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ANALYTICAL REPORT

Job Number: 580-87761-3

Job Description: Portland Harbor

For:
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Attention: Dr. Laura McWilliams

Approved for release.
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The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 580-87761-3
Project/Site: Portland Harbor

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
AP	Compounds have an altered pattern compared to the reference pattern within the expected retention time window. This may be due to interferences from non-target compounds, and/or due to different relative concentrations of the compounds.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE
Client: Haley & Aldrich, Inc.
Project: Portland Harbor
Report Number: 580-87761-3

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 07/18/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 1.2º C, 1.7º C, 2.1º C, 4.1º C, 4.6º C, 4.9º C and 5.3º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

SEMIVOLATILE ORGANIC COMPOUNDS - SELECTED ION MODE (SIM)
Samples 22T-VB-02-7.0-8.8_20190717 (580-87761-5), 22T-VB-03-2.0-4.0_20190717 (580-87761-12), 22T-VB-03-4.0-6.0_20190717 (580-87761-13), 22T-VB-03-8.0-9.0_20190717 (580-87761-15), 22T-VB-03-11.2-12_20190717 (580-87761-17), 22T-VB-03-4.0-6.0-D_20190717 (580-87761-18), 22T-SG-04_20190718 (580-87761-21), 22T-SG-05_20190718 (580-87761-22), 22T-SG-06_20190718 (580-87761-23) and 22T-SG-09_20190718 (580-87761-26) were analyzed for semivolatile organic compounds - Selected Ion Mode (SIM) in accordance with 8270D SIM. The samples were prepared on 08/26/2019 and analyzed on 08/29/2019 and 08/30/2019.

Total Alkyl PAH Comments: Total alkyl homologue results are considered estimated. These compounds are identified as eluting within a retention time window established by examining NIST SRM 2779 (Gulf of Mexico Crude Oil). Quantitation is estimated using a parent PAH response factor.

If requested, the following target analytes are reported individually and are also included in the total alkyl result for their respective homologue group: Specifically, 1-methylnaphthalene and 2-methylnaphthalene are included in the total C1-naphthalene homologue result, 2,6-dimethylnaphthalene is included in the total C2-alkylnaphthalene homologue result, 2,3,5-trimethylnaphthalene is included in the total C3-alkylnaphthalene homologue result, and 1-methylphenanthrene is included in the total C1-phenanthrenes/anthracenes homologue result.

The following samples required dilution prior to analysis due to the nature of the sample matrix: 22T-VB-02-7.0-8.8_20190717 (580-87761-5)[30X], 22T-VB-02-7.0-8.8_20190717 (580-87761-5)[50X], 22T-VB-03-2.0-4.0_20190717 (580-87761-12)[30X], 22T-VB-03-4.0-6.0_20190717 (580-87761-13)[200X], 22T-VB-03-4.0-6.0_20190717 (580-87761-13)[30X], 22T-VB-03-8.0-9.0_20190717 (580-87761-15)[100X], 22T-VB-03-8.0-9.0_20190717 (580-87761-15)[30X], 22T-VB-03-11.2-12_20190717 (580-87761-17)[100X], 22T-VB-03-11.2-12_20190717 (580-87761-17)[30X], 22T-VB-03-4.0-6.0-D_20190717 (580-87761-18)[100X], 22T-VB-03-4.0-6.0-D_20190717 (580-87761-18)[30X], 22T-SG-04_20190718 (580-87761-21)[30X], 22T-SG-05_20190718 (580-87761-22)[30X], 22T-SG-06_20190718 (580-87761-23)[100X], 22T-SG-06_20190718 (580-87761-23)[30X] and 22T-SG-09_20190718 (580-87761-26)[30X]. The reporting limits have been adjusted accordingly. The samples were analyzed at a dilution based on screening results. Because of this dilution the surrogate recovery does not provide useful information.

The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: 22T-VB-02-7.0-8.8_20190717 (580-87761-5), 22T-VB-03-2.0-4.0_20190717 (580-87761-12), 22T-VB-03-4.0-6.0_20190717 (580-87761-13), 22T-VB-03-8.0-9.0_20190717 (580-87761-15), 22T-VB-03-11.2-12_20190717 (580-87761-17), 22T-VB-03-4.0-6.0-D_20190717 (580-87761-18), 22T-SG-04_20190718 (580-87761-21), 22T-SG-04_20190718 (580-87761-21[MS]), 22T-SG-04_20190718 (580-87761-21[MSD]), 22T-SG-05_20190718 (580-87761-22), 22T-SG-06_20190718 (580-87761-23), 22T-SG-09_20190718 (580-87761-26), (LCS 140-32772/2-A) and (MB 140-32772/1-A).

The following sediment samples were frozen to extend the extraction holding times in accordance with sediment management standards: 22T-VB-02-7.0-8.8_20190717 (580-87761-5), 22T-VB-03-2.0-4.0_20190717 (580-87761-12), 22T-VB-03-4.0-6.0_20190717 (580-87761-13), 22T-VB-03-8.0-9.0_20190717 (580-87761-15), 22T-VB-03-11.2-12_20190717 (580-87761-17), 22T-VB-03-4.0-6.0-D_20190717 (580-87761-18), 22T-SG-04_20190718 (580-87761-21), 22T-SG-04_20190718 (580-87761-21[MS]),

22T-SG-04_20190718 (580-87761-21[MSD]), 22T-SG-05_20190718 (580-87761-22), 22T-SG-06_20190718 (580-87761-23) and 22T-SG-09_20190718 (580-87761-26).

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: 22T-VB-02-7.0-8.8_20190717 — Lab Sample ID: 580-87761-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	130	J	150	20	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	340		290	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	1700		29	13	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	150		29	7.3	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	550		29	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	2000		29	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	2400		29	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	2100		29	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	1400		29	9.9	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	1800		29	17	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	810		29	13	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	660		29	7.6	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	420		29	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	1800		29	15	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	390		29	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	310		290	23	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	1900		58	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	290		29	9.1	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	440		29	27	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	540		29	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	470		58	35	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	580		58	22	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	1200		120	72	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	170		29	8.8	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	310		58	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	290		29	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	400		58	31	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	920		58	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	620		58	46	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	100		29	9.9	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	150		29	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	150		29	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	660		120	60	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	350	AP	58	55	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	2200		29	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	230		29	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	870		29	9.9	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene	6900		29	27	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	1000		29	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1300		29	20	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	720		580	53	ng/g	30	☼	8270D SIM	Total/NA
Perylene	670		29	5.8	ng/g	30	☼	8270D SIM	Total/NA
Phenanthrene	6900		58	51	ng/g	30	☼	8270D SIM	Total/NA
Pyrene - DL	8700		97	29	ng/g	50	☼	8270D SIM	Total/NA

Client Sample ID: 22T-VB-03-2.0-4.0_20190717 — Lab Sample ID: 580-87761-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	94	J	150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	210	J	300	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	620		30	14	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-03-2.0-4.0_20190717 (Continued) — Lab Sample ID: 580-87761-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	110		30	7.4	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	350		30	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	1100		30	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	1200		30	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	1200		30	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	730		30	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	830		30	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	430		30	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	430		30	7.7	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	180		30	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	1100		30	15	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	180		30	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	190	J	300	23	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	960		59	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	220		30	9.2	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	230		30	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	370		30	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	270		59	36	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	300		59	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	660		120	73	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	130		30	8.9	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	180		59	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	200		30	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	230		59	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	360		59	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	410		59	47	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	77		30	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	110		30	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	120		30	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	290		120	61	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	270	AP	59	56	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	1200		30	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	130		30	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	300		30	10	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene	4100		30	27	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	560		30	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	640		30	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	440	J	590	54	ng/g	30	☼	8270D SIM	Total/NA
Perylene	440		30	5.9	ng/g	30	☼	8270D SIM	Total/NA
Phenanthrene	2800		59	52	ng/g	30	☼	8270D SIM	Total/NA
Pyrene	3500		59	18	ng/g	30	☼	8270D SIM	Total/NA

Client Sample ID: 22T-VB-03-4.0-6.0_20190717 — Lab Sample ID: 580-87761-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	310		150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	800		290	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	5500		29	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	320		29	7.3	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	3900		29	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	5500		29	12	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-03-4.0-6.0_20190717 (Continued) — Lab Sample ID: 580-87761-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	6000		29	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	4900		29	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	3300		29	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	4100		29	17	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	2300		29	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	1500		29	7.6	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	1200		29	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	4500		29	15	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	1300		29	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	710		290	23	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	5600		59	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	570		29	9.1	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	1000		29	27	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	1200		29	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	1300		59	35	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	3300		59	22	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	2900		120	72	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	300		29	8.8	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	640		59	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	590		29	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	910		59	31	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	3500		59	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	1500	AP	59	46	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	210		29	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	300		29	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	300		29	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	2000		120	61	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	1200	AP	59	55	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	5300		29	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	570		29	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	3300		29	10	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	3800		29	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	3200		29	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1800		590	54	ng/g	30	☼	8270D SIM	Total/NA
Perylene	1500		29	5.9	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene - DL	22000		200	180	ng/g	200	☼	8270D SIM	Total/NA
Phenanthrene - DL	29000		390	340	ng/g	200	☼	8270D SIM	Total/NA
Pyrene - DL	24000		390	120	ng/g	200	☼	8270D SIM	Total/NA

Client Sample ID: 22T-VB-03-8.0-9.0_20190717 — Lab Sample ID: 580-87761-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	400		150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	970		300	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	4000		30	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	300		30	7.5	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	1700		30	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	3700		30	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	4300		30	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	3500		30	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	2400		30	10	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-03-8.0-9.0_20190717 (Continued) — Lab Sample ID: 580-87761-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	3000		30	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	1500		30	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	1300		30	7.8	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	980		30	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	3500		30	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	1000		30	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	880		300	24	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	4400		60	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	510		30	9.2	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	900		30	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	1000		30	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	1100		60	36	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	2300		60	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	2600		120	73	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	290		30	8.9	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	580		60	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	550		30	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	800		60	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	3000		60	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	1900	AP	60	47	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	170		30	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	280		30	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	290		30	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	1800		120	62	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	3100	AP	60	56	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	4000		30	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	420		30	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	2300		30	10	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	2600		30	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2300		30	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	2200		600	55	ng/g	30	☼	8270D SIM	Total/NA
Perylene	1100		30	6.0	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene - DL	14000		99	90	ng/g	100	☼	8270D SIM	Total/NA
Phenanthrene - DL	19000		200	170	ng/g	100	☼	8270D SIM	Total/NA
Pyrene - DL	17000		200	60	ng/g	100	☼	8270D SIM	Total/NA

Client Sample ID: 22T-VB-03-11.2-12_20190717 — Lab Sample ID: 580-87761-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	260		150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	430		300	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	1700		30	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	340		30	7.5	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	1200		30	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	2800		30	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	3800		30	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	3200		30	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	2200		30	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	3000		30	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	1300		30	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	840		30	7.8	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-03-11.2-12_20190717 (Continued) — Lab Sample ID: 580-87761-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C1-Dibenzothiophenes	550		30	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	2400		30	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	480		30	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	440		300	24	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	2400		60	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	380		30	9.2	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	560		30	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	700		30	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	620		60	36	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	900		60	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	1500		120	73	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	250		30	9.0	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	410		60	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	410		30	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	560		60	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	1200		60	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	840		60	47	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	180		30	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	250		30	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	260		30	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	850		120	62	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	560	AP	60	56	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	3100		30	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	340		30	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	1100		30	10	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	1000		30	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2200		30	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1300		600	55	ng/g	30	☼	8270D SIM	Total/NA
Perylene	1100		30	6.0	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene - DL	11000		99	91	ng/g	100	☼	8270D SIM	Total/NA
Phenanthrene - DL	9400		200	180	ng/g	100	☼	8270D SIM	Total/NA
Pyrene - DL	13000		200	60	ng/g	100	☼	8270D SIM	Total/NA

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 — Lab Sample ID: 580-87761-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	290		150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	720		300	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	4300		30	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	290		30	7.5	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	3100		30	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	3800		30	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	4400		30	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	3700		30	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	2400		30	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	3000		30	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	1600		30	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	1100		30	7.8	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	980		30	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	3400		30	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	980		30	17	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 (Continued) — Lab Sample ID: 580-87761-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C1-Naphthalenes	650		300	24	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	4200		60	34	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	470		30	9.3	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	760		30	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	930		30	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	970		60	36	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	2600		60	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	2200		120	73	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	260		30	9.0	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	480		60	34	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	470		30	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	660		60	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	2600		60	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	1000		60	47	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	150		30	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	230		30	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	240		30	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	1400		120	62	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	650	AP	60	56	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	4100		30	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	430		30	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	2600		30	10	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	3000		30	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2300		30	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1600		600	55	ng/g	30	☼	8270D SIM	Total/NA
Perylene	1100		30	6.0	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene - DL	16000		100	91	ng/g	100	☼	8270D SIM	Total/NA
Phenanthrene - DL	22000		200	180	ng/g	100	☼	8270D SIM	Total/NA
Pyrene - DL	18000		200	60	ng/g	100	☼	8270D SIM	Total/NA

Client Sample ID: 22T-SG-04_20190718 — Lab Sample ID: 580-87761-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	200	F1	150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	380		310	31	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	1800		31	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	120	F1	31	7.6	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	590		31	25	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	1300		31	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	1400		31	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	1300		31	16	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	830		31	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	1000		31	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	470		31	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	560		31	8.0	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	400		31	20	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	1400		31	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	490		31	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	380		310	24	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	1700		61	34	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	300		31	9.5	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-SG-04_20190718 (Continued)

Lab Sample ID: 580-87761-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C2-Dibenzothiophenes	530		31	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	570		31	14	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	800		61	37	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	910		61	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	1500		120	75	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	200		31	9.2	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	420		61	34	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	350		31	17	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	610		61	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	1600		61	30	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	890		61	48	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	120		31	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	230		31	29	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	200		31	12	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	1400		120	63	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	500	AP	61	58	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	1400		31	12	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	150	F1	31	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	670		31	10	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene	4300		31	28	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	1200		31	15	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	740		31	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	670		610	56	ng/g	30	☼	8270D SIM	Total/NA
Perylene	380		31	6.1	ng/g	30	☼	8270D SIM	Total/NA
Phenanthrene	4800		61	54	ng/g	30	☼	8270D SIM	Total/NA
Pyrene	4500		61	18	ng/g	30	☼	8270D SIM	Total/NA

Client Sample ID: 22T-SG-05_20190718

Lab Sample ID: 580-87761-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	170	J	190	26	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	270	J	370	38	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	700		37	17	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	230		37	9.3	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	690		37	30	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	1500		37	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	2100		37	13	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	2000		37	19	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	1300		37	13	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	1800		37	22	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	650		37	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	460		37	9.7	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	210		37	24	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	1200		37	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	190		37	21	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	280	J	370	29	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	970		74	42	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	230		37	12	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	250		37	35	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	390		37	17	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	300		74	45	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-SG-05_20190718 (Continued)

Lab Sample ID: 580-87761-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C2-Naphthalenes	420		74	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	700		150	91	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	170		37	11	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	220		74	42	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	240		37	20	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	220		74	40	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	550		74	36	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	440		74	59	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	120		37	13	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	150		37	35	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	160		37	14	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	490		150	77	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	320	AP	74	70	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	1700		37	14	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	210		37	21	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	500		37	13	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene	5000		37	34	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	440		37	18	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1300		37	26	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1100		740	68	ng/g	30	☼	8270D SIM	Total/NA
Perylene	690		37	7.4	ng/g	30	☼	8270D SIM	Total/NA
Phenanthrene	4000		74	66	ng/g	30	☼	8270D SIM	Total/NA
Pyrene	5500		74	22	ng/g	30	☼	8270D SIM	Total/NA

Client Sample ID: 22T-SG-06_20190718

Lab Sample ID: 580-87761-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	270		150	21	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	450		300	30	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	1900		30	14	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	300		30	7.4	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	1200		30	24	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	3700		30	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	4900		30	11	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	4100		30	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	2800		30	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	3800		30	18	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	1700		30	14	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	970		30	7.7	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	530		30	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	2800		30	15	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	530		30	17	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	460		300	23	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	2600		59	33	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	380		30	9.2	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	480		30	28	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	730		30	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	600		59	36	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	1000		59	23	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	1300		120	73	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	200		30	8.9	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-SG-06_20190718 (Continued)

Lab Sample ID: 580-87761-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C3-Dibenzothiophenes	330		59	33	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	360		30	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	470		59	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Naphthalenes	1300		59	29	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	700		59	47	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	150		30	10	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	190		30	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	200		30	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	830		120	62	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	530	AP	59	56	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	3900		30	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	460		30	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	1500		30	10	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	1500		30	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2800		30	21	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1600		590	54	ng/g	30	☼	8270D SIM	Total/NA
Perylene	1300		30	5.9	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene - DL	13000		99	90	ng/g	100	☼	8270D SIM	Total/NA
Phenanthrene - DL	13000		200	170	ng/g	100	☼	8270D SIM	Total/NA
Pyrene - DL	15000		200	59	ng/g	100	☼	8270D SIM	Total/NA

Client Sample ID: 22T-SG-09_20190718

Lab Sample ID: 580-87761-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	340		140	20	ng/g	30	☼	8270D SIM	Total/NA
2-Methylnaphthalene	770		290	29	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthene	1500		29	13	ng/g	30	☼	8270D SIM	Total/NA
Acenaphthylene	230		29	7.2	ng/g	30	☼	8270D SIM	Total/NA
Anthracene	850		29	23	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]anthracene	2200		29	12	ng/g	30	☼	8270D SIM	Total/NA
Benzo[a]pyrene	2500		29	10	ng/g	30	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene	2200		29	15	ng/g	30	☼	8270D SIM	Total/NA
Benzo[e]pyrene	1500		29	9.8	ng/g	30	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	1900		29	17	ng/g	30	☼	8270D SIM	Total/NA
Benzo[k]fluoranthene	790		29	13	ng/g	30	☼	8270D SIM	Total/NA
C1-Chrysenes	950		29	7.5	ng/g	30	☼	8270D SIM	Total/NA
C1-Dibenzothiophenes	530		29	19	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluoranthenes/pyrene	2100		29	15	ng/g	30	☼	8270D SIM	Total/NA
C1-Fluorenes	500		29	16	ng/g	30	☼	8270D SIM	Total/NA
C1-Naphthalenes	710		290	23	ng/g	30	☼	8270D SIM	Total/NA
C1-Phenanthrenes/Anthracenes	2400		58	32	ng/g	30	☼	8270D SIM	Total/NA
C2-Chrysenes	490		29	9.0	ng/g	30	☼	8270D SIM	Total/NA
C2-Dibenzothiophenes	710		29	27	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluoranthenes/Pyrene	920		29	13	ng/g	30	☼	8270D SIM	Total/NA
C2-Fluorenes	780		58	35	ng/g	30	☼	8270D SIM	Total/NA
C2-Naphthalenes	1100		58	22	ng/g	30	☼	8270D SIM	Total/NA
C2-Phenanthrenes/Anthracenes	2100		120	71	ng/g	30	☼	8270D SIM	Total/NA
C3-Chrysenes	350		29	8.7	ng/g	30	☼	8270D SIM	Total/NA
C3-Dibenzothiophenes	570		58	32	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluoranthenes/Pyrene	570		29	16	ng/g	30	☼	8270D SIM	Total/NA
C3-Fluorenes	700		58	31	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-SG-09_20190718 (Continued)

Lab Sample ID: 580-87761-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C3-Naphthalenes	1700		58	28	ng/g	30	☼	8270D SIM	Total/NA
C3-Phenanthrenes/Anthracenes	1200		58	46	ng/g	30	☼	8270D SIM	Total/NA
C4-Chrysenes	220		29	9.8	ng/g	30	☼	8270D SIM	Total/NA
C4-Dibenzothiophenes	320		29	28	ng/g	30	☼	8270D SIM	Total/NA
C4-Fluoranthenes/Pyrene	340		29	11	ng/g	30	☼	8270D SIM	Total/NA
C4-Naphthalenes	1300		120	60	ng/g	30	☼	8270D SIM	Total/NA
C4-Phenanthrenes/Anthracenes	720	AP	58	54	ng/g	30	☼	8270D SIM	Total/NA
Chrysene	2300		29	11	ng/g	30	☼	8270D SIM	Total/NA
Dibenz(a,h)anthracene	250		29	17	ng/g	30	☼	8270D SIM	Total/NA
Dibenzothiophene	830		29	9.8	ng/g	30	☼	8270D SIM	Total/NA
Fluoranthene	6100		29	26	ng/g	30	☼	8270D SIM	Total/NA
Fluorene	980		29	14	ng/g	30	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1400		29	20	ng/g	30	☼	8270D SIM	Total/NA
Naphthalene	1700		580	53	ng/g	30	☼	8270D SIM	Total/NA
Perylene	670		29	5.8	ng/g	30	☼	8270D SIM	Total/NA
Phenanthrene	5900		58	51	ng/g	30	☼	8270D SIM	Total/NA
Pyrene	6900		58	17	ng/g	30	☼	8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 22T-VB-02-7.0-8.8_20190717

Date Collected: 07/17/19 14:20
Date Received: 07/18/19 13:00

Lab Sample ID: 580-87761-5

Matrix: Solid
Percent Solids: 58.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	130	J	150	20	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
2-Methylnaphthalene	340		290	30	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Acenaphthene	1700		29	13	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Acenaphthylene	150		29	7.3	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Anthracene	550		29	24	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[a]anthracene	2000		29	12	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[a]pyrene	2400		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[b]fluoranthene	2100		29	15	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[e]pyrene	1400		29	9.9	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[g,h,i]perylene	1800		29	17	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Benzo[k]fluoranthene	810		29	13	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Chrysenes	660		29	7.6	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Dibenzothiophenes	420		29	19	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Fluoranthenes/pyrene	1800		29	15	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Fluorenes	390		29	16	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Naphthalenes	310		290	23	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C1-Phenanthrenes/Anthracenes	1900		58	33	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Chrysenes	290		29	9.1	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Dibenzothiophenes	440		29	27	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Fluoranthenes/Pyrene	540		29	13	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Fluorenes	470		58	35	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Naphthalenes	580		58	22	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C2-Phenanthrenes/Anthracenes	1200		120	72	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Chrysenes	170		29	8.8	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Dibenzothiophenes	310		58	33	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Fluoranthenes/Pyrene	290		29	16	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Fluorenes	400		58	31	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Naphthalenes	920		58	29	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C3-Phenanthrenes/Anthracenes	620		58	46	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C4-Chrysenes	100		29	9.9	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C4-Dibenzothiophenes	150		29	28	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C4-Fluoranthenes/Pyrene	150		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C4-Naphthalenes	660		120	60	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
C4-Phenanthrenes/Anthracenes	350	AP	58	55	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Chrysene	2200		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Dibenz(a,h)anthracene	230		29	17	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Dibenzothiophene	870		29	9.9	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Fluoranthene	6900		29	27	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Fluorene	1000		29	14	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Indeno[1,2,3-cd]pyrene	1300		29	20	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Naphthalene	720		580	53	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Perylene	670		29	5.8	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30
Phenanthrene	6900		58	51	ng/g	☼	08/26/19 13:35	08/29/19 17:08	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 17:08*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 17:08*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 17:08*	*30*

Client Sample ID: 22T-VB-02-7.0-8.8_20190717

Lab Sample ID: 580-87761-5

Date Collected: 07/17/19 14:20
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 58.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	8700		97	29	ng/g	☼	08/26/19 13:35	08/30/19 14:02	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 14:02*	*50*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 14:02*	*50*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 14:02*	*50*

Client Sample ID: 22T-VB-03-2.0-4.0_20190717

Lab Sample ID: 580-87761-12

Date Collected: 07/17/19 16:35
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 54.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	94	J	150	21	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
2-Methylnaphthalene	210	J	300	30	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Acenaphthene	620		30	14	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Acenaphthylene	110		30	7.4	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Anthracene	350		30	24	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[a]anthracene	1100		30	12	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[a]pyrene	1200		30	11	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[b]fluoranthene	1200		30	15	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[e]pyrene	730		30	10	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[g,h,i]perylene	830		30	18	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Benzo[k]fluoranthene	430		30	14	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Chrysenes	430		30	7.7	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Dibenzothiophenes	180		30	19	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Fluoranthenes/pyrene	1100		30	15	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Fluorenes	180		30	17	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Naphthalenes	190	J	300	23	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C1-Phenanthrenes/Anthracenes	960		59	33	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Chrysenes	220		30	9.2	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Dibenzothiophenes	230		30	28	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Fluoranthenes/Pyrene	370		30	13	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Fluorenes	270		59	36	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Naphthalenes	300		59	23	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C2-Phenanthrenes/Anthracenes	660		120	73	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Chrysenes	130		30	8.9	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Dibenzothiophenes	180		59	33	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Fluoranthenes/Pyrene	200		30	16	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Fluorenes	230		59	32	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Naphthalenes	360		59	29	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C3-Phenanthrenes/Anthracenes	410		59	47	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C4-Chrysenes	77		30	10	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C4-Dibenzothiophenes	110		30	28	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C4-Fluoranthenes/Pyrene	120		30	11	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C4-Naphthalenes	290		120	61	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
C4-Phenanthrenes/Anthracenes	270	AP	59	56	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Chrysene	1200		30	11	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Dibenz(a,h)anthracene	130		30	17	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Dibenzothiophene	300		30	10	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30

Client Sample ID: 22T-VB-03-2.0-4.0_20190717

Lab Sample ID: 580-87761-12

Date Collected: 07/17/19 16:35
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 54.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	4100		30	27	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Fluorene	560		30	14	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Indeno[1,2,3-cd]pyrene	640		30	21	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Naphthalene	440	J	590	54	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Perylene	440		30	5.9	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Phenanthrene	2800		59	52	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30
Pyrene	3500		59	18	ng/g	☼	08/26/19 13:35	08/29/19 17:34	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 17:34*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 17:34*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 17:34*	*30*

Client Sample ID: 22T-VB-03-4.0-6.0_20190717

Lab Sample ID: 580-87761-13

Date Collected: 07/17/19 16:40
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 59.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	310		150	21	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
2-Methylnaphthalene	800		290	30	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Acenaphthene	5500		29	14	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Acenaphthylene	320		29	7.3	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Anthracene	3900		29	24	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[a]anthracene	5500		29	12	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[a]pyrene	6000		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[b]fluoranthene	4900		29	15	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[e]pyrene	3300		29	10	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[g,h,i]perylene	4100		29	17	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Benzo[k]fluoranthene	2300		29	14	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Chrysenes	1500		29	7.6	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Dibenzothiophenes	1200		29	19	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Fluoranthenes/pyrene	4500		29	15	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Fluorenes	1300		29	16	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Naphthalenes	710		290	23	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C1-Phenanthrenes/Anthracenes	5600		59	33	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Chrysenes	570		29	9.1	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Dibenzothiophenes	1000		29	27	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Fluoranthenes/Pyrene	1200		29	13	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Fluorenes	1300		59	35	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Naphthalenes	3300		59	22	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C2-Phenanthrenes/Anthracenes	2900		120	72	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Chrysenes	300		29	8.8	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Dibenzothiophenes	640		59	33	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Fluoranthenes/Pyrene	590		29	16	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Fluorenes	910		59	31	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Naphthalenes	3500		59	29	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C3-Phenanthrenes/Anthracenes	1500	AP	59	46	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C4-Chrysenes	210		29	10	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C4-Dibenzothiophenes	300		29	28	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30

Client Sample ID: 22T-VB-03-4.0-6.0_20190717

Lab Sample ID: 580-87761-13

Date Collected: 07/17/19 16:40
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 59.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C4-Fluoranthenes/Pyrene	300		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C4-Naphthalenes	2000		120	61	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
C4-Phenanthrenes/Anthracenes	1200	AP	59	55	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Chrysene	5300		29	11	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Dibenz(a,h)anthracene	570		29	17	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Dibenzothiophene	3300		29	10	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Fluorene	3800		29	14	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Indeno[1,2,3-cd]pyrene	3200		29	21	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Naphthalene	1800		590	54	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30
Perylene	1500		29	5.9	ng/g	☼	08/26/19 13:35	08/29/19 17:59	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 17:59*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 17:59*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 17:59*	*30*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	22000		200	180	ng/g	☼	08/26/19 13:35	08/30/19 16:09	200
Phenanthrene	29000		390	340	ng/g	☼	08/26/19 13:35	08/30/19 16:09	200
Pyrene	24000		390	120	ng/g	☼	08/26/19 13:35	08/30/19 16:09	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 16:09*	*200*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 16:09*	*200*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 16:09*	*200*

Client Sample ID: 22T-VB-03-8.0-9.0_20190717

Lab Sample ID: 580-87761-15

Date Collected: 07/17/19 16:50
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 61.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	400		150	21	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
2-Methylnaphthalene	970		300	30	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Acenaphthene	4000		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Acenaphthylene	300		30	7.5	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Anthracene	1700		30	24	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[a]anthracene	3700		30	12	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[a]pyrene	4300		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[b]fluoranthene	3500		30	15	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[e]pyrene	2400		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[g,h,i]perylene	3000		30	18	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Benzo[k]fluoranthene	1500		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Chrysenes	1300		30	7.8	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Dibenzothiophenes	980		30	19	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Fluoranthenes/pyrene	3500		30	16	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Fluorenes	1000		30	17	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Naphthalenes	880		300	24	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C1-Phenanthrenes/Anthracenes	4400		60	33	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C2-Chrysenes	510		30	9.2	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30

Client Sample ID: 22T-VB-03-8.0-9.0_20190717

Lab Sample ID: 580-87761-15

Date Collected: 07/17/19 16:50
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 61.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C2-Dibenzothiophenes	900		30	28	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C2-Fluoranthenes/Pyrene	1000		30	13	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C2-Fluorenes	1100		60	36	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C2-Naphthalenes	2300		60	23	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C2-Phenanthrenes/Anthracenes	2600		120	73	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Chrysenes	290		30	8.9	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Dibenzothiophenes	580		60	33	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Fluoranthenes/Pyrene	550		30	16	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Fluorenes	800		60	32	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Naphthalenes	3000		60	29	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C3-Phenanthrenes/Anthracenes	1900	AP	60	47	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C4-Chrysenes	170		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C4-Dibenzothiophenes	280		30	28	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C4-Fluoranthenes/Pyrene	290		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C4-Naphthalenes	1800		120	62	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
C4-Phenanthrenes/Anthracenes	3100	AP	60	56	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Chrysene	4000		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Dibenz(a,h)anthracene	420		30	17	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Dibenzothiophene	2300		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Fluorene	2600		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Indeno[1,2,3-cd]pyrene	2300		30	21	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Naphthalene	2200		600	55	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30
Perylene	1100		30	6.0	ng/g	☼	08/26/19 13:35	08/29/19 18:24	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 18:24*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 18:24*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 18:24*	*30*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	14000		99	90	ng/g	☼	08/26/19 13:35	08/30/19 14:27	100
Phenanthrene	19000		200	170	ng/g	☼	08/26/19 13:35	08/30/19 14:27	100
Pyrene	17000		200	60	ng/g	☼	08/26/19 13:35	08/30/19 14:27	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 14:27*	*100*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 14:27*	*100*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 14:27*	*100*

Client Sample ID: 22T-VB-03-11.2-12_20190717

Lab Sample ID: 580-87761-17

Date Collected: 07/17/19 17:00
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 68.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	260		150	21	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
2-Methylnaphthalene	430		300	30	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Acenaphthene	1700		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Acenaphthylene	340		30	7.5	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Anthracene	1200		30	24	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30

Client Sample ID: 22T-VB-03-11.2-12_20190717

Date Collected: 07/17/19 17:00
Date Received: 07/18/19 13:00

Lab Sample ID: 580-87761-17

Matrix: Solid
Percent Solids: 68.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	2800		30	12	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Benzo[a]pyrene	3800		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Benzo[b]fluoranthene	3200		30	15	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Benzo[e]pyrene	2200		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Benzo[g,h,i]perylene	3000		30	18	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Benzo[k]fluoranthene	1300		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Chrysenes	840		30	7.8	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Dibenzothiophenes	550		30	19	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Fluoranthenes/pyrene	2400		30	16	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Fluorenes	480		30	17	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Naphthalenes	440		300	24	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C1-Phenanthrenes/Anthracenes	2400		60	33	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Chrysenes	380		30	9.2	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Dibenzothiophenes	560		30	28	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Fluoranthenes/Pyrene	700		30	13	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Fluorenes	620		60	36	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Naphthalenes	900		60	23	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C2-Phenanthrenes/Anthracenes	1500		120	73	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Chrysenes	250		30	9.0	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Dibenzothiophenes	410		60	33	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Fluoranthenes/Pyrene	410		30	16	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Fluorenes	560		60	32	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Naphthalenes	1200		60	29	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C3-Phenanthrenes/Anthracenes	840		60	47	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C4-Chrysenes	180		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C4-Dibenzothiophenes	250		30	28	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C4-Fluoranthenes/Pyrene	260		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C4-Naphthalenes	850		120	62	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
C4-Phenanthrenes/Anthracenes	560	AP	60	56	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Chrysene	3100		30	11	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Dibenz(a,h)anthracene	340		30	17	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Dibenzothiophene	1100		30	10	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Fluorene	1000		30	14	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Indeno[1,2,3-cd]pyrene	2200		30	21	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Naphthalene	1300		600	55	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30
Perylene	1100		30	6.0	ng/g	☼	08/26/19 13:35	08/29/19 18:50	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 18:50*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 18:50*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 18:50*	*30*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	11000		99	91	ng/g	☼	08/26/19 13:35	08/30/19 14:53	100
Phenanthrene	9400		200	180	ng/g	☼	08/26/19 13:35	08/30/19 14:53	100
Pyrene	13000		200	60	ng/g	☼	08/26/19 13:35	08/30/19 14:53	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 14:53*	*100*

Client Sample ID: 22T-VB-03-11.2-12_20190717

Lab Sample ID: 580-87761-17

Date Collected: 07/17/19 17:00
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 68.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 14:53*	*100*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 14:53*	*100*

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717

Lab Sample ID: 580-87761-18

Date Collected: 07/17/19 17:05
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 58.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	290		150	21	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
2-Methylnaphthalene	720		300	30	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Acenaphthene	4300		30	14	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Acenaphthylene	290		30	7.5	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Anthracene	3100		30	24	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[a]anthracene	3800		30	12	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[a]pyrene	4400		30	11	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[b]fluoranthene	3700		30	15	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[e]pyrene	2400		30	10	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[g,h,i]perylene	3000		30	18	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Benzo[k]fluoranthene	1600		30	14	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Chrysenes	1100		30	7.8	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Dibenzothiophenes	980		30	19	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Fluoranthenes/pyrene	3400		30	16	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Fluorenes	980		30	17	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Naphthalenes	650		300	24	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C1-Phenanthrenes/Anthracenes	4200		60	34	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Chrysenes	470		30	9.3	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Dibenzothiophenes	760		30	28	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Fluoranthenes/Pyrene	930		30	13	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Fluorenes	970		60	36	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Naphthalenes	2600		60	23	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C2-Phenanthrenes/Anthracenes	2200		120	73	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Chrysenes	260		30	9.0	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Dibenzothiophenes	480		60	34	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Fluoranthenes/Pyrene	470		30	16	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Fluorenes	660		60	32	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Naphthalenes	2600		60	29	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C3-Phenanthrenes/Anthracenes	1000		60	47	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C4-Chrysenes	150		30	10	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C4-Dibenzothiophenes	230		30	28	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C4-Fluoranthenes/Pyrene	240		30	11	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C4-Naphthalenes	1400		120	62	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
C4-Phenanthrenes/Anthracenes	650	AP	60	56	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Chrysene	4100		30	11	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Dibenz(a,h)anthracene	430		30	17	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Dibenzothiophene	2600		30	10	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Fluorene	3000		30	14	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Indeno[1,2,3-cd]pyrene	2300		30	21	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30
Naphthalene	1600		600	55	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717

Lab Sample ID: 580-87761-18

Date Collected: 07/17/19 17:05
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 58.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perylene	1100		30	6.0	ng/g	☼	08/26/19 13:35	08/29/19 19:15	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 19:15*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 19:15*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 19:15*	*30*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	16000		100	91	ng/g	☼	08/26/19 13:35	08/30/19 15:18	100
Phenanthrene	22000		200	180	ng/g	☼	08/26/19 13:35	08/30/19 15:18	100
Pyrene	18000		200	60	ng/g	☼	08/26/19 13:35	08/30/19 15:18	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 15:18*	*100*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 15:18*	*100*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 15:18*	*100*

Client Sample ID: 22T-SG-04_20190718

Lab Sample ID: 580-87761-21

Date Collected: 07/18/19 08:36
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	200	F1	150	21	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
2-Methylnaphthalene	380		310	31	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Acenaphthene	1800		31	14	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Acenaphthylene	120	F1	31	7.6	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Anthracene	590		31	25	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[a]anthracene	1300		31	12	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[a]pyrene	1400		31	11	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[b]fluoranthene	1300		31	16	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[e]pyrene	830		31	10	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[g,h,i]perylene	1000		31	18	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Benzo[k]fluoranthene	470		31	14	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Chrysenes	560		31	8.0	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Dibenzothiophenes	400		31	20	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Fluoranthenes/pyrene	1400		31	16	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Fluorenes	490		31	17	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Naphthalenes	380		310	24	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C1-Phenanthrenes/Anthracenes	1700		61	34	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Chrysenes	300		31	9.5	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Dibenzothiophenes	530		31	28	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Fluoranthenes/Pyrene	570		31	14	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Fluorenes	800		61	37	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Naphthalenes	910		61	23	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C2-Phenanthrenes/Anthracenes	1500		120	75	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C3-Chrysenes	200		31	9.2	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C3-Dibenzothiophenes	420		61	34	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C3-Fluoranthenes/Pyrene	350		31	17	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C3-Fluorenes	610		61	33	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30

Client Sample ID: 22T-SG-04_20190718

Lab Sample ID: 580-87761-21

Date Collected: 07/18/19 08:36
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C3-Naphthalenes	1600		61	30	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C3-Phenanthrenes/Anthracenes	890		61	48	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C4-Chrysenes	120		31	10	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C4-Dibenzothiophenes	230		31	29	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C4-Fluoranthenes/Pyrene	200		31	12	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C4-Naphthalenes	1400		120	63	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
C4-Phenanthrenes/Anthracenes	500	AP	61	58	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Chrysene	1400		31	12	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Dibenz(a,h)anthracene	150	F1	31	17	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Dibenzothiophene	670		31	10	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Fluoranthene	4300		31	28	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Fluorene	1200		31	15	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Indeno[1,2,3-cd]pyrene	740		31	21	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Naphthalene	670		610	56	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Perylene	380		31	6.1	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Phenanthrene	4800		61	54	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30
Pyrene	4500		61	18	ng/g	☼	08/26/19 13:35	08/29/19 19:40	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 19:40*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 19:40*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 19:40*	*30*

Client Sample ID: 22T-SG-05_20190718

Lab Sample ID: 580-87761-22

Date Collected: 07/18/19 08:55
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 39.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	170	J	190	26	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
2-Methylnaphthalene	270	J	370	38	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Acenaphthene	700		37	17	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Acenaphthylene	230		37	9.3	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Anthracene	690		37	30	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[a]anthracene	1500		37	15	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[a]pyrene	2100		37	13	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[b]fluoranthene	2000		37	19	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[e]pyrene	1300		37	13	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[g,h,i]perylene	1800		37	22	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Benzo[k]fluoranthene	650		37	17	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Chrysenes	460		37	9.7	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Dibenzothiophenes	210		37	24	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Fluoranthenes/pyrene	1200		37	19	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Fluorenes	190		37	21	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Naphthalenes	280	J	370	29	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C1-Phenanthrenes/Anthracenes	970		74	42	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C2-Chrysenes	230		37	12	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C2-Dibenzothiophenes	250		37	35	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C2-Fluoranthenes/Pyrene	390		37	17	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C2-Fluorenes	300		74	45	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30

Client Sample ID: 22T-SG-05_20190718

Lab Sample ID: 580-87761-22

Date Collected: 07/18/19 08:55
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 39.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C2-Naphthalenes	420		74	28	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C2-Phenanthrenes/Anthracenes	700		150	91	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Chrysenes	170		37	11	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Dibenzothiophenes	220		74	42	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Fluoranthenes/Pyrene	240		37	20	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Fluorenes	220		74	40	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Naphthalenes	550		74	36	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C3-Phenanthrenes/Anthracenes	440		74	59	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C4-Chrysenes	120		37	13	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C4-Dibenzothiophenes	150		37	35	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C4-Fluoranthenes/Pyrene	160		37	14	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C4-Naphthalenes	490		150	77	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
C4-Phenanthrenes/Anthracenes	320	AP	74	70	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Chrysene	1700		37	14	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Dibenz(a,h)anthracene	210		37	21	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Dibenzothiophene	500		37	13	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Fluoranthene	5000		37	34	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Fluorene	440		37	18	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Indeno[1,2,3-cd]pyrene	1300		37	26	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Naphthalene	1100		740	68	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Perylene	690		37	7.4	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Phenanthrene	4000		74	66	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30
Pyrene	5500		74	22	ng/g	☼	08/26/19 13:35	08/29/19 20:55	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 20:55*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 20:55*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 20:55*	*30*

Client Sample ID: 22T-SG-06_20190718

Lab Sample ID: 580-87761-23

Date Collected: 07/18/19 09:11
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	270		150	21	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
2-Methylnaphthalene	450		300	30	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Acenaphthene	1900		30	14	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Acenaphthylene	300		30	7.4	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Anthracene	1200		30	24	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[a]anthracene	3700		30	12	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[a]pyrene	4900		30	11	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[b]fluoranthene	4100		30	15	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[e]pyrene	2800		30	10	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[g,h,i]perylene	3800		30	18	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Benzo[k]fluoranthene	1700		30	14	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C1-Chrysenes	970		30	7.7	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C1-Dibenzothiophenes	530		30	19	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C1-Fluoranthenes/pyrene	2800		30	15	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C1-Fluorenes	530		30	17	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30

Client Sample ID: 22T-SG-06_20190718

Lab Sample ID: 580-87761-23

Date Collected: 07/18/19 09:11
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C1-Naphthalenes	460		300	23	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C1-Phenanthrenes/Anthracenes	2600		59	33	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Chrysenes	380		30	9.2	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Dibenzothiophenes	480		30	28	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Fluoranthenes/Pyrene	730		30	13	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Fluorenes	600		59	36	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Naphthalenes	1000		59	23	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C2-Phenanthrenes/Anthracenes	1300		120	73	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Chrysenes	200		30	8.9	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Dibenzothiophenes	330		59	33	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Fluoranthenes/Pyrene	360		30	16	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Fluorenes	470		59	32	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Naphthalenes	1300		59	29	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C3-Phenanthrenes/Anthracenes	700		59	47	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C4-Chrysenes	150		30	10	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C4-Dibenzothiophenes	190		30	28	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C4-Fluoranthenes/Pyrene	200		30	11	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C4-Naphthalenes	830		120	62	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
C4-Phenanthrenes/Anthracenes	530	AP	59	56	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Chrysene	3900		30	11	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Dibenz(a,h)anthracene	460		30	17	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Dibenzothiophene	1500		30	10	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Fluorene	1500		30	14	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Indeno[1,2,3-cd]pyrene	2800		30	21	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Naphthalene	1600		590	54	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30
Perylene	1300		30	5.9	ng/g	☼	08/26/19 13:35	08/29/19 21:20	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 21:20*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 21:20*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 21:20*	*30*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	13000		99	90	ng/g	☼	08/26/19 13:35	08/30/19 15:44	100
Phenanthrene	13000		200	170	ng/g	☼	08/26/19 13:35	08/30/19 15:44	100
Pyrene	15000		200	59	ng/g	☼	08/26/19 13:35	08/30/19 15:44	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/30/19 15:44*	*100*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/30/19 15:44*	*100*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/30/19 15:44*	*100*

Client Sample ID: 22T-SG-09_20190718

Lab Sample ID: 580-87761-26

Date Collected: 07/18/19 10:29
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 51.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	340		140	20	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
2-Methylnaphthalene	770		290	29	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30

Client Sample ID: 22T-SG-09_20190718

Date Collected: 07/18/19 10:29
Date Received: 07/18/19 13:00

Lab Sample ID: 580-87761-26

Matrix: Solid
Percent Solids: 51.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1500		29	13	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Acenaphthylene	230		29	7.2	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Anthracene	850		29	23	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[a]anthracene	2200		29	12	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[a]pyrene	2500		29	10	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[b]fluoranthene	2200		29	15	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[e]pyrene	1500		29	9.8	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[g,h,i]perylene	1900		29	17	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Benzo[k]fluoranthene	790		29	13	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Chrysenes	950		29	7.5	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Dibenzothiophenes	530		29	19	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Fluoranthenes/pyrene	2100		29	15	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Fluorenes	500		29	16	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Naphthalenes	710		290	23	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C1-Phenanthrenes/Anthracenes	2400		58	32	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Chrysenes	490		29	9.0	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Dibenzothiophenes	710		29	27	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Fluoranthenes/Pyrene	920		29	13	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Fluorenes	780		58	35	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Naphthalenes	1100		58	22	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C2-Phenanthrenes/Anthracenes	2100		120	71	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Chrysenes	350		29	8.7	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Dibenzothiophenes	570		58	32	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Fluoranthenes/Pyrene	570		29	16	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Fluorenes	700		58	31	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Naphthalenes	1700		58	28	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C3-Phenanthrenes/Anthracenes	1200		58	46	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C4-Chrysenes	220		29	9.8	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C4-Dibenzothiophenes	320		29	28	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C4-Fluoranthenes/Pyrene	340		29	11	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C4-Naphthalenes	1300		120	60	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
C4-Phenanthrenes/Anthracenes	720	AP	58	54	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Chrysene	2300		29	11	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Dibenz(a,h)anthracene	250		29	17	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Dibenzothiophene	830		29	9.8	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Fluoranthene	6100		29	26	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Fluorene	980		29	14	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Indeno[1,2,3-cd]pyrene	1400		29	20	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Naphthalene	1700		580	53	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Perylene	670		29	5.8	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Phenanthrene	5900		58	51	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30
Pyrene	6900		58	17	ng/g	☼	08/26/19 13:35	08/29/19 21:45	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*	*08/26/19 13:35*	*08/29/19 21:45*	*30*
Nitrobenzene-d5	*0*	*X*	*20 - 121*	*08/26/19 13:35*	*08/29/19 21:45*	*30*
Terphenyl-d14	*0*	*X*	*35 - 150*	*08/26/19 13:35*	*08/29/19 21:45*	*30*

Default Detection Limits

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Prep: 3540C

Analyte	RL	MDL	Units
1-Methylnaphthalene	5.0	0.70	ng/g
2-Methylnaphthalene	10	1.0	ng/g
Acenaphthene	1.0	0.46	ng/g
Acenaphthylene	1.0	0.25	ng/g
Anthracene	1.0	0.81	ng/g
Benzo[a]anthracene	1.0	0.40	ng/g
Benzo[a]pyrene	1.0	0.36	ng/g
Benzo[b]fluoranthene	1.0	0.51	ng/g
Benzo[e]pyrene	1.0	0.34	ng/g
Benzo[g,h,i]perylene	1.0	0.59	ng/g
Benzo[k]fluoranthene	1.0	0.46	ng/g
C1-Chrysenes	1.0	0.26	ng/g
C1-Dibenzothiophenes	1.0	0.65	ng/g
C1-Fluoranthenes/pyrene	1.0	0.52	ng/g
C1-Fluorenes	1.0	0.56	ng/g
C1-Naphthalenes	10	0.79	ng/g
C1-Phenanthrenes/Anthracenes	2.0	1.1	ng/g
C2-Chrysenes	1.0	0.31	ng/g
C2-Dibenzothiophenes	1.0	0.93	ng/g
C2-Fluoranthenes/Pyrene	1.0	0.45	ng/g
C2-Fluorenes	2.0	1.2	ng/g
C2-Naphthalenes	2.0	0.76	ng/g
C2-Phenanthrenes/Anthracenes	4.0	2.5	ng/g
C3-Chrysenes	1.0	0.30	ng/g
C3-Dibenzothiophenes	2.0	1.1	ng/g
C3-Fluoranthenes/Pyrene	1.0	0.55	ng/g
C3-Fluorenes	2.0	1.1	ng/g
C3-Naphthalenes	2.0	0.98	ng/g
C3-Phenanthrenes/Anthracenes	2.0	1.6	ng/g
C4-Chrysenes	1.0	0.34	ng/g
C4-Dibenzothiophenes	1.0	0.95	ng/g
C4-Fluoranthenes/Pyrene	1.0	0.38	ng/g
C4-Naphthalenes	4.0	2.1	ng/g
C4-Phenanthrenes/Anthracenes	2.0	1.9	ng/g
Chrysene	1.0	0.38	ng/g
Dibenz(a,h)anthracene	1.0	0.57	ng/g
Dibenzothiophene	1.0	0.34	ng/g
Fluoranthene	1.0	0.91	ng/g
Fluorene	1.0	0.48	ng/g
Indeno[1,2,3-cd]pyrene	1.0	0.70	ng/g
Naphthalene	20	1.8	ng/g
Perylene	1.0	0.20	ng/g
Phenanthrene	2.0	1.8	ng/g
Pyrene	2.0	0.60	ng/g

Surrogate Summary

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		FBP	NBZ	TPHL						
Lab Sample ID	Client Sample ID	(20-142)	(20-121)	(35-150)						
580-87761-5	22T-VB-02-7.0-8.8_20190717	0 X	0 X	0 X						
580-87761-5 - DL	22T-VB-02-7.0-8.8_20190717	0 X	0 X	0 X						
580-87761-12	22T-VB-03-2.0-4.0_20190717	0 X	0 X	0 X						
580-87761-13	22T-VB-03-4.0-6.0_20190717	0 X	0 X	0 X						
580-87761-13 - DL	22T-VB-03-4.0-6.0_20190717	0 X	0 X	0 X						
580-87761-15	22T-VB-03-8.0-9.0_20190717	0 X	0 X	0 X						
580-87761-15 - DL	22T-VB-03-8.0-9.0_20190717	0 X	0 X	0 X						
580-87761-17	22T-VB-03-11.2-12_20190717	0 X	0 X	0 X						
580-87761-17 - DL	22T-VB-03-11.2-12_20190717	0 X	0 X	0 X						
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	0 X	0 X	0 X						
580-87761-18 - DL	22T-VB-03-4.0-6.0-D_20190717	0 X	0 X	0 X						
580-87761-21	22T-SG-04_20190718	0 X	0 X	0 X						
580-87761-21 MS	22T-SG-04_20190718	0 X	0 X	0 X						
580-87761-21 MSD	22T-SG-04_20190718	0 X	0 X	0 X						
580-87761-22	22T-SG-05_20190718	0 X	0 X	0 X						
580-87761-23	22T-SG-06_20190718	0 X	0 X	0 X						
580-87761-23 - DL	22T-SG-06_20190718	0 X	0 X	0 X						
580-87761-26	22T-SG-09_20190718	0 X	0 X	0 X						
LCS 140-32772/2-A	Lab Control Sample	74	78	83						
MB 140-32772/1-A	Method Blank	68	68	78						

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 140-32772/1-A
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		5.0	0.70	ng/g		08/26/19 13:35	08/29/19 15:02	1
2-Methylnaphthalene	ND		10	1.0	ng/g		08/26/19 13:35	08/29/19 15:02	1
Acenaphthene	ND		1.0	0.46	ng/g		08/26/19 13:35	08/29/19 15:02	1
Acenaphthylene	ND		1.0	0.25	ng/g		08/26/19 13:35	08/29/19 15:02	1
Anthracene	ND		1.0	0.81	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[a]anthracene	ND		1.0	0.40	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[a]pyrene	ND		1.0	0.36	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[b]fluoranthene	ND		1.0	0.51	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[e]pyrene	ND		1.0	0.34	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[g,h,i]perylene	ND		1.0	0.59	ng/g		08/26/19 13:35	08/29/19 15:02	1
Benzo[k]fluoranthene	ND		1.0	0.46	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Chrysenes	ND		1.0	0.26	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Dibenzothiophenes	ND		1.0	0.65	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Fluoranthenes/pyrene	ND		1.0	0.52	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Fluorenes	ND		1.0	0.56	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Naphthalenes	ND		10	0.79	ng/g		08/26/19 13:35	08/29/19 15:02	1
C1-Phenanthrenes/Anthracenes	ND		2.0	1.1	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Chrysenes	ND		1.0	0.31	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Dibenzothiophenes	ND		1.0	0.93	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Fluoranthenes/Pyrene	ND		1.0	0.45	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Fluorenes	ND		2.0	1.2	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Naphthalenes	ND		2.0	0.76	ng/g		08/26/19 13:35	08/29/19 15:02	1
C2-Phenanthrenes/Anthracenes	ND		4.0	2.5	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Chrysenes	ND		1.0	0.30	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Dibenzothiophenes	ND		2.0	1.1	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Fluoranthenes/Pyrene	ND		1.0	0.55	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Fluorenes	ND		2.0	1.1	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Naphthalenes	ND		2.0	0.98	ng/g		08/26/19 13:35	08/29/19 15:02	1
C3-Phenanthrenes/Anthracenes	ND		2.0	1.6	ng/g		08/26/19 13:35	08/29/19 15:02	1
C4-Chrysenes	ND		1.0	0.34	ng/g		08/26/19 13:35	08/29/19 15:02	1
C4-Dibenzothiophenes	ND		1.0	0.95	ng/g		08/26/19 13:35	08/29/19 15:02	1
C4-Fluoranthenes/Pyrene	ND		1.0	0.38	ng/g		08/26/19 13:35	08/29/19 15:02	1
C4-Naphthalenes	ND		4.0	2.1	ng/g		08/26/19 13:35	08/29/19 15:02	1
C4-Phenanthrenes/Anthracenes	ND		2.0	1.9	ng/g		08/26/19 13:35	08/29/19 15:02	1
Chrysene	ND		1.0	0.38	ng/g		08/26/19 13:35	08/29/19 15:02	1
Dibenz(a,h)anthracene	ND		1.0	0.57	ng/g		08/26/19 13:35	08/29/19 15:02	1
Dibenzothiophene	ND		1.0	0.34	ng/g		08/26/19 13:35	08/29/19 15:02	1
Fluoranthene	ND		1.0	0.91	ng/g		08/26/19 13:35	08/29/19 15:02	1
Fluorene	ND		1.0	0.48	ng/g		08/26/19 13:35	08/29/19 15:02	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.70	ng/g		08/26/19 13:35	08/29/19 15:02	1
Naphthalene	ND		20	1.8	ng/g		08/26/19 13:35	08/29/19 15:02	1
Perylene	ND		1.0	0.20	ng/g		08/26/19 13:35	08/29/19 15:02	1
Phenanthrene	ND		2.0	1.8	ng/g		08/26/19 13:35	08/29/19 15:02	1
Pyrene	ND		2.0	0.60	ng/g		08/26/19 13:35	08/29/19 15:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*68*		*20 - 142*	*08/26/19 13:35*	*08/29/19 15:02*	*1*
Nitrobenzene-d5	*68*		*20 - 121*	*08/26/19 13:35*	*08/29/19 15:02*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 140-32772/1-A
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	78		35 - 150	08/26/19 13:35	08/29/19 15:02	1

Lab Sample ID: LCS 140-32772/2-A
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32772

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	50.0	37.9		ng/g		76	50 - 150
2-Methylnaphthalene	50.0	38.5		ng/g		77	50 - 150
Acenaphthene	50.0	36.3		ng/g		73	50 - 150
Acenaphthylene	50.0	33.1		ng/g		66	30 - 150
Anthracene	50.0	33.1		ng/g		66	30 - 150
Benzo[a]anthracene	50.0	43.3		ng/g		87	50 - 150
Benzo[a]pyrene	50.0	36.5		ng/g		73	30 - 150
Benzo[b]fluoranthene	50.0	40.1		ng/g		80	50 - 150
Benzo[e]pyrene	50.0	37.7		ng/g		75	50 - 150
Benzo[g,h,i]perylene	50.0	36.4		ng/g		73	50 - 150
Benzo[k]fluoranthene	50.0	36.6		ng/g		73	50 - 150
Chrysene	50.0	38.4		ng/g		77	50 - 150
Dibenz(a,h)anthracene	50.0	38.2		ng/g		76	50 - 150
Dibenzothiophene	50.0	35.0		ng/g		70	50 - 150
Fluoranthene	50.0	42.0		ng/g		84	50 - 150
Fluorene	50.0	36.6		ng/g		73	50 - 150
Indeno[1,2,3-cd]pyrene	50.0	39.1		ng/g		78	50 - 150
Naphthalene	50.0	37.2		ng/g		74	50 - 150
Perylene	50.0	31.7		ng/g		63	30 - 150
Phenanthrene	50.0	36.4		ng/g		73	50 - 150
Pyrene	50.0	40.4		ng/g		81	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	74		20 - 142
Nitrobenzene-d5	78		20 - 121
Terphenyl-d14	83		35 - 150

Lab Sample ID: 580-87761-21 MS
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: 22T-SG-04_20190718
Prep Type: Total/NA
Prep Batch: 32772

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	200	F1	50.9	172	F1	ng/g	☼	-60	50 - 150
2-Methylnaphthalene	380		50.9	277	J 4	ng/g	☼	-203	50 - 150
Acenaphthene	1800		50.9	1140	4	ng/g	☼	-1363	50 - 150
Acenaphthylene	120	F1	50.9	160		ng/g	☼	79	30 - 150
Anthracene	590		50.9	415	4	ng/g	☼	-340	30 - 150
Benzo[a]anthracene	1300		50.9	969	4	ng/g	☼	-662	50 - 150
Benzo[a]pyrene	1400		50.9	1120	4	ng/g	☼	-507	30 - 150
Benzo[b]fluoranthene	1300		50.9	1050	4	ng/g	☼	-515	50 - 150
Benzo[e]pyrene	830		50.9	673	4	ng/g	☼	-314	50 - 150

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 580-87761-21 MS
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: 22T-SG-04_20190718
Prep Type: Total/NA
Prep Batch: 32772

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[g,h,i]perylene	1000		50.9	852	4	ng/g	☼	-344	50 - 150
Benzo[k]fluoranthene	470		50.9	363	4	ng/g	☼	-212	50 - 150
Chrysene	1400		50.9	1060	4	ng/g	☼	-729	50 - 150
Dibenz(a,h)anthracene	150	F1	50.9	135	F1	ng/g	☼	-24	50 - 150
Dibenzothiophene	670		50.9	497	4	ng/g	☼	-344	50 - 150
Fluoranthene	4300		50.9	3240	4	ng/g	☼	-2022	50 - 150
Fluorene	1200		50.9	701	4	ng/g	☼	-964	50 - 150
Indeno[1,2,3-cd]pyrene	740		50.9	632	4	ng/g	☼	-219	50 - 150
Naphthalene	670		50.9	551	J 4	ng/g	☼	-238	50 - 150
Perylene	380		50.9	310	4	ng/g	☼	-147	30 - 150
Phenanthrene	4800		50.9	3360	4	ng/g	☼	-2888	50 - 150
Pyrene	4500		50.9	3190	4	ng/g	☼	-2589	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*
Nitrobenzene-d5	*0*	*X*	*20 - 121*
Terphenyl-d14	*0*	*X*	*35 - 150*

Lab Sample ID: 580-87761-21 MSD
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: 22T-SG-04_20190718
Prep Type: Total/NA
Prep Batch: 32772

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	200	F1	50.9	172	F1	ng/g	☼	-60	50 - 150	0	35
2-Methylnaphthalene	380		50.9	314	4	ng/g	☼	-130	50 - 150	13	35
Acenaphthene	1800		50.9	1340	4	ng/g	☼	-970	50 - 150	16	35
Acenaphthylene	120	F1	50.9	133	F1	ng/g	☼	27	30 - 150	18	35
Anthracene	590		50.9	460	4	ng/g	☼	-254	30 - 150	10	35
Benzo[a]anthracene	1300		50.9	991	4	ng/g	☼	-618	50 - 150	2	35
Benzo[a]pyrene	1400		50.9	970	4	ng/g	☼	-796	30 - 150	14	35
Benzo[b]fluoranthene	1300		50.9	928	4	ng/g	☼	-755	50 - 150	12	35
Benzo[e]pyrene	830		50.9	597	4	ng/g	☼	-463	50 - 150	12	35
Benzo[g,h,i]perylene	1000		50.9	705	4	ng/g	☼	-634	50 - 150	19	35
Benzo[k]fluoranthene	470		50.9	349	4	ng/g	☼	-240	50 - 150	4	35
Chrysene	1400		50.9	1060	4	ng/g	☼	-724	50 - 150	0	35
Dibenz(a,h)anthracene	150	F1	50.9	125	F1	ng/g	☼	-45	50 - 150	8	35
Dibenzothiophene	670		50.9	593	4	ng/g	☼	-156	50 - 150	18	35
Fluoranthene	4300		50.9	3360	4	ng/g	☼	-1788	50 - 150	4	35
Fluorene	1200		50.9	860	4	ng/g	☼	-652	50 - 150	20	35
Indeno[1,2,3-cd]pyrene	740		50.9	525	4	ng/g	☼	-431	50 - 150	19	35
Naphthalene	670		50.9	580	J 4	ng/g	☼	-181	50 - 150	5	35
Perylene	380		50.9	279	4	ng/g	☼	-208	30 - 150	10	35
Phenanthrene	4800		50.9	4010	4	ng/g	☼	-1609	50 - 150	18	35
Pyrene	4500		50.9	3470	4	ng/g	☼	-2043	50 - 150	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*0*	*X*	*20 - 142*
Nitrobenzene-d5	*0*	*X*	*20 - 121*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 580-87761-21 MSD
Matrix: Solid
Analysis Batch: 33099

Client Sample ID: 22T-SG-04_20190718
Prep Type: Total/NA
Prep Batch: 32772

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Terphenyl-d14	*0*	*X*	*35 - 150*

GC/MS Semi VOA

Prep Batch: 32772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-87761-5 - DL	22T-VB-02-7.0-8.8_20190717	Total/NA	Solid	3540C	
580-87761-5	22T-VB-02-7.0-8.8_20190717	Total/NA	Solid	3540C	
580-87761-12	22T-VB-03-2.0-4.0_20190717	Total/NA	Solid	3540C	
580-87761-13 - DL	22T-VB-03-4.0-6.0_20190717	Total/NA	Solid	3540C	
580-87761-13	22T-VB-03-4.0-6.0_20190717	Total/NA	Solid	3540C	
580-87761-15	22T-VB-03-8.0-9.0_20190717	Total/NA	Solid	3540C	
580-87761-15 - DL	22T-VB-03-8.0-9.0_20190717	Total/NA	Solid	3540C	
580-87761-17	22T-VB-03-11.2-12_20190717	Total/NA	Solid	3540C	
580-87761-17 - DL	22T-VB-03-11.2-12_20190717	Total/NA	Solid	3540C	
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	Total/NA	Solid	3540C	
580-87761-18 - DL	22T-VB-03-4.0-6.0-D_20190717	Total/NA	Solid	3540C	
580-87761-21	22T-SG-04_20190718	Total/NA	Solid	3540C	
580-87761-22	22T-SG-05_20190718	Total/NA	Solid	3540C	
580-87761-23	22T-SG-06_20190718	Total/NA	Solid	3540C	
580-87761-23 - DL	22T-SG-06_20190718	Total/NA	Solid	3540C	
580-87761-26	22T-SG-09_20190718	Total/NA	Solid	3540C	
MB 140-32772/1-A	Method Blank	Total/NA	Solid	3540C	
LCS 140-32772/2-A	Lab Control Sample	Total/NA	Solid	3540C	
580-87761-21 MS	22T-SG-04_20190718	Total/NA	Solid	3540C	
580-87761-21 MSD	22T-SG-04_20190718	Total/NA	Solid	3540C	

Analysis Batch: 33099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-87761-5	22T-VB-02-7.0-8.8_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-12	22T-VB-03-2.0-4.0_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-13	22T-VB-03-4.0-6.0_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-15	22T-VB-03-8.0-9.0_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-17	22T-VB-03-11.2-12_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-21	22T-SG-04_20190718	Total/NA	Solid	8270D SIM	32772
580-87761-22	22T-SG-05_20190718	Total/NA	Solid	8270D SIM	32772
580-87761-23	22T-SG-06_20190718	Total/NA	Solid	8270D SIM	32772
580-87761-26	22T-SG-09_20190718	Total/NA	Solid	8270D SIM	32772
MB 140-32772/1-A	Method Blank	Total/NA	Solid	8270D SIM	32772
LCS 140-32772/2-A	Lab Control Sample	Total/NA	Solid	8270D SIM	32772
580-87761-21 MS	22T-SG-04_20190718	Total/NA	Solid	8270D SIM	32772
580-87761-21 MSD	22T-SG-04_20190718	Total/NA	Solid	8270D SIM	32772

Analysis Batch: 33157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-87761-5 - DL	22T-VB-02-7.0-8.8_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-13 - DL	22T-VB-03-4.0-6.0_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-15 - DL	22T-VB-03-8.0-9.0_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-17 - DL	22T-VB-03-11.2-12_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-18 - DL	22T-VB-03-4.0-6.0-D_20190717	Total/NA	Solid	8270D SIM	32772
580-87761-23 - DL	22T-SG-06_20190718	Total/NA	Solid	8270D SIM	32772

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Client Sample ID: 22T-VB-02-7.0-8.8_20190717
Lab Sample ID: 580-87761-5
Date Collected: 07/17/19 14:20
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 58.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 17:08	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	50	33157	08/30/19 14:02	JRC	TAL KNX

Client Sample ID: 22T-VB-03-2.0-4.0_20190717
Lab Sample ID: 580-87761-12
Date Collected: 07/17/19 16:35
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 54.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 17:34	JRC	TAL KNX

Client Sample ID: 22T-VB-03-4.0-6.0_20190717
Lab Sample ID: 580-87761-13
Date Collected: 07/17/19 16:40
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 59.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 17:59	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	200	33157	08/30/19 16:09	JRC	TAL KNX

Client Sample ID: 22T-VB-03-8.0-9.0_20190717
Lab Sample ID: 580-87761-15
Date Collected: 07/17/19 16:50
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 61.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 18:24	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	100	33157	08/30/19 14:27	JRC	TAL KNX

Client Sample ID: 22T-VB-03-11.2-12_20190717
Lab Sample ID: 580-87761-17
Date Collected: 07/17/19 17:00
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 68.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 18:50	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	100	33157	08/30/19 14:53	JRC	TAL KNX

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717

Lab Sample ID: 580-87761-18

Date Collected: 07/17/19 17:05
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 58.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 19:15	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	100	33157	08/30/19 15:18	JRC	TAL KNX

Client Sample ID: 22T-SG-04_20190718

Lab Sample ID: 580-87761-21

Date Collected: 07/18/19 08:36
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 19:40	JRC	TAL KNX

Client Sample ID: 22T-SG-05_20190718

Lab Sample ID: 580-87761-22

Date Collected: 07/18/19 08:55
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 39.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 20:55	JRC	TAL KNX

Client Sample ID: 22T-SG-06_20190718

Lab Sample ID: 580-87761-23

Date Collected: 07/18/19 09:11
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 49.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 21:20	JRC	TAL KNX
Total/NA	Prep	3540C	DL		32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM	DL	100	33157	08/30/19 15:44	JRC	TAL KNX

Client Sample ID: 22T-SG-09_20190718

Lab Sample ID: 580-87761-26

Date Collected: 07/18/19 10:29
Matrix: Solid
Date Received: 07/18/19 13:00
Percent Solids: 51.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			32772	08/26/19 13:35	CLI	TAL KNX
Total/NA	Analysis	8270D SIM		30	33099	08/29/19 21:45	JRC	TAL KNX

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Laboratory: Eurofins TestAmerica, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	WA100007	11-05-19

Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	TNI0189	01-01-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270D SIM	3540C	Solid	1-Methylnaphthalene
8270D SIM	3540C	Solid	2-Methylnaphthalene
8270D SIM	3540C	Solid	Acenaphthene
8270D SIM	3540C	Solid	Acenaphthylene
8270D SIM	3540C	Solid	Anthracene
8270D SIM	3540C	Solid	Benzo[a]anthracene
8270D SIM	3540C	Solid	Benzo[a]pyrene
8270D SIM	3540C	Solid	Benzo[b]fluoranthene
8270D SIM	3540C	Solid	Benzo[e]pyrene
8270D SIM	3540C	Solid	Benzo[g,h,i]perylene
8270D SIM	3540C	Solid	Benzo[k]fluoranthene
8270D SIM	3540C	Solid	C1-Chrysenes
8270D SIM	3540C	Solid	C1-Dibenzothiophenes
8270D SIM	3540C	Solid	C1-Fluoranthenes/pyrene
8270D SIM	3540C	Solid	C1-Fluorenes
8270D SIM	3540C	Solid	C1-Naphthalenes
8270D SIM	3540C	Solid	C1-Phenanthrenes/Anthracenes
8270D SIM	3540C	Solid	C2-Chrysenes
8270D SIM	3540C	Solid	C2-Dibenzothiophenes
8270D SIM	3540C	Solid	C2-Fluoranthenes/Pyrene
8270D SIM	3540C	Solid	C2-Fluorenes
8270D SIM	3540C	Solid	C2-Naphthalenes
8270D SIM	3540C	Solid	C2-Phenanthrenes/Anthracenes
8270D SIM	3540C	Solid	C3-Chrysenes
8270D SIM	3540C	Solid	C3-Dibenzothiophenes
8270D SIM	3540C	Solid	C3-Fluoranthenes/Pyrene
8270D SIM	3540C	Solid	C3-Fluorenes
8270D SIM	3540C	Solid	C3-Naphthalenes
8270D SIM	3540C	Solid	C3-Phenanthrenes/Anthracenes
8270D SIM	3540C	Solid	C4-Chrysenes
8270D SIM	3540C	Solid	C4-Dibenzothiophenes
8270D SIM	3540C	Solid	C4-Fluoranthenes/Pyrene
8270D SIM	3540C	Solid	C4-Naphthalenes
8270D SIM	3540C	Solid	C4-Phenanthrenes/Anthracenes
8270D SIM	3540C	Solid	Chrysene
8270D SIM	3540C	Solid	Dibenz(a,h)anthracene
8270D SIM	3540C	Solid	Dibenzothiophene
8270D SIM	3540C	Solid	Fluoranthene
8270D SIM	3540C	Solid	Fluorene
8270D SIM	3540C	Solid	Indeno[1,2,3-cd]pyrene

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	TNI0189	01-01-20

8270D SIM	3540C	Solid	Naphthalene
8270D SIM	3540C	Solid	Perylene
8270D SIM	3540C	Solid	Phenanthrene
8270D SIM	3540C	Solid	Pyrene

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL KNX
3540C	Soxhlet Extraction	SW846	TAL KNX

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Portland Harbor

Job ID: 580-87761-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-87761-5	22T-VB-02-7.0-8.8_20190717	Solid	07/17/19 14:20	07/18/19 13:00	
580-87761-12	22T-VB-03-2.0-4.0_20190717	Solid	07/17/19 16:35	07/18/19 13:00	
580-87761-13	22T-VB-03-4.0-6.0_20190717	Solid	07/17/19 16:40	07/18/19 13:00	
580-87761-15	22T-VB-03-8.0-9.0_20190717	Solid	07/17/19 16:50	07/18/19 13:00	
580-87761-17	22T-VB-03-11.2-12_20190717	Solid	07/17/19 17:00	07/18/19 13:00	
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	Solid	07/17/19 17:05	07/18/19 13:00	
580-87761-21	22T-SG-04_20190718	Solid	07/18/19 08:36	07/18/19 13:00	
580-87761-22	22T-SG-05_20190718	Solid	07/18/19 08:55	07/18/19 13:00	
580-87761-23	22T-SG-06_20190718	Solid	07/18/19 09:11	07/18/19 13:00	
580-87761-26	22T-SG-09_20190718	Solid	07/18/19 10:29	07/18/19 13:00	

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 32163

Lab Sample ID: IC 140-32163/2 Client Sample ID:

Date Analyzed: 07/21/19 11:55 Lab File ID: ic 1XC.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chrysene	10.17	Baseline	cochranj	07/29/19 14:32

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: MB 140-32772/1-A Client Sample ID:

Date Analyzed: 08/29/19 15:02 Lab File ID: mb 140-32772-1-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
C1-Dibenzothiophenes		Baseline	cochranj	08/30/19 09:11
C2-Dibenzothiophenes		Baseline	cochranj	08/30/19 09:11
C3-Fluorenes		Baseline	cochranj	08/30/19 09:11
Dibenz(a,h)anthracene		Invalid Compound ID	cochranj	08/30/19 09:12
Dibenzothiophene		Invalid Compound ID	cochranj	08/30/19 09:12
Perylene	11.77	Peak assignment corrected	cochranj	08/29/19 15:40
Benzo[g,h,i]perylene	13.52	Peak assignment corrected	cochranj	08/29/19 15:40

Lab Sample ID: 580-87761-5 Client Sample ID: 22T-VB-02-7.0-8.8_20190717

Date Analyzed: 08/29/19 17:08 Lab File ID: 580-87761-b-5-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:56
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:56
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:56
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 09:56
Benzo[k]fluoranthene	11.31	Missed Peak	cochranj	08/30/19 09:56
Benzo[a]pyrene	11.67	Missed Peak	cochranj	08/30/19 09:57

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-12 Client Sample ID: 22T-VB-03-2.0-4.0_20190717

Date Analyzed: 08/29/19 17:34 Lab File ID: 580-87761-b-12-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:57
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:57
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:57
Benzo[b]fluoranthene	11.28	Split Peak	cochranj	08/30/19 07:58
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 07:58
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 07:59
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 10:08

Lab Sample ID: 580-87761-13 Client Sample ID: 22T-VB-03-4.0-6.0_20190717

Date Analyzed: 08/29/19 17:59 Lab File ID: 580-87761-b-13-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:57
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:57
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:57
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	09/03/19 17:43
Benzo[k]fluoranthene	11.30	Missed Peak	cochranj	09/03/19 17:43
Benzo[a]pyrene	11.67	Missed Peak	cochranj	09/03/19 17:43

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-15 Client Sample ID: 22T-VB-03-8.0-9.0_20190717

Date Analyzed: 08/29/19 18:24 Lab File ID: 580-87761-b-15-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:57
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:57
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:57
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 10:34
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 10:34
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 10:34
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 10:34

Lab Sample ID: 580-87761-17 Client Sample ID: 22T-VB-03-11.2-12_20190717

Date Analyzed: 08/29/19 18:50 Lab File ID: 580-87761-b-17-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:57
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:57
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:57
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 10:43
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 10:43
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 10:43

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-18 Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717

Date Analyzed: 08/29/19 19:15 Lab File ID: 580-87761-b-18-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:58
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:58
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:58
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 10:56
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 10:56
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 10:56
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 10:57

Lab Sample ID: 580-87761-21 Client Sample ID: 22T-SG-04_20190718

Date Analyzed: 08/29/19 19:40 Lab File ID: 580-87761-b-21-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:58
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:58
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:58
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 11:11
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 11:11
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 11:11
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 11:12

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-21 MS Client Sample ID: 22T-SG-04_20190718 MS

Date Analyzed: 08/29/19 20:05 Lab File ID: 580-87761-b-21-b ms.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:58
C1-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:33
C1-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:32
C1-Fluoranthenes/pyrene		Invalid Compound ID	cochranj	08/30/19 11:33
C1-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:32
C1-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:32
C1-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:32
C2-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:33
C2-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:32
C2-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:33
C2-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:32
C2-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:32
C2-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:33
C3-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:33
C3-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:32
C3-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:33
C3-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:32
C3-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:32
C3-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:33
C4-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:33
C4-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:32
C4-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:33
C4-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:32
C4-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:33
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:58
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:58
Benzo[k]fluoranthene	11.31	Missed Peak	cochranj	09/03/19 18:02
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 11:31

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-21 MSD Client Sample ID: 22T-SG-04_20190718 MSD

Date Analyzed: 08/29/19 20:30 Lab File ID: 580-87761-b-21-c msd.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:59
C1-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:35
C1-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:35
C1-Fluoranthenes/pyrene		Invalid Compound ID	cochranj	08/30/19 11:35
C1-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:35
C1-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:35
C1-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:35
C2-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Fluorenes		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:35
C3-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:35
C4-Chrysenes		Invalid Compound ID	cochranj	08/30/19 11:36
C4-Dibenzothiophenes		Invalid Compound ID	cochranj	08/30/19 11:35
C4-Fluoranthenes/Pyrene		Invalid Compound ID	cochranj	08/30/19 11:35
C4-Naphthalenes		Invalid Compound ID	cochranj	08/30/19 11:35
C4-Phenanthrenes/Anthracenes		Invalid Compound ID	cochranj	08/30/19 11:35
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:59
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:59
Benzo[b]fluoranthene	11.28	Split Peak	cochranj	08/30/19 11:34
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 11:35
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 11:35

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-22 Client Sample ID: 22T-SG-05_20190718

Date Analyzed: 08/29/19 20:55 Lab File ID: 580-87761-b-22-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:59
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:59
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:59
Benzo[b]fluoranthene	11.28	Split Peak	cochranj	08/30/19 12:33
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 12:33
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 12:34

Lab Sample ID: 580-87761-23 Client Sample ID: 22T-SG-06_20190718

Date Analyzed: 08/29/19 21:20 Lab File ID: 580-87761-b-23-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:59
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:59
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:59
Benzo[b]fluoranthene	11.29	Split Peak	cochranj	08/30/19 12:42
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 12:42
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 12:42
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 12:43

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33099

Lab Sample ID: 580-87761-26 Client Sample ID:

Date Analyzed: 08/29/19 21:45 Lab File ID: 580-87761-b-26-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene-d10	6.34	Baseline	cochranj	08/30/19 06:54
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 10:59
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 10:59
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 10:59
Benzo[b]fluoranthene	11.28	Split Peak	cochranj	08/30/19 06:55
Benzo[k]fluoranthene	11.31	Split Peak	cochranj	08/30/19 06:56
Benzo[a]pyrene	11.67	Split Peak	cochranj	08/30/19 06:56
Dibenz(a,h)anthracene	13.16	Baseline	cochranj	08/30/19 06:57

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33157

Lab Sample ID: 580-87761-5 DL Client Sample ID: 22T-VB-02-7.0-8.8_20190717 DL

Date Analyzed: 08/30/19 14:02 Lab File ID: 580-87761-b-5-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:14
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:14
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:14

Lab Sample ID: 580-87761-15 DL Client Sample ID: 22T-VB-03-8.0-9.0_20190717 DL

Date Analyzed: 08/30/19 14:27 Lab File ID: 580-87761-b-15-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:15
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:15
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:15

Lab Sample ID: 580-87761-17 DL Client Sample ID: 22T-VB-03-11.2-12_20190717 DL

Date Analyzed: 08/30/19 14:53 Lab File ID: 580-87761-b-17-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:15
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:15
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:15

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxvi Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Analysis Batch Number: 33157

Lab Sample ID: 580-87761-18 DL Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 DL

Date Analyzed: 08/30/19 15:18 Lab File ID: 580-87761-b-18-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:15
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:15
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:15
Chrysene-d12	10.14	Baseline	cochranj	08/30/19 16:01

Lab Sample ID: 580-87761-23 DL Client Sample ID: 22T-SG-06_20190718 DL

Date Analyzed: 08/30/19 15:44 Lab File ID: 580-87761-b-23-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:16
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:16
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:16

Lab Sample ID: 580-87761-13 DL Client Sample ID: 22T-VB-03-4.0-6.0_20190717 DL

Date Analyzed: 08/30/19 16:09 Lab File ID: 580-87761-b-13-a.D GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorobiphenyl (Surr)		Invalid Compound ID	cochranj	08/31/19 13:16
Nitrobenzene-d5		Invalid Compound ID	cochranj	08/31/19 13:16
Terphenyl-d14		Invalid Compound ID	cochranj	08/31/19 13:16

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
608270simccv_00005	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
608270simccv_00005	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	25 uL	1-Methylnaphthalene	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Phenanthrene	0.5 ug/mL
							Pyrene	0.5 ug/mL
							Benzo[e]pyrene	0.5 ug/mL
							Dibenzothiophene	0.5 ug/mL
							Perylene	0.5 ug/mL
					60xx8270simsr_00005	25 uL	2-Fluorobiphenyl (Surr)	0.5 ug/mL
							Nitrobenzene-d5	0.5 ug/mL
							Terphenyl-d14	0.5 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
60ICV8270SIM_00010	11/30/19	07/15/19	Hexane, Lot 221330	1 mL	60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
60ICV8270SIM_00010	11/30/19	07/15/19	Hexane, Lot 221330	1 mL	60xx8270simsr_00005	25 uL	2-Fluorobiphenyl (Surr)	0.5 ug/mL
							Nitrobenzene-d5	0.5 ug/mL
							Terphenyl-d14	0.5 ug/mL
					60XXICVPAH2_00003	25 uL	1-Methylnaphthalene	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Phenanthrene	0.5 ug/mL
							Pyrene	0.5 ug/mL
					60XXSACPAHICV_00007	25 uL	Benzo[e]pyrene	0.5 ug/mL
							Dibenzothiophene	0.5 ug/mL
							Perylene	0.5 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60XXICVPAH2_00003	03/06/21	03/05/19	Hexane, Lot 203464	5 mL	60MXSSCLMX5_00001	0.05 mL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..60MXSSCLMX5_00001	03/06/21		Restek, Lot A0115109		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
.60XXSACPAHICV_00007	04/19/20	07/15/19	Hexane, Lot 221330	10 mL	60MXSSBENZEP_00005	1000 uL	Benzo[e]pyrene	20 ug/mL
					60MXSSDBTHP_00004	200 uL	Dibenzothiophene	20 ug/mL
					60MXSSPERYLN_00003	200 uL	Perylene	20 ug/mL
..60MXSSBENZEP_00005	07/15/21		CIL, Lot SDGL-018		(Purchased Reagent)		Benzo[e]pyrene	200 ug/mL
..60MXSSDBTHP_00004	05/02/21		SPEX CertiPrep, Lot EN180502014		(Purchased Reagent)		Dibenzothiophene	1000 ug/mL
..60MXSSPERYLN_00003	05/02/20		SPEX CertiPrep, Lot EN170502007		(Purchased Reagent)		Perylene	1000 ug/mL
60L18270SIM_00005	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	1 uL	1-Methylnaphthalene	0.02 ug/mL
							2-Methylnaphthalene	0.02 ug/mL
							Acenaphthene	0.02 ug/mL
							Acenaphthylene	0.02 ug/mL
							Anthracene	0.02 ug/mL
							Benzo[a]anthracene	0.02 ug/mL
							Benzo[a]pyrene	0.02 ug/mL
							Benzo[b]fluoranthene	0.02 ug/mL
							Benzo[g,h,i]perylene	0.02 ug/mL
							Benzo[k]fluoranthene	0.02 ug/mL
							Chrysene	0.02 ug/mL
							Dibenz(a,h)anthracene	0.02 ug/mL
							Fluoranthene	0.02 ug/mL
							Fluorene	0.02 ug/mL
							Indeno[1,2,3-cd]pyrene	0.02 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	0.02 ug/mL
							Phenanthrene	0.02 ug/mL
							Pyrene	0.02 ug/mL
							1-Methylphenanthrene	0.02 ug/mL
							2,3,5-Trimethylnaphthalene	0.02 ug/mL
							2,6-Dimethylnaphthalene	0.02 ug/mL
							Benzo[e]pyrene	0.02 ug/mL
							Dibenzothiophene	0.02 ug/mL
							Perylene	0.02 ug/mL
							1,1'-Biphenyl	0.02 ug/mL
							Dibenzofuran	0.02 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	1 uL	2-Fluorobiphenyl (Surr)	0.02 ug/mL
							Nitrobenzene-d5	0.02 ug/mL
							Terphenyl-d14	0.02 ug/mL
					60xx8270smspc_00003	1 uL	Benzo(b)thiophene	0.02 ug/mL
							cis-Decalin	0.02 ug/mL
							Naphthobenzothiophene	0.02 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
60L28270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	5 uL	1-Methylnaphthalene	0.1 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							1-Methylphenanthrene	0.1 ug/mL
							2,3,5-Trimethylnaphthalene	0.1 ug/mL
							2,6-Dimethylnaphthalene	0.1 ug/mL
							Benzo[e]pyrene	0.1 ug/mL
							Dibenzothiophene	0.1 ug/mL
							Perylene	0.1 ug/mL
							1,1'-Biphenyl	0.1 ug/mL
							Dibenzofuran	0.1 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	5 uL	2-Fluorobiphenyl (Surr)	0.1 ug/mL
							Nitrobenzene-d5	0.1 ug/mL
							Terphenyl-d14	0.1 ug/mL
					60xx8270smspc_00003	5 uL	Benzo(b)thiophene	0.1 ug/mL
							cis-Decalin	0.1 ug/mL
							Naphthobenzothiophene	0.1 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL
60L38270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	12.5 uL	1-Methylnaphthalene	0.25 ug/mL
							2-Methylnaphthalene	0.25 ug/mL
							Acenaphthene	0.25 ug/mL
							Acenaphthylene	0.25 ug/mL
							Anthracene	0.25 ug/mL
							Benzo[a]anthracene	0.25 ug/mL
							Benzo[a]pyrene	0.25 ug/mL
							Benzo[b]fluoranthene	0.25 ug/mL
							Benzo[g,h,i]perylene	0.25 ug/mL
							Benzo[k]fluoranthene	0.25 ug/mL
							Chrysene	0.25 ug/mL
							Dibenz(a,h)anthracene	0.25 ug/mL
							Fluoranthene	0.25 ug/mL
							Fluorene	0.25 ug/mL
							Indeno[1,2,3-cd]pyrene	0.25 ug/mL
							Naphthalene	0.25 ug/mL
							Phenanthrene	0.25 ug/mL
							Pyrene	0.25 ug/mL
							1-Methylphenanthrene	0.25 ug/mL
							2,3,5-Trimethylnaphthalene	0.25 ug/mL
							2,6-Dimethylnaphthalene	0.25 ug/mL
							Benzo[e]pyrene	0.25 ug/mL
							Dibenzothiophene	0.25 ug/mL
							Perylene	0.25 ug/mL
							1,1'-Biphenyl	0.25 ug/mL
							Dibenzofuran	0.25 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	12.5 uL	2-Fluorobiphenyl (Surr)	0.25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5	0.25 ug/mL
							Terphenyl-d14	0.25 ug/mL
					60xx8270smspc_00003	12.5 uL	Benzo(b)thiophene	0.25 ug/mL
							cis-Decalin	0.25 ug/mL
							Naphthobenzothiophene	0.25 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL
60L48270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	25 uL	1-Methylnaphthalene	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Naphthalene	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	0.5 ug/mL
							Pyrene	0.5 ug/mL
							1-Methylphenanthrene	0.5 ug/mL
							2,3,5-Trimethylnaphthalene	0.5 ug/mL
							2,6-Dimethylnaphthalene	0.5 ug/mL
							Benzo[e]pyrene	0.5 ug/mL
							Dibenzothiophene	0.5 ug/mL
							Perylene	0.5 ug/mL
							1,1'-Biphenyl	0.5 ug/mL
							Dibenzofuran	0.5 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	25 uL	2-Fluorobiphenyl (Surr)	0.5 ug/mL
							Nitrobenzene-d5	0.5 ug/mL
							Terphenyl-d14	0.5 ug/mL
					60xx8270smspc_00003	25 uL	Benzo(b)thiophene	0.5 ug/mL
							cis-Decalin	0.5 ug/mL
							Naphthobenzothiophene	0.5 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
60L58270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	50 uL	1-Methylnaphthalene	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Anthracene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Chrysene	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Naphthalene	1 ug/mL
							Phenanthrene	1 ug/mL
							Pyrene	1 ug/mL
							1-Methylphenanthrene	1 ug/mL
							2,3,5-Trimethylnaphthalene	1 ug/mL
							2,6-Dimethylnaphthalene	1 ug/mL
							Benzo[e]pyrene	1 ug/mL
							Dibenzothiophene	1 ug/mL
							Perylene	1 ug/mL
							1,1'-Biphenyl	1 ug/mL
							Dibenzofuran	1 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	50 uL	2-Fluorobiphenyl (Surr)	1 ug/mL
							Nitrobenzene-d5	1 ug/mL
							Terphenyl-d14	1 ug/mL
					60xx8270smspc_00003	50 uL	Benzo(b)thiophene	1 ug/mL
							cis-Decalin	1 ug/mL
							Naphthobenzothiophene	1 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL
60L68270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	125 uL	1-Methylnaphthalene	2.5 ug/mL
							2-Methylnaphthalene	2.5 ug/mL
							Acenaphthene	2.5 ug/mL
							Acenaphthylene	2.5 ug/mL
							Anthracene	2.5 ug/mL
							Benzo[a]anthracene	2.5 ug/mL
							Benzo[a]pyrene	2.5 ug/mL
							Benzo[b]fluoranthene	2.5 ug/mL
							Benzo[g,h,i]perylene	2.5 ug/mL
							Benzo[k]fluoranthene	2.5 ug/mL
							Chrysene	2.5 ug/mL
							Dibenz(a,h)anthracene	2.5 ug/mL
							Fluoranthene	2.5 ug/mL
							Fluorene	2.5 ug/mL
							Indeno[1,2,3-cd]pyrene	2.5 ug/mL
							Naphthalene	2.5 ug/mL
							Phenanthrene	2.5 ug/mL
							Pyrene	2.5 ug/mL
							1-Methylphenanthrene	2.5 ug/mL
							2,3,5-Trimethylnaphthalene	2.5 ug/mL
							2,6-Dimethylnaphthalene	2.5 ug/mL
							Benzo[e]pyrene	2.5 ug/mL
							Dibenzothiophene	2.5 ug/mL
							Perylene	2.5 ug/mL
							1,1'-Biphenyl	2.5 ug/mL
							Dibenzofuran	2.5 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	125 uL	2-Fluorobiphenyl (Surr)	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5	2.5 ug/mL
							Terphenyl-d14	2.5 ug/mL
					60xx8270smspc_00003	125 uL	Benzo(b)thiophene	2.5 ug/mL
							cis-Decalin	2.5 ug/mL
							Naphthobenzothiophene	2.5 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL
60L78270SIM_00006	11/30/19	07/09/19	Hexane, Lot 221330	1 mL	60XX8270PAHT1_00003	250 uL	1-Methylnaphthalene	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Chrysene	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Naphthalene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	5 ug/mL
							Pyrene	5 ug/mL
							1-Methylphenanthrene	5 ug/mL
							2,3,5-Trimethylnaphthalene	5 ug/mL
							2,6-Dimethylnaphthalene	5 ug/mL
							Benzo[e]pyrene	5 ug/mL
							Dibenzothiophene	5 ug/mL
							Perylene	5 ug/mL
							1,1'-Biphenyl	5 ug/mL
							Dibenzofuran	5 ug/mL
					60xx8270simis_00003	10 uL	Acenaphthene-d10	0.5 ug/mL
							Chrysene-d12	0.5 ug/mL
							Naphthalene-d8	0.5 ug/mL
							Perylene-d12	0.5 ug/mL
							Phenanthrene-d10	0.5 ug/mL
					60xx8270simsr_00005	250 uL	2-Fluorobiphenyl (Surr)	5 ug/mL
							Nitrobenzene-d5	5 ug/mL
							Terphenyl-d14	5 ug/mL
					60xx8270smspc_00003	250 uL	Benzo(b)thiophene	5 ug/mL
							cis-Decalin	5 ug/mL
							Naphthobenzothiophene	5 ug/mL
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
..60MXIS_00008	11/30/19		Restek, Lot A0139031		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20		Restek, Lot A0143524		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
60SP8270SIMSR_00008	06/13/20	08/08/19	Methanol, Lot 225737	50 mL	60xx8270simsr_00005	2.5 mL	2,4,6-Tribromophenol	1 ug/mL
							2-Fluorobiphenyl (Surr)	1 ug/mL
							2-Fluorophenol	1 ug/mL
							Nitrobenzene-d5	1 ug/mL
							Phenol-d5	1 ug/mL
							Terphenyl-d14	1 ug/mL
.60xx8270simsr_00005	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXSU_00020	40 uL	2,4,6-Tribromophenol	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Phenol-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..60MXSU_00020	06/13/20	Restek, Lot A0143524			(Purchased Reagent)		2,4,6-Tribromophenol	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
60SP8270SIMTA_00009	02/08/20	07/24/19	Methanol, Lot 225737	25 mL	60XX8270PAHT1_00003	1.25 mL	1-Methylnaphthalene	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Anthracene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Chrysene	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Naphthalene	1 ug/mL
							Phenanthrene	1 ug/mL
							Pyrene	1 ug/mL
							1-Methylphenanthrene	1 ug/mL
							2,3,5-Trimethylnaphthalene	1 ug/mL
							2,6-Dimethylnaphthalene	1 ug/mL
							Benzo[e]pyrene	1 ug/mL
							Dibenzothiophene	1 ug/mL
							Perylene	1 ug/mL
							1,1'-Biphenyl	1 ug/mL
							Dibenzofuran	1 ug/mL
					60xx8270smspc_00003	1.25 mL	Benzo(b)thiophene	1 ug/mL
							cis-Decalin	1 ug/mL
							Naphthobenzothiophene	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.60XX8270PAHT1_00003	02/08/20	07/09/19	Hexane, Lot 221330	10 mL	60MX8270CLMX5_00003	100 uL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					60MXNATSACPAH_00008	100 uL	1-Methylphenanthrene	20 ug/mL
							2,3,5-Trimethylnaphthalene	20 ug/mL
							2,6-Dimethylnaphthalene	20 ug/mL
							Benzo[e]pyrene	20 ug/mL
							Dibenzothiophene	20 ug/mL
							Perylene	20 ug/mL
					60MXSVOCAD_00004	100 uL	1,1'-Biphenyl	20 ug/mL
							Dibenzofuran	20 ug/mL
..60MX8270CLMX5_00003	03/05/21		Restek, Lot A0125411		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..60MXNATSACPAH_00008	09/01/20		Restek, Lot A0146343		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzothiophene	2000 ug/mL
							Perylene	2000 ug/mL
..60MXSVOCAD_00004	02/08/21		Restek, Lot A0139915		(Purchased Reagent)		1,1'-Biphenyl	2000 ug/mL
							Dibenzofuran	2000 ug/mL
.60xx8270smspc_00003	06/13/20	07/09/19	Hexane, Lot 221330	10 mL	60MXB(b)Th_00001	100 uL	Benzo(b)thiophene	20 ug/mL
					60MXDECALIN_00001	200 uL	cis-Decalin	20 ug/mL
					60MXNBT_00001	200 uL	Naphthobenzothiophene	20 ug/mL
..60MXB(b)Th_00001	06/13/20		Absolute, Lot 061818		(Purchased Reagent)		Benzo(b)thiophene	2000 ug/mL
..60MXDECALIN_00001	06/13/20		Absolute, Lot 071018		(Purchased Reagent)		cis-Decalin	1000 ug/mL
..60MXNBT_00001	06/13/20		Absolute, Lot 051118		(Purchased Reagent)		Naphthobenzothiophene	1000 ug/mL
60WDM8270D_00003	11/30/19	06/12/19	Hexane, Lot 211844	1 mL	60SRMWDM_00001	0.005 mL	C1-Benzothiophenes	5000 ug/mL
							C1-Chrysenes	5000 ug/mL
							C1-Decalins	5000 ug/mL
							C1-Dibenzothiophenes	5000 ug/mL
							C1-Fluoranthenes/pyrene	5000 ug/mL
							C1-Fluorenes	5000 ug/mL
							C1-Naphthalenes	5000 ug/mL
							C1-Naphthobenzothiophenes	5000 ug/mL
							C1-Phenanthrenes/Anthracenes	5000 ug/mL
							C2-Benzothiophenes	5000 ug/mL
							C2-Chrysenes	5000 ug/mL
							C2-Decalins	5000 ug/mL
							C2-Dibenzothiophenes	5000 ug/mL
							C2-Fluoranthenes/Pyrene	5000 ug/mL
							C2-Fluorenes	5000 ug/mL
							C2-Naphthalenes	5000 ug/mL
							C2-Naphthobenzothiophenes	5000 ug/mL
							C2-Phenanthrenes/Anthracenes	5000 ug/mL
							C3-Benzothiophenes	5000 ug/mL
							C3-Chrysenes	5000 ug/mL
							C3-Decalins	5000 ug/mL
							C3-Dibenzothiophenes	5000 ug/mL
							C3-Fluoranthenes/Pyrene	5000 ug/mL
							C3-Fluorenes	5000 ug/mL
							C3-Naphthalenes	5000 ug/mL
							C3-Naphthobenzothiophenes	5000 ug/mL
							C3-Phenanthrenes/Anthracenes	5000 ug/mL
							C4-Benzothiophenes	5000 ug/mL
							C4-Chrysenes	5000 ug/mL
							C4-Decalins	5000 ug/mL
							C4-Dibenzothiophenes	5000 ug/mL
							C4-Fluoranthenes/Pyrene	5000 ug/mL
							C4-Naphthalenes	5000 ug/mL
							C4-Naphthobenzothiophenes	5000 ug/mL
							C4-Phenanthrenes/Anthracenes	5000 ug/mL
.60SRMWDM_00001	05/30/19		National Institute of STDs and Tech., Lot SRM 2779		(Purchased Reagent)		C1-Benzothiophenes	1 g/g
							C1-Chrysenes	1 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							C1-Decalins	1 g/g
							C1-Dibenzothiophenes	1 g/g
							C1-Fluoranthenes/pyrene	1 g/g
							C1-Fluorenes	1 g/g
							C1-Naphthalenes	1 g/g
							C1-Naphthobenzothiophenes	1 g/g
							C1-Phenanthrenes/Anthracenes	1 g/g
							C2-Benzothiophenes	1 g/g
							C2-Chrysenes	1 g/g
							C2-Decalins	1 g/g
							C2-Dibenzothiophenes	1 g/g
							C2-Fluoranthenes/Pyrene	1 g/g
							C2-Fluorenes	1 g/g
							C2-Naphthalenes	1 g/g
							C2-Naphthobenzothiophenes	1 g/g
							C2-Phenanthrenes/Anthracenes	1 g/g
							C3-Benzothiophenes	1 g/g
							C3-Chrysenes	1 g/g
							C3-Decalins	1 g/g
							C3-Dibenzothiophenes	1 g/g
							C3-Fluoranthenes/Pyrene	1 g/g
							C3-Fluorenes	1 g/g
							C3-Naphthalenes	1 g/g
							C3-Naphthobenzothiophenes	1 g/g
							C3-Phenanthrenes/Anthracenes	1 g/g
							C4-Benzothiophenes	1 g/g
							C4-Chrysenes	1 g/g
							C4-Decalins	1 g/g
							C4-Dibenzothiophenes	1 g/g
							C4-Fluoranthenes/Pyrene	1 g/g
							C4-Naphthalenes	1 g/g
							C4-Naphthobenzothiophenes	1 g/g
							C4-Phenanthrenes/Anthracenes	1 g/g
60xx8270simis_00003	11/30/19	07/09/19	Hexane, Lot 221330	10 mL	60MXIS_00008	0.25 mL	Acenaphthene-d10	50 ug/mL
							Chrysene-d12	50 ug/mL
							Naphthalene-d8	50 ug/mL
							Perylene-d12	50 ug/mL
							Phenanthrene-d10	50 ug/mL
.60MXIS_00008	11/30/19	Restek, Lot A0139031			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

Reagent

60MX8270CLMX5_00003

BNA 1335-37
Rec 7/17/17 JW

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31995 **Lot No.:** A0125411

Description : 8270 Calibration Mix #5, Revised

8270 Calibration Mix #5, Revised 2,000µg/ml, Methylene Chloride, 1ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2023 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBW2603V)	2,008.0 µg/mL	+/- 11.7841 +/- 90.4557 +/- 100.3688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 95%	(Lot STBF0201V)	2,014.5 µg/mL	+/- 11.8221 +/- 90.7474 +/- 100.6925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 98%	(Lot 523400-9)	2,005.1 µg/mL	+/- 11.7669 +/- 90.3242 +/- 100.2229	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Acenaphthylene **CAS #** 208-96-8 **Purity** 98%	(Lot L18Q)	2,008.5 µg/mL	+/- 11.7871 +/- 90.4787 +/- 100.3943	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKBW9515V)	2,016.0 µg/mL	+/- 11.8310 +/- 90.8161 +/- 100.7687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Fluorene **CAS #** 86-73-7 **Purity** 99%	(Lot 10193329)	2,018.0 µg/mL	+/- 11.8428 +/- 90.9062 +/- 100.8687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Phenanthrene **CAS #** 85-01-8 **Purity** 99%	(Lot MKBT8628V)	2,016.0 µg/mL	+/- 11.8310 +/- 90.8161 +/- 100.7687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Anthracene **CAS #** 120-12-7 **Purity** 99%	(Lot MKBV7759V)	2,017.0	µg/mL	+/- 11.8369 +/- 90.8611 +/- 100.8187	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Fluoranthene **CAS #** 206-44-0 **Purity** 98%	(Lot MKBQ6360V)	2,007.0	µg/mL	+/- 11.7784 +/- 90.4125 +/- 100.3208	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Pyrene **CAS #** 129-00-0 **Purity** 98%	(Lot BCBP9868V)	2,017.8	µg/mL	+/- 11.8417 +/- 90.8981 +/- 100.8597	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benz(a)anthracene **CAS #** 56-55-3 **Purity** 99%	(Lot ER031412-01)	2,017.5	µg/mL	+/- 11.8398 +/- 90.8837 +/- 100.8437	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot 012015)	2,009.0	µg/mL	+/- 11.7899 +/- 90.5008 +/- 100.4188	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot ER03101401)	2,018.5	µg/mL	+/- 11.8457 +/- 90.9287 +/- 100.8937	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012012K)	2,004.0	µg/mL	+/- 11.7606 +/- 90.2755 +/- 100.1689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,995.5	µg/mL	+/- 11.7107 +/- 89.8926 +/- 99.7440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	2,020.0	µg/mL	+/- 11.8545 +/- 90.9963 +/- 100.9686	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	2,018.5	µg/mL	+/- 11.8457 +/- 90.9287 +/- 100.8937	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER05121401)	2,018.5	µg/mL	+/- 11.8457 +/- 90.9287 +/- 100.8937	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

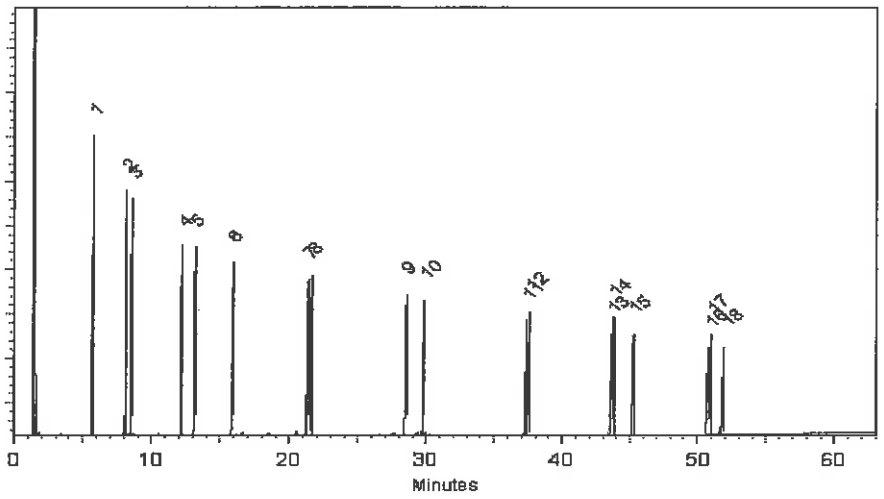
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

Date Mixed: 27-Feb-2017 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 03-Mar-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

60MXB(b)Th_00001

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ISO 17034 Accredited
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CERTIFIED WEIGHT REPORT

Part Number: 92840
Lot Number: 061818
Description: Thianaphthene

Solvent: Methylene chloride **Lot#** 76782

Expiration Date: 061823
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2684186

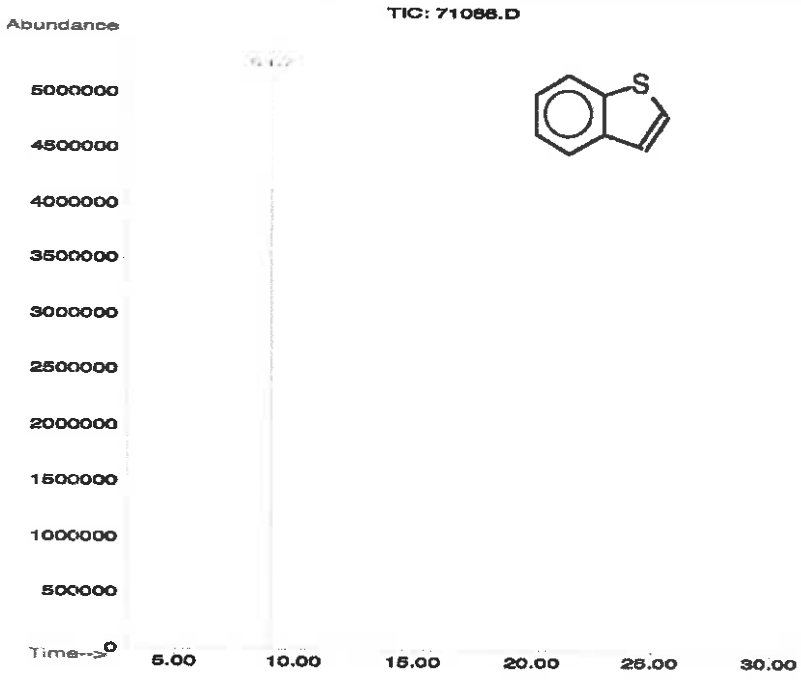
5E-05 Balance Uncertainty
0.003 Flask Uncertainty

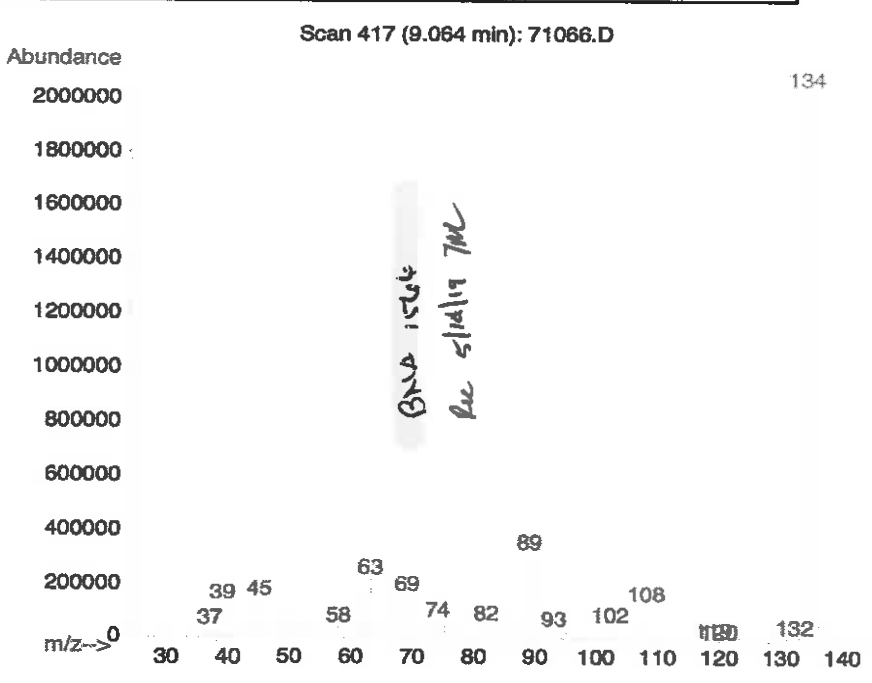
Weight(s) shown below were combined and diluted to (mL): 20.0

	061818
Formulated By: Justin Dippold	DATE
	061818
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Thianaphthene	1066	04526HY	2000	99	0.2	0.04043	0.04050	2003.6	9.5	95-15-8	N/A	N/A

Method GC8MSD-2.M: Column:SBB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (14 min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 300°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Lance R. Boynton/Nicole Poisson





- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Reagent

60MXDECALIN_00001

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Certified Reference Material CRM

ISO 17034 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 71975
Lot Number: 071018
Description: cis-Decahydronaphthalene

Solvent(s): Methanol **Lot#** DS435

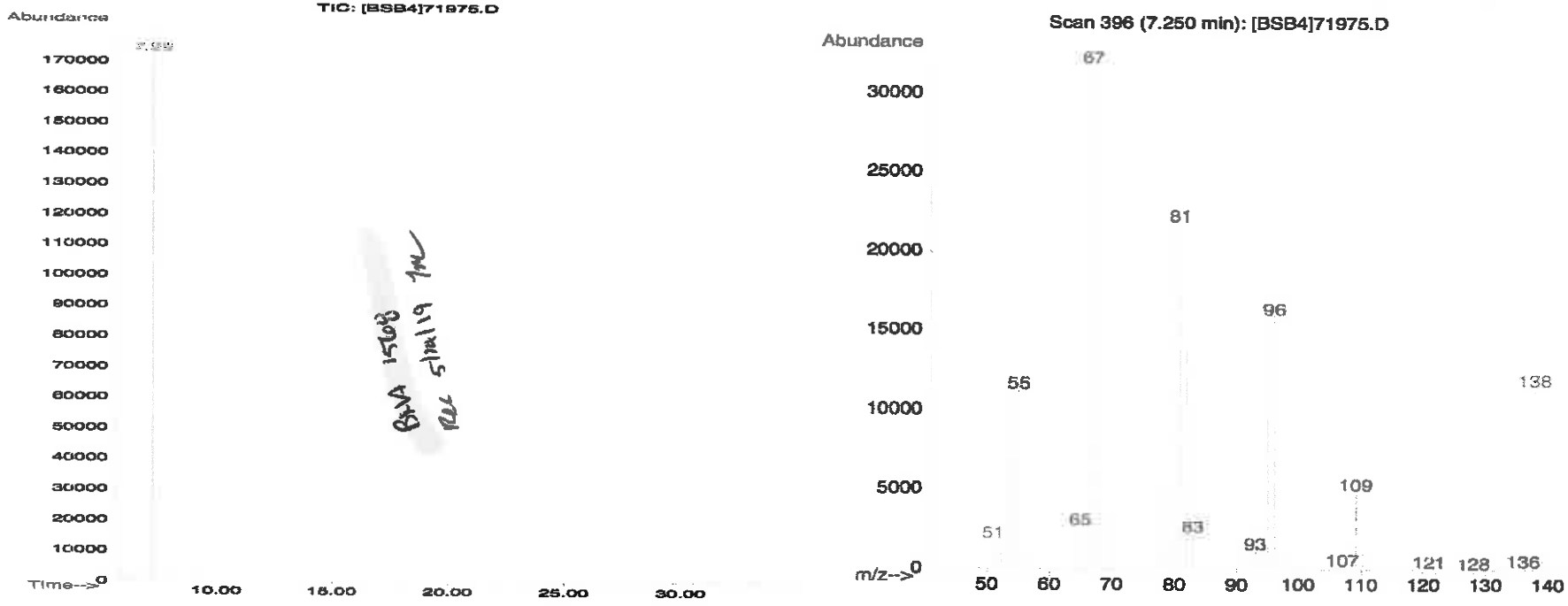
Expiration Date: 071023
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 2684186 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty

Eli Aliaga 071018
Formulated By: Eli Aliaga DATE

Pedro Rentas 071018
Reviewed By: Pedro L. Rentas DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. cis-Decahydronaphthalene	1975	00628KI	1000	99	0.2	0.01006	0.01012	1005.7	10.7	493-01-6	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Reagent

60MXIS_00008

BNA 1499-1501

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Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0139031

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2023 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	2,005.7	µg/mL	+/- 11.6613 +/- 90.3379 +/- 100.2411	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,011.0	µg/mL	+/- 11.6921 +/- 90.5766 +/- 100.5060	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 99%	(Lot PR-28021)	2,011.5	µg/mL	+/- 11.6950 +/- 90.5992 +/- 100.5310	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,005.3	µg/mL	+/- 11.6590 +/- 90.3199 +/- 100.2211	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot PR-28823)	2,005.3	µg/mL	+/- 11.6590 +/- 90.3199 +/- 100.2211	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,011.6	µg/mL	+/- 11.6956 +/- 90.6037 +/- 100.5360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

60MXNATSACPAH_00008

BHA 1521 - 1525
Rec 2/28/19

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Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569478-FL **Lot No.:** A0146343

Description : Sacramento SIM PAH Standard

Sacramento SIM PAH Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1-Methylphenanthrene **CAS #** 832-69-9 **Purity** 99% (Lot 7137700)	2,000.0 µg/mL	+/- 20.1475 µg/mL +/- 91.5714 µg/mL +/- 101.3013 µg/mL	Gravimetric Unstressed Stressed
2	2,3,5-Trimethylnaphthalene **CAS #** 2245-38-7 **Purity** 98% (Lot N7VYK)	2,004.1 µg/mL	+/- 20.1888 µg/mL +/- 91.7592 µg/mL +/- 101.5090 µg/mL	Gravimetric Unstressed Stressed
3	2,6-Dimethylnaphthalene **CAS #** 581-42-0 **Purity** 99% (Lot STBG7481)	2,000.0 µg/mL	+/- 20.1475 µg/mL +/- 91.5714 µg/mL +/- 101.3013 µg/mL	Gravimetric Unstressed Stressed
4	3-Methylphenanthrene **CAS #** 832-71-3 **Purity** 99% (Lot SABOL)	2,010.0 µg/mL	+/- 20.2482 µg/mL +/- 92.0293 µg/mL +/- 101.8078 µg/mL	Gravimetric Unstressed Stressed
5	Benzo(e)pyrene **CAS #** 192-97-2 **Purity** 99% (Lot NT061029)	2,000.0 µg/mL	+/- 20.1475 µg/mL +/- 91.5714 µg/mL +/- 101.3013 µg/mL	Gravimetric Unstressed Stressed
6	Dibenzothiophene **CAS #** 132-65-0 **Purity** 98% (Lot H27J01)	1,999.2 µg/mL	+/- 20.1394 µg/mL +/- 91.5348 µg/mL +/- 101.2608 µg/mL	Gravimetric Unstressed Stressed
7	Perylene **CAS #** 198-55-0 **Purity** 99% (Lot 04101PG)	2,005.0 µg/mL	+/- 20.1978 µg/mL +/- 91.8004 µg/mL +/- 101.5545 µg/mL	Gravimetric Unstressed Stressed

Reagent

60MXNBT_00001

Absolute Standards, Inc.
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Certified Reference Material CRM

ISO 17034 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 71977
Lot Number: 051118
Description: 1,2-Benzodiphenylene sulfide

Solvent(s): Methanol **Lot#** DS435

Expiration Date: 051121
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 2684186

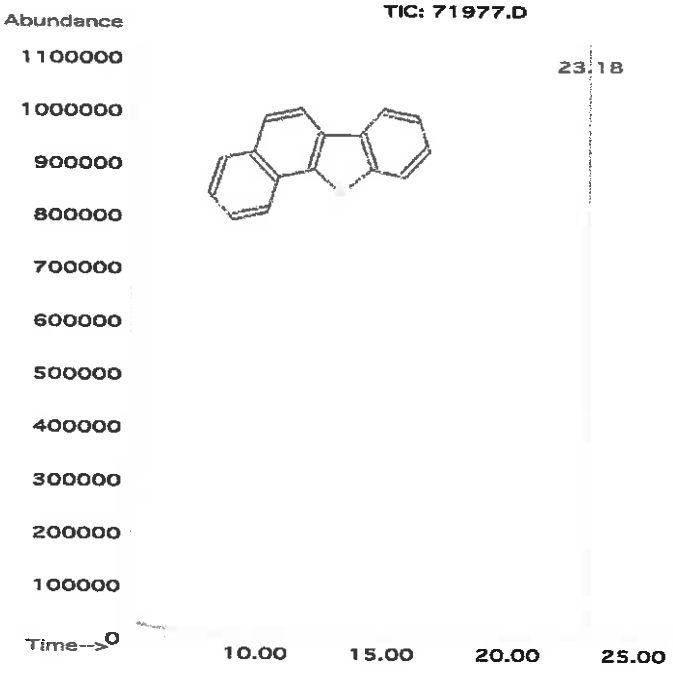
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

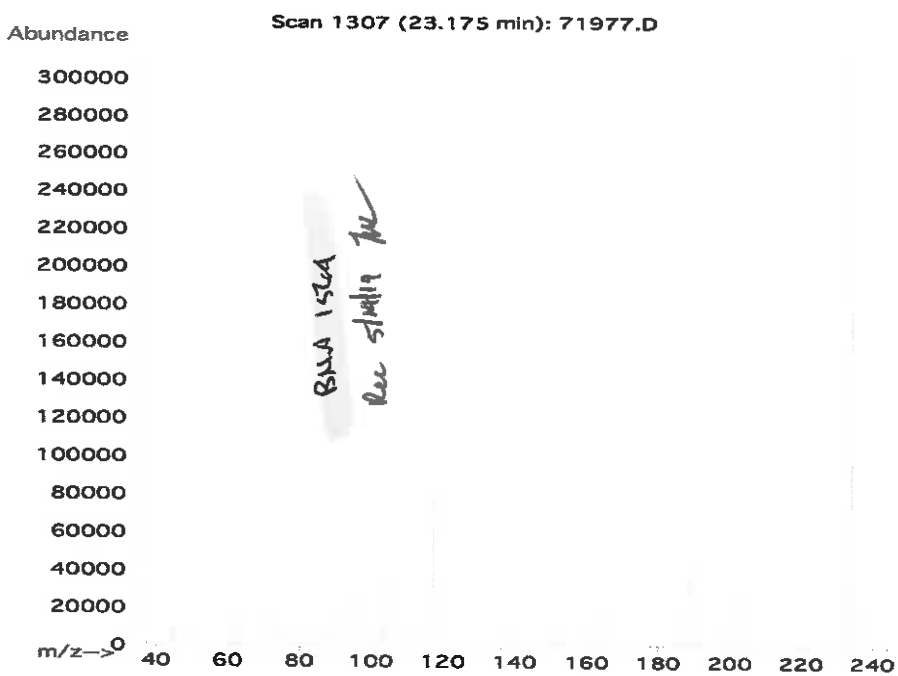
Weight(s) shown below were combined and diluted to (mL): 2.5

Formulated By: Mario Luis	051118 DATE
Reviewed By: Pedro L. Rentas	051118 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1,2-Benzodiphenylene sulfide	1977	07527KSV	1000	99	0.2	0.00253	0.00255	1009.8	39.8	239-35-0	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Melissa Stonier.





- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Reagent

60MXSSBENZEP_00005

BNA 1596
Rec 7/12/19

Cambridge Isotope Laboratories, Inc. Certificate of Analysis

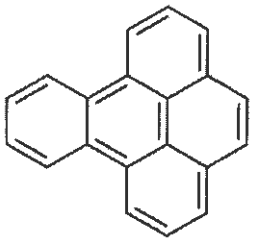
Product Name: BENZO[E]PYRENE
(Isotopic Label & Enrichment Specification) UNLABELED STANDARD 200 UG/ML IN ISOOCTANE

Lot Number: SDGL-018

Catalog Number: ULM-7423-S

Product Information

Chemical Purity Specification: ≥ 98%



MW*: 252.31
** For isotopically labeled compounds, MW listed is for the fully enriched product.*

Labeled CAS Number: NA

Unlabeled CAS Number: 192-97-2

Chemical Formula: C20H12

Storage: Store at room temperature away from light and moisture
Stability: See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: Marina Klionsky

Marina Klionsky, Quality Review

Quality Control Tests and Results

QC Release Date	2/01/2017
Expiration Date	2/01/2027
Concentration Based on Gravimetry	200.0 ± 2.1 µg/mL (k=2)
Chemical Purity of Neat Material(s)	99.5%

Reagent

60MXSSCLMX5_00001

BNA 1348
Rec 7/17/17 TW

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31995.sec **Lot No.:** A0115109

Description : 8270 Calibration Mix #5, Revised

8270 Calibration Mix #5, Revised 2,000 µg/ml, Methylene Chloride, 1ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Naphthalene **CAS #** 91-20-3.SEC (Lot 4KW3H-OO) **Purity** 99%	2,014.0 µg/mL	+/- 11.9625 µg/mL +/- 90.7448 µg/mL +/- 100.6857 µg/mL	Gravimetric Unstressed Stressed
2	2-Methylnaphthalene **CAS #** 91-57-6.SEC (Lot 76023-1) **Purity** 99%	2,000.0 µg/mL	+/- 11.8794 µg/mL +/- 90.1140 µg/mL +/- 99.9858 µg/mL	Gravimetric Unstressed Stressed
3	1-Methylnaphthalene **CAS #** 90-12-0.SEC (Lot UATSA) **Purity** 99%	2,000.0 µg/mL	+/- 11.8794 µg/mL +/- 90.1140 µg/mL +/- 99.9858 µg/mL	Gravimetric Unstressed Stressed
4	Acenaphthylene **CAS #** 208-96-8.SEC (Lot 062013) **Purity** 98%	2,005.1 µg/mL	+/- 11.9096 µg/mL +/- 90.3429 µg/mL +/- 100.2397 µg/mL	Gravimetric Unstressed Stressed
5	Acenaphthene **CAS #** 83-32-9.SEC (Lot BWZJE) **Purity** 99%	2,000.0 µg/mL	+/- 11.8794 µg/mL +/- 90.1140 µg/mL +/- 99.9858 µg/mL	Gravimetric Unstressed Stressed
6	Fluorene **CAS #** 86-73-7.SEC (Lot 1561600) **Purity** 99%	2,010.0 µg/mL	+/- 11.9388 µg/mL +/- 90.5645 µg/mL +/- 100.4857 µg/mL	Gravimetric Unstressed Stressed
7	Phenanthrene **CAS #** 85-01-8.SEC (Lot 1777100) **Purity** 98%	2,007.0 µg/mL	+/- 11.9212 µg/mL +/- 90.4312 µg/mL +/- 100.3377 µg/mL	Gravimetric Unstressed Stressed

8	Anthracene **CAS #** 120-12-7.SEC **Purity** 99%	(Lot WDFNJ)	2,012.0	µg/mL	+/- 11.9507 +/- 90.6547 +/- 100.5857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Fluoranthene **CAS #** 206-44-0.SEC **Purity** 99%	(Lot FREGF)	2,016.0	µg/mL	+/- 11.9744 +/- 90.8349 +/- 100.7856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Pyrene **CAS #** 129-00-0.SEC **Purity** 99%	(Lot ROVJC)	2,012.0	µg/mL	+/- 11.9507 +/- 90.6547 +/- 100.5857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benz(a)anthracene **CAS #** 56-55-3.SEC **Purity** 97%	(Lot MTENF)	2,015.7	µg/mL	+/- 11.9724 +/- 90.8196 +/- 100.7686	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	chrysene **CAS #** 218-01-9.SEC **Purity** 99%	(Lot I3AKL)	2,002.0	µg/mL	+/- 11.8913 +/- 90.2041 +/- 100.0857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Benzo(b)fluoranthene **CAS #** 205-99-2.SEC **Purity** 97%	(Lot 012012)	2,017.6	µg/mL	+/- 11.9839 +/- 90.9070 +/- 100.8656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Benzo(k)fluoranthene **CAS #** 207-08-9.SEC **Purity** 98%	(Lot 3596500)	2,005.1	µg/mL	+/- 11.9096 +/- 90.3429 +/- 100.2397	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Benzo(a)pyrene **CAS #** 50-32-8.SEC **Purity** 99%	(Lot 2IGMD)	2,002.0	µg/mL	+/- 11.8913 +/- 90.2041 +/- 100.0857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5.SEC **Purity** 99%	(Lot 022013)	2,014.0	µg/mL	+/- 11.9625 +/- 90.7448 +/- 100.6857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Dibenz(a,h)anthracene **CAS #** 53-70-3.SEC **Purity** 99%	(Lot 0012012)	2,012.0	µg/mL	+/- 11.9507 +/- 90.6547 +/- 100.5857	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Benzo(g,h,i)perylene **CAS #** 191-24-2.SEC **Purity** 99%	(Lot 0022012)	2,016.0	µg/mL	+/- 11.9744 +/- 90.8349 +/- 100.7856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

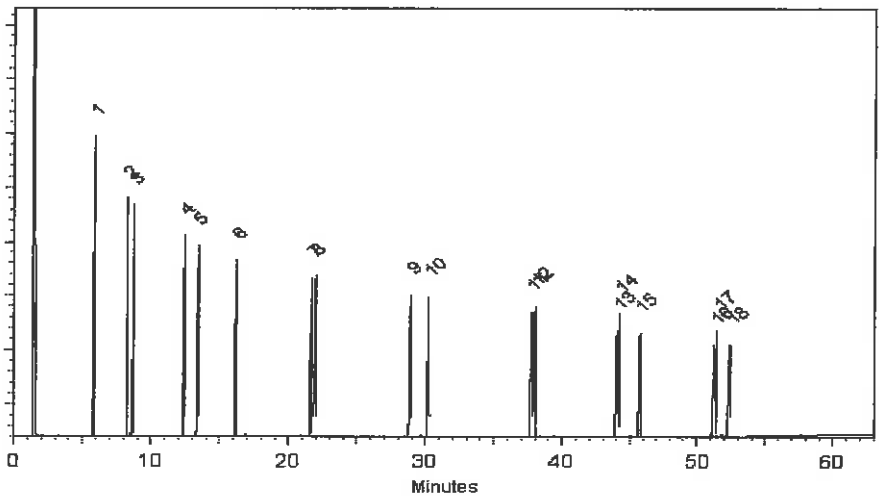
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 02-Nov-2015 **Balance:** 1128353505

Jennifer L. Pollino - QC Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

60MXSSDBTHP_00004

BNA 1593
Rec 7/12/19

Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: S-1185 **Lot No.** EN180502014

Description: Dibenzothiophene

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: 5-2-2018
Expiration Date: 5-1-2021

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Dibenzothiophene	132-65-0	1000 µg/mL	98%	1009 µg/mL	± 26 µg/mL

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 5-2-2018

Certifying Officer: Shannon Mace

Shannon Macieira, Operations Manager

Reagent

60MXSSPERYLN_00003

BNA 1595
Rec 7/12/17

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®
Certificate of Reference Material

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ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: S-3005 **Lot No.** EN170502007

Description: Perylene

Matrix: Methylene Chloride

Manufactured Date: 5-2-2017
Expiration Date: 5-1-2020

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
Perylene	198-55-0	1000 µg/mL	99%	1008 µg/mL	± 26 µg/mL

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 5-2-2017

Certifying Officer: Shannon Mace
Shannon Macieira, Operations Manager

Reagent

60MXSU_00020

BNA 1559-1561

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

rec'd 4/19/19

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0143524

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBF3761V)	4,998.8	µg/mL	+/- 29.0635 +/- 145.8817 +/- 177.0219	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot CD-105)	5,018.9	µg/mL	+/- 29.1801 +/- 146.4674 +/- 177.7325	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-29603)	5,009.3	µg/mL	+/- 29.1243 +/- 146.1872 +/- 177.3925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot M09E045)	5,024.7	µg/mL	+/- 29.2138 +/- 146.6366 +/- 177.9379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,012.1	µg/mL	+/- 29.1410 +/- 146.2708 +/- 177.4940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot B180320L)	5,022.9	µg/mL	+/- 29.2038 +/- 146.5860 +/- 177.8765	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

60MXSVOCAD_00004

BNA 1515-1519
Rec 1/31/19

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567839 **Lot No.:** A0139915

Description : SVOC PAH Additions

SVOC PAH Additions 2,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Biphenyl **CAS #** 92-52-4 **Purity** 99% (Lot MKBV9808V)	2,020.0 µg/mL	+/- 18.7849 µg/mL +/- 92.1557 µg/mL +/- 102.0148 µg/mL	Gravimetric Unstressed Stressed
2	Dibenzofuran **CAS #** 132-64-9 **Purity** 99% (Lot MKCD9952)	2,020.0 µg/mL	+/- 18.7849 µg/mL +/- 92.1557 µg/mL +/- 102.0148 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

60SRMWDM_00001

BNA 1443
Rec. 4/10/18
Exp. 9/30/20

National Institute of Standards & Technology

Opened: 5/29/18 TAL
Exp. 5/29/20

Certificate of Analysis

Standard Reference Material® 2779

Gulf of Mexico Crude Oil

This Standard Reference Material (SRM) 2779 is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), hopanes, and steranes in a crude oil matrix. All of the constituents for which certified, reference, and information values are provided are naturally present in the oil. A unit of SRM 2779 consists of five ampoules each containing 1.2 mL of crude oil.

Certified Mass Fraction Values: Certified mass fraction values for 21 PAHs are provided in Table 1. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1]. The certified values are based on the agreement of results obtained at NIST using multiple analytical techniques.

Reference Mass Fraction Values: Reference mass fraction values are provided for an additional 22 PAHs (Table 2), alkylated PAHs (Table 3), and hopanes and steranes (Table 4). Reference values are noncertified values that are estimates of the true value. However, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Expiration of Certification: The certification of **SRM 2779** is valid, within the measurement uncertainties specified, until **30 September 2020,** provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). The certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet) will facilitate notification.

The overall direction and coordination of technical measurements leading to certification were performed by M.M. Schantz and L.C. Sander of the NIST Analytical Chemistry Division.

Evaluation of the data was provided by N.A. Heckert, S.D. Leigh, and A.L. Pintar of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Measurement Services Division.

Analytical measurements were performed by B.A. Benner, Jr., J.R. Kucklick, and M.M. Schantz of the NIST Analytical Chemistry Division. Additional results for PAHs, hopanes, and steranes were used from 24 laboratories that participated in an interlaboratory study coordinated by M.M. Schantz.

Partial funding support for the preparation and certification of this SRM was provided by the National Oceanic and Atmospheric Administration and ultimately paid by BP Corporation North America, Inc. as part of the natural resource damage assessment for the 2010 Deepwater Horizon oil spill.

Stephen A. Wise, Chief
Analytical Chemistry Division

Robert L. Watters, Jr., Chief
Measurement Services Division

Gaithersburg, MD 20899
Certificate Issue Date: 04 June 2012
Certificate Revision History on Last Page

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring crude oil and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: Sealed ampoules, as received, should be stored in the dark at temperatures between 4 °C and 30 °C.

Use: Samples for analysis should be withdrawn immediately after opening ampoules and should be processed without delay for the certified values in Table 1 to be valid within the stated uncertainties. Certified values are not applicable to material stored in ampoules that have been opened, even if they are resealed.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The petroleum crude oil for this SRM was collected on May 21, 2010 on the drillship *Discoverer Enterprise* from the insertion tube that was receiving oil directly from the Macondo well during response operations. The oil was collected into certified cleaned 2.5 liter glass bottles and transported under chain of custody to TDI Brooks Laboratory in College Station, Texas. A portion was subsequently provided to NIST under the authority of the National Oceanic and Atmospheric Administration (NOAA). The water was separated from the oil by letting it sit in a separatory funnel for 4 h and removing the water. The resulting oil was homogenized by stirring for 18 h in a 20 L glass flask before transferring into 2 mL amber glass ampoules that had been flushed with argon.

Analysis for PAHs, Hopanes, and Steranes: The general approach used for the value assignment of the PAHs, hopanes, and steranes in SRM 2779 consisted of combining results from analyses using various combinations of different cleanup/isolation procedures and chromatographic separation and detection techniques [2]. Three sets of gas chromatography/mass spectrometry (GC/MS) results, designated as GC/MS (I) through GC/MS (III) were obtained at NIST.

For GC/MS (I) analyses, duplicate test portions of 400 mg from 10 ampoules of SRM 2779 were transferred to a vial, spiked with a known amount of an internal standard solution (see below), and diluted with hexane. A portion of the diluted oil (0.5 mL) was fractionated using an aminopropyl solid-phase extraction (SPE) column to isolate the fraction of interest. Following a concentration step, the processed extract was then fractionated using liquid chromatography on a semi-preparative scale aminopropyl silane column. Three fractions were collected: (1) aliphatics, hopanes, and steranes; (2) naphthalene through the dimethylphenanthrenes and anthracenes; and (3) the remainder of the PAHs through molecular mass 302 g/mol. Each fraction was then analyzed by GC/MS using a 0.25 mm i.d × 60 m fused silica capillary column with a 50 % (mole fraction) phenyl methylpolysiloxane phase (0.25 µm film thickness; DB-17MS, Agilent Technologies, Wilmington, DE), and fractions 2 and 3 were analyzed using a 0.25 mm i.d. × 15 m fused silica capillary column with a 50 % (mole fraction) liquid crystal polysiloxane phase (0.15 µm film thickness; LC-50, J&K Scientific, Milton, Ontario, Canada). The results from the DB-17MS column are denoted as GC/MS Ia and those from the LC-50 column as GC/MS Ib.

For the GC/MS (II) determination of the PAHs, one test portion (6 mg to 8 mg) from each of six ampoules was transferred to a vial, spiked with a known amount of internal standard solution (see below), and diluted with 2 % dichloromethane in hexane (volume fraction). A portion of the diluted oil (0.1 mL) was fractionated using an aminopropyl SPE column to isolate the fraction of interest. Following a concentration step, the isolated fraction was analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl methylpolysiloxane phase (0.25 µm film thickness; ZB-50 column, Phenomenex, Torrance, CA).

For the GC/MS (III) determination of the PAHs, hopanes, and steranes, one test portion (1 mL, exact mass known) from each of three ampoules was transferred to a bottle and diluted with 25 mL of hexane (exact mass known) prior to adding the internal standards (see below). The extracts were fractionated into two fractions using a silica/alumina column with the majority of the aliphatics, hopanes, and steranes in fraction 1 and the majority of the PAHs in fraction 2. The analytes of interest were quantified using GC/MS on a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % (mole fraction) phenyl methylpolysiloxane phase (0.25 µm film thickness; Rxi-17sil MS, Restek, Bellefonte, PA).

For the methods described above, perdeuterated PAHs and perdeuterated aliphatics were added to the crude oil as internal standards for quantification purposes.

---

[1] Certain commercial equipment, instrumentation, or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the NIST, nor does it imply that the materials or equipment identified are necessarily the best available for the purpose.

In addition to the analyses performed at NIST, SRM 2779 was used in an interlaboratory comparison exercise in 2011 [3]. Results from 24 laboratories that participated in this exercise were used as the fourth data set in the determination of the values for PAHs, hopanes, and steranes in SRM 2779. Not all of the laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, more than 90 % of the laboratories used the parent PAH for determination of the response factor for the corresponding alkylated group.

Homogeneity Assessment for PAHs: The homogeneity of SRM 2779 was assessed by analyzing duplicate test portions of 400 mg from 10 ampoules selected by stratified random sampling. Test portions were processed and analyzed as described above for GC/MS (I). No differences among ampoules were observed for the PAHs at the 400 mg test portion size.

Certified Values: The certified mass fraction value is a weighted mean of the mass fractions from two to five analytical methods [4]. The uncertainty listed with each value is an expanded uncertainty about the mean [4,5], with coverage factor, $k = 2$, calculated by combining within-method variances with a between-method variance [6] following the ISO Guide [7,8]. Sample fractionation and analysis method are denoted by the footnotes in the table.

Table 1. Certified Mass Fraction Values for PAHs in SRM 2779

	Mass Fraction (mg/kg)		
Naphthalene[a,b,c,d]	855	±	46
1-Methylnaphthalene[a,b,d]	1140	±	20
2-Methylnaphthalene[a,b,d]	1630	±	50
Dibenzothiophene[a,b,d]	51.8	±	2.1
Phenanthrene[a,b,c,d,e]	258	±	27
Anthracene[a,c,e]	3.42	±	0.59
1-Methylphenanthrene[a,b,c,d,e]	169	±	10
2-Methylphenanthrene[a,b,c,e]	230	±	14
3-Methylphenanthrene[a,b,c,e]	206	±	32
9-Methylphenanthrene[a,b,c,e]	232	±	19
Fluoranthene[a,b,c,d,e]	4.36	±	0.40
Pyrene[a,b,c,d,e]	14.81	±	0.39
Benz[*a*]anthracene[a,b,c,d,e]	7.03	±	0.85
Chrysene/Triphenylene[a,b,d]	47.4	±	1.7
Benzo[*b*]fluoranthene[a,b,c,d,e]	5.62	±	0.34
Benzo[*e*]pyrene[a,b,c,d,e]	10.78	±	0.60
Benzo[*ghi*]perylene[a,b,c,d,e]	2.11	±	0.26
Dibenz[*a,c*]anthracene[a,h]	2.03	±	0.10
Dibenz[*a,h*]anthracene[a,c,e]	0.574	±	0.091
Benzo[*b*]chyrsene[a,c]	0.629	±	0.022

[a] GC/MS Ia using LC fractionation followed by analysis on a DB-17MS column.
[b] GC/MS II using SPE clean-up followed by analysis on a ZB-50 column.
[c] GC/MS III using silica/alumina fractionation followed by analysis on an Rxi-17sil MS column.
[d] Data from the interlaboratory study [3].
[e] GC/MS Ib using LC fractionation followed by analysis on a LC-50 column.

Reference Values: For most of the PAHs, the reference mass fraction value is a weighted mean of the mass fractions from two to five analytical methods [4] when available. The uncertainty listed with each value is an expanded uncertainty about the mean [4,5], with coverage factor, $k = 2$, calculated by combining within method variances with a between method variance [6] following the ISO Guide [7,8] unless otherwise indicated. Sample fractionation and analysis methods are denoted by the footnotes in the table.

For dibenzofuran, 1,2-dimethylnapthalene, 1-methylfluoranthene, 3-methylfluoranthene, and 1,6,7-trimethylnaphthalene, the reference mass fractions value are the means of results obtained using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to the associated degrees of freedom and a 95 % confidence level for each analyte. There are five degrees of freedom for these values except for the 1,6,7-trimethylnaphthalene (15 degrees of freedom) value and the dibenzofuran (12 degrees of freedom) value.

Table 2. Reference Mass Fraction Values for PAHs in SRM 2779

	Mass Fraction (mg/kg)
Biphenyl[a,b,c,d]	195 ± 19
Acenaphthylene[a,b]	8.09 ± 0.10
1,2-Dimethylnaphthalene[d]	173 ± 5
1,6-Dimethylnaphthalene[c,d]	1160 ± 100
1,6,7-Trimethylnaphthalene[e]	306 ± 63
Dibenzofuran[e]	25.7 ± 3.6
Fluorene[a,b,c,d]	145 ± 43
2-Methylanthracene[a,d]	23.3 ± 2.5
1,7-Dimethylphenanthrene[c,d]	110 ± 12
1-Methylfluoranthene[e]	5.77 ± 0.09
3-Methylfluoranthene[c]	1.75 ± 0.17
1-Methylpyrene[a,c,d,e]	12.1 ± 1.8
4-Methylpyrene[a,c,d,e]	21.6 ± 1.5
Chrysene[a,e]	23.3 ± 5.2
Triphenylene[a,e]	17.7 ± 6.7
6-Methylchrysene[a,c,d,e]	15.10 ± 0.56
Benzo[*j*]fluoranthene[a,c,e]	0.75 ± 0.29
Benzo[*k*]fluoranthene[a,c,e]	0.66 ± 0.28
Benzo[*a*]pyrene[a,b,c,d,e]	1.36 ± 0.35
Perylene[a,c,e]	0.71 ± 0.17
Indeno[1,2,3-*cd*]pyrene[a,c,e]	0.48 ± 0.14
Picene[a,c,d]	1.92 ± 0.37

[a] GC/MS III using silica/alumina fractionation followed by analysis on an Rxi-17sil MS column.
[b] Data from the interlaboratory study [3].
[c] GC/MS Ia using LC fractionation followed by analysis on a DB-17MS column.
[d] GC/MS II using SPE clean-up followed by analysis on a ZB-50 column.
[e] GC/MS Ib using LC fractionation followed by analysis on a LC-50 column.

The reference mass fraction values for the alkylated PAH groups are the means of results obtained using one analytical technique. The data are from the interlaboratory study [3]. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to the associated degrees of freedom and a 95 % confidence level for each analyte.

Table 3. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 2779

	Mass Fraction (mg/kg)	Degrees of Freedom
C1-Decalins	1040 ± 410	5
C2-Decalins	1060 ± 470	5
C3-Decalins	1460 ± 600	5
C2-Naphthalenes	2170 ± 360	22
C3-Naphthalenes	1380 ± 270	21
C4-Naphthalenes	700 ± 130	22
C2-Benzothiophenes	36 ± 13	6
C4-Benzothiophenes	30 ± 4	5
C1-Fluorenes	300 ± 60	22
C2-Fluorenes	380 ± 30	19
C3-Fluorenes	270 ± 40	21
C1-Phenanthrenes/anthracenes	670 ± 90	22
C2-Phenanthrenes/anthracenes	630 ± 60	21
C3-Phenanthrenes/anthracenes	400 ± 50	20
C4-Phenanthrenes/anthracenes	200 ± 30	19
C1-Dibenzothiophenes	130 ± 20	21
C2-Dibenzothiophenes	160 ± 20	21
C3-Dibenzothiophenes	110 ± 10	19
C4-Dibenzothiophenes	56 ± 10	17
C1-Fluoranthenes/pyrenes	67 ± 7	19
C2-Fluoranthenes/pyrenes	130 ± 20	18
C3-Fluoranthenes/pyrenes	120 ± 20	19
C4-Fluoranthenes/pyrenes	87 ± 21	11
C1-Naphthobenzothiophenes	57 ± 15	7
C2-Naphthobenzothiophenes	70 ± 19	7
C3-Naphthobenzothiophenes	48 ± 12	7
C4-Naphthobenzothiophenes	31 ± 10	6
C1-Benzanthraces/chrysenes/triphenylenes	110 ± 7	20
C2-Benzanthraces/chrysenes/triphenylenes	130 ± 10	18
C3-Benzanthraces/chrysenes/triphenylenes	93 ± 12	17
C4-Benzanthraces/chrysenes/triphenylenes	71 ± 16	12

The reference mass fraction values for hopanes and steranes, where data are available from three analytical methods, are weighted means [4]. The uncertainty listed with each value is an expanded uncertainty about the mean [4,5], with coverage factor, $k = 2$, calculated by combining within-method variances with a between-method variance [6] following the ISO Guide [7,8].

For analytes where the only available data are from the interlaboratory study, the reference mass fractions and associated uncertainties are calculated using the method means. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to eight degrees of freedom and a 95 % confidence level for each analyte.

Table 4. Reference Mass Fraction Values for Hopanes and Steranes in SRM 2779

	Mass Fraction (mg/kg)
17α(H),21β(H)-30-Norhopane[a,b,c]	17.0 ± 4.6
17α(H)-22,29,30-Trisnorhopane[a,b,c]	7.29 ± 0.79
18α(H)-22,29,30-Trisnorhopane[c]	6.9 ± 1.1
17α(H),21β(H)-30-Hopane[a,b,c]	42.1 ± 9.9
17α(H),21β(H)-22R-Homohopane[a,b,c]	13.8 ± 3.6
17α(H),21β(H)-22S-Homohopane[a,b c]	17.3 ± 4.3
17α(H)-Diahopane[c]	4.5 ± 1.2
5α(H), 14β(H),17β(H)-Cholestane 20S[c]	22.3 ± 7.5
5α(H), 14β(H),17β(H)-Cholestane 20R[a,b,c]	23.7 ± 2.7
13β(H),17α(H)-Diacholestane 20S[c]	41.2 ± 6.7
5α(H), 14α(H),17α(H)-24-Ethylcholestane 20R[a,b,c]	16.9 ± 5.0
5α(H), 14β(H),17β(H)-24-Ethylcholestane 20R[a,b,c]	21.3 ± 8.2
5α(H), 14β(H),17β(H)-24-Ethylcholestane 20S[c]	23.1 ± 6.4

[a] GC/MS Ia using LC fractionation followed by analysis on a DB-17MS column.
[b] GC/MS III using silica/alumina fractionation followed by analysis on an Rxi-17sil MS column.
[c] Data from the interlaboratory study [3].

The laboratories listed below participated in the interlaboratory comparison exercise for the determination of PAHs, hopanes, and steranes in SRM 2779 [3].

Alpha Analytical, Inc., Mansfield, MA
ALS Environmental Division, Edmonton, AB, Canada
Battelle Analytical & Environmental Chemistry Laboratory, Duxbury, MA
Columbia Analytical Services at Jacksonville, FL, Rochester, NY, and Kelso, WA
Florida International University, North Miami, FL
New York State Department of Health, Albany, NY
NOAA/NCCOS/NOS, Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center, Juneau, AK
NOAA/NMFS/NW Fisheries Science Center, Seattle, WA
Pace Analytical Services, Inc., Minneapolis, MN
RJ Lee Group, Inc., at Monroeville, PA and Pasco, WA
TDI/B&B Laboratories, Inc., College Station, TX
TestAmerica Laboratories at Mobile, AL, West Sacramento, CA, University Park, IL, Pittsburgh, PA, Knoxville, TN, South Burlington, VT, and Tacoma, WA
Texas A&M University, College Station, TX
University of Iowa, Iowa City, IA

REFERENCES

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[5] Rukhin, A.L.; *Weighted Means Statistics in Interlaboratory Studies*; Metrologia, Vol. 46, pp. 323-331 (2009).

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[7] JCGM 100:2008; *Evaluation of Measurement Data — Guide to the Expression of Uncertainty in Measurement* (ISO GUM 1995 with Minor Corrections); Joint Committee for Guides in Metrology (JCGM) (2008); available at http://www.bipm.org/utils/common/documents/jcgm/JCGM_100_2008_E.pdf (accessed June 2012); see also Taylor, B.N.; Kuyatt, C.E.; *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*; NIST Technical Note 1297; U.S. Government Printing Office: Washington, DC (1994); available at http://www.nist.gov/pml/pubs/index.cfm (accessed June 2012).

[8] JCGM 101:2008; *Evaluation of Measurement Data – Supplement 1 to the Guide to the Expression of Uncertainty in Measurement – Propagation of Distributions Using a Monte Carlo Method*; Joint Committee for Guides in Metrology (JCGM) (2008); available at http://www.bipm.org/utils/common/documents/jcgm/JCGM_101_2008_E.pdf (accessed June 2012).

Certificate Revision History: 04 June 2012 (Editorial changes); 22 May 2012 (Corrected names in Table 4; editorial changes); 30 January 2012 (Original certificate date)

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

Method 8270D SIM

Semivolatile Organic Compounds (GC/MS SIM) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Matrix: Solid Level: Low

GC Column (1): Rxi-5SilMS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ	#	FBP	#	TPHL	#
22T-VB-02-7.0-8.8_20190717	580-87761-5	0	X	0	X	0	X
22T-VB-02-7.0-8.8_20190717 DL	580-87761-5 DL	0	X	0	X	0	X
22T-VB-03-2.0-4.0_20190717	580-87761-12	0	X	0	X	0	X
22T-VB-03-4.0-6.0_20190717	580-87761-13	0	X	0	X	0	X
22T-VB-03-4.0-6.0_20190717 DL	580-87761-13 DL	0	X	0	X	0	X
22T-VB-03-8.0-9.0_20190717	580-87761-15	0	X	0	X	0	X
22T-VB-03-8.0-9.0_20190717 DL	580-87761-15 DL	0	X	0	X	0	X
22T-VB-03-11.2-12_20190717	580-87761-17	0	X	0	X	0	X
22T-VB-03-11.2-12_20190717 DL	580-87761-17 DL	0	X	0	X	0	X
22T-VB-03-4.0-6.0-D_20190717	580-87761-18	0	X	0	X	0	X
22T-VB-03-4.0-6.0-D_20190717 DL	580-87761-18 DL	0	X	0	X	0	X
22T-SG-04_20190718	580-87761-21	0	X	0	X	0	X
22T-SG-05_20190718	580-87761-22	0	X	0	X	0	X
22T-SG-06_20190718	580-87761-23	0	X	0	X	0	X
22T-SG-06_20190718 DL	580-87761-23 DL	0	X	0	X	0	X
22T-SG-09_20190718	580-87761-26	0	X	0	X	0	X
	MB 140-32772/1-A	68		68		78	
	LCS 140-32772/2-A	78		74		83	
22T-SG-04_20190718 MS	580-87761-21 MS	0	X	0	X	0	X
22T-SG-04_20190718 MSD	580-87761-21 MSD	0	X	0	X	0	X

	QC LIMITS
NBZ = Nitrobenzene-d5	20-121
FBP = 2-Fluorobiphenyl (Surr)	20-142
TPHL = Terphenyl-d14	35-150

Column to be used to flag recovery values

FORM II 8270D SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Matrix: Solid Level: Low Lab File ID: lcs 140-32772-2-a.D

Lab ID: LCS 140-32772/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/g)	LCS CONCENTRATION (ng/g)	LCS % REC	QC LIMITS REC	#
1-Methylnaphthalene	50.0	37.9	76	50-150	
2-Methylnaphthalene	50.0	38.5	77	50-150	
Acenaphthene	50.0	36.3	73	50-150	
Acenaphthylene	50.0	33.1	66	30-150	
Anthracene	50.0	33.1	66	30-150	
Benzo[a]anthracene	50.0	43.3	87	50-150	
Benzo[a]pyrene	50.0	36.5	73	30-150	
Benzo[b]fluoranthene	50.0	40.1	80	50-150	
Benzo[e]pyrene	50.0	37.7	75	50-150	
Benzo[g,h,i]perylene	50.0	36.4	73	50-150	
Benzo[k]fluoranthene	50.0	36.6	73	50-150	
Chrysene	50.0	38.4	77	50-150	
Dibenz(a,h)anthracene	50.0	38.2	76	50-150	
Dibenzothiophene	50.0	35.0	70	50-150	
Fluoranthene	50.0	42.0	84	50-150	
Fluorene	50.0	36.6	73	50-150	
Indeno[1,2,3-cd]pyrene	50.0	39.1	78	50-150	
Naphthalene	50.0	37.2	74	50-150	
Perylene	50.0	31.7	63	30-150	
Phenanthrene	50.0	36.4	73	50-150	
Pyrene	50.0	40.4	81	50-150	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Matrix: Solid Level: Low Lab File ID: 580-87761-b-21-b ms.D

Lab ID: 580-87761-21 MS Client ID: 22T-SG-04_20190718 MS

COMPOUND	SPIKE ADDED (ng/g)	SAMPLE CONCENTRATION (ng/g)	MS CONCENTRATION (ng/g)	MS % REC	QC LIMITS REC	#
1-Methylnaphthalene	50.9	200	172	-60	50-150	F1
2-Methylnaphthalene	50.9	380	277 J	-203	50-150	4
Acenaphthene	50.9	1800	1140	-1363	50-150	4
Acenaphthylene	50.9	120	160	79	30-150	
Anthracene	50.9	590	415	-340	30-150	4
Benzo[a]anthracene	50.9	1300	969	-662	50-150	4
Benzo[a]pyrene	50.9	1400	1120	-507	30-150	4
Benzo[b]fluoranthene	50.9	1300	1050	-515	50-150	4
Benzo[e]pyrene	50.9	830	673	-314	50-150	4
Benzo[g,h,i]perylene	50.9	1000	852	-344	50-150	4
Benzo[k]fluoranthene	50.9	470	363	-212	50-150	4
Chrysene	50.9	1400	1060	-729	50-150	4
Dibenz(a,h)anthracene	50.9	150	135	-24	50-150	F1
Dibenzothiophene	50.9	670	497	-344	50-150	4
Fluoranthene	50.9	4300	3240	-2022	50-150	4
Fluorene	50.9	1200	701	-964	50-150	4
Indeno[1,2,3-cd]pyrene	50.9	740	632	-219	50-150	4
Naphthalene	50.9	670	551 J	-238	50-150	4
Perylene	50.9	380	310	-147	30-150	4
Phenanthrene	50.9	4800	3360	-2888	50-150	4
Pyrene	50.9	4500	3190	-2589	50-150	4

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Matrix: Solid Level: Low Lab File ID: 580-87761-b-21-c msd.D

Lab ID: 580-87761-21 MSD Client ID: 22T-SG-04_20190718 MSD

COMPOUND	SPIKE ADDED (ng/g)	MSD CONCENTRATION (ng/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1-Methylnaphthalene	50.9	172	-60	0	35	50-150	F1
2-Methylnaphthalene	50.9	314	-130	13	35	50-150	4
Acenaphthene	50.9	1340	-970	16	35	50-150	4
Acenaphthylene	50.9	133	27	18	35	30-150	F1
Anthracene	50.9	460	-254	10	35	30-150	4
Benzo[a]anthracene	50.9	991	-618	2	35	50-150	4
Benzo[a]pyrene	50.9	970	-796	14	35	30-150	4
Benzo[b]fluoranthene	50.9	928	-755	12	35	50-150	4
Benzo[e]pyrene	50.9	597	-463	12	35	50-150	4
Benzo[g,h,i]perylene	50.9	705	-634	19	35	50-150	4
Benzo[k]fluoranthene	50.9	349	-240	4	35	50-150	4
Chrysene	50.9	1060	-724	0	35	50-150	4
Dibenz(a,h)anthracene	50.9	125	-45	8	35	50-150	F1
Dibenzothiophene	50.9	593	-156	18	35	50-150	4
Fluoranthene	50.9	3360	-1788	4	35	50-150	4
Fluorene	50.9	860	-652	20	35	50-150	4
Indeno[1,2,3-cd]pyrene	50.9	525	-431	19	35	50-150	4
Naphthalene	50.9	580 J	-181	5	35	50-150	4
Perylene	50.9	279	-208	10	35	30-150	4
Phenanthrene	50.9	4010	-1609	18	35	50-150	4
Pyrene	50.9	3470	-2043	8	35	50-150	4

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab File ID: mb 140-32772-1-a.D Lab Sample ID: MB 140-32772/1-A

Matrix: Solid Date Extracted: 08/26/2019 13:35

Instrument ID: MP Date Analyzed: 08/29/2019 15:02

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-32772/2-A	lcs 140-32772-2-a.D	08/29/2019 15:27
22T-VB-02-7.0-8.8_20190717	580-87761-5	580-87761-b-5-a.D	08/29/2019 17:08
22T-VB-03-2.0-4.0_20190717	580-87761-12	580-87761-b-12-a.D	08/29/2019 17:34
22T-VB-03-4.0-6.0_20190717	580-87761-13	580-87761-b-13-a.D	08/29/2019 17:59
22T-VB-03-8.0-9.0_20190717	580-87761-15	580-87761-b-15-a.D	08/29/2019 18:24
22T-VB-03-11.2-12_20190717	580-87761-17	580-87761-b-17-a.D	08/29/2019 18:50
22T-VB-03-4.0-6.0-D_20190717	580-87761-18	580-87761-b-18-a.D	08/29/2019 19:15
22T-SG-04_20190718	580-87761-21	580-87761-b-21-a.D	08/29/2019 19:40
22T-SG-04_20190718 MS	580-87761-21 MS	580-87761-b-21-b ms.D	08/29/2019 20:05
22T-SG-04_20190718 MSD	580-87761-21 MSD	580-87761-b-21-c msd.D	08/29/2019 20:30
22T-SG-05_20190718	580-87761-22	580-87761-b-22-a.D	08/29/2019 20:55
22T-SG-06_20190718	580-87761-23	580-87761-b-23-a.D	08/29/2019 21:20
22T-SG-09_20190718	580-87761-26	580-87761-b-26-a.D	08/29/2019 21:45
22T-VB-02-7.0-8.8_20190717 DL	580-87761-5 DL	580-87761-b-5-a.D	08/30/2019 14:02
22T-VB-03-8.0-9.0_20190717 DL	580-87761-15 DL	580-87761-b-15-a.D	08/30/2019 14:27
22T-VB-03-11.2-12_20190717 DL	580-87761-17 DL	580-87761-b-17-a.D	08/30/2019 14:53
22T-VB-03-4.0-6.0-D_20190717 DL	580-87761-18 DL	580-87761-b-18-a.D	08/30/2019 15:18
22T-SG-06_20190718 DL	580-87761-23 DL	580-87761-b-23-a.D	08/30/2019 15:44
22T-VB-03-4.0-6.0_20190717 DL	580-87761-13 DL	580-87761-b-13-a.D	08/30/2019 16:09

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: ICIS 140-32163/5 Date Analyzed: 07/21/2019 13:11

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): icis 4X.D Heated Purge: (Y/N) N

Calibration ID: 2060

		NPT		ANT		PHN	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		213911	4.89	105890	6.34	180526	7.59
UPPER LIMIT		427822	5.39	211780	6.84	361052	8.09
LOWER LIMIT		106956	4.39	52945	5.84	90263	7.09
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-32163/10		198727	4.90	97779	6.35	165088	7.59

NPT = Naphthalene-d8
ANT = Acenaphthene-d10
PHN = Phenanthrene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: ICIS 140-32163/5 Date Analyzed: 07/21/2019 13:11

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): icis 4X.D Heated Purge: (Y/N) N

Calibration ID: 2060

		CRY		PRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		158085	10.15	149512	11.75		
UPPER LIMIT		316170	10.65	299024	12.25		
LOWER LIMIT		79043	9.65	74756	11.25		
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-32163/10		144275	10.15	115957	11.75		

CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: CCVIS 140-33099/2 Date Analyzed: 08/29/2019 12:06

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): ccvis.D Heated Purge: (Y/N) N

Calibration ID: 2060

		NPT		ANT		PHN	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		217594	4.88	110054	6.34	181476	7.58
UPPER LIMIT		435188	5.38	220108	6.84	362952	8.08
LOWER LIMIT		108797	4.38	55027	5.84	90738	7.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-32772/1-A		201450	4.88	107716	6.34	186946	7.59
LCS 140-32772/2-A		213389	4.88	112706	6.34	196330	7.59
580-87761-5	22T-VB-02-7.0-8.8_20190717	206192	4.88	106960	6.34	190998	7.59
580-87761-12	22T-VB-03-2.0-4.0_20190717	208841	4.88	108264	6.34	191041	7.59
580-87761-13	22T-VB-03-4.0-6.0_20190717	209850	4.88	110964	6.34	203826	7.59
580-87761-15	22T-VB-03-8.0-9.0_20190717	207282	4.88	110237	6.34	200202	7.59
580-87761-17	22T-VB-03-11.2-12_20190717	207048	4.88	109463	6.34	195897	7.59
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	214410	4.88	112129	6.34	203099	7.59
580-87761-21	22T-SG-04_20190718	206955	4.88	109669	6.34	198837	7.59
580-87761-21 MS	22T-SG-04_20190718 MS	210421	4.88	110988	6.34	197703	7.59
580-87761-21 MSD	22T-SG-04_20190718 MSD	206292	4.88	108504	6.34	198297	7.59
580-87761-22	22T-SG-05_20190718	203395	4.88	106489	6.34	186401	7.59
580-87761-23	22T-SG-06_20190718	209604	4.88	111622	6.34	196418	7.59
580-87761-26	22T-SG-09_20190718	205736	4.88	110957	6.34	194834	7.59

NPT = Naphthalene-d8
ANT = Acenaphthene-d10
PHN = Phenanthrene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: CCVIS 140-33099/2 Date Analyzed: 08/29/2019 12:06

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): ccvis.D Heated Purge: (Y/N) N

Calibration ID: 2060

		CRY		PRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		154805	10.13	135373	11.73		
UPPER LIMIT		309610	10.63	270746	12.23		
LOWER LIMIT		77403	9.63	67687	11.23		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-32772/1-A		161863	10.14	159849	11.74		
LCS 140-32772/2-A		176624	10.14	183878	11.73		
580-87761-5	22T-VB-02-7.0-8.8_20190717	179973	10.14	190319	11.74		
580-87761-12	22T-VB-03-2.0-4.0_20190717	176778	10.14	192456	11.74		
580-87761-13	22T-VB-03-4.0-6.0_20190717	192920	10.14	201093	11.74		
580-87761-15	22T-VB-03-8.0-9.0_20190717	189454	10.14	201078	11.74		
580-87761-17	22T-VB-03-11.2-12_20190717	191111	10.14	200890	11.74		
580-87761-18	22T-VB-03-4.0-6.0-D_20190717	191082	10.14	204372	11.74		
580-87761-21	22T-SG-04_20190718	182472	10.14	196398	11.74		
580-87761-21 MS	22T-SG-04_20190718 MS	183259	10.14	195761	11.74		
580-87761-21 MSD	22T-SG-04_20190718 MSD	184720	10.14	200274	11.74		
580-87761-22	22T-SG-05_20190718	175444	10.14	186160	11.74		
580-87761-23	22T-SG-06_20190718	187930	10.14	198002	11.74		
580-87761-26	22T-SG-09_20190718	179888	10.14	196605	11.74		

CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: CCVIS 140-33157/2 Date Analyzed: 08/30/2019 10:26

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): ccvis.D Heated Purge: (Y/N) N

Calibration ID: 2060

		NPT		ANT		PHN	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		212421	4.88	108113	6.33	181428	7.58
UPPER LIMIT		424842	5.38	216226	6.83	362856	8.08
LOWER LIMIT		106211	4.38	54057	5.83	90714	7.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
580-87761-5 DL	22T-VB-02-7.0-8.8_20190717 DL	187130	4.88	98365	6.34	168916	7.58
580-87761-15 DL	22T-VB-03-8.0-9.0_20190717 DL	192834	4.88	100614	6.34	173213	7.59
580-87761-17 DL	22T-VB-03-11.2-12_20190717 DL	190507	4.88	99875	6.34	169643	7.58
580-87761-18 DL	22T-VB-03-4.0-6.0-D_20190717 DL	191961	4.88	100417	6.34	171598	7.59
580-87761-23 DL	22T-SG-06_20190718 DL	194097	4.88	100430	6.34	171363	7.59
580-87761-13 DL	22T-VB-03-4.0-6.0_20190717 DL	191093	4.88	98826	6.34	169637	7.59

NPT = Naphthalene-d8
ANT = Acenaphthene-d10
PHN = Phenanthrene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Sample No.: CCVIS 140-33157/2 Date Analyzed: 08/30/2019 10:26

Instrument ID: MP GC Column: Rxi-5SilMS 25 ID: 0.25(mm)

Lab File ID (Standard): ccvis.D Heated Purge: (Y/N) N

Calibration ID: 2060

		CRY		PRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		158011	10.13	149435	11.73		
UPPER LIMIT		316022	10.63	298870	12.23		
LOWER LIMIT		79006	9.63	74718	11.23		
LAB SAMPLE ID	CLIENT SAMPLE ID						
580-87761-5 DL	22T-VB-02-7.0-8.8_20190717 DL	155759	10.13	169837	11.73		
580-87761-15 DL	22T-VB-03-8.0-9.0_20190717 DL	158360	10.13	173193	11.73		
580-87761-17 DL	22T-VB-03-11.2-12_20190717 DL	156182	10.13	172515	11.73		
580-87761-18 DL	22T-VB-03-4.0-6.0-D_20190717 DL	157489	10.14	168015	11.73		
580-87761-23 DL	22T-SG-06_20190718 DL	154230	10.14	166175	11.74		
580-87761-13 DL	22T-VB-03-4.0-6.0_20190717 DL	155551	10.14	164289	11.74		

CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-02-7.0-8.8_20190717 Lab Sample ID: 580-87761-5

Matrix: Solid Lab File ID: 580-87761-b-5-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 14:20

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.69(g) Date Analyzed: 08/29/2019 17:08

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 42.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	130	J	150	20
91-57-6	2-Methylnaphthalene	340		290	30
83-32-9	Acenaphthene	1700		29	13
208-96-8	Acenaphthylene	150		29	7.3
120-12-7	Anthracene	550		29	24
56-55-3	Benzo[a]anthracene	2000		29	12
50-32-8	Benzo[a]pyrene	2400		29	11
205-99-2	Benzo[b]fluoranthene	2100		29	15
192-97-2	Benzo[e]pyrene	1400		29	9.9
191-24-2	Benzo[g,h,i]perylene	1800		29	17
207-08-9	Benzo[k]fluoranthene	810		29	13
STL00905	C1-Chrysenes	660		29	7.6
STL00909	C1-Dibenzothiophenes	420		29	19
STL00912	C1-Fluoranthenes/pyrene	1800		29	15
STL00913	C1-Fluorenes	390		29	16
STL00916	C1-Naphthalenes	310		290	23
STL00901	C1-Phenanthrenes/Anthracenes	1900		58	33
STL00906	C2-Chrysenes	290		29	9.1
STL00910	C2-Dibenzothiophenes	440		29	27
STL00968	C2-Fluoranthenes/Pyrene	540		29	13
STL00914	C2-Fluorenes	470		58	35
STL00917	C2-Naphthalenes	580		58	22
STL00902	C2-Phenanthrenes/Anthracenes	1200		120	72
STL00907	C3-Chrysenes	170		29	8.8
STL00911	C3-Dibenzothiophenes	310		58	33
STL00969	C3-Fluoranthenes/Pyrene	290		29	16
STL00915	C3-Fluorenes	400		58	31
STL00918	C3-Naphthalenes	920		58	29
STL00903	C3-Phenanthrenes/Anthracenes	620		58	46
STL00908	C4-Chrysenes	100		29	9.9
STL00967	C4-Dibenzothiophenes	150		29	28
STL01791	C4-Fluoranthenes/Pyrene	150		29	11
STL00919	C4-Naphthalenes	660		120	60

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-02-7.0-8.8_20190717 Lab Sample ID: 580-87761-5

Matrix: Solid Lab File ID: 580-87761-b-5-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 14:20

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.69(g) Date Analyzed: 08/29/2019 17:08

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 42.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	350	AP	58	55
218-01-9	Chrysene	2200		29	11
53-70-3	Dibenz(a,h)anthracene	230		29	17
132-65-0	Dibenzothiophene	870		29	9.9
206-44-0	Fluoranthene	6900		29	27
86-73-7	Fluorene	1000		29	14
193-39-5	Indeno[1,2,3-cd]pyrene	1300		29	20
91-20-3	Naphthalene	720		580	53
198-55-0	Perylene	670		29	5.8
85-01-8	Phenanthrene	6900		58	51

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D
Lims ID: 580-87761-B-5-A
Client ID: 22T-VB-02-7.0-8.8_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 17:08:30 ALS Bottle#: 6 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-014
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 31-Aug-2019 11:32:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	206192	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	224742	0.4952	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	68955	0.2319	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	97	25170	0.0888	
11 Acenaphthylene	152	6.216	6.216	0.000	99	37679	0.1024	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	106960	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	333502	1.17	
16 Fluorene	166	6.796	6.793	0.003	100	218065	0.6927	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	270893	0.5942	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	98	190998	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	2333583	4.74	
20 Anthracene	178	7.648	7.648	0.000	99	154070	0.3755	
22 Fluoranthene	202	8.690	8.687	0.003	99	2264619	4.73	
23 Pyrene	202	8.911	8.906	0.005	99	2842657	5.22	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	62	590552	1.38	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	179973	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	756864	1.48	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	742180	1.43	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	327119	0.5551	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	459756	0.9421	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	732950	1.64	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	190319	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	232227	0.4599	
35 Indeno[1,2,3-cd]pyrene	276	13.154	13.150	0.004	85	489788	0.8910	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	41	72910	0.1563	
37 Benzo[g,h,i]perylene	276	13.512	13.508	0.004	99	619494	1.20	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	94751	0.2088	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	181129	0.3991	
A 40 C3-Naphthalenes	170	6.558	(6.323-6.820)		0	285287	0.6286	
A 41 C4-Naphthalenes	184	6.947	(6.483-7.421)		0	205098	0.4519	
A 42 C1-Fluorenes	180	7.299	(7.219-7.413)		0	83290	0.2646	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.565-7.939)		0	100798	0.3202	
A 44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	86928	0.2761	
A 45 C1-Dibenzothiophenes	198	7.953	(7.827-8.065)		0	130708	0.2867	
A 46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	135848	0.2980	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	97278	0.2134	
A 48 C4-Dibenzothiophenes	240	9.055	(8.814-9.591)		0	48146	0.1056	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	638137	1.30	
A 50 C2-Phenanthrenes/Anthracen	206	8.537	(8.358-8.785)		0	394223	0.8013	
A 51 C3-Phenanthrenes/Anthracen	220	9.001	(8.747-9.260)		0	208060	0.4229	
A 52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	118461	0.2408	
A 53 C1-Fluoranthenes/pyrene	216	9.313	(9.112-9.500)		0	668428	1.23	
A 54 C2-Fluoranthenes/Pyrene	230	9.807	(9.587-10.039)		0	199468	0.3662	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.043-10.519)		0	107027	0.1965	
A 56 C4-Fluoranthenes/Pyrene	258	10.711	(10.371-10.864)		0	57722	0.1060	
A 57 C1-Chrysenes	242	10.623	(10.512-10.741)		0	232202	0.4537	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	102095	0.1995	
A 59 C3-Chrysenes	270	11.515	(11.245-11.890)		0	59614	0.1165	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	34897	0.0682	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

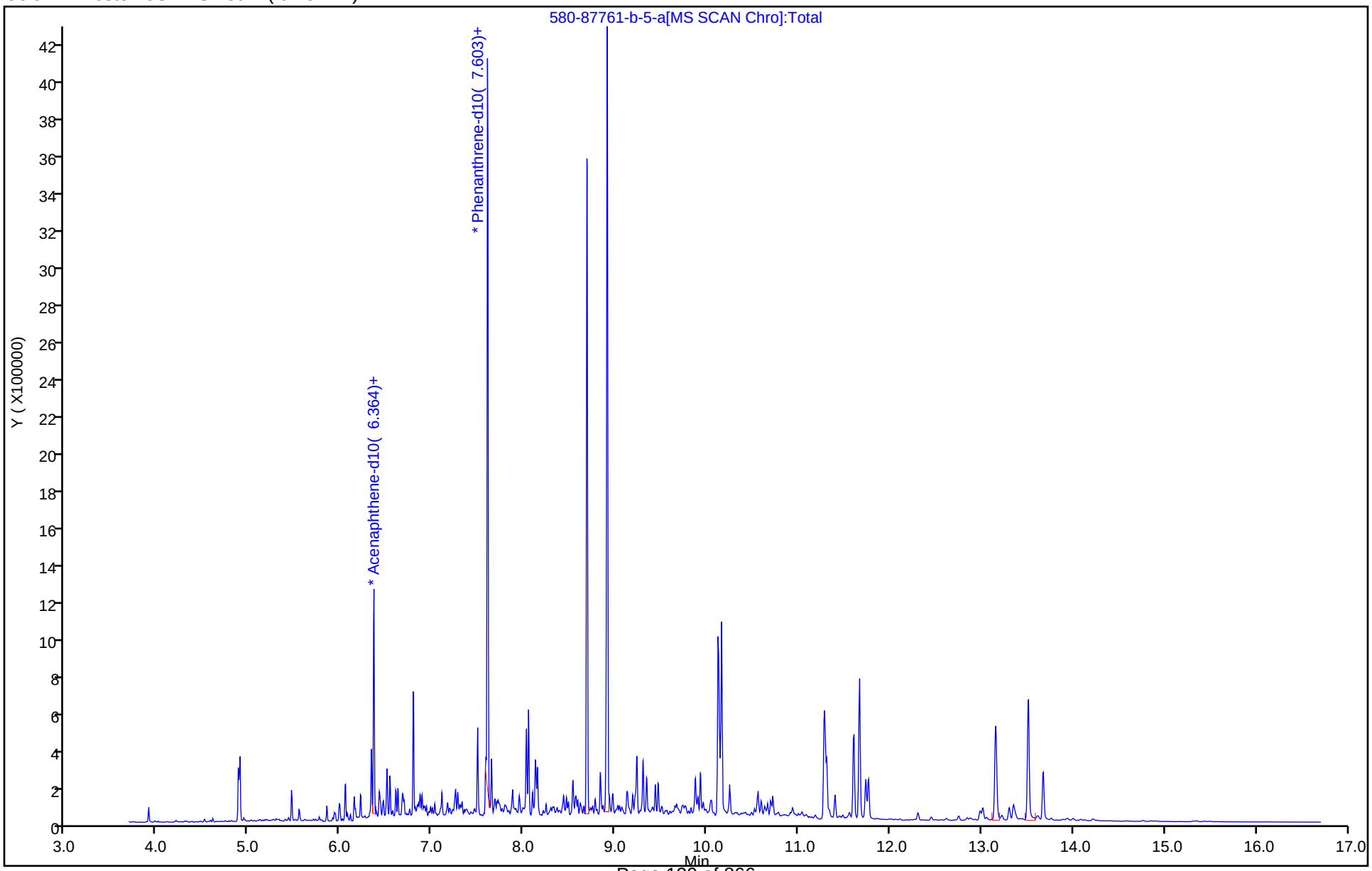
Report Date: 31-Aug-2019 11:48:41 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D

Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5	Worklist Smp#:	14
Client ID:	22T-VB-02-7.0-8.8_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	6
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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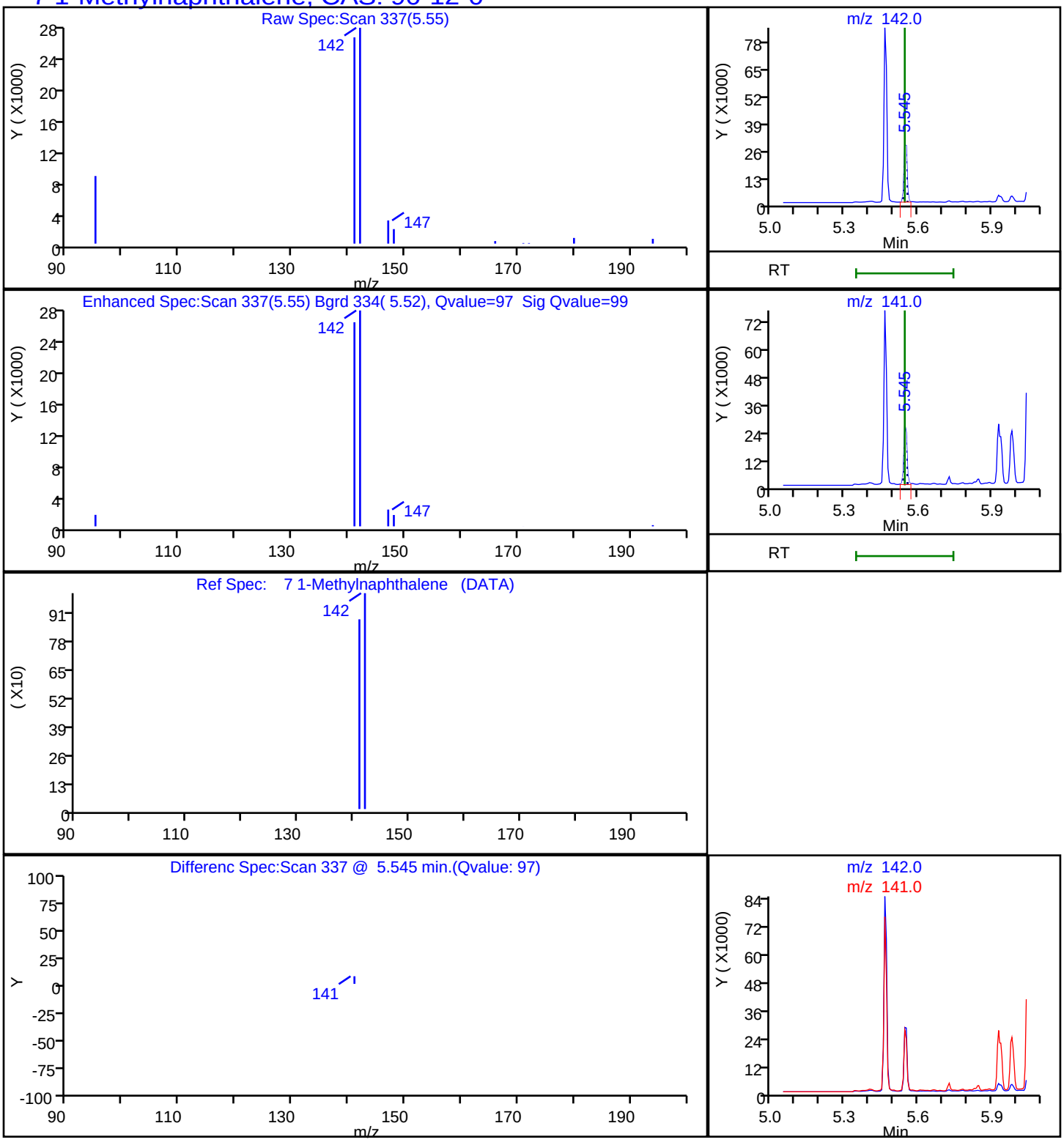
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

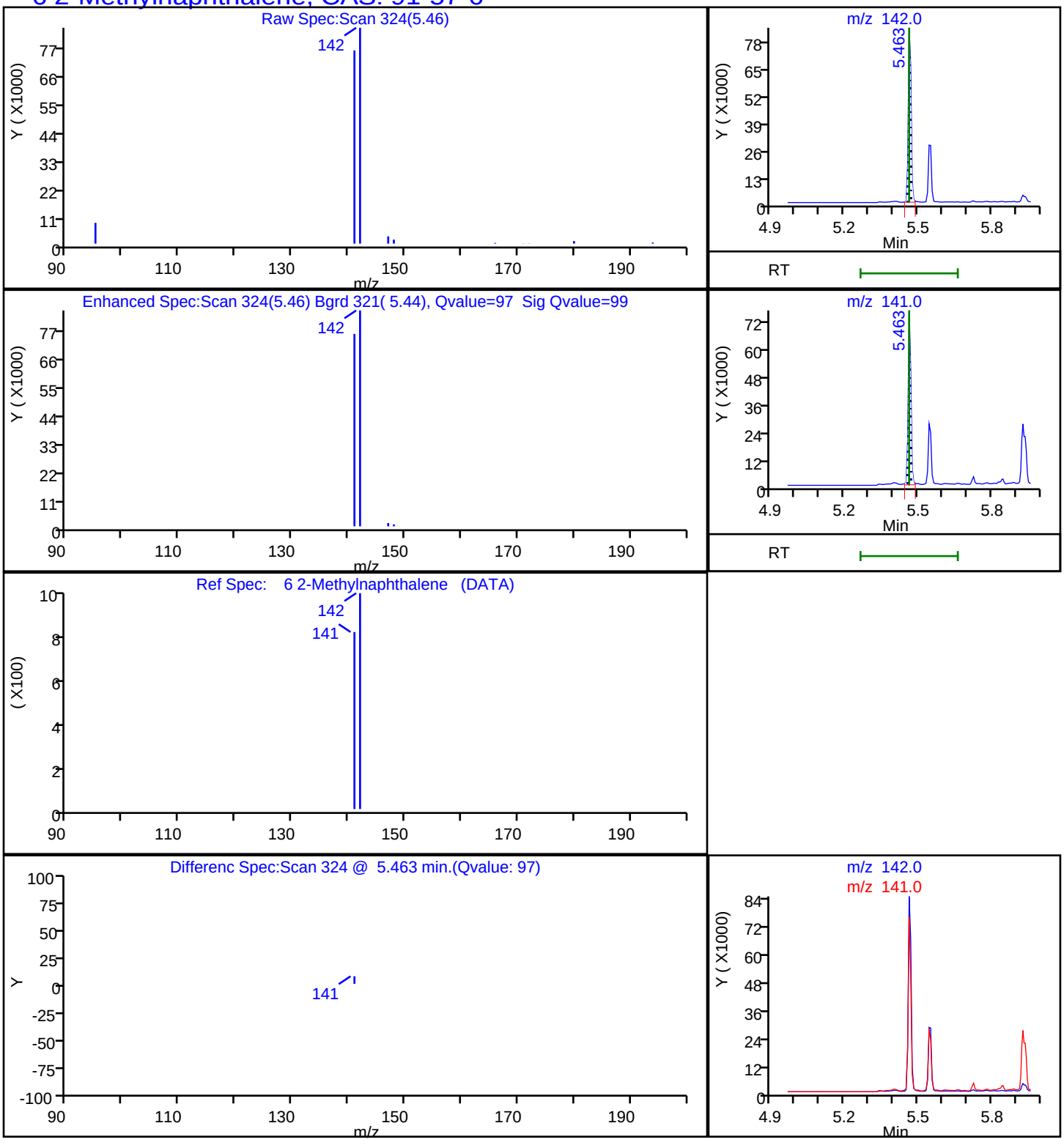


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

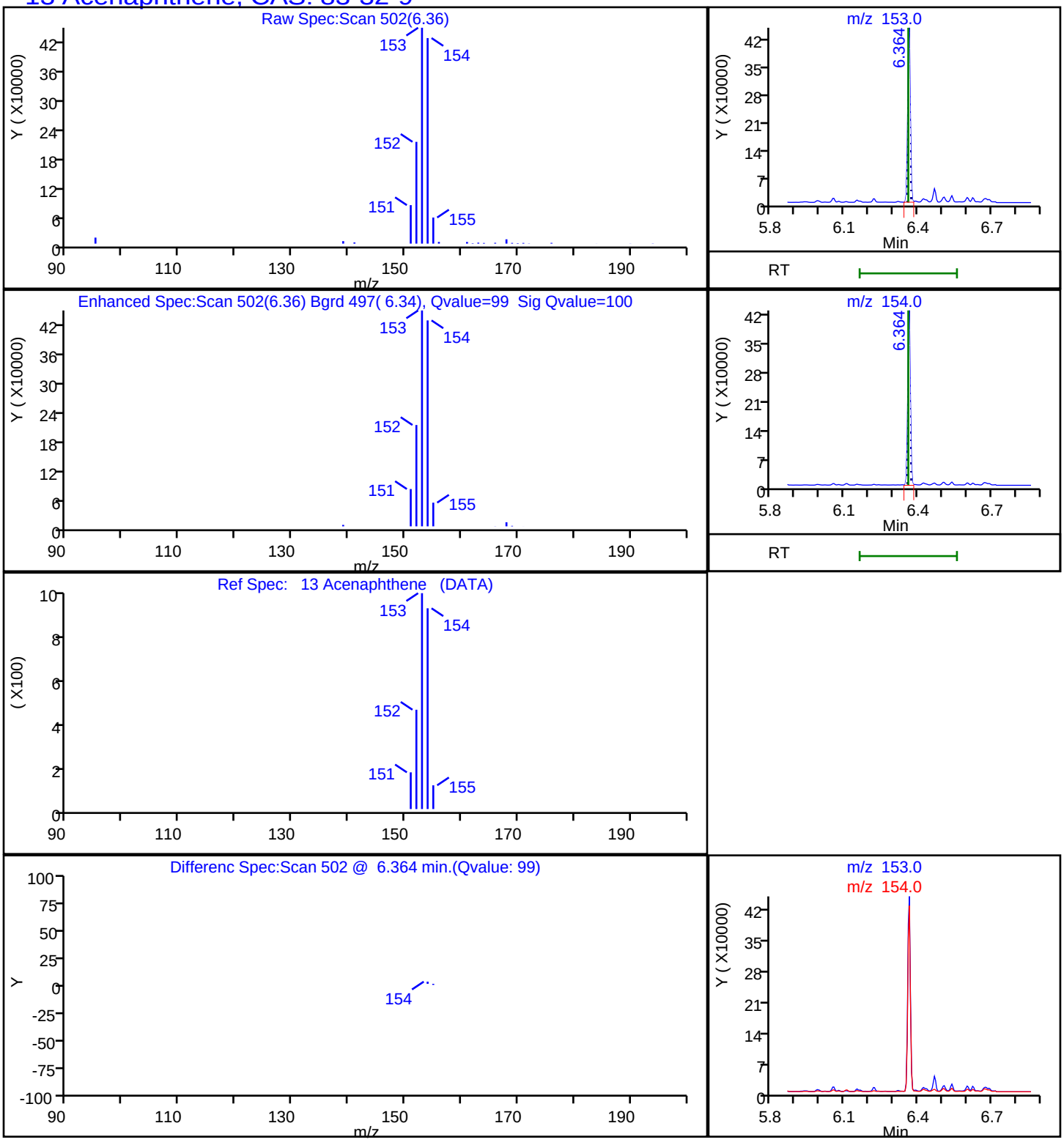


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9

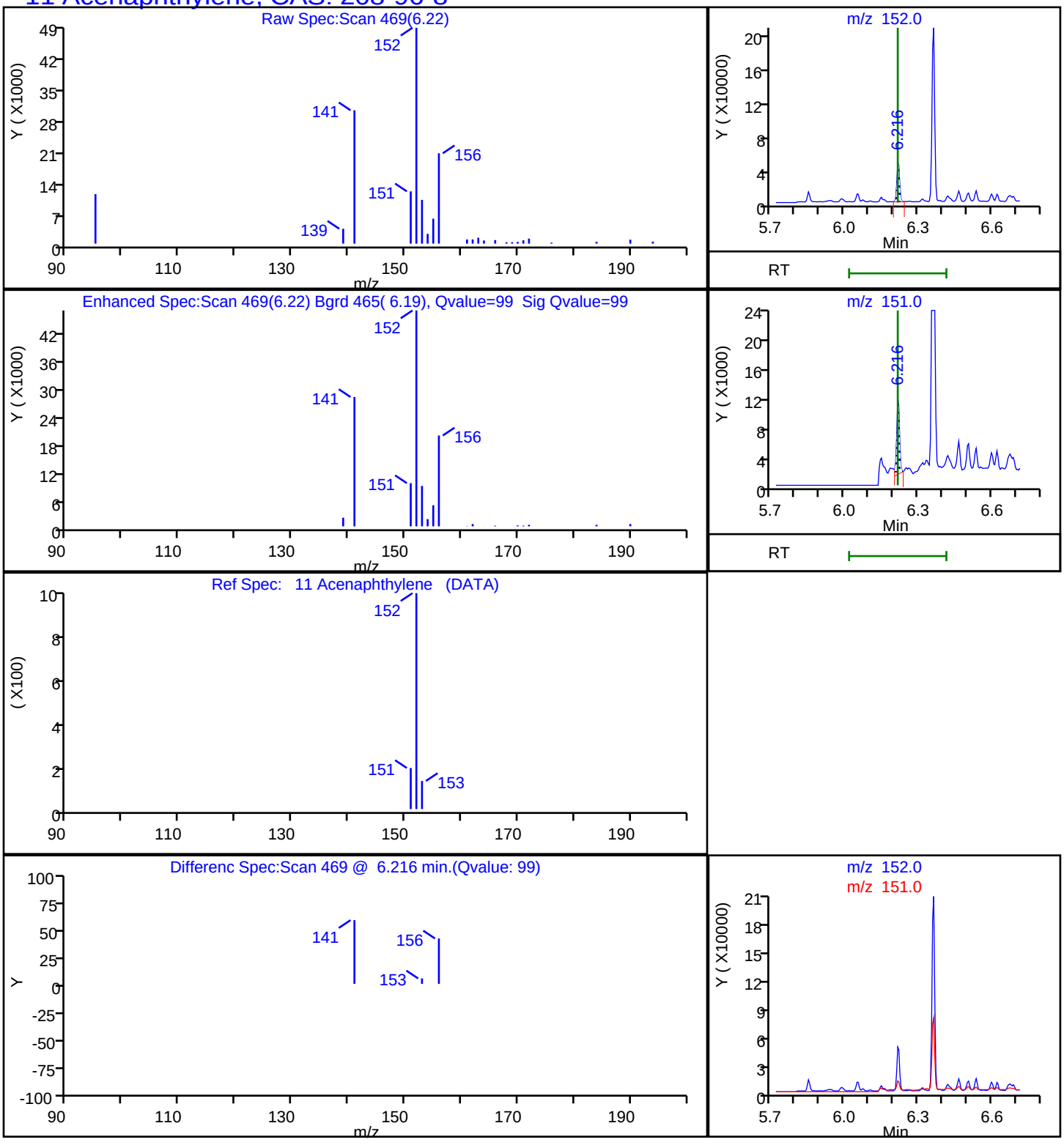


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

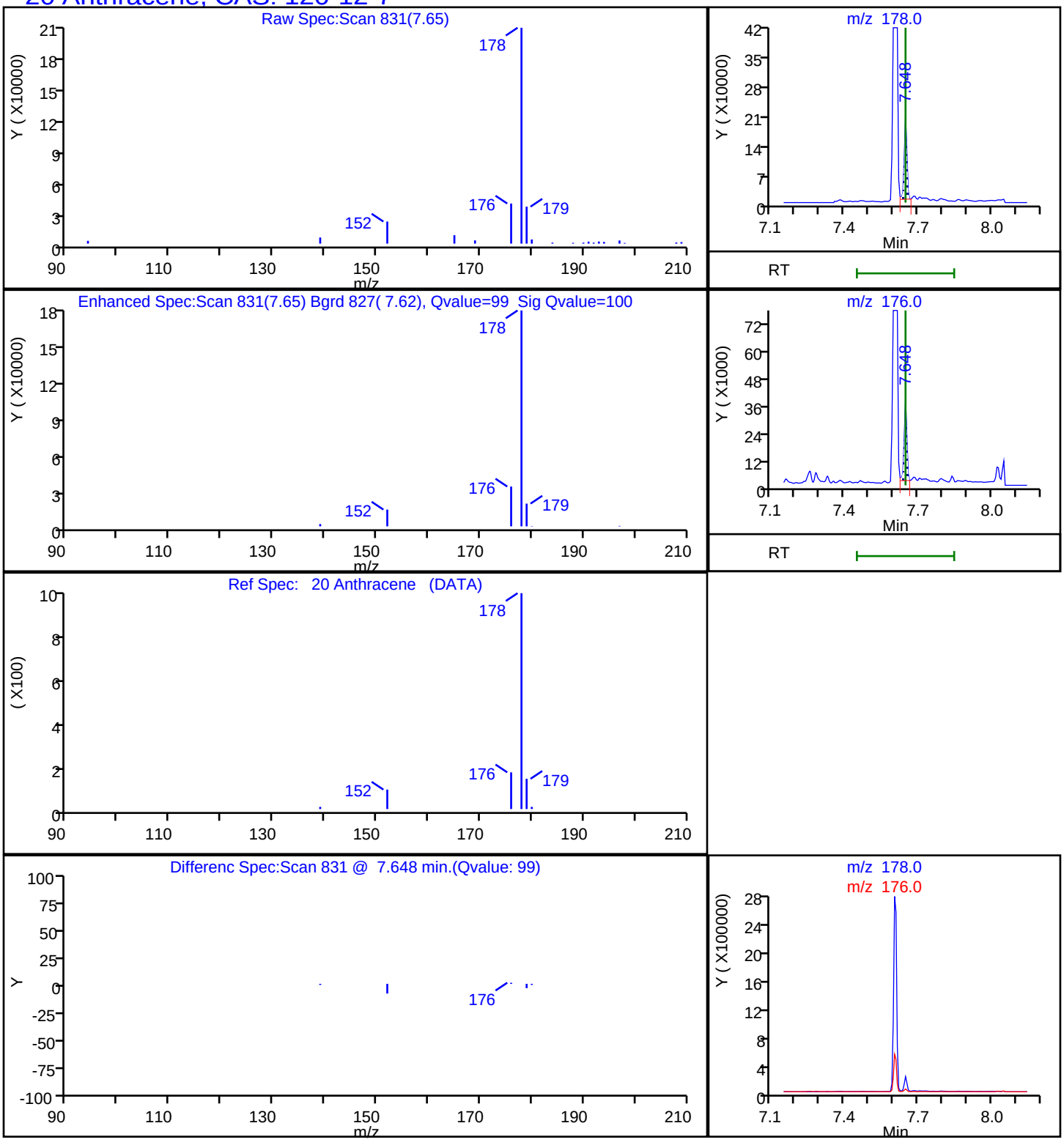
11 Acenaphthylene, CAS: 208-96-8



Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D		
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5
Client ID:	22T-VB-02-7.0-8.8_20190717		
Operator ID:	11211	ALS Bottle#:	6 Worklist Smp#: 14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

20 Anthracene, CAS: 120-12-7

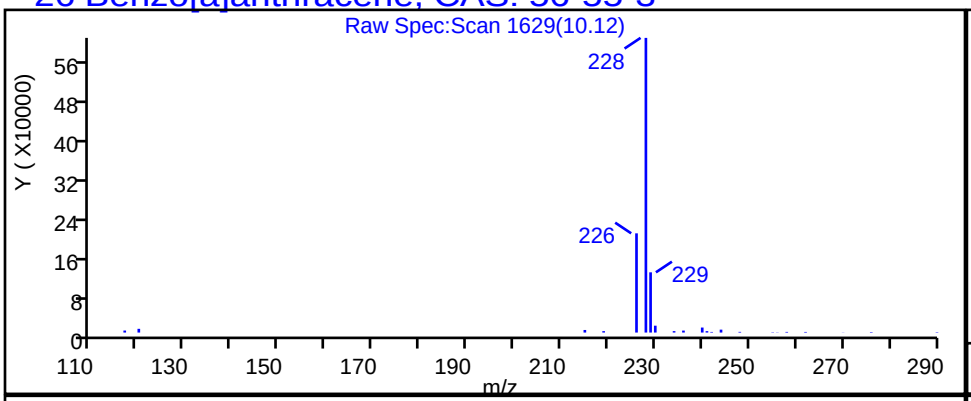


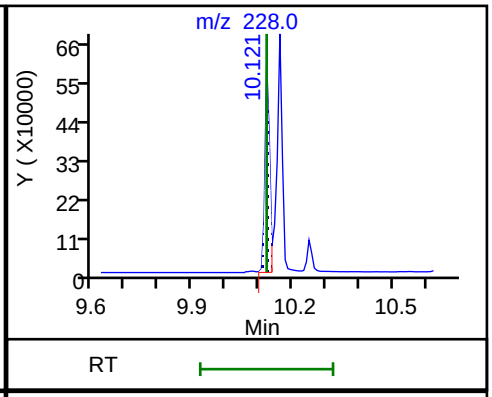
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

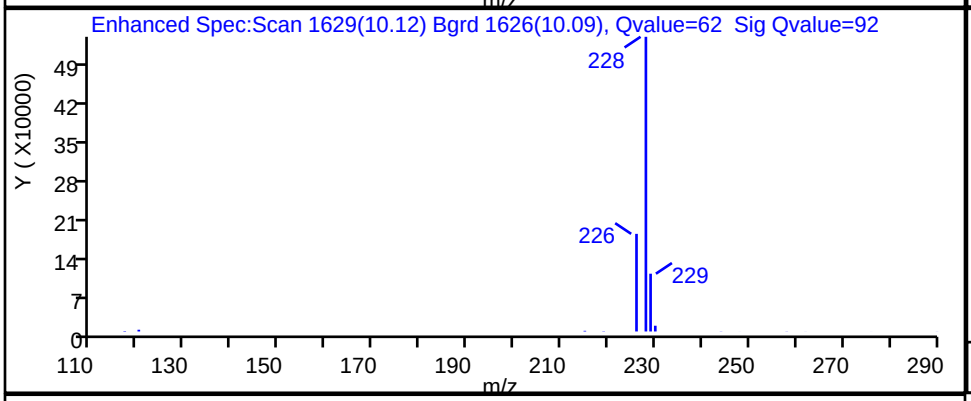
Eurofins TestAmerica, Knoxville

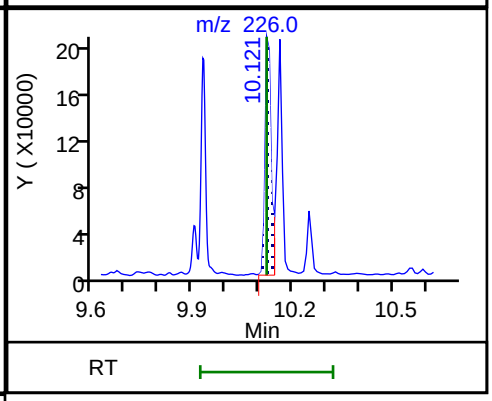
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

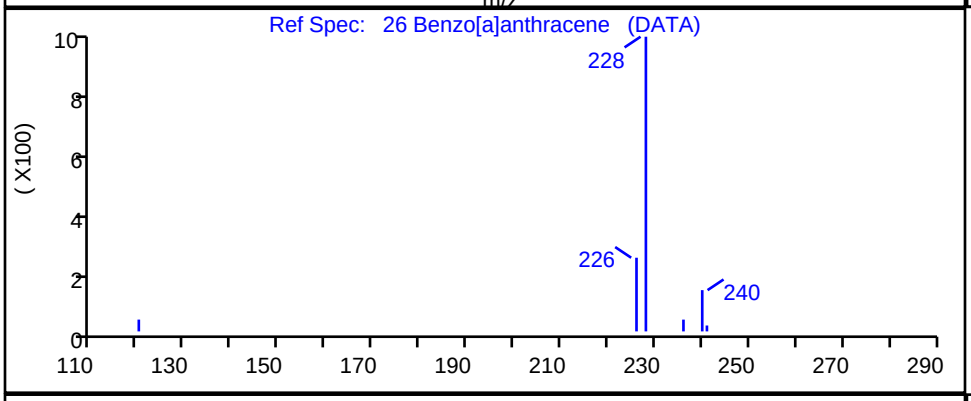
26 Benzo[a]anthracene, CAS: 56-55-3

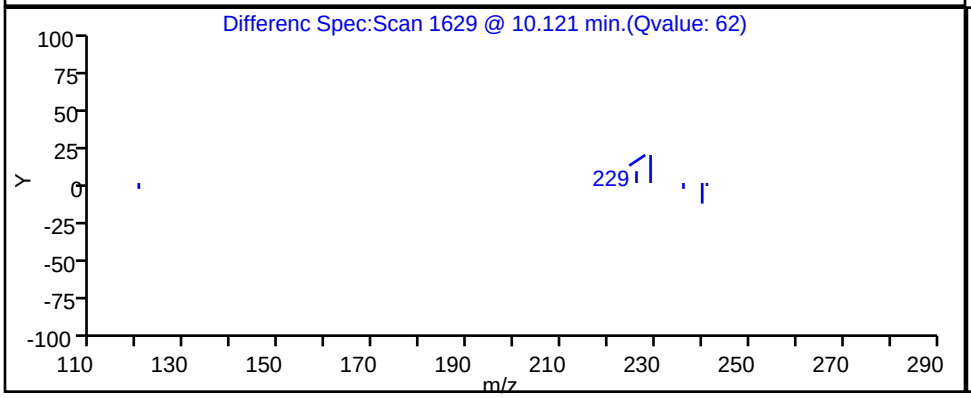


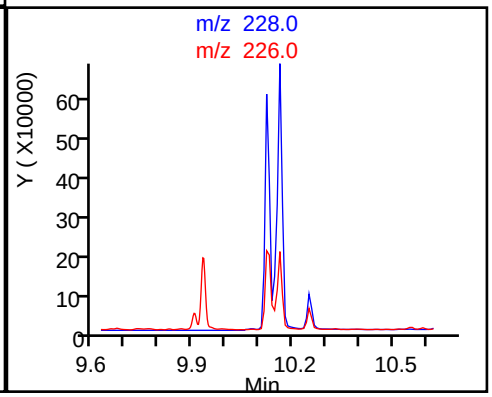










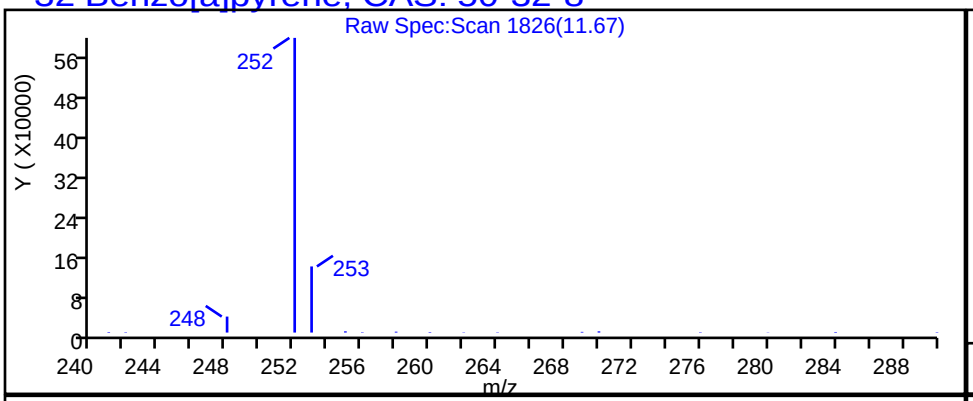


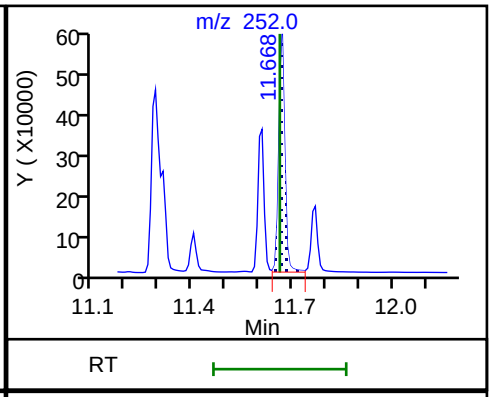
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

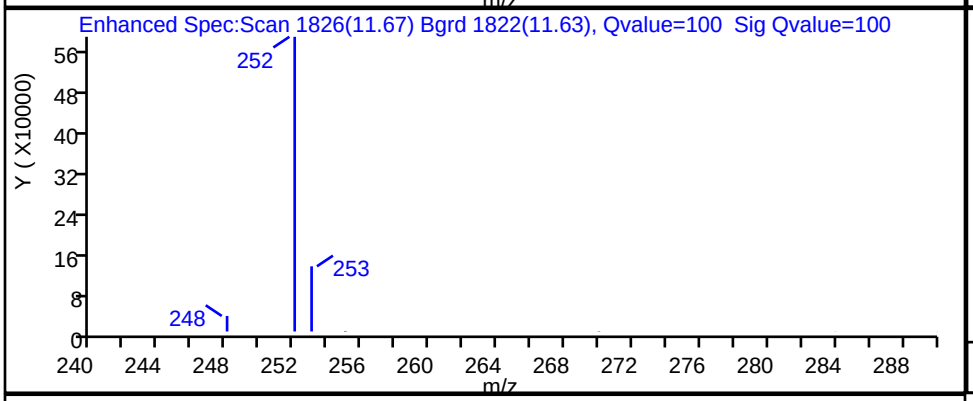
Eurofins TestAmerica, Knoxville

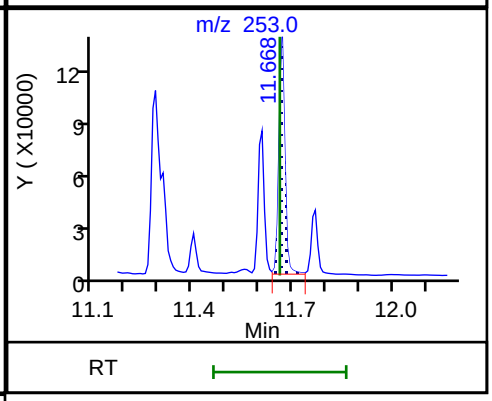
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

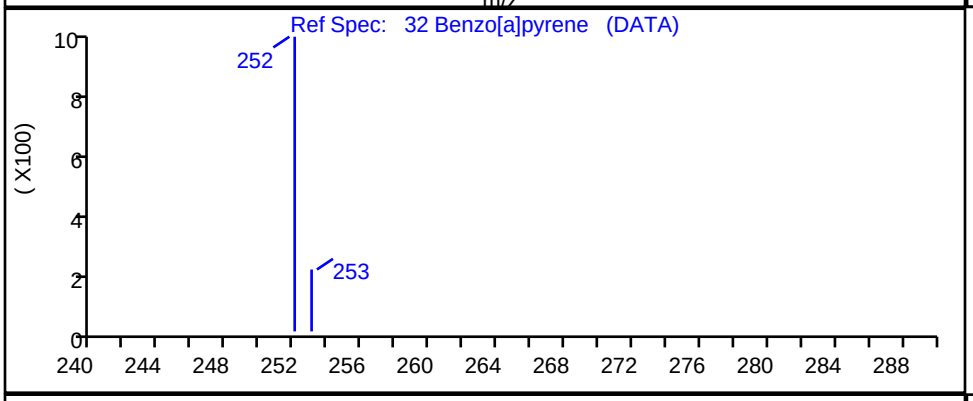
32 Benzo[a]pyrene, CAS: 50-32-8

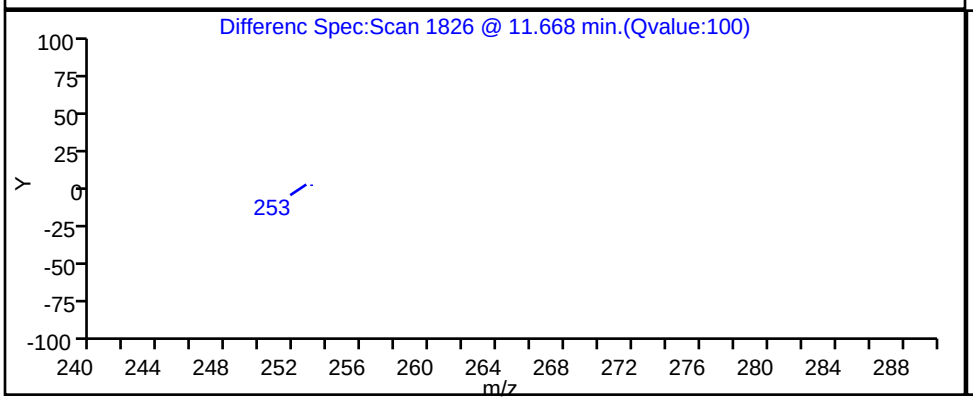


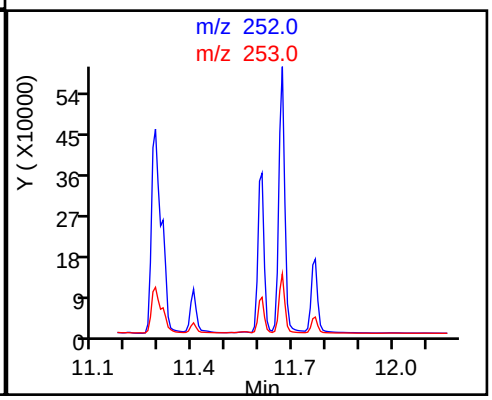










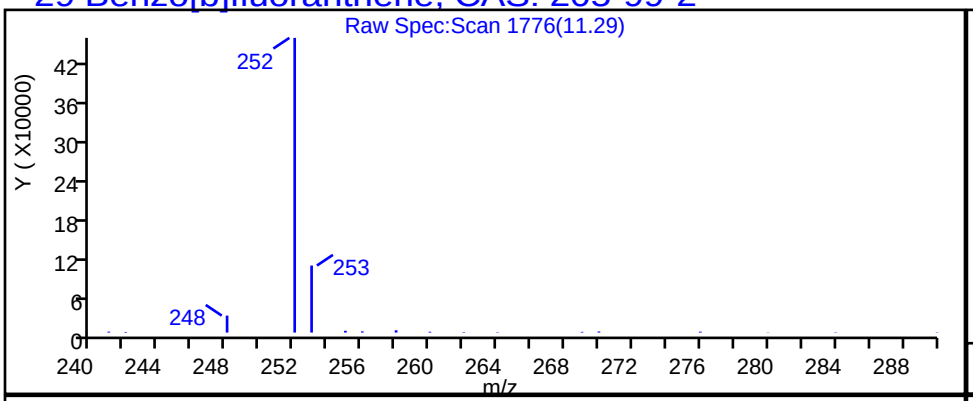


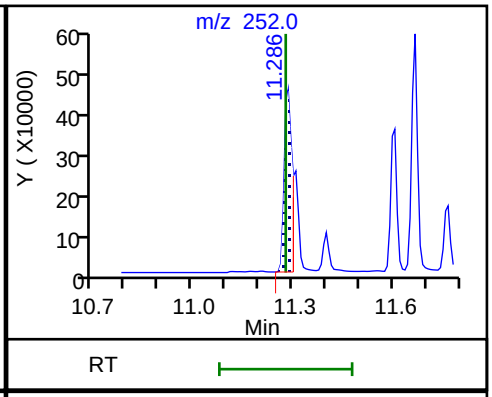
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

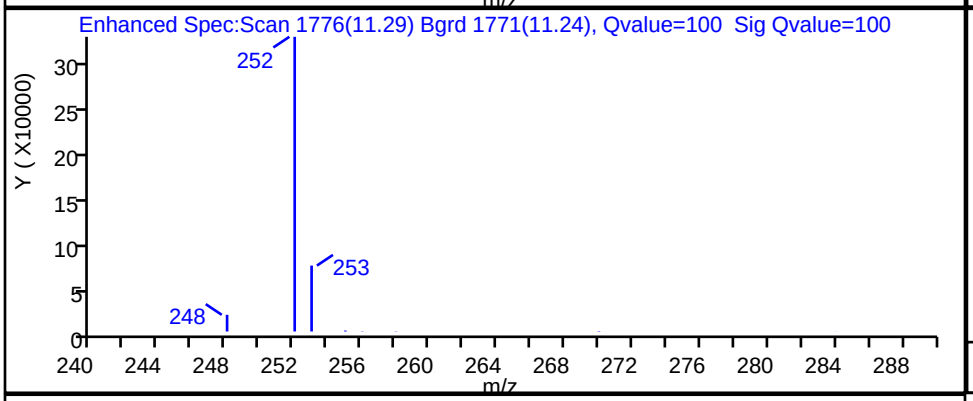
Eurofins TestAmerica, Knoxville

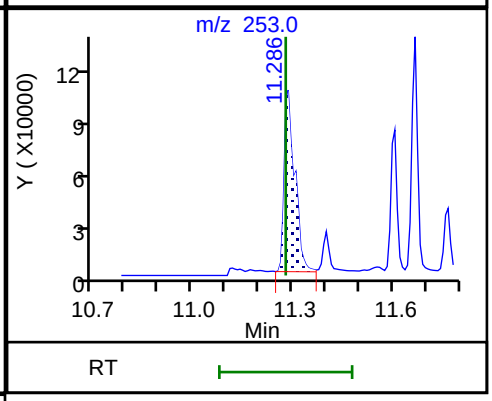
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

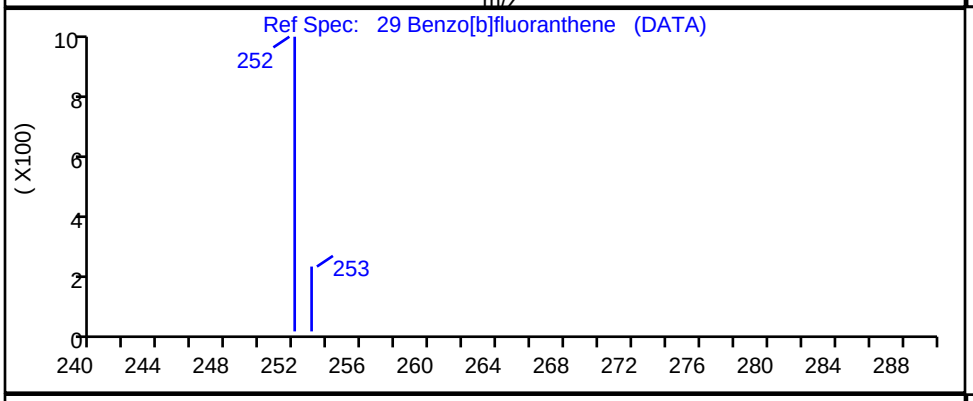
29 Benzo[b]fluoranthene, CAS: 205-99-2

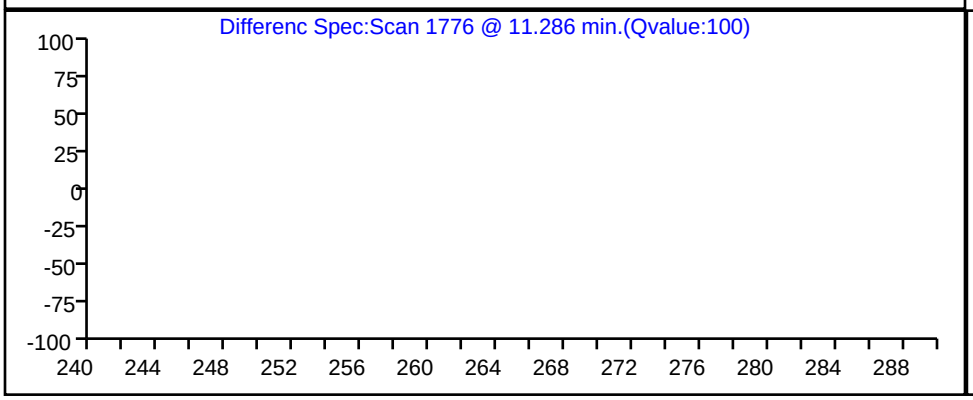


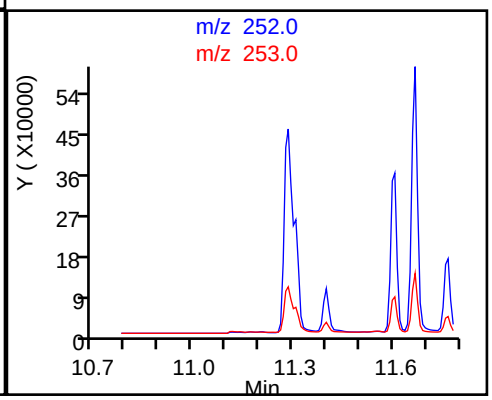










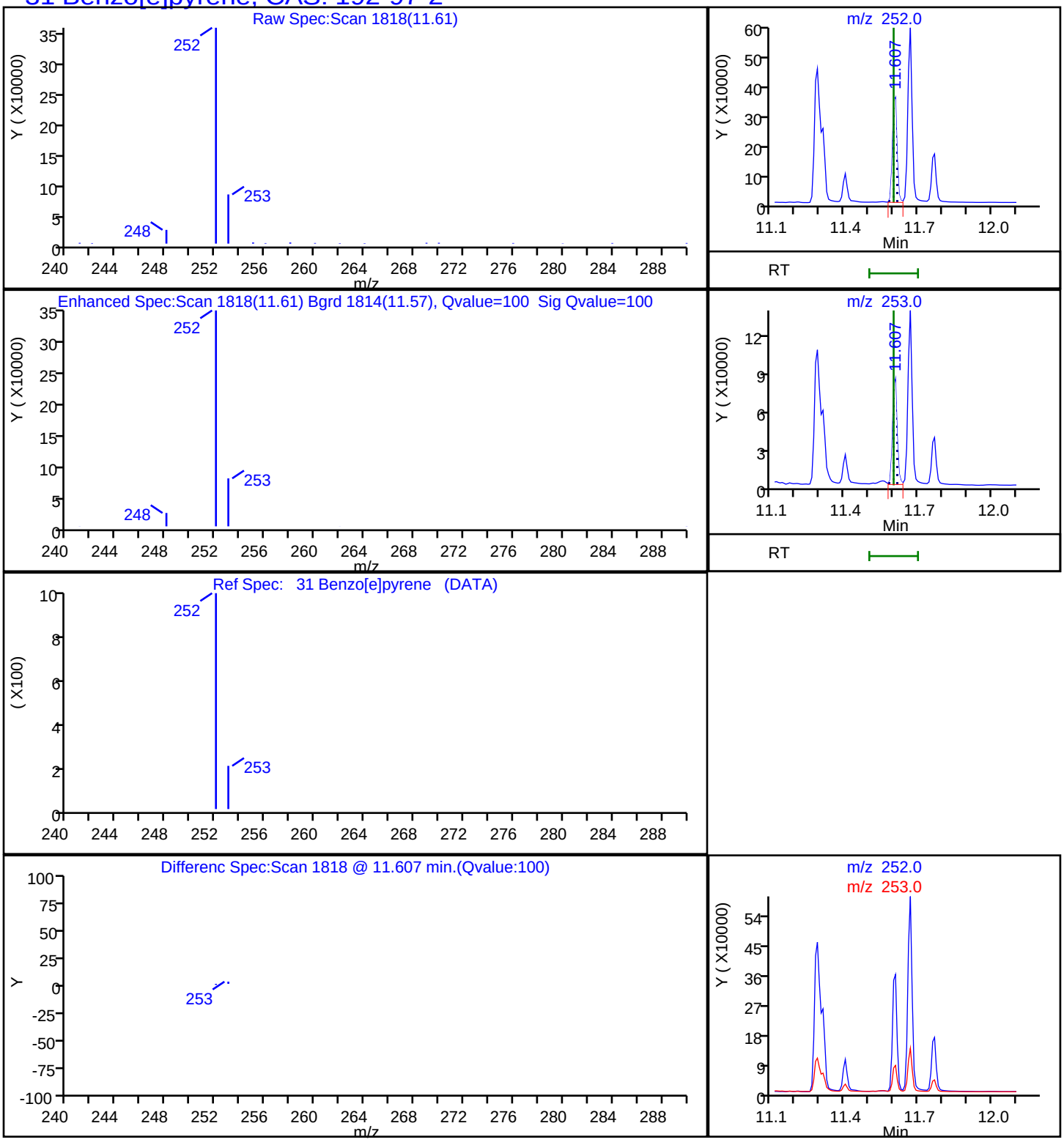


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



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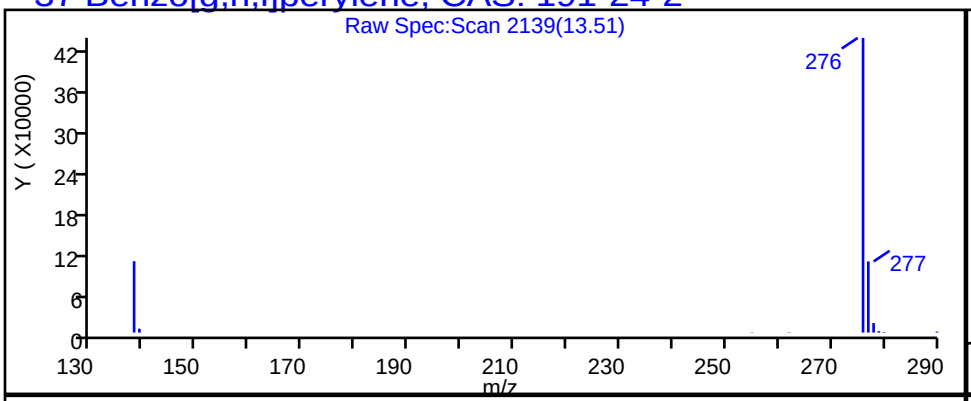
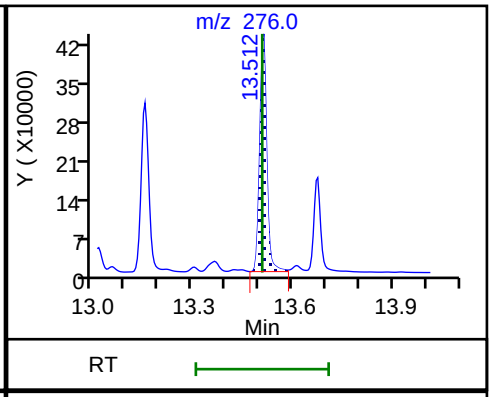
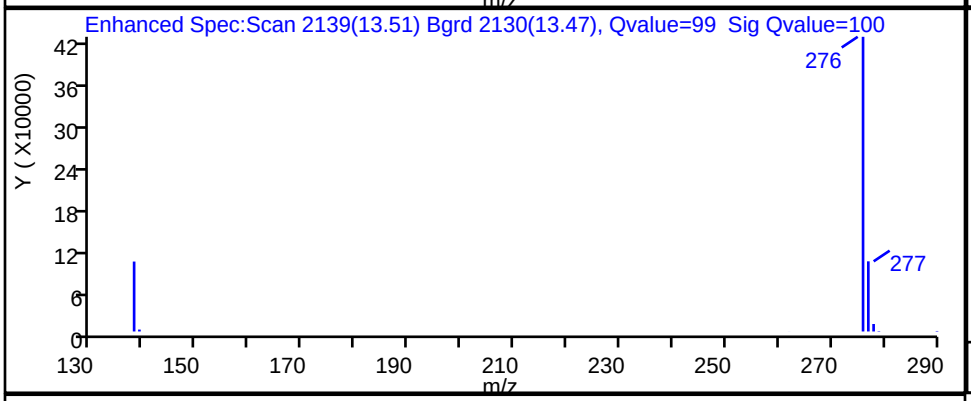
Eurofins TestAmerica, Knoxville

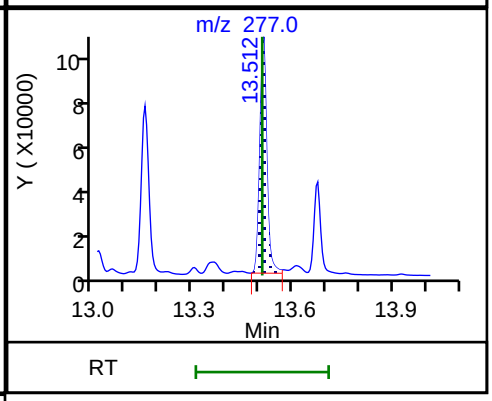
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

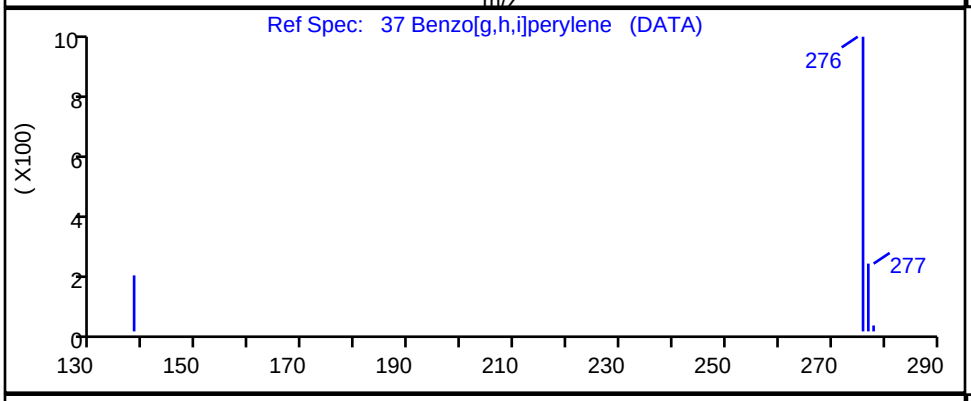
37 Benzo[g,h,i]perylene, CAS: 191-24-2

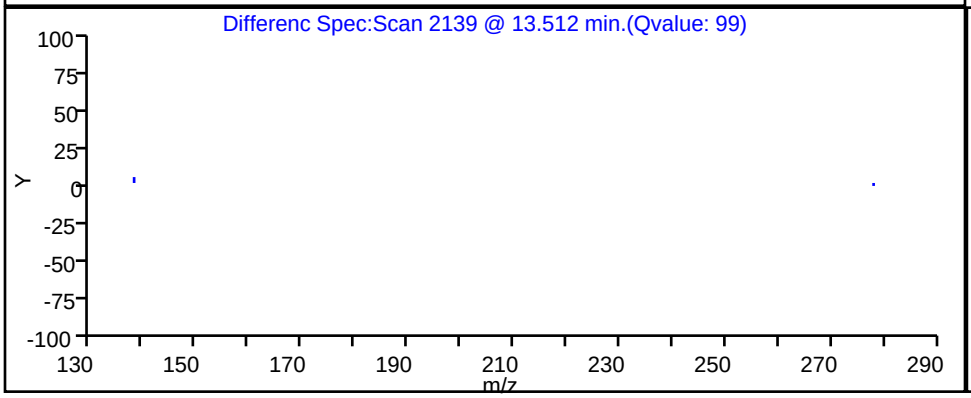


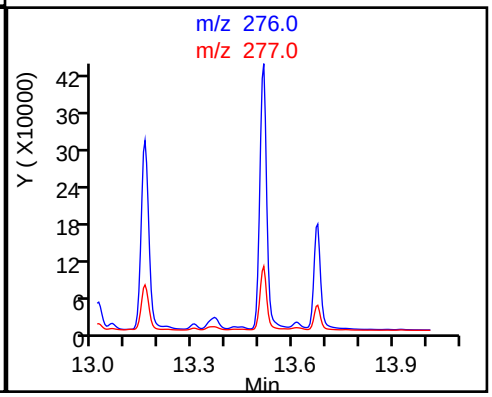












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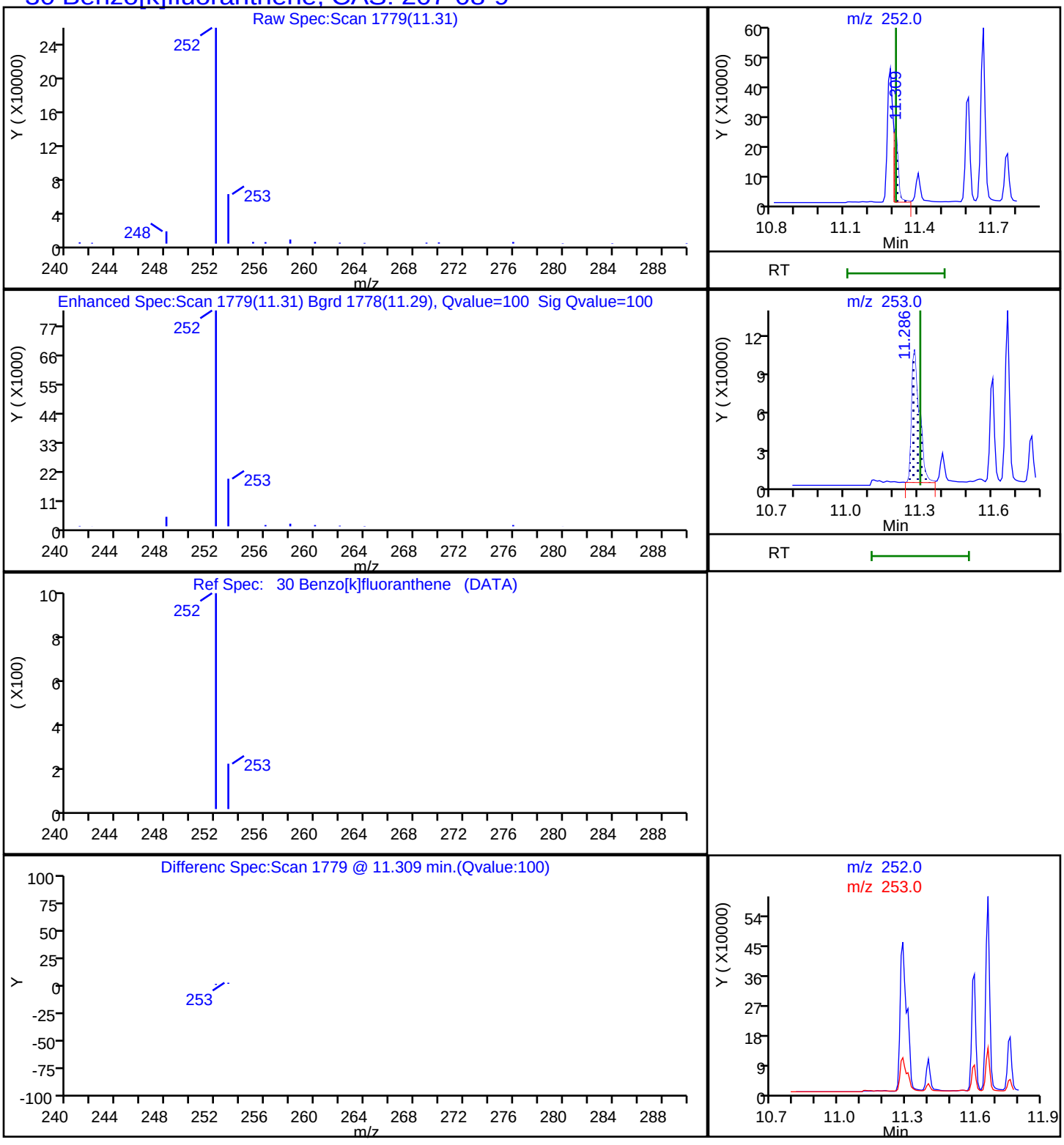
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



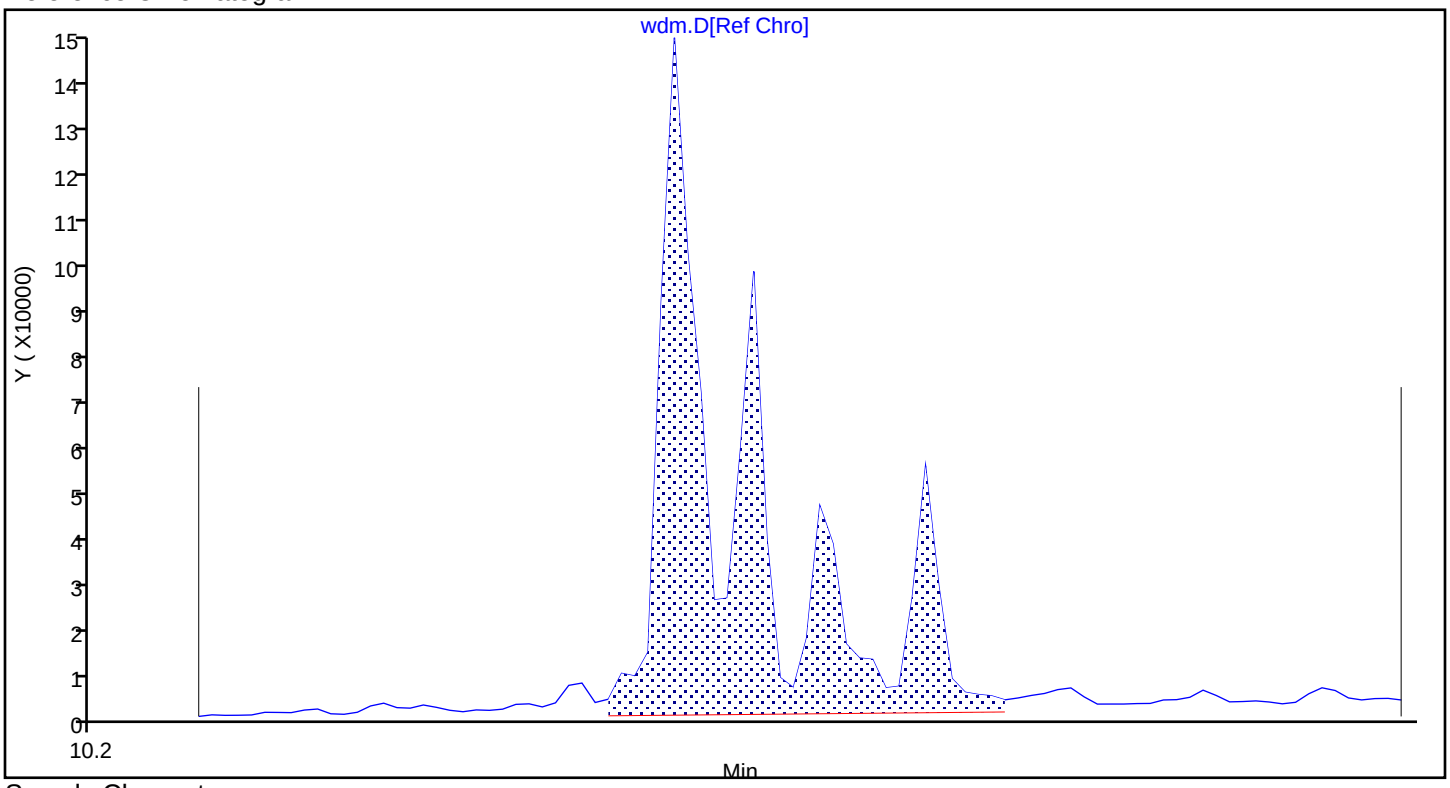
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

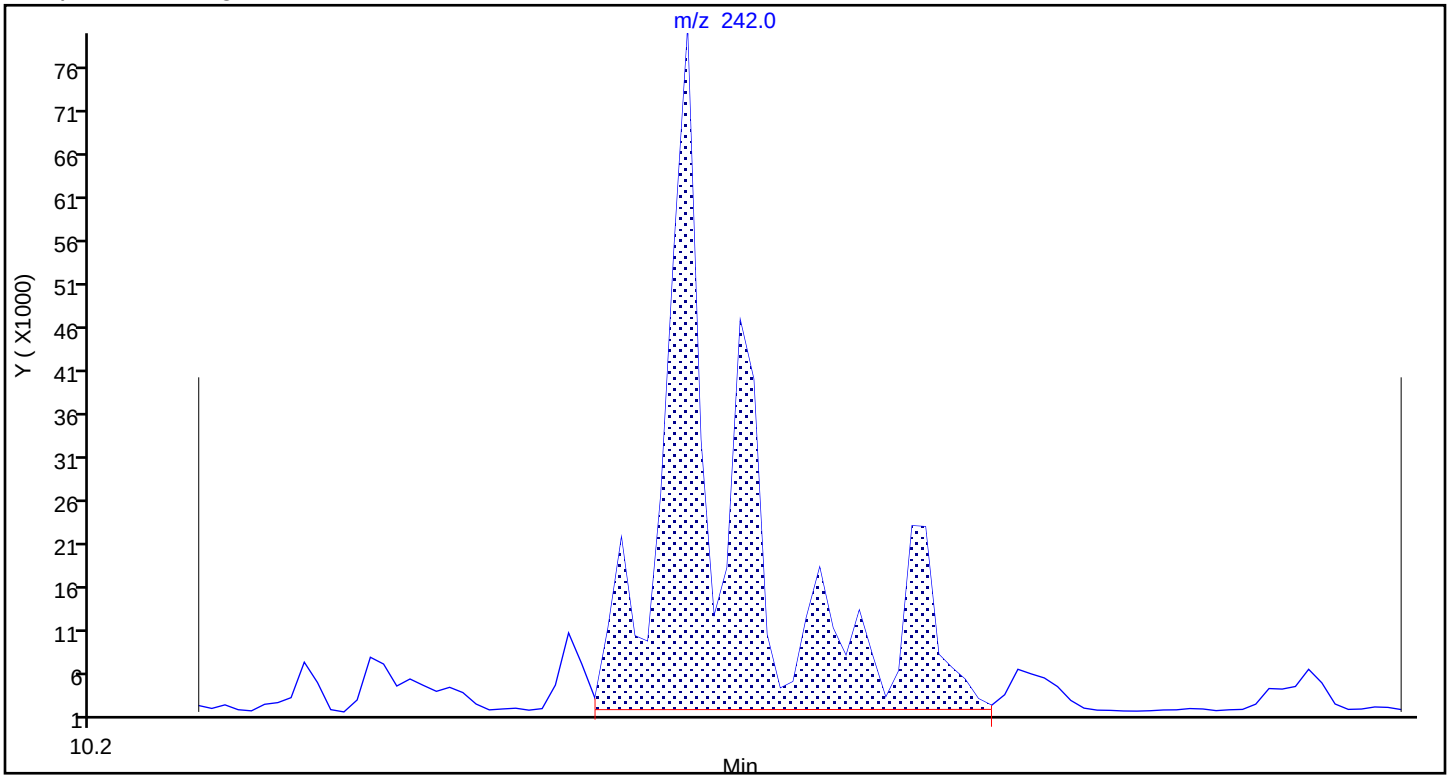
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



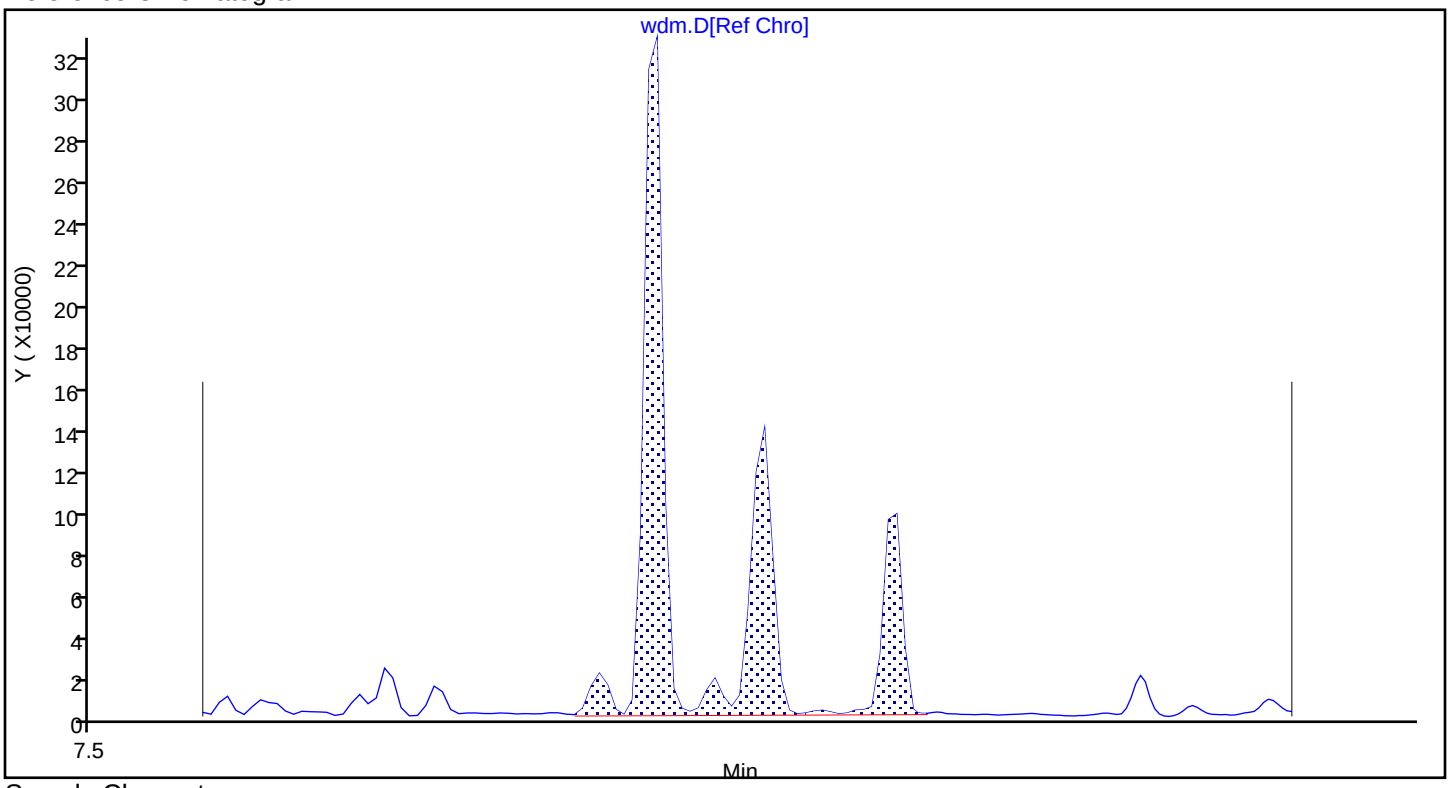
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

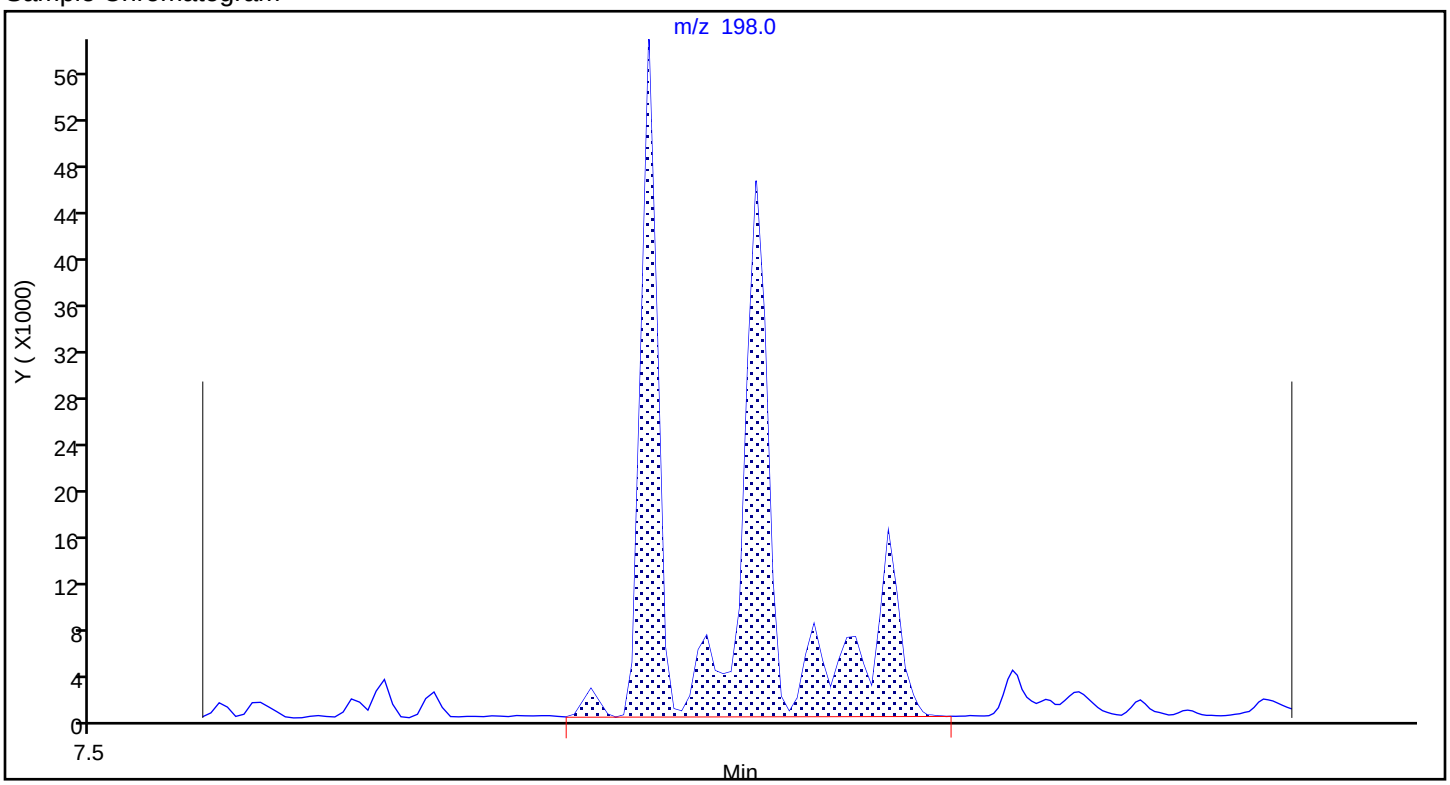
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



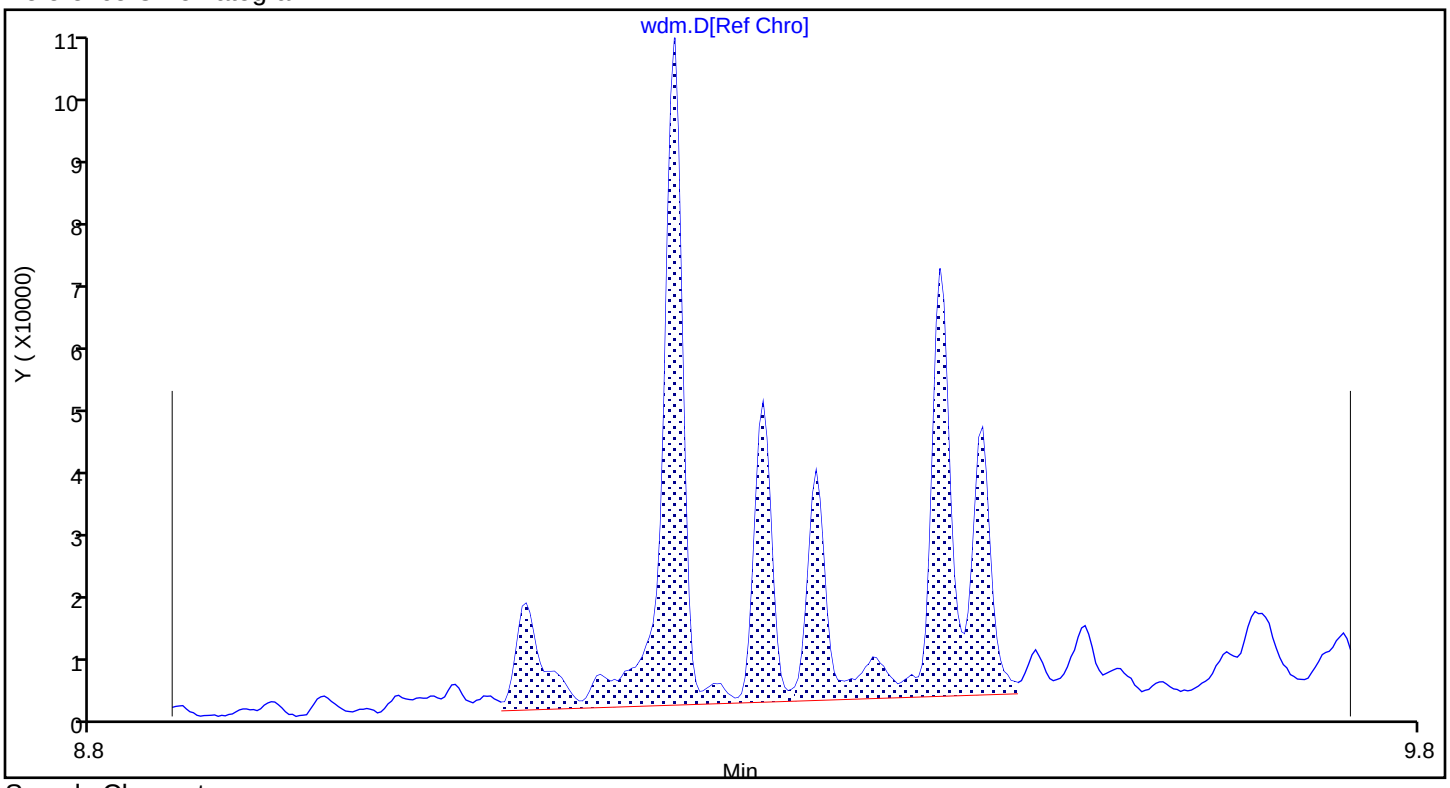
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

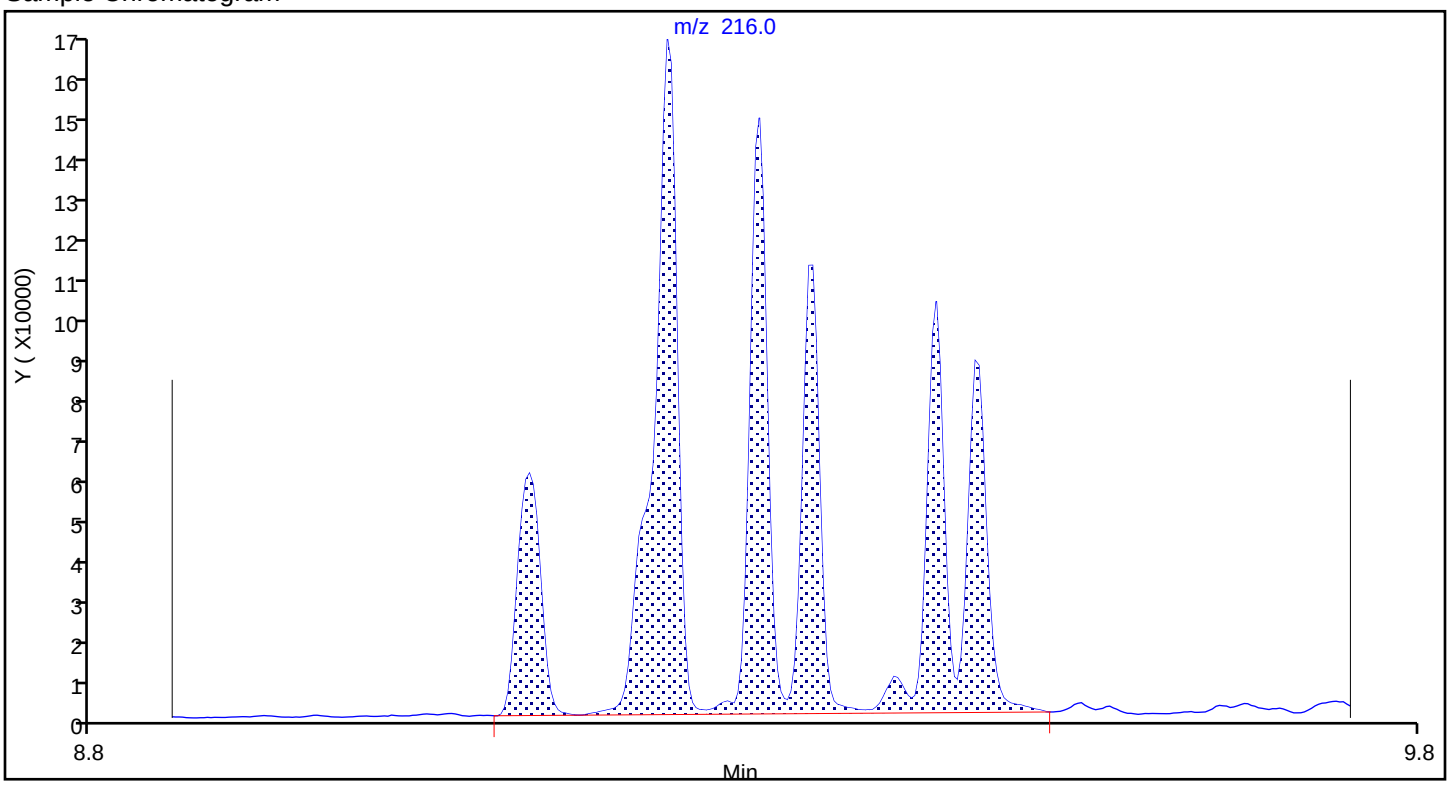
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



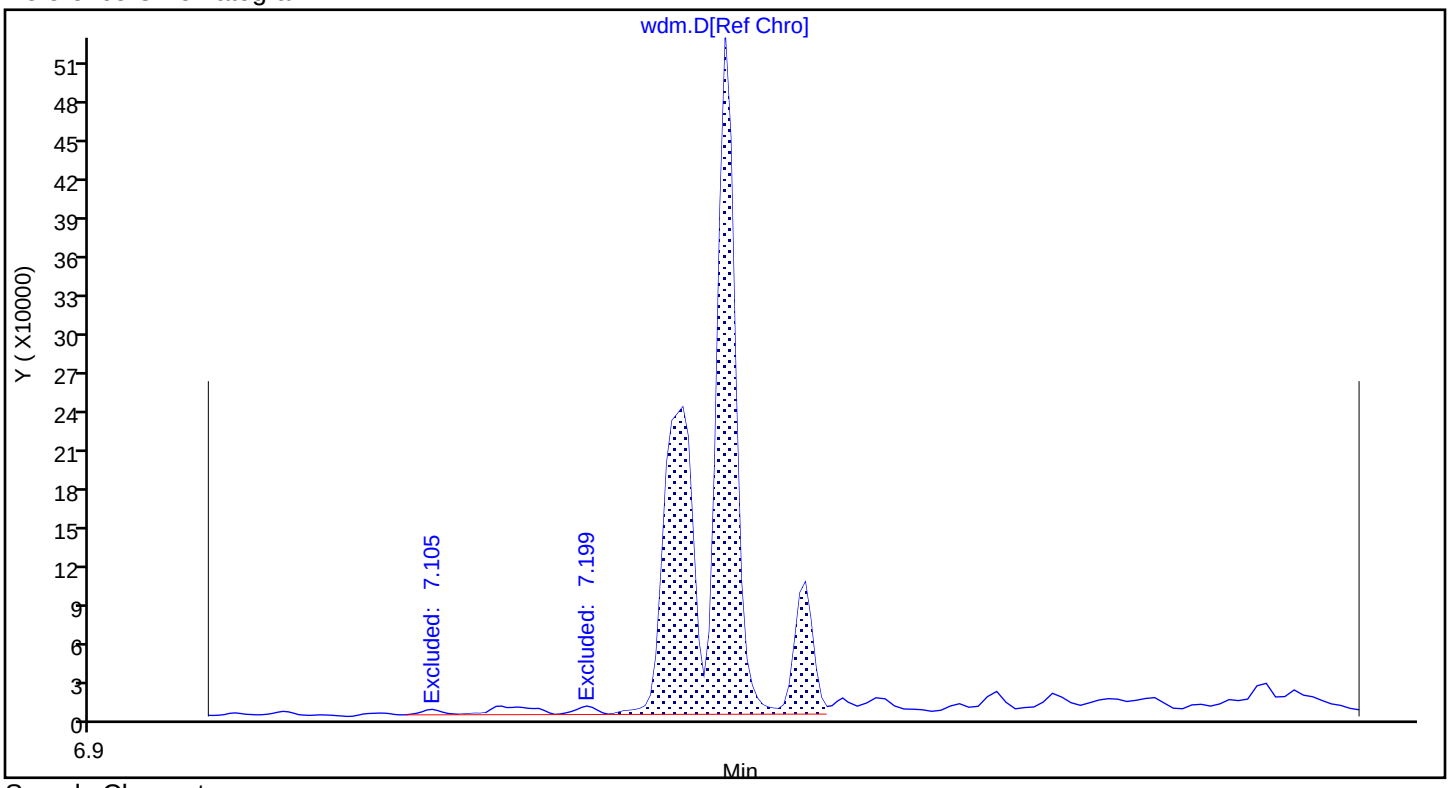
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

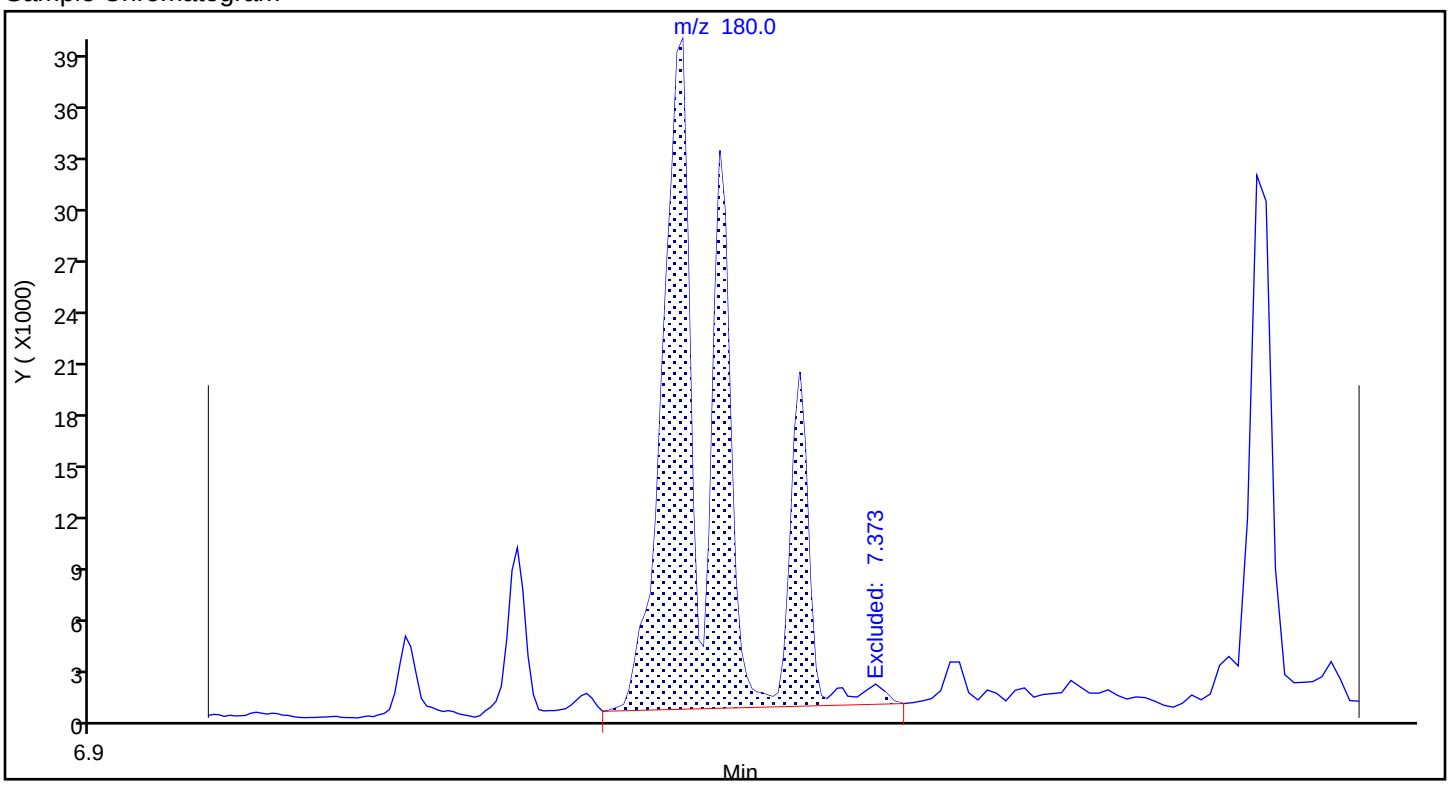
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



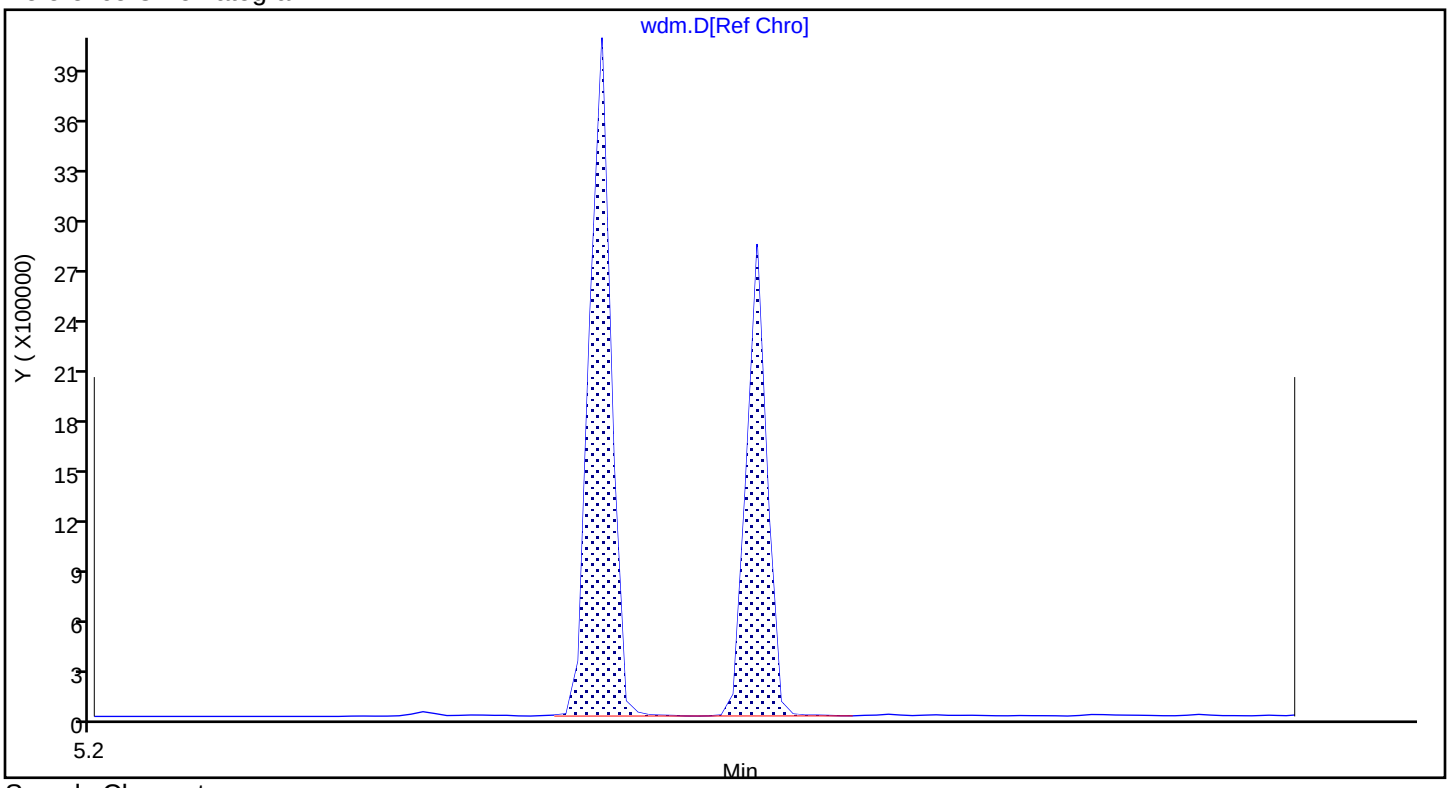
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

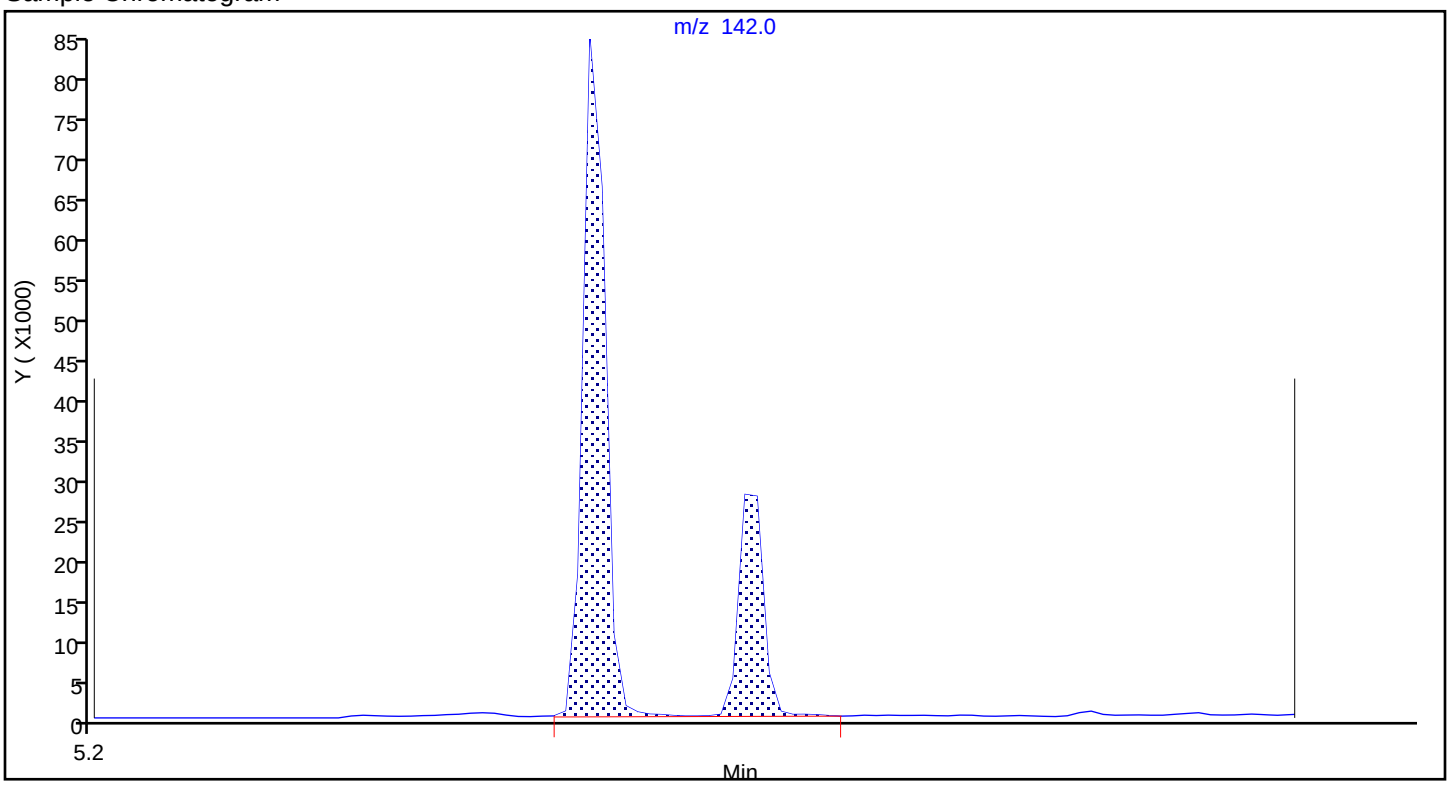
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



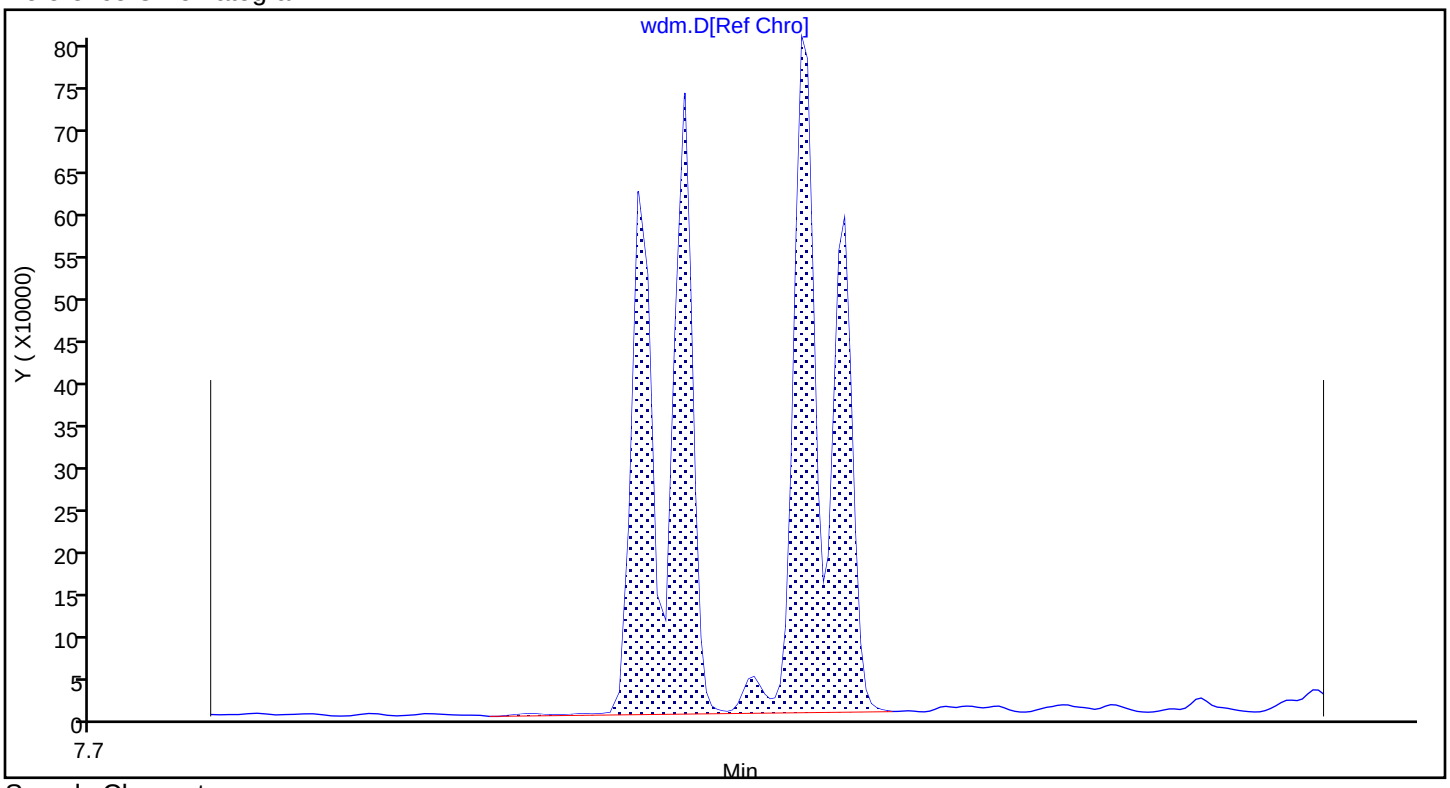
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

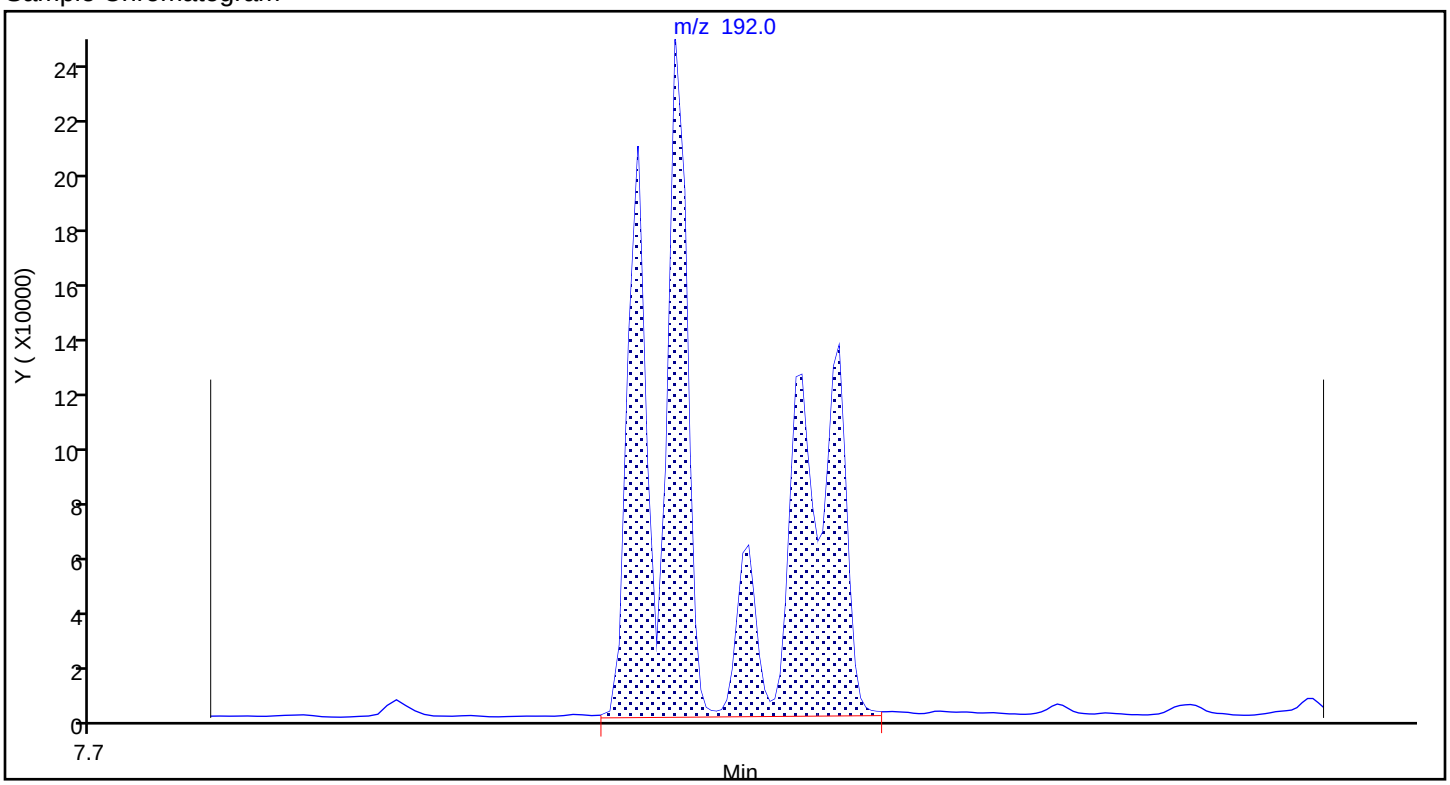
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



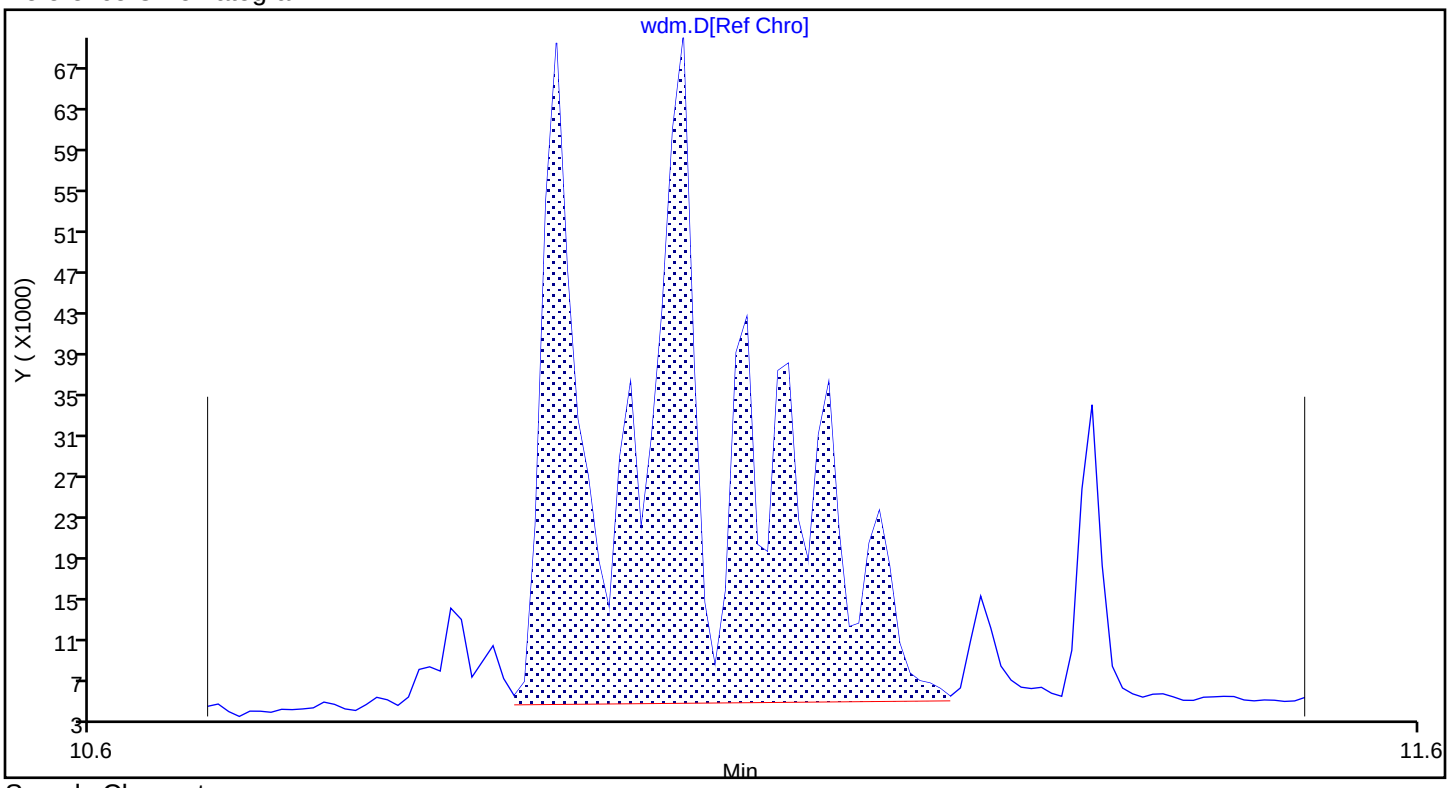
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

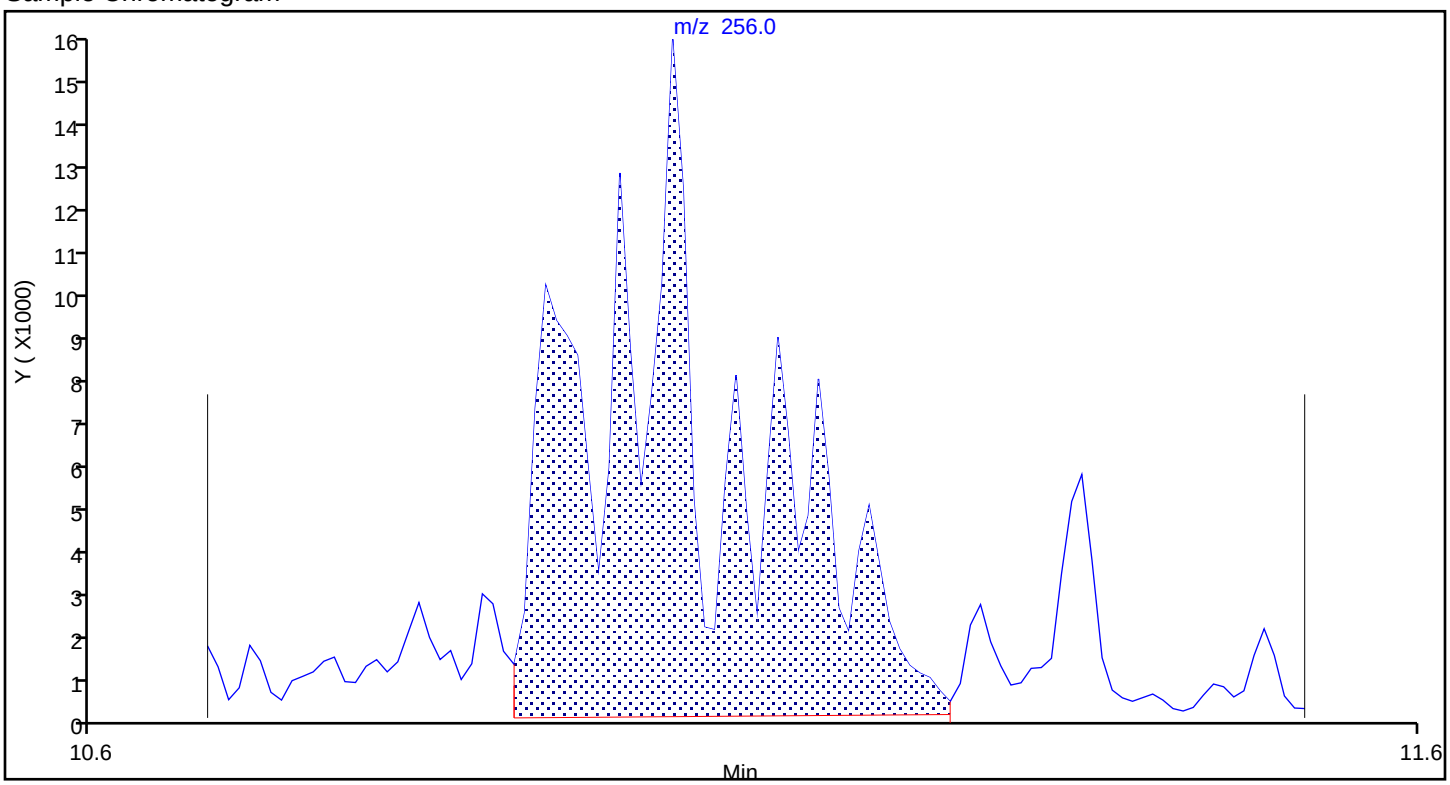
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



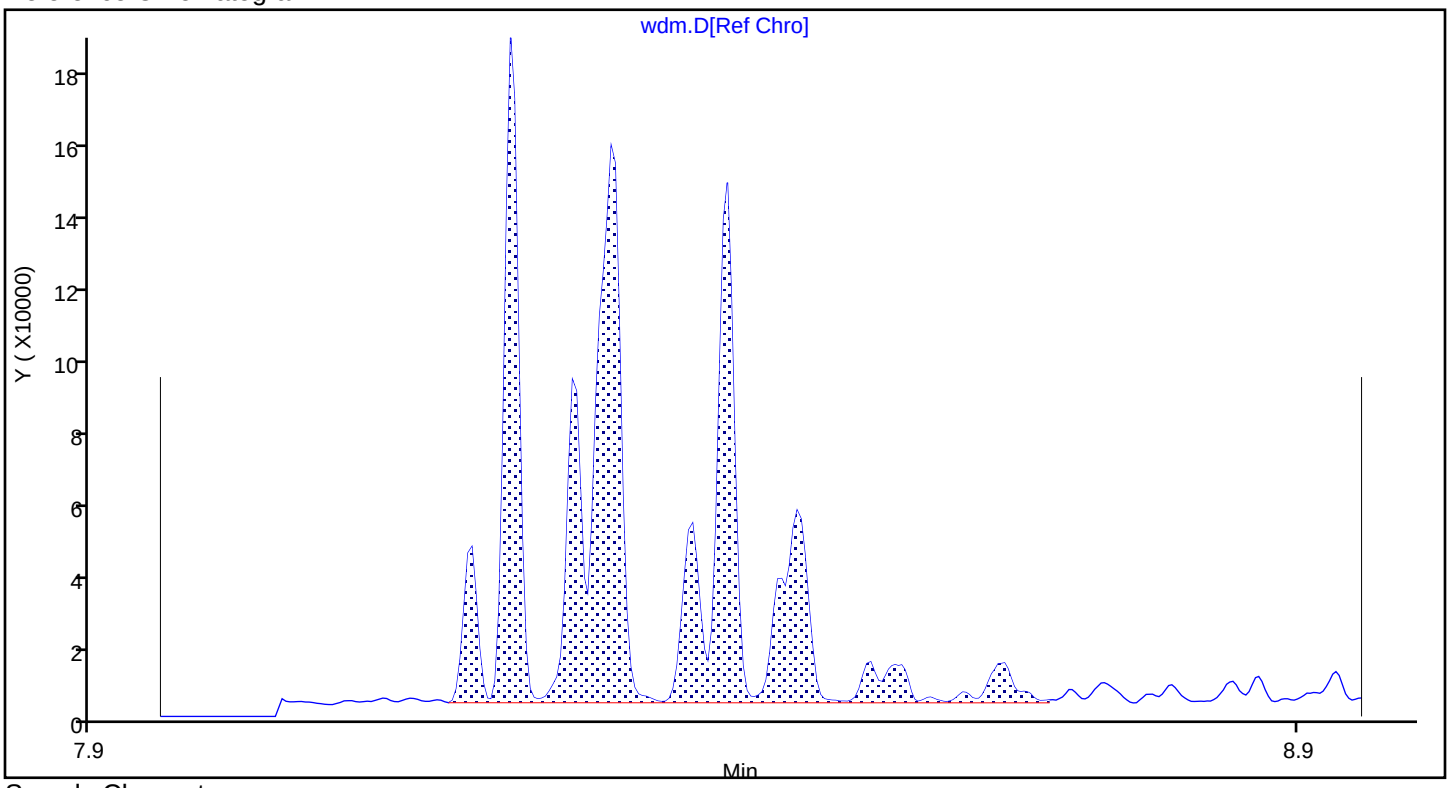
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

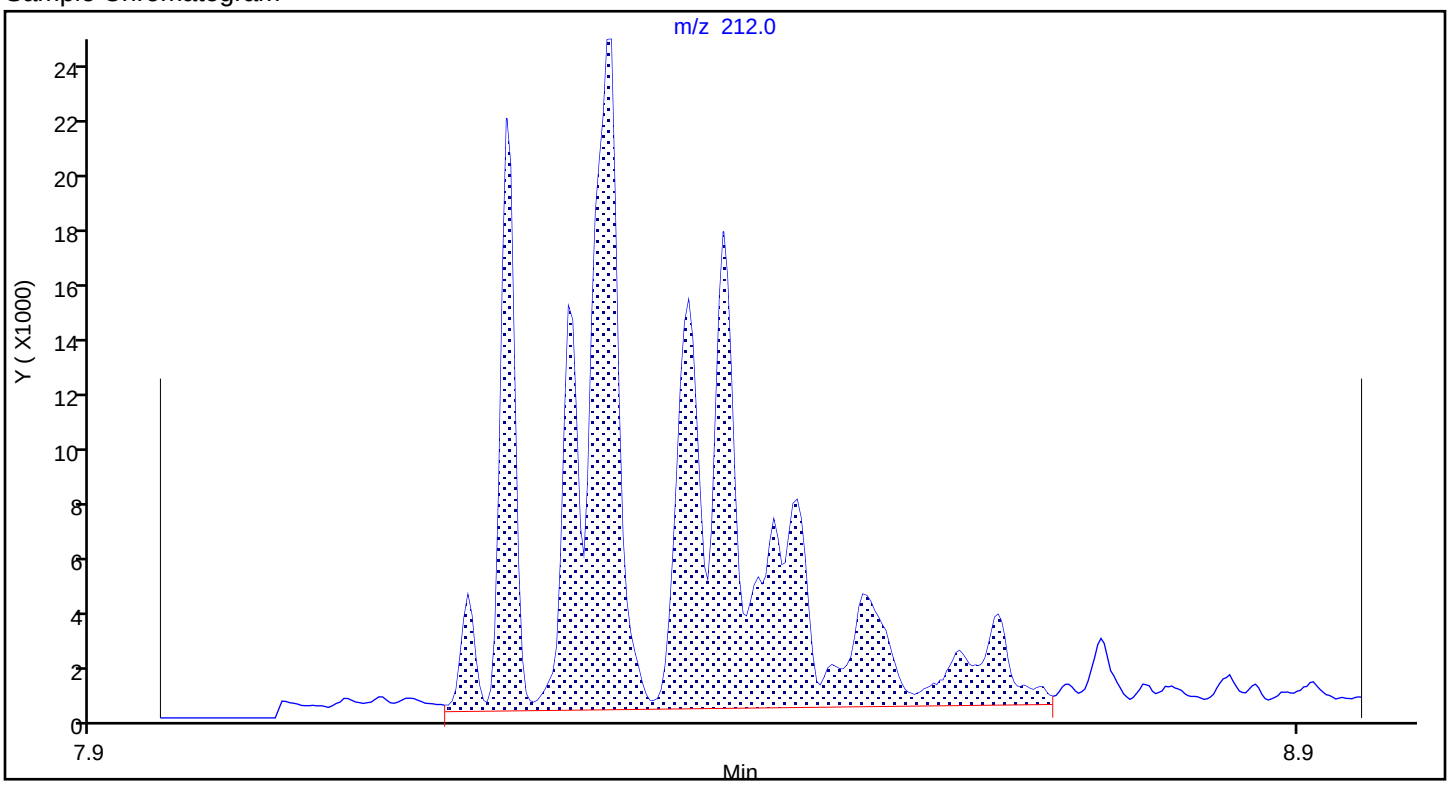
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



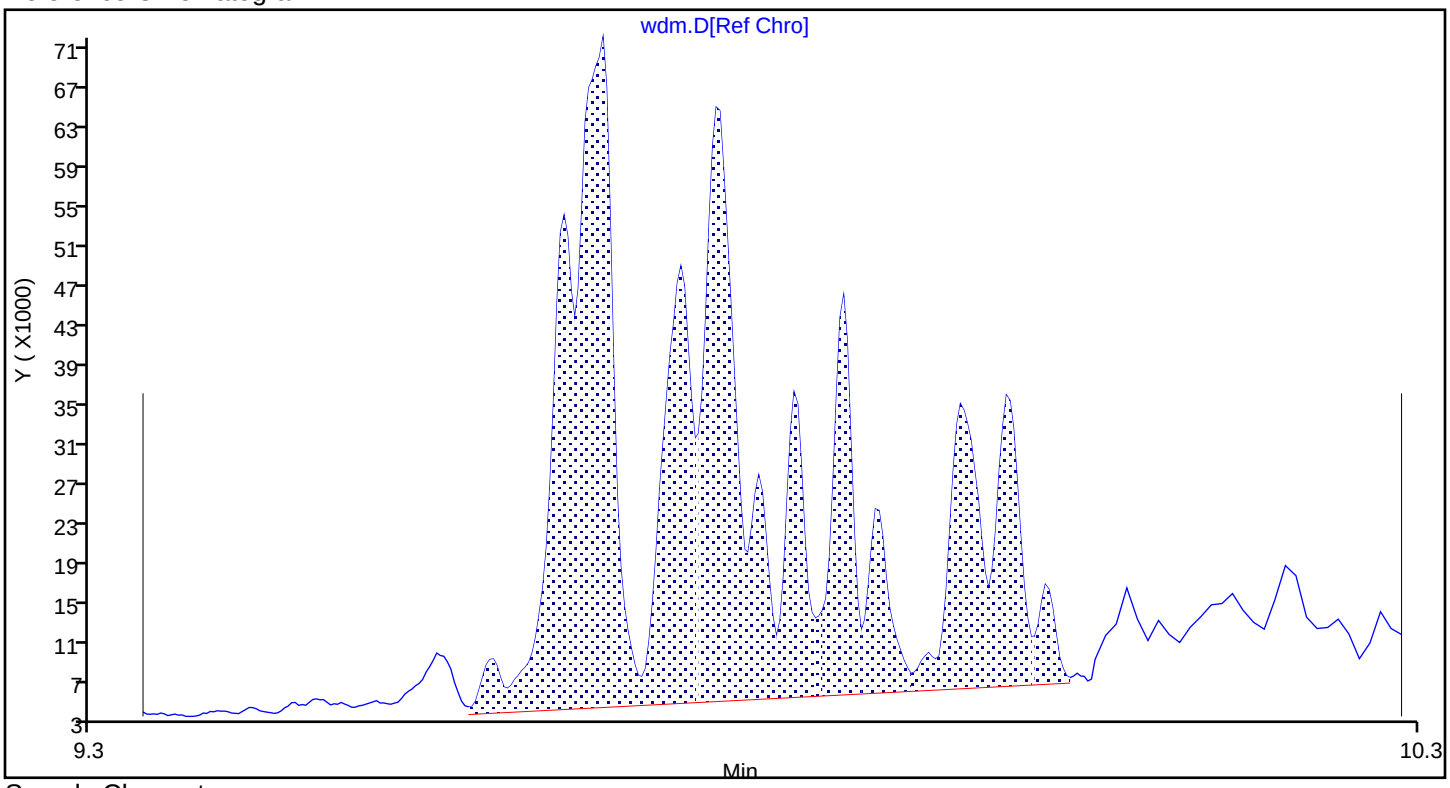
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

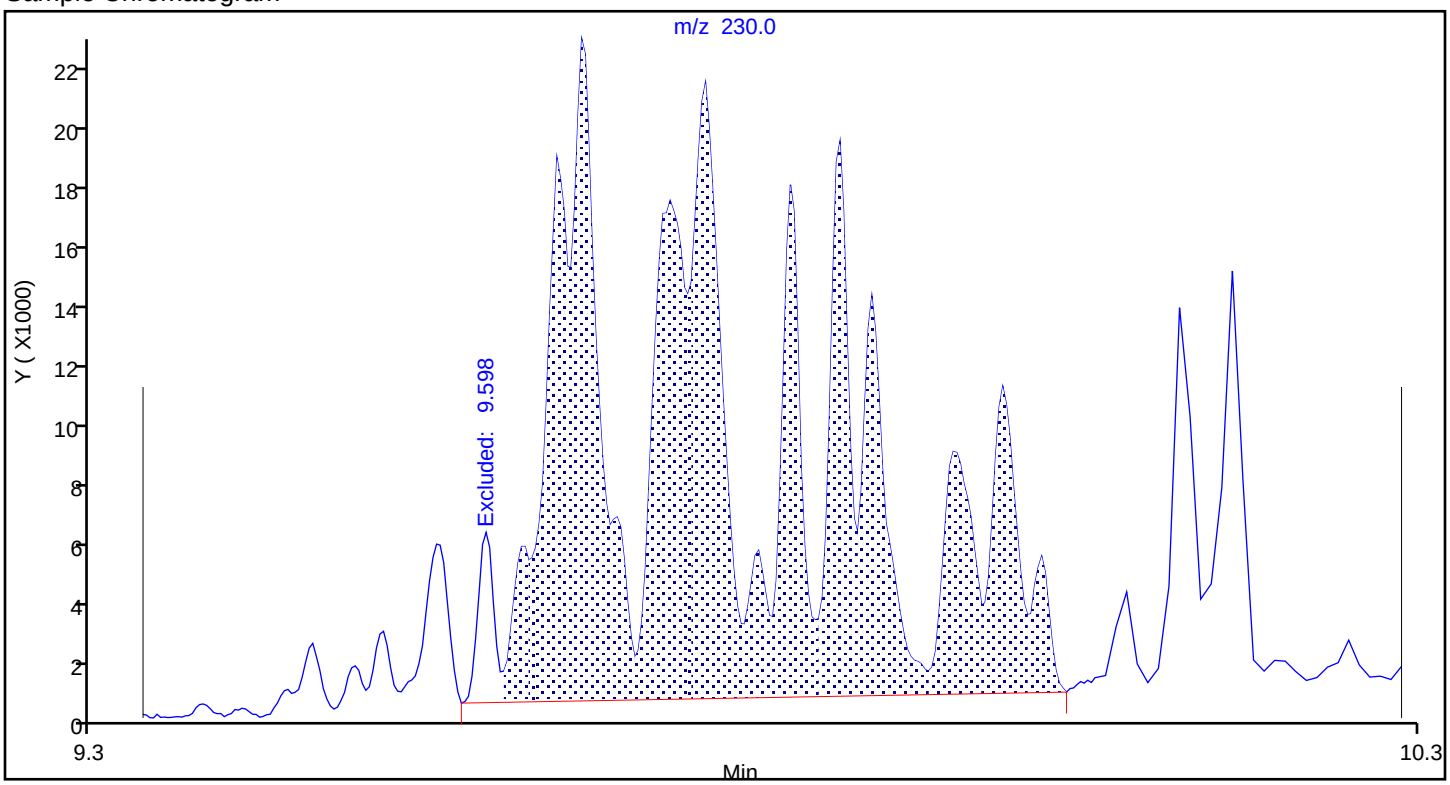
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



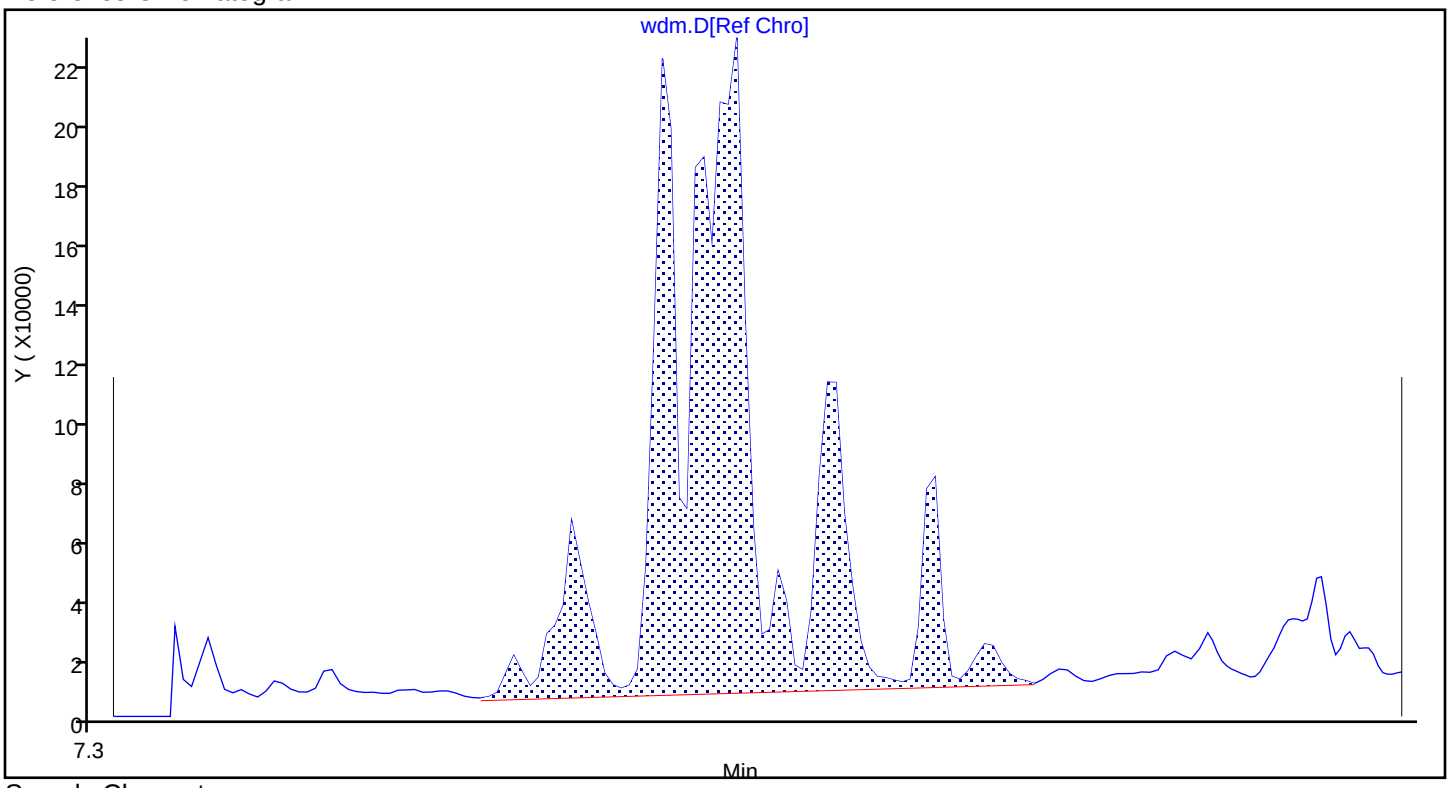
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

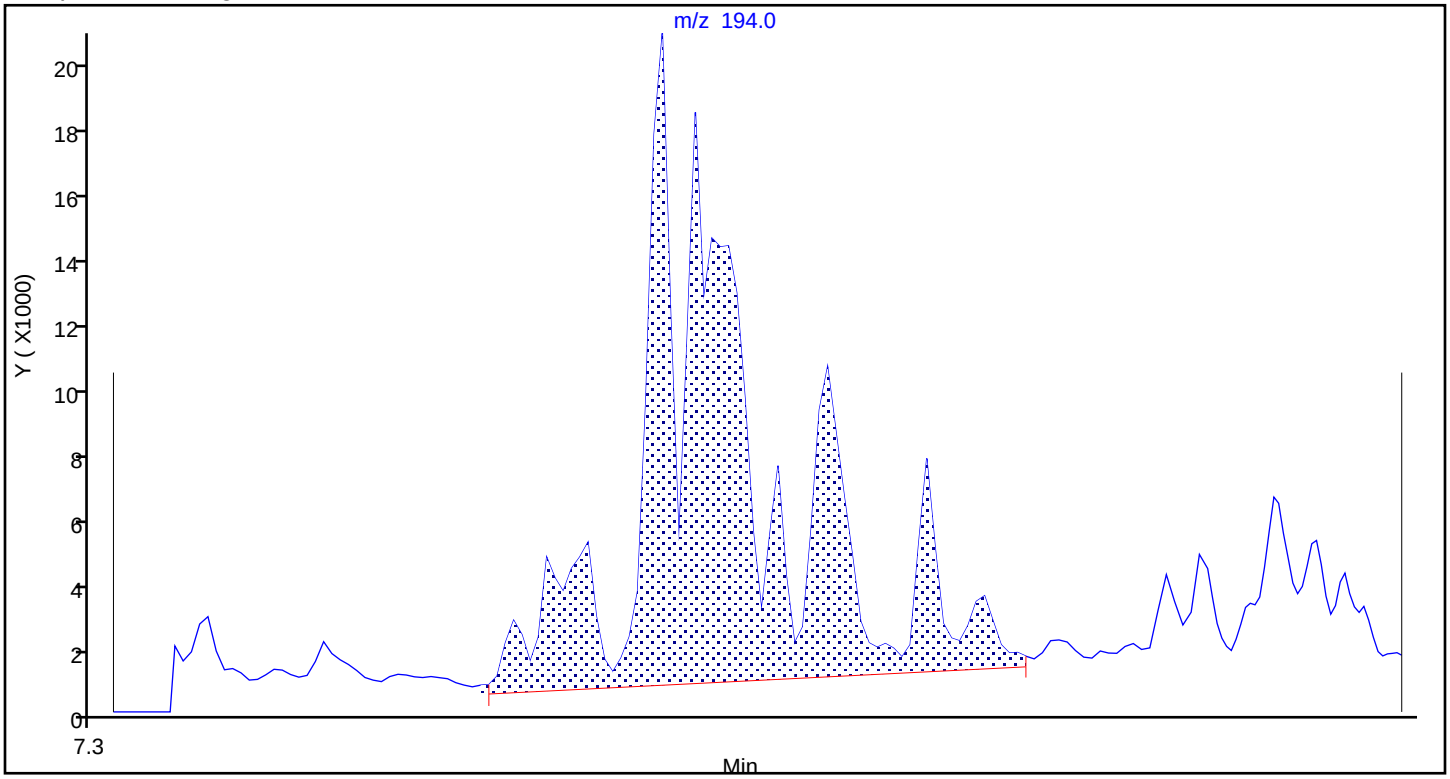
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



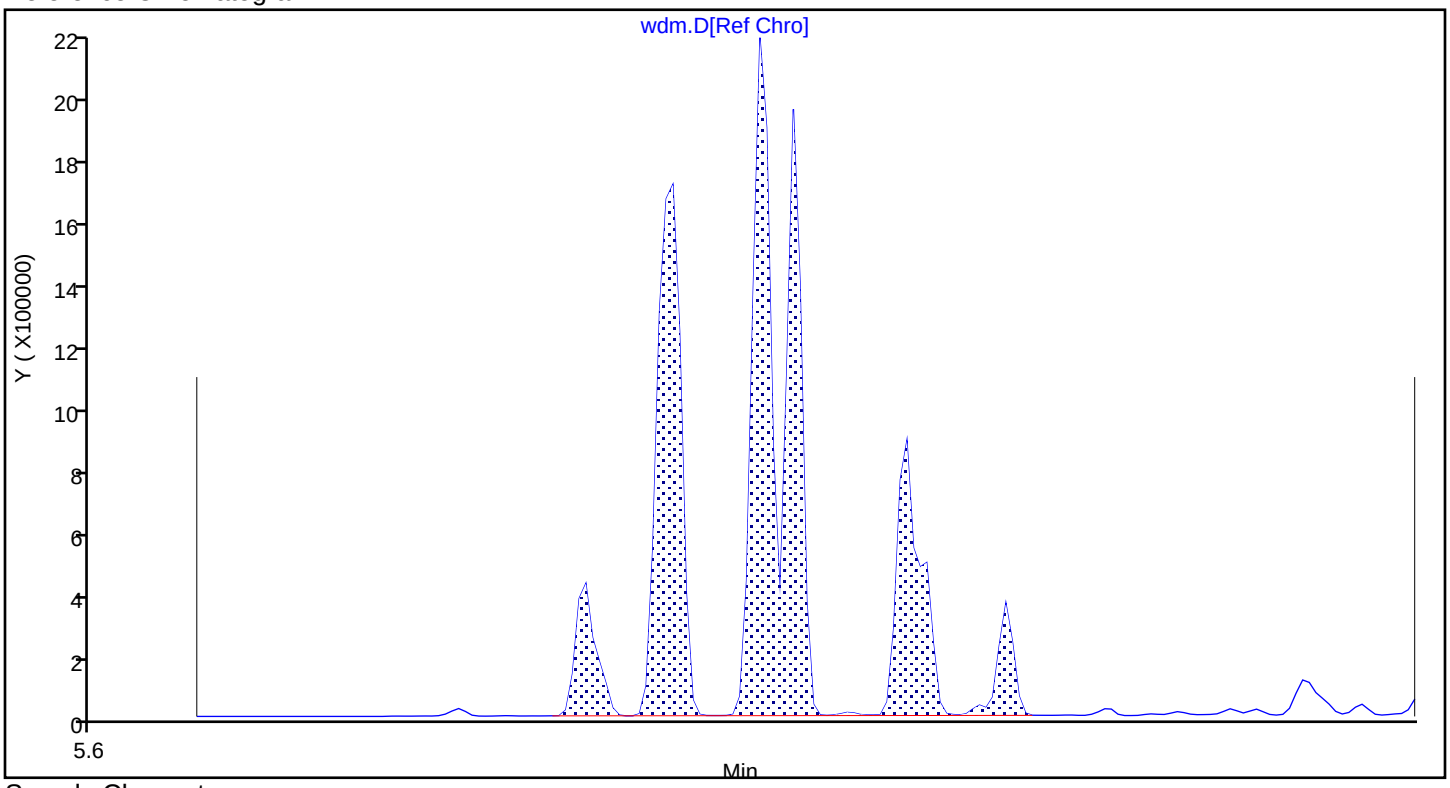
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

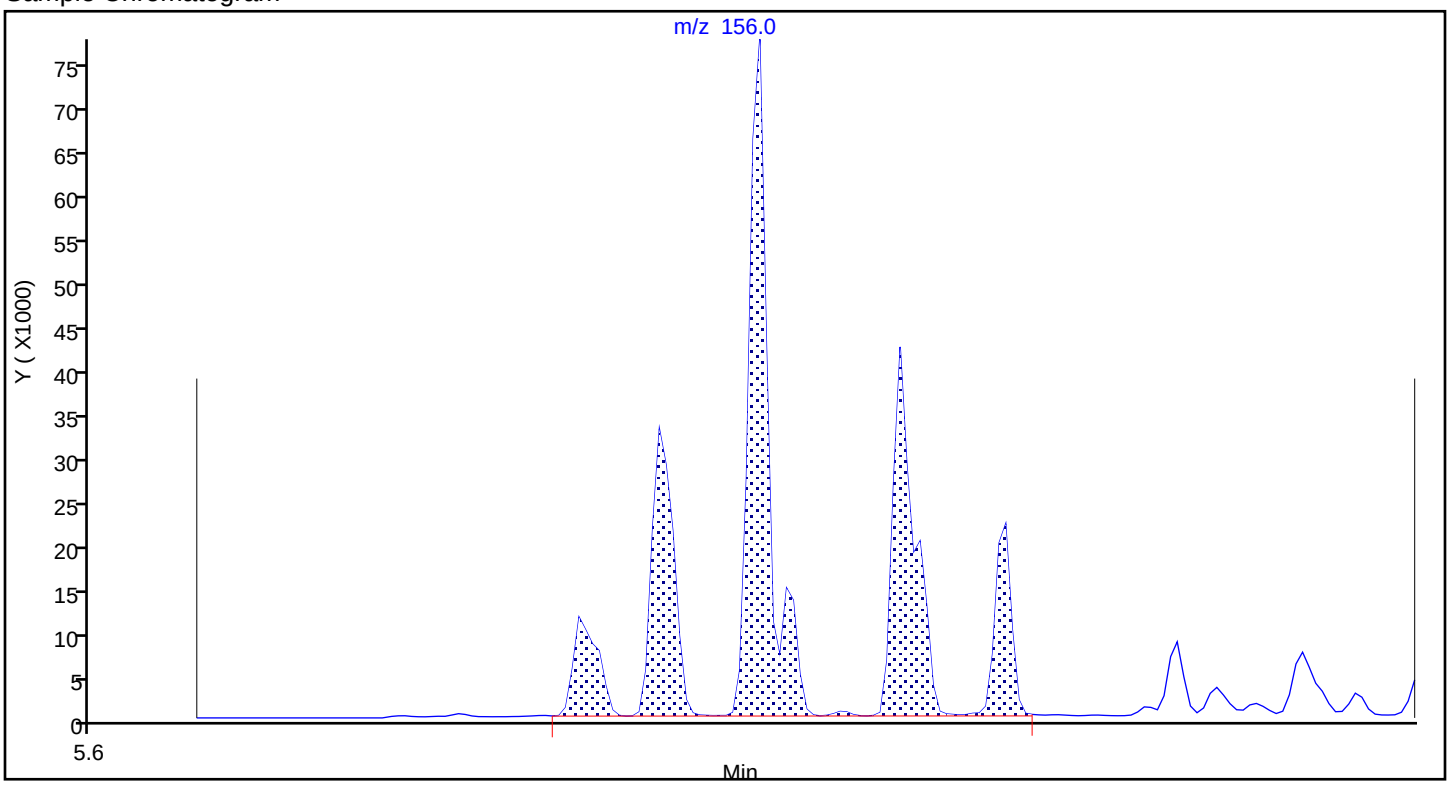
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



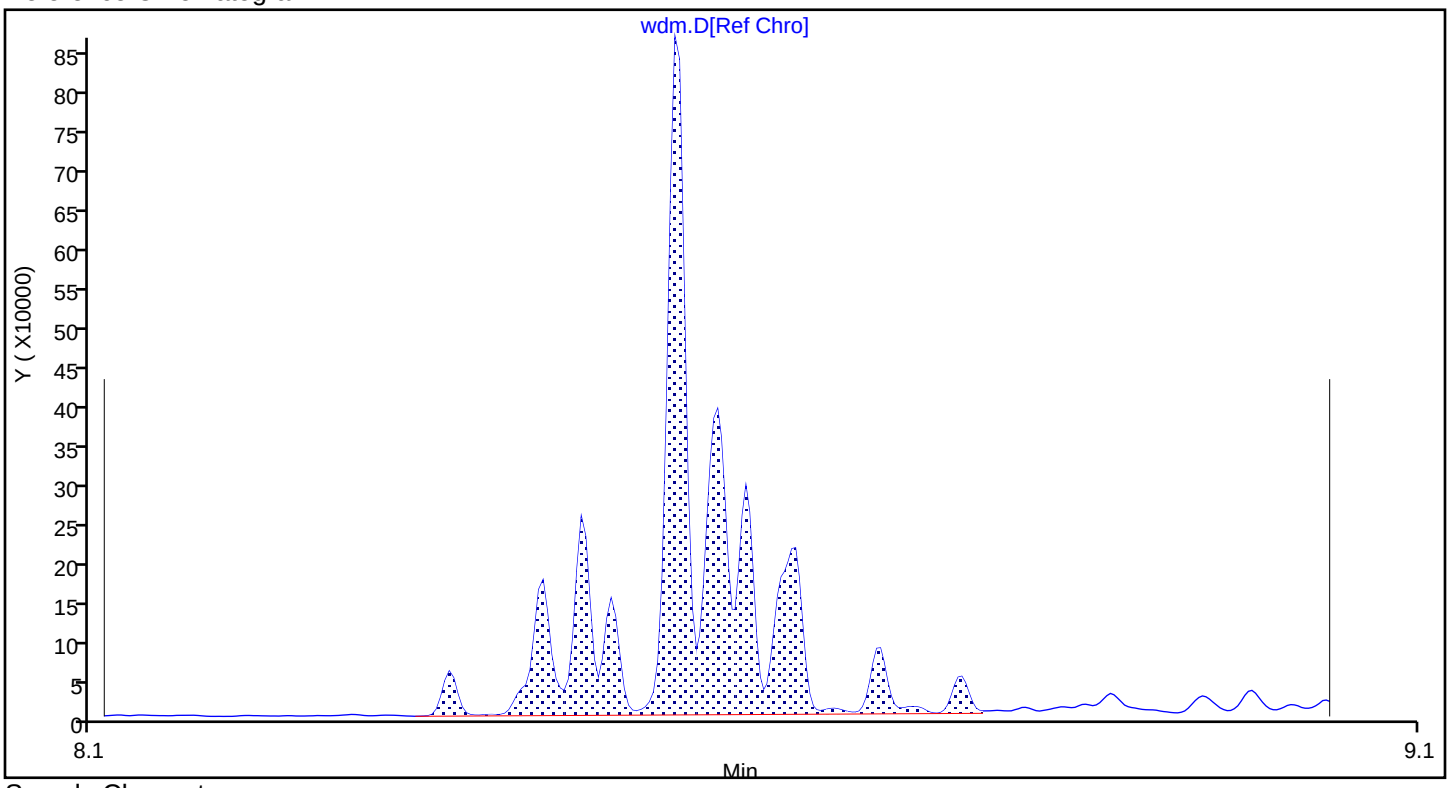
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

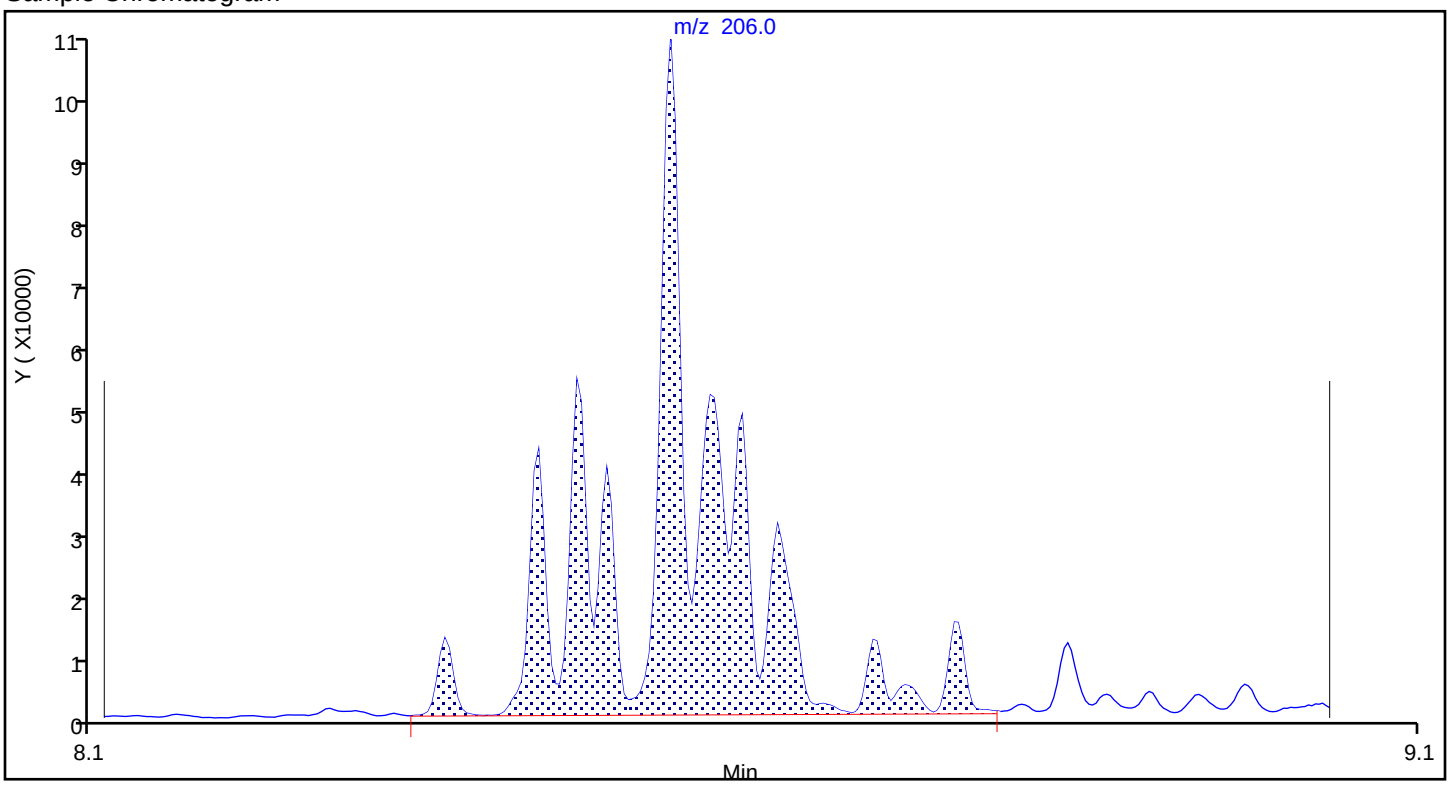
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



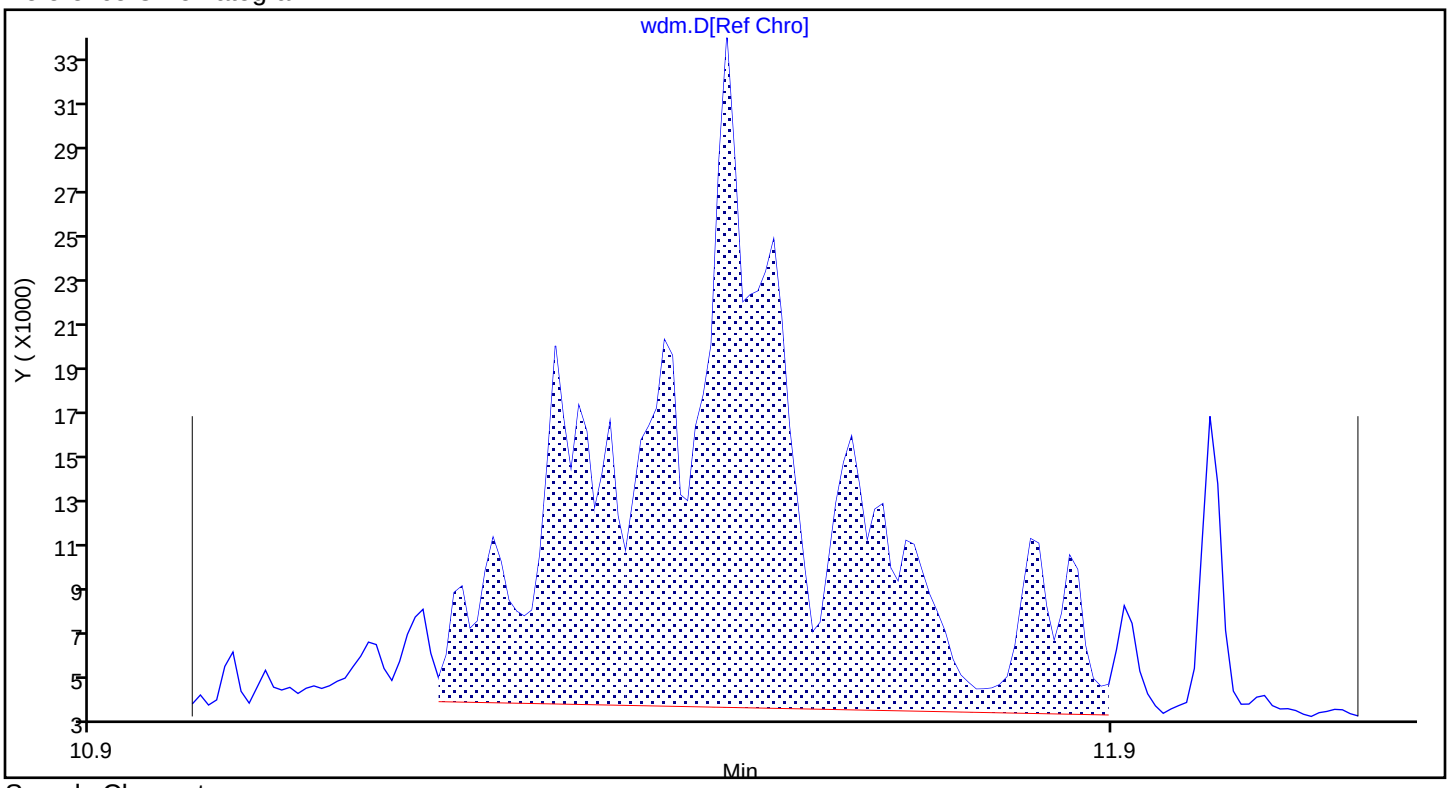
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

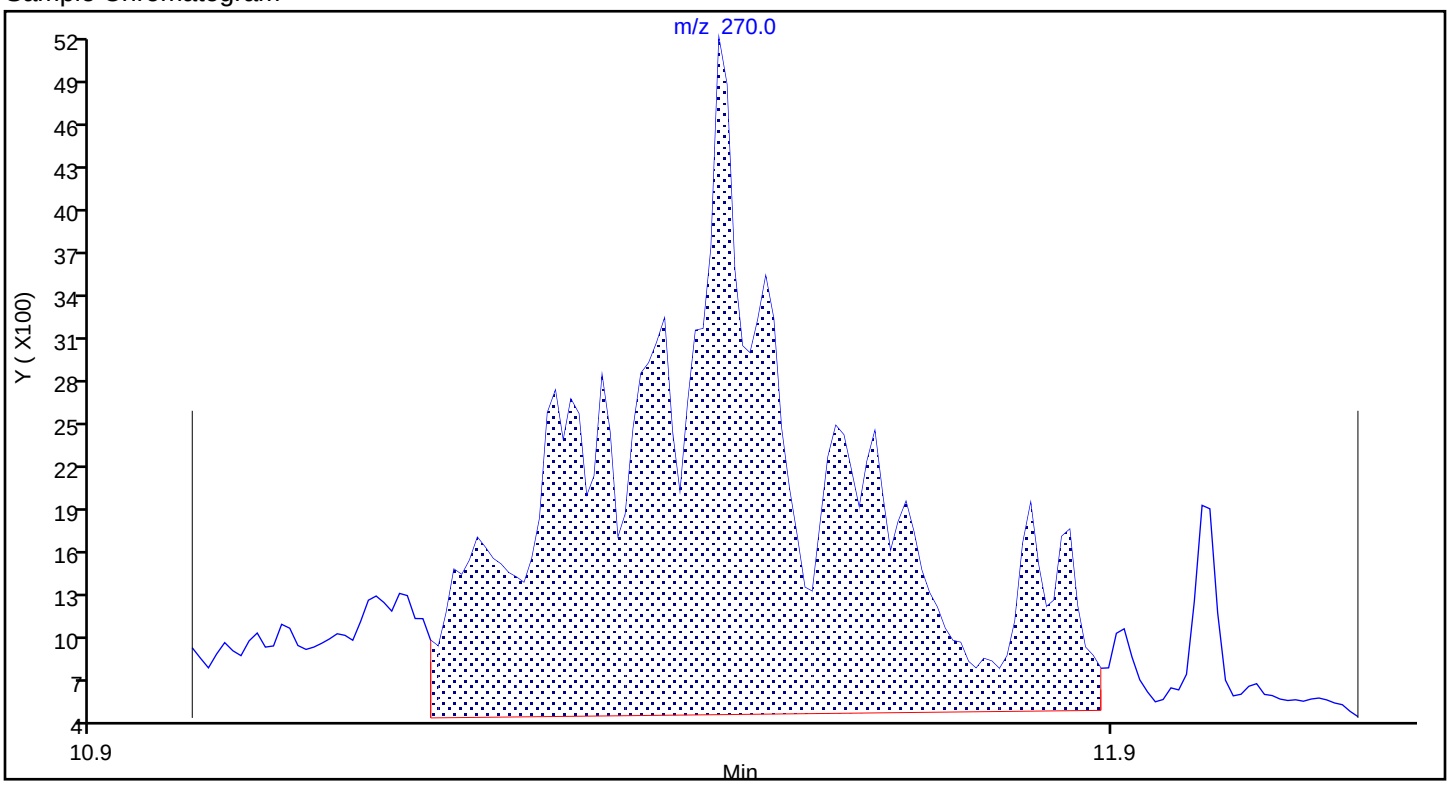
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



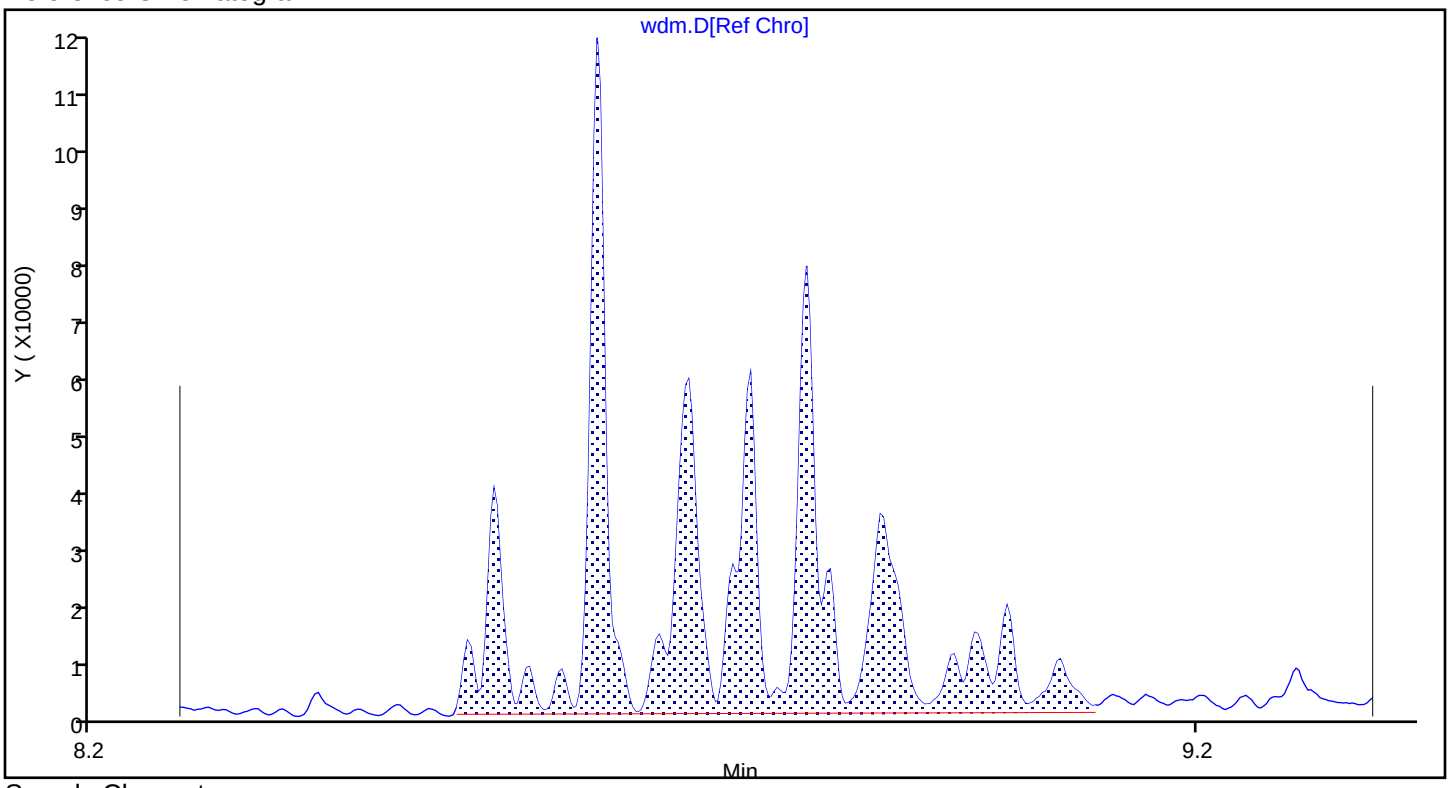
Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

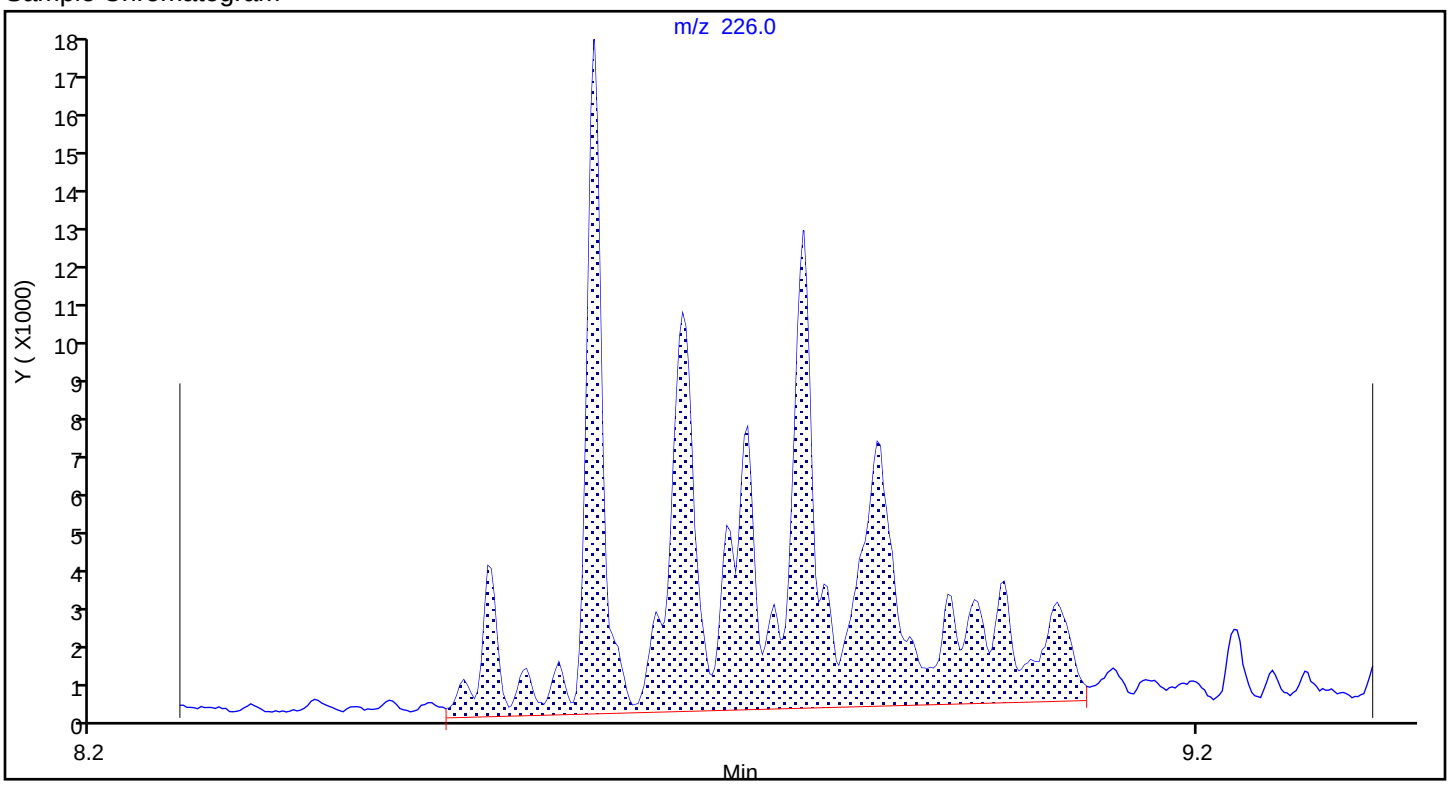
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
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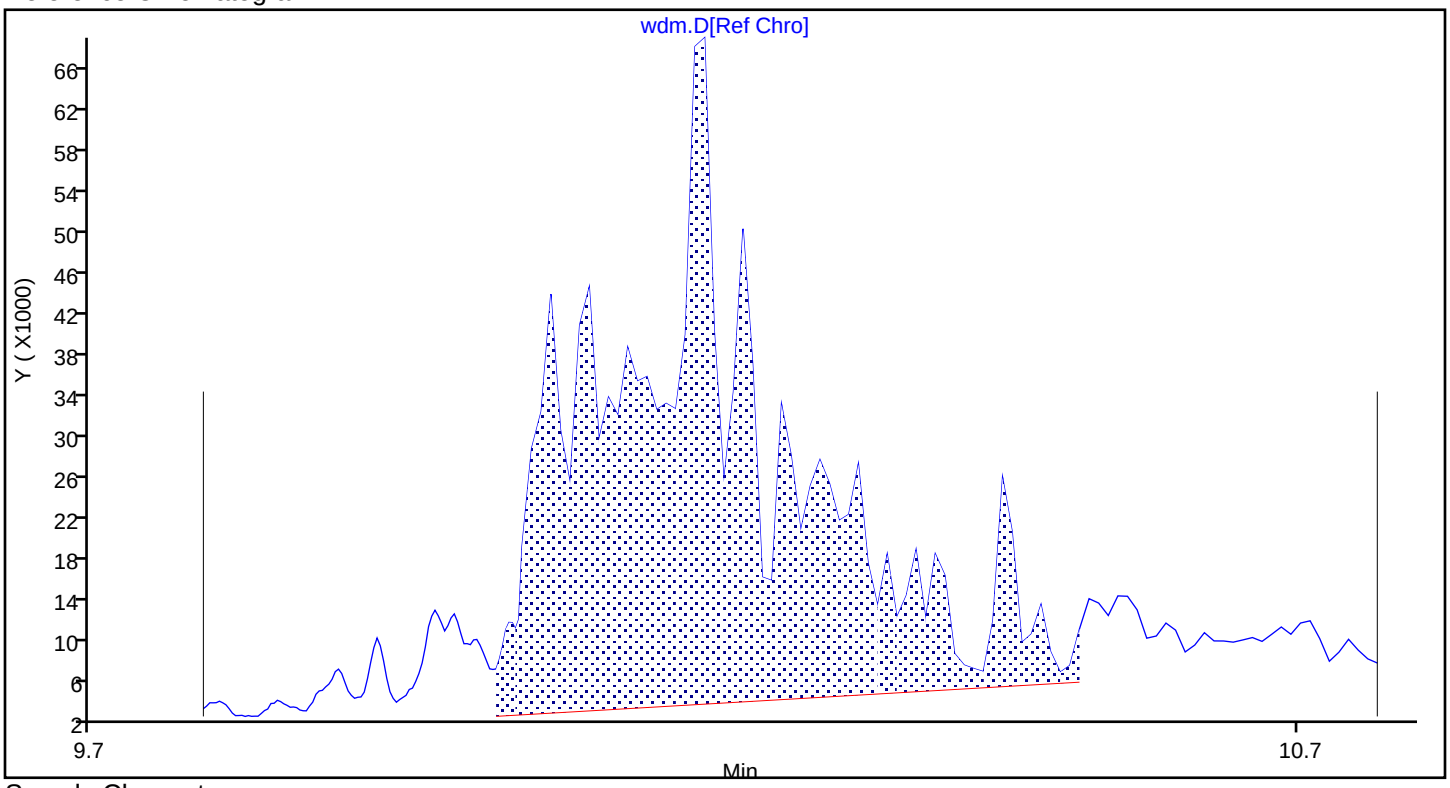
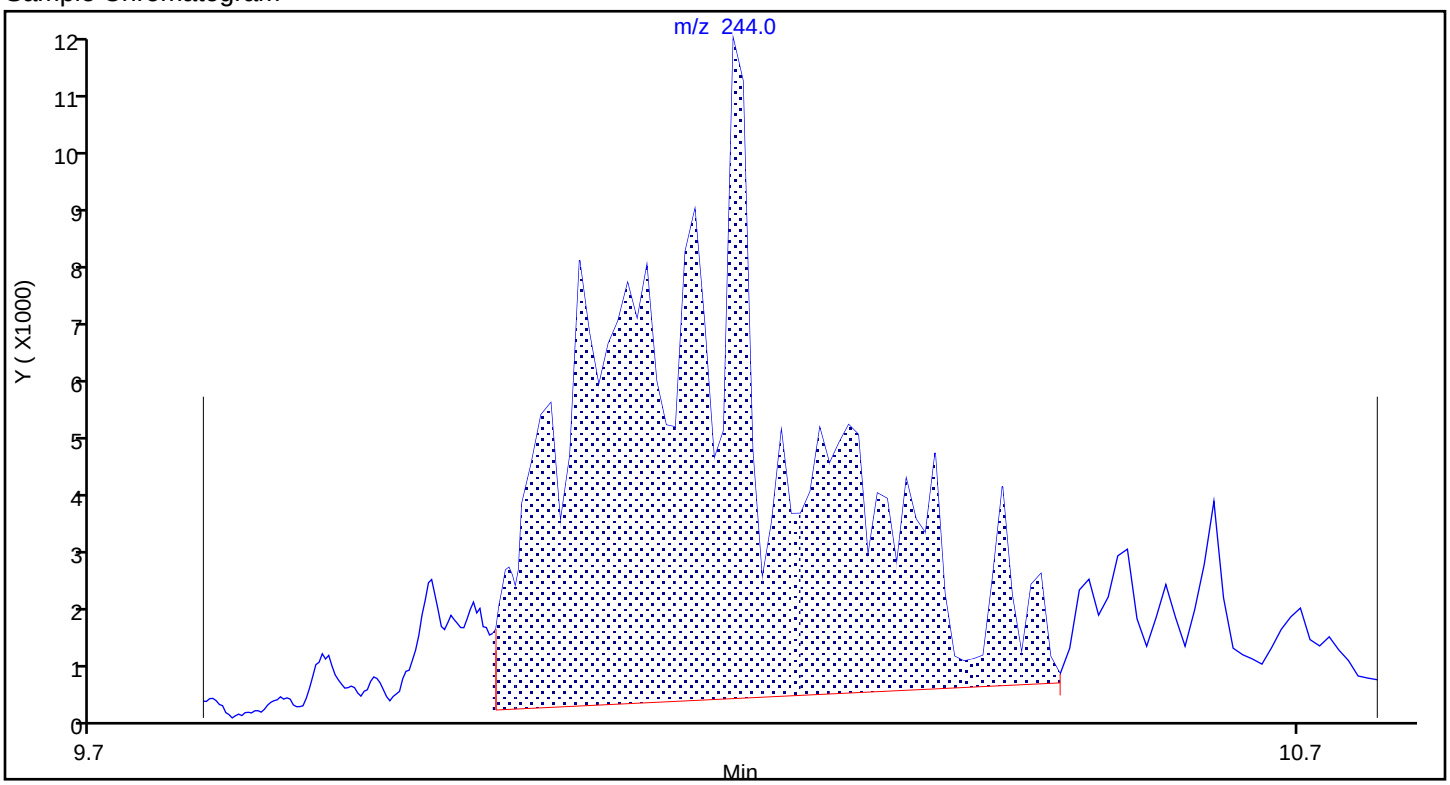
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
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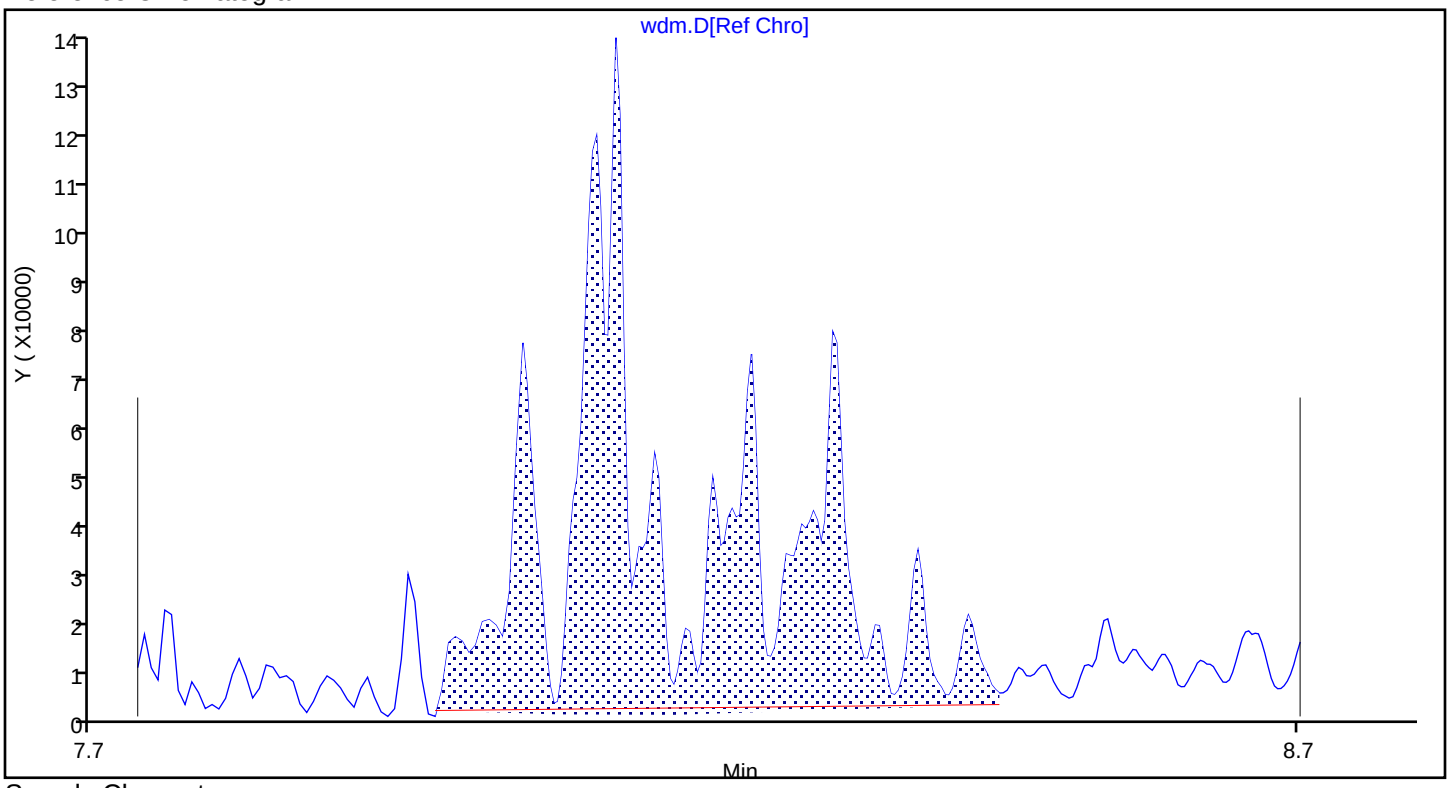
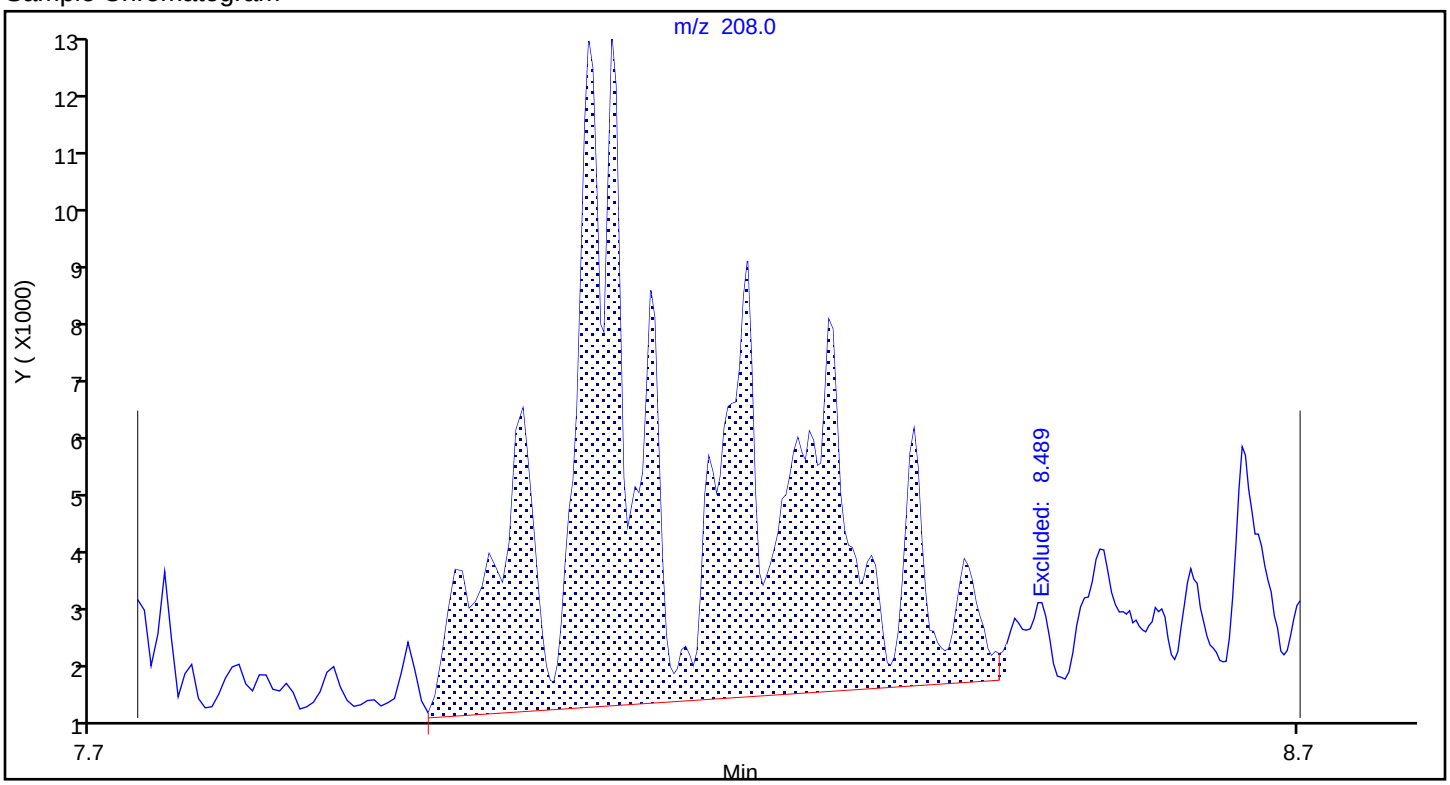
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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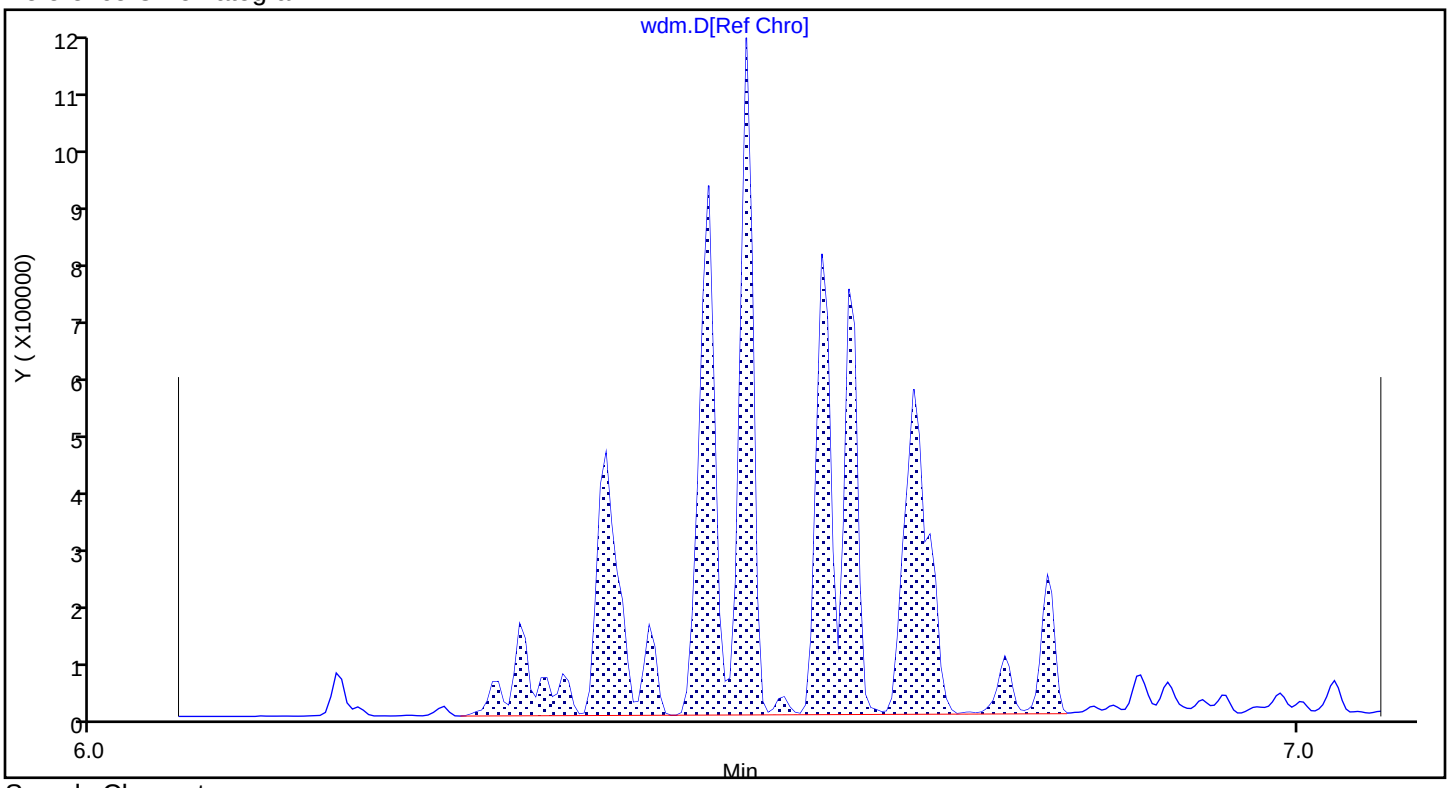
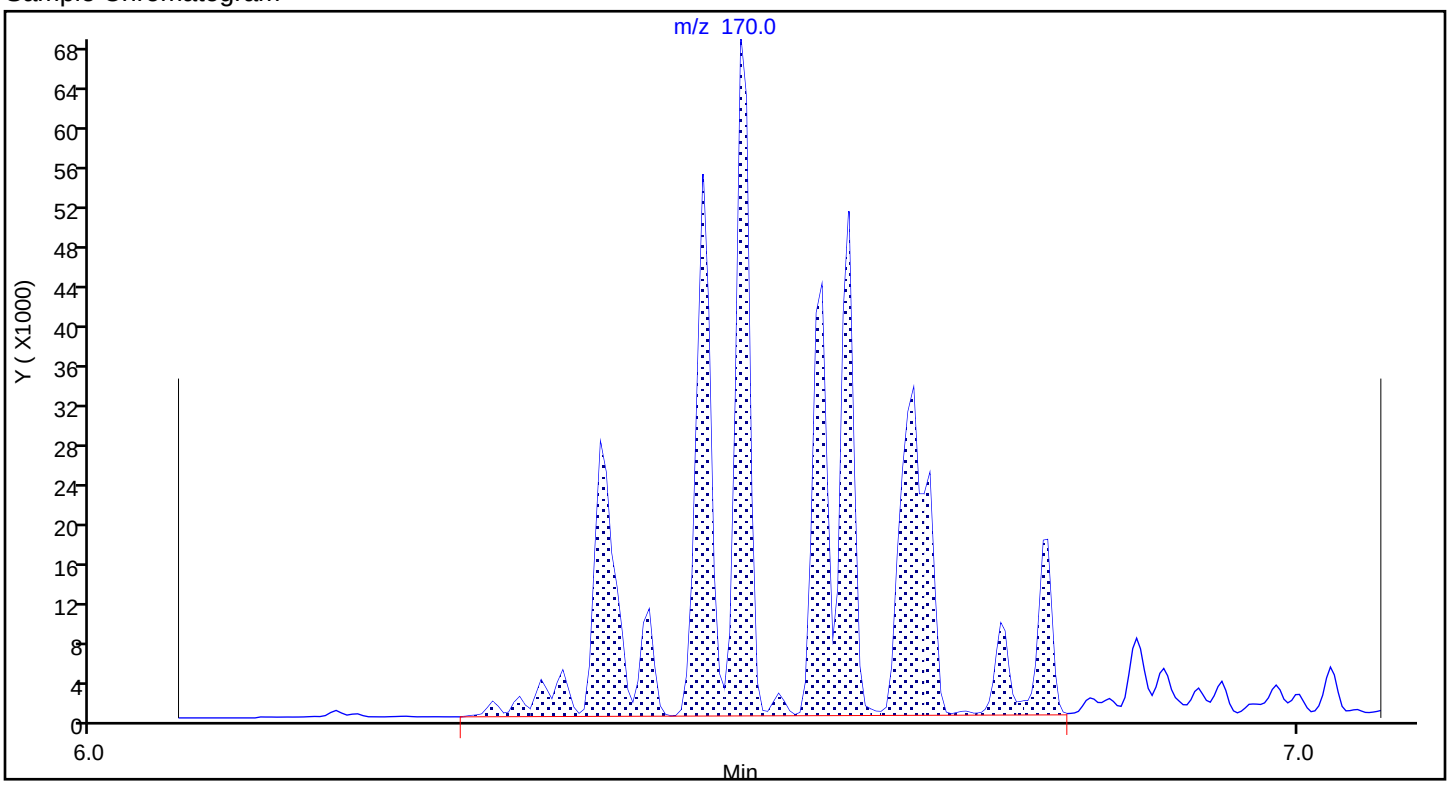
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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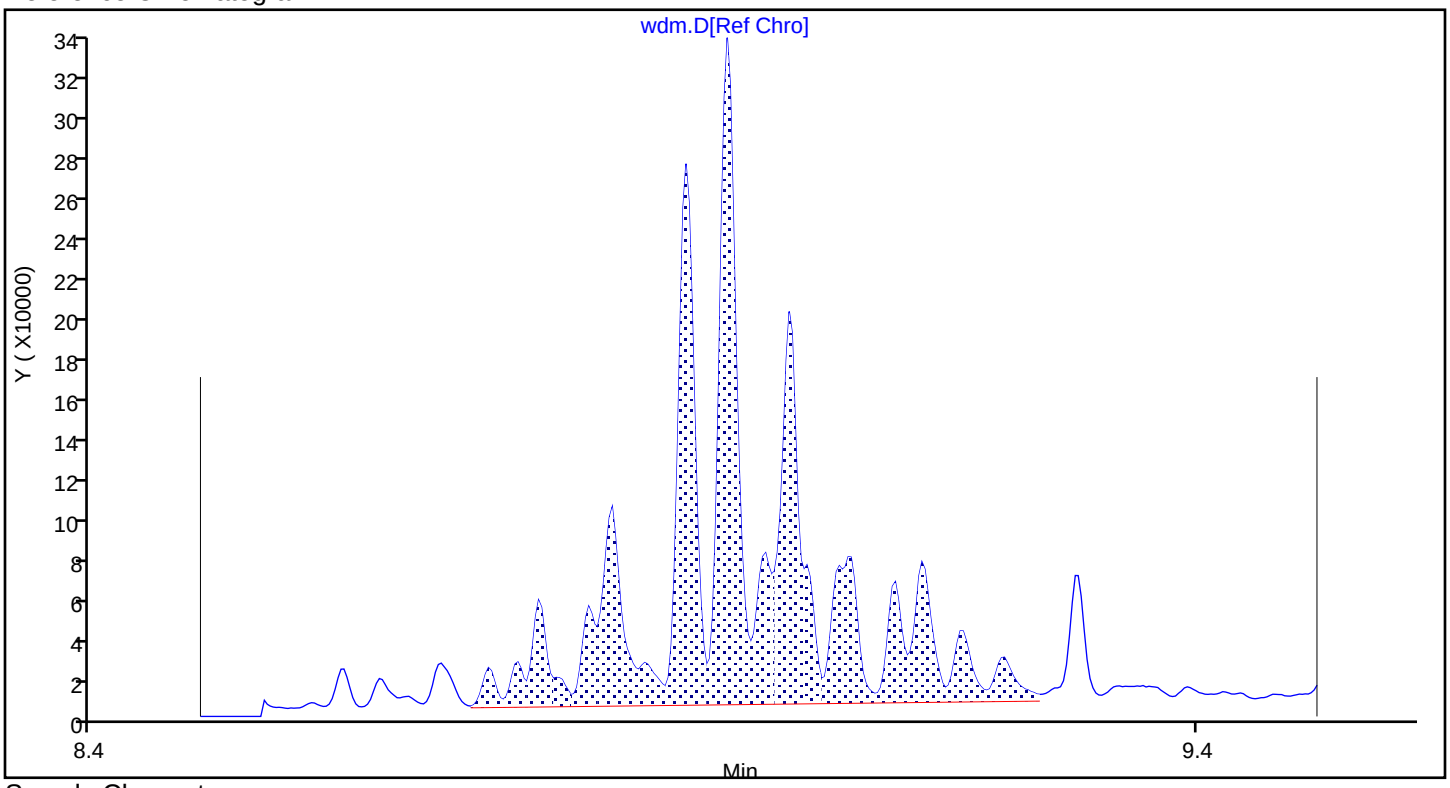
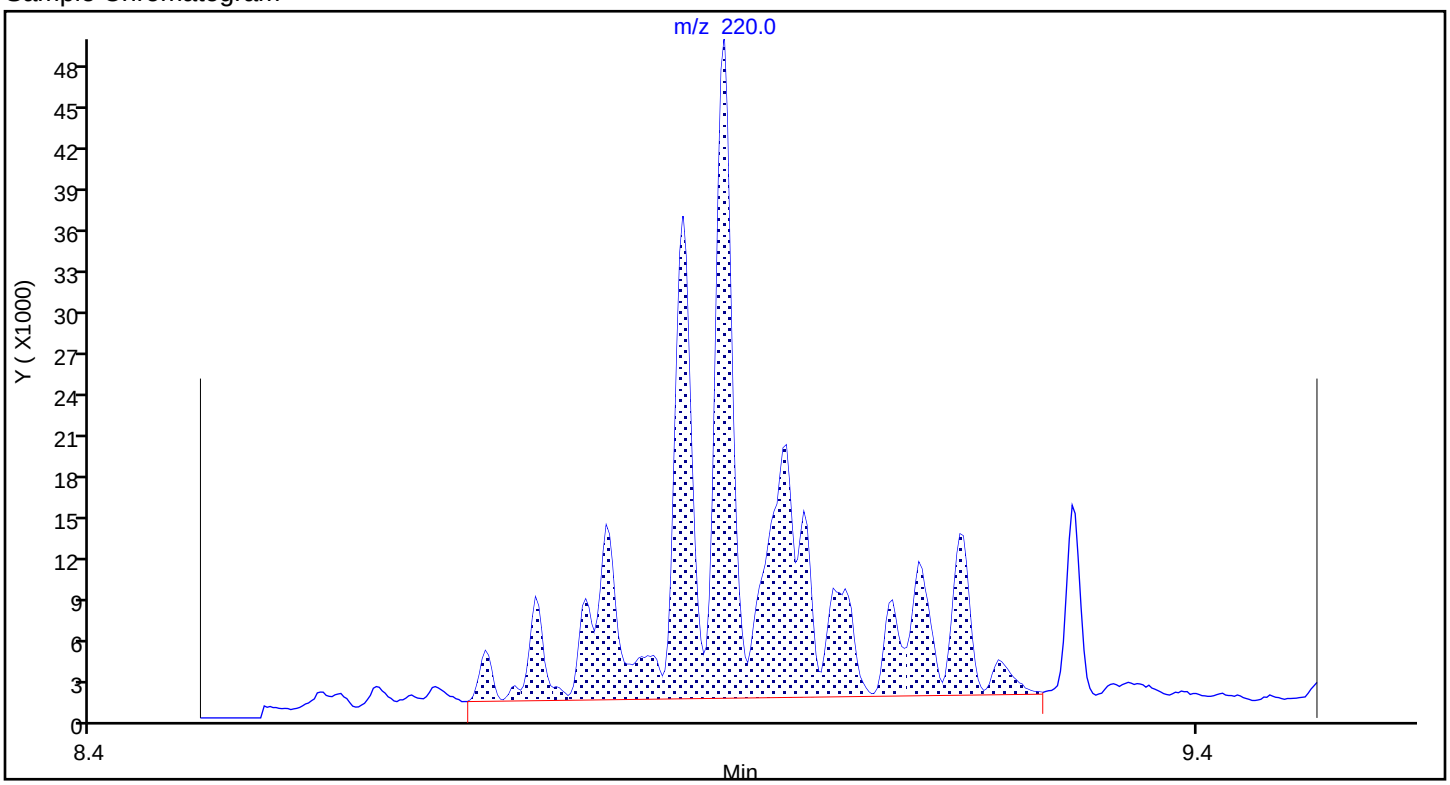
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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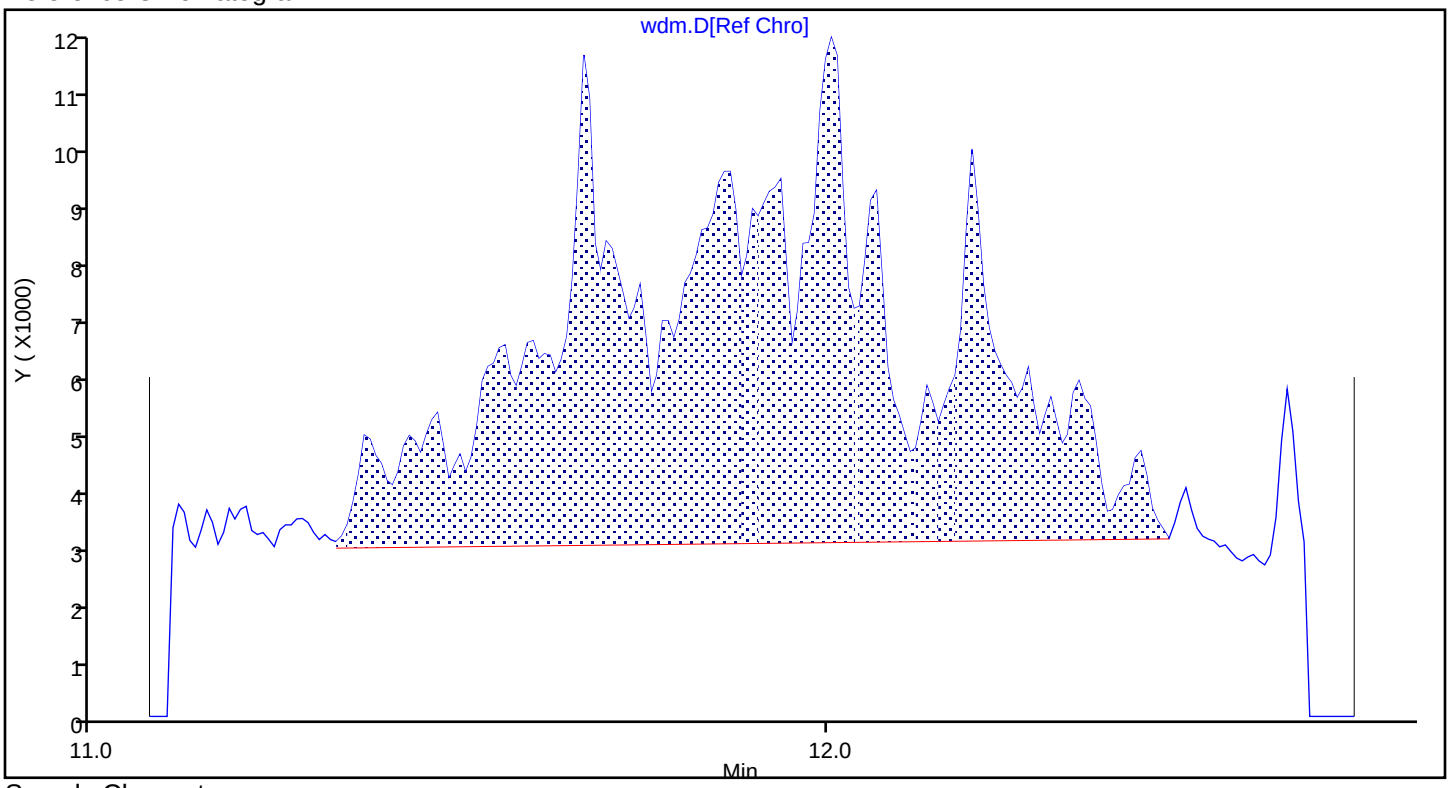
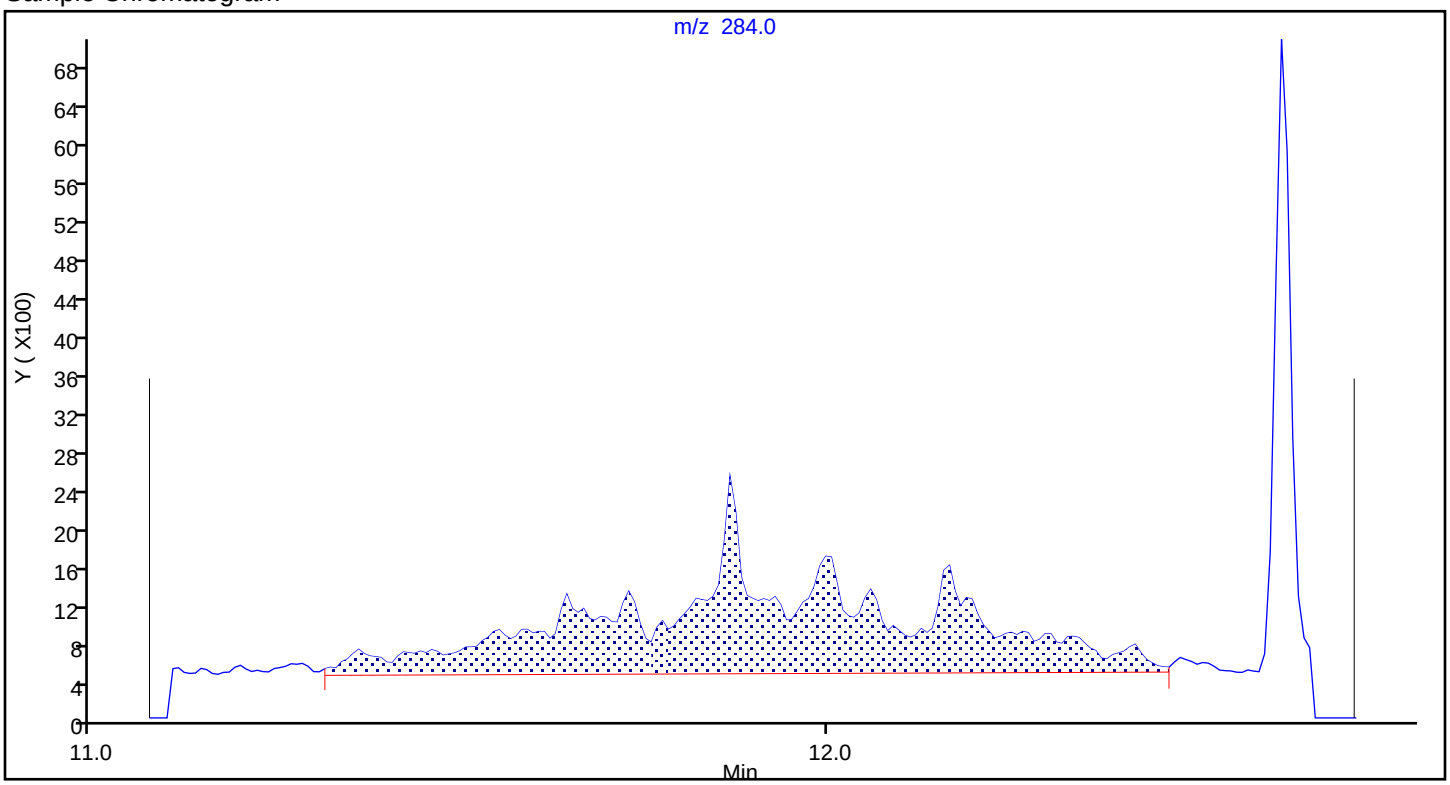
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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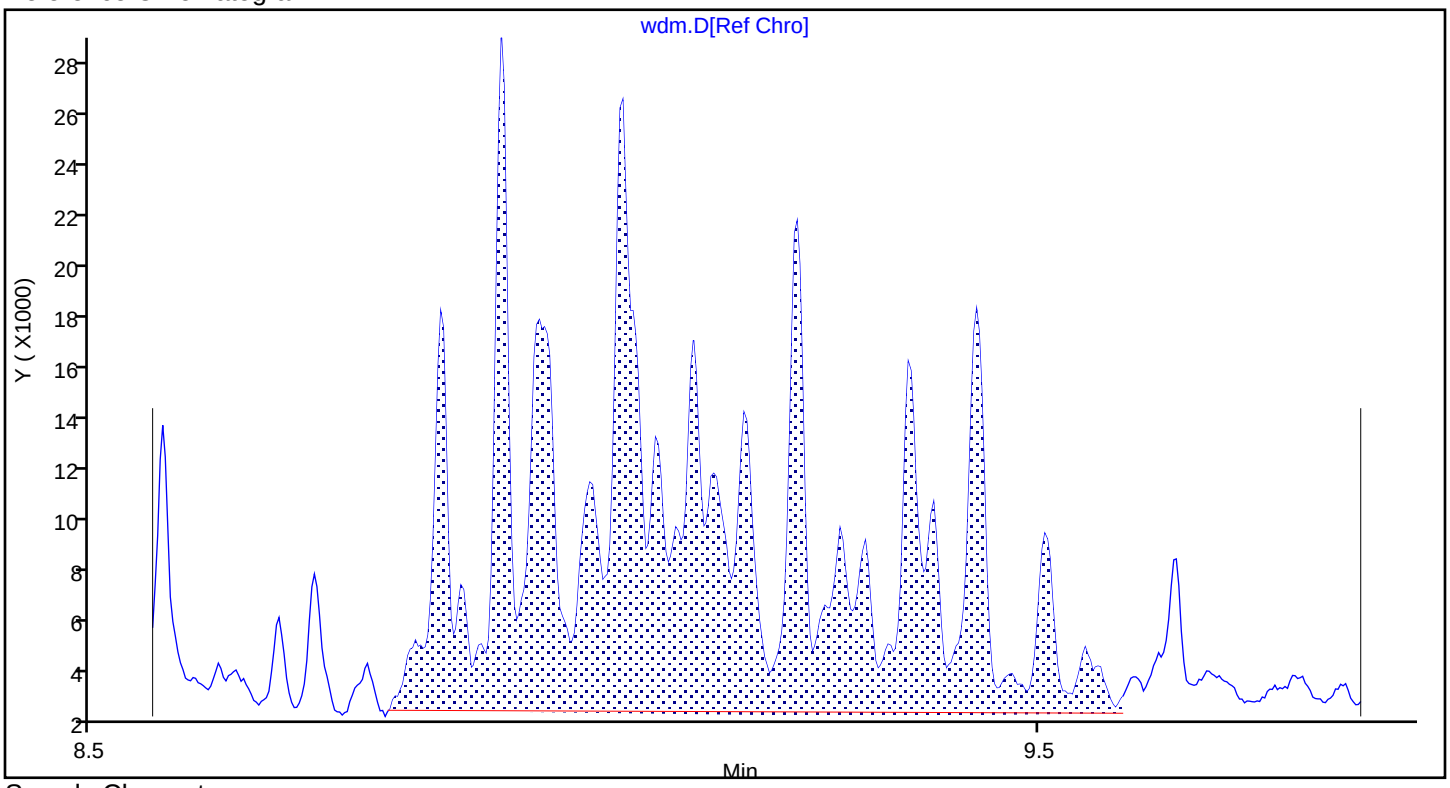
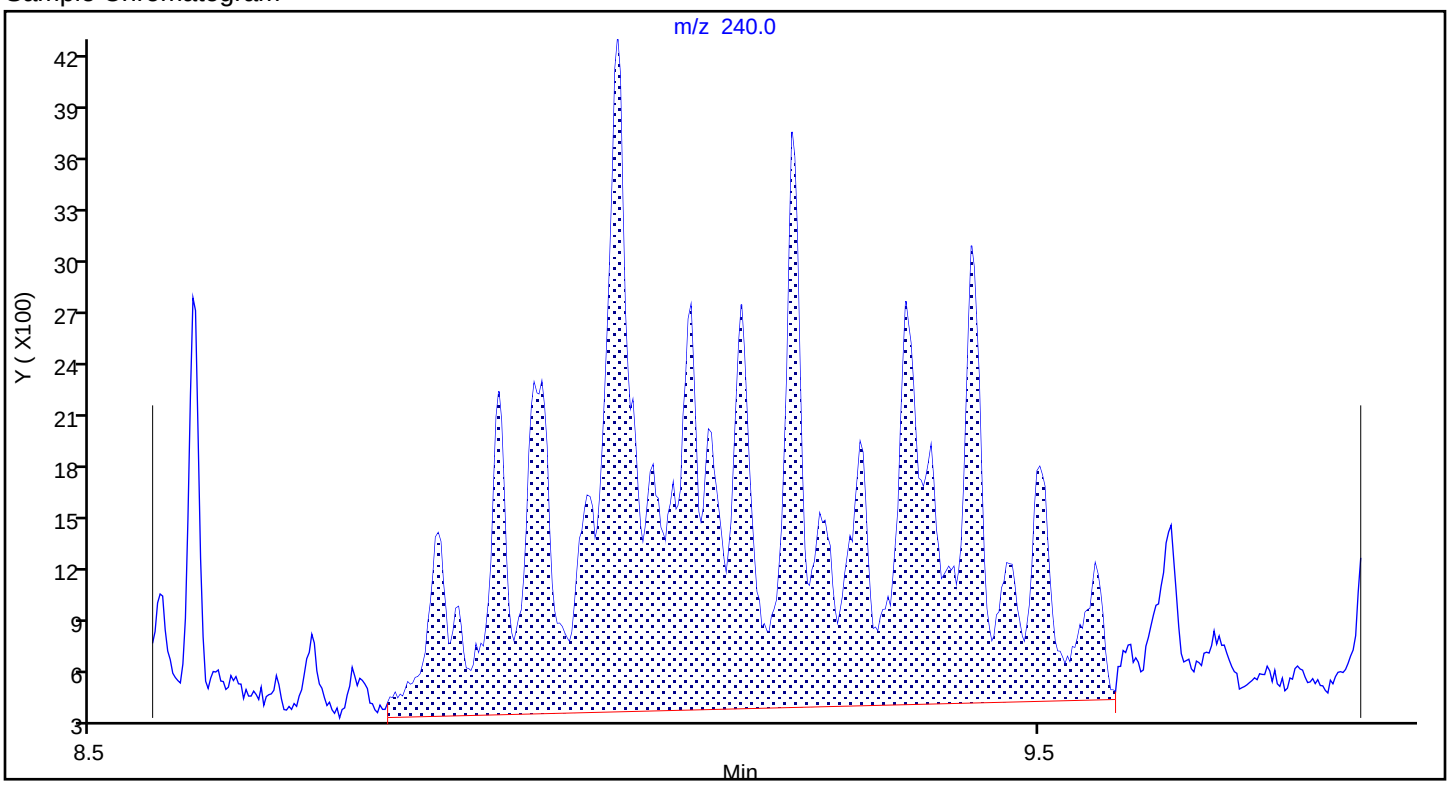
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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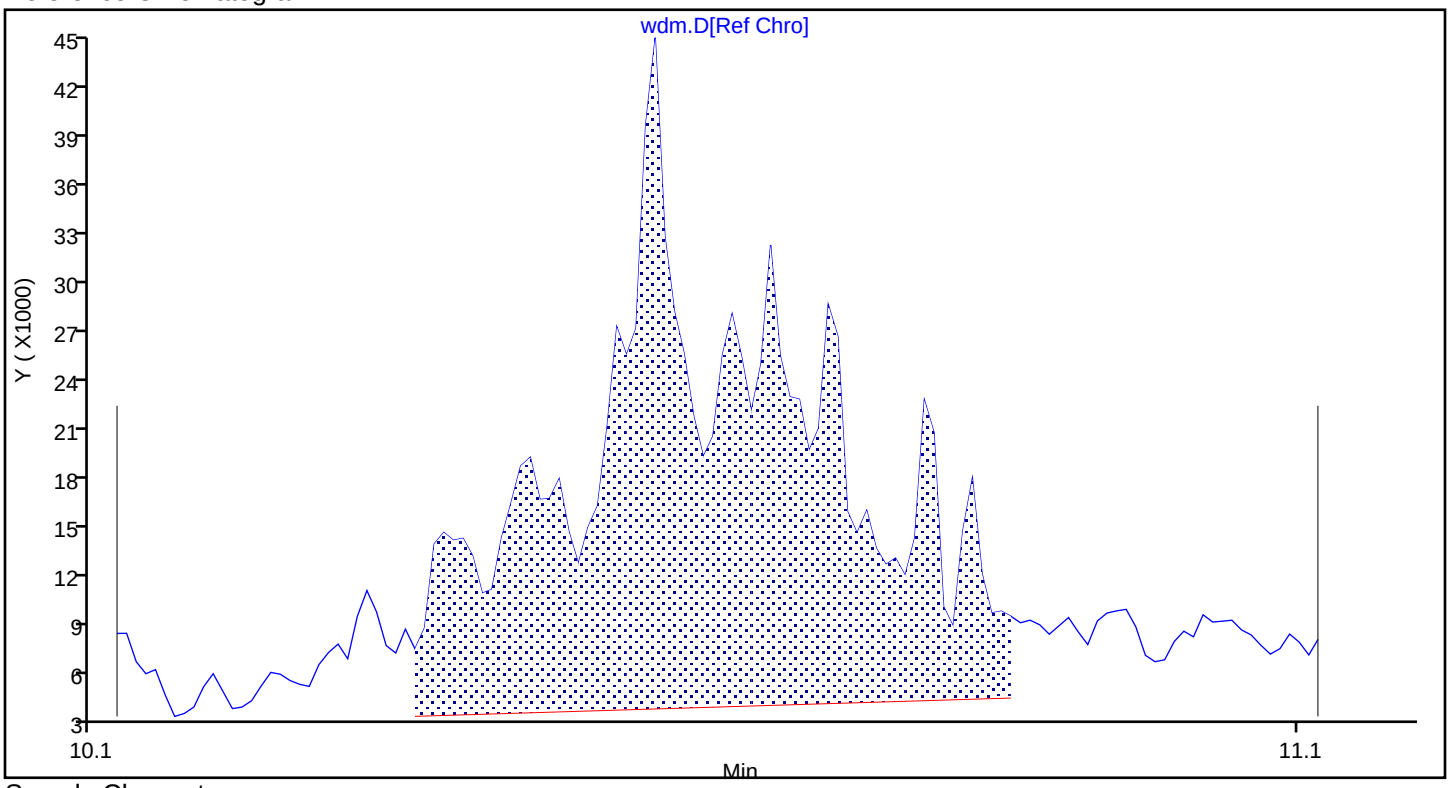
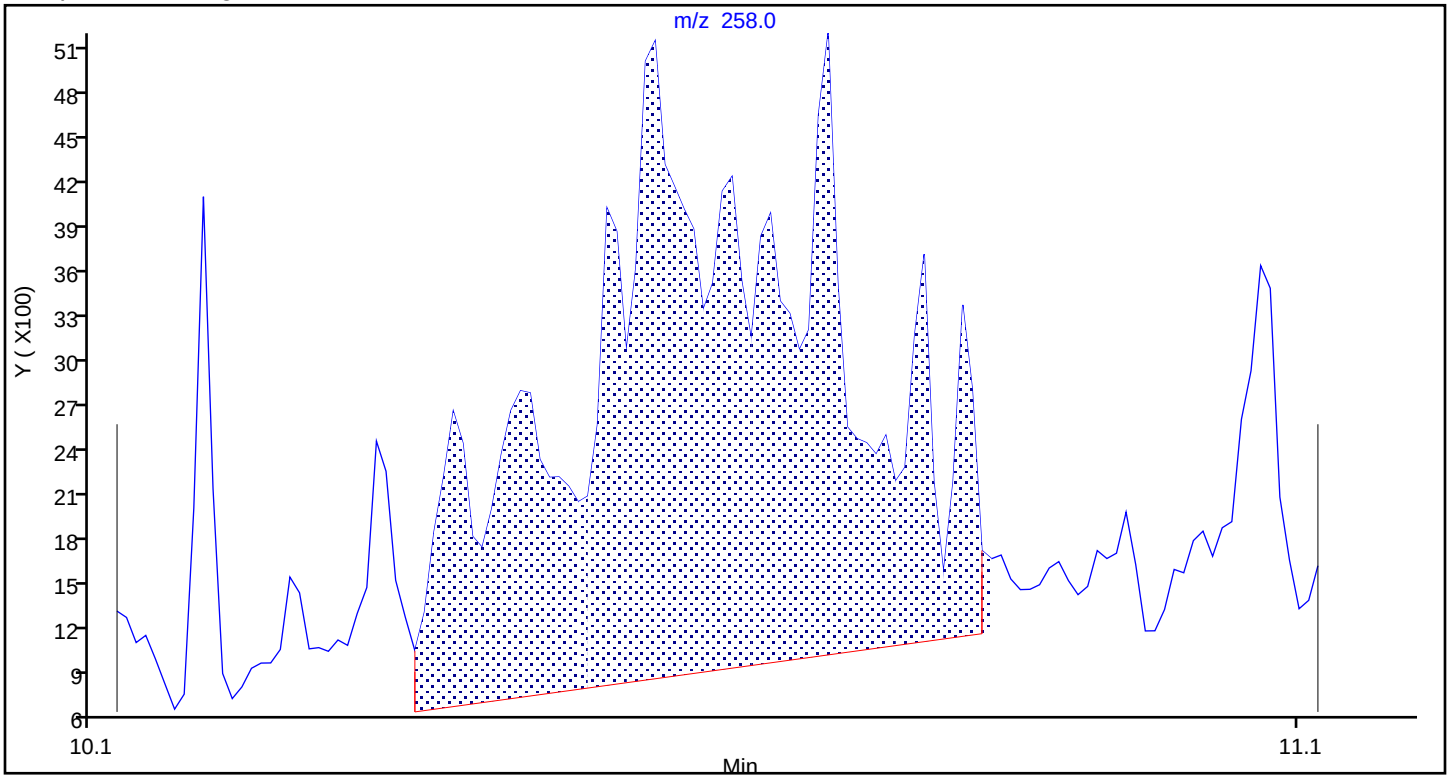
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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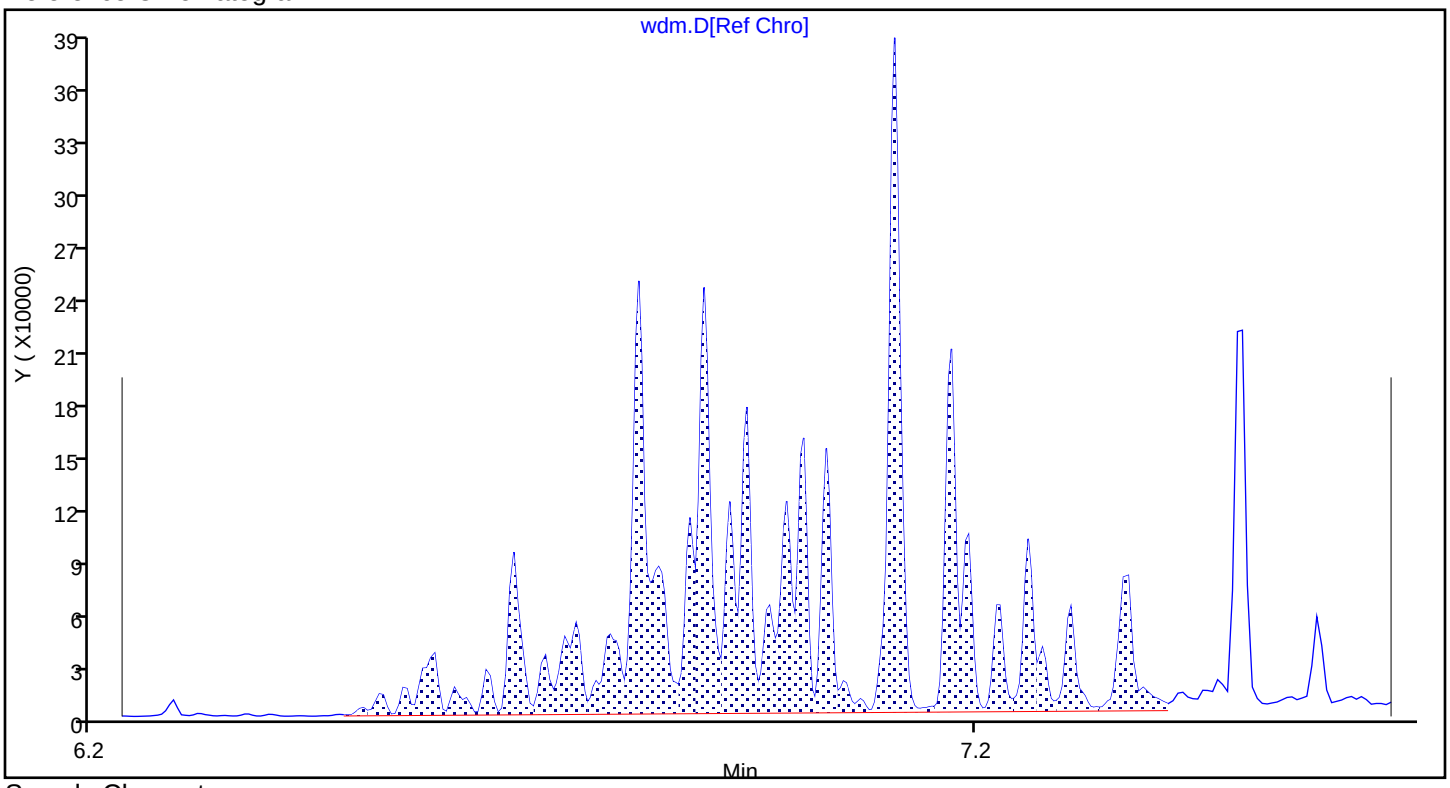
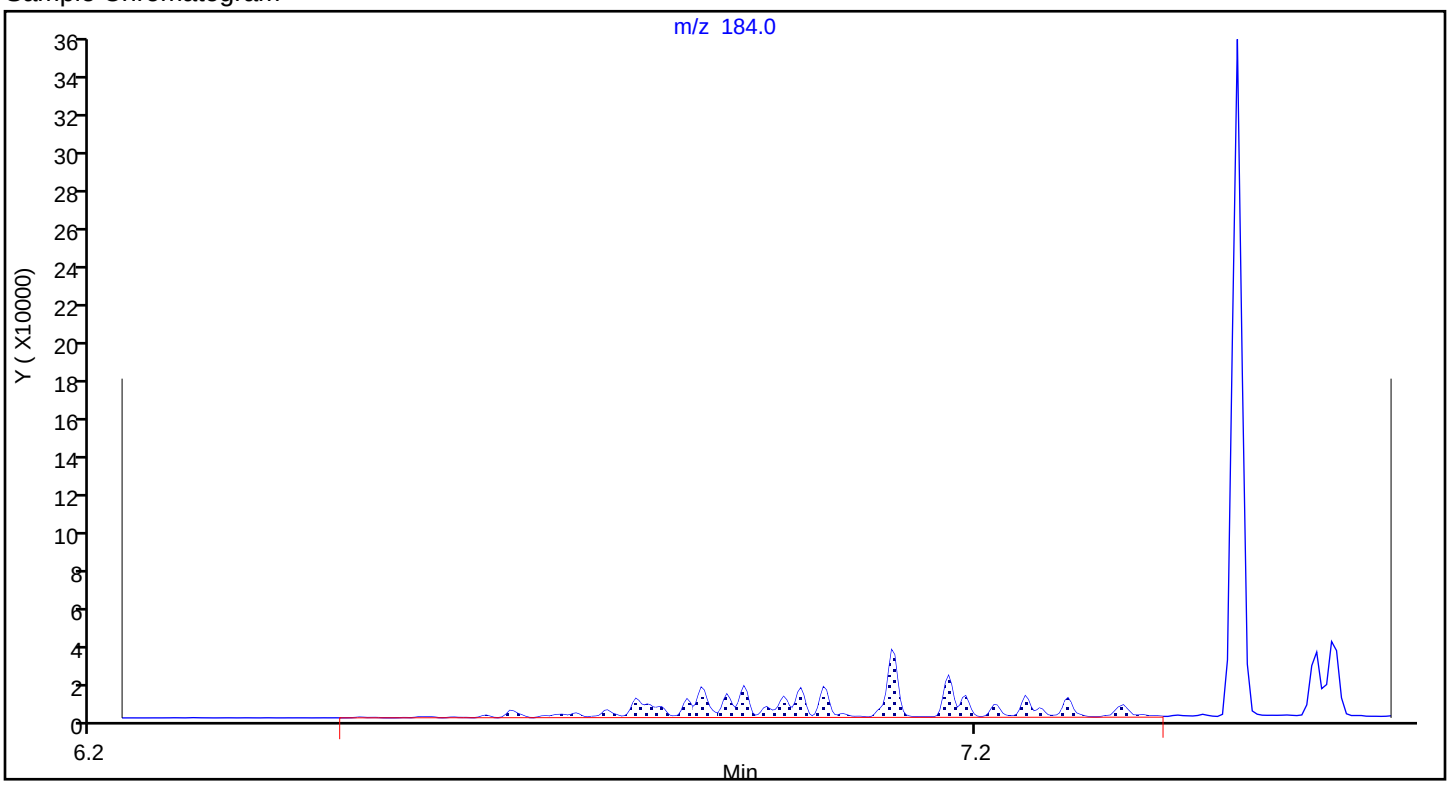
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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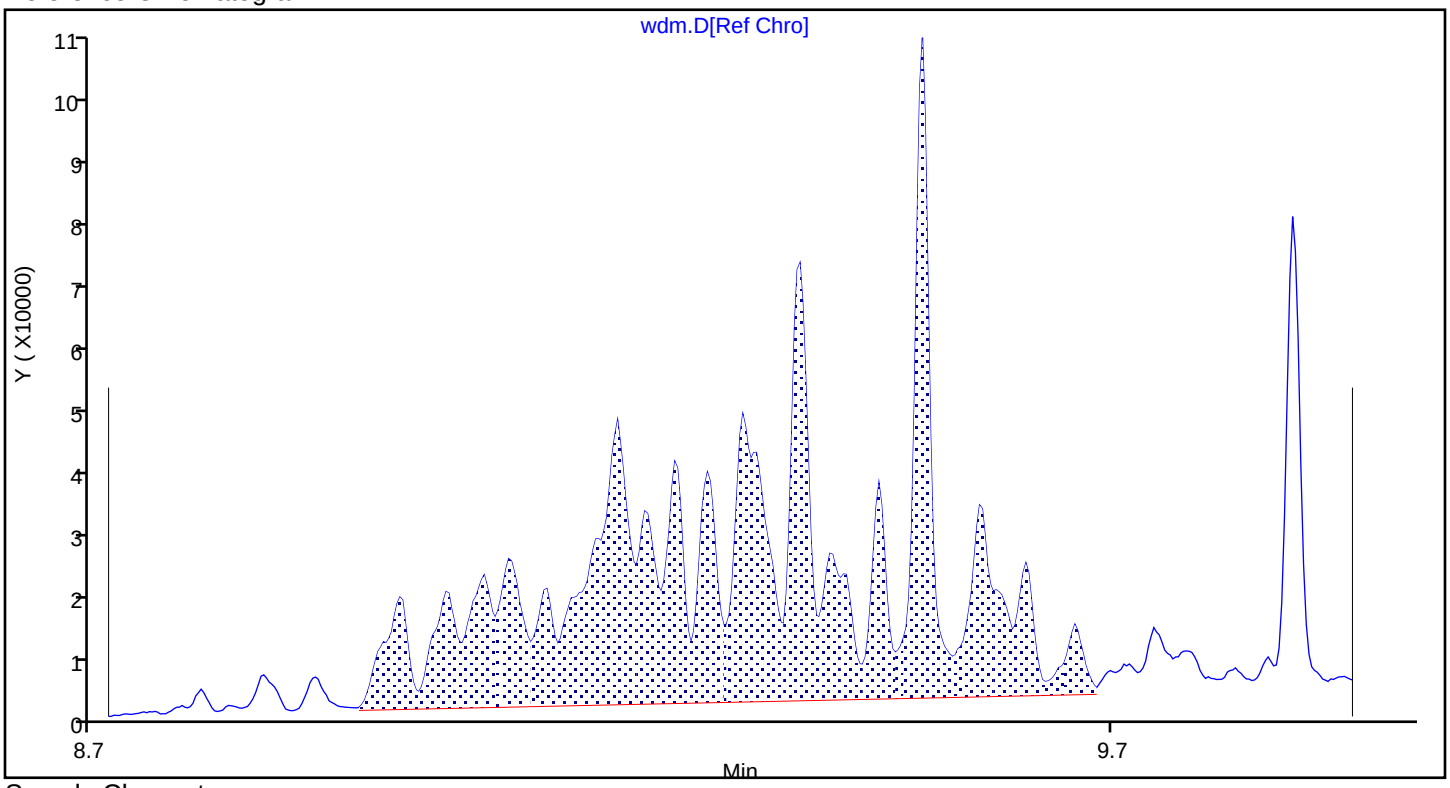
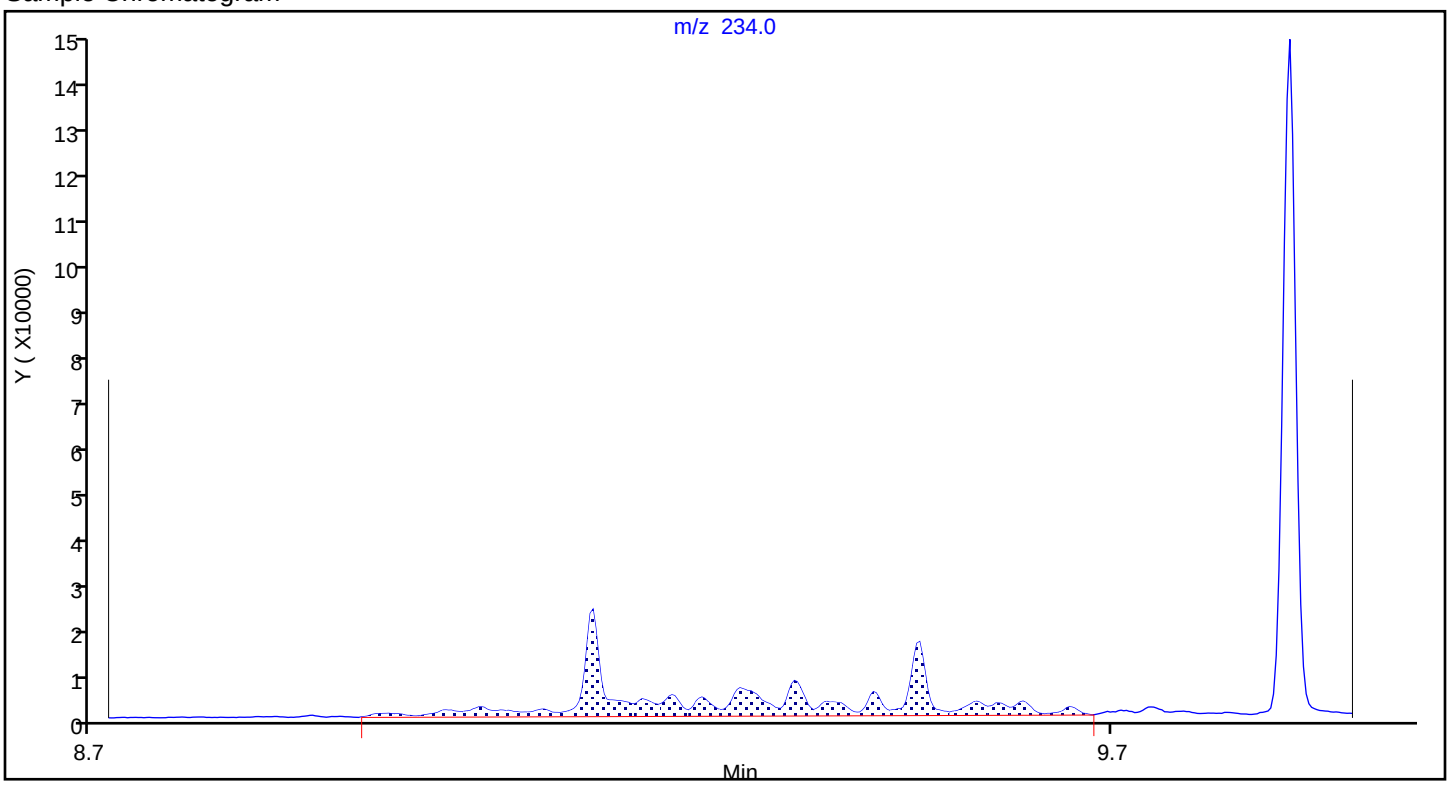
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram



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Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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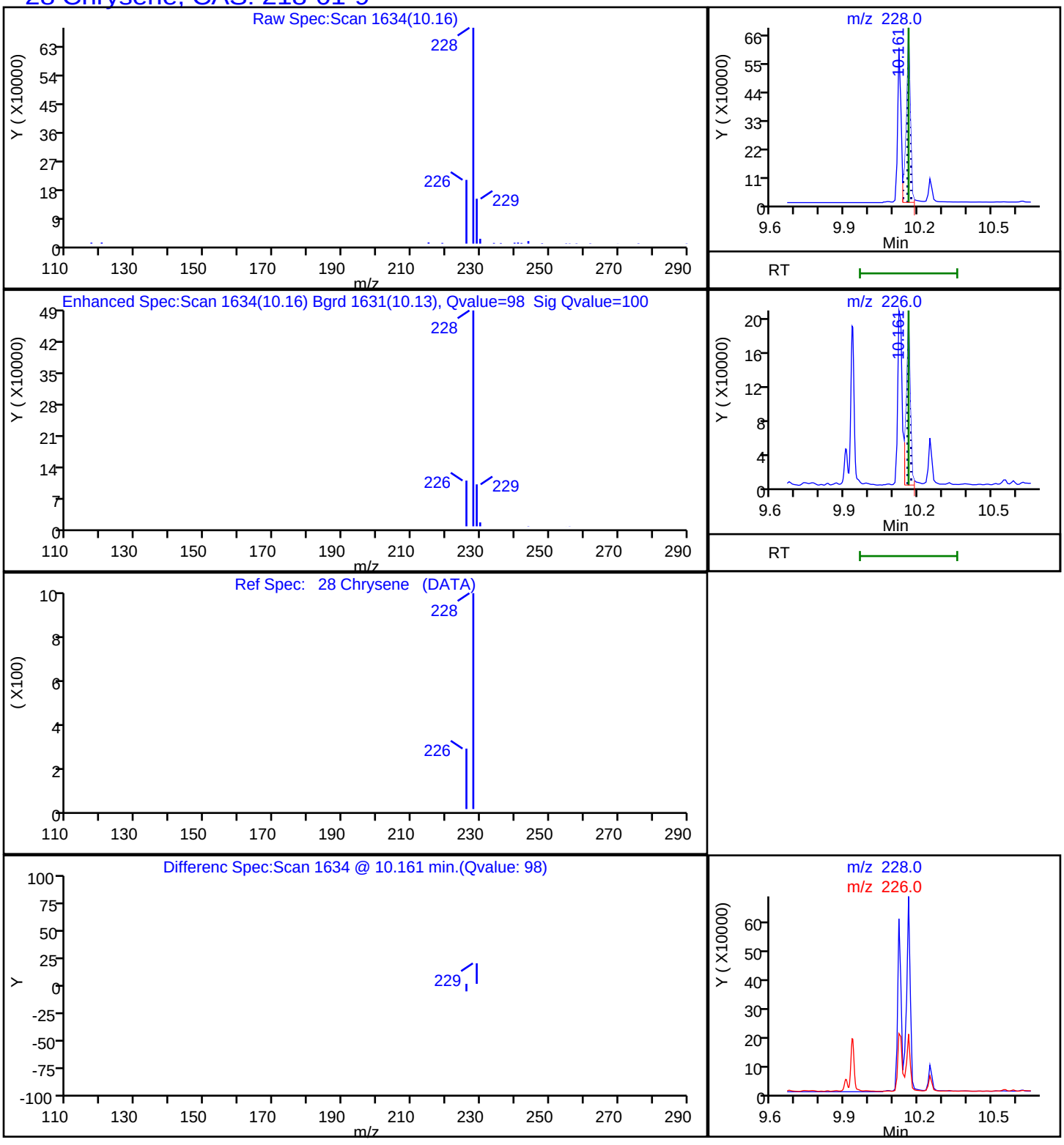
28 Chrysene, CAS: 218-01-9



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Eurofins TestAmerica, Knoxville

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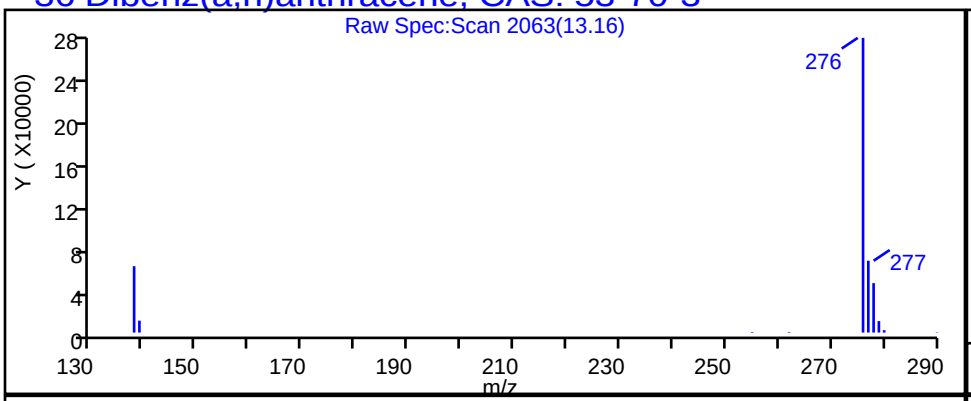
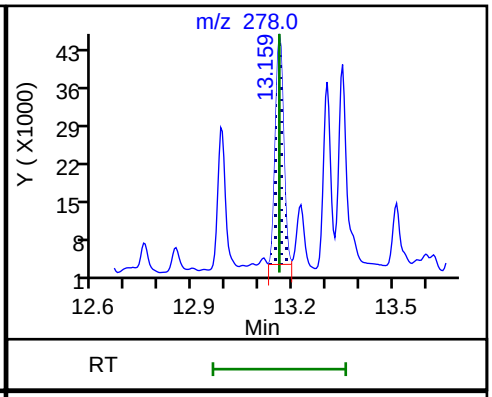
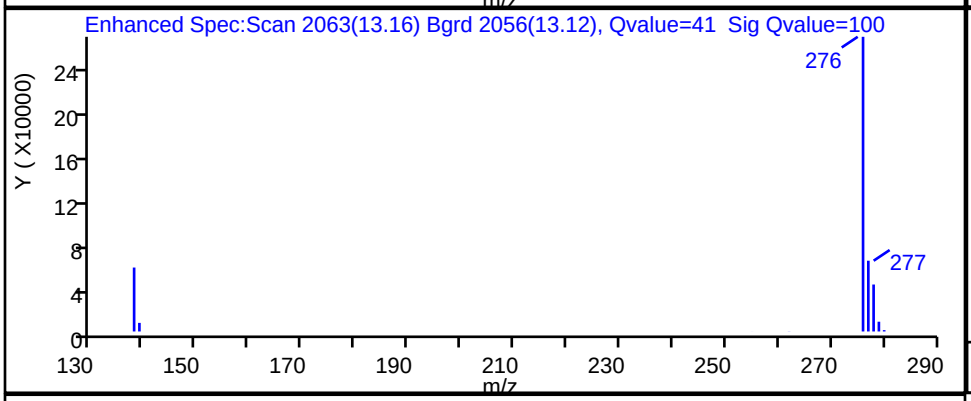
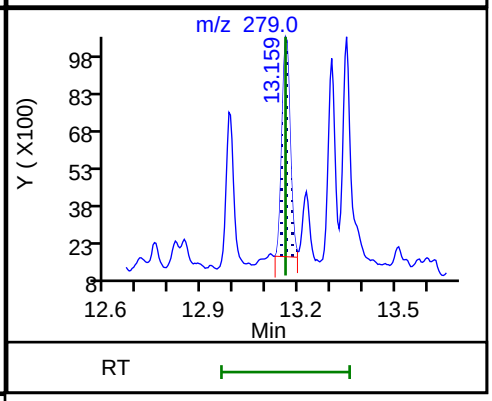
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

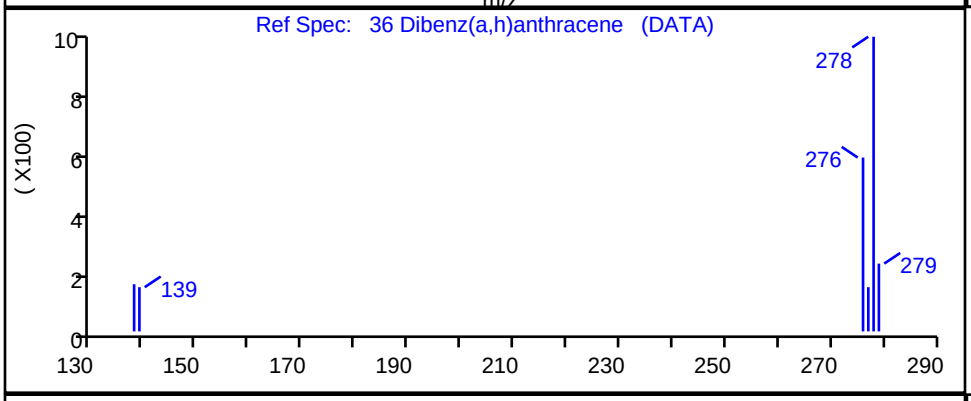
36 Dibenz(a,h)anthracene, CAS: 53-70-3

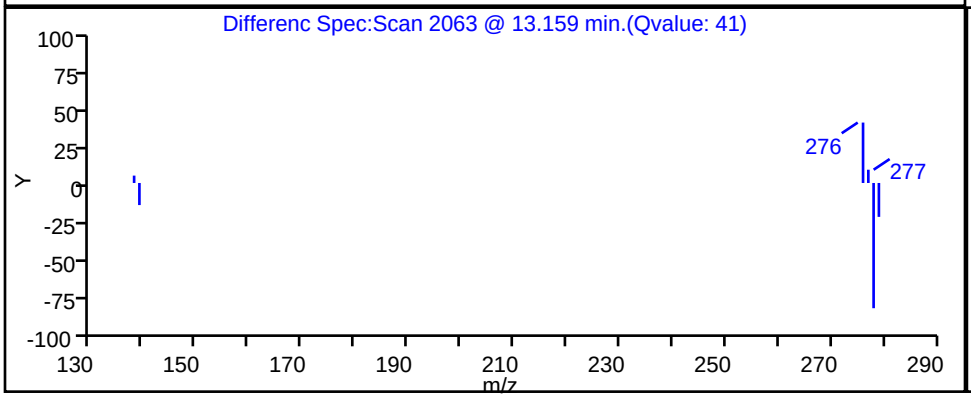


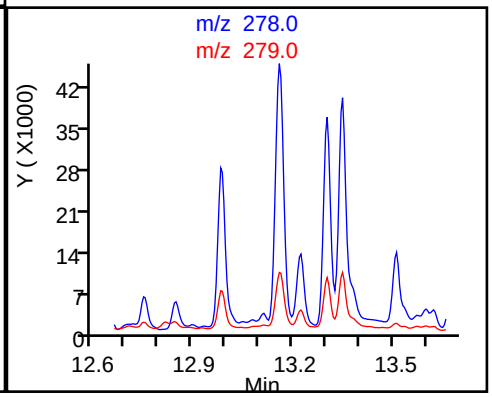












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Eurofins TestAmerica, Knoxville

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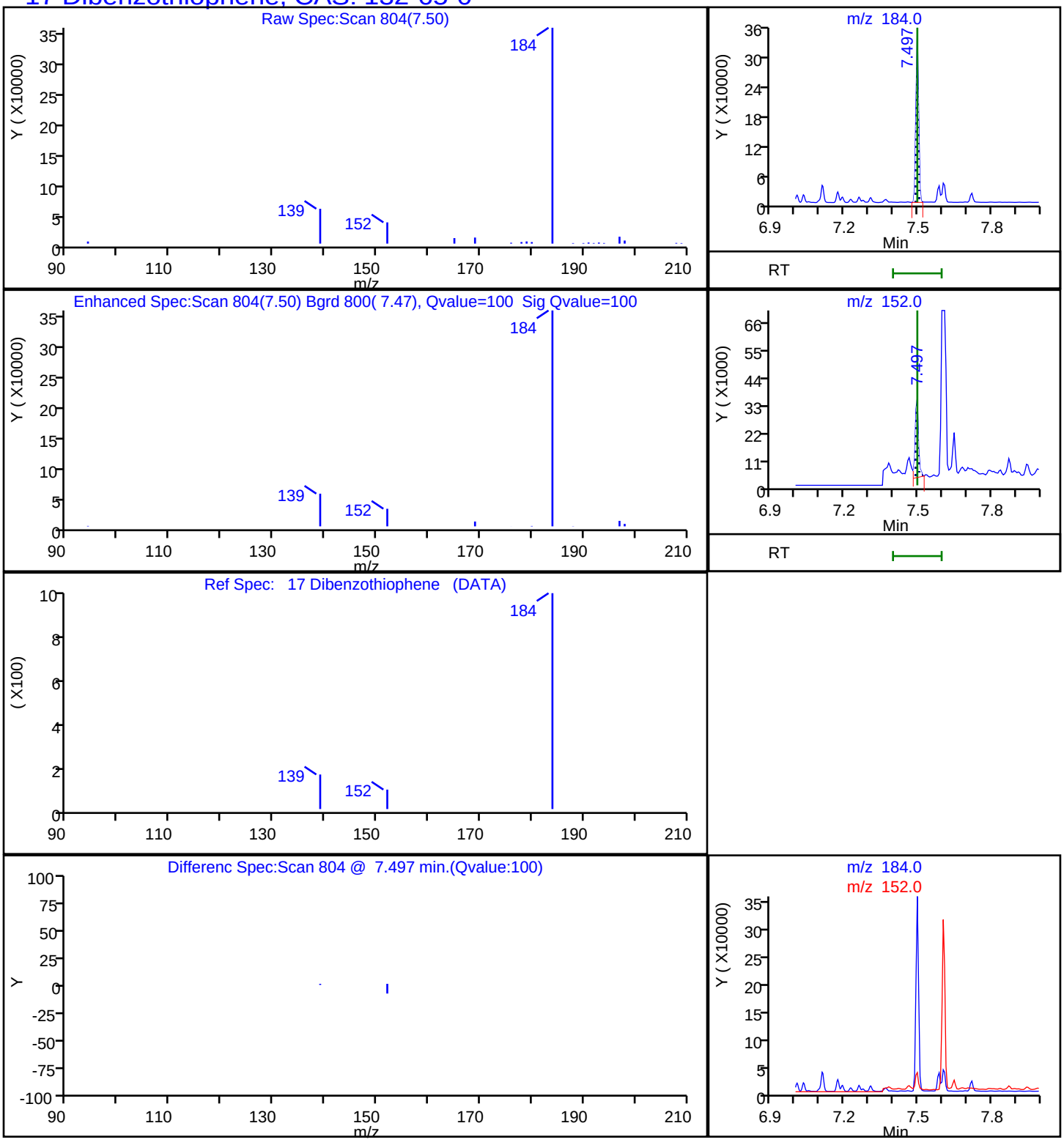
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

17 Dibenzothiophene, CAS: 132-65-0



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Eurofins TestAmerica, Knoxville

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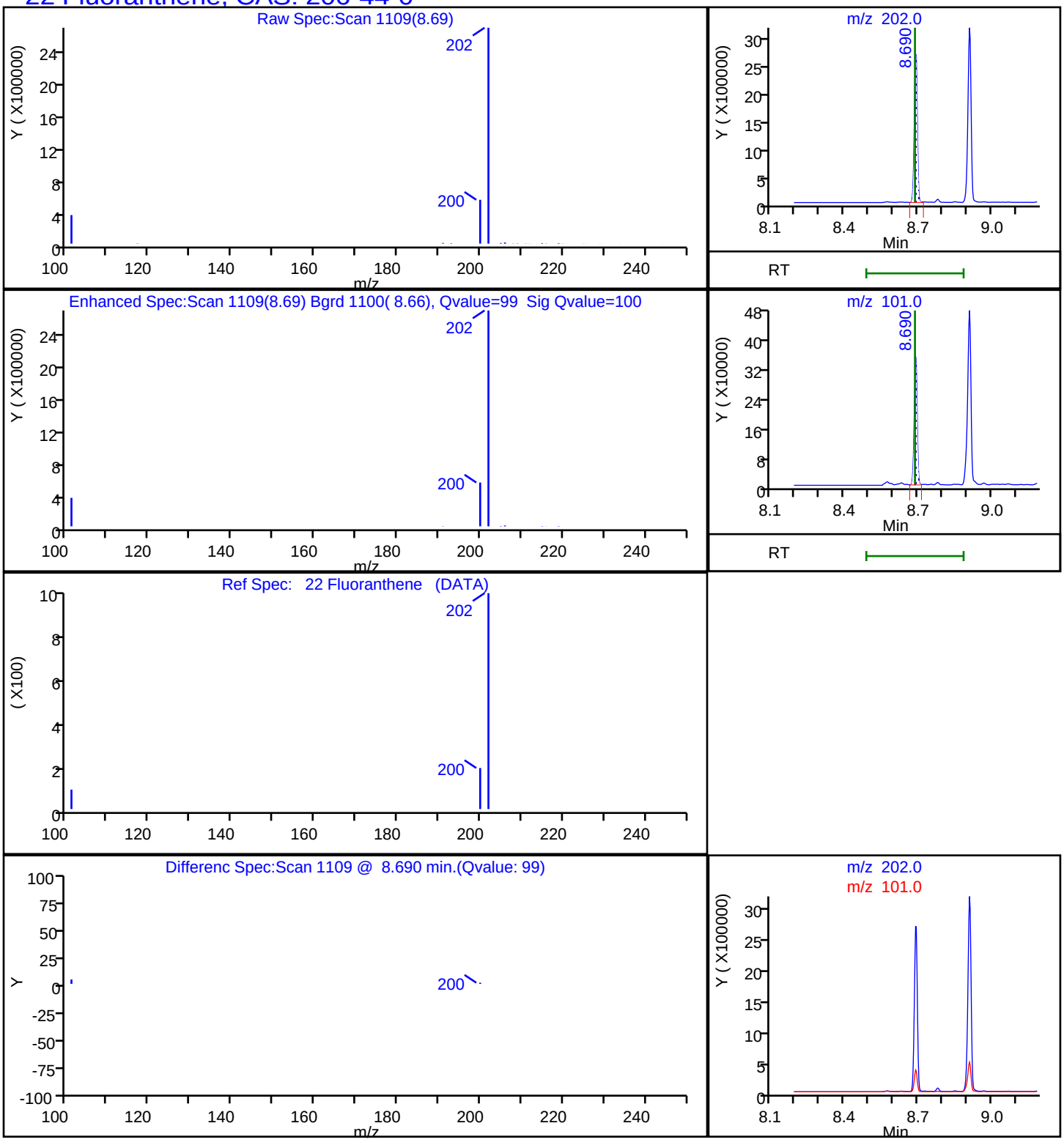
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0



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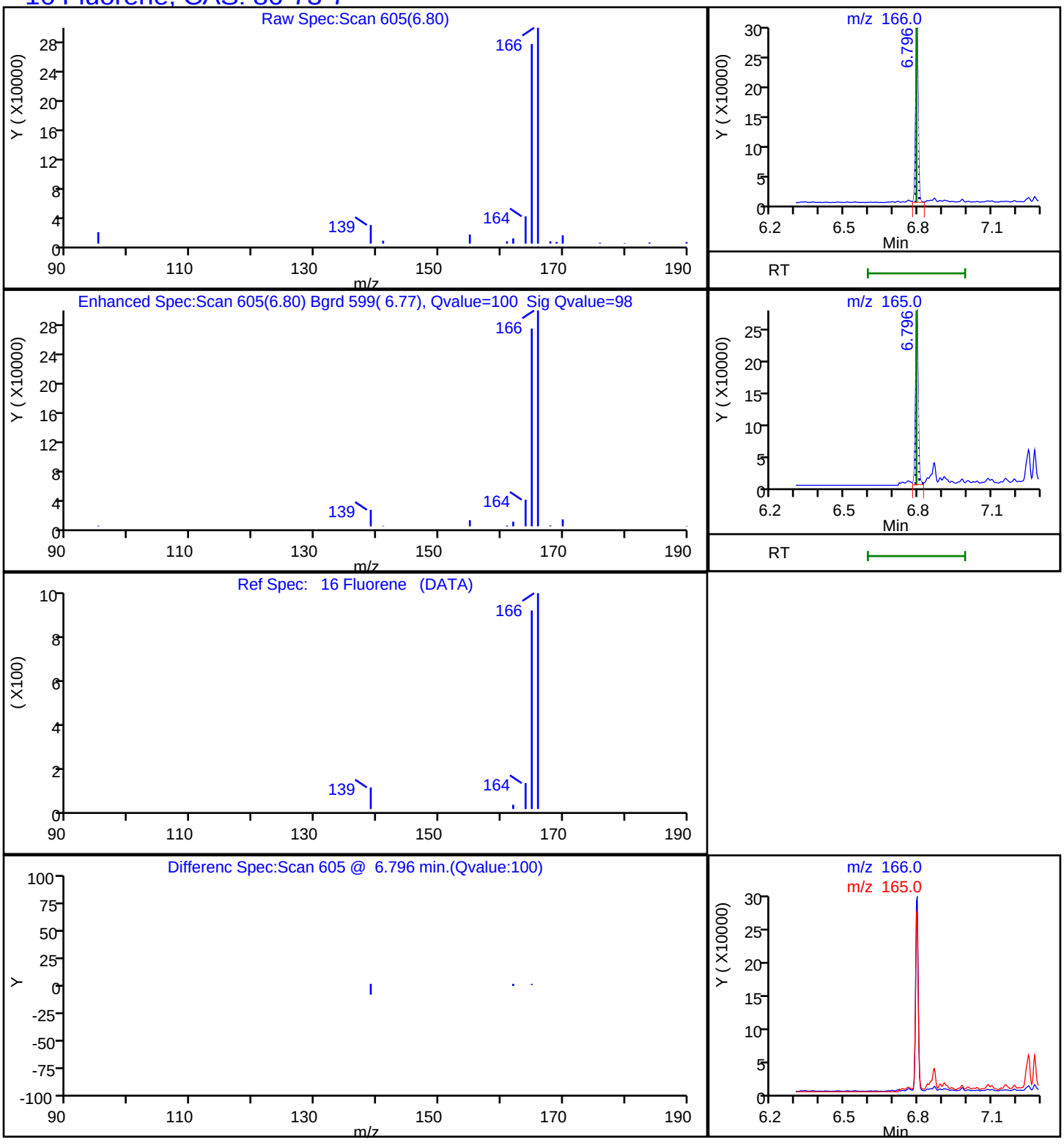
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

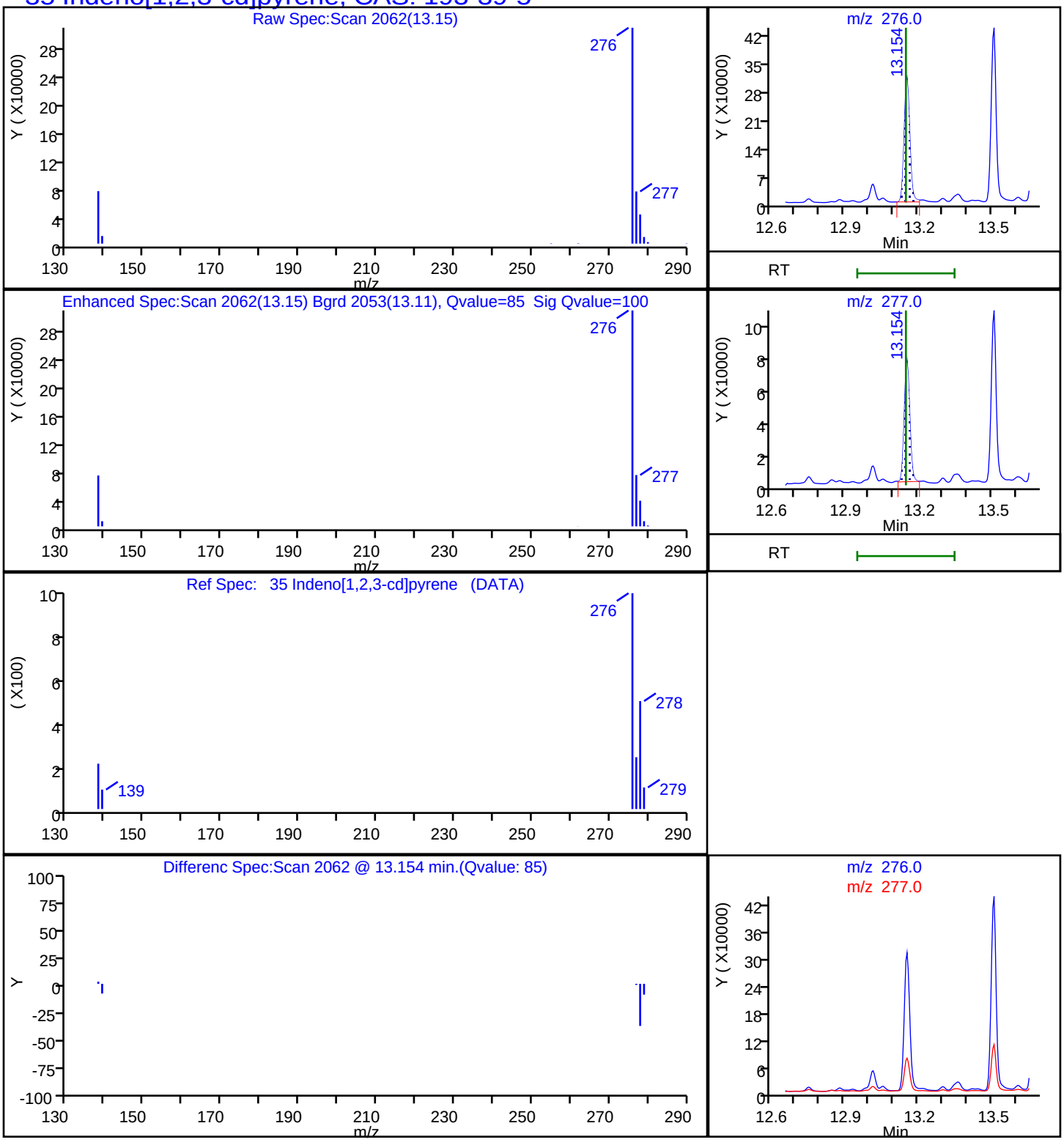


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

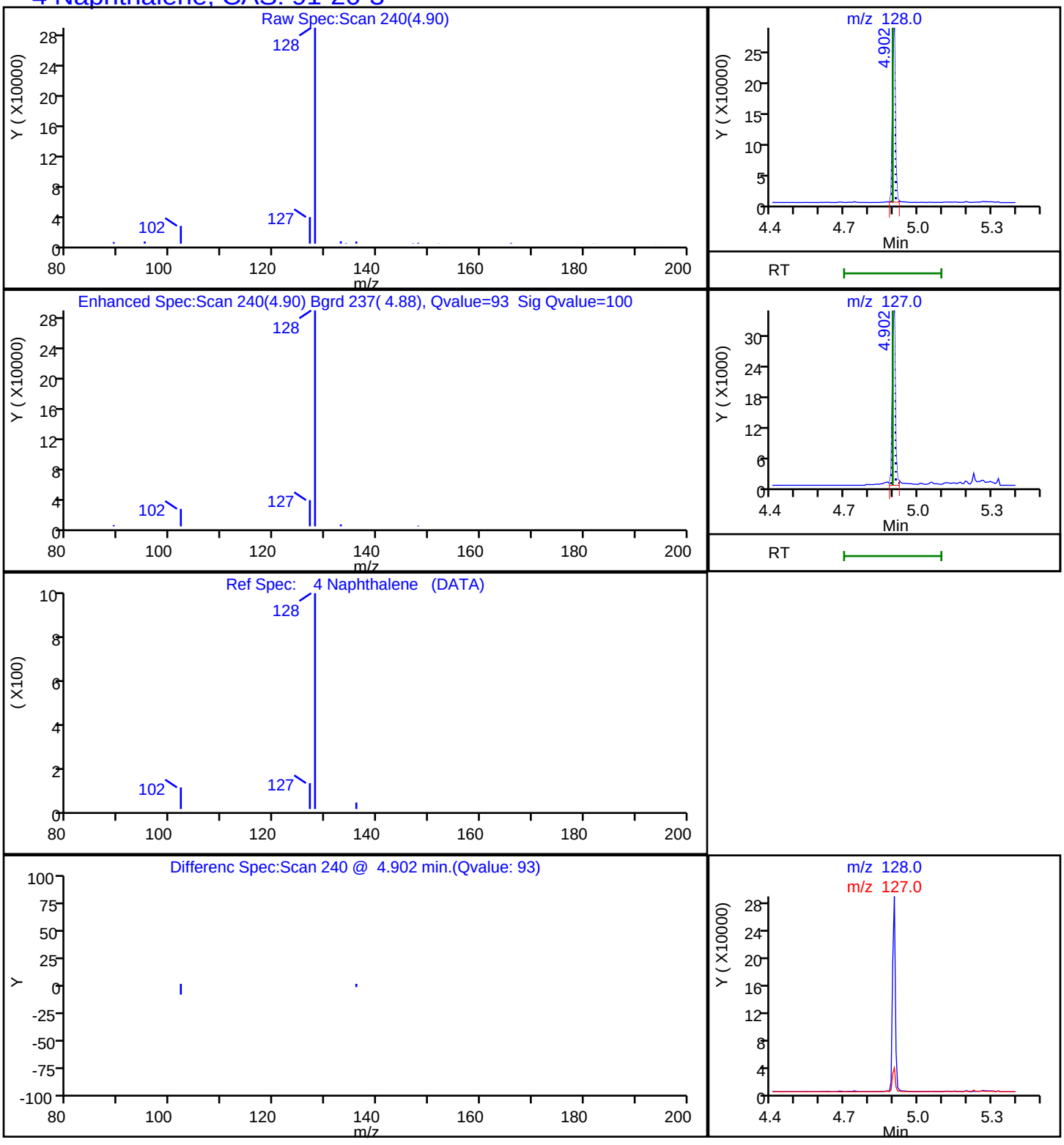


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

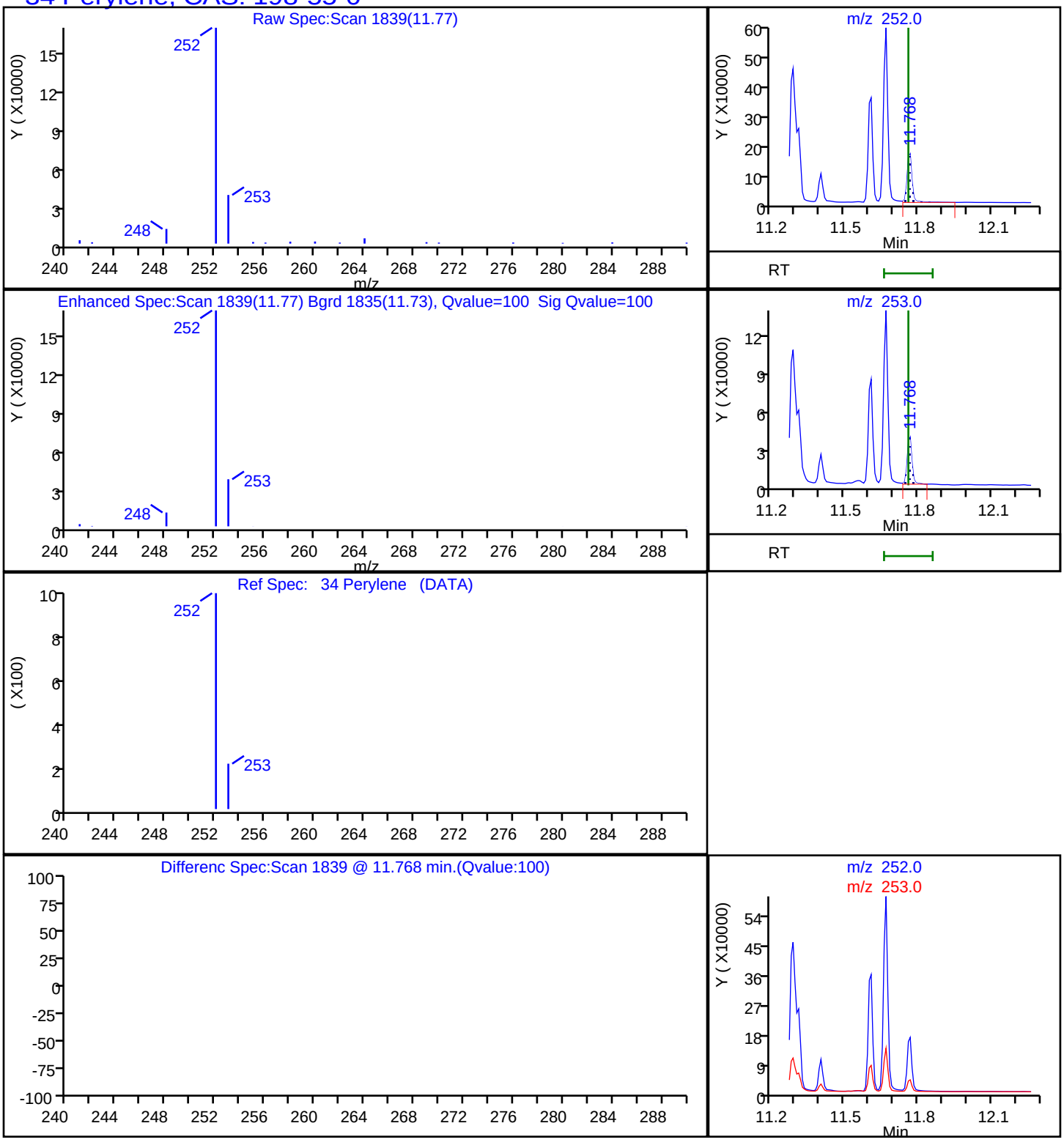


Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



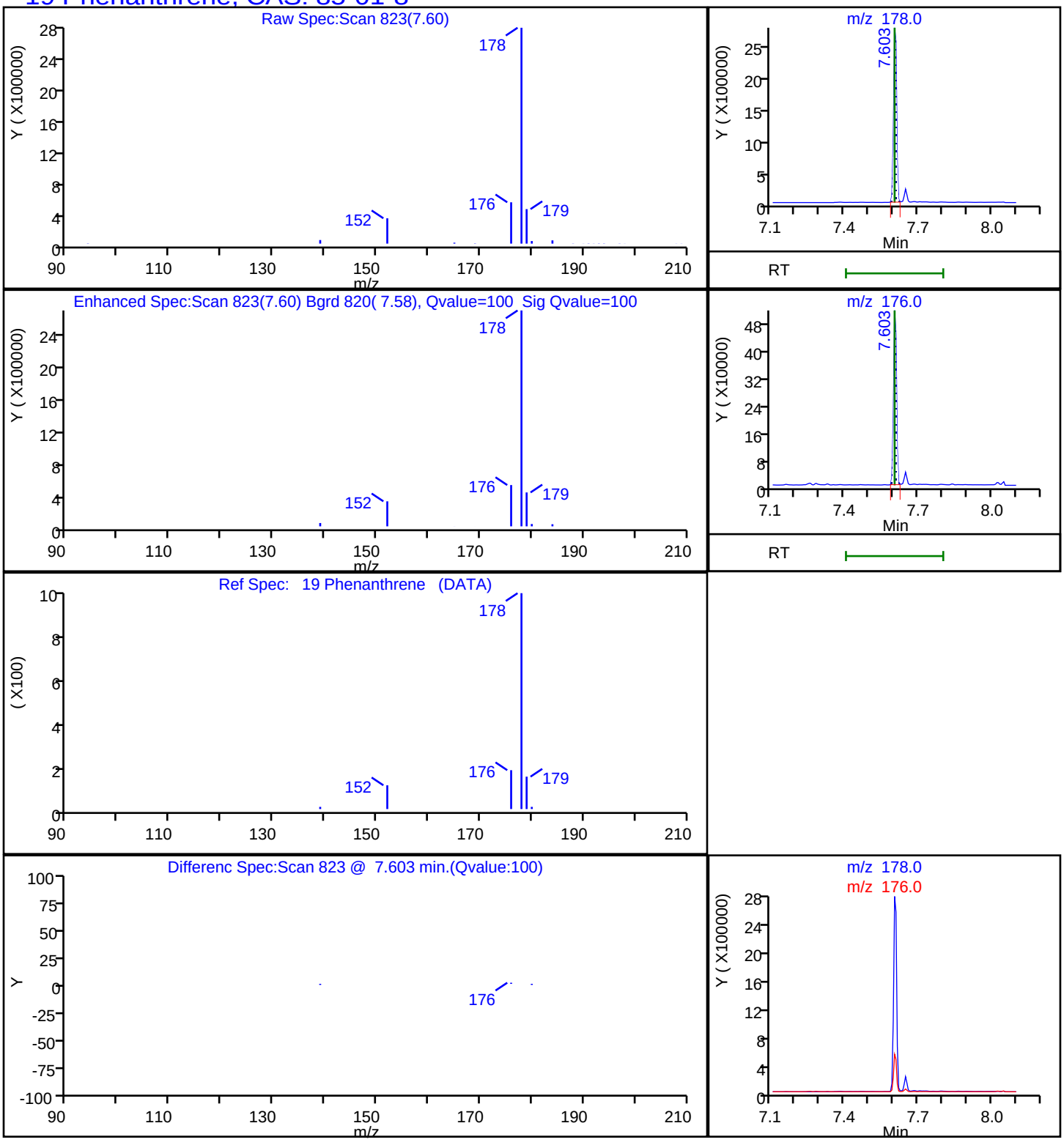
Report Date: 31-Aug-2019 11:48:42 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D

Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8



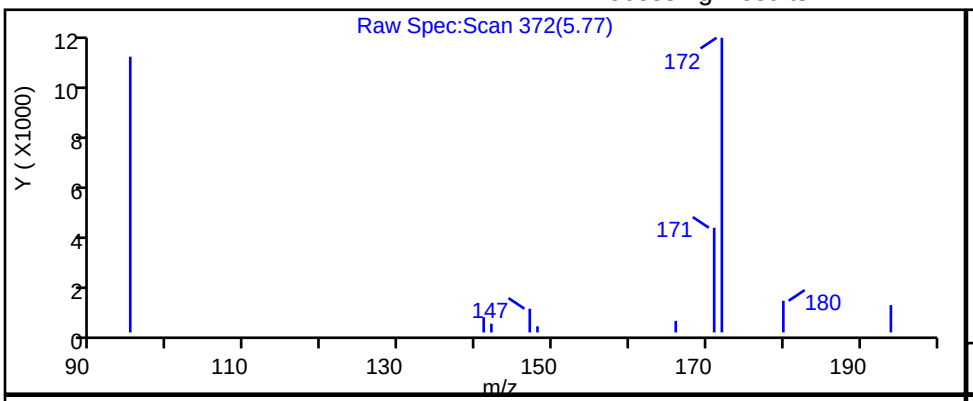
User Disabled Compound Report

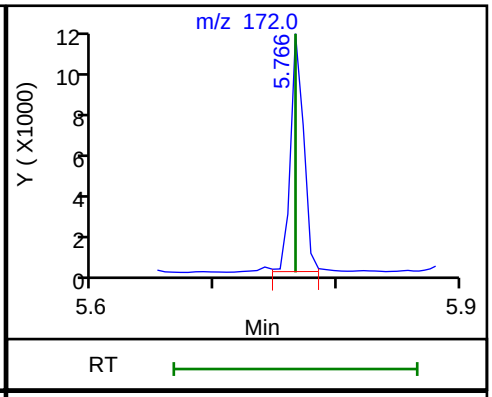
Eurofins TestAmerica, Knoxville

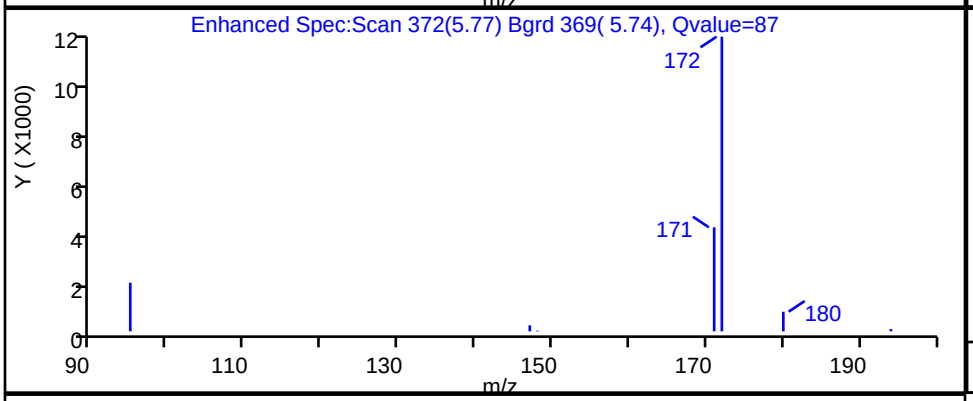
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

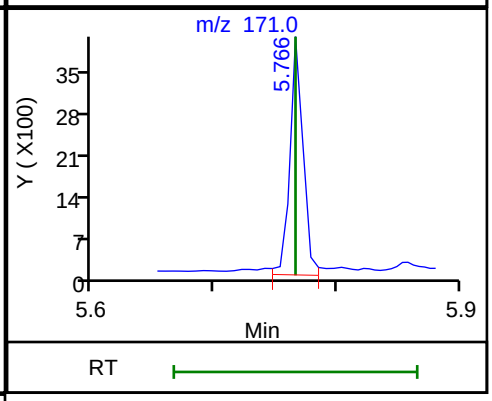
$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

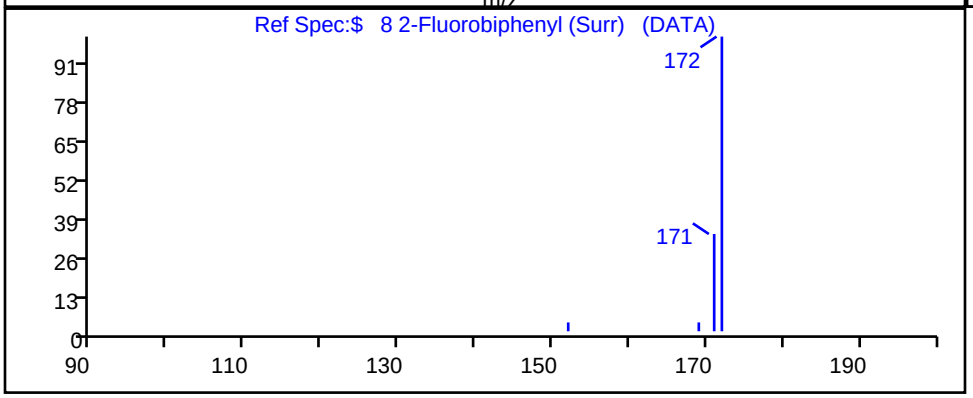
Processing Results











RT	Mass	Response	Amount
5.77	172.00	8453	0.024440
5.77	171.00	3067	

Reviewer: cochranj, 31-Aug-2019 10:56:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

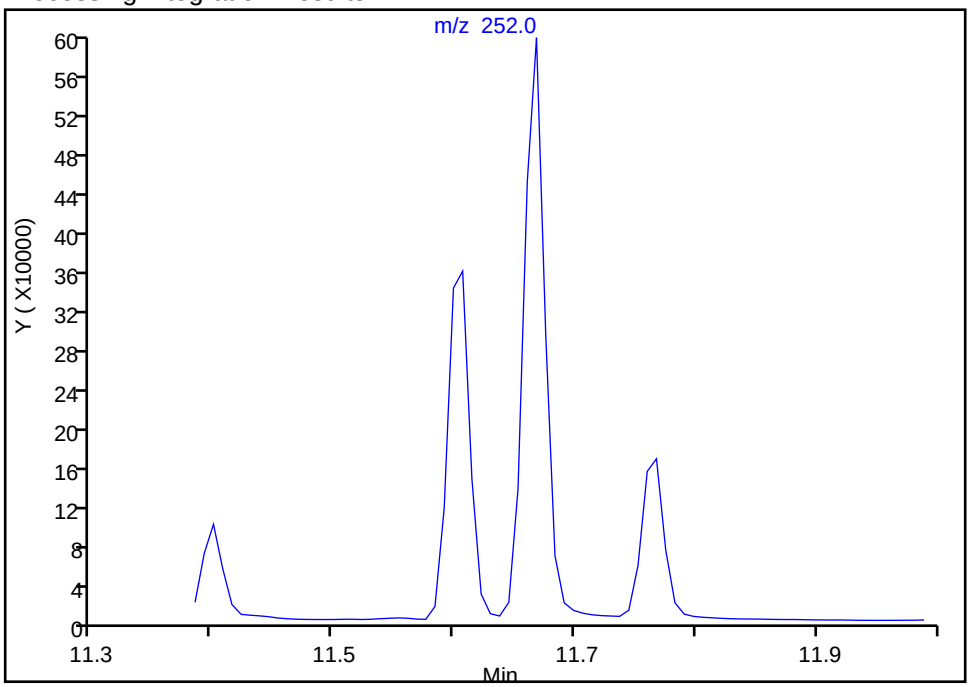
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

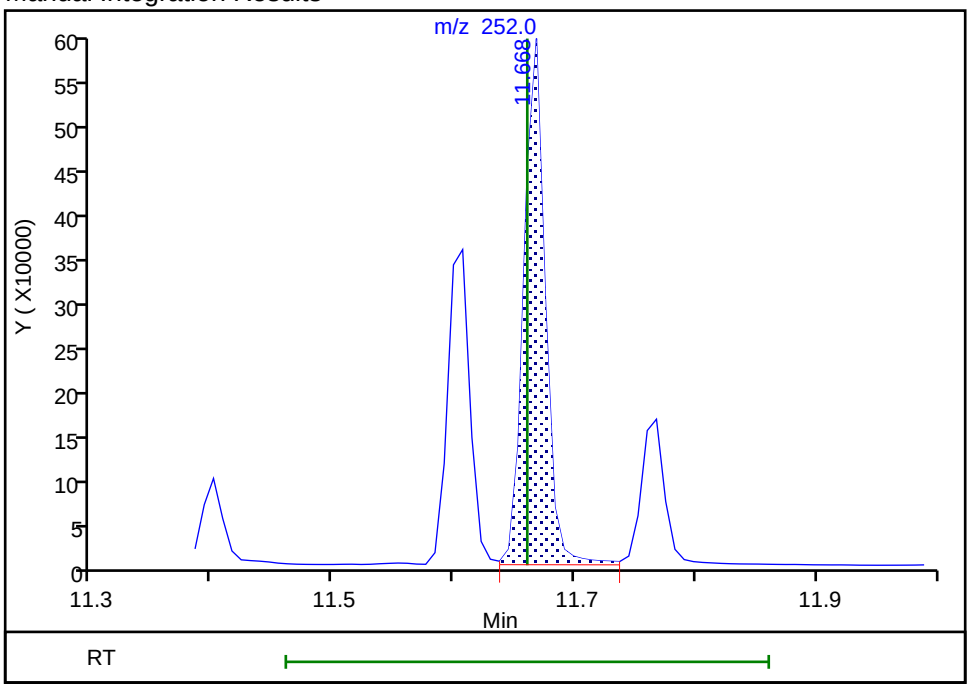
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 732950
Amount: 1.639419
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 09:57:00
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

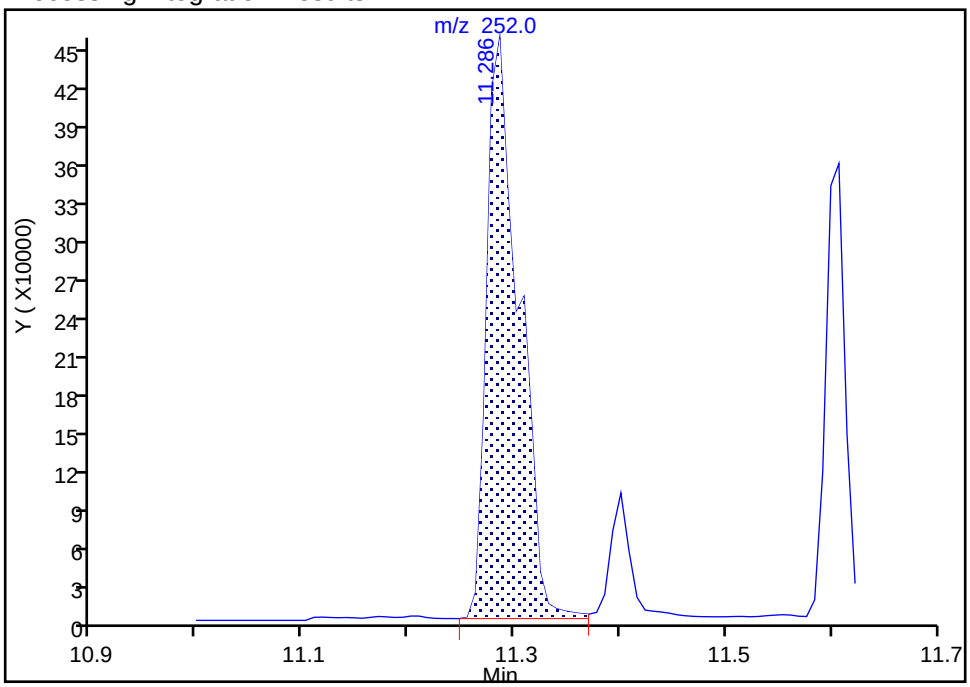
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

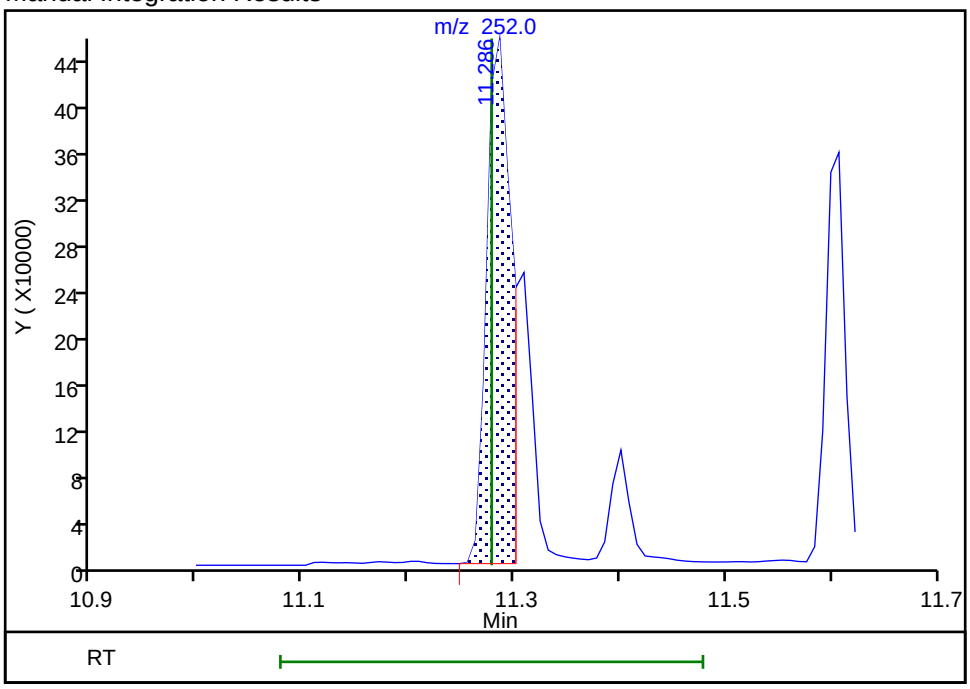
Processing Integration Results

RT: 11.29
Area: 959651
Amount: 1.846710
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 742180
Amount: 1.428218
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 09:56:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

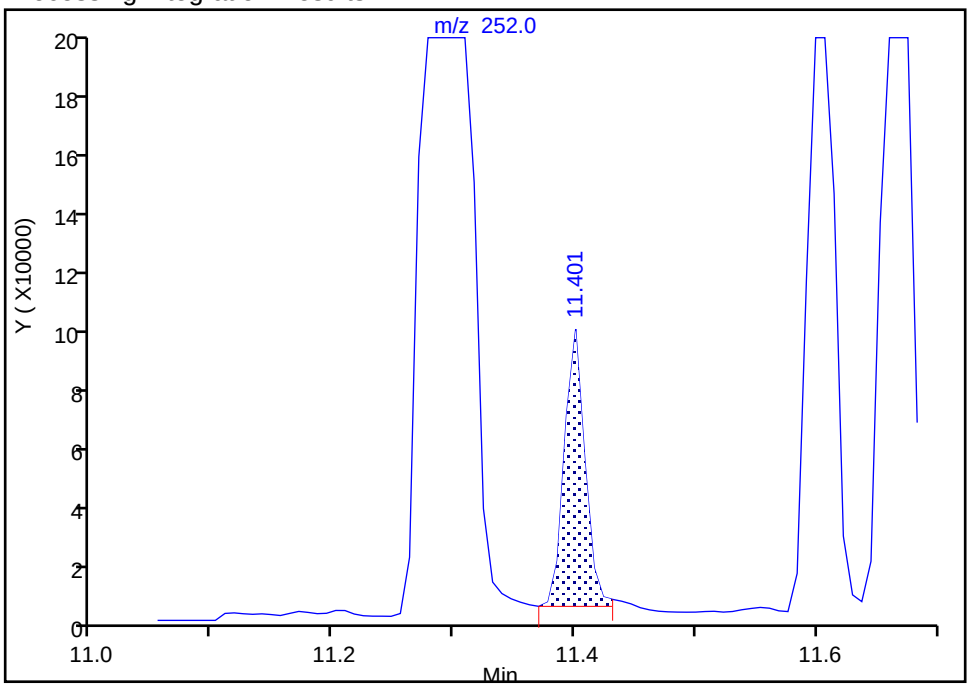
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

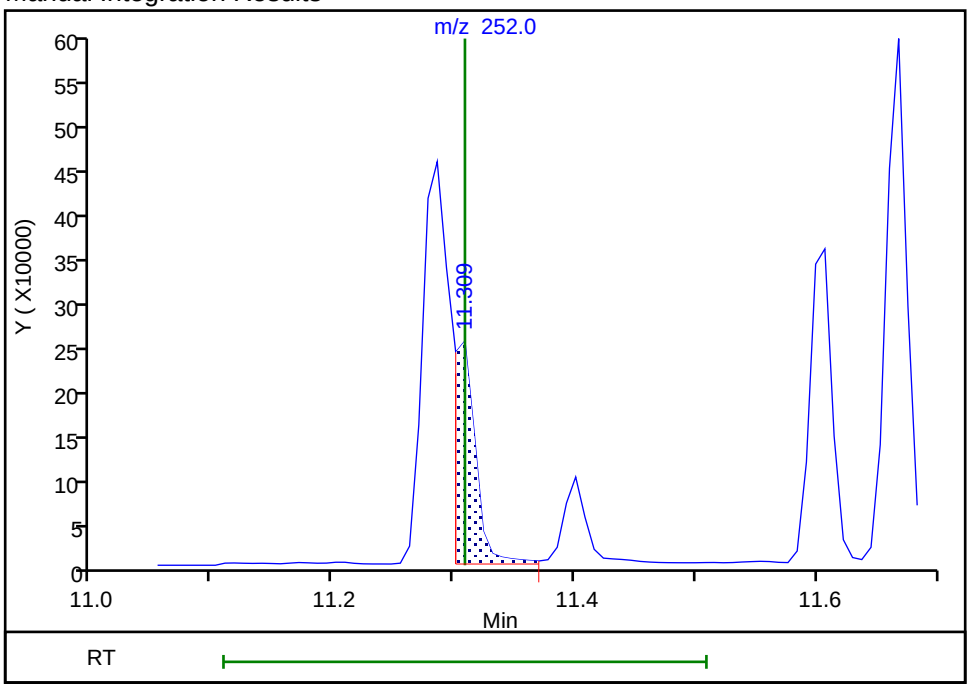
Processing Integration Results

RT: 11.40
Area: 112702
Amount: 0.191233
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 327119
Amount: 0.555056
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 09:56:52

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

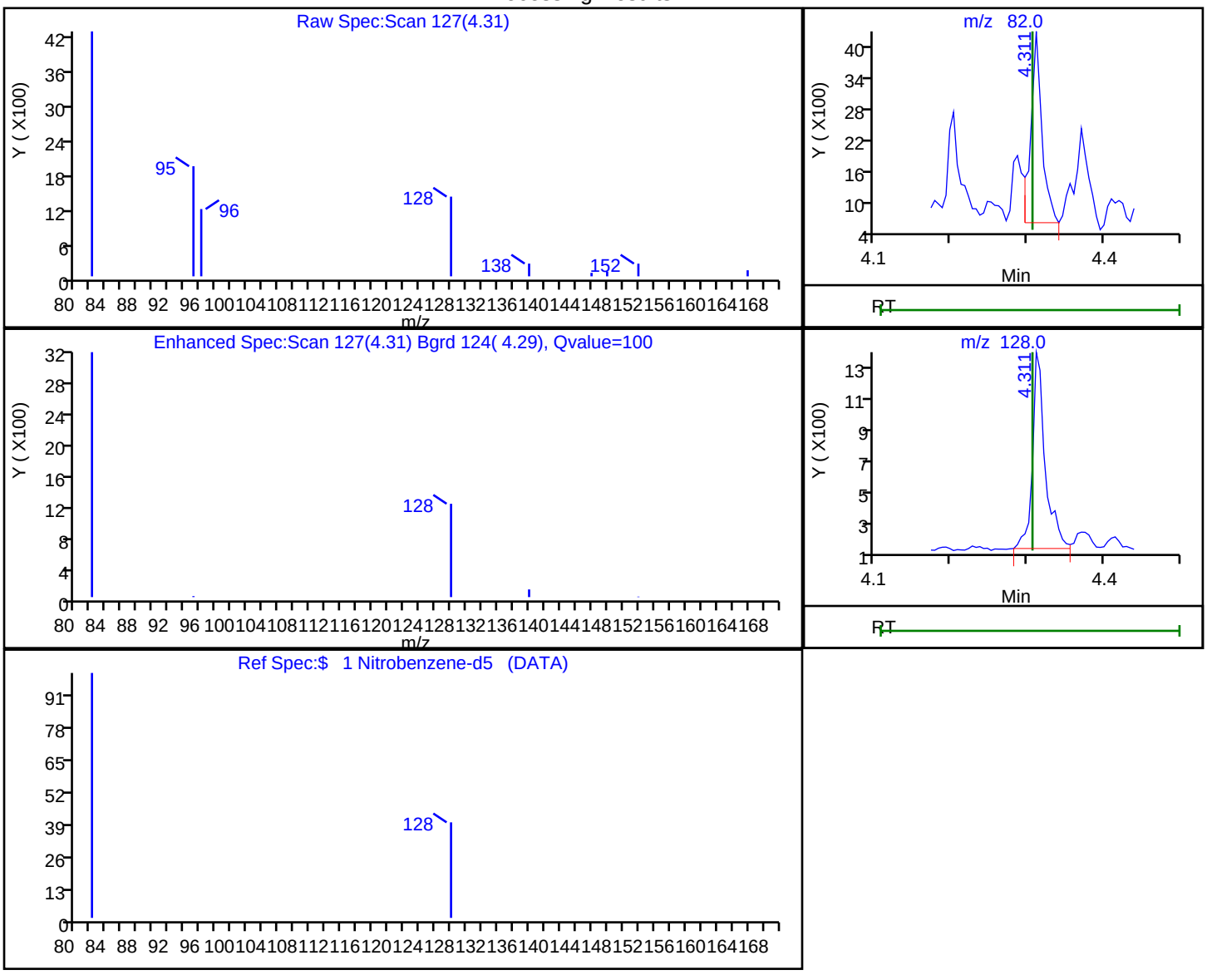
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	3709	0.030811
4.31	128.00	1457	

Reviewer: cochranj, 31-Aug-2019 10:56:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

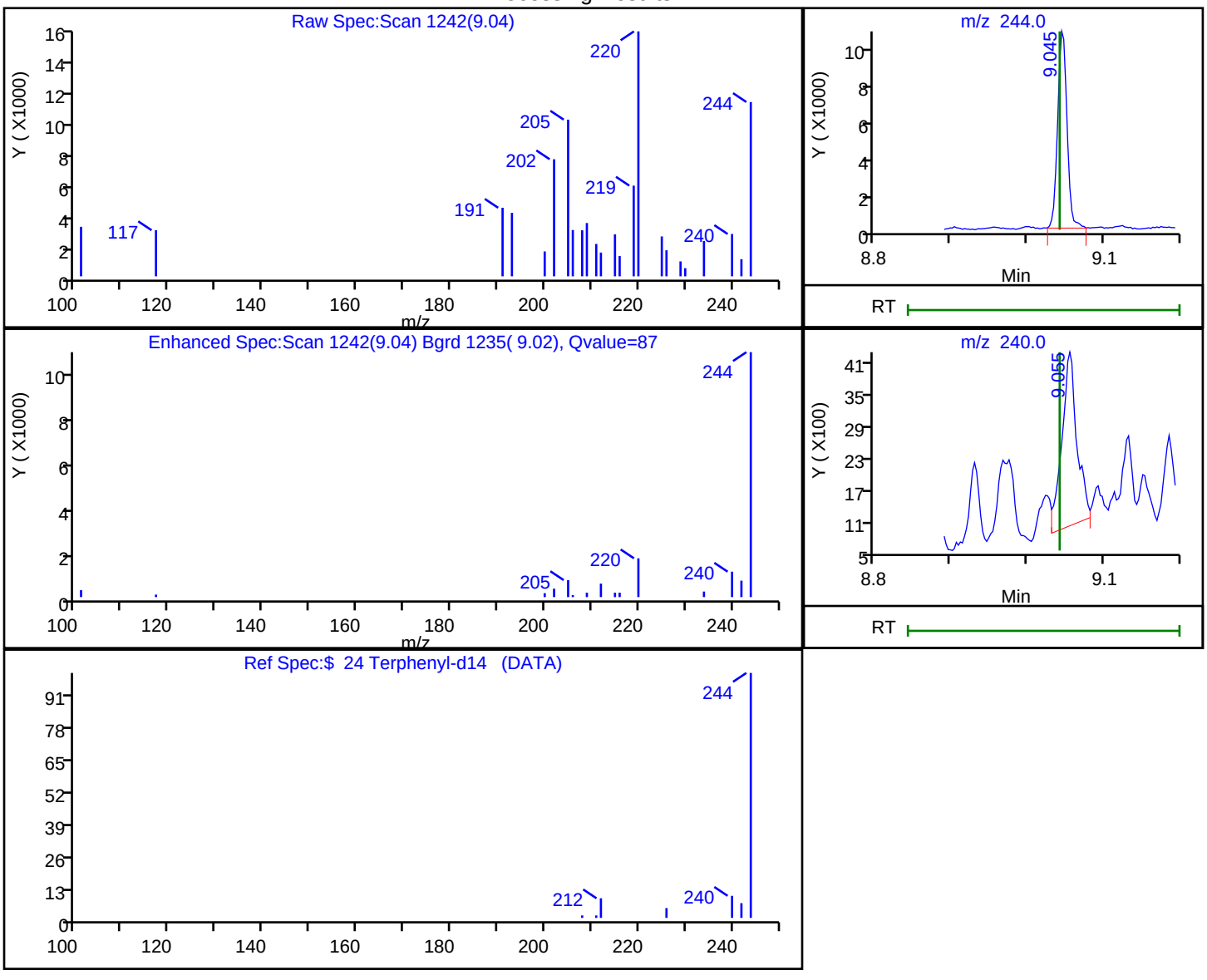
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-5-a.D				
Injection Date:	29-Aug-2019 17:08:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	6	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 24 Terphenyl-d14, CAS: 1718-51-0

Processing Results



RT	Mass	Response	Amount
9.04	244.00	8858	0.030094
9.06	240.00	4490	

Reviewer: cochranj, 31-Aug-2019 10:56:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-02-7.0-8.8_20190717 DL Lab Sample ID: 580-87761-5 DL

Matrix: Solid Lab File ID: 580-87761-b-5-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 14:20

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.69(g) Date Analyzed: 08/30/2019 14:02

Con. Extract Vol.: 0.5(mL) Dilution Factor: 50

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 42.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
129-00-0	Pyrene	8700		97	29

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D
Lims ID: 580-87761-B-5-A
Client ID: 22T-VB-02-7.0-8.8_20190717
Sample Type: Client
Inject. Date: 30-Aug-2019 14:02:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 50.0000
Sample Info: 140-0012910-010
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 31-Aug-2019 13:14:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	187130	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	132902	0.3227	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	98	40918	0.1516	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	98	15492	0.0603	
11 Acenaphthylene	152	6.216	6.216	0.000	99	23401	0.0691	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	98	98365	0.5000	
13 Acenaphthene	153	6.360	6.360	0.000	99	197482	0.7545	
16 Fluorene	166	6.793	6.793	0.000	100	129491	0.4473	
17 Dibenzothiophene	184	7.497	7.491	0.006	99	158102	0.3921	
* 18 Phenanthrene-d10	188	7.581	7.581	0.000	97	168916	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1397313	3.21	
20 Anthracene	178	7.648	7.648	0.000	100	91090	0.2510	
22 Fluoranthene	202	8.687	8.684	0.003	99	1338352	3.16	
23 Pyrene	202	8.909	8.906	0.003	99	1687716	3.58	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	94	352468	0.9517	
* 27 Chrysene-d12	240	10.129	10.129	0.000	87	155759	0.5000	
28 Chrysene	228	10.161	10.161	0.000	97	429539	0.9698	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	409908	0.8839	M
30 Benzo[k]fluoranthene	252	11.294	11.301	-0.007	100	226784	0.4312	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	267072	0.6132	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	430739	1.08	a
* 33 Perylene-d12	264	11.729	11.729	0.000	100	169837	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	132871	0.2949	
35 Indeno[1,2,3-cd]pyrene	276	13.147	13.150	-0.003	84	295912	0.6032	
36 Dibenz(a,h)anthracene	278	13.156	13.159	-0.003	42	45682	0.1097	M
37 Benzo[g,h,i]perylene	276	13.505	13.508	-0.004	99	375823	0.8186	
A 38 C1-Naphthalenes	142	5.520	(5.444-5.596)		0	55735	0.1353	
A 39 C2-Naphthalenes	156	6.076	(5.913-6.239)		0	106594	0.2588	
A 40 C3-Naphthalenes	170	6.555	(6.306-6.809)		0	168466	0.4090	
A 41 C4-Naphthalenes	184	6.946	(6.489-7.384)		0	121428	0.2948	
A 42 C1-Fluorenes	180	7.299	(7.134-7.311)		0	48783	0.1685	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.564-7.934)		0	57336	0.1981	
A 44 C3-Fluorenes	208	8.109	(7.985-8.453)		0	49856	0.1722	
A 45 C1-Dibenzothiophenes	198	7.953	(7.822-8.064)		0	75903	0.1883	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	78111	0.1937	
A 47 C3-Dibenzothiophenes	226	8.652	(8.524-9.104)		0	56978	0.1413	
A 48 C4-Dibenzothiophenes	240	9.053	(8.810-9.579)		0	28153	0.0698	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.002-8.183)		0	367473	0.8446	
A 50 C2-Phenanthrenes/Anthracen	206	8.554	(8.341-8.770)		0	227380	0.5226	
A 51 C3-Phenanthrenes/Anthracen	220	8.994	(8.743-9.258)		0	120227	0.2763	
A 52 C4-Phenanthrenes/Anthracen	234	9.189	(8.959-9.683)		0	66984	0.1540	
A 53 C1-Fluoranthenes/pyrene	216	9.313	(9.109-9.496)		0	388645	0.8245	
A 54 C2-Fluoranthenes/Pyrene	230	9.804	(9.584-10.051)		0	118902	0.2523	
A 55 C3-Fluoranthenes/Pyrene	244	10.232	(10.030-10.504)		0	67539	0.1433	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	34186	0.0725	
A 57 C1-Chrysenes	242	10.619	(10.504-10.751)		0	135677	0.3063	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	64140	0.1448	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	33777	0.0763	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	19785	0.0447	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

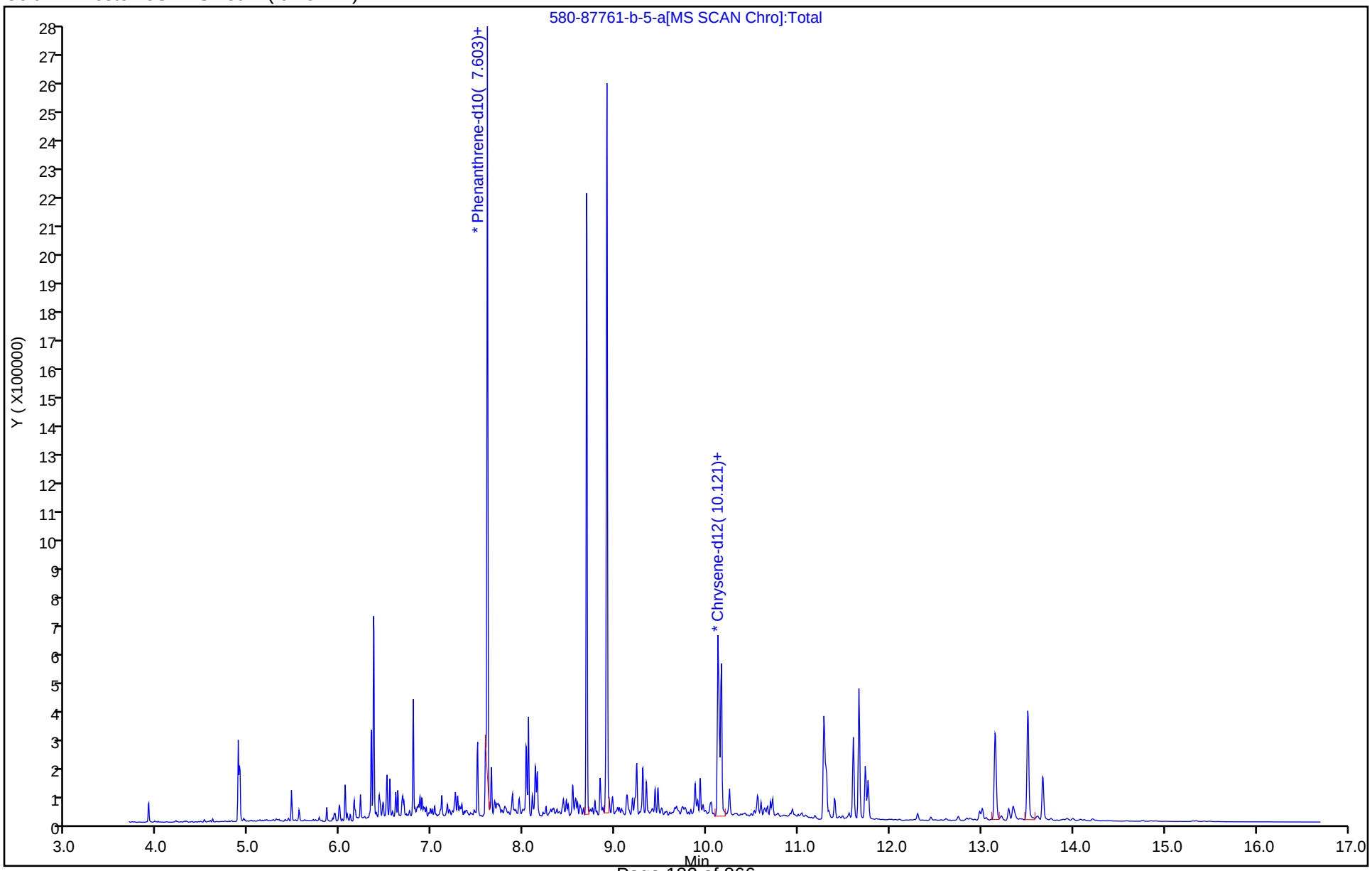
Report Date: 31-Aug-2019 13:17:24 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D

Injection Date:	30-Aug-2019 14:02:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5	Worklist Smp#:	10
Client ID:	22T-VB-02-7.0-8.8_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	10
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

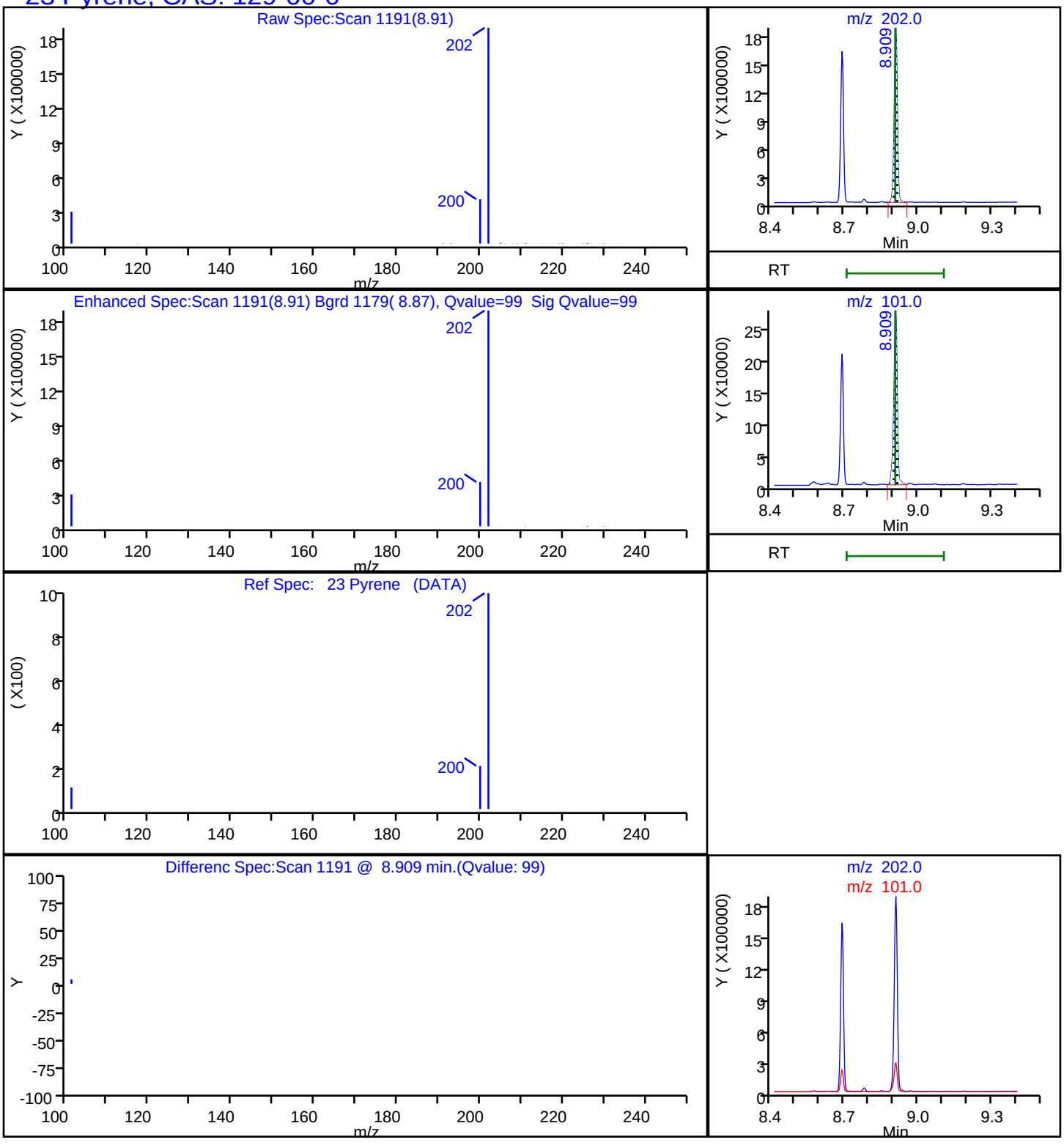


Report Date: 31-Aug-2019 13:17:25 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D				
Injection Date:	30-Aug-2019 14:02:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	50.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



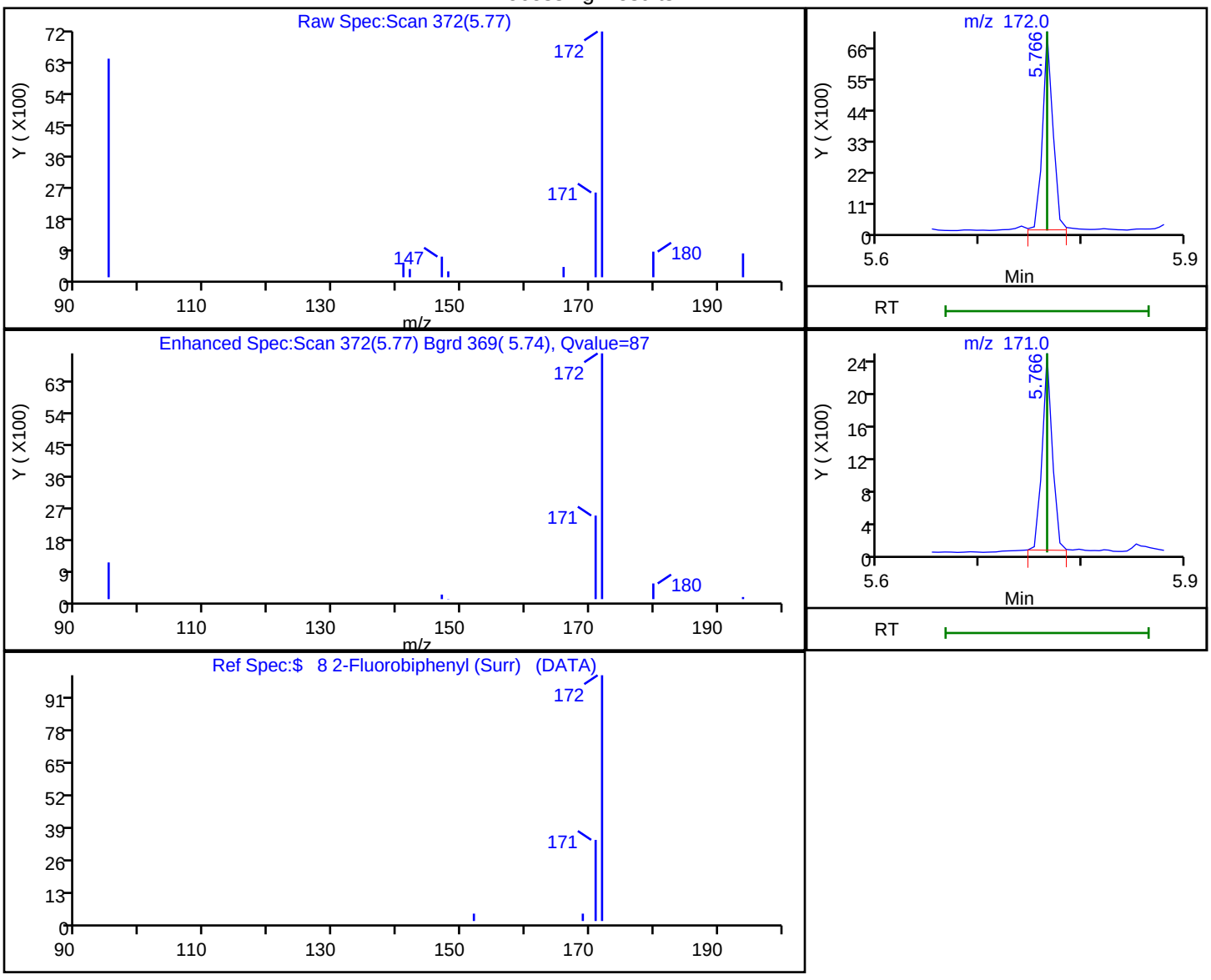
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D				
Injection Date:	30-Aug-2019 14:02:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	50.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	4997	0.015710
5.77	171.00	1637	

Reviewer: cochranj, 31-Aug-2019 13:14:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

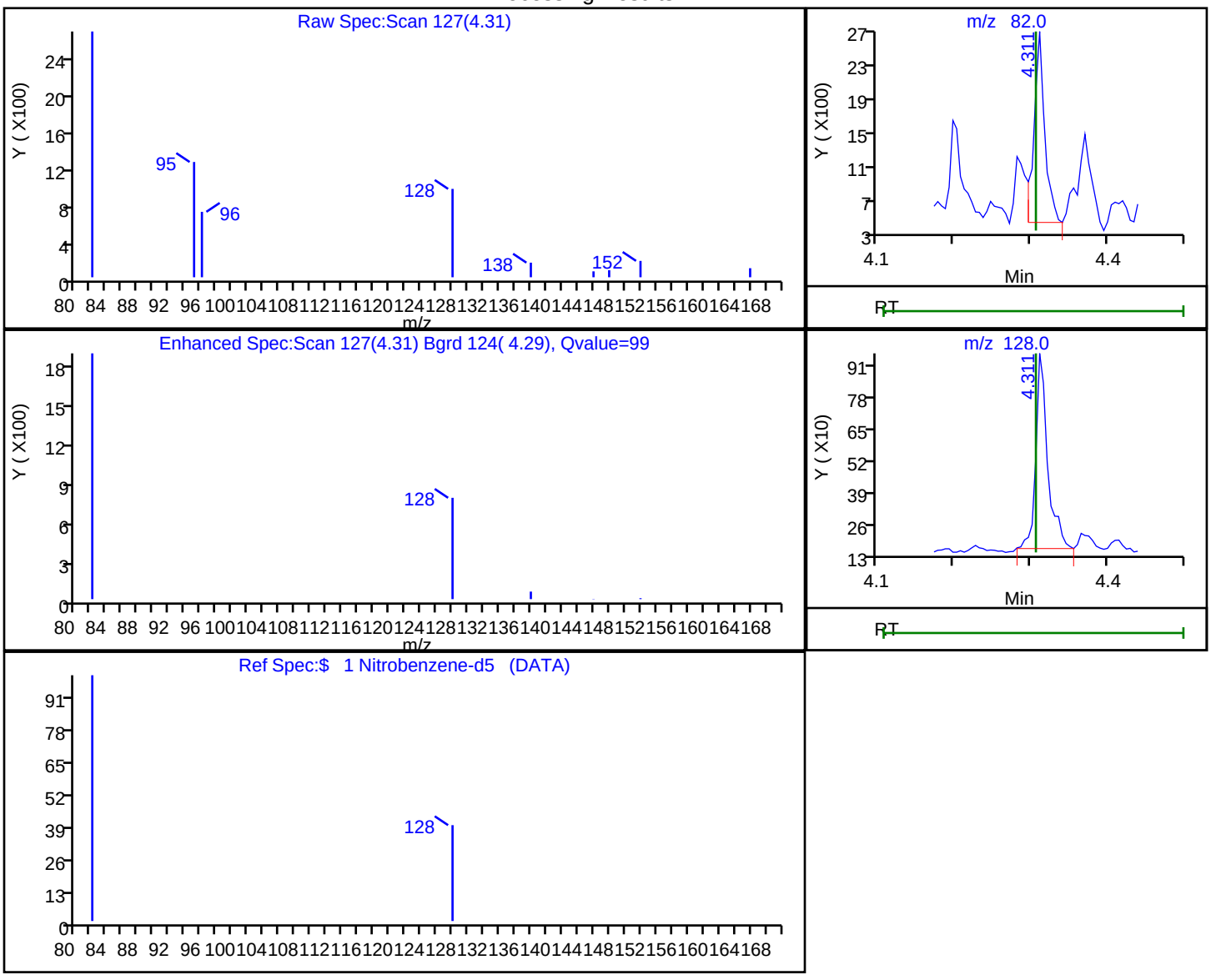
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D				
Injection Date:	30-Aug-2019 14:02:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	50.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	2173	0.019890
4.31	128.00	877	

Reviewer: cochranj, 31-Aug-2019 13:14:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

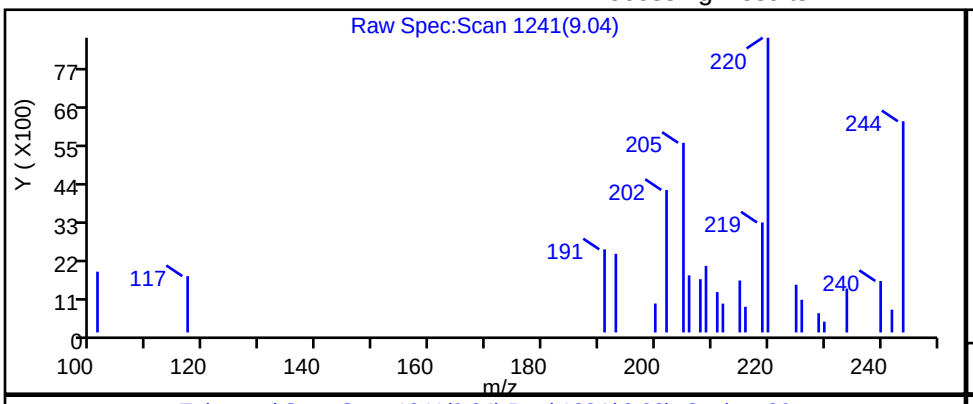
User Disabled Compound Report

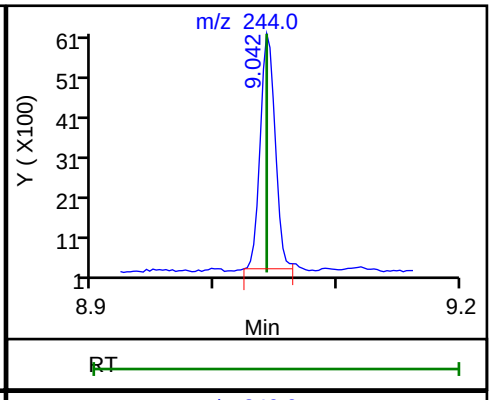
Eurofins TestAmerica, Knoxville

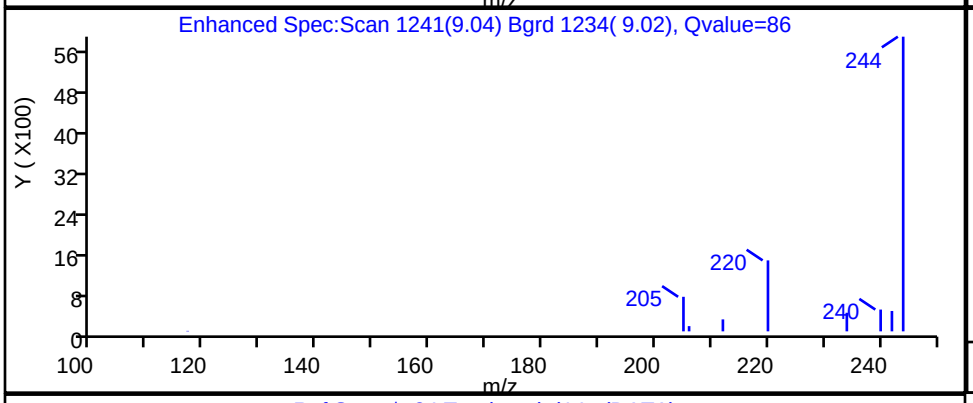
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-5-a.D				
Injection Date:	30-Aug-2019 14:02:30	Instrument ID:	MP		
Lims ID:	580-87761-B-5-A	Lab Sample ID:	140-87761-5		
Client ID:	22T-VB-02-7.0-8.8_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	50.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

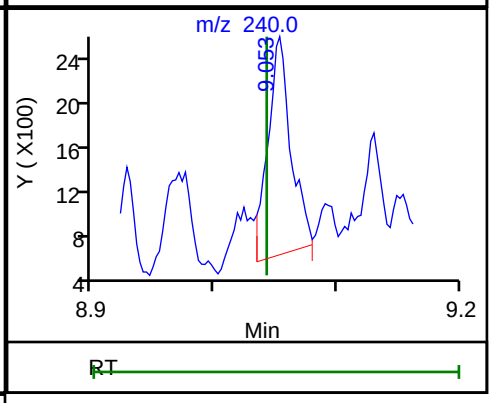
$ 24 Terphenyl-d14, CAS: 1718-51-0

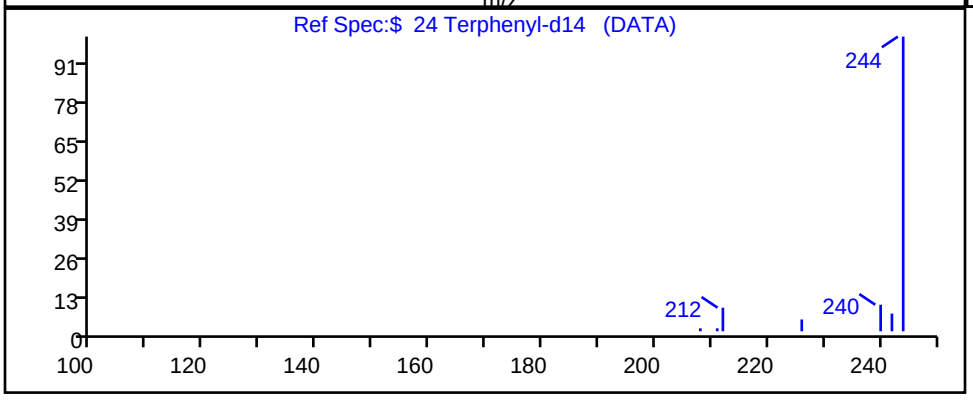
Processing Results











RT	Mass	Response	Amount
9.04	244.00	4982	0.019557
9.05	240.00	2499	

Reviewer: cochranj, 31-Aug-2019 13:14:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-2.0-4.0_20190717 Lab Sample ID: 580-87761-12

Matrix: Solid Lab File ID: 580-87761-b-12-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:35

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 18.60(g) Date Analyzed: 08/29/2019 17:34

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 45.7 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	94	J	150	21
91-57-6	2-Methylnaphthalene	210	J	300	30
83-32-9	Acenaphthene	620		30	14
208-96-8	Acenaphthylene	110		30	7.4
120-12-7	Anthracene	350		30	24
56-55-3	Benzo[a]anthracene	1100		30	12
50-32-8	Benzo[a]pyrene	1200		30	11
205-99-2	Benzo[b]fluoranthene	1200		30	15
192-97-2	Benzo[e]pyrene	730		30	10
191-24-2	Benzo[g,h,i]perylene	830		30	18
207-08-9	Benzo[k]fluoranthene	430		30	14
STL00905	C1-Chrysenes	430		30	7.7
STL00909	C1-Dibenzothiophenes	180		30	19
STL00912	C1-Fluoranthenes/pyrene	1100		30	15
STL00913	C1-Fluorenes	180		30	17
STL00916	C1-Naphthalenes	190	J	300	23
STL00901	C1-Phenanthrenes/Anthracenes	960		59	33
STL00906	C2-Chrysenes	220		30	9.2
STL00910	C2-Dibenzothiophenes	230		30	28
STL00968	C2-Fluoranthenes/Pyrene	370		30	13
STL00914	C2-Fluorenes	270		59	36
STL00917	C2-Naphthalenes	300		59	23
STL00902	C2-Phenanthrenes/Anthracenes	660		120	73
STL00907	C3-Chrysenes	130		30	8.9
STL00911	C3-Dibenzothiophenes	180		59	33
STL00969	C3-Fluoranthenes/Pyrene	200		30	16
STL00915	C3-Fluorenes	230		59	32
STL00918	C3-Naphthalenes	360		59	29
STL00903	C3-Phenanthrenes/Anthracenes	410		59	47
STL00908	C4-Chrysenes	77		30	10
STL00967	C4-Dibenzothiophenes	110		30	28
STL01791	C4-Fluoranthenes/Pyrene	120		30	11
STL00919	C4-Naphthalenes	290		120	61

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-2.0-4.0_20190717 Lab Sample ID: 580-87761-12

Matrix: Solid Lab File ID: 580-87761-b-12-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:35

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 18.60(g) Date Analyzed: 08/29/2019 17:34

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 45.7 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	270	AP	59	56
218-01-9	Chrysene	1200		30	11
53-70-3	Dibenz(a,h)anthracene	130		30	17
132-65-0	Dibenzothiophene	300		30	10
206-44-0	Fluoranthene	4100		30	27
86-73-7	Fluorene	560		30	14
193-39-5	Indeno[1,2,3-cd]pyrene	640		30	21
91-20-3	Naphthalene	440	J	590	54
198-55-0	Perylene	440		30	5.9
85-01-8	Phenanthrene	2800		59	52
129-00-0	Pyrene	3500		59	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D
Lims ID: 580-87761-B-12-A
Client ID: 22T-VB-03-2.0-4.0_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 17:34:30 ALS Bottle#: 7 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-015
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 08:09:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	208841	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	136935	0.2979	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	96	41932	0.1392	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	98	18155	0.0633	
11 Acenaphthylene	152	6.216	6.216	0.000	100	27035	0.0726	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	108264	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	121176	0.4207	
16 Fluorene	166	6.796	6.793	0.003	100	119820	0.3760	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	93610	0.2053	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	98	191041	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	936450	1.90	
20 Anthracene	178	7.648	7.648	0.000	99	97799	0.2383	
22 Fluoranthene	202	8.690	8.687	0.003	100	1305202	2.73	
23 Pyrene	202	8.909	8.906	0.003	99	1268953	2.37	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	305861	0.7276	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	176778	0.5000	
28 Chrysene	228	10.161	10.161	0.000	99	406040	0.8078	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	437985	0.8335	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	172360	0.2892	Ma
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	243196	0.4928	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	358488	0.7929	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	192456	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	149779	0.2934	
35 Indeno[1,2,3-cd]pyrene	276	13.154	13.150	0.004	86	238278	0.4286	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	42	42449	0.0900	M
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	98	292309	0.5619	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	60052	0.1306	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	93420	0.2032	
A 40 C3-Naphthalenes	170	6.559	(6.323-6.820)		0	110675	0.2408	
A 41 C4-Naphthalenes	184	6.944	(6.483-7.421)		0	89371	0.1944	
A 42 C1-Fluorenes	180	7.302	(7.219-7.413)		0	39193	0.1230	

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A	43 C2-Fluorenes	194	7.687	(7.565-7.939)		0	56893	0.1786	
A	44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	49411	0.1551	
A	45 C1-Dibenzothiophenes	198	7.950	(7.827-8.065)		0	54616	0.1198	
A	46 C2-Dibenzothiophenes	212	8.328	(8.209-8.703)		0	70222	0.1540	
A	47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	56630	0.1242	
A	48 C4-Dibenzothiophenes	240	9.053	(8.814-9.591)		0	32912	0.0722	
A	49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	316786	0.6438	
A	50 C2-Phenanthrenes/Anthracen	206	8.537	(8.358-8.785)		0	218433	0.4439	
A	51 C3-Phenanthrenes/Anthracen	220	8.973	(8.747-9.260)		0	134183	0.2727	
A	52 C4-Phenanthrenes/Anthracen	234	9.189	(8.966-9.686)		0	88875	0.1806	
A	53 C1-Fluoranthenes/pyrene	216	9.300	(9.112-9.500)		0	406523	0.7599	
A	54 C2-Fluoranthenes/Pyrene	230	9.670	(9.587-10.039)		0	132950	0.2485	
A	55 C3-Fluoranthenes/Pyrene	244	10.233	(10.043-10.519)		0	71799	0.1342	
A	56 C4-Fluoranthenes/Pyrene	258	10.711	(10.371-10.864)		0	41675	0.0779	
A	57 C1-Chrysenes	242	10.607	(10.512-10.741)		0	144022	0.2865	
A	58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	72978	0.1452	
A	59 C3-Chrysenes	270	11.515	(11.245-11.890)		0	42676	0.0849	
A	60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	25941	0.0516	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

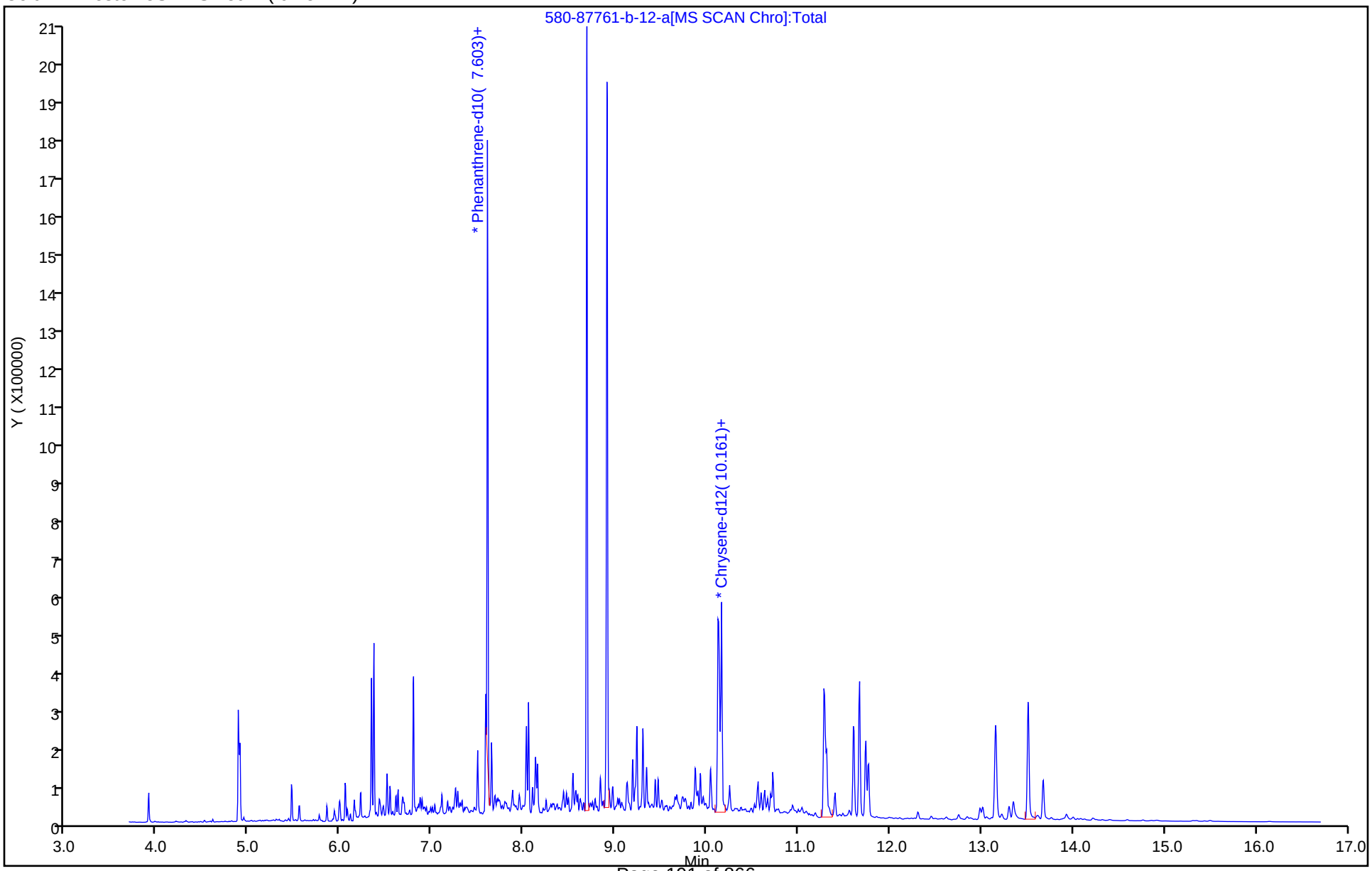
Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D

Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12	Worklist Smp#:	15
Client ID:	22T-VB-03-2.0-4.0_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	7
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

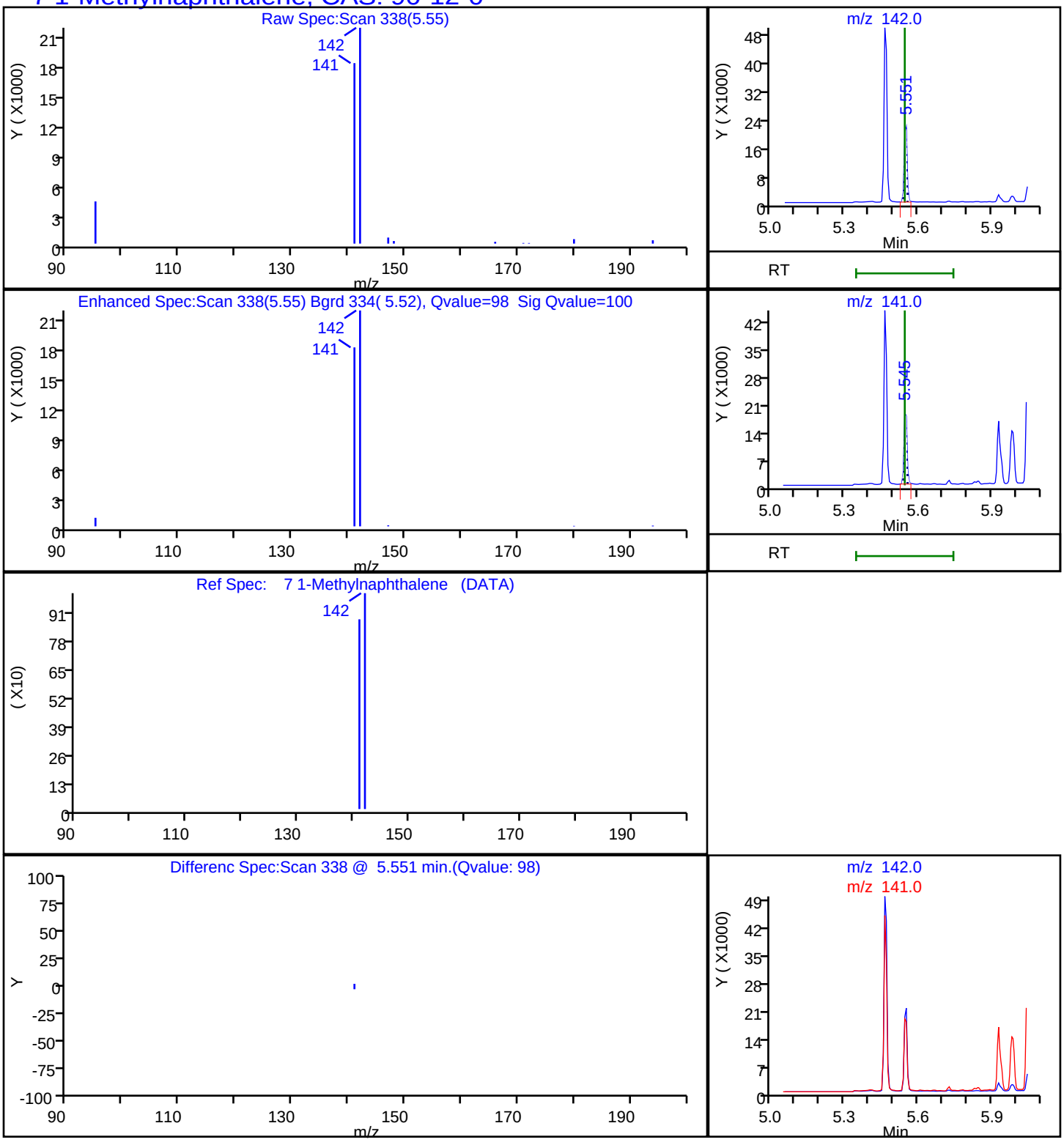


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

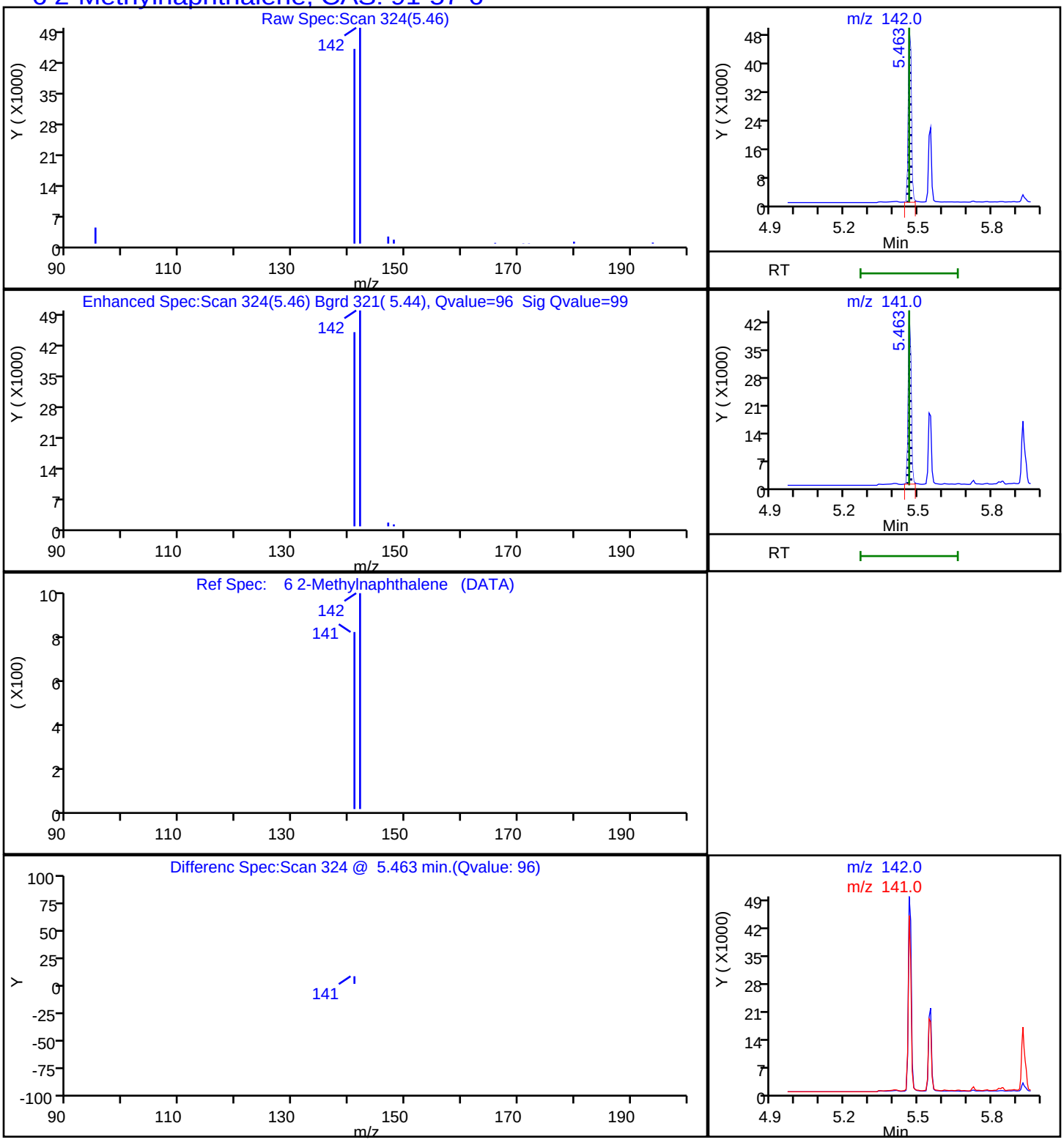


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6



Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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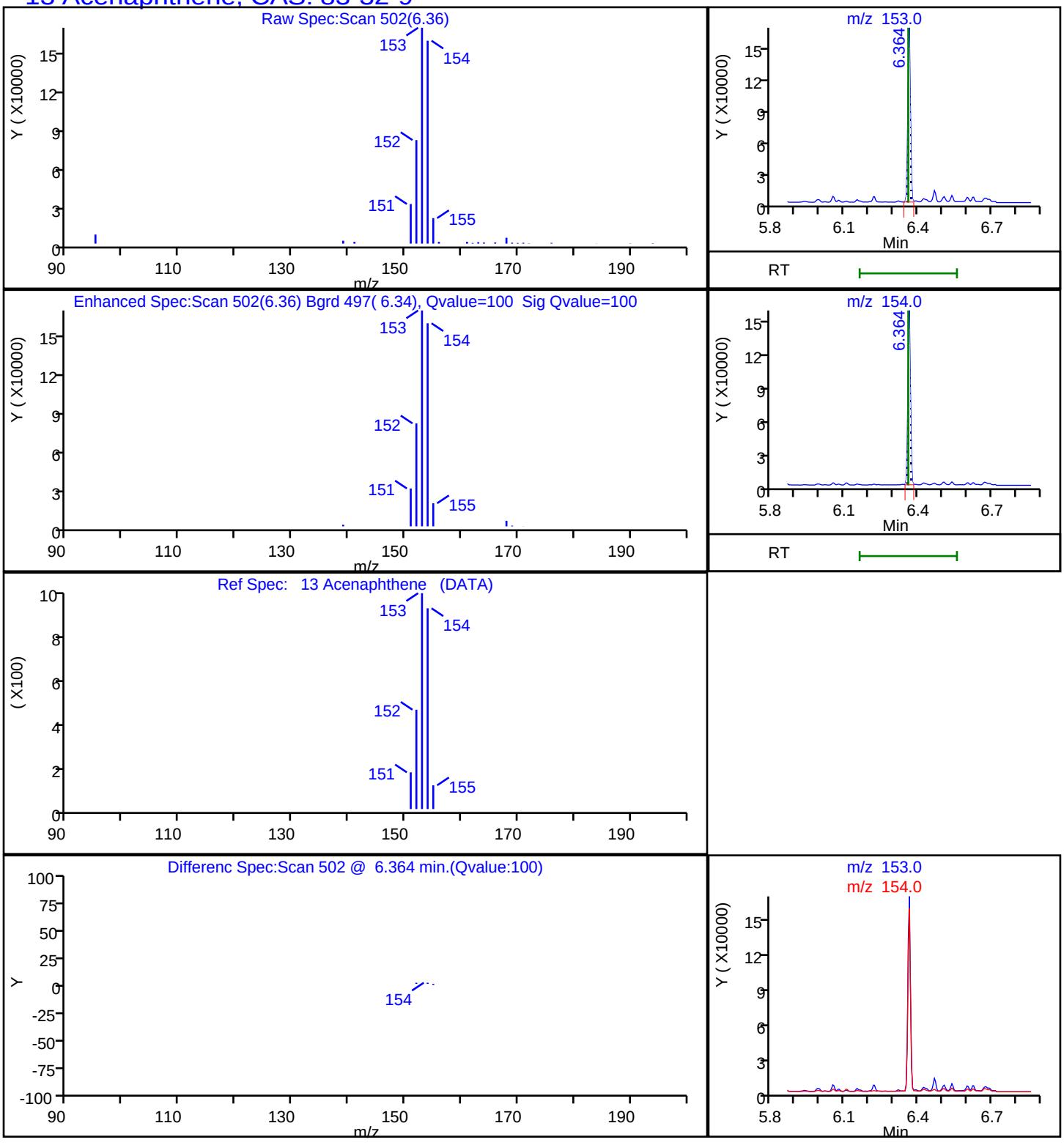
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9



Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
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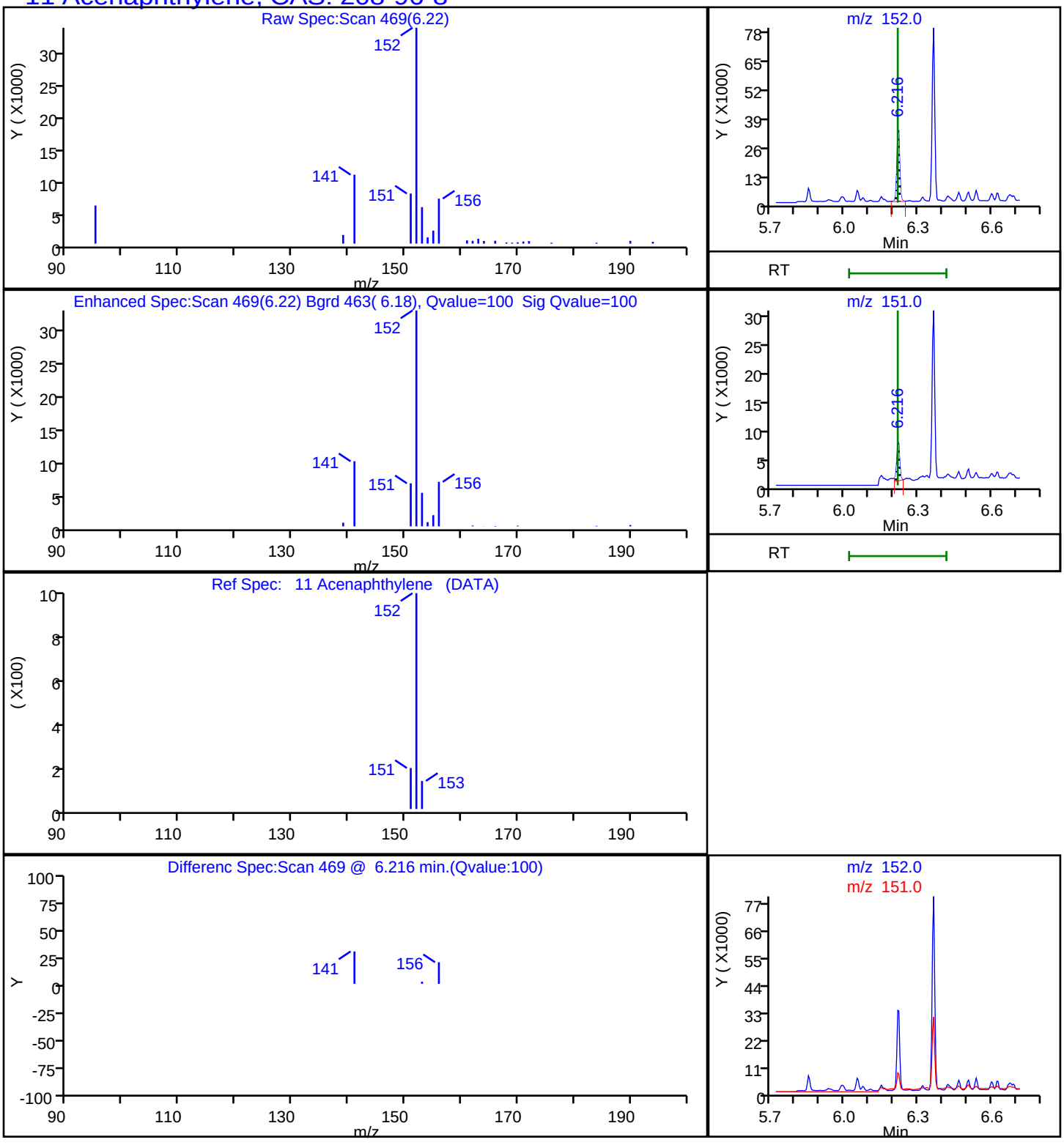
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8



Eurofins TestAmerica, Knoxville

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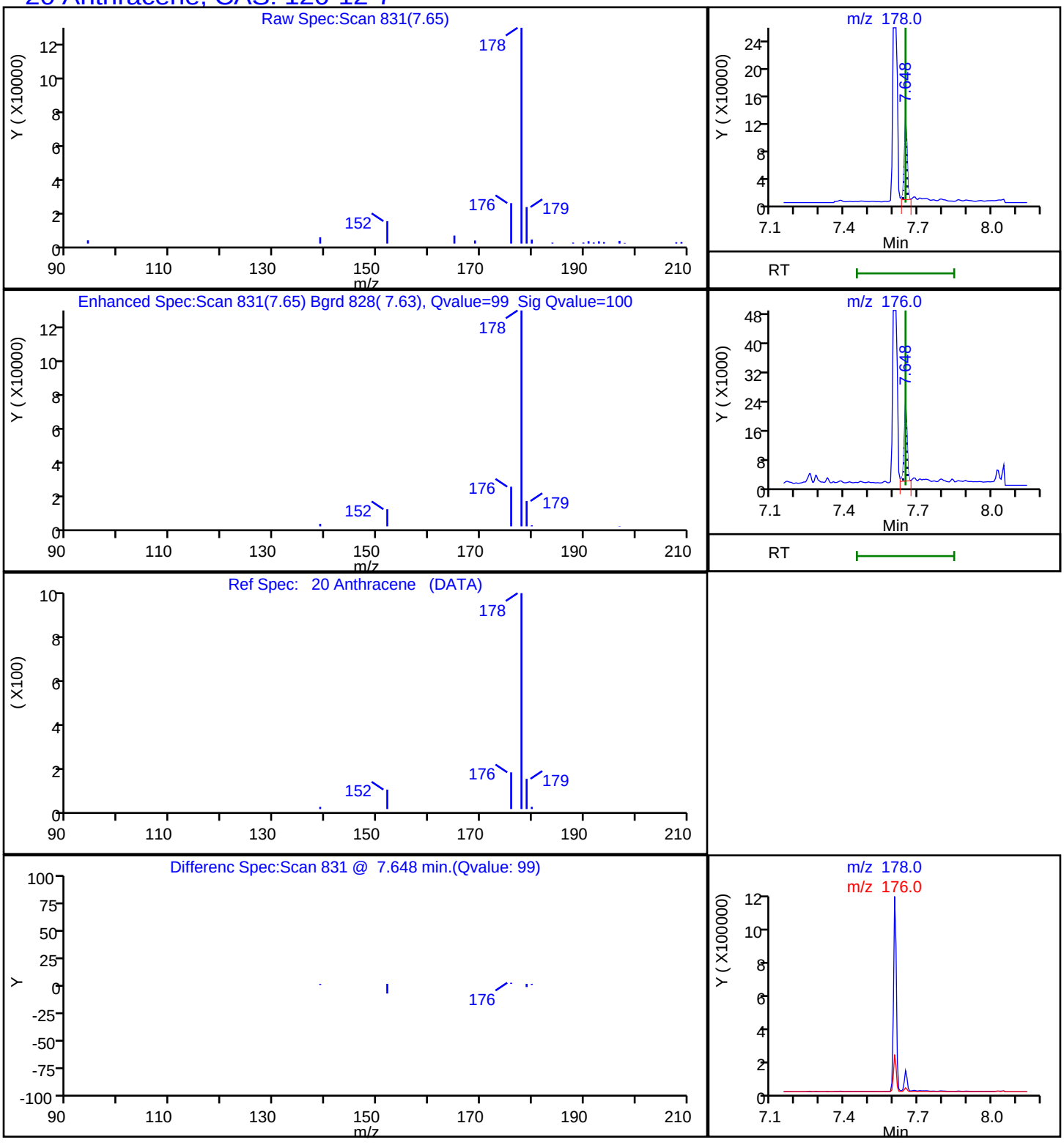
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7



Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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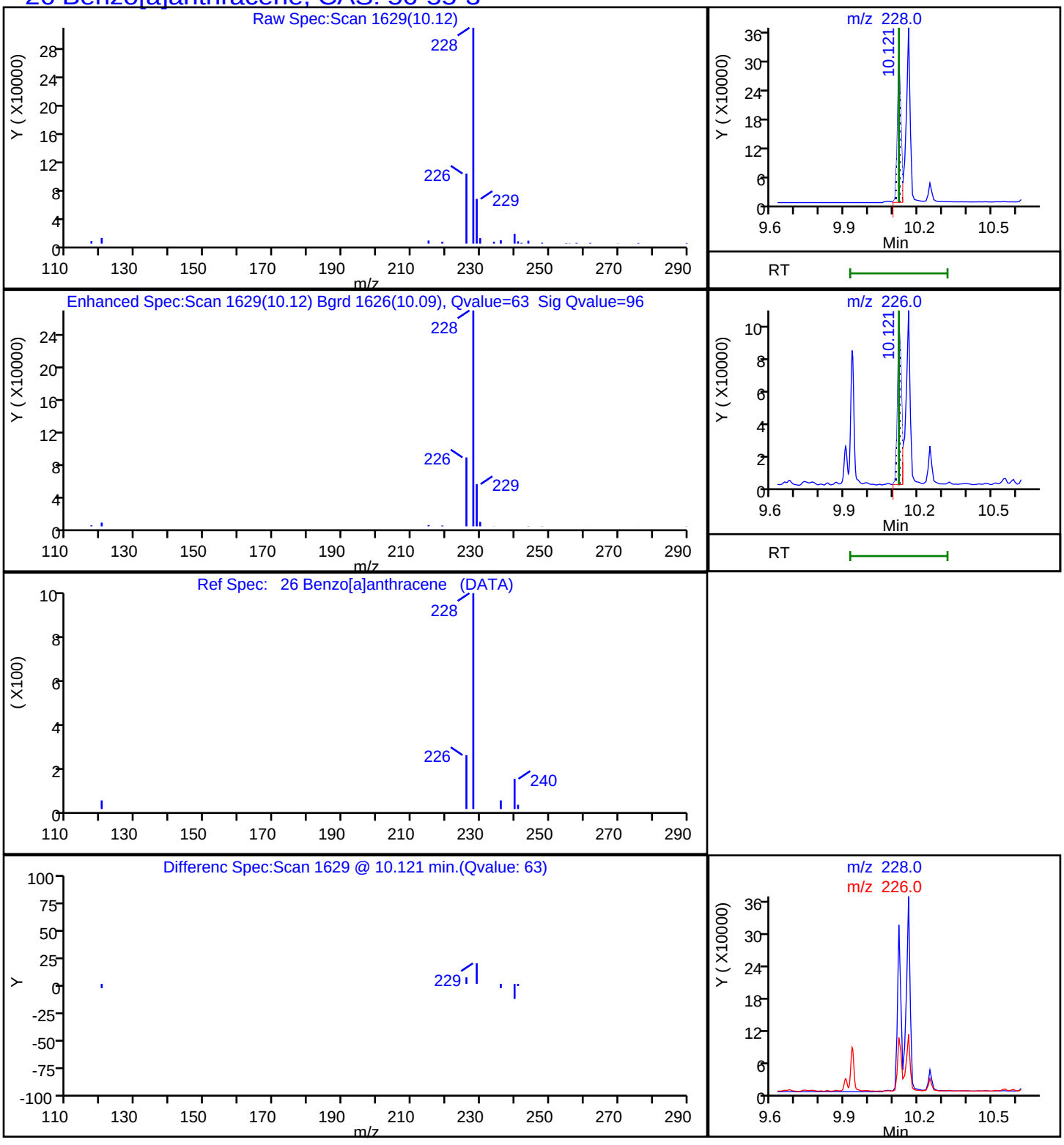
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

26 Benzo[a]anthracene, CAS: 56-55-3

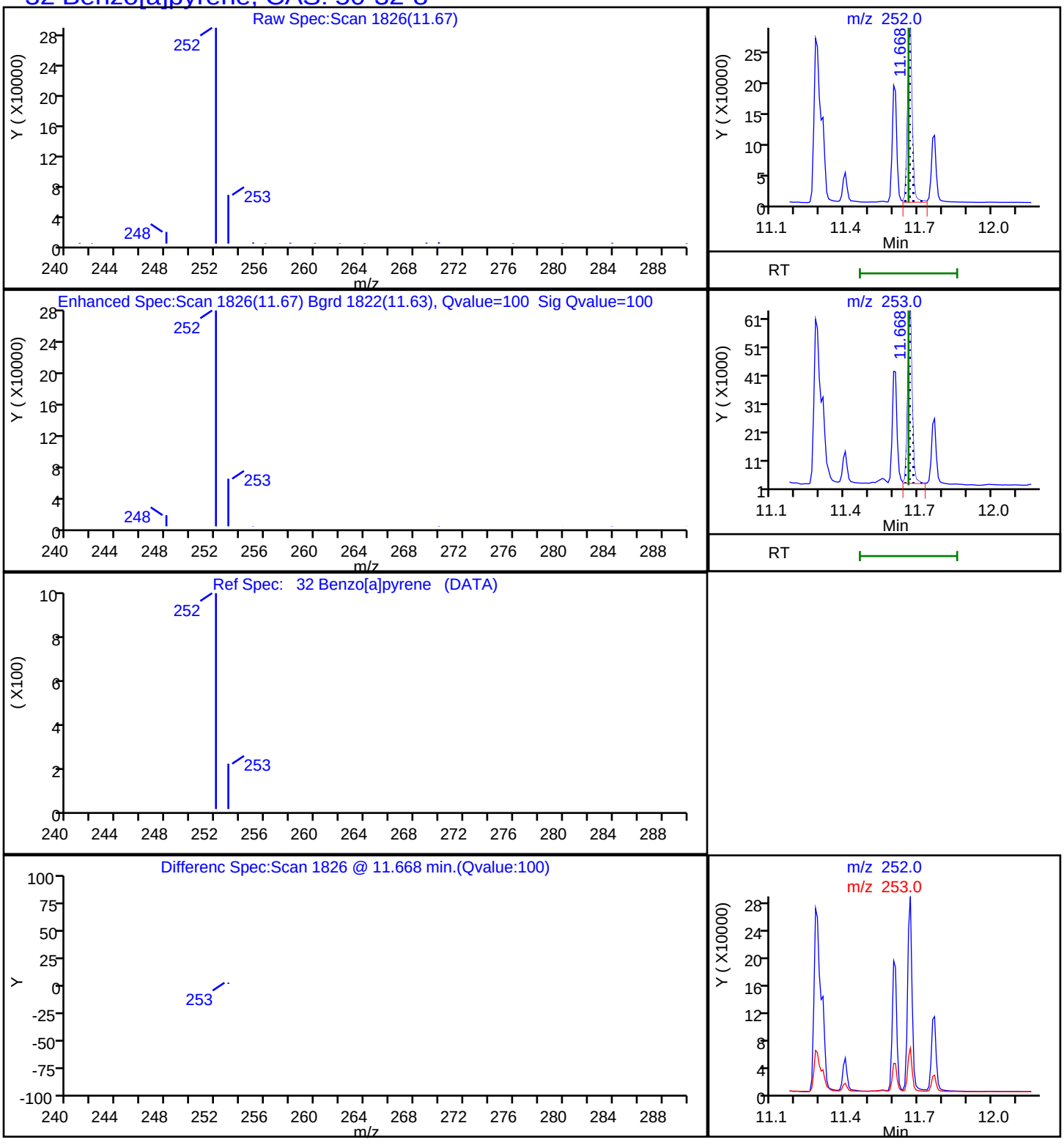


Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

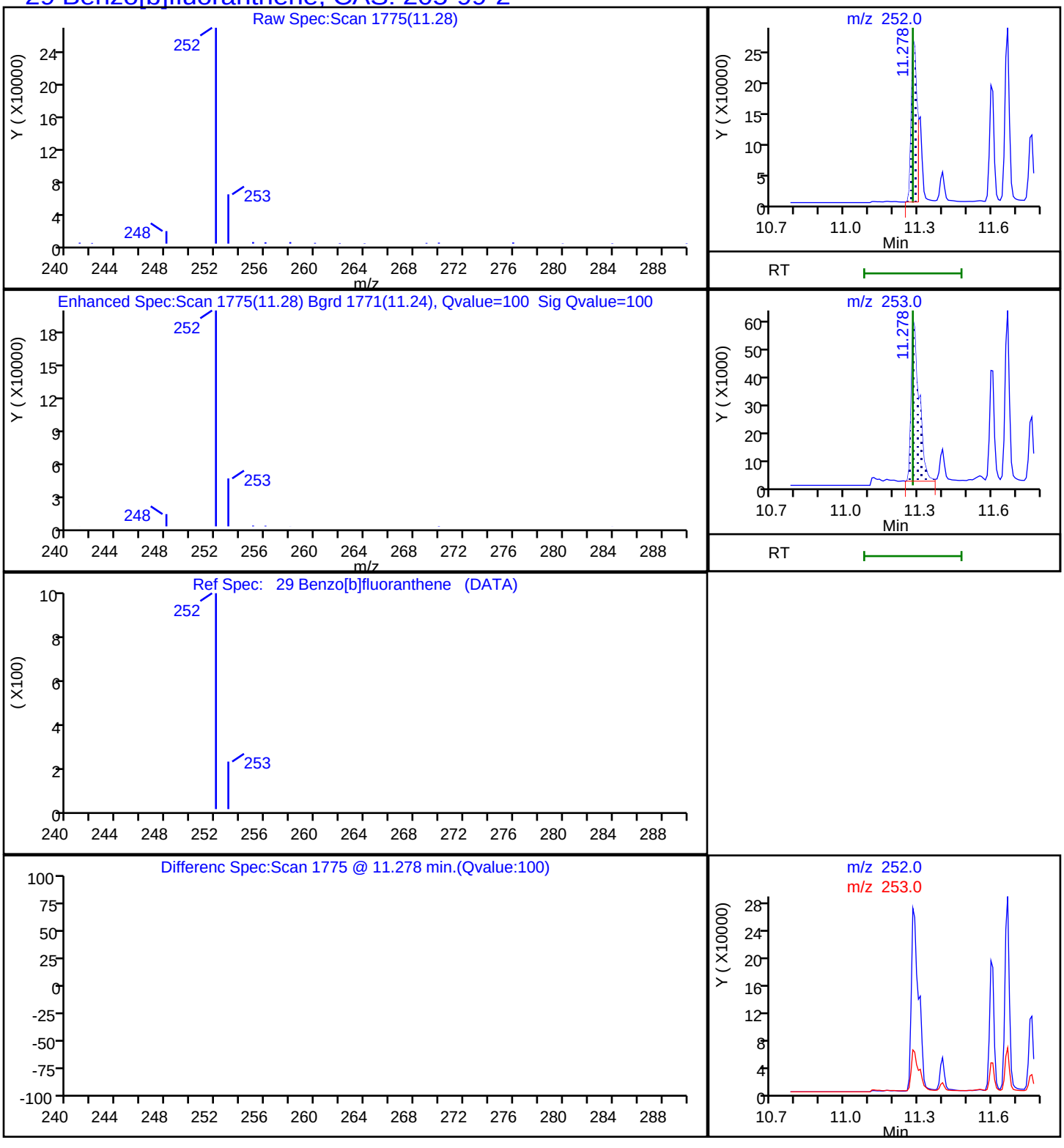


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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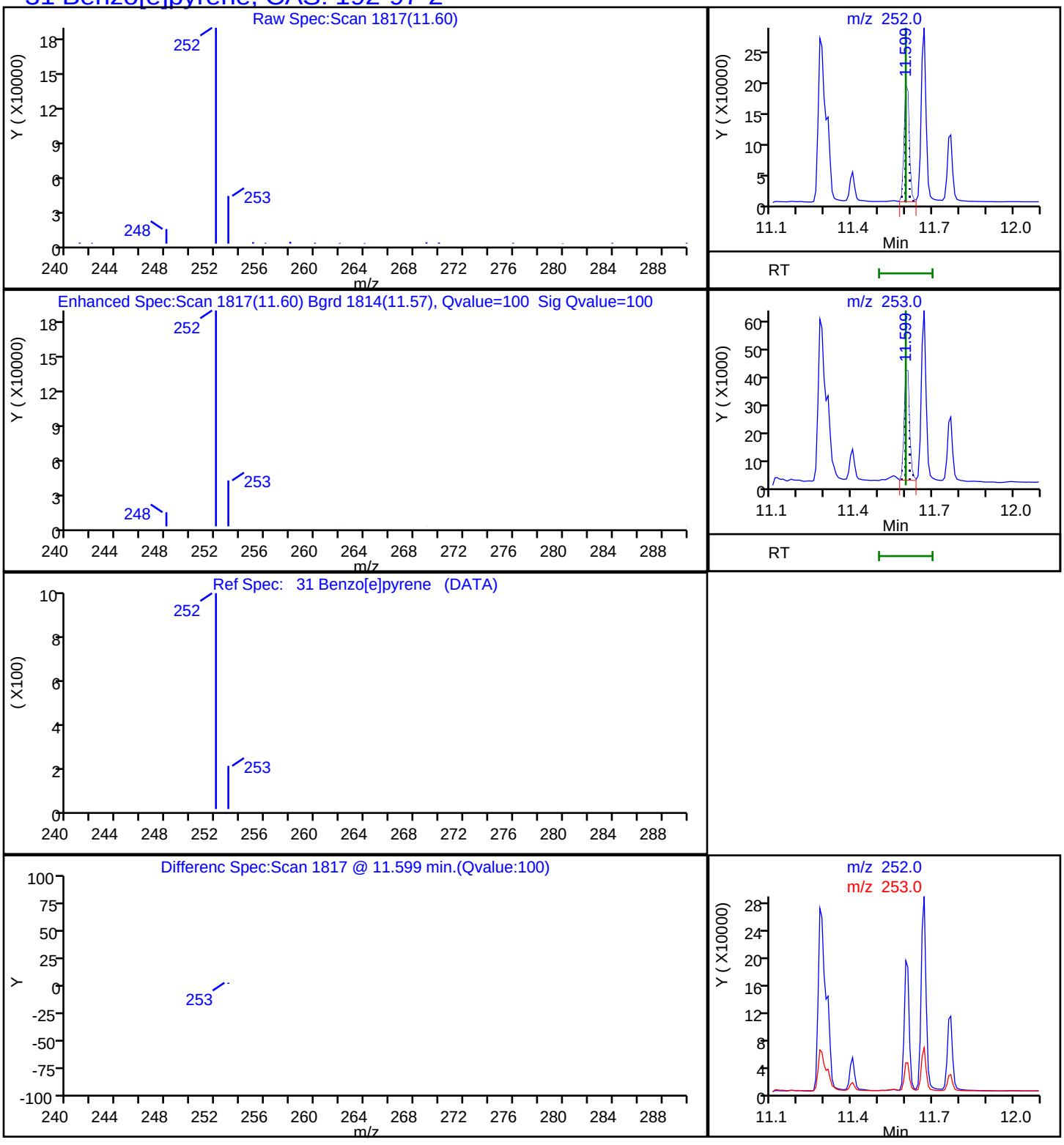
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2

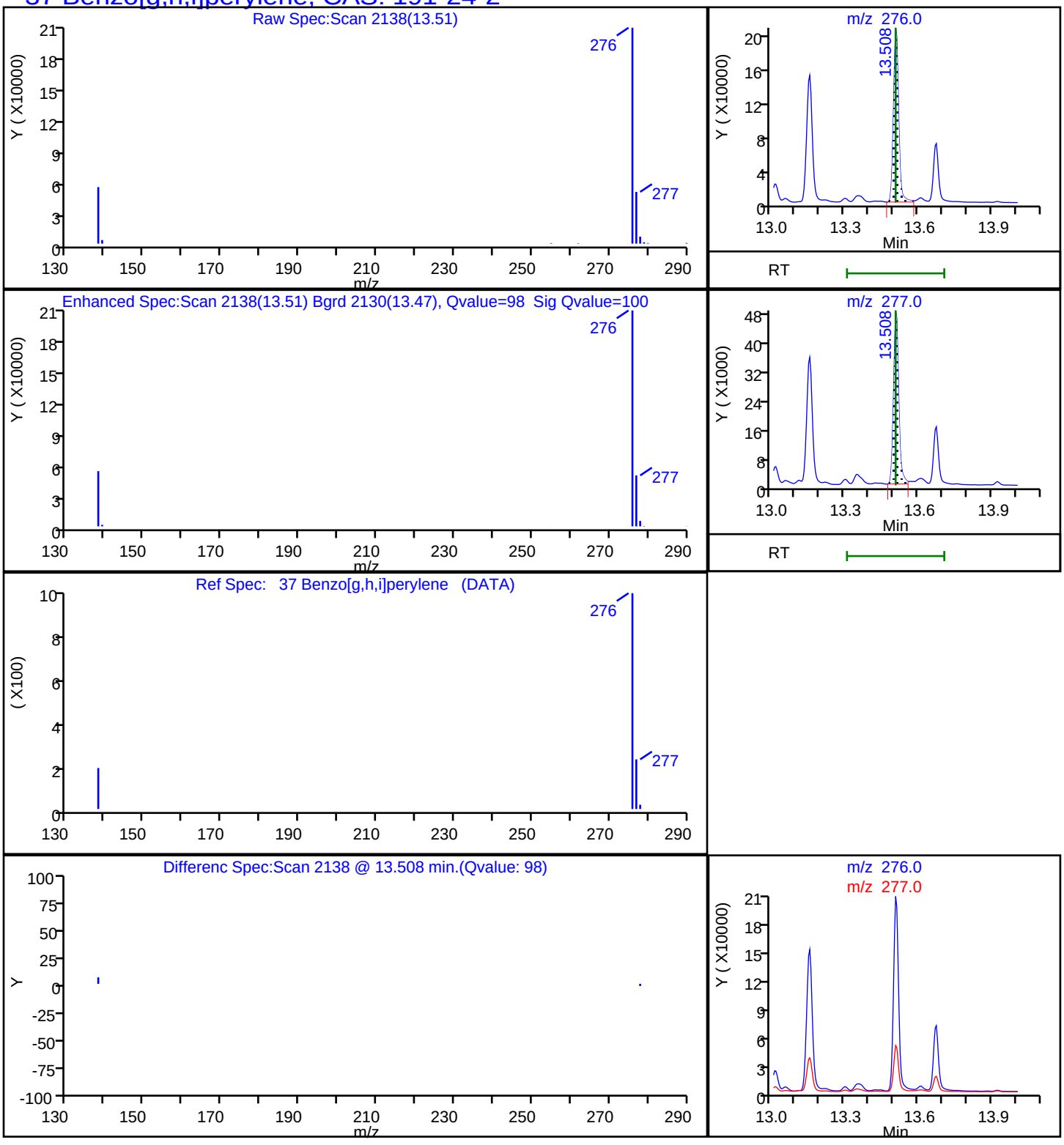


Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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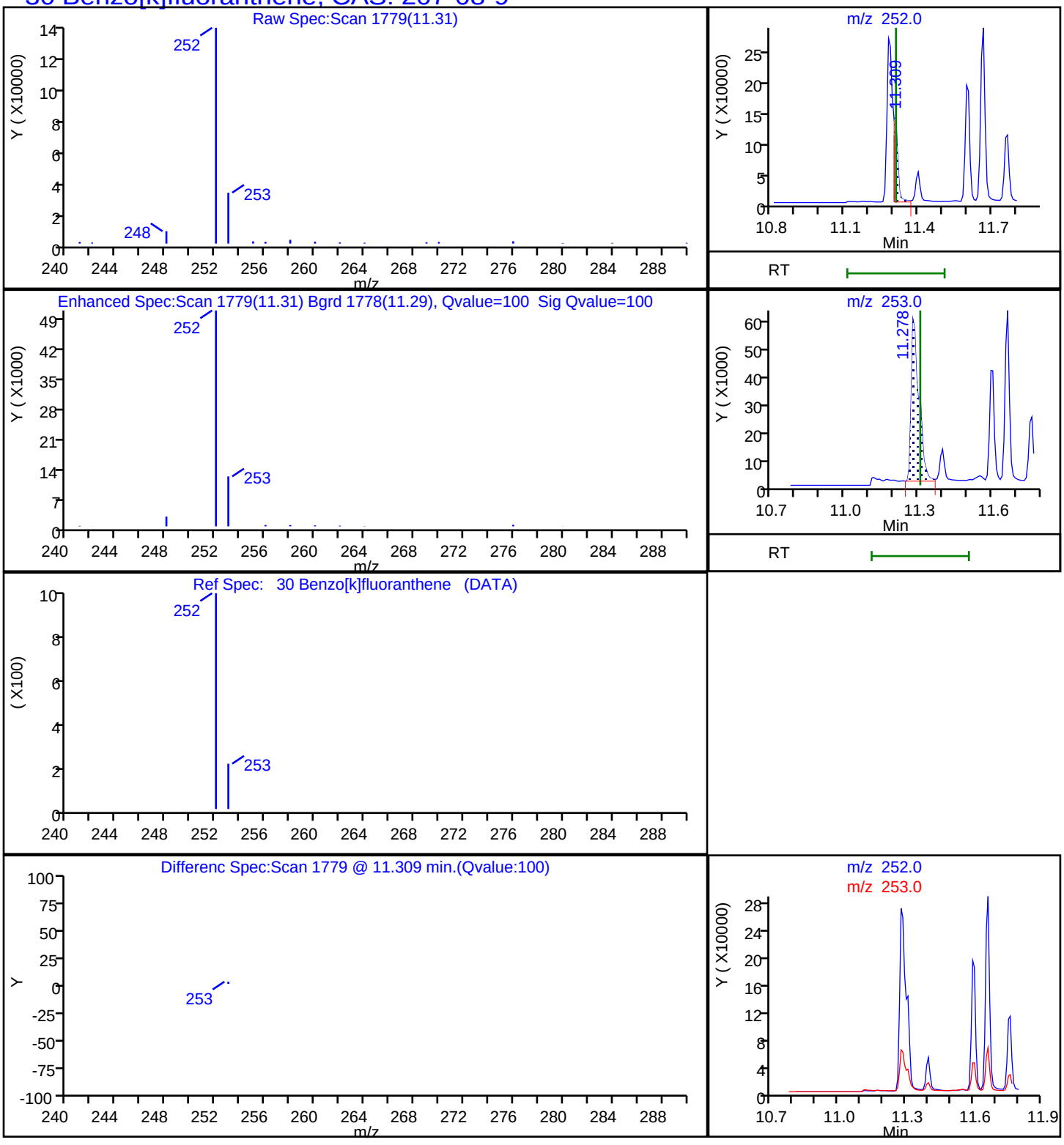
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



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Eurofins TestAmerica, Knoxville

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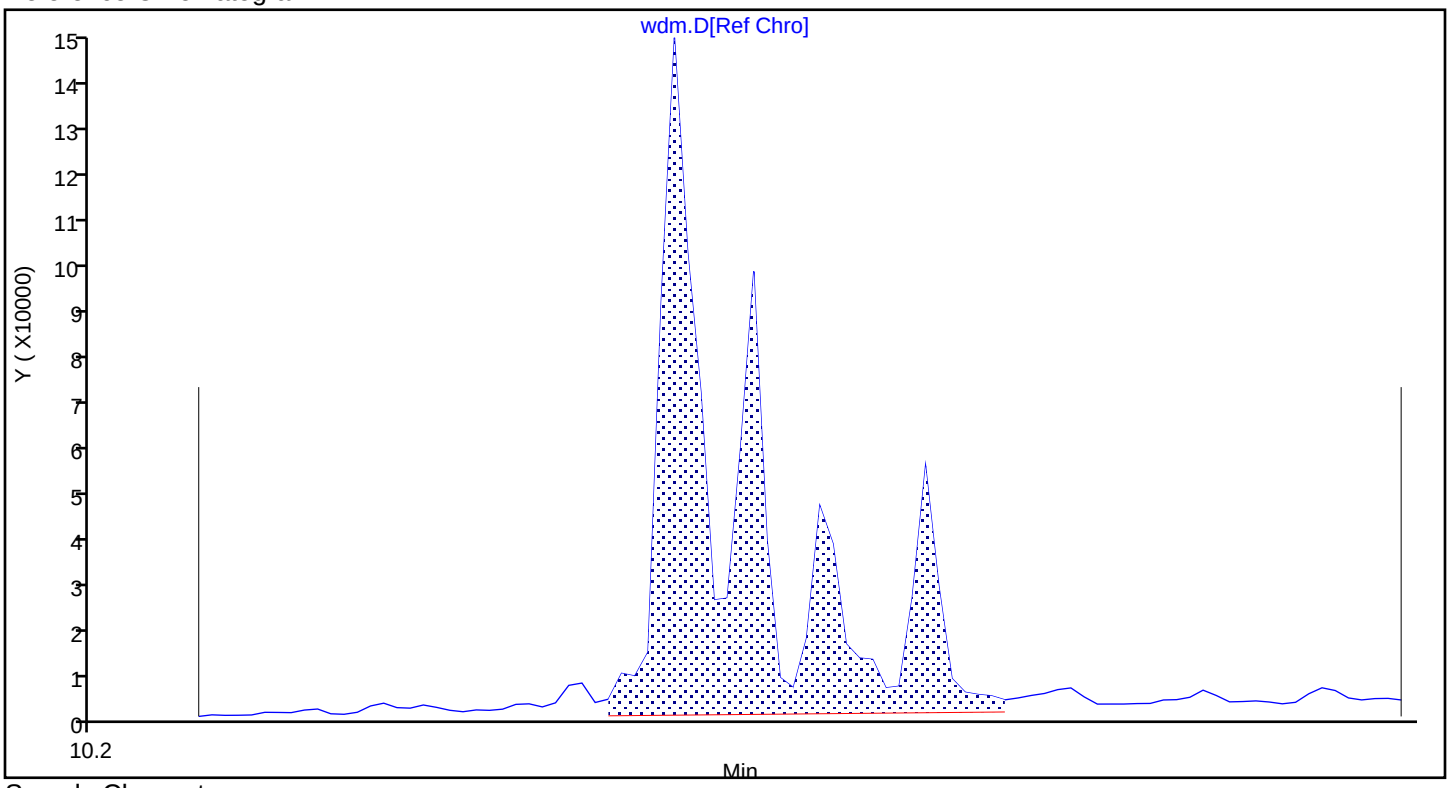
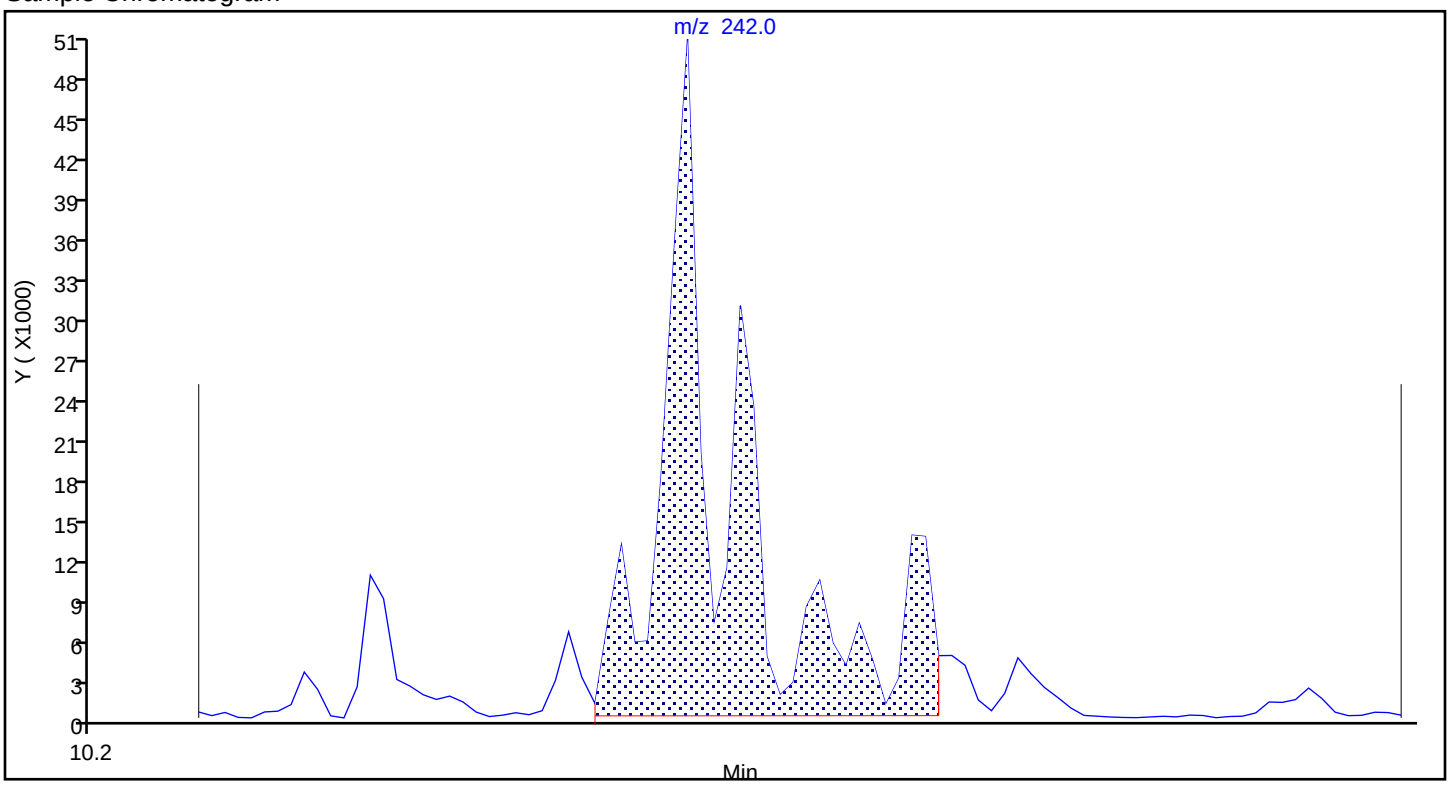
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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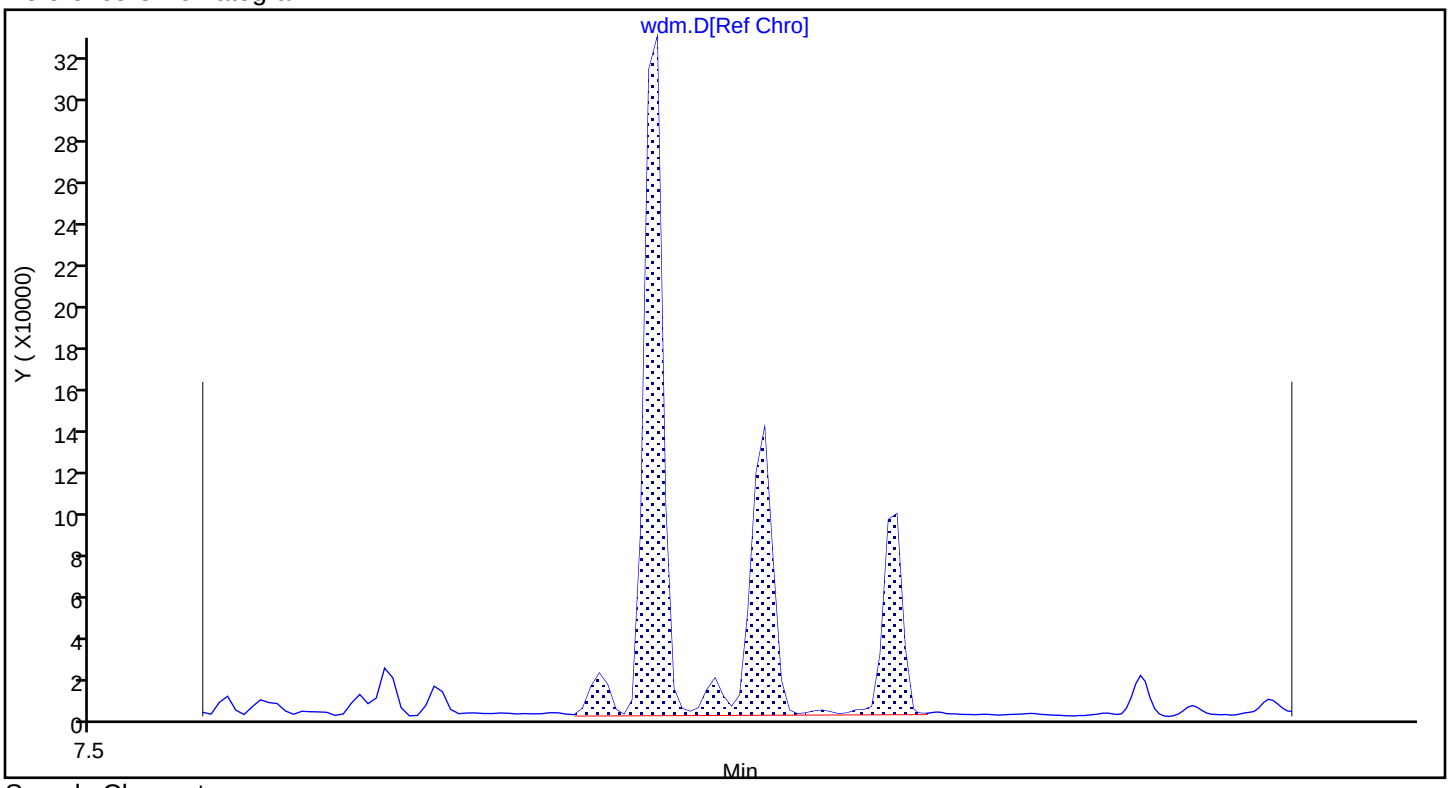
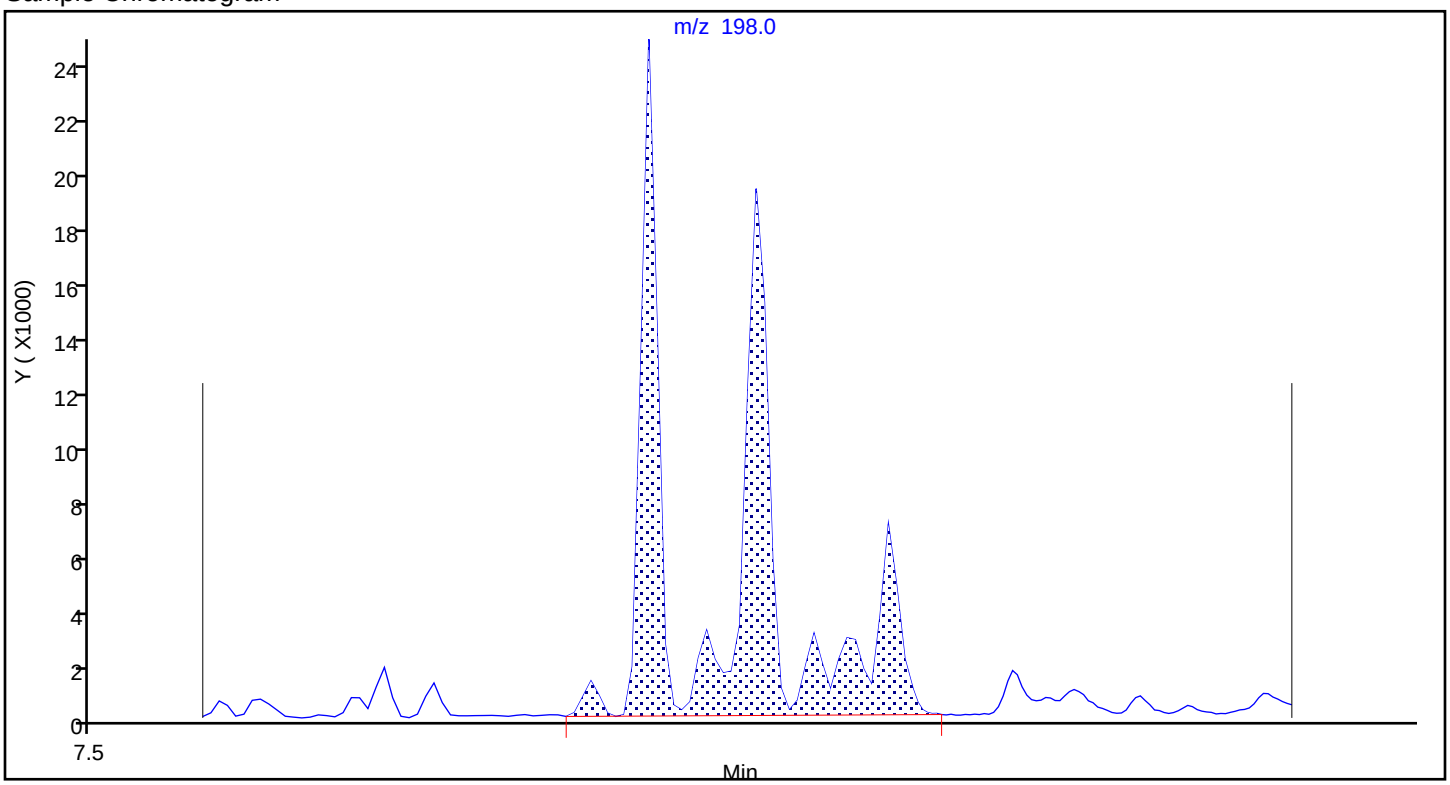
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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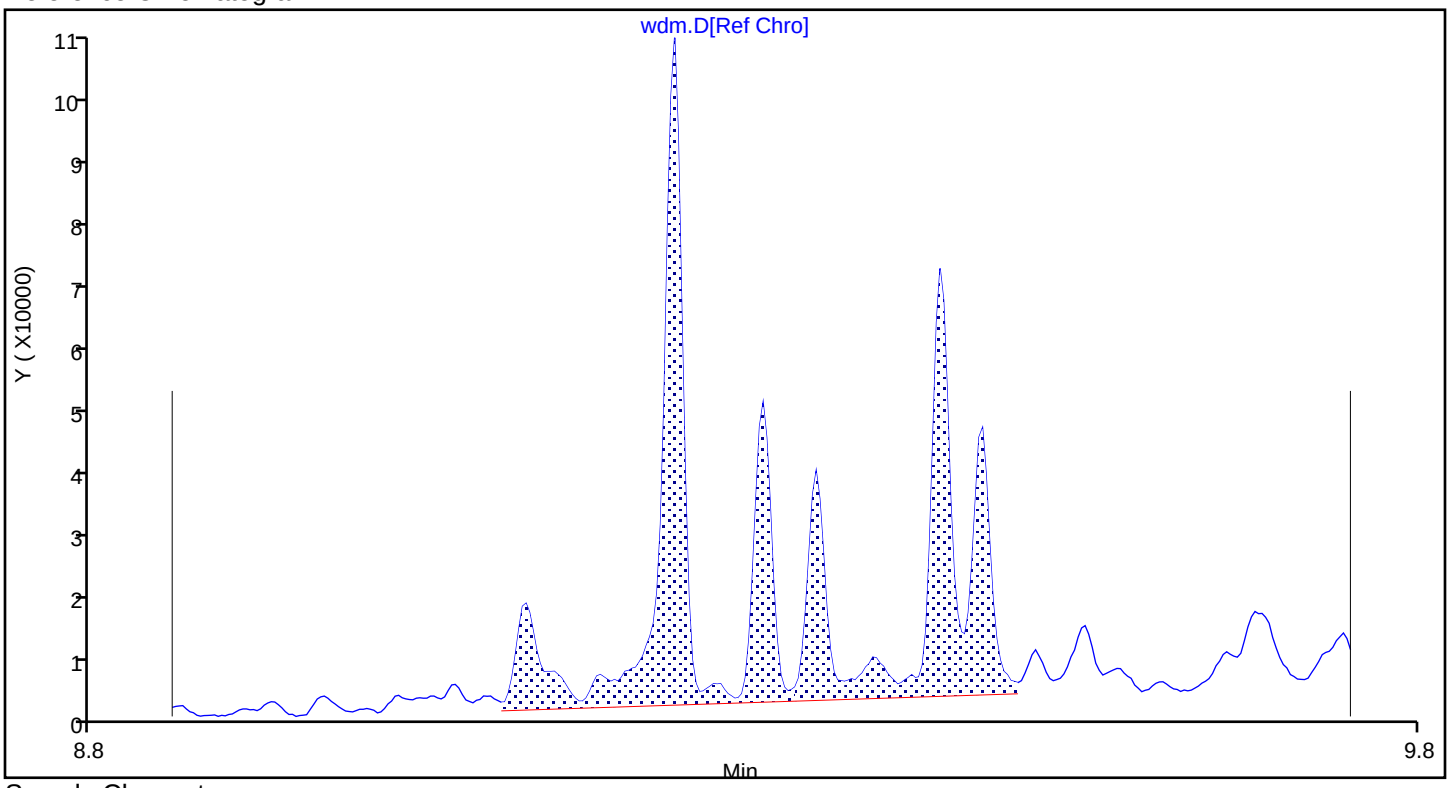
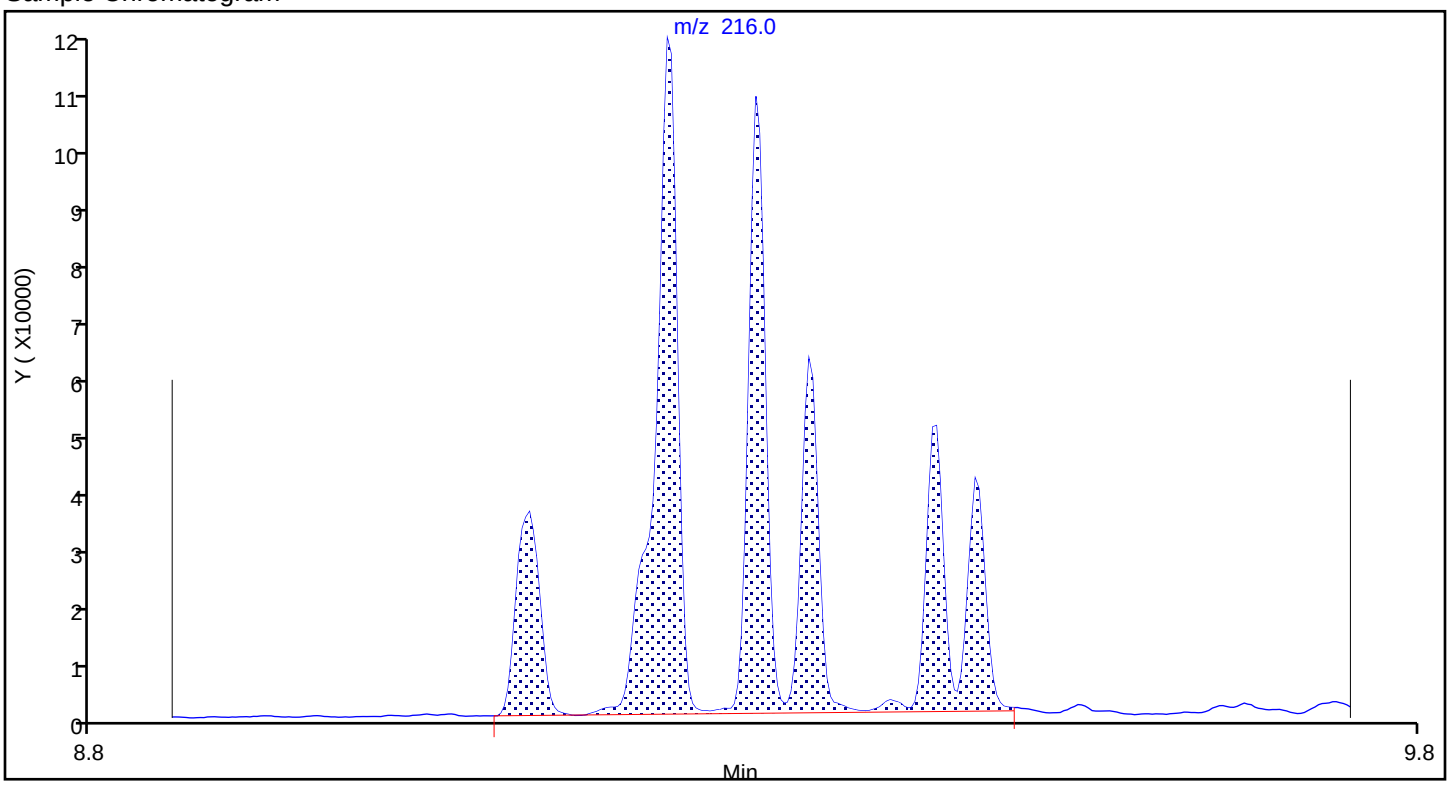
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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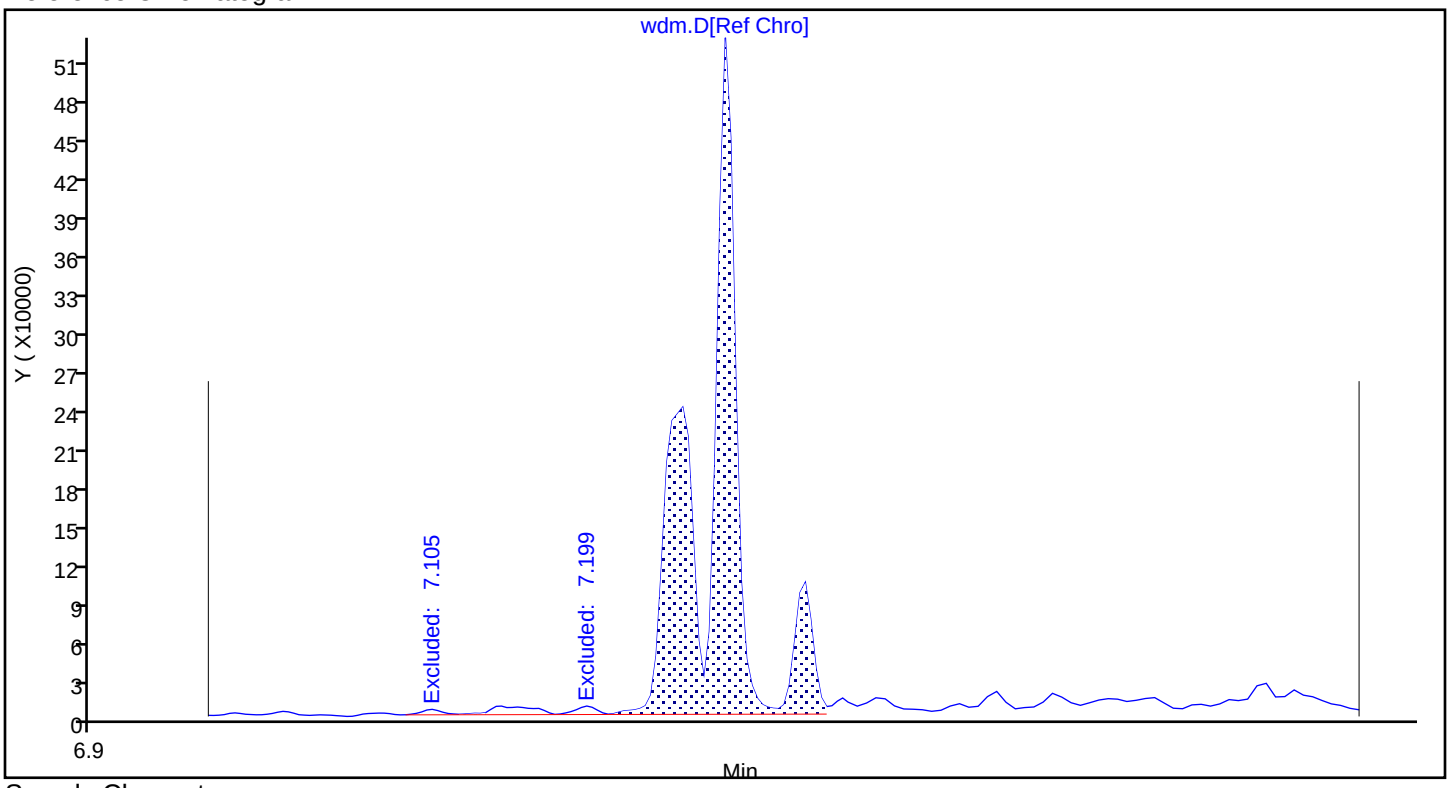
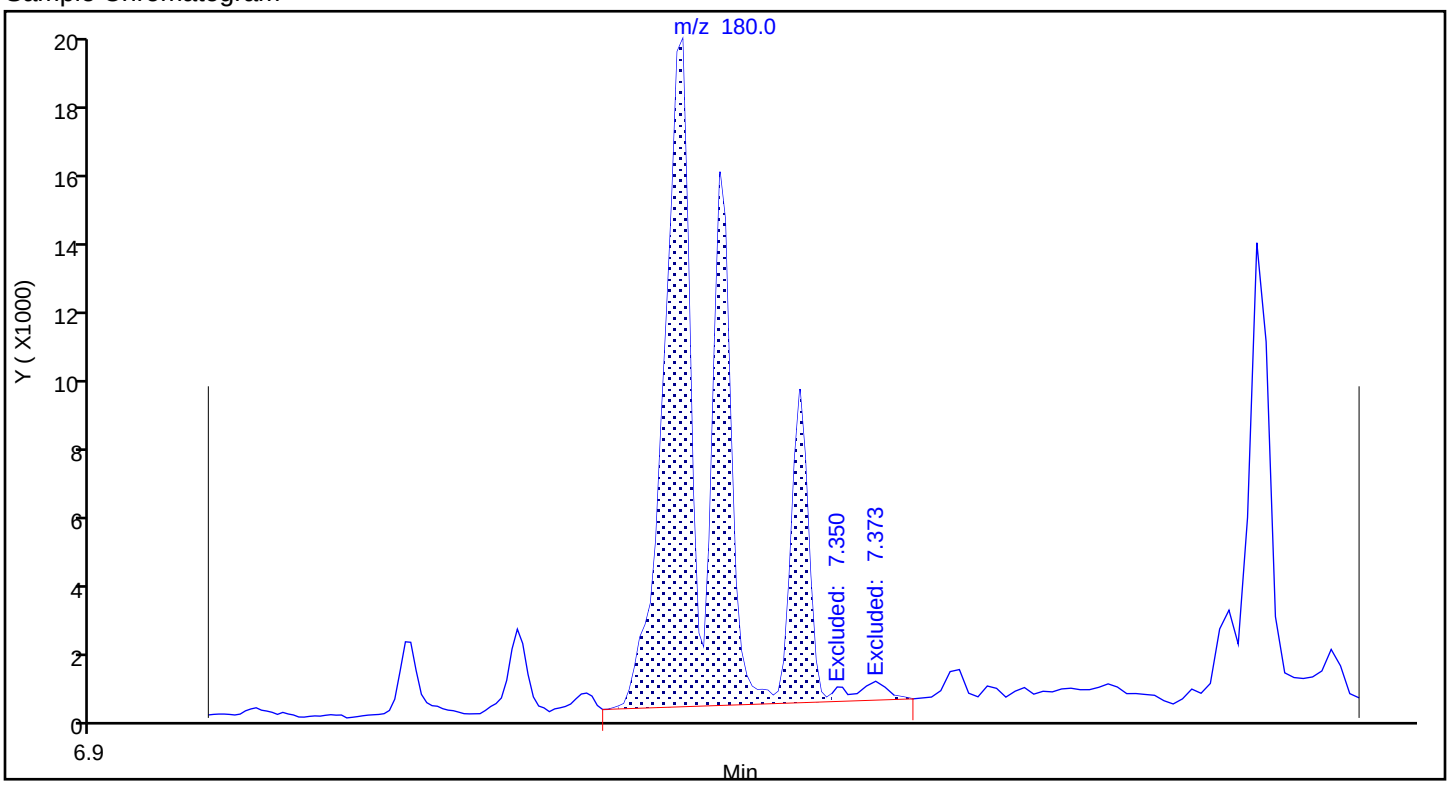
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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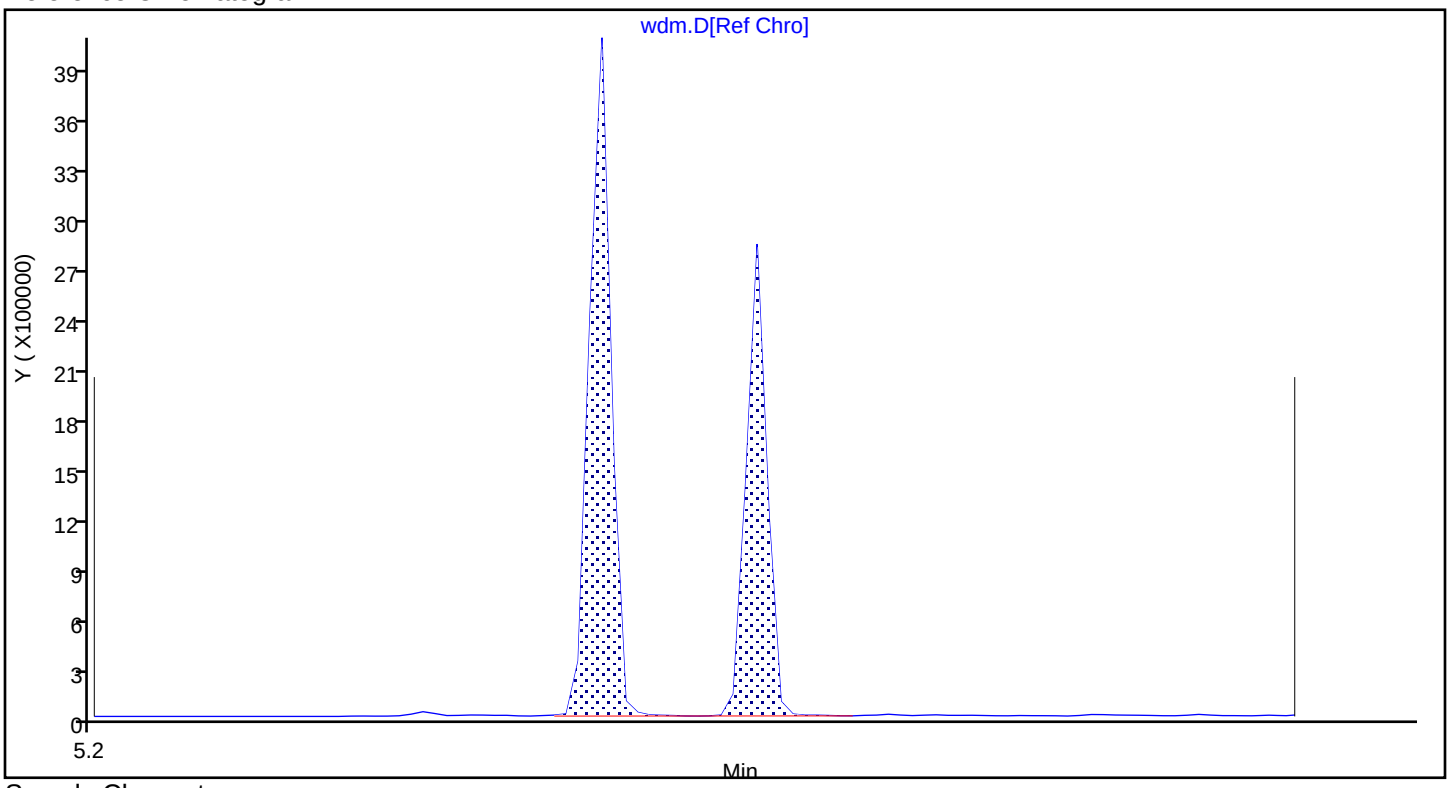
Eurofins TestAmerica, Knoxville

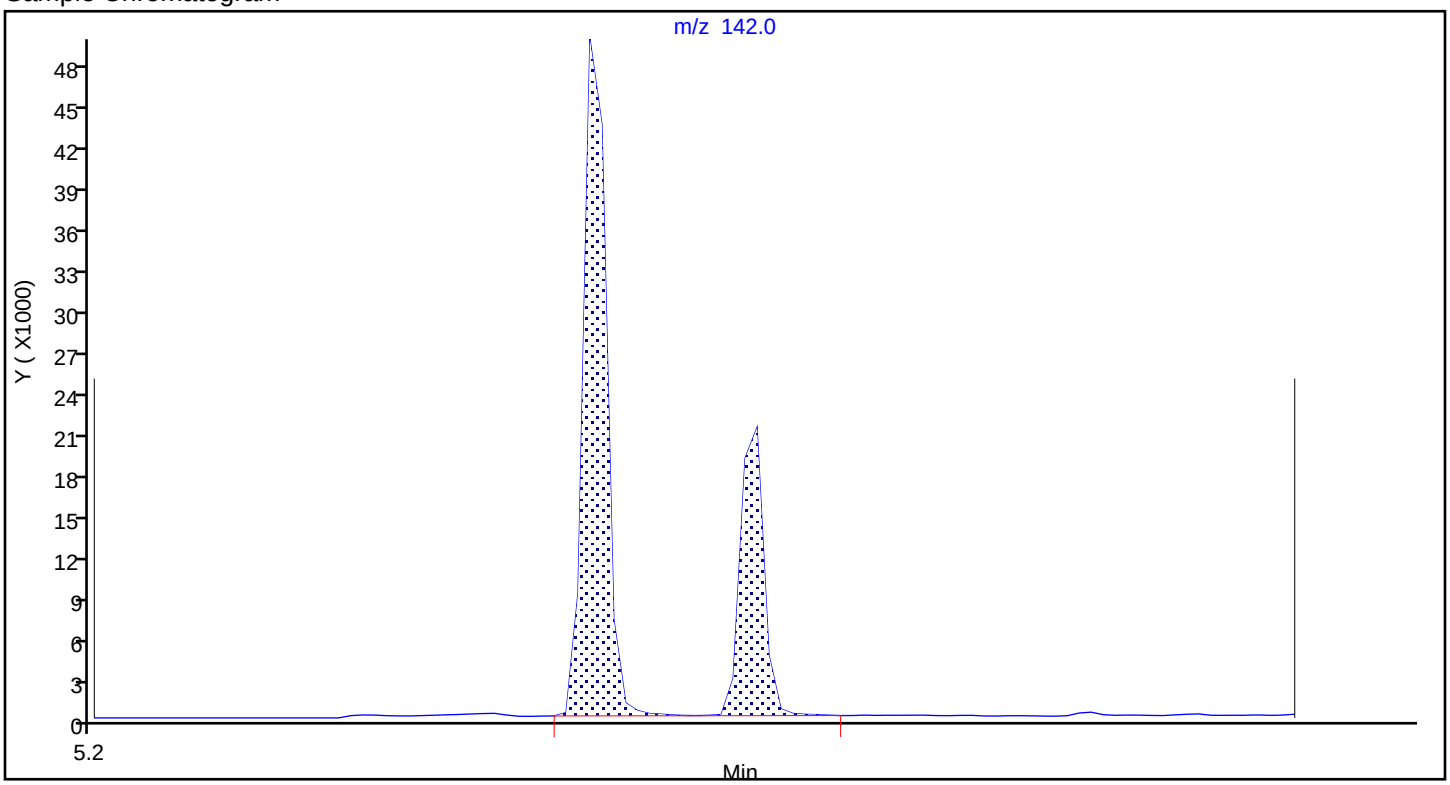
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



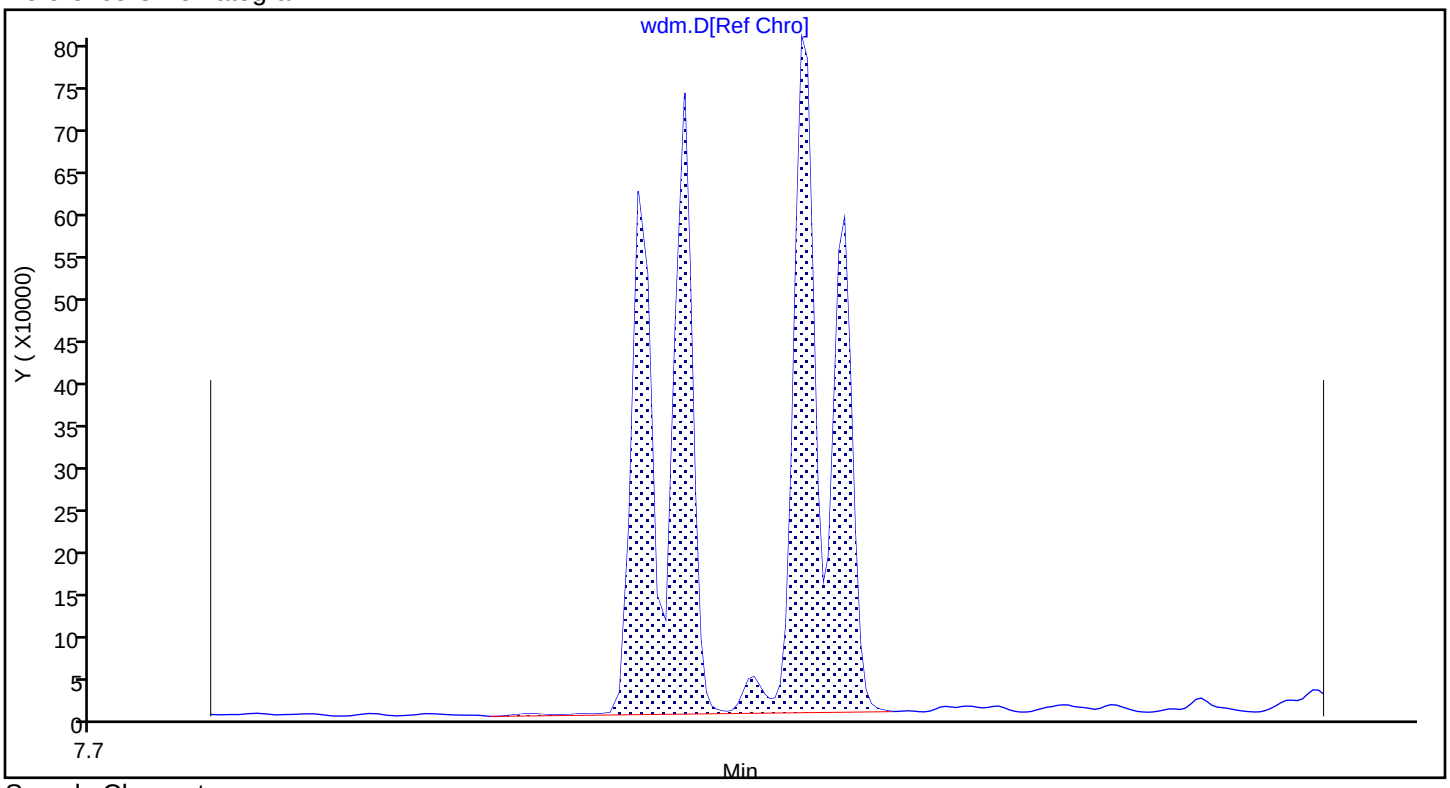
Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

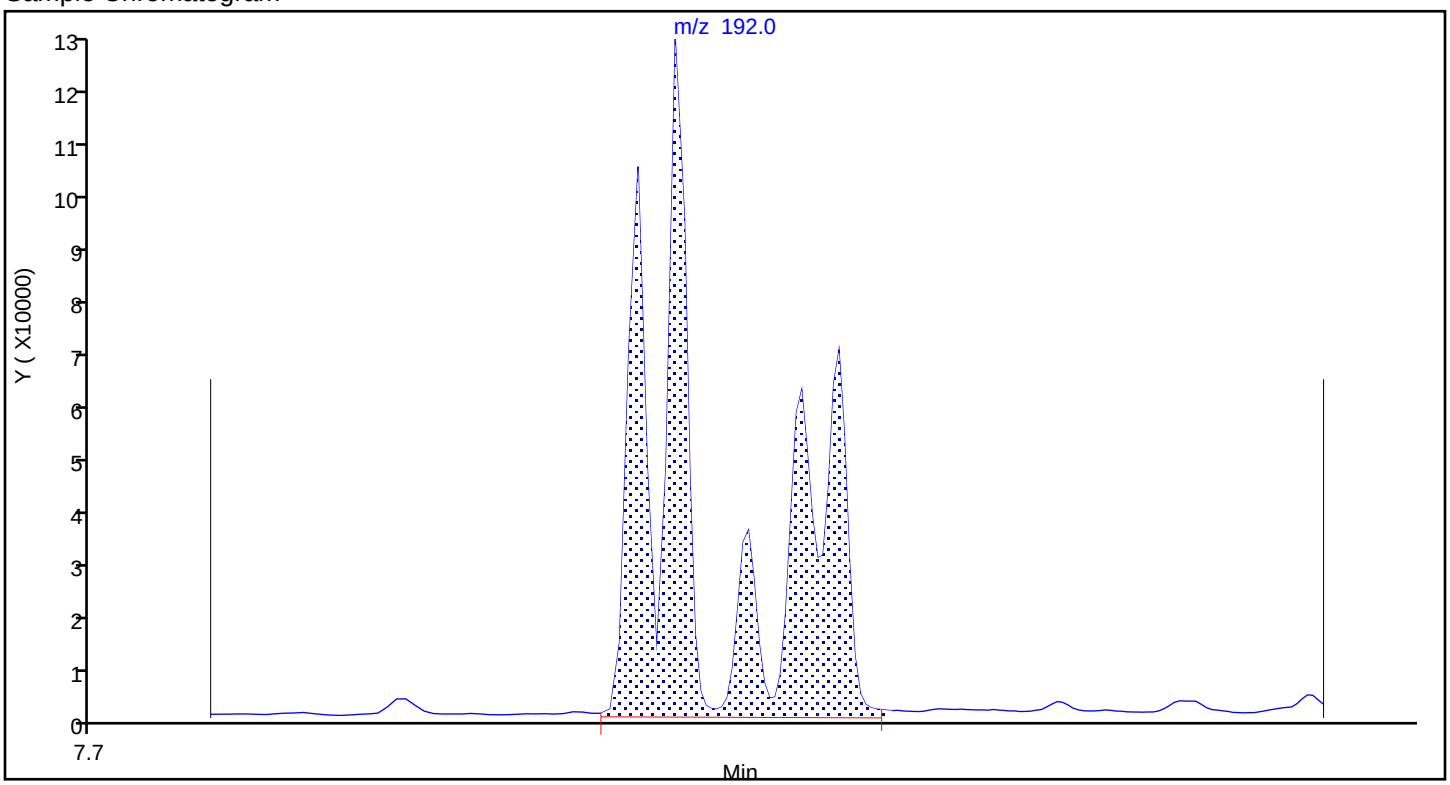
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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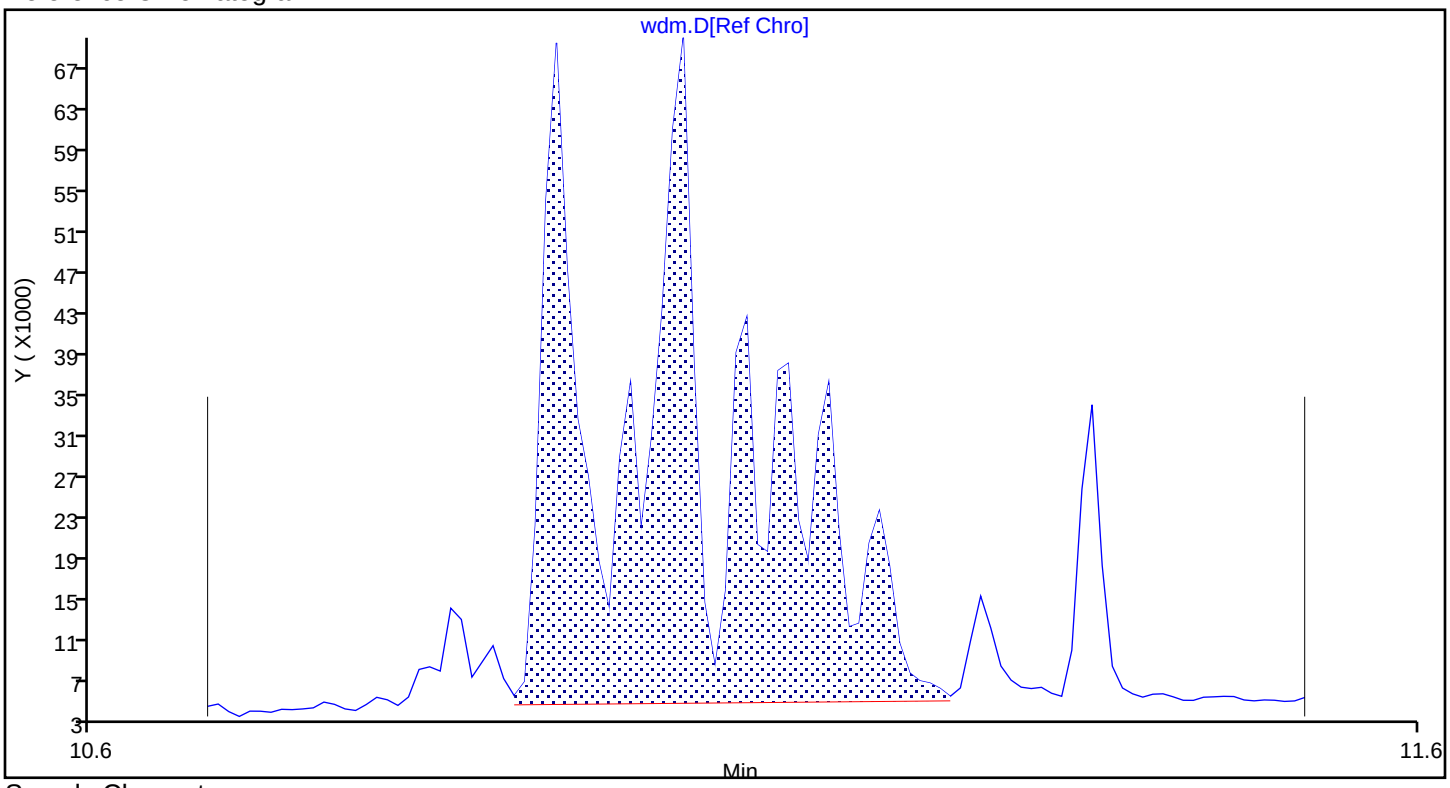
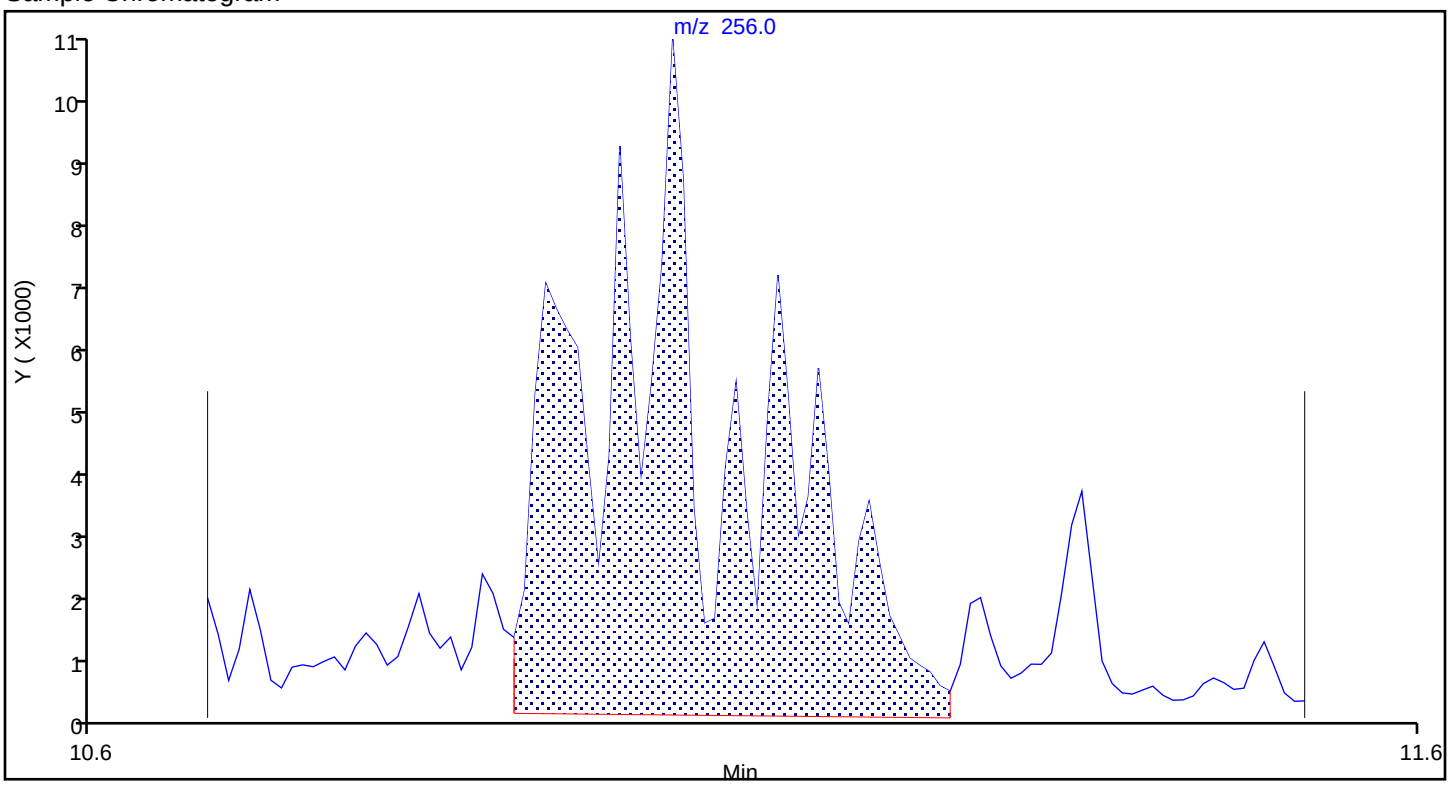
A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



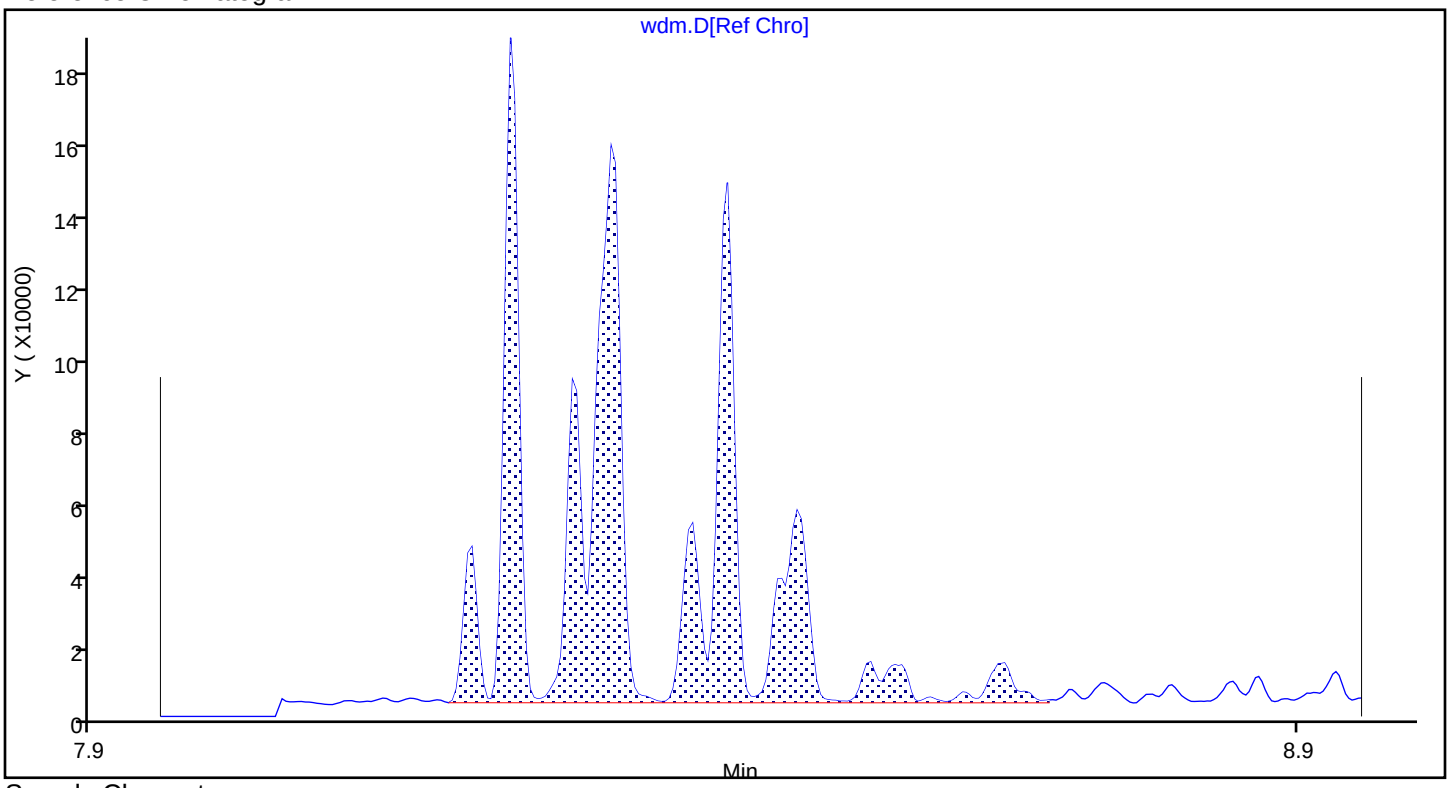
Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

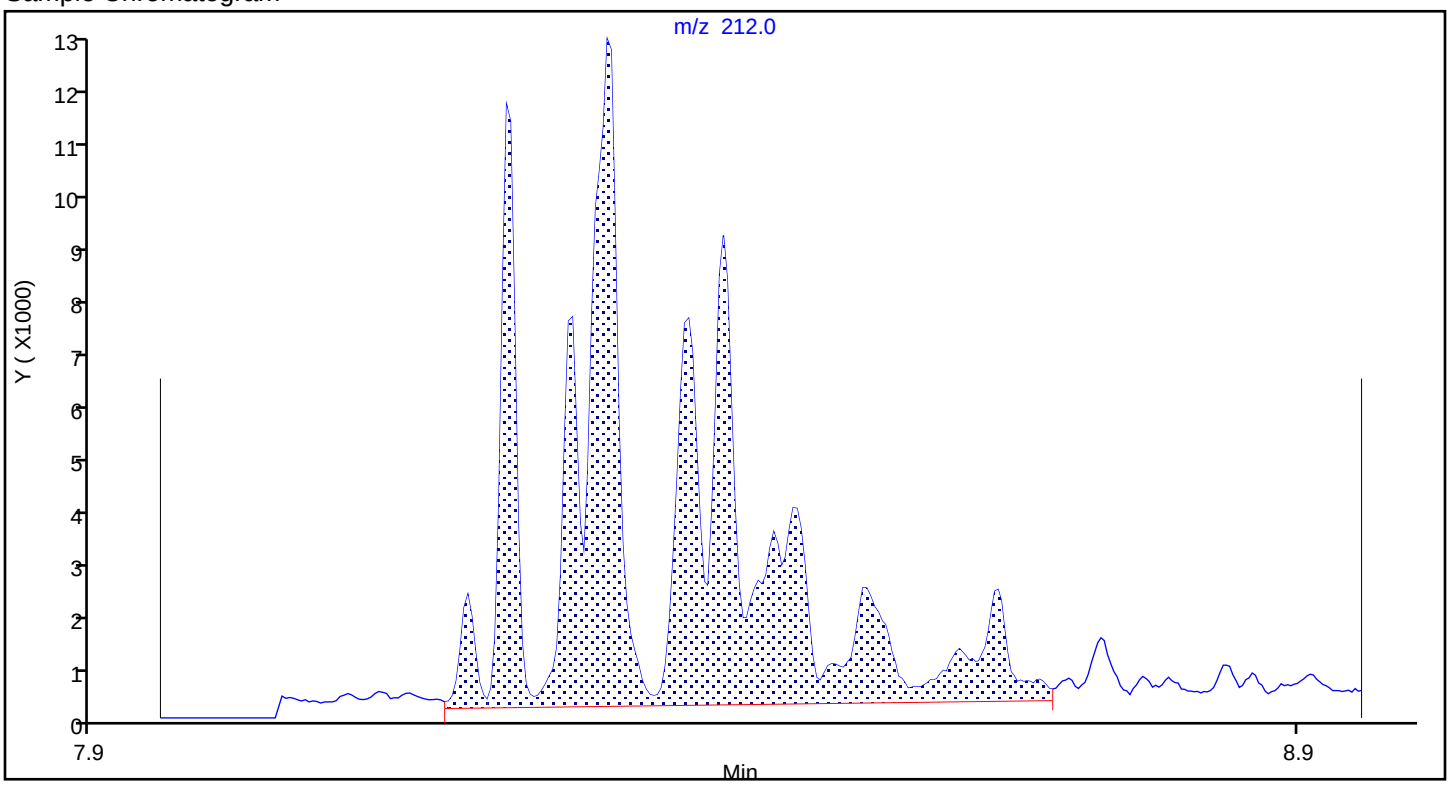
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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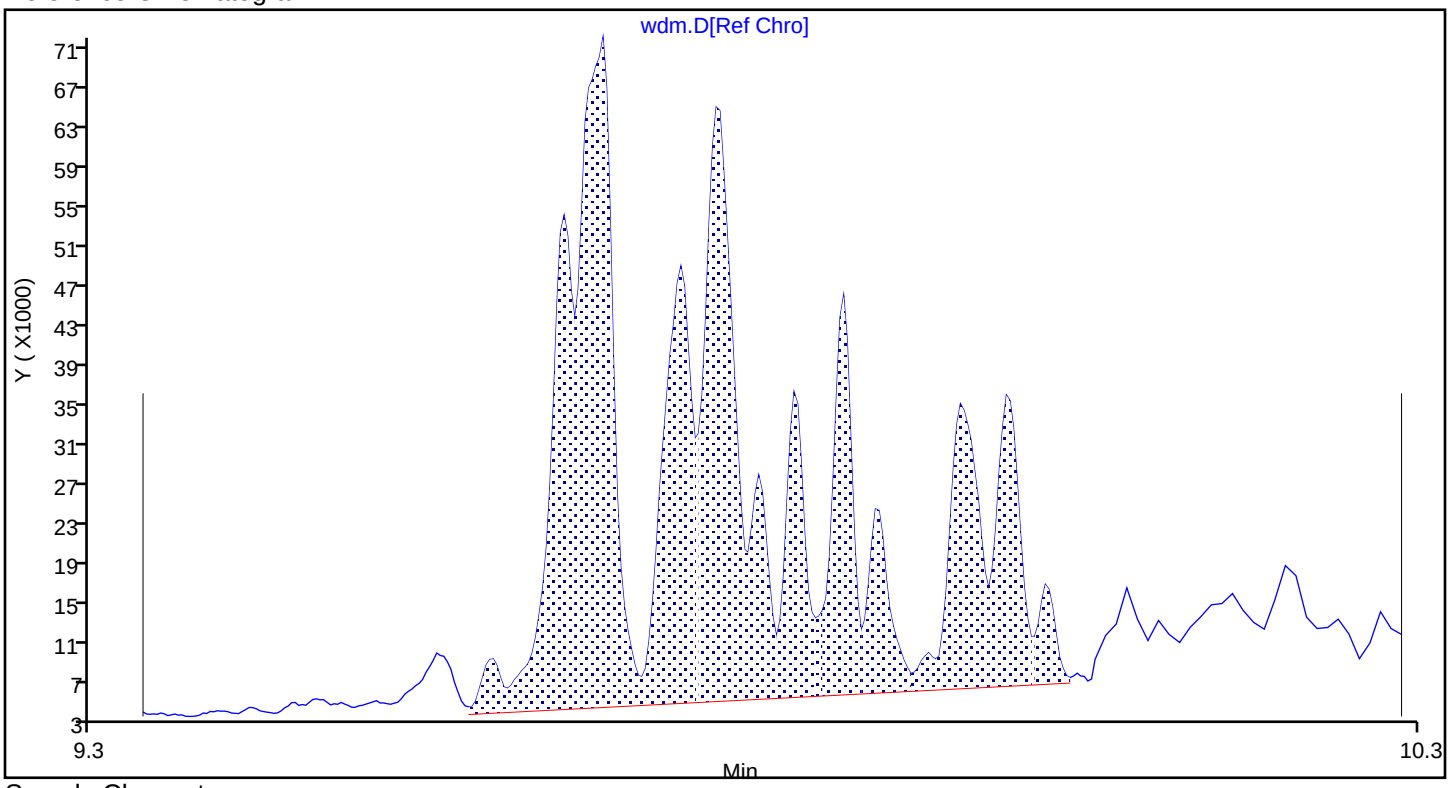
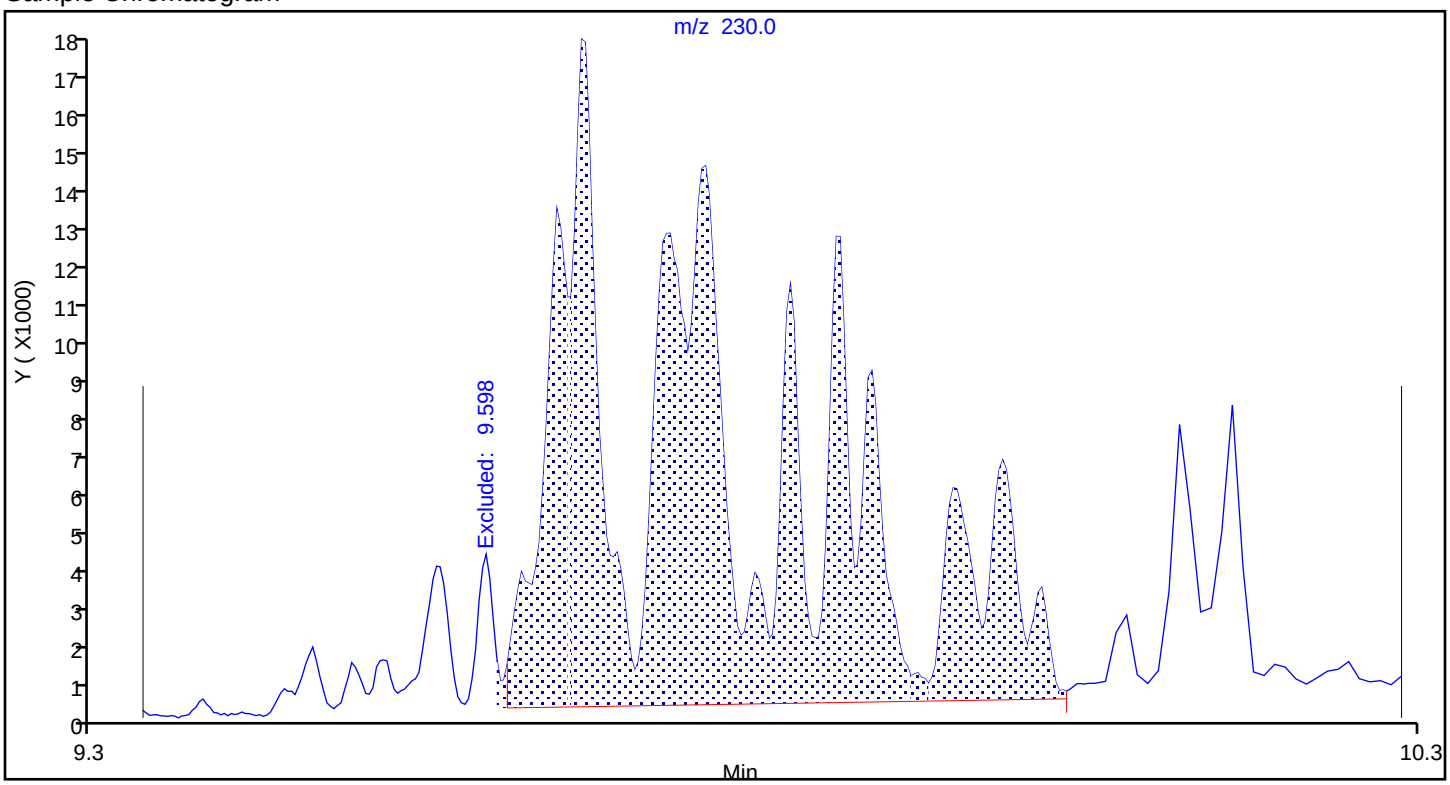
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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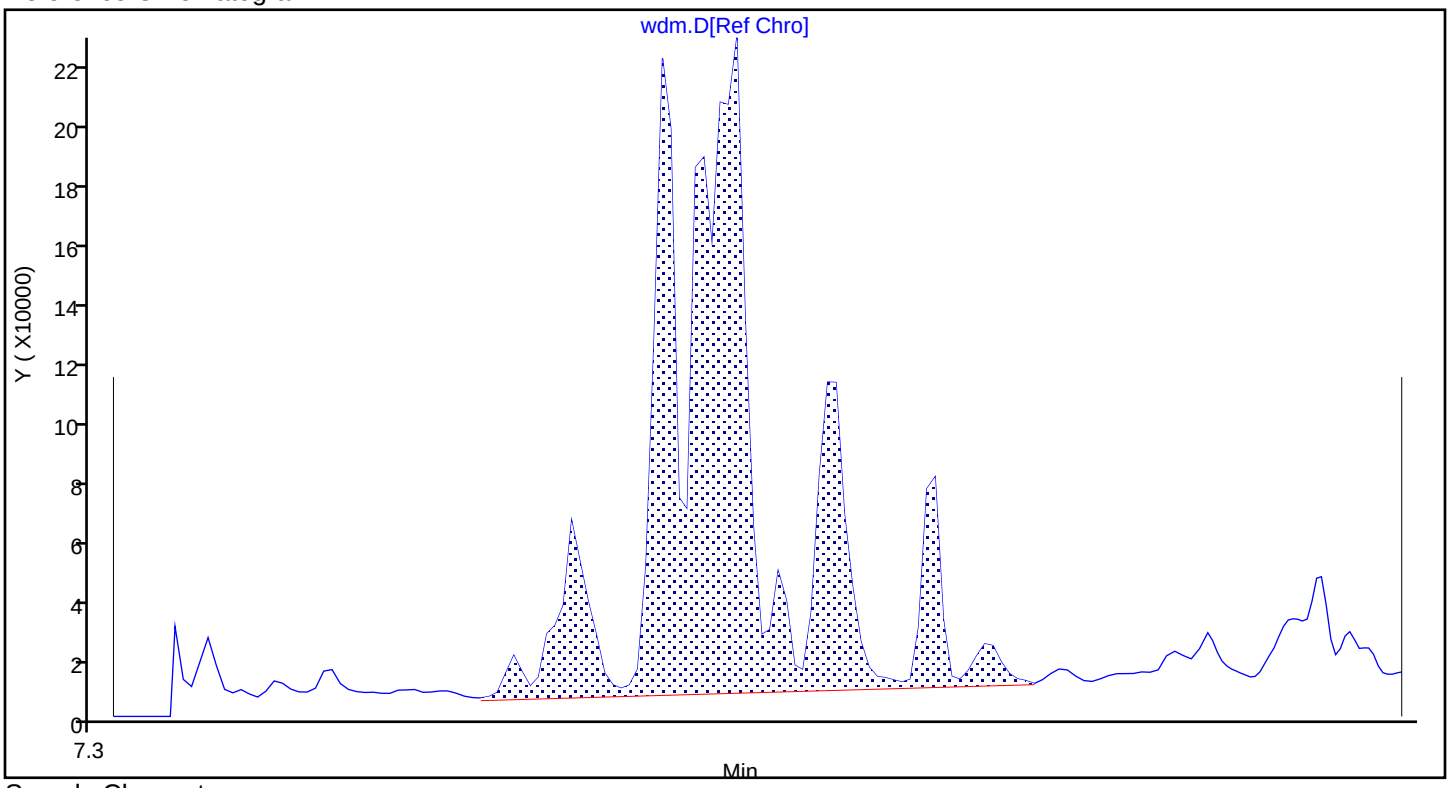
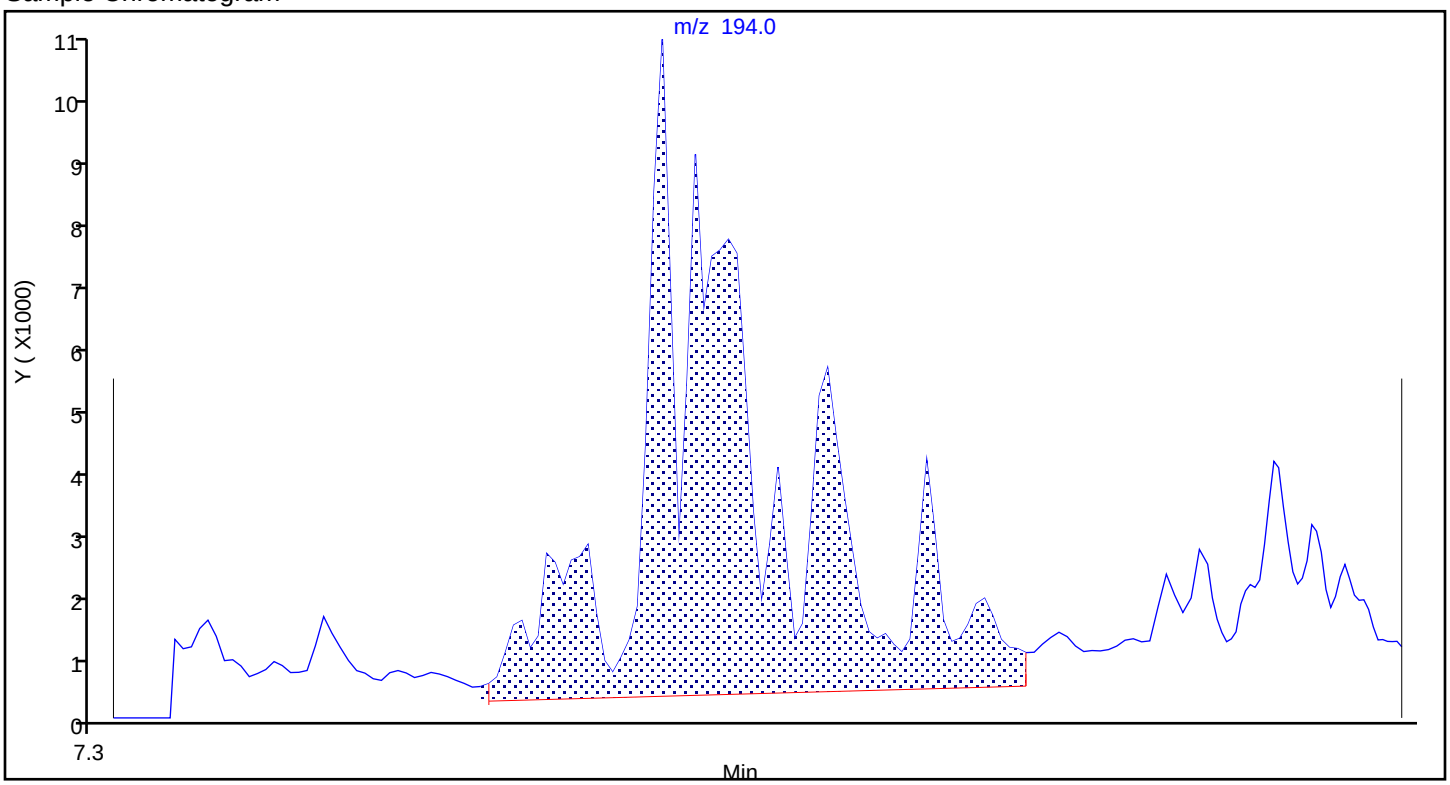
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



Eurofins TestAmerica, Knoxville

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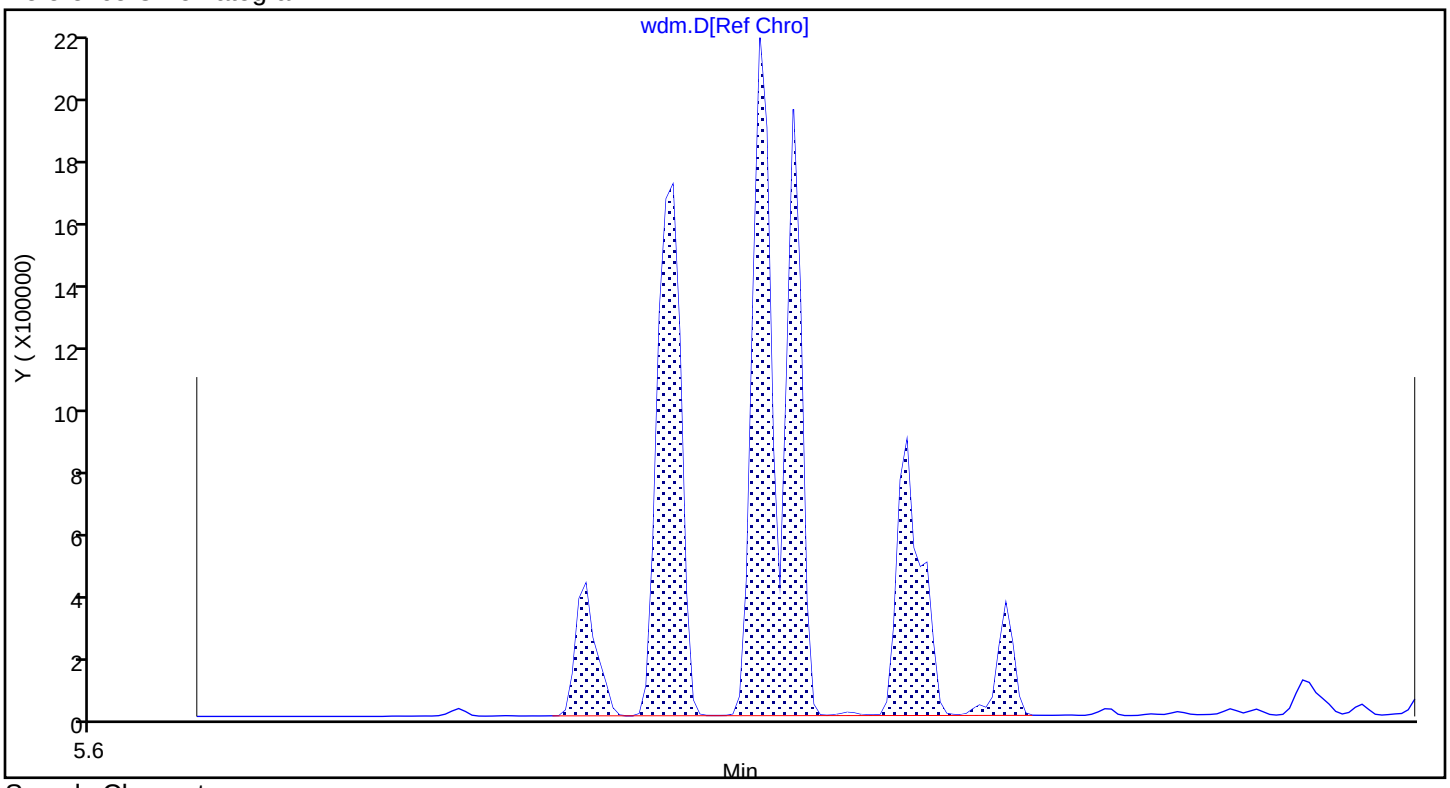
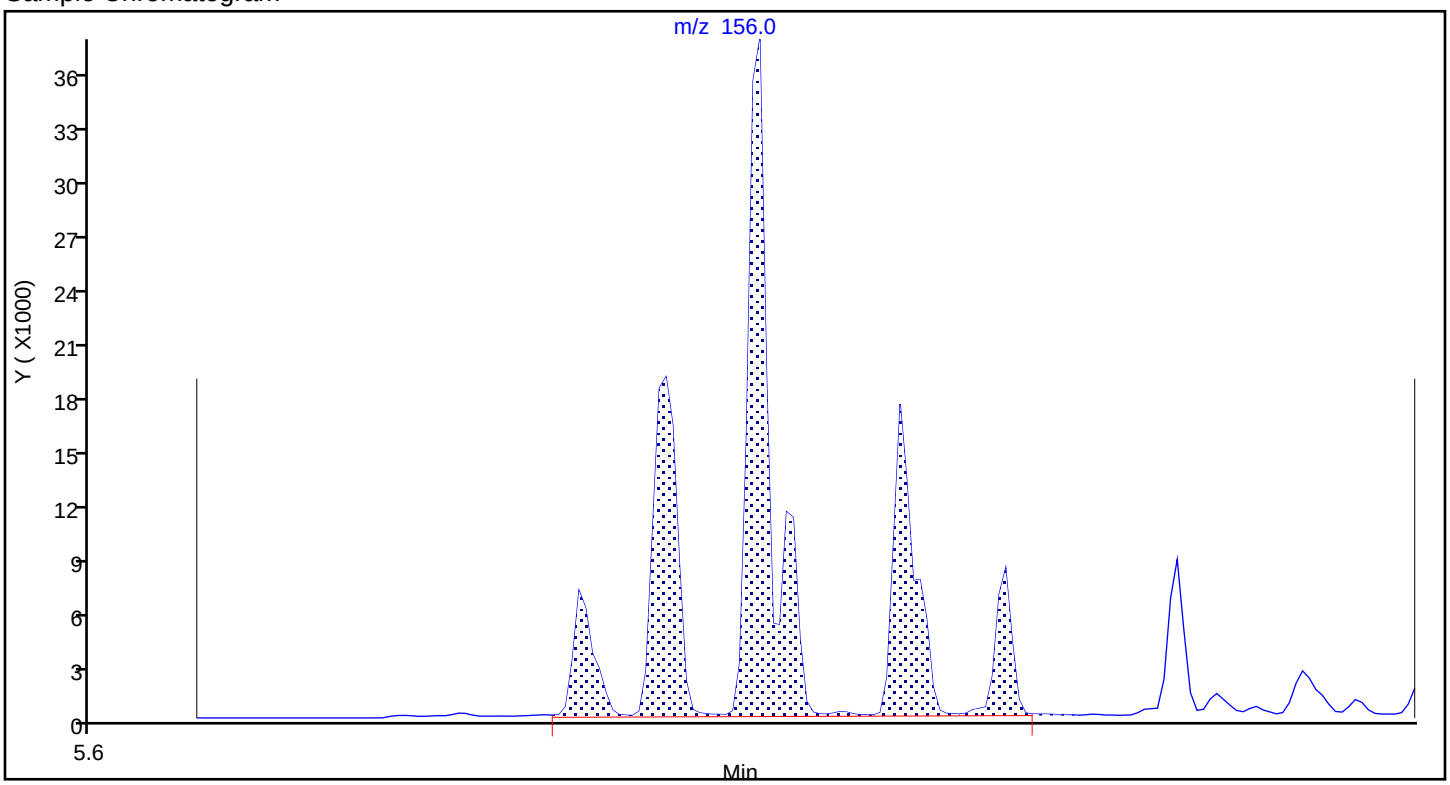
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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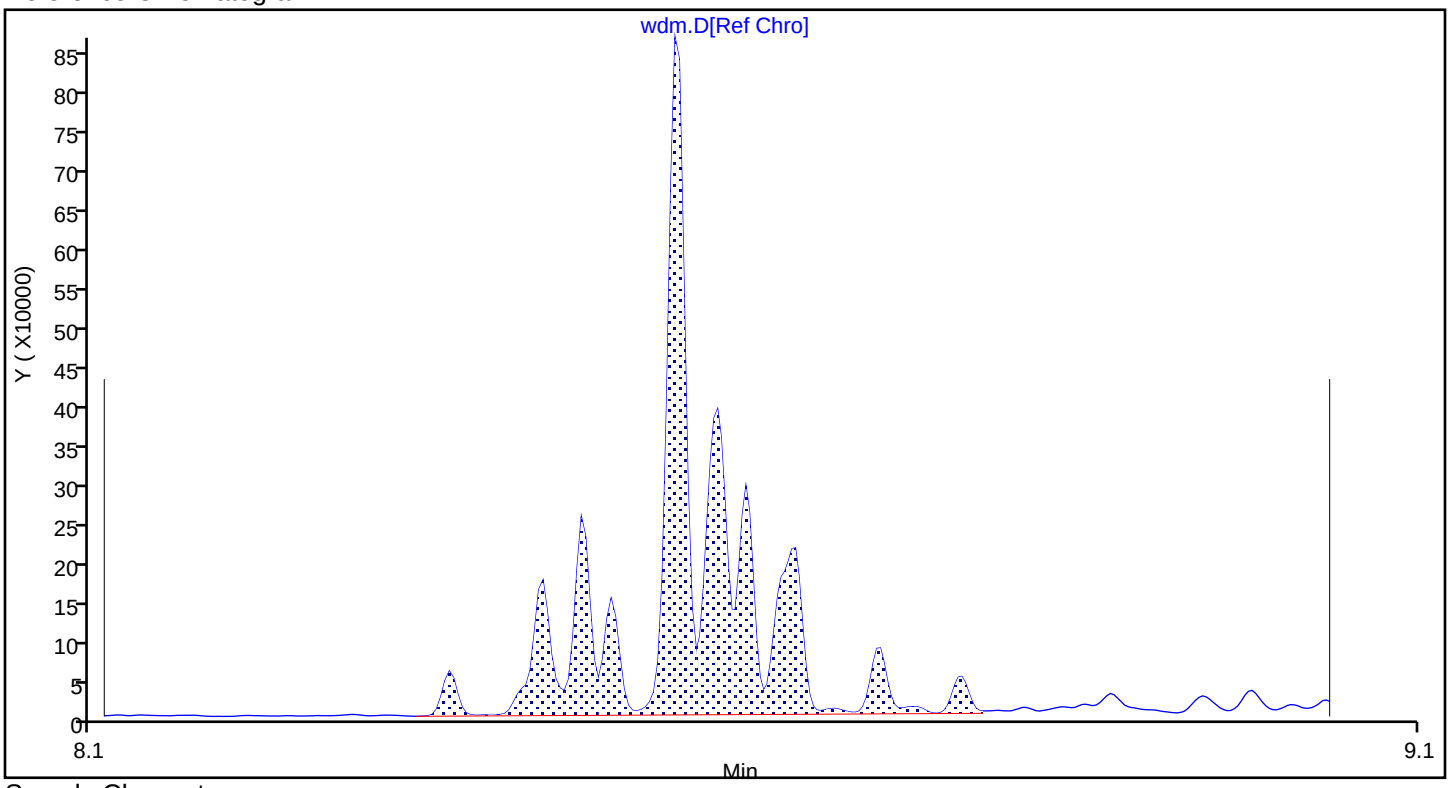
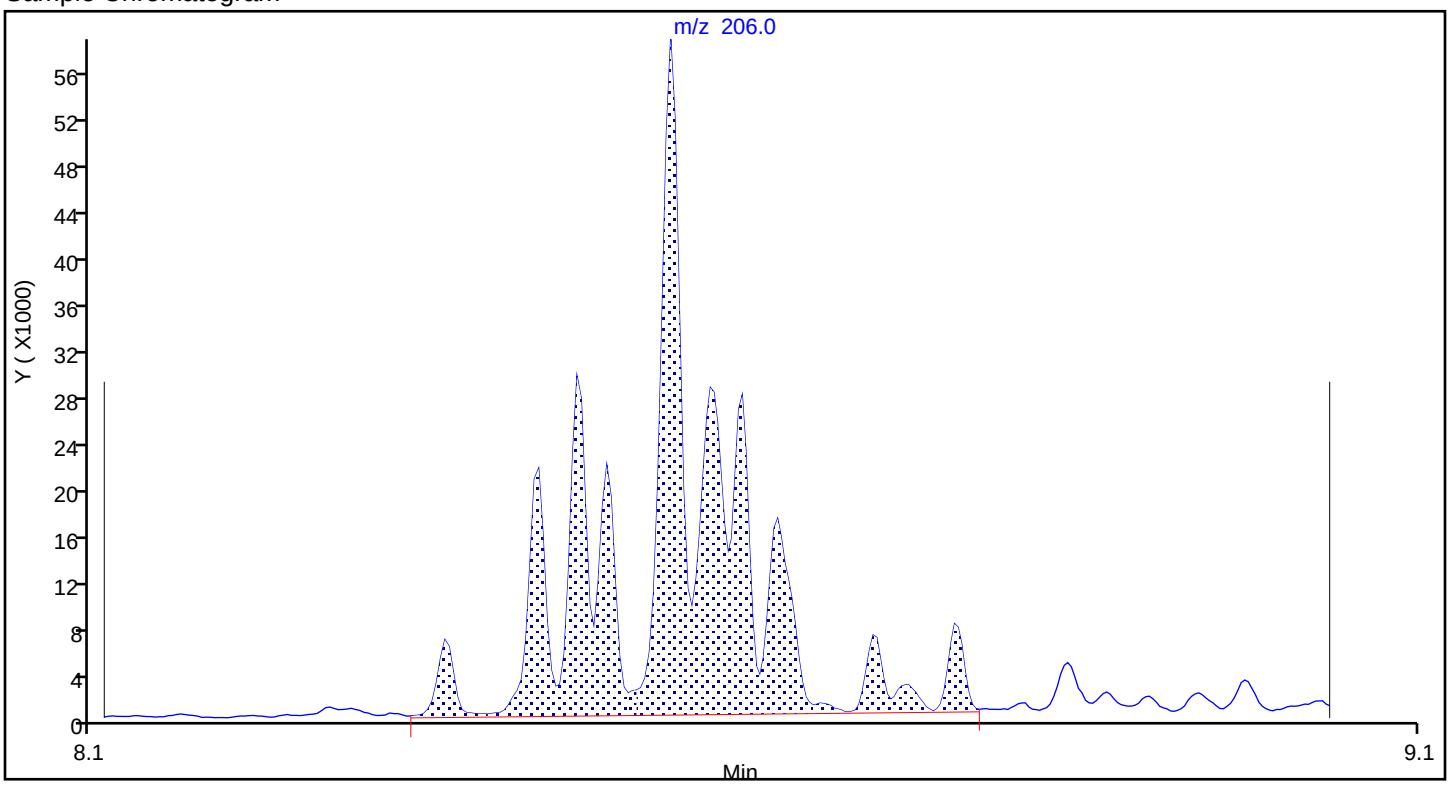
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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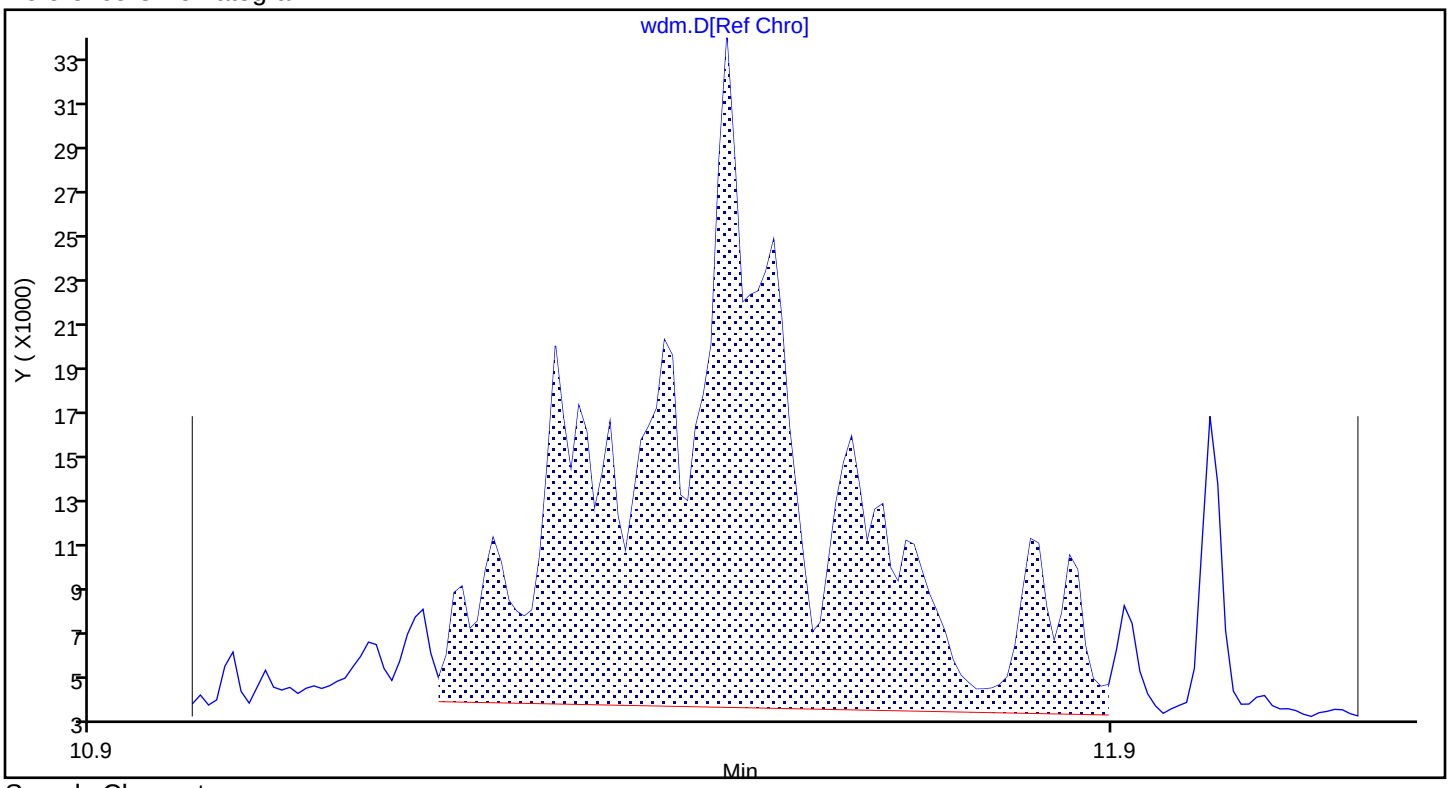
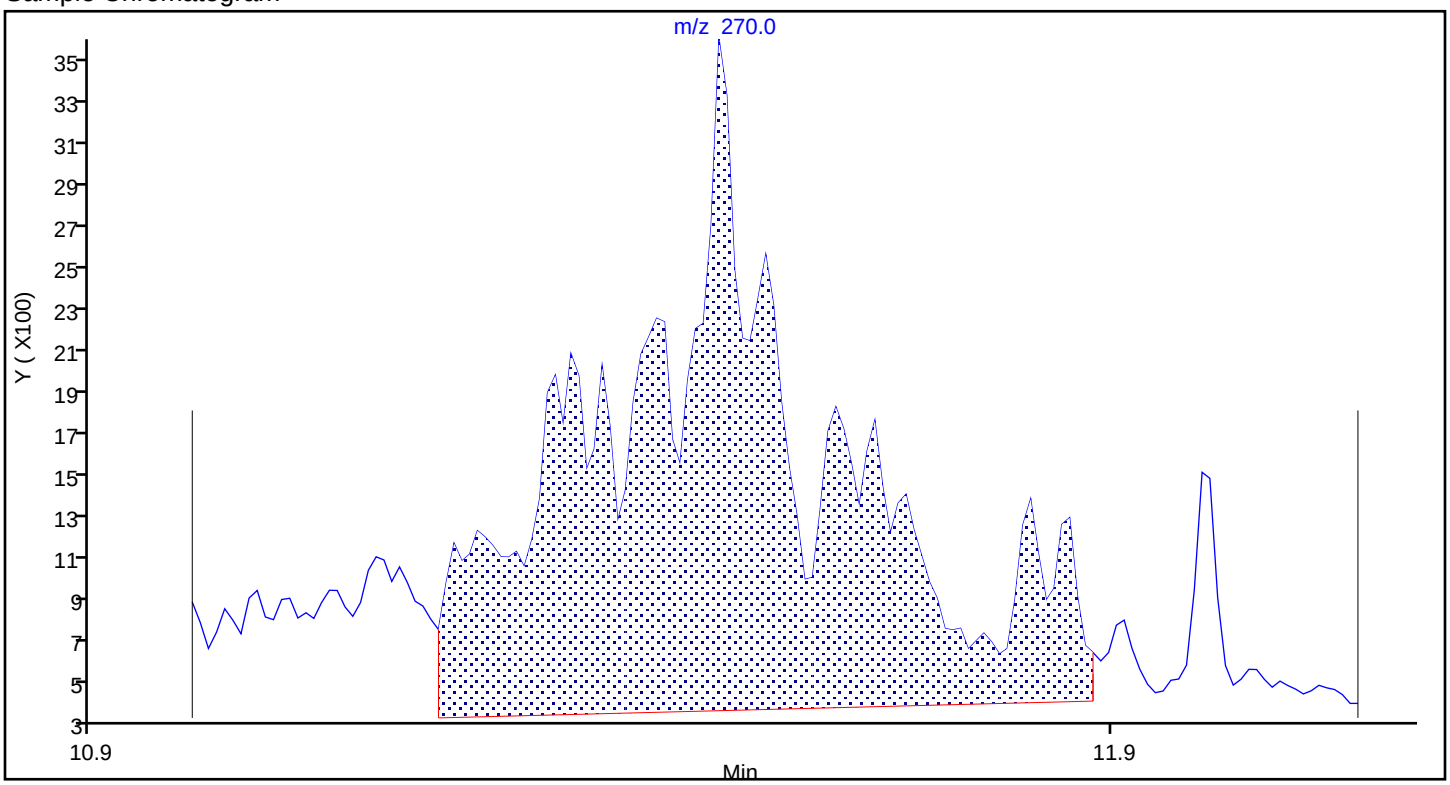
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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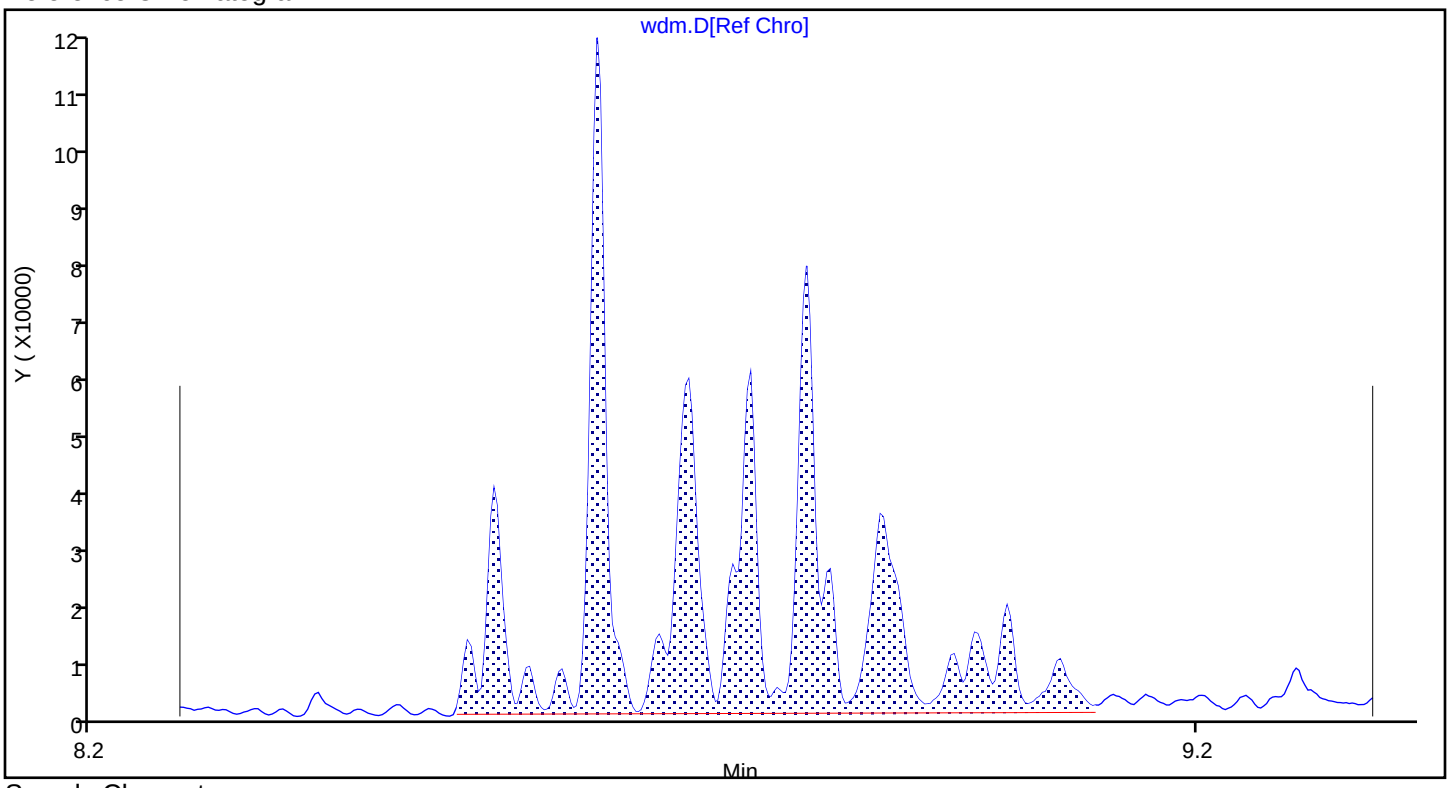
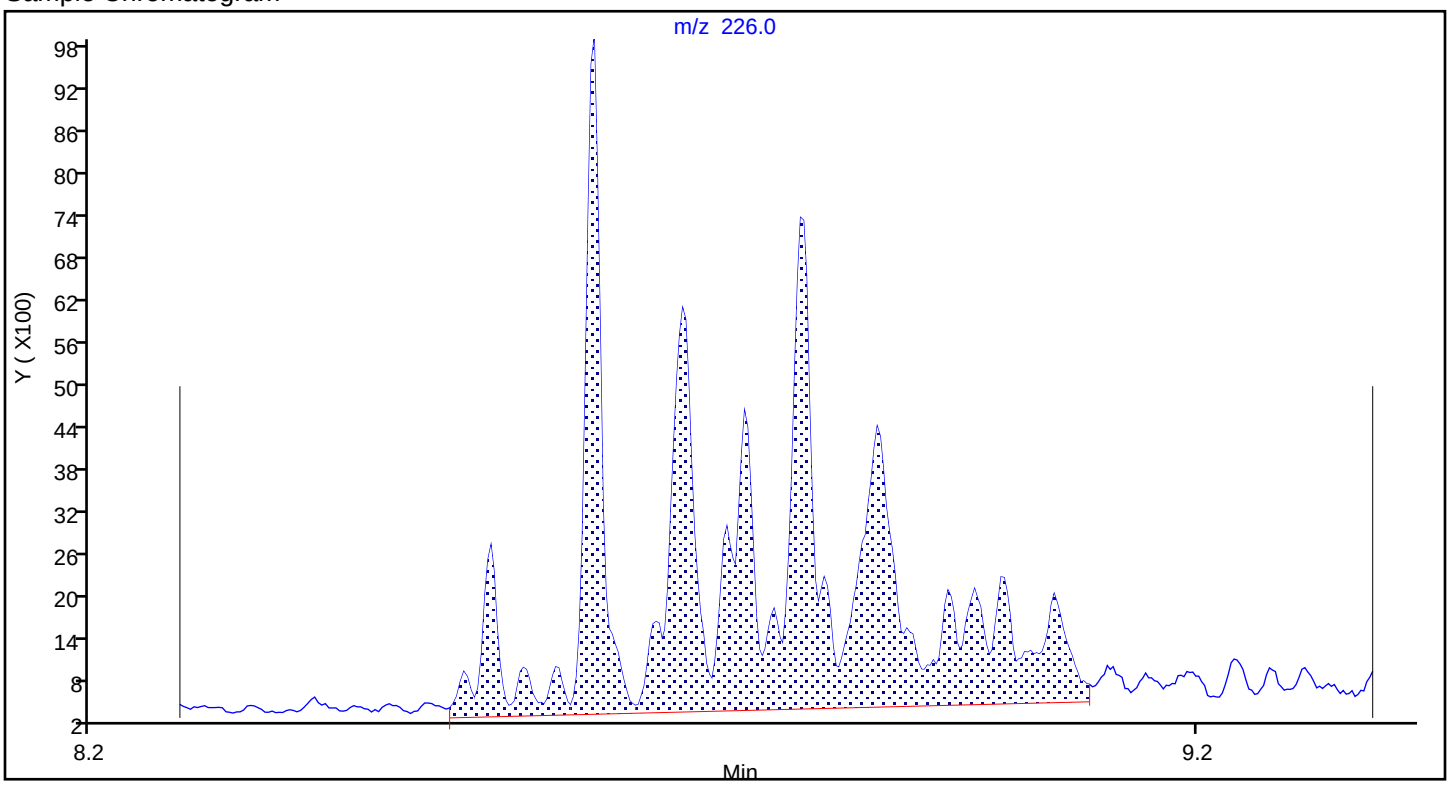
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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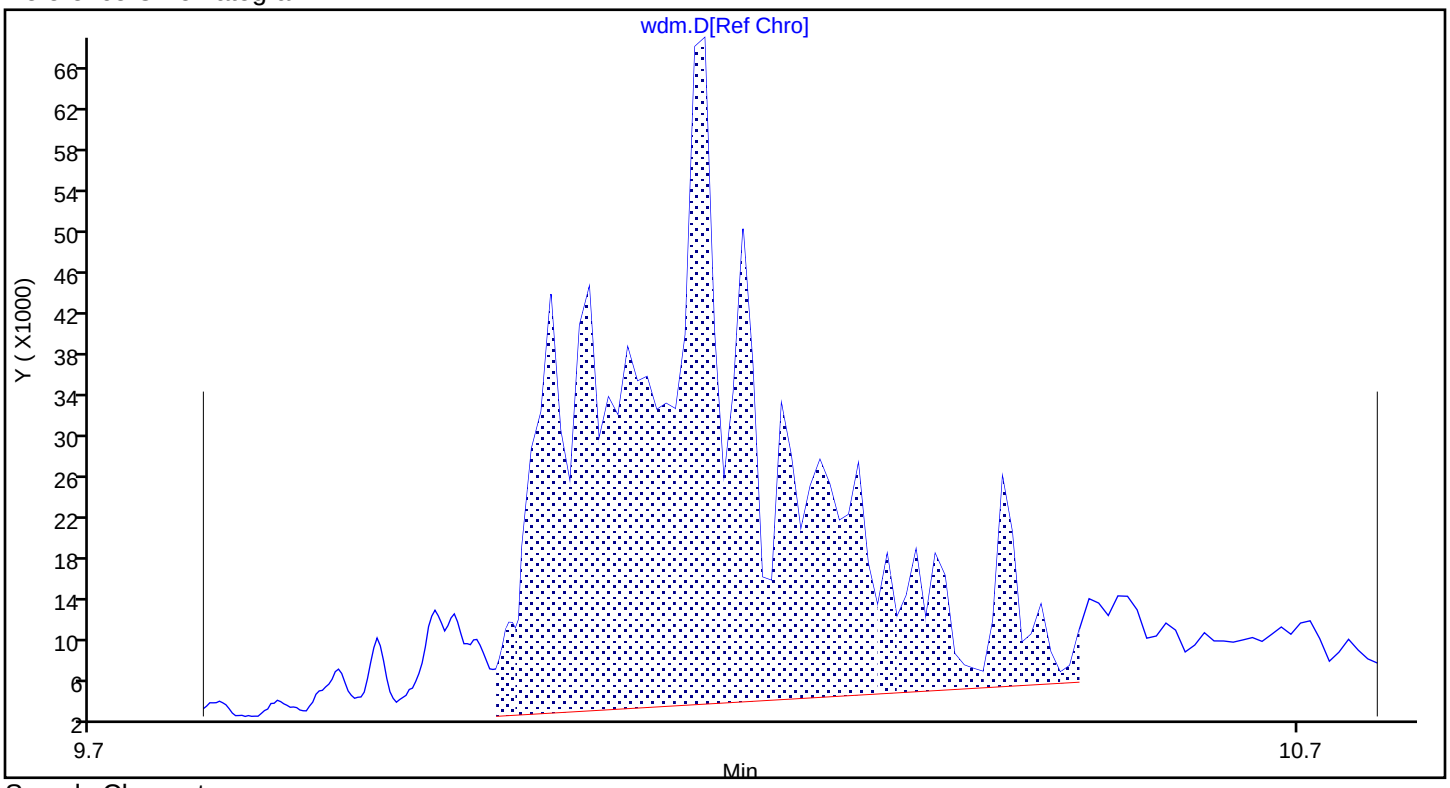
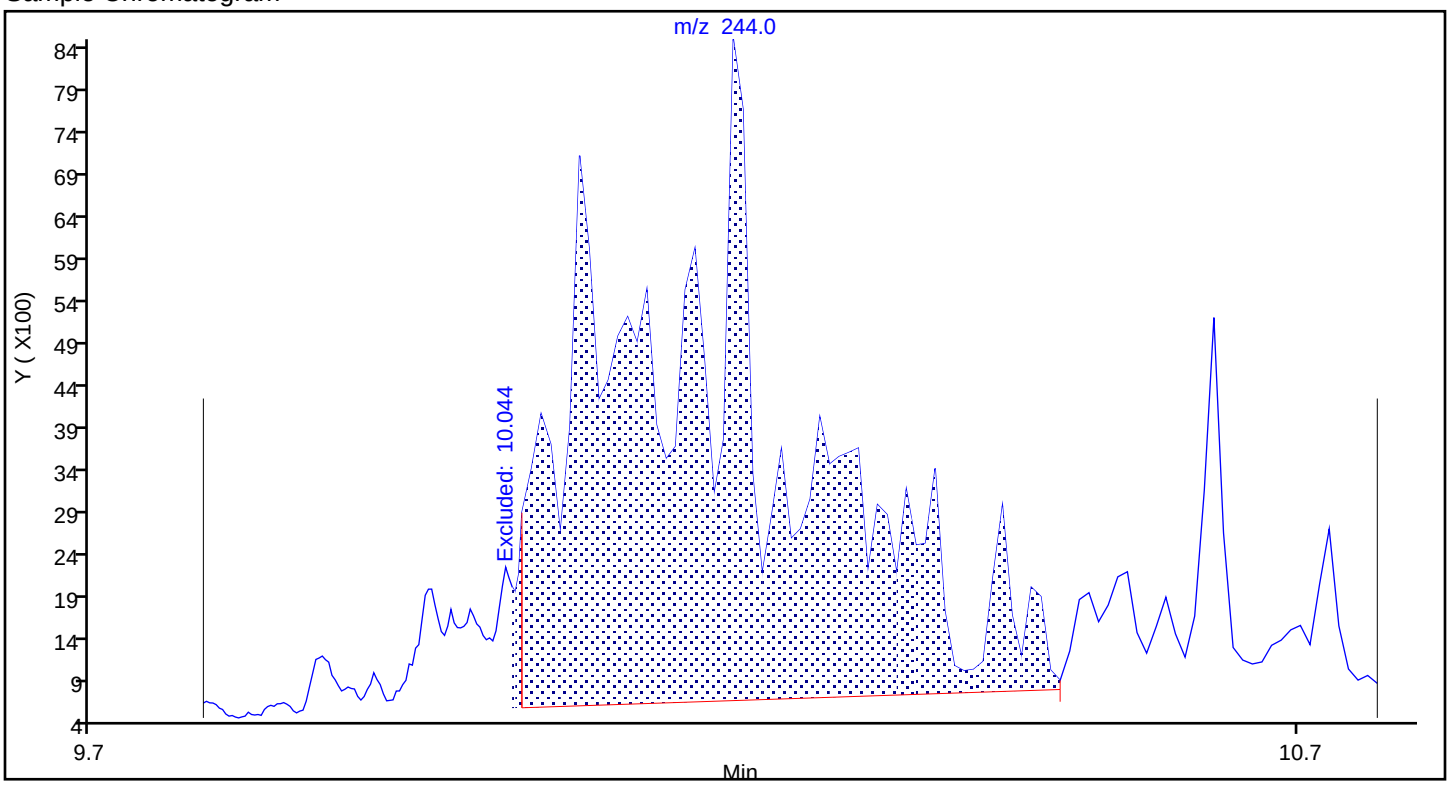
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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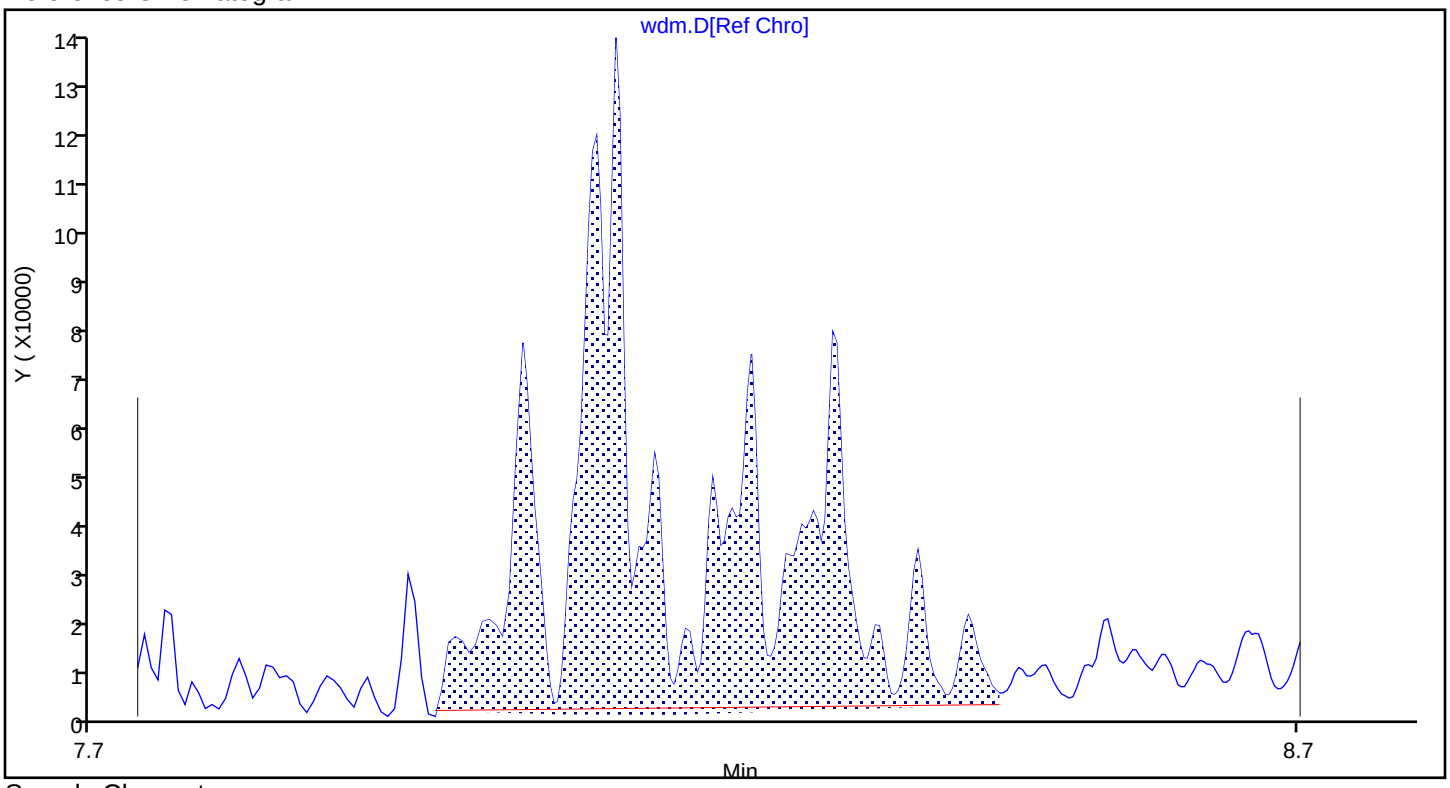
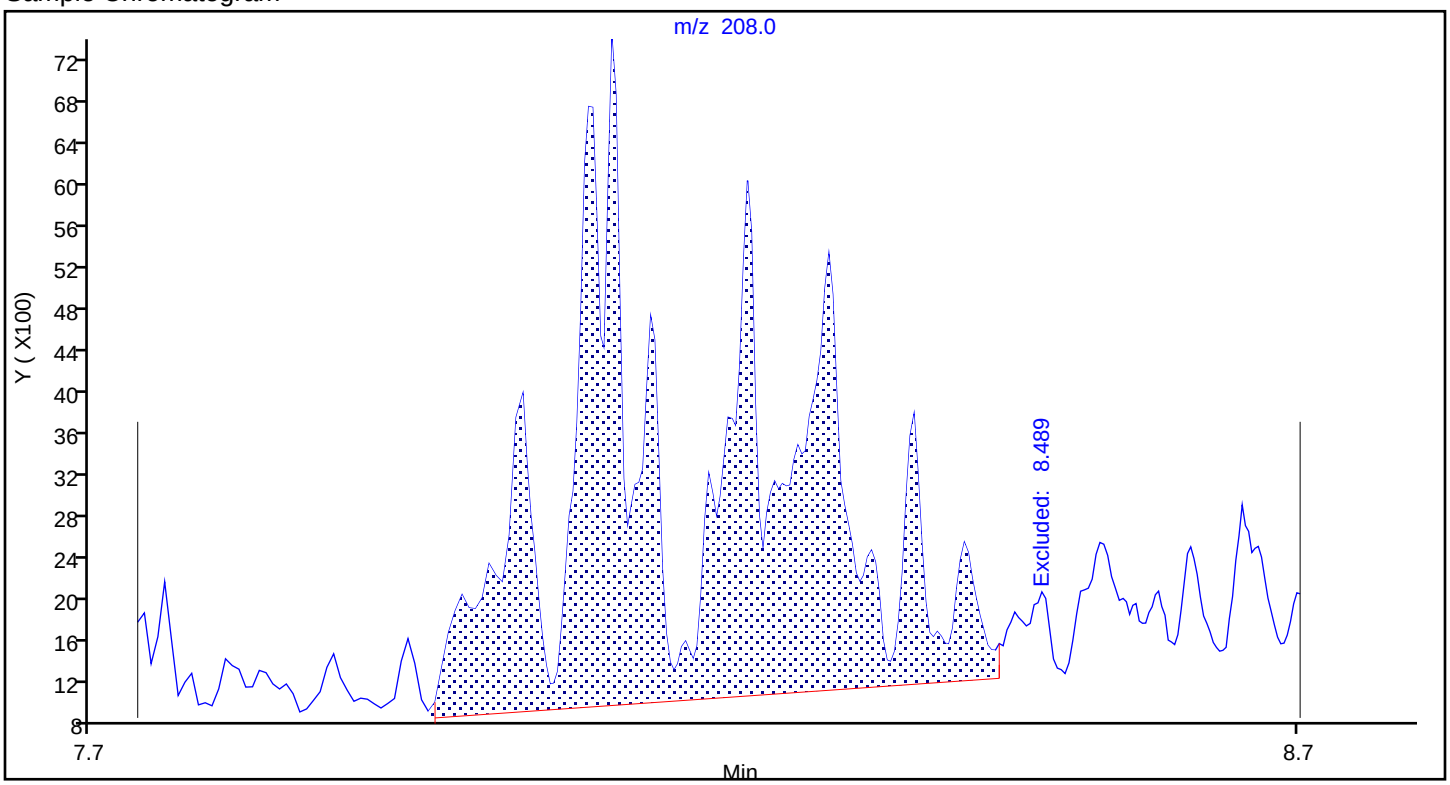
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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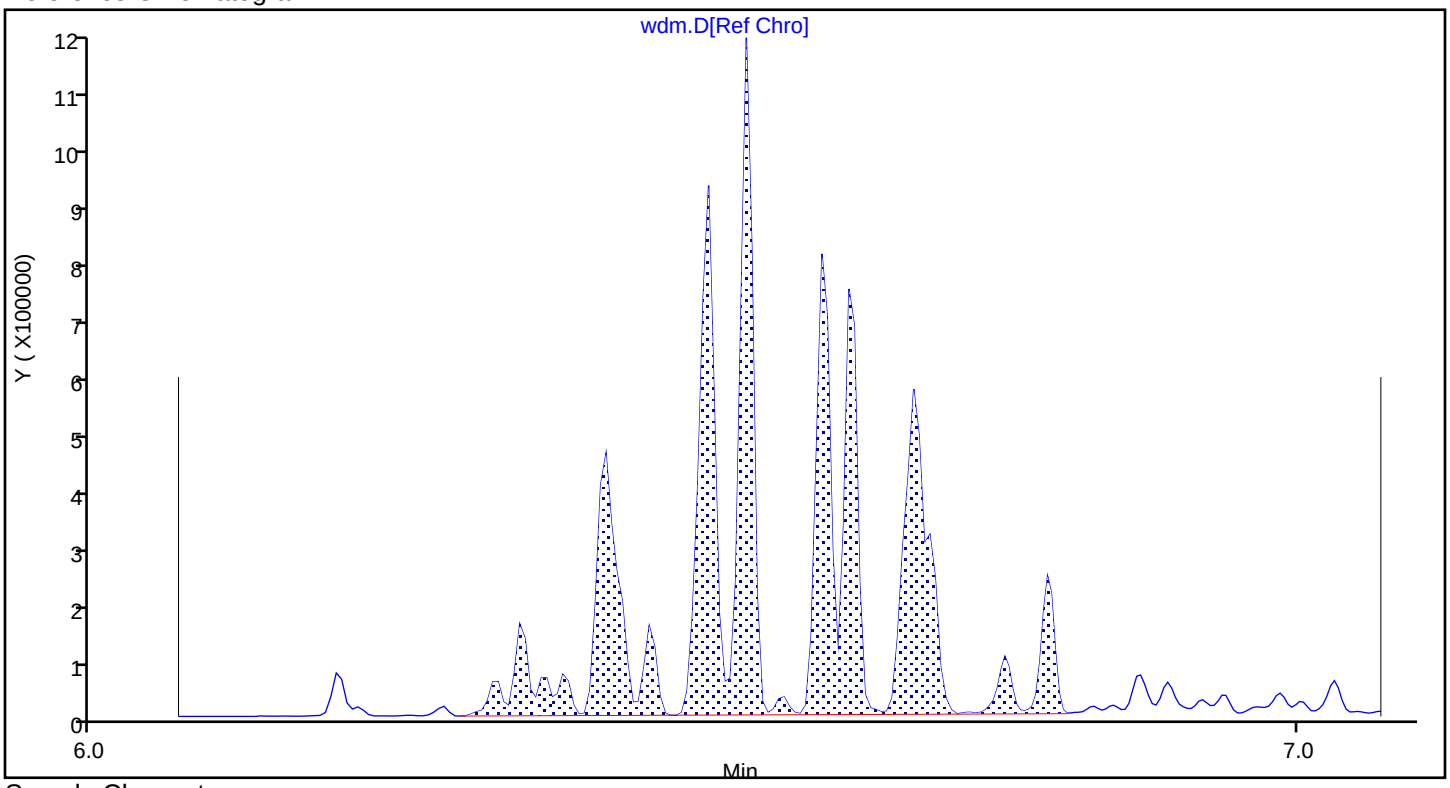
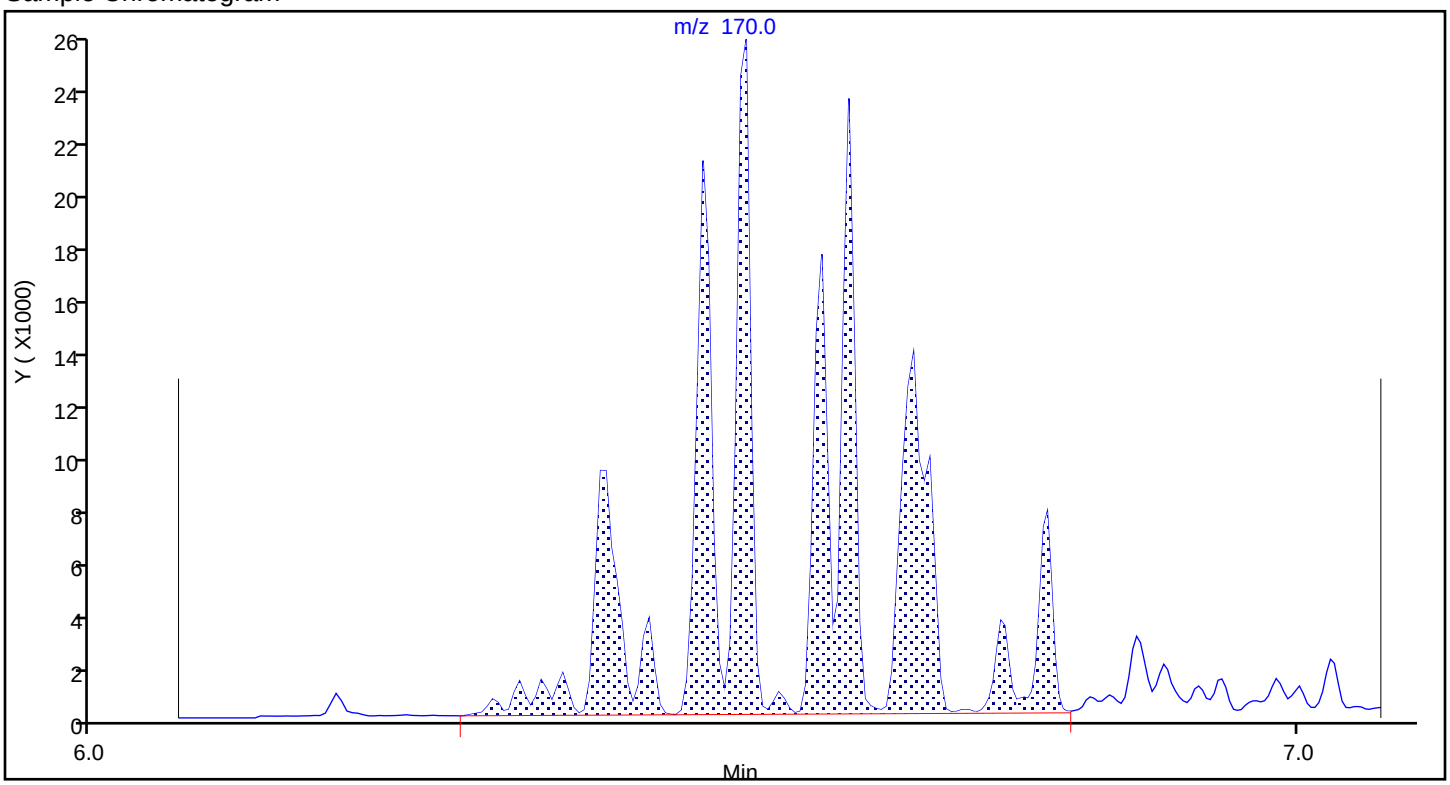
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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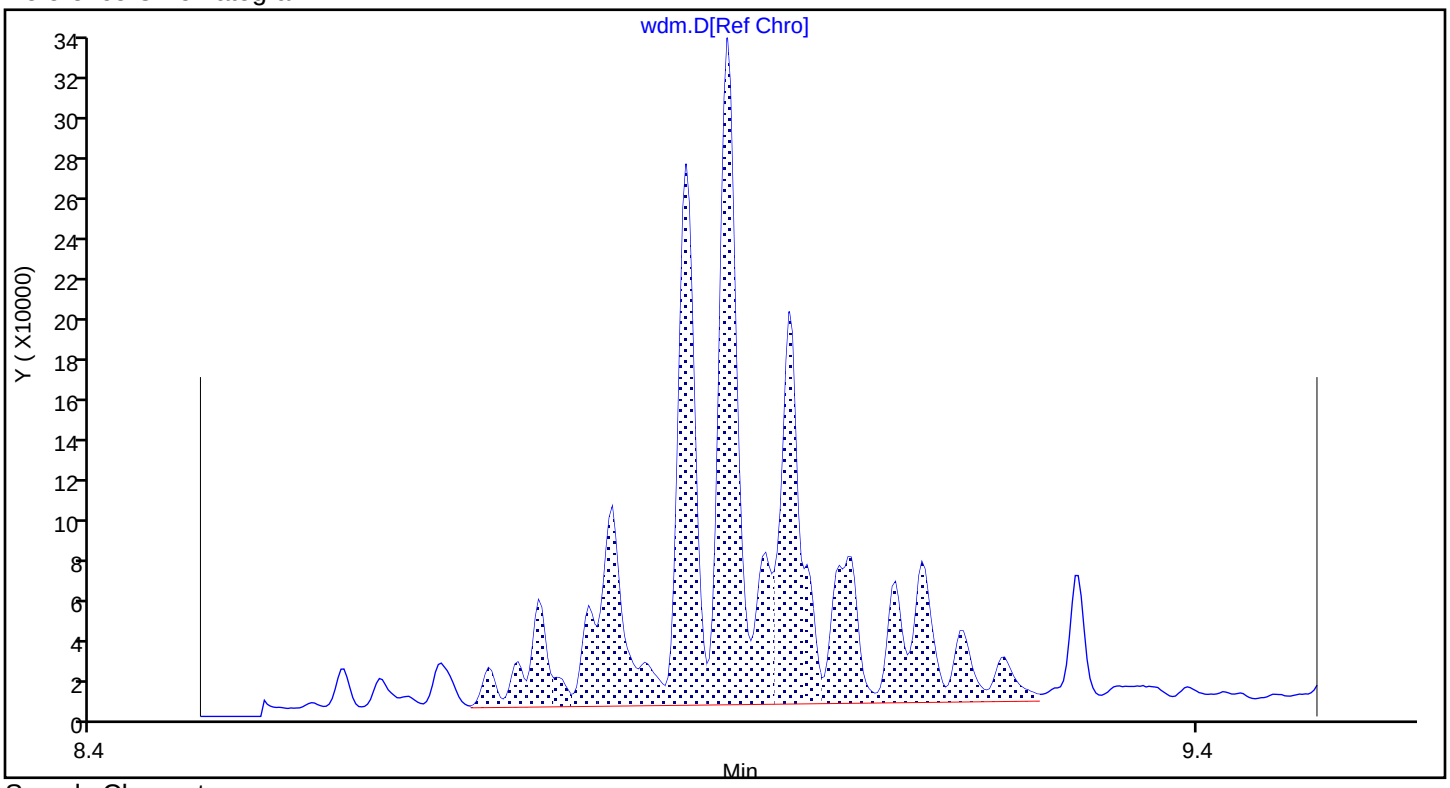
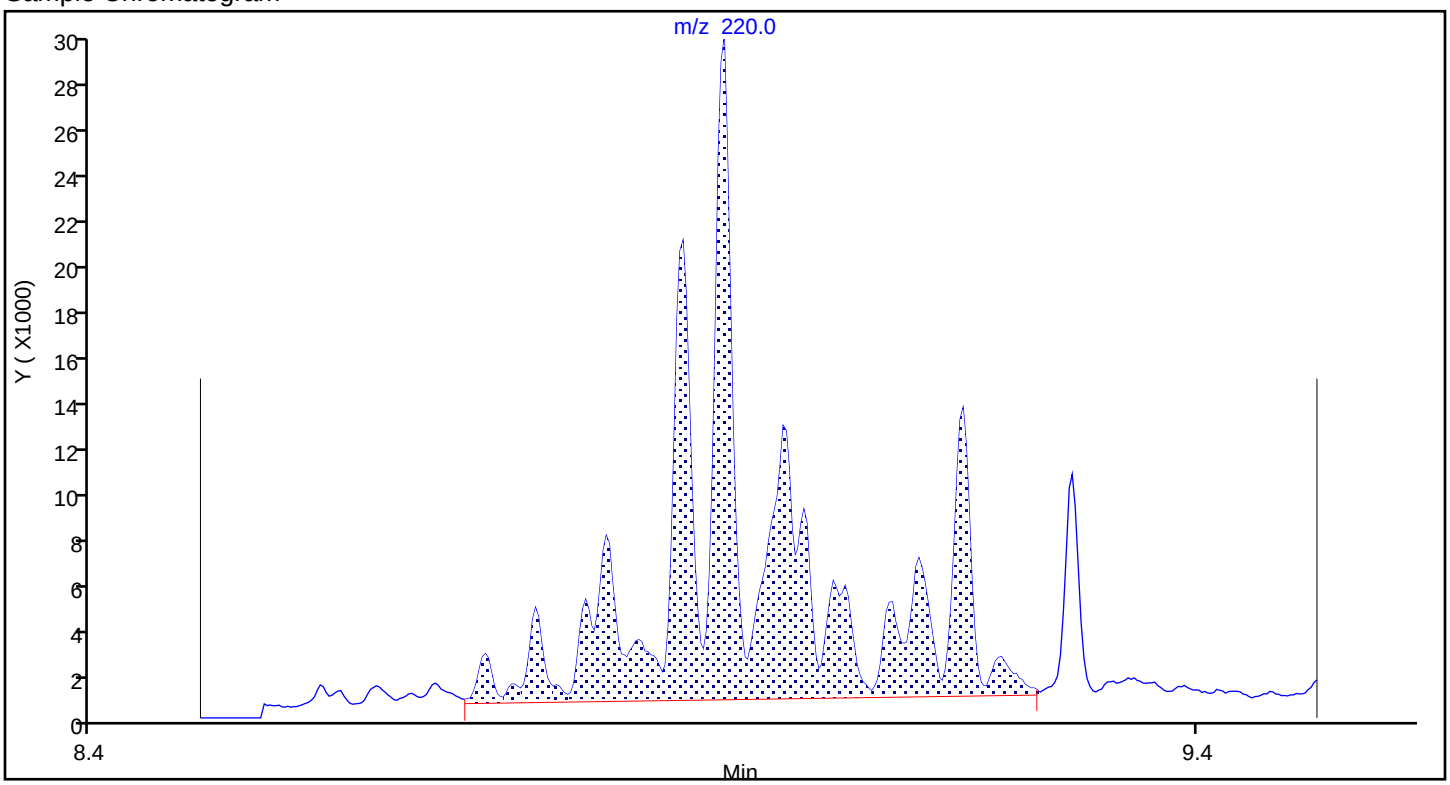
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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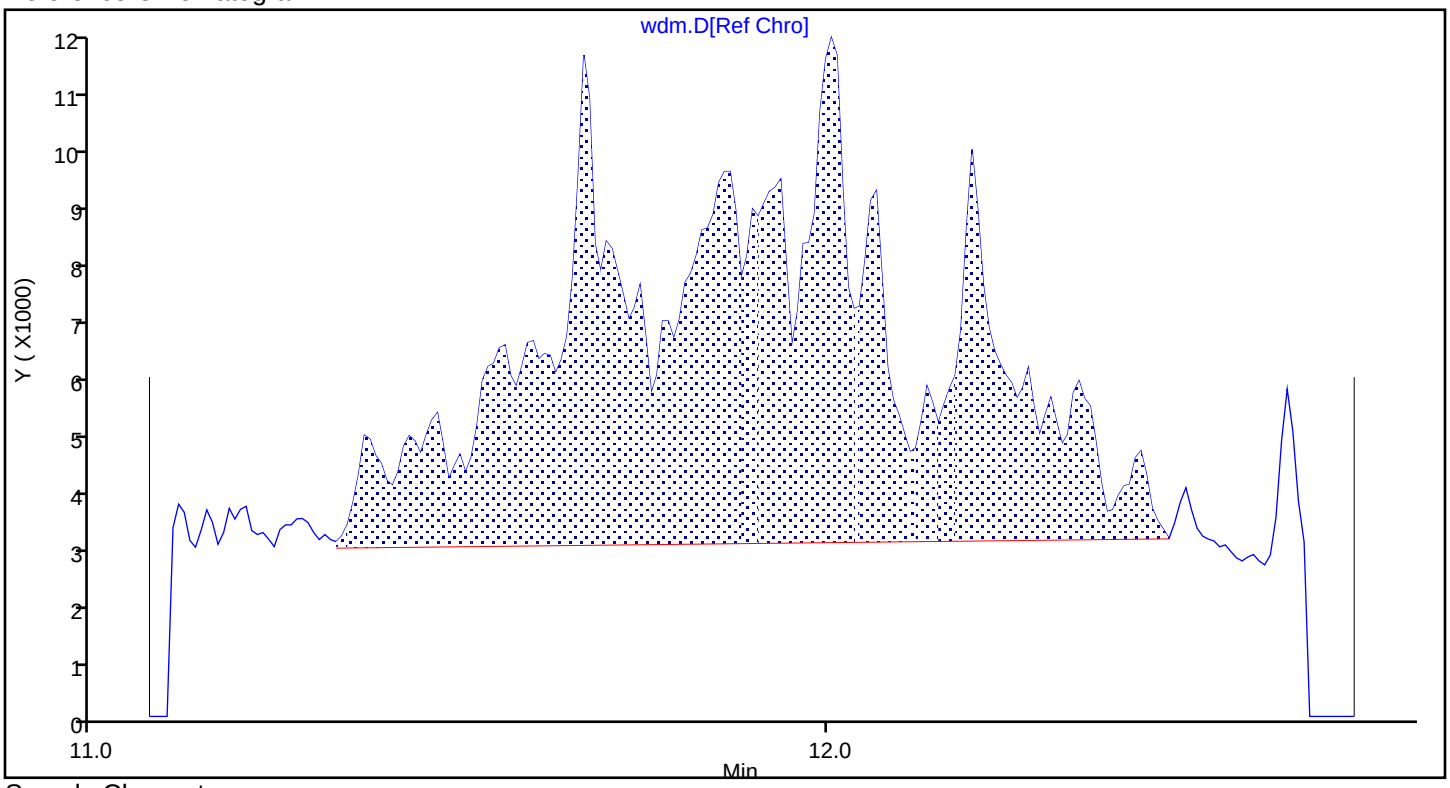
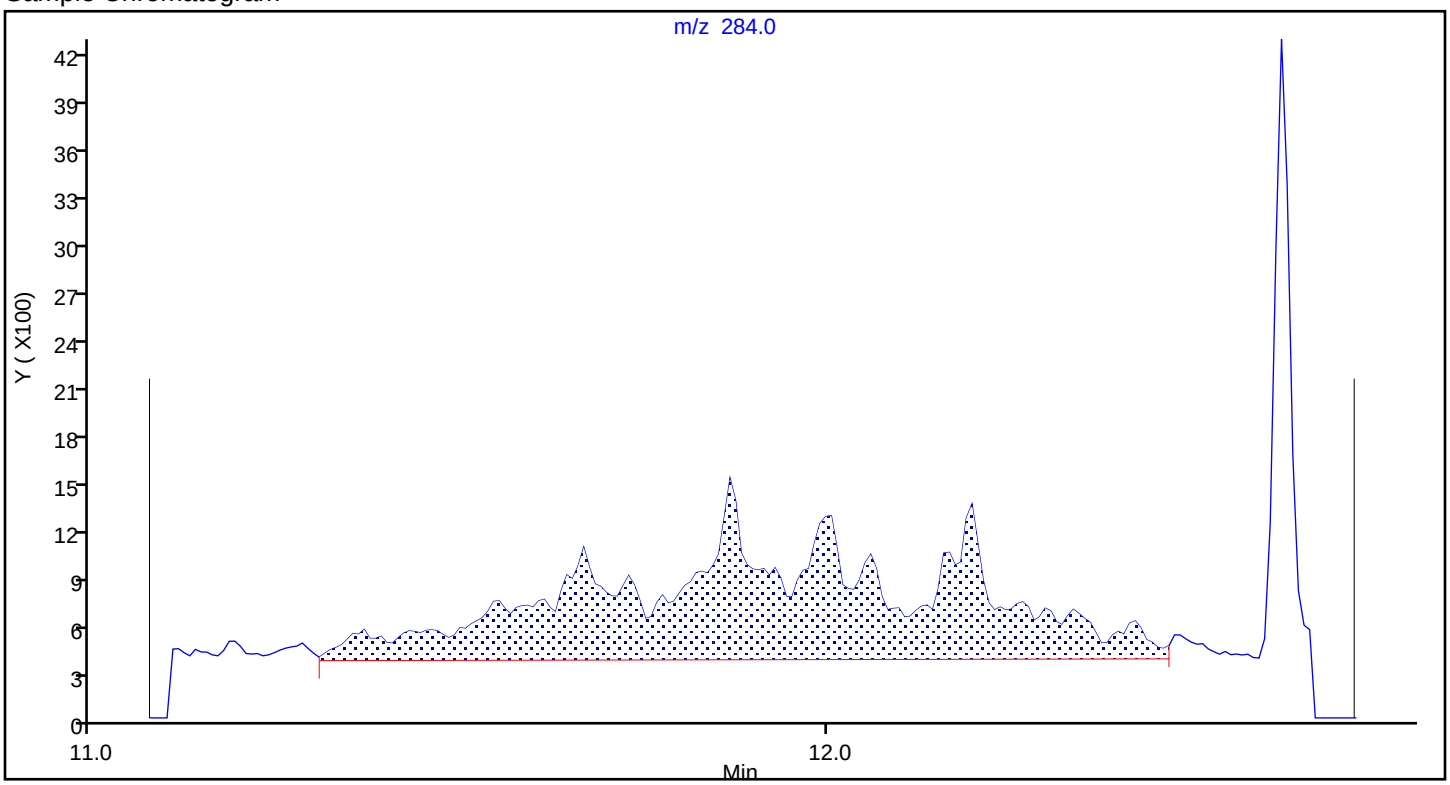
A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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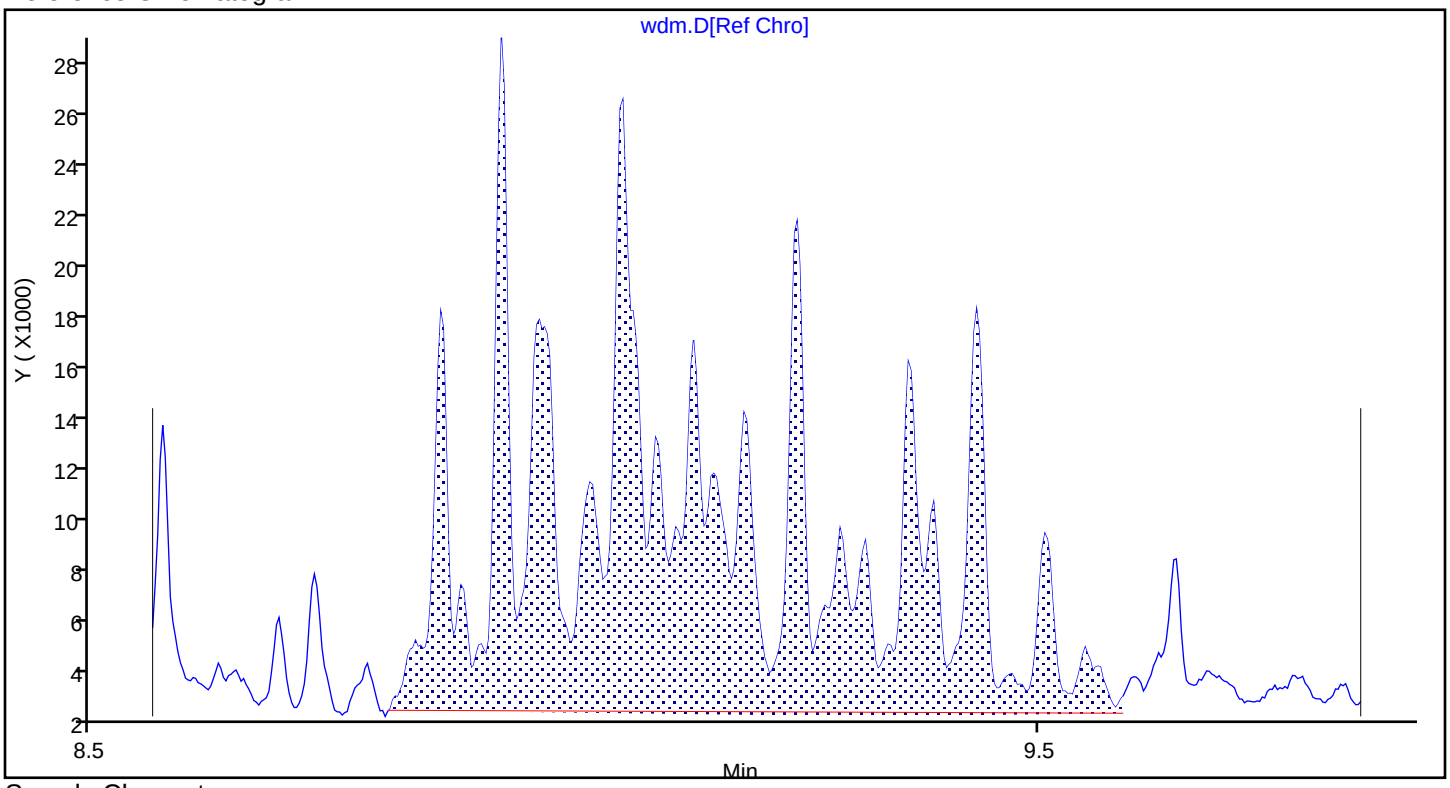
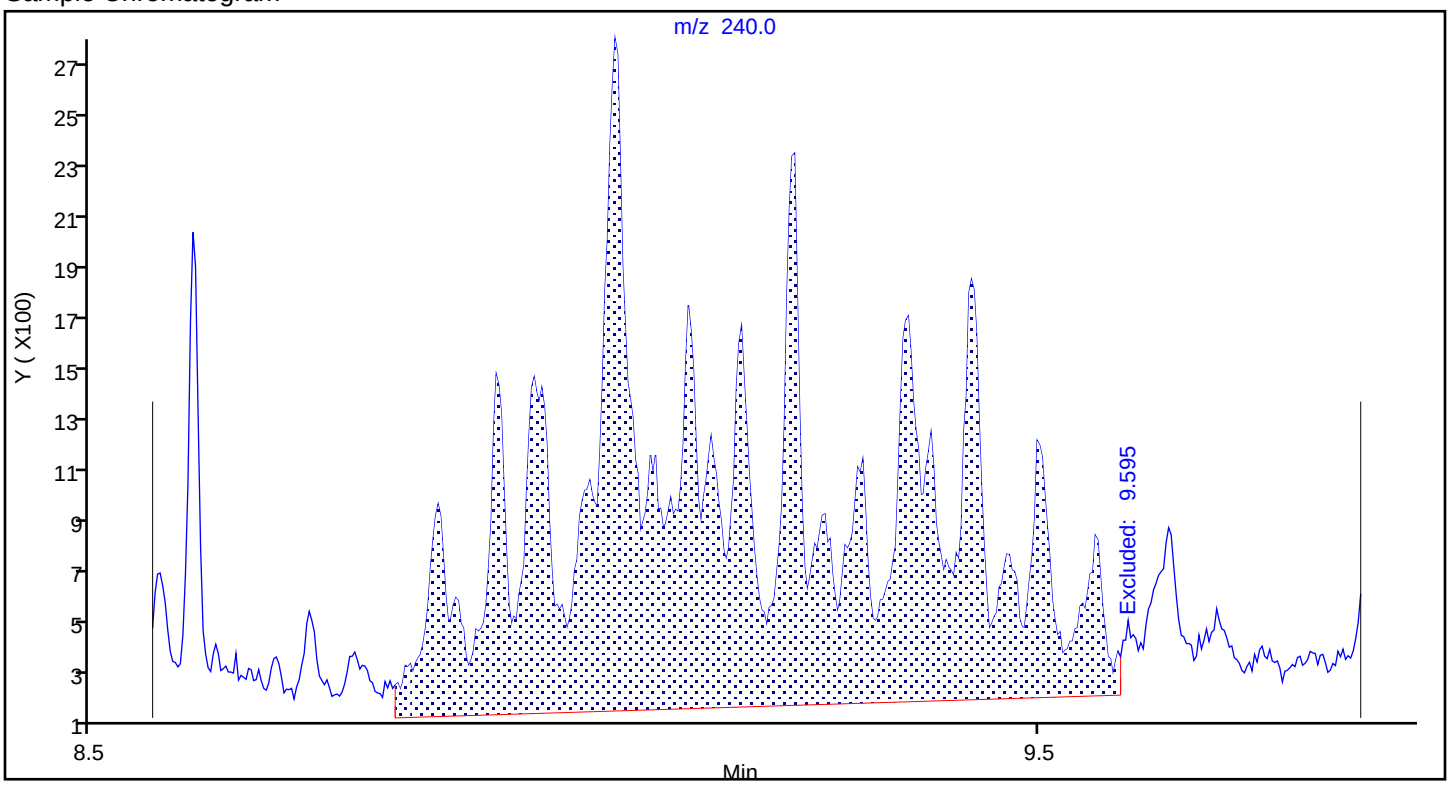
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
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Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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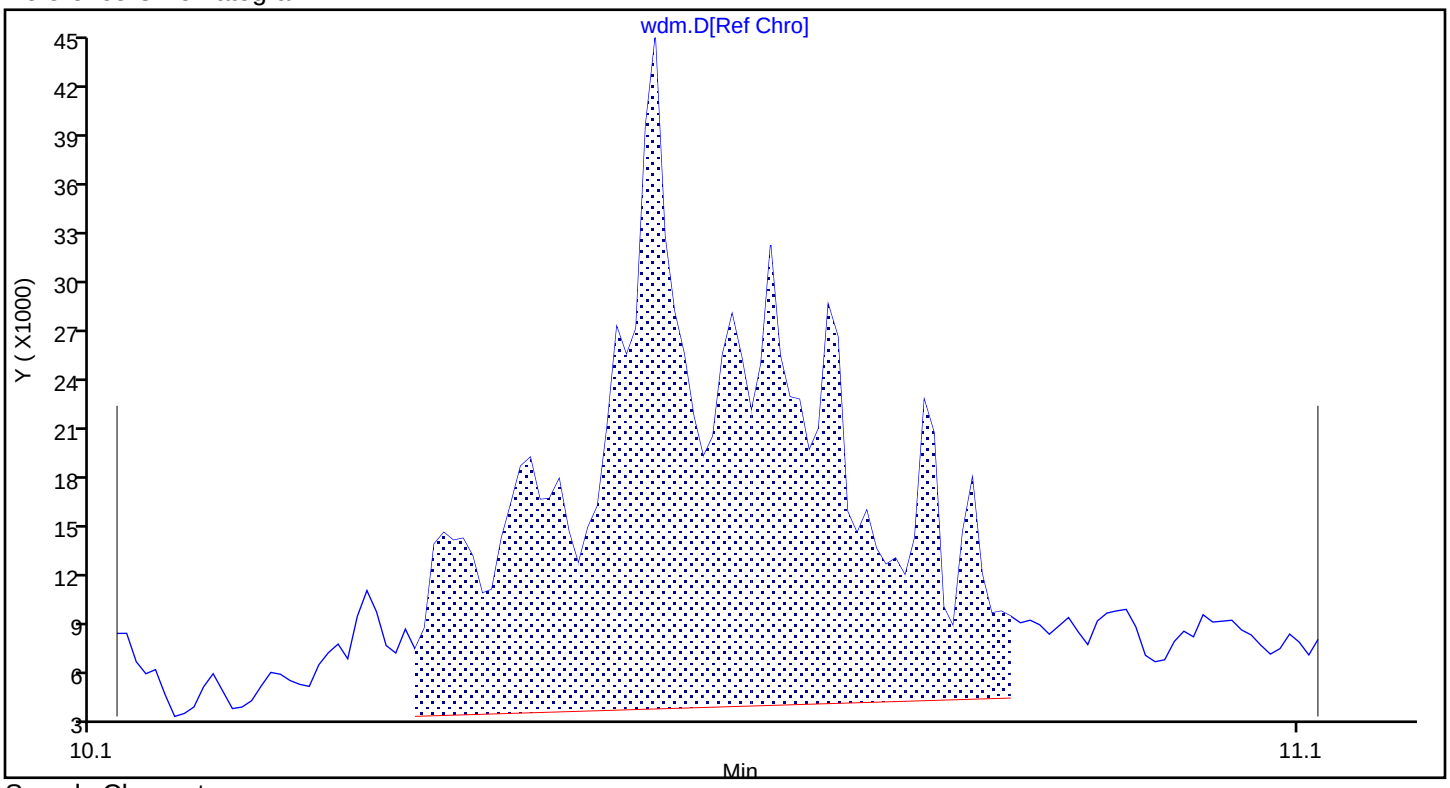
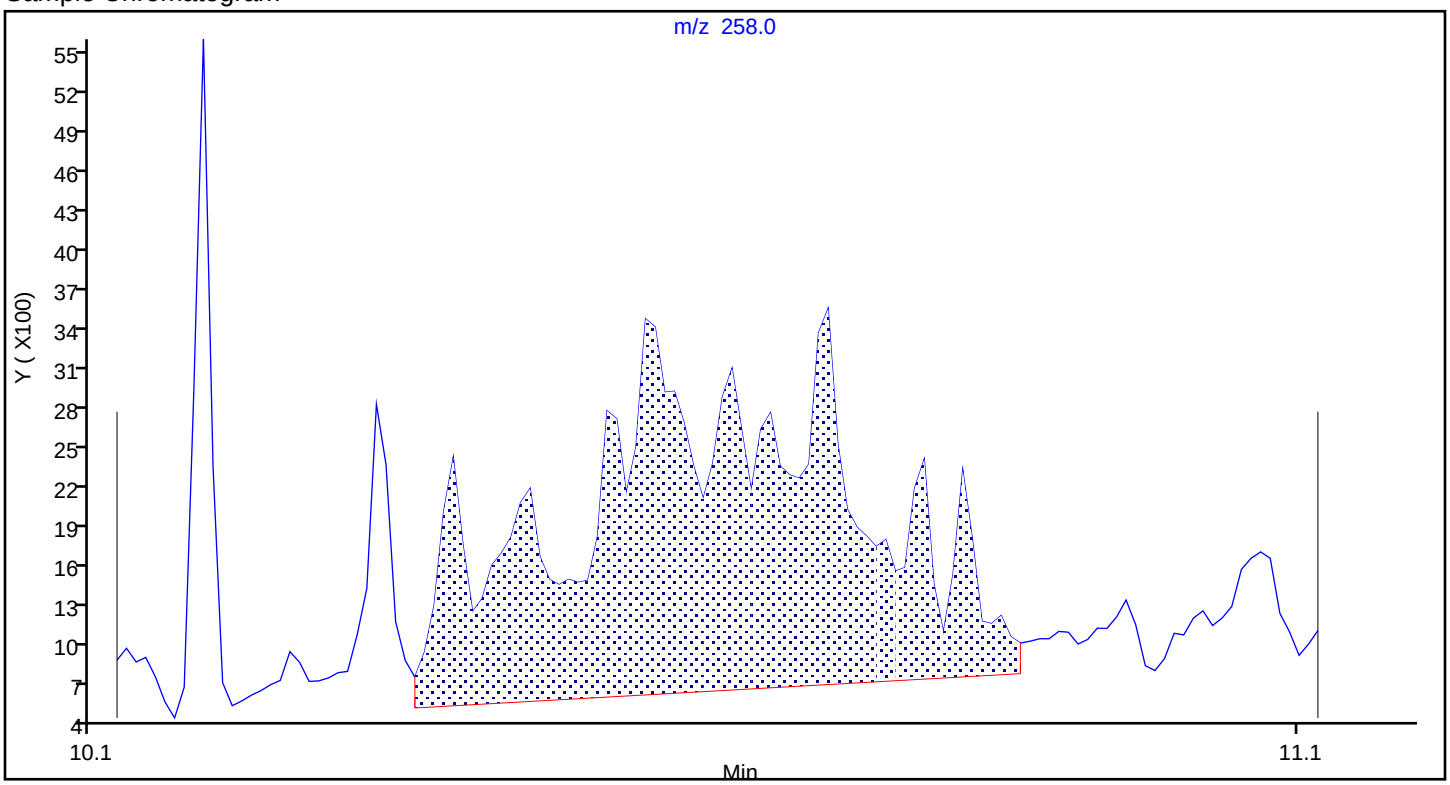
A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



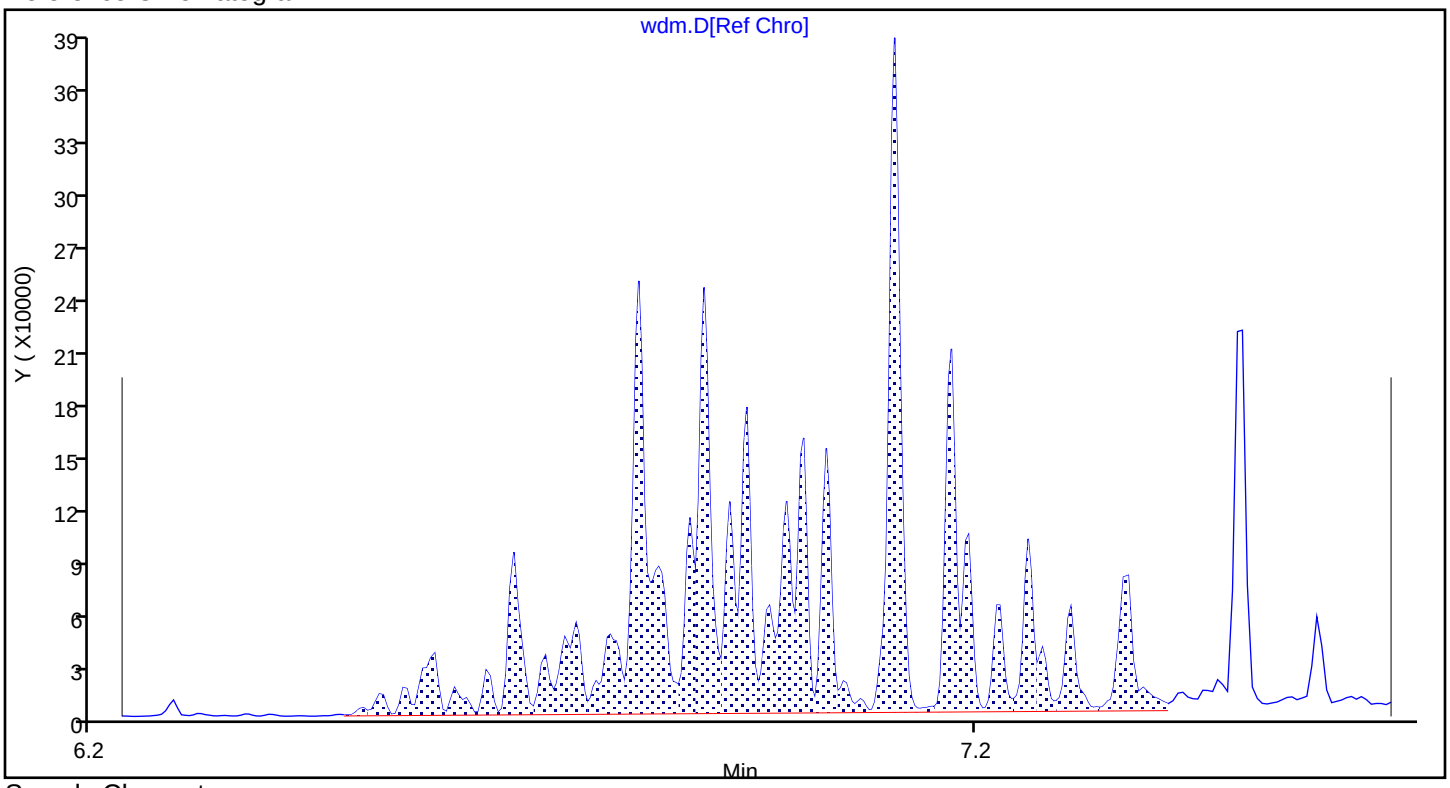
Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

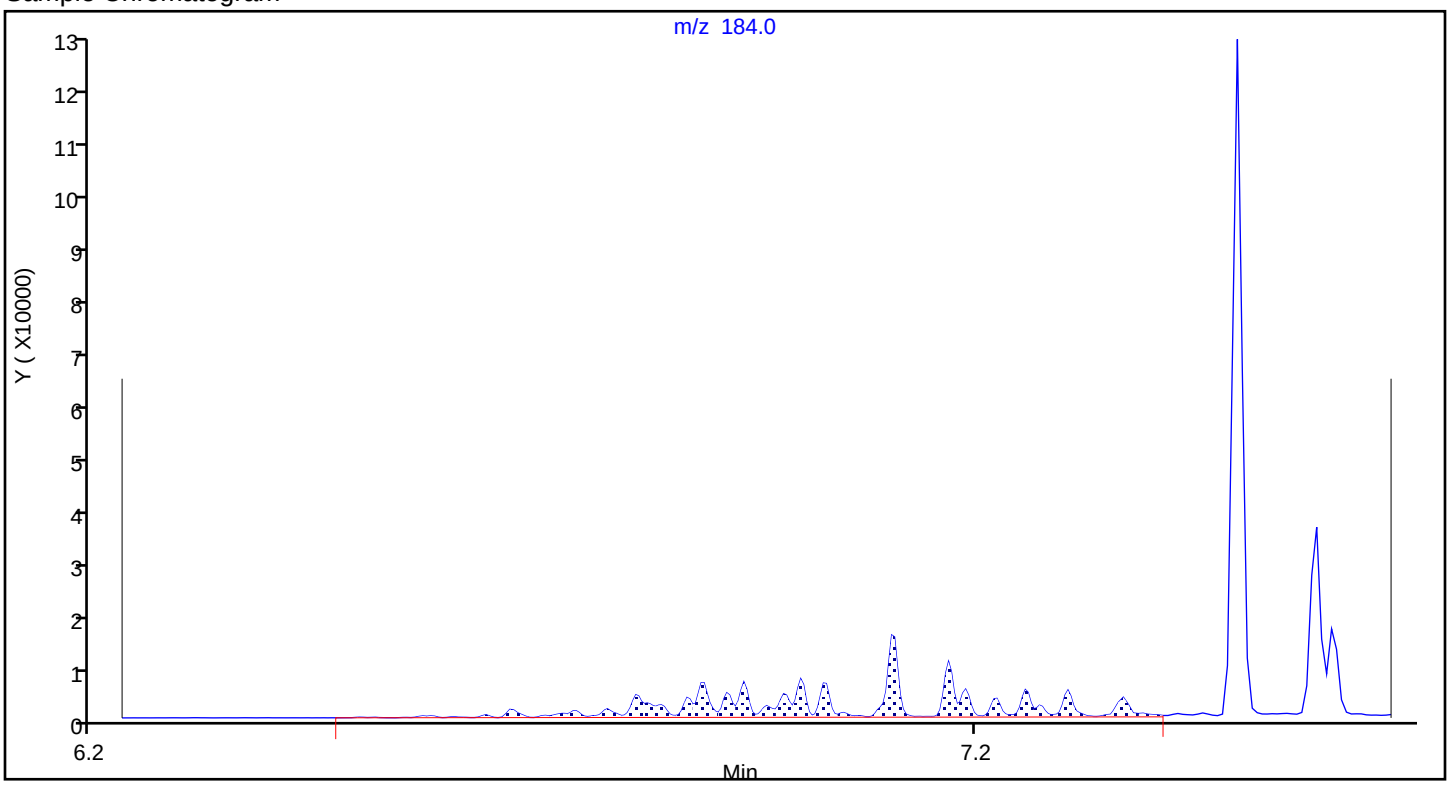
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



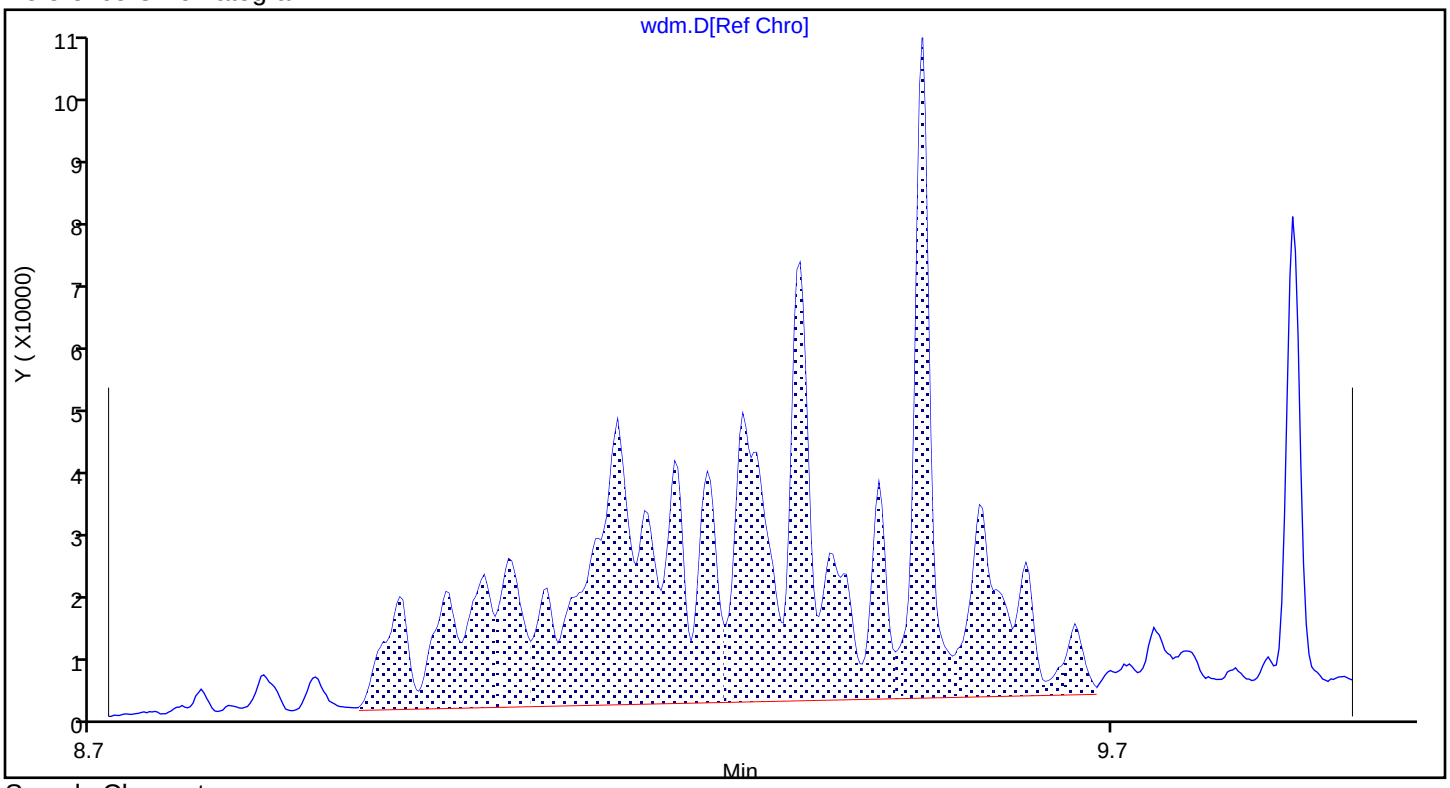
Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

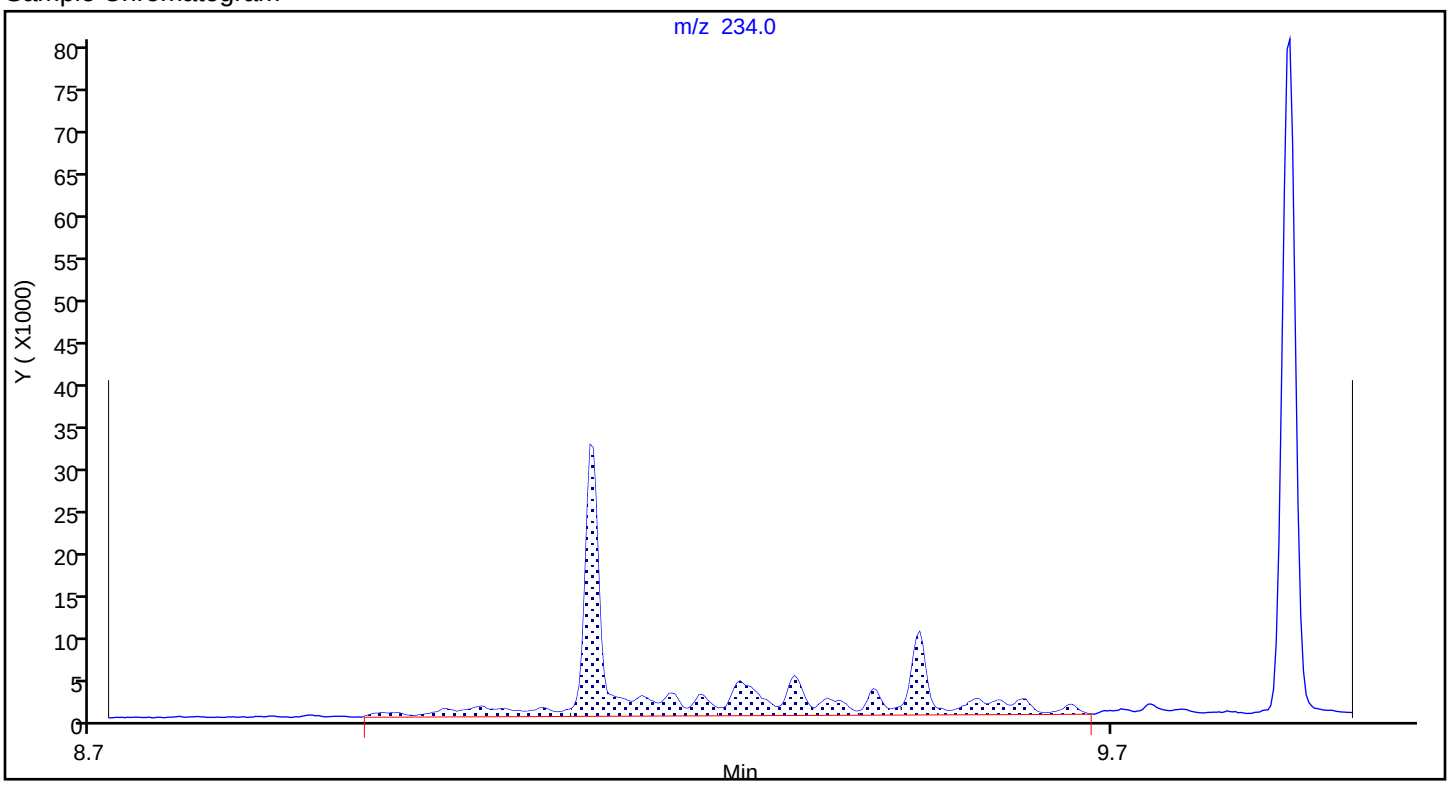
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

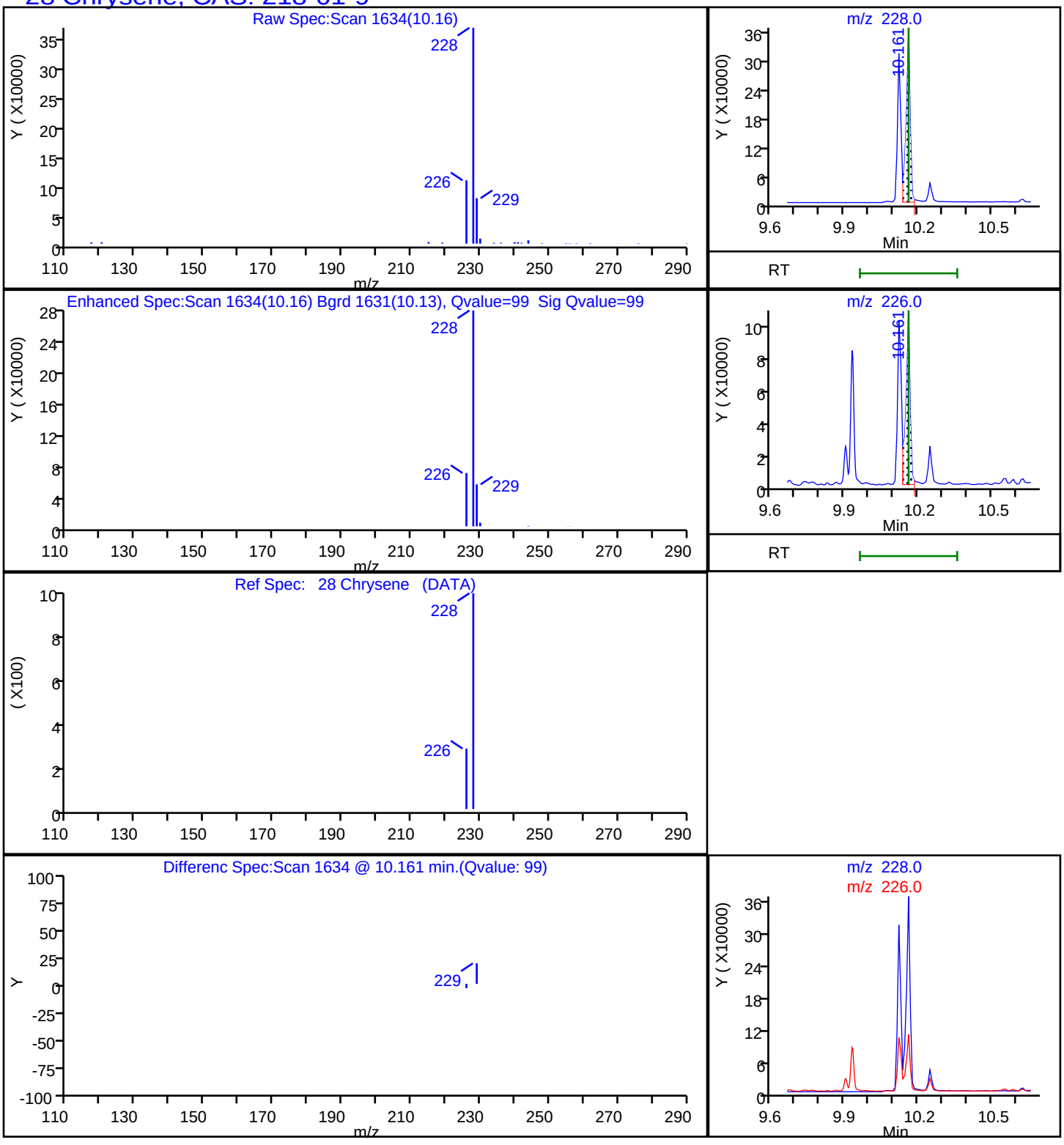


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

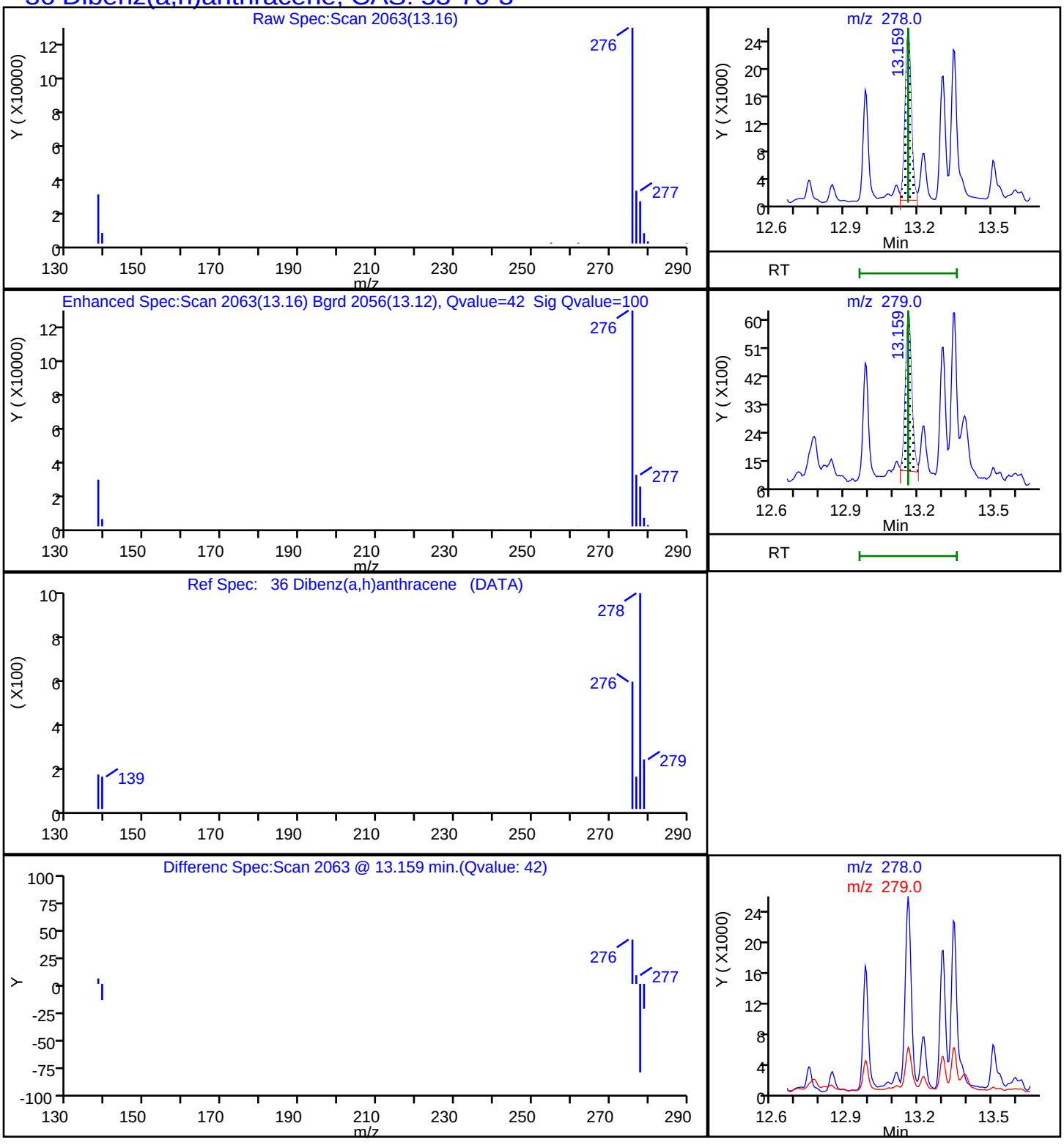


Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

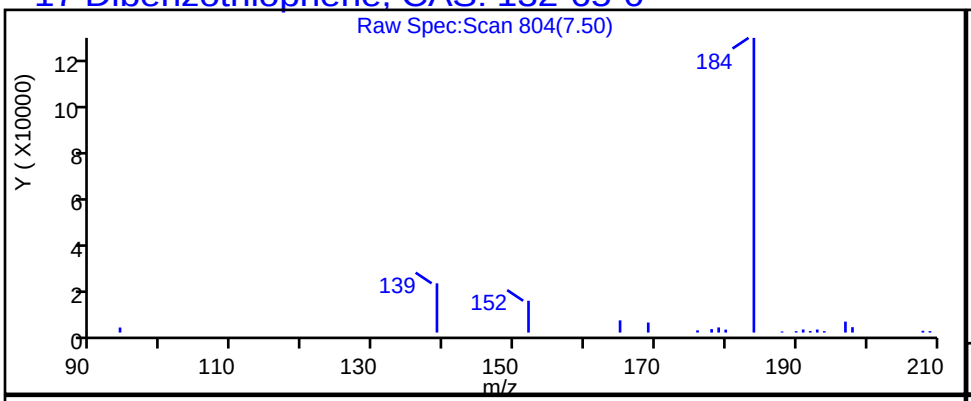


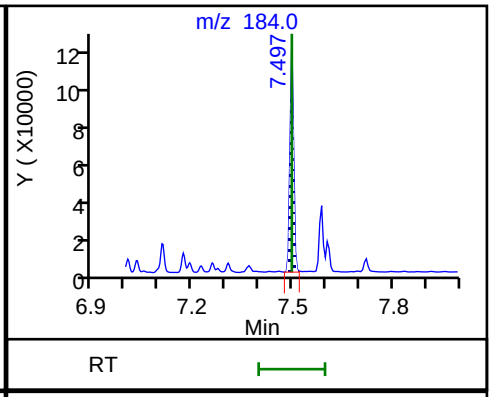
Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

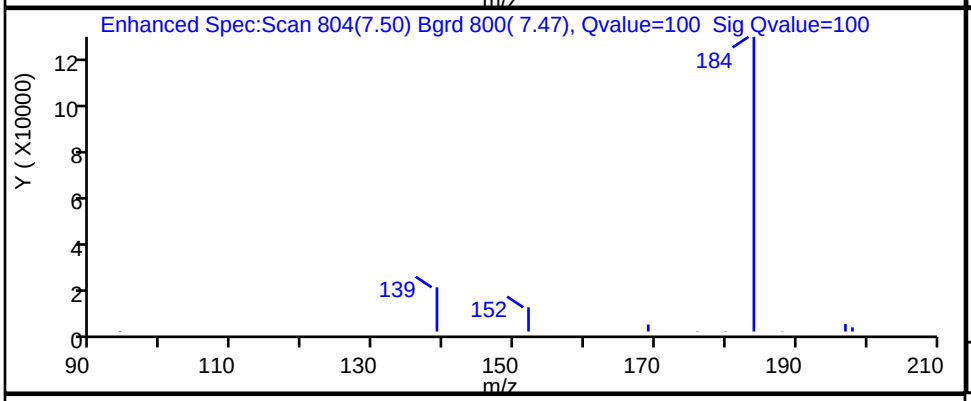
Eurofins TestAmerica, Knoxville

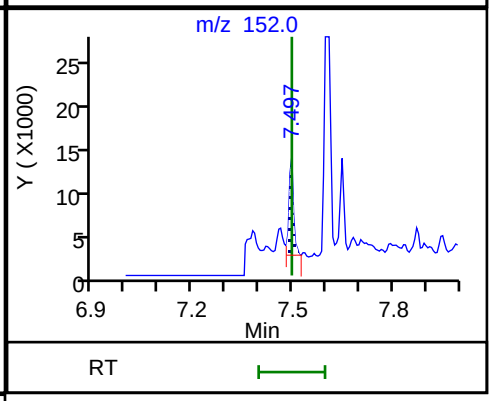
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

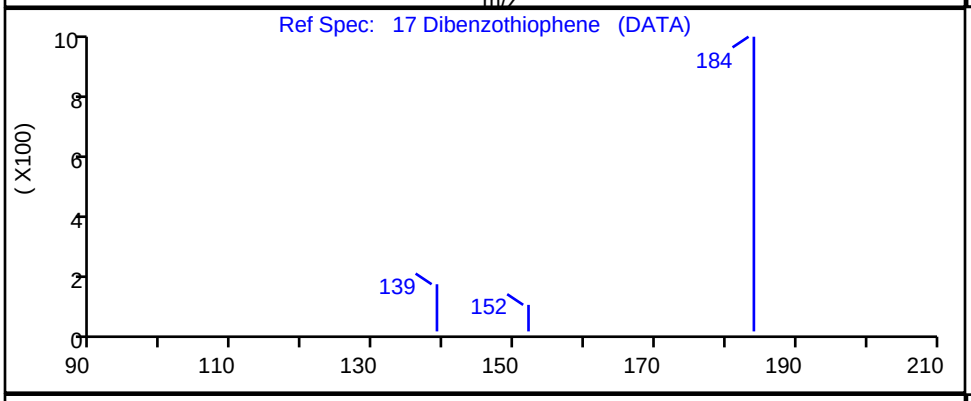
17 Dibenzothiophene, CAS: 132-65-0

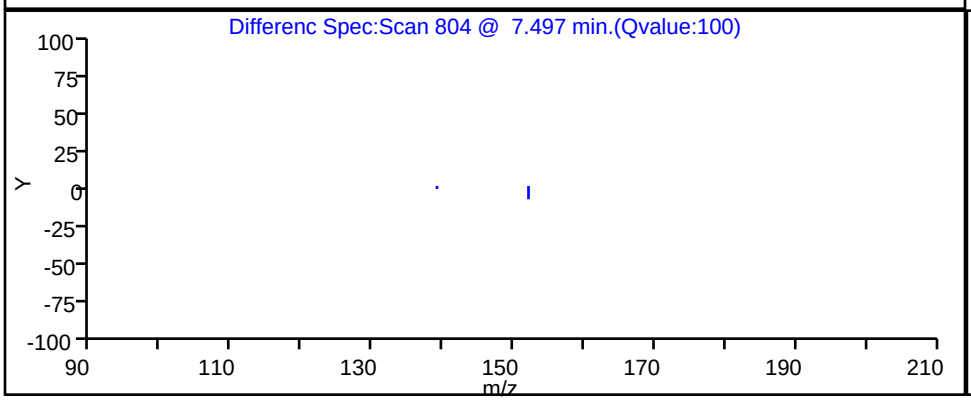


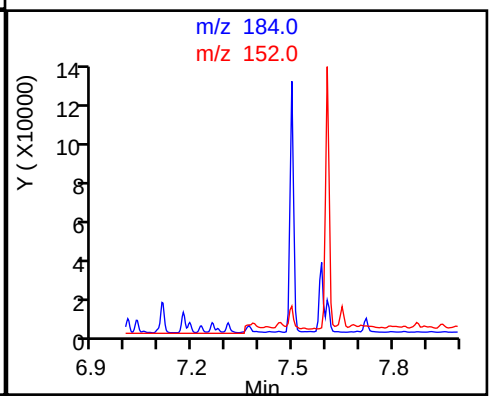










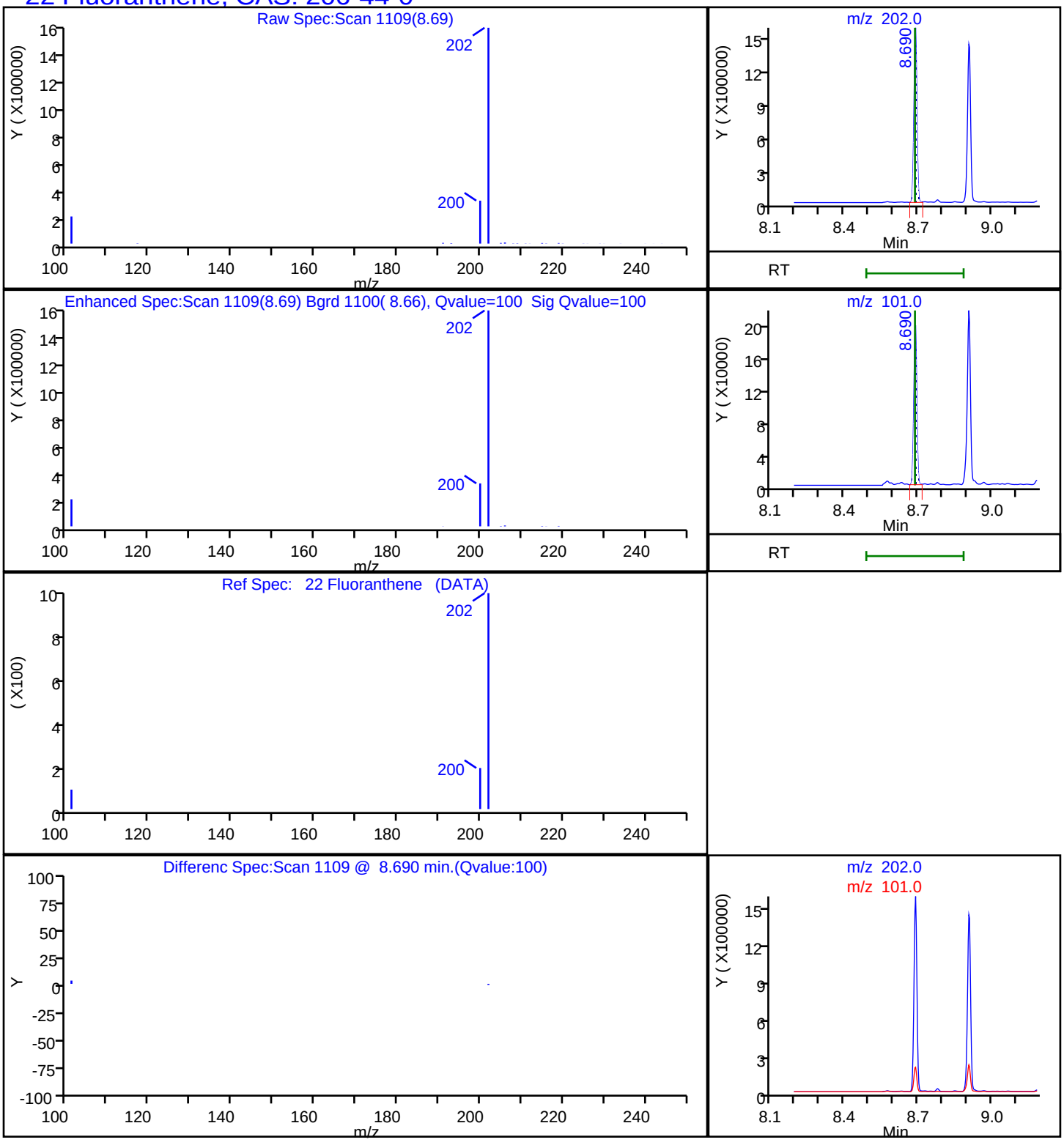


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

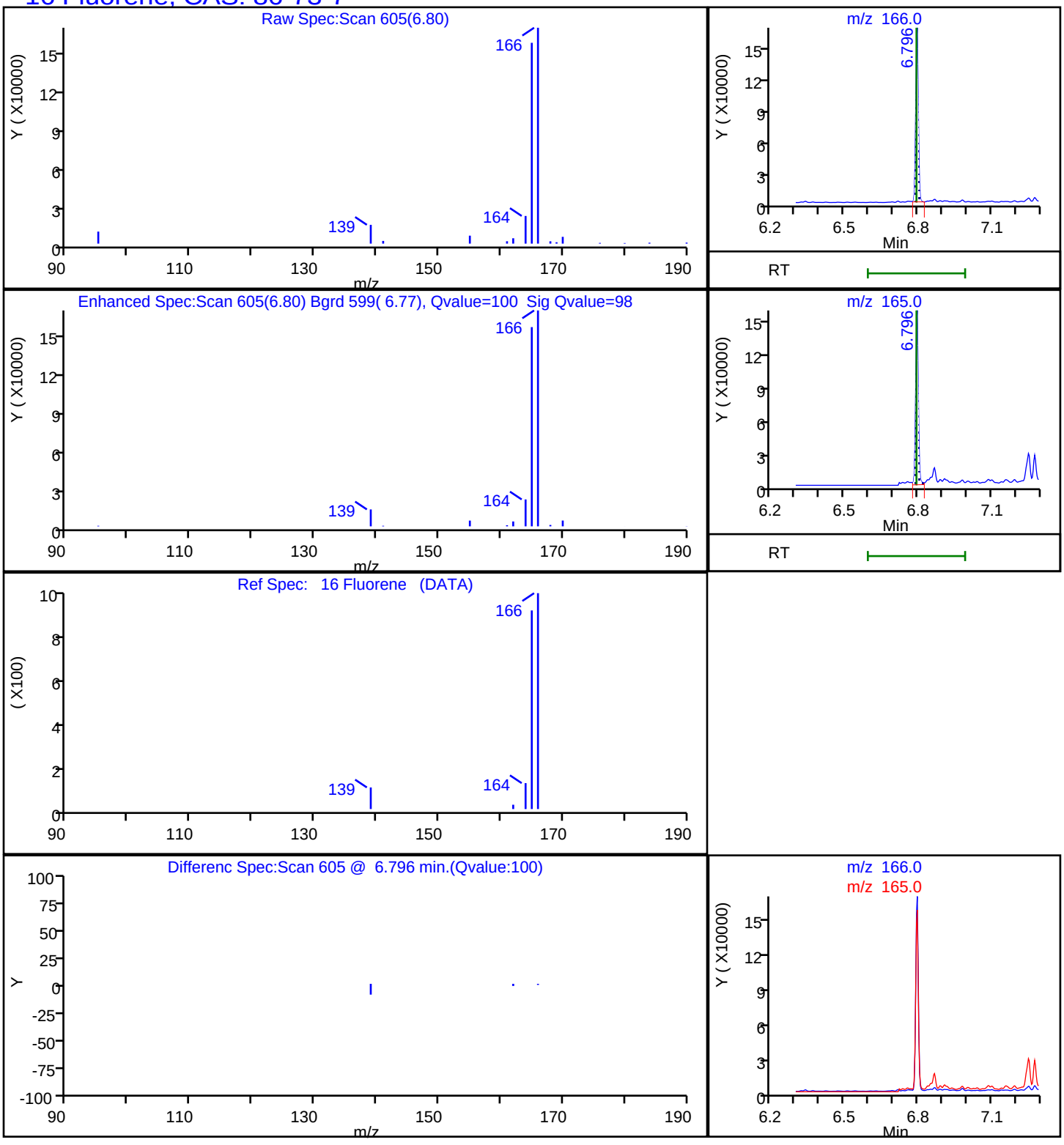


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

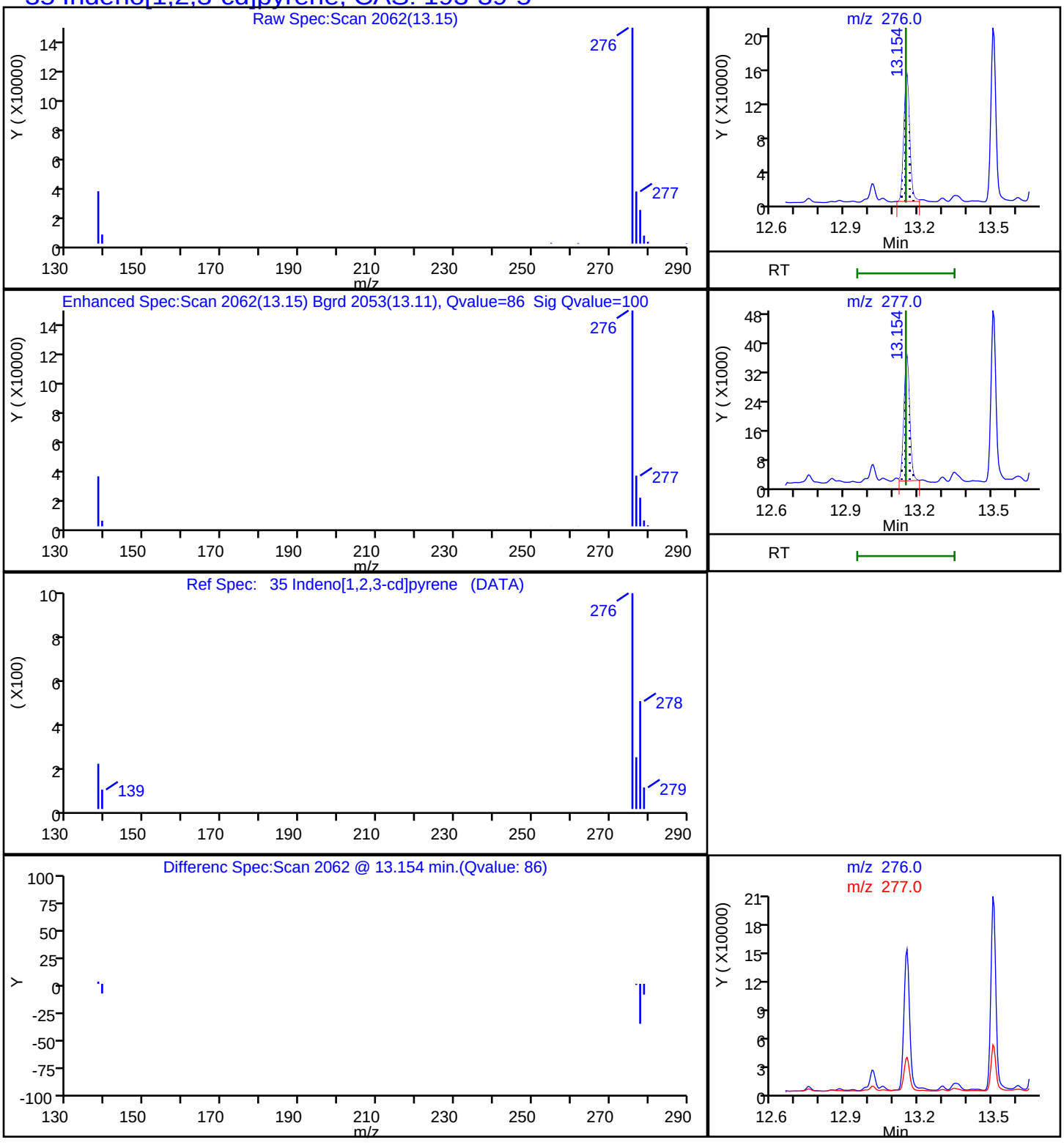


Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

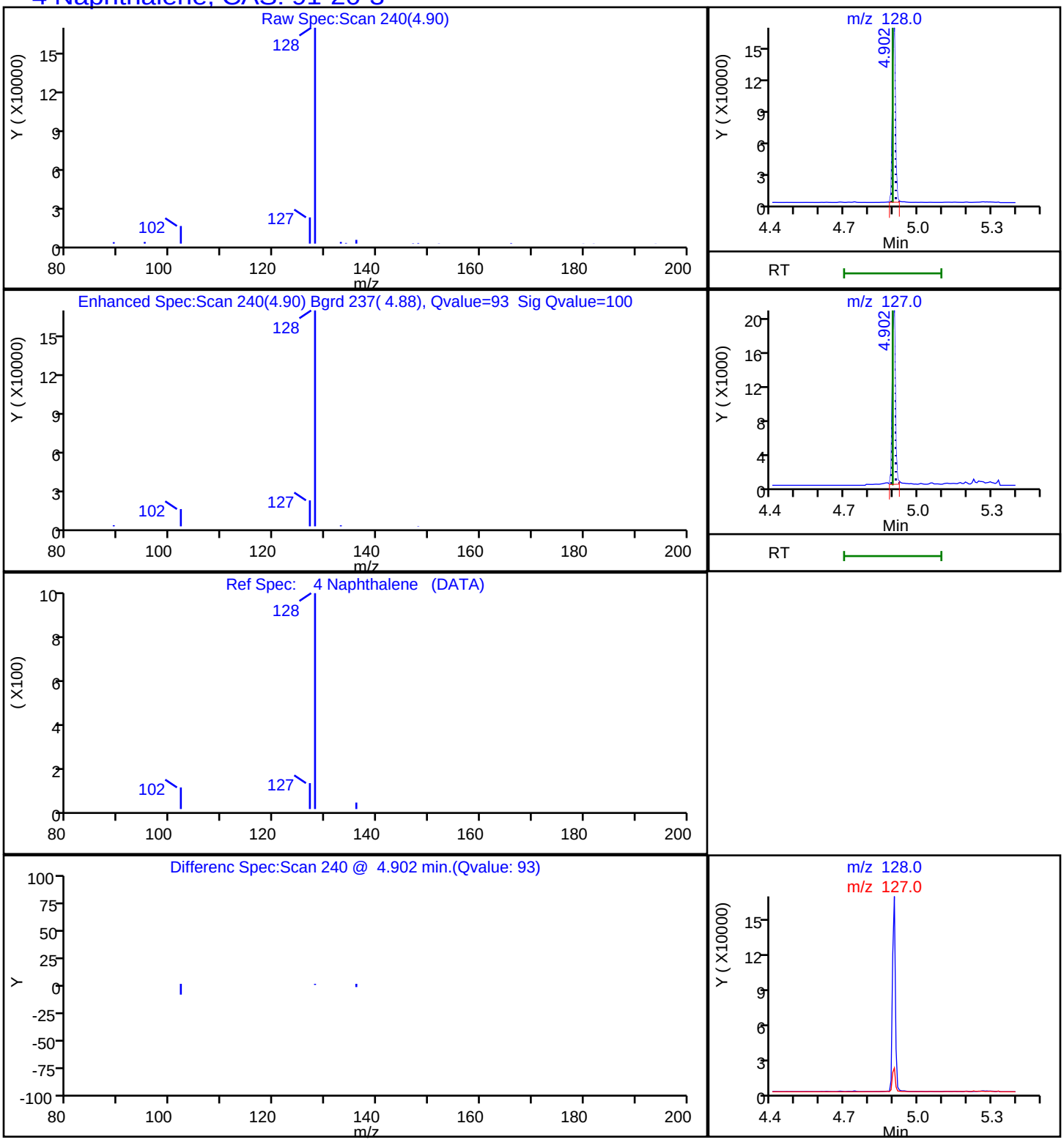


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

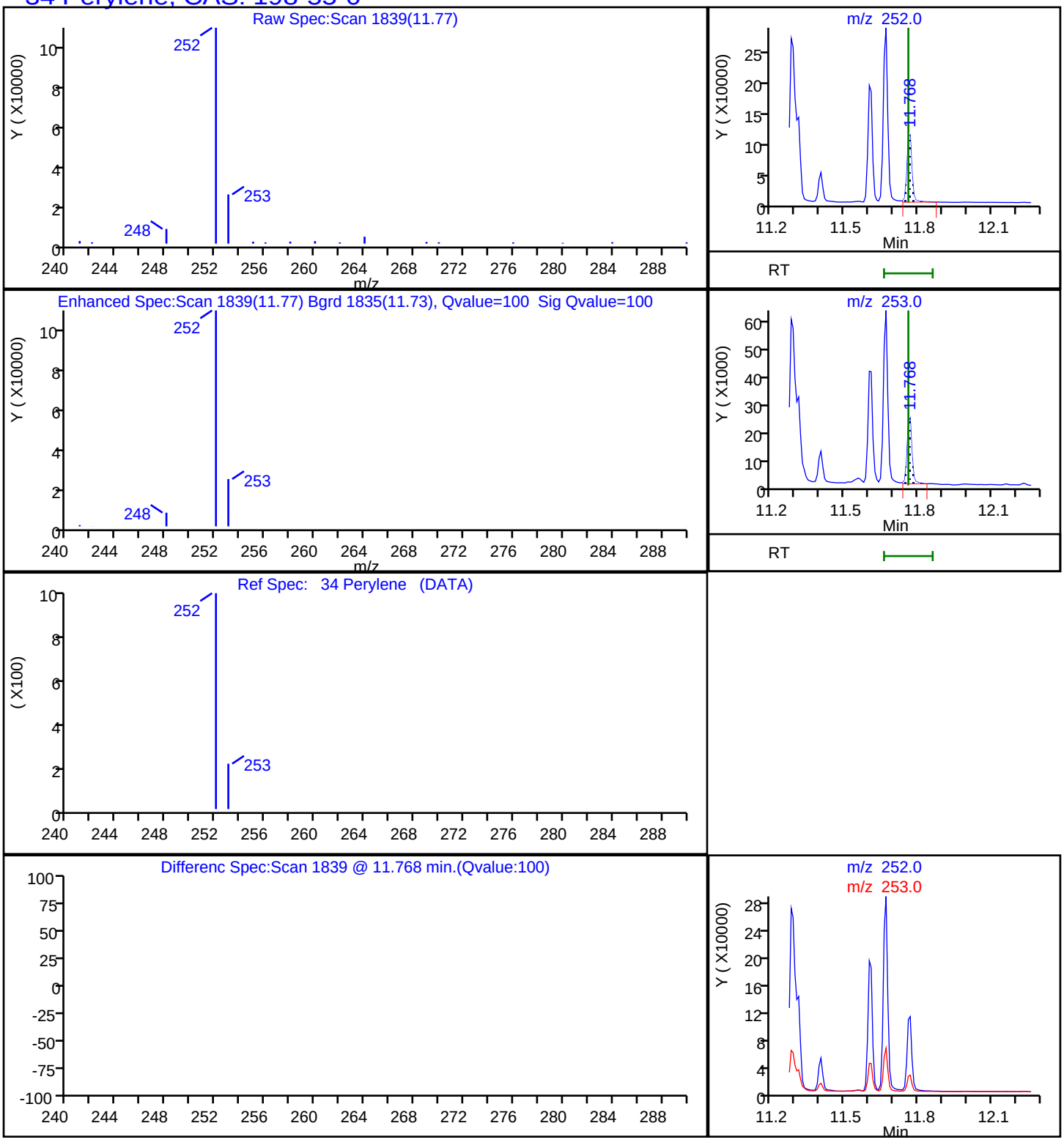


Report Date: 31-Aug-2019 11:48:47 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0

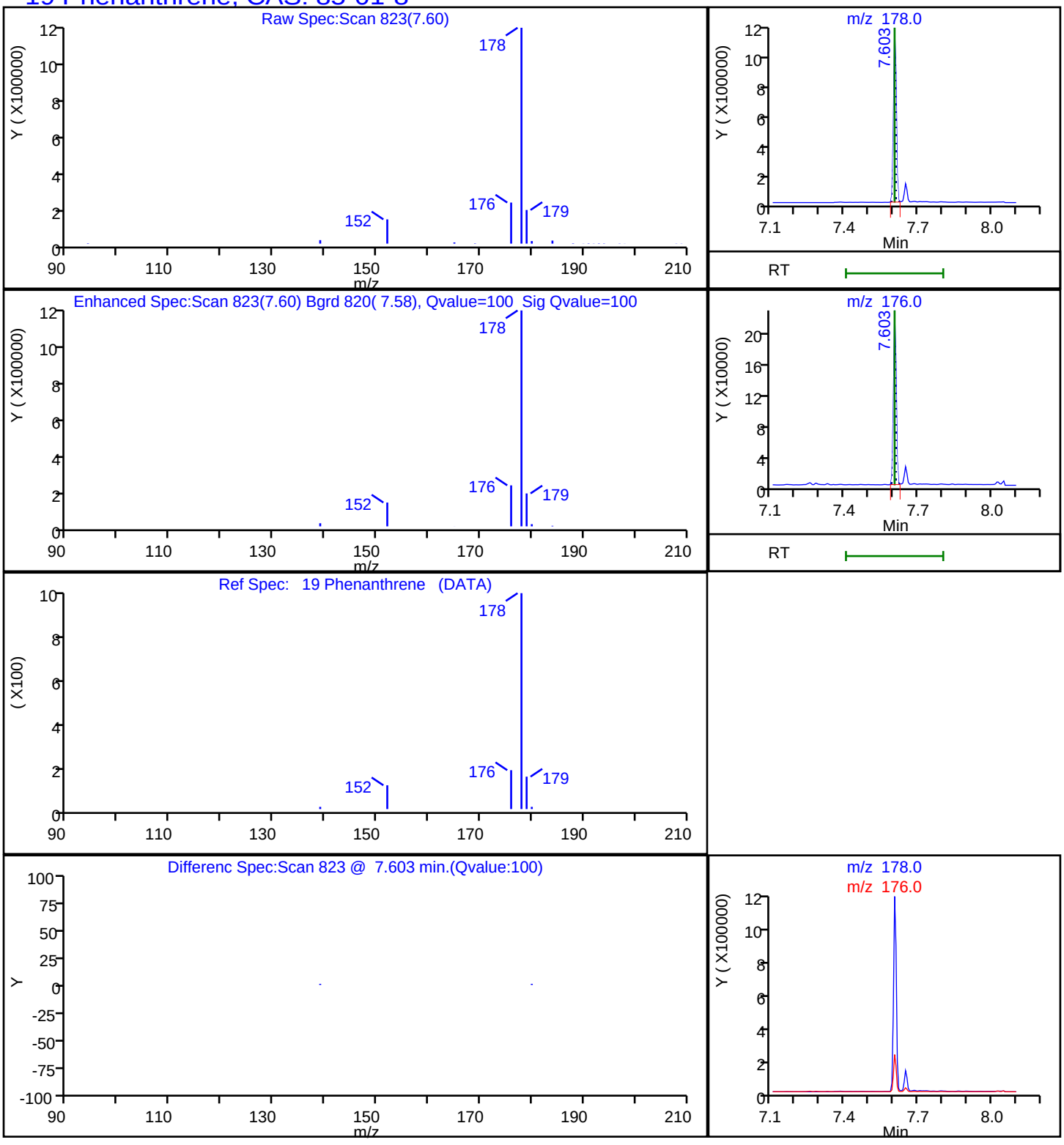


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

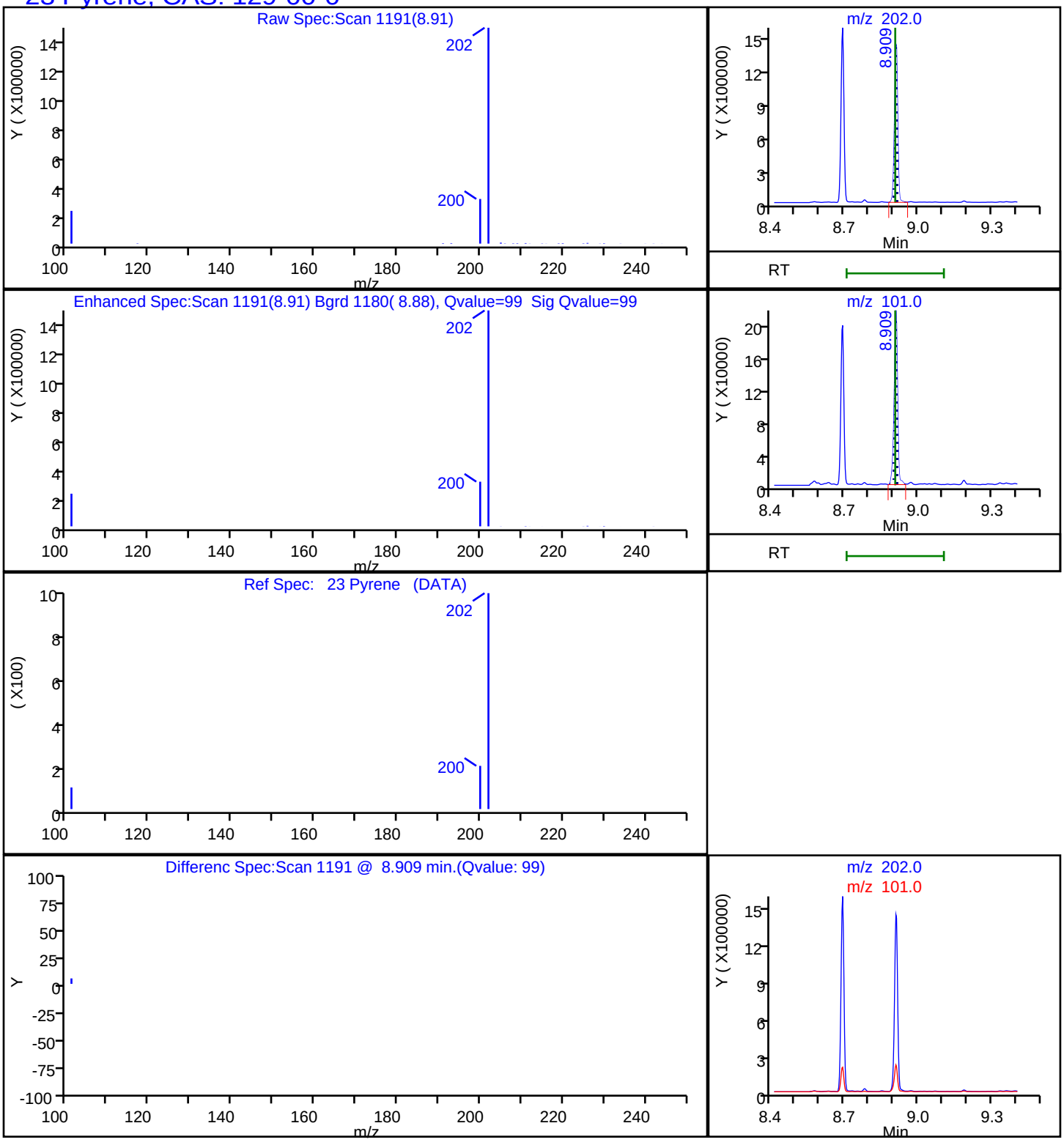


Report Date: 31-Aug-2019 11:48:46 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



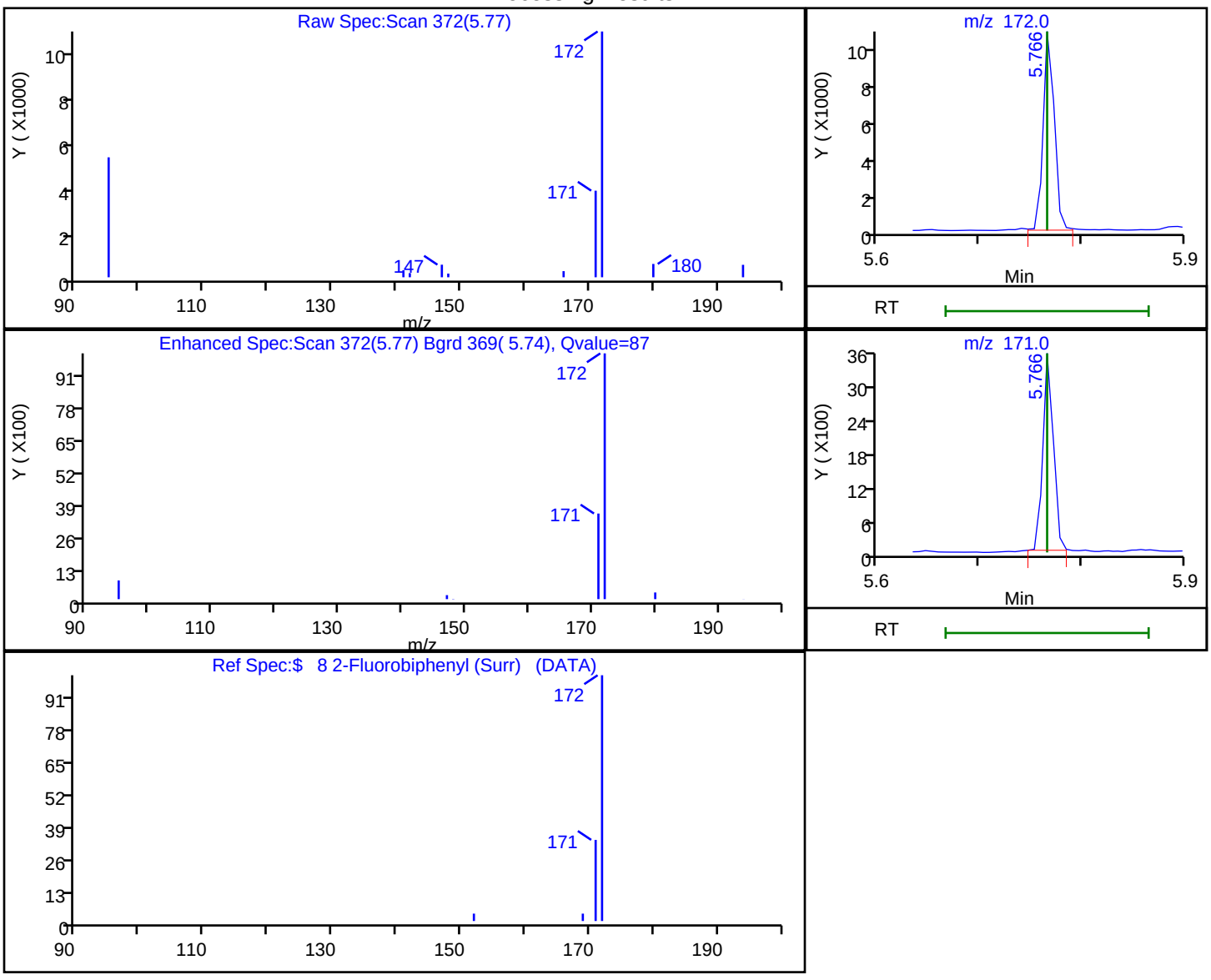
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	7673	0.021918
5.77	171.00	2497	

Reviewer: cochranj, 31-Aug-2019 10:57:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

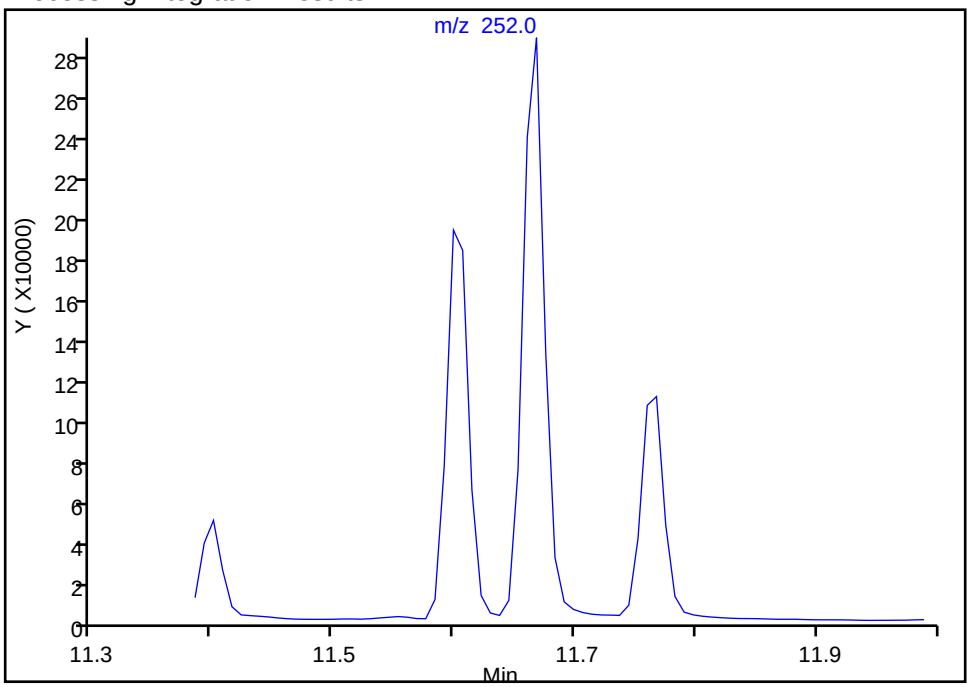
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

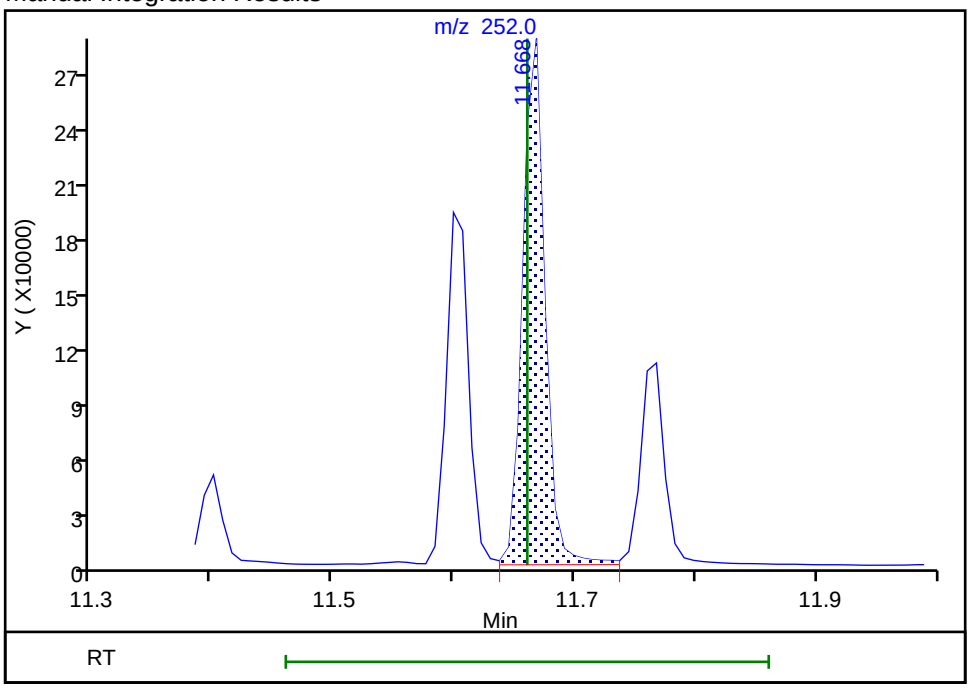
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 358488
Amount: 0.792941
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 07:59:19
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

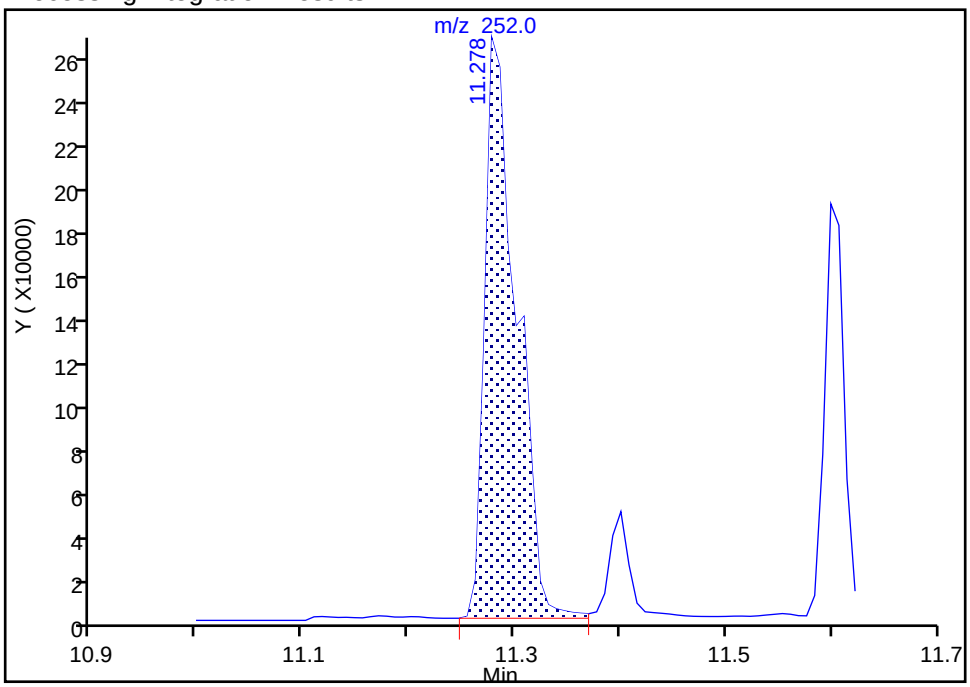
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

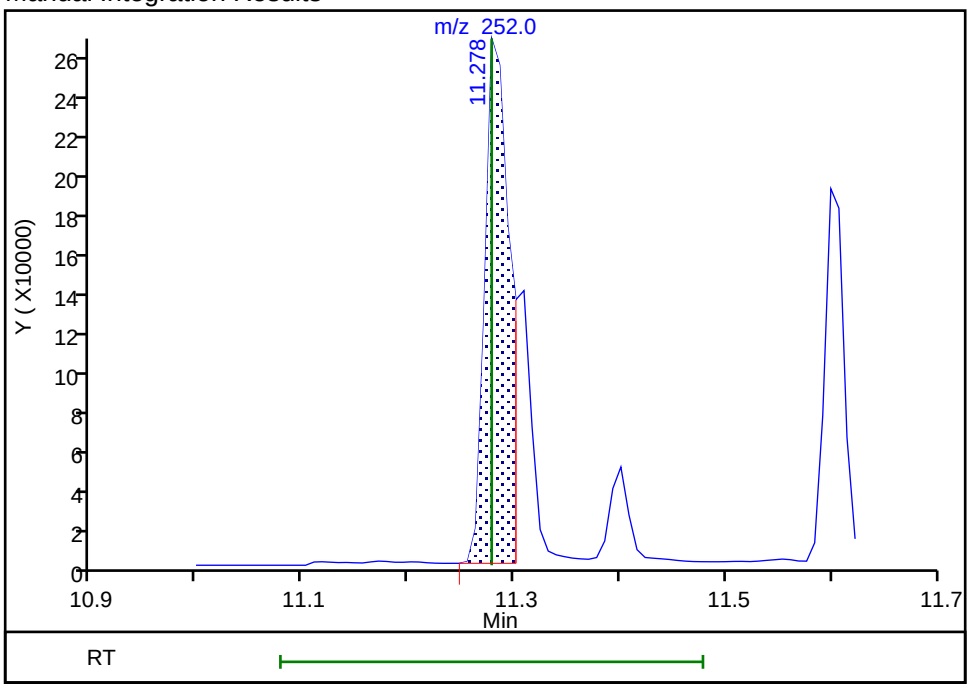
Processing Integration Results

RT: 11.28
Area: 549565
Amount: 1.045815
Amount Units: ug/ml



Manual Integration Results

RT: 11.28
Area: 437985
Amount: 0.833480
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 07:58:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

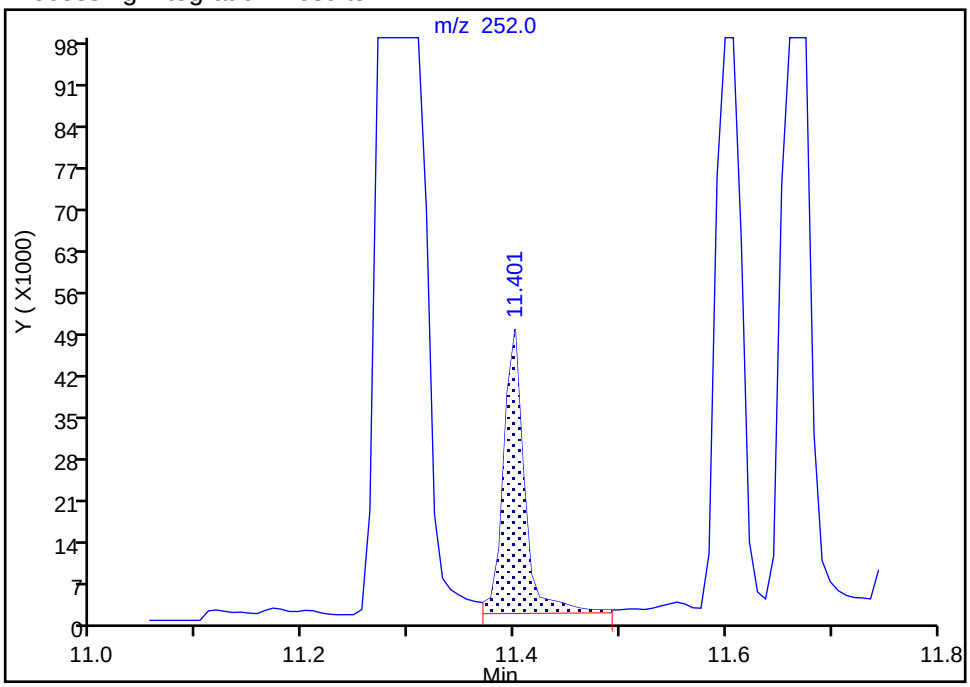
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

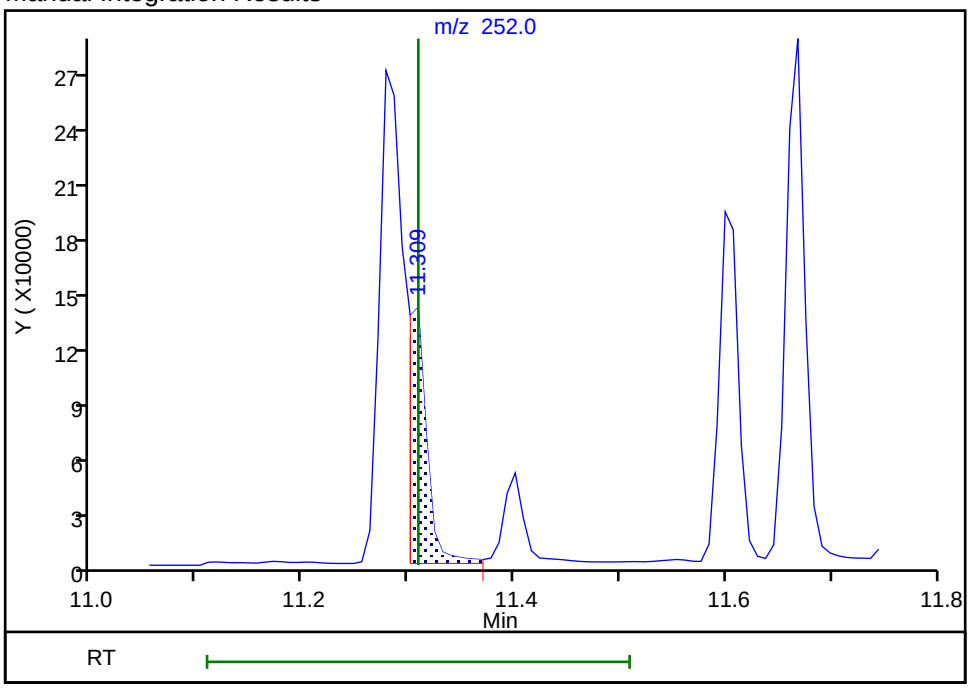
Processing Integration Results

RT: 11.40
Area: 66403
Amount: 0.111422
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 172360
Amount: 0.289213
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 07:58:38
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Knoxville

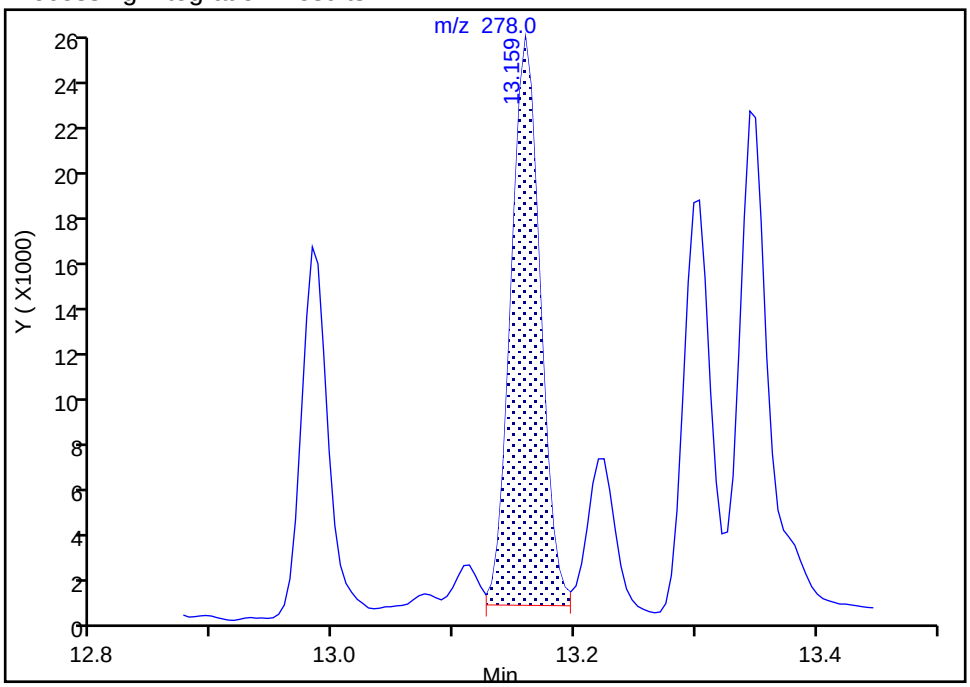
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

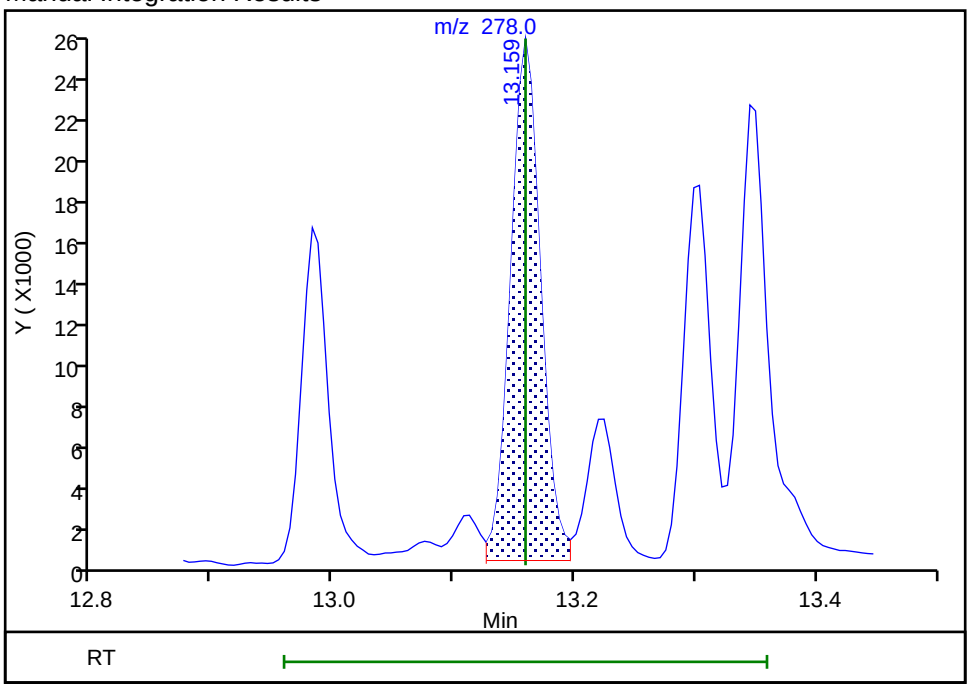
Processing Integration Results

RT: 13.16
Area: 40607
Amount: 0.086067
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 42449
Amount: 0.089971
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:08:01
Audit Action: Manually Integrated Audit Reason: Baseline

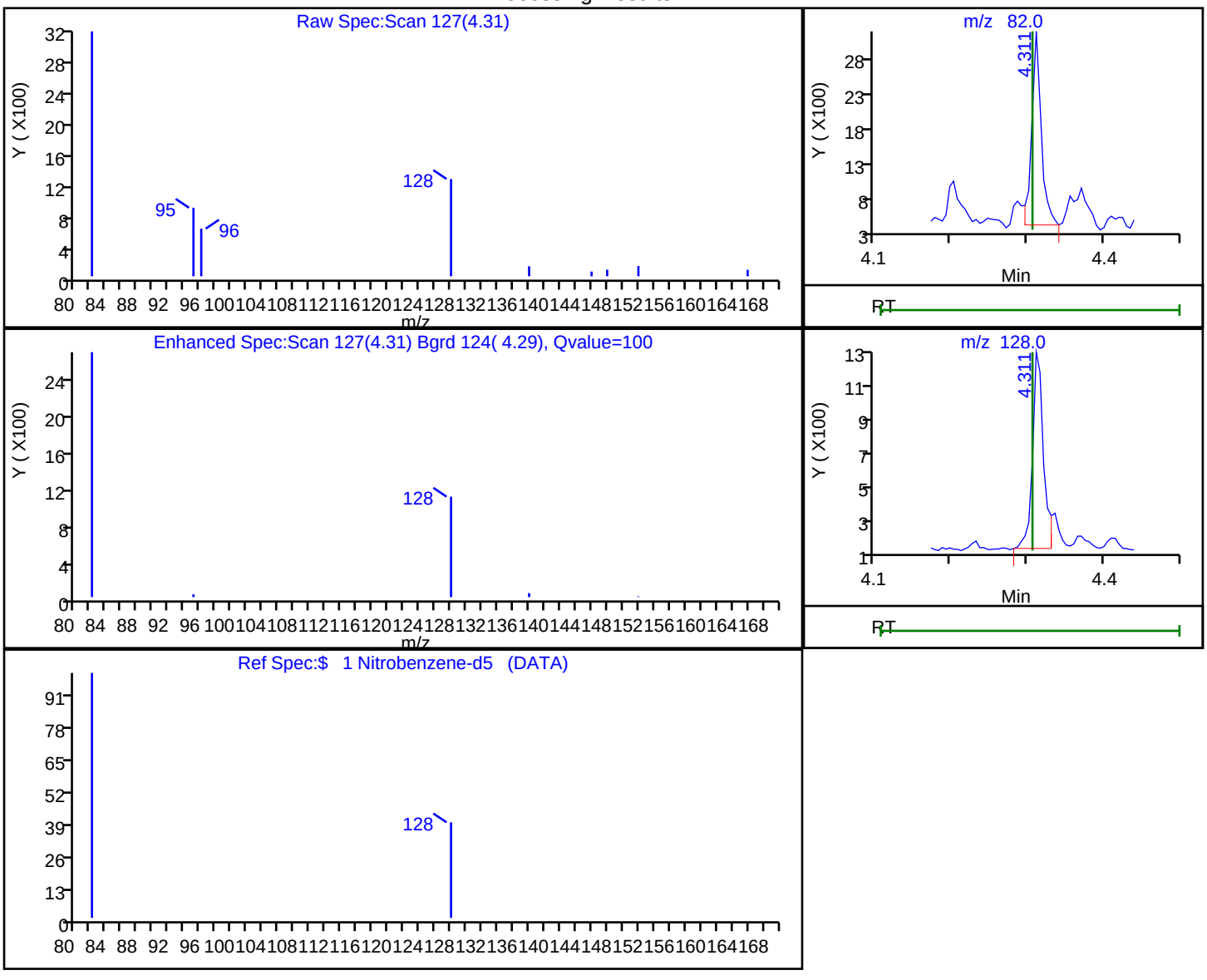
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	2427	0.019906
4.31	128.00	1124	

Reviewer: cochranj, 31-Aug-2019 10:57:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

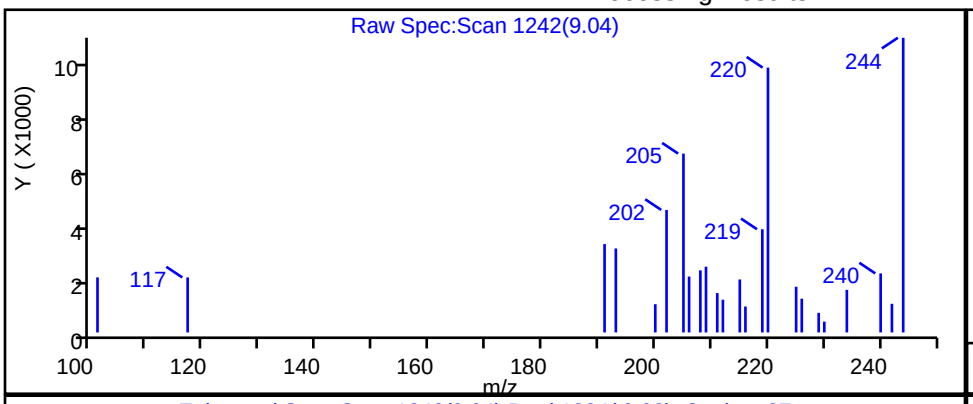
User Disabled Compound Report

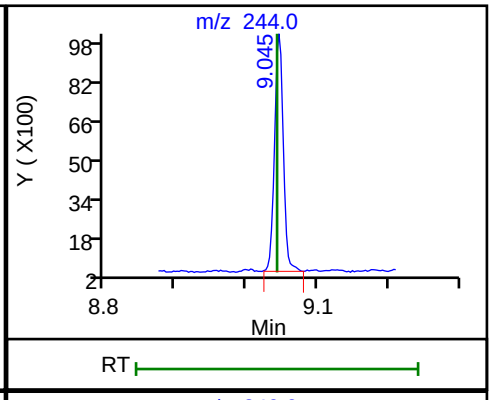
Eurofins TestAmerica, Knoxville

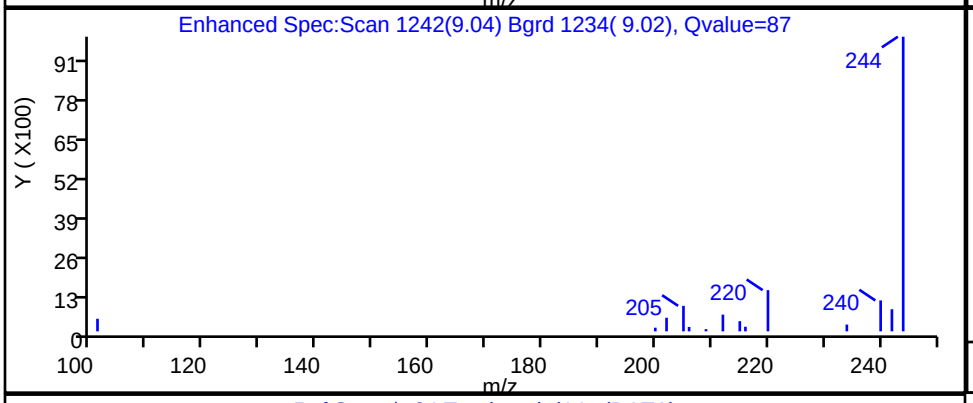
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-12-a.D				
Injection Date:	29-Aug-2019 17:34:30	Instrument ID:	MP		
Lims ID:	580-87761-B-12-A	Lab Sample ID:	140-87761-12		
Client ID:	22T-VB-03-2.0-4.0_20190717				
Operator ID:	11211	ALS Bottle#:	7	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

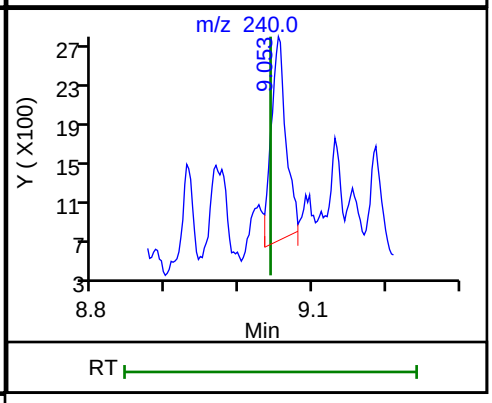
$ 24 Terphenyl-d14, CAS: 1718-51-0

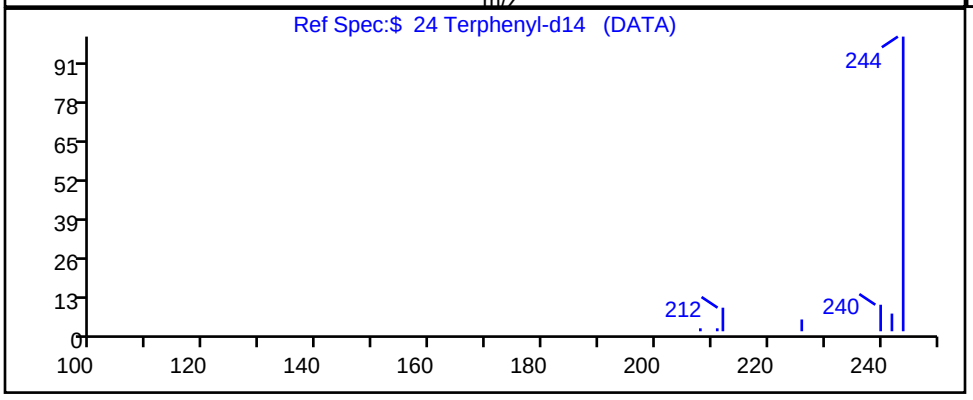
Processing Results











RT	Mass	Response	Amount
9.04	244.00	8478	0.029324
9.05	240.00	2890	

Reviewer: cochranj, 31-Aug-2019 10:57:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0_20190717 Lab Sample ID: 580-87761-13

Matrix: Solid Lab File ID: 580-87761-b-13-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:40

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.24(g) Date Analyzed: 08/29/2019 17:59

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 40.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	310		150	21
91-57-6	2-Methylnaphthalene	800		290	30
83-32-9	Acenaphthene	5500		29	14
208-96-8	Acenaphthylene	320		29	7.3
120-12-7	Anthracene	3900		29	24
56-55-3	Benzo[a]anthracene	5500		29	12
50-32-8	Benzo[a]pyrene	6000		29	11
205-99-2	Benzo[b]fluoranthene	4900		29	15
192-97-2	Benzo[e]pyrene	3300		29	10
191-24-2	Benzo[g,h,i]perylene	4100		29	17
207-08-9	Benzo[k]fluoranthene	2300		29	14
STL00905	C1-Chrysenes	1500		29	7.6
STL00909	C1-Dibenzothiophenes	1200		29	19
STL00912	C1-Fluoranthenes/pyrene	4500		29	15
STL00913	C1-Fluorenes	1300		29	16
STL00916	C1-Naphthalenes	710		290	23
STL00901	C1-Phenanthrenes/Anthracenes	5600		59	33
STL00906	C2-Chrysenes	570		29	9.1
STL00910	C2-Dibenzothiophenes	1000		29	27
STL00968	C2-Fluoranthenes/Pyrene	1200		29	13
STL00914	C2-Fluorenes	1300		59	35
STL00917	C2-Naphthalenes	3300		59	22
STL00902	C2-Phenanthrenes/Anthracenes	2900		120	72
STL00907	C3-Chrysenes	300		29	8.8
STL00911	C3-Dibenzothiophenes	640		59	33
STL00969	C3-Fluoranthenes/Pyrene	590		29	16
STL00915	C3-Fluorenes	910		59	31
STL00918	C3-Naphthalenes	3500		59	29
STL00903	C3-Phenanthrenes/Anthracenes	1500	AP	59	46
STL00908	C4-Chrysenes	210		29	10
STL00967	C4-Dibenzothiophenes	300		29	28
STL01791	C4-Fluoranthenes/Pyrene	300		29	11
STL00919	C4-Naphthalenes	2000		120	61

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0_20190717 Lab Sample ID: 580-87761-13

Matrix: Solid Lab File ID: 580-87761-b-13-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:40

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.24(g) Date Analyzed: 08/29/2019 17:59

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 40.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	1200	AP	59	55
218-01-9	Chrysene	5300		29	11
53-70-3	Dibenz(a,h)anthracene	570		29	17
132-65-0	Dibenzothiophene	3300		29	10
86-73-7	Fluorene	3800		29	14
193-39-5	Indeno[1,2,3-cd]pyrene	3200		29	21
91-20-3	Naphthalene	1800		590	54
198-55-0	Perylene	1500		29	5.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D
Lims ID: 580-87761-B-13-A
Client ID: 22T-VB-03-4.0-6.0_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 17:59:30 ALS Bottle#: 8 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-016
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 03-Sep-2019 17:44:00 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0340

First Level Reviewer: cochranj Date: 03-Sep-2019 17:44:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	209850	0.5000	
4 Naphthalene	128	4.903	4.896	0.007	93	572330	1.24	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	98	164647	0.5441	
7 1-Methylnaphthalene	142	5.552	5.545	0.007	97	60003	0.2081	
11 Acenaphthylene	152	6.216	6.216	0.000	89	83183	0.2178	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	110964	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	1103086	3.74	
16 Fluorene	166	6.797	6.793	0.004	100	842503	2.58	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	1109047	2.28	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	97	203826	0.5000	
19 Phenanthrene	178	7.609	7.603	0.006	99	7476488	14.2	E
20 Anthracene	178	7.648	7.648	0.000	100	1158752	2.65	
22 Fluoranthene	202	8.695	8.687	0.008	99	6071742	11.9	E
23 Pyrene	202	8.917	8.906	0.011	99	7477705	12.8	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	90	1724141	3.76	
* 27 Chrysene-d12	240	10.137	10.129	0.008	70	192920	0.5000	
28 Chrysene	228	10.161	10.161	0.000	100	1979884	3.61	
29 Benzo[b]fluoranthene	252	11.286	11.286	0.008	100	1844633	3.36	M
30 Benzo[k]fluoranthene	252	11.301	11.301	-0.008	100	991845	1.59	M
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	1169682	2.27	
32 Benzo[a]pyrene	252	11.668	11.668	0.008	100	1927337	4.08	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	201093	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	551135	1.03	
35 Indeno[1,2,3-cd]pyrene	276	13.159	13.150	0.009	86	1252432	2.16	
36 Dibenz(a,h)anthracene	278	13.164	13.159	0.005	41	189868	0.3851	
37 Benzo[g,h,i]perylene	276	13.517	13.508	0.009	99	1533777	2.82	
A 38 C1-Naphthalenes	142	5.507	(5.454-5.583)		0	222288	0.4813	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	1025667	2.22	
A 40 C3-Naphthalenes	170	6.557	(6.323-6.820)		0	1111003	2.41	
A 41 C4-Naphthalenes	184	6.952	(6.483-7.421)		0	624168	1.35	
A 42 C1-Fluorenes	180	7.302	(7.219-7.413)		0	287888	0.8815	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	291306	0.8920	
A 44 C3-Fluorenes	208	8.113	(7.989-8.454)		0	201452	0.6169	
A 45 C1-Dibenzothiophenes	198	7.878	(7.827-8.065)		0	407164	0.8369	
A 46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	336237	0.6911	
A 47 C3-Dibenzothiophenes	226	8.658	(8.529-9.109)		0	211176	0.4341	
A 48 C4-Dibenzothiophenes	240	9.056	(8.814-9.591)		0	99417	0.2044	
A 49 C1-Phenanthrenes/Anthracen	192	8.058	(8.020-8.193)		0	2007253	3.82	
A 50 C2-Phenanthrenes/Anthracen	206	8.557	(8.358-8.785)		0	1037590	1.98	
A 51 C3-Phenanthrenes/Anthracen	220	9.001	(8.747-9.260)		0	535691	1.02	
A 52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	423853	0.8073	
A 53 C1-Fluoranthenes/pyrene	216	9.316	(9.112-9.500)		0	1804002	3.09	
A 54 C2-Fluoranthenes/Pyrene	230	9.809	(9.587-10.039)		0	482619	0.8267	
A 55 C3-Fluoranthenes/Pyrene	244	10.241	(10.043-10.519)		0	233242	0.3995	
A 56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	119527	0.2047	
A 57 C1-Chrysenes	242	10.624	(10.512-10.741)		0	568538	1.04	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	213033	0.3883	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	113435	0.2068	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	78846	0.1437	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

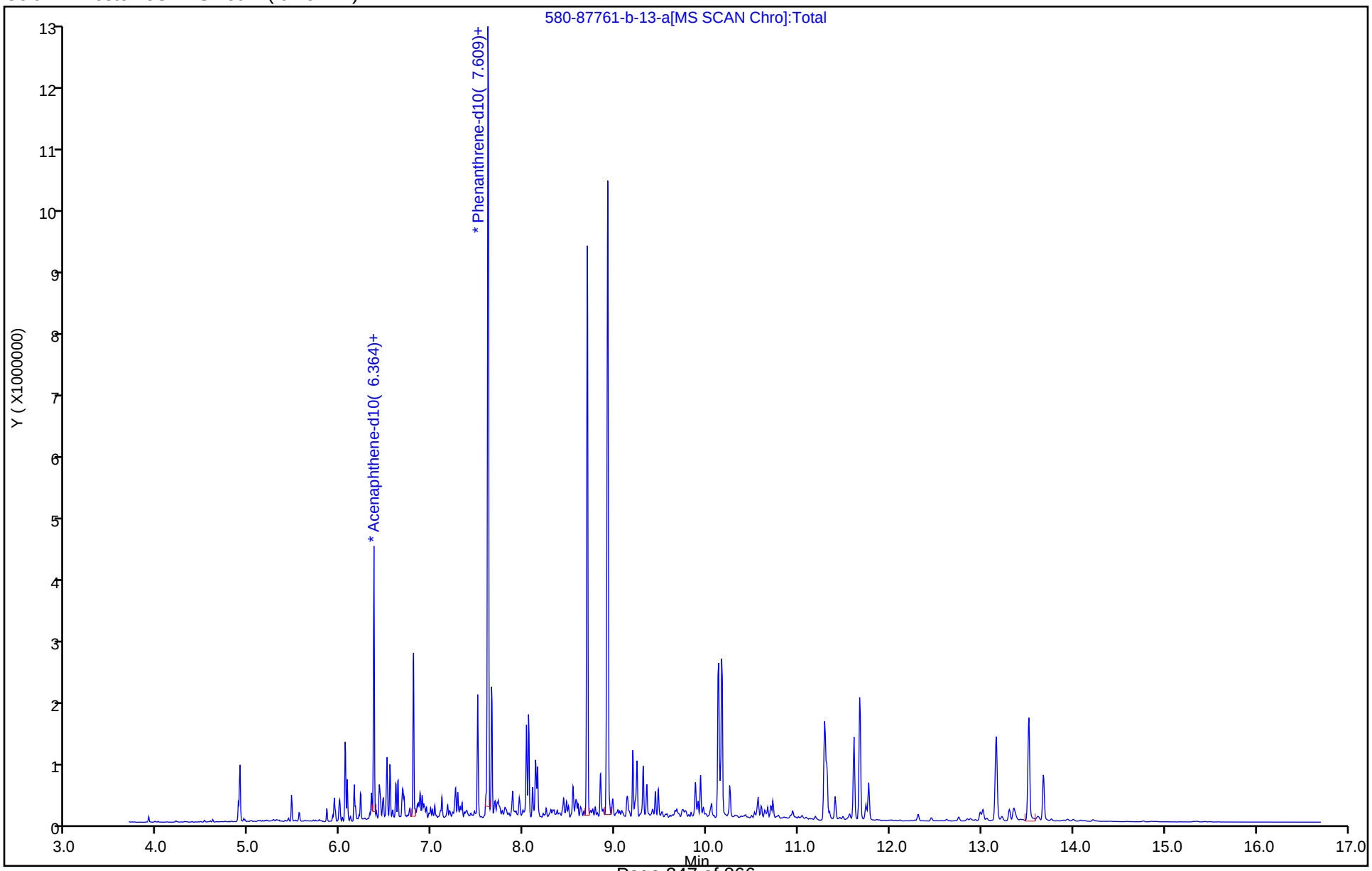
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13	Worklist Smp#:	16
Client ID:	22T-VB-03-4.0-6.0_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	8
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

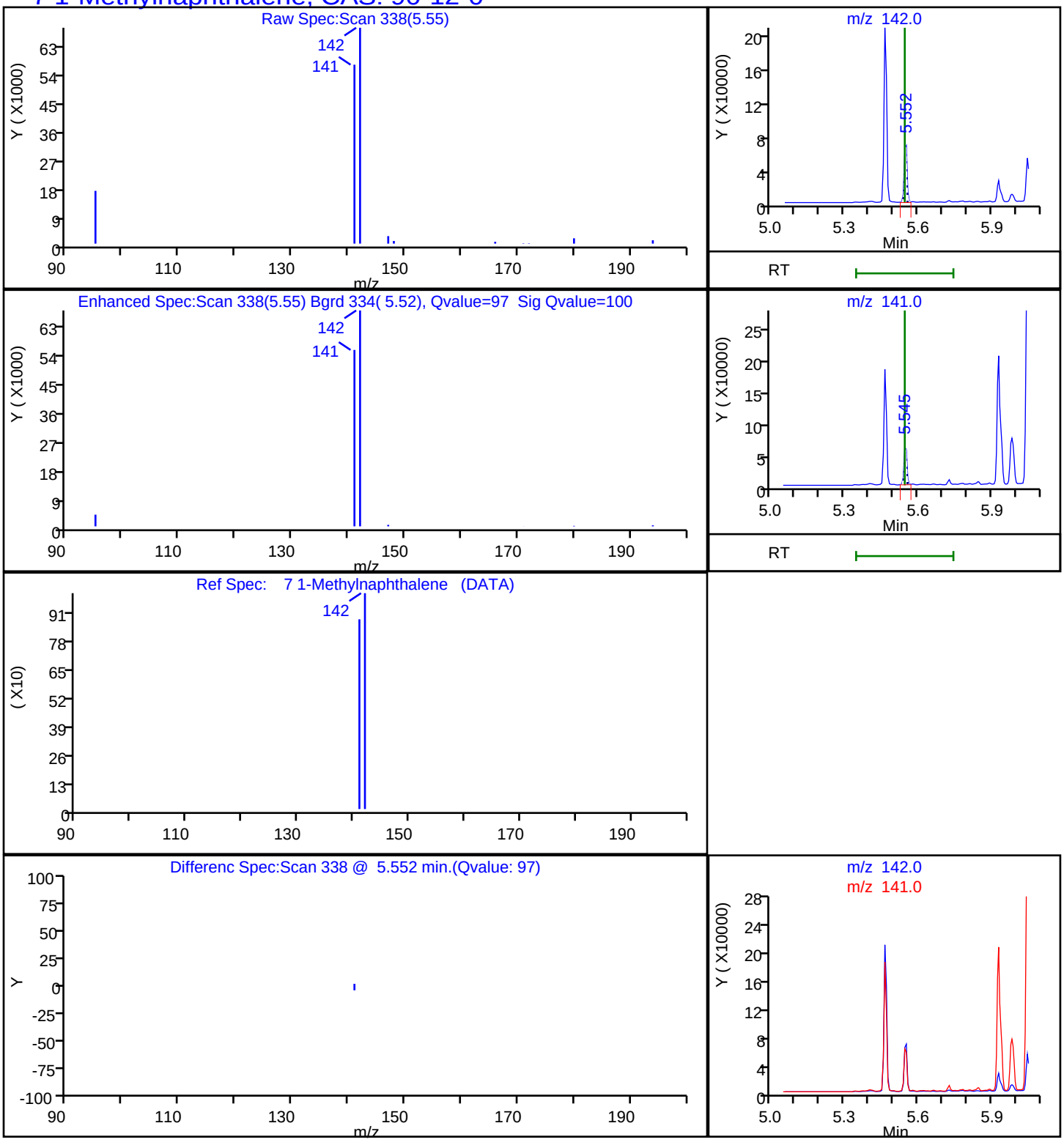


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

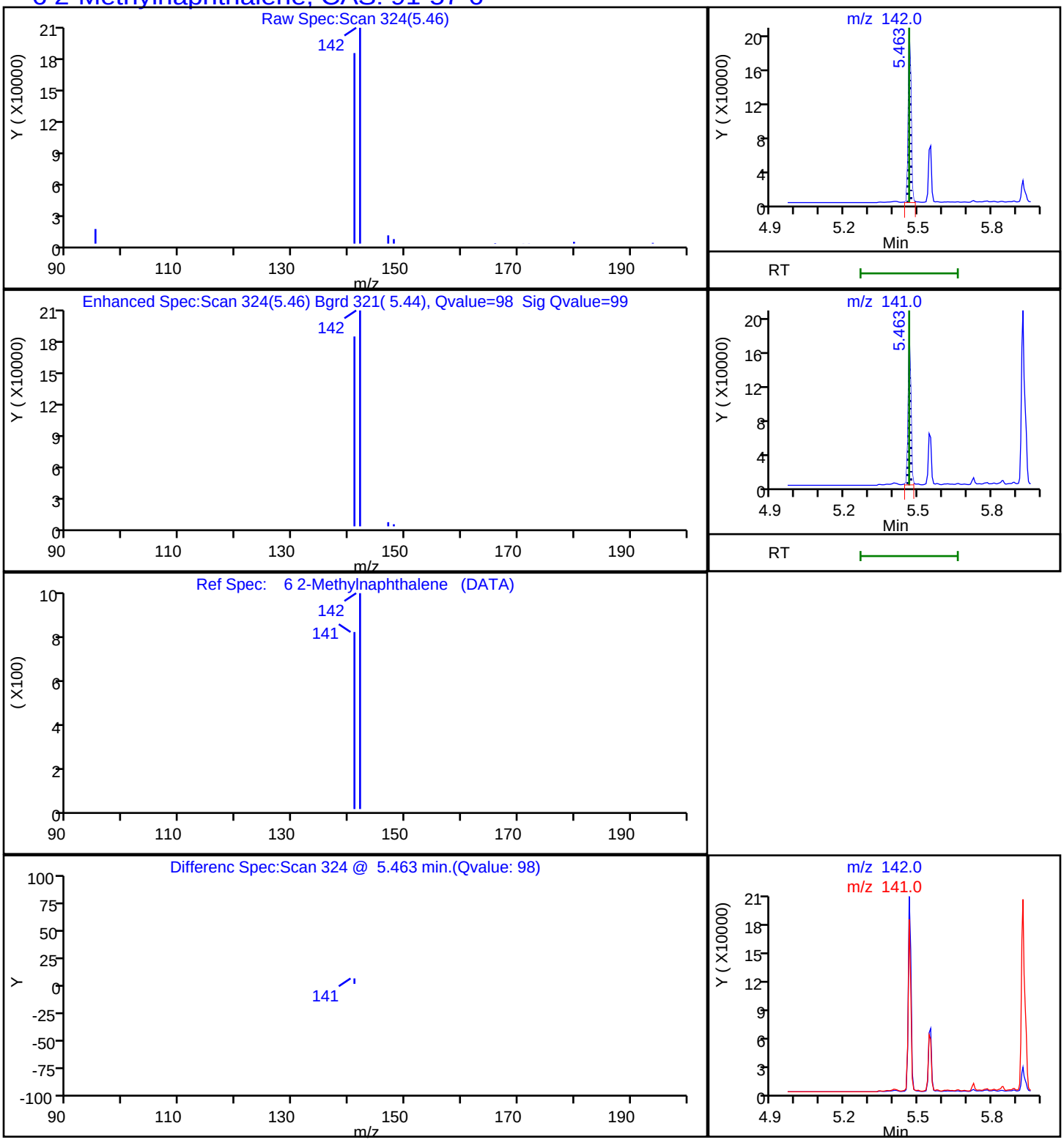


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

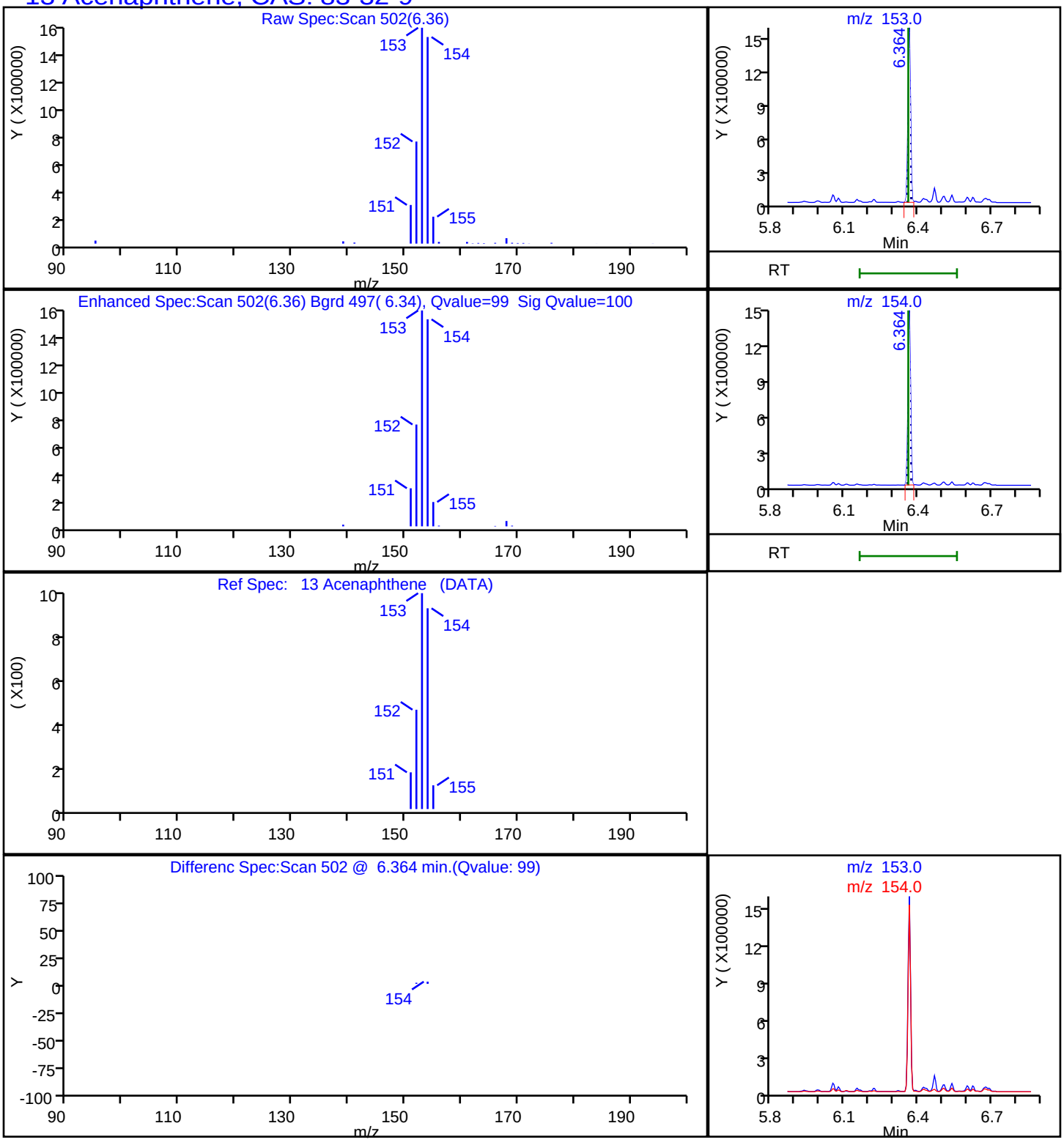


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9

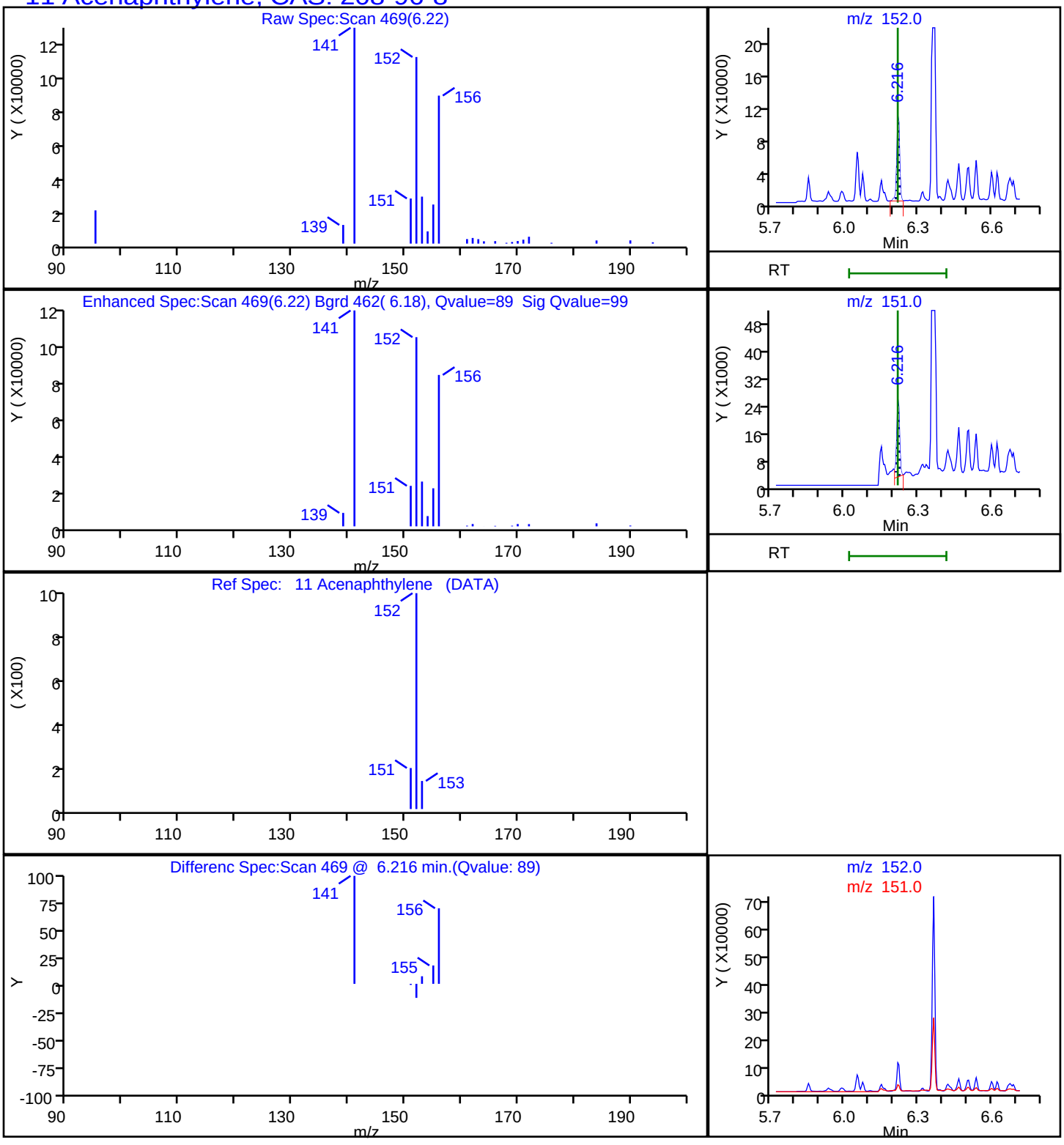


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8

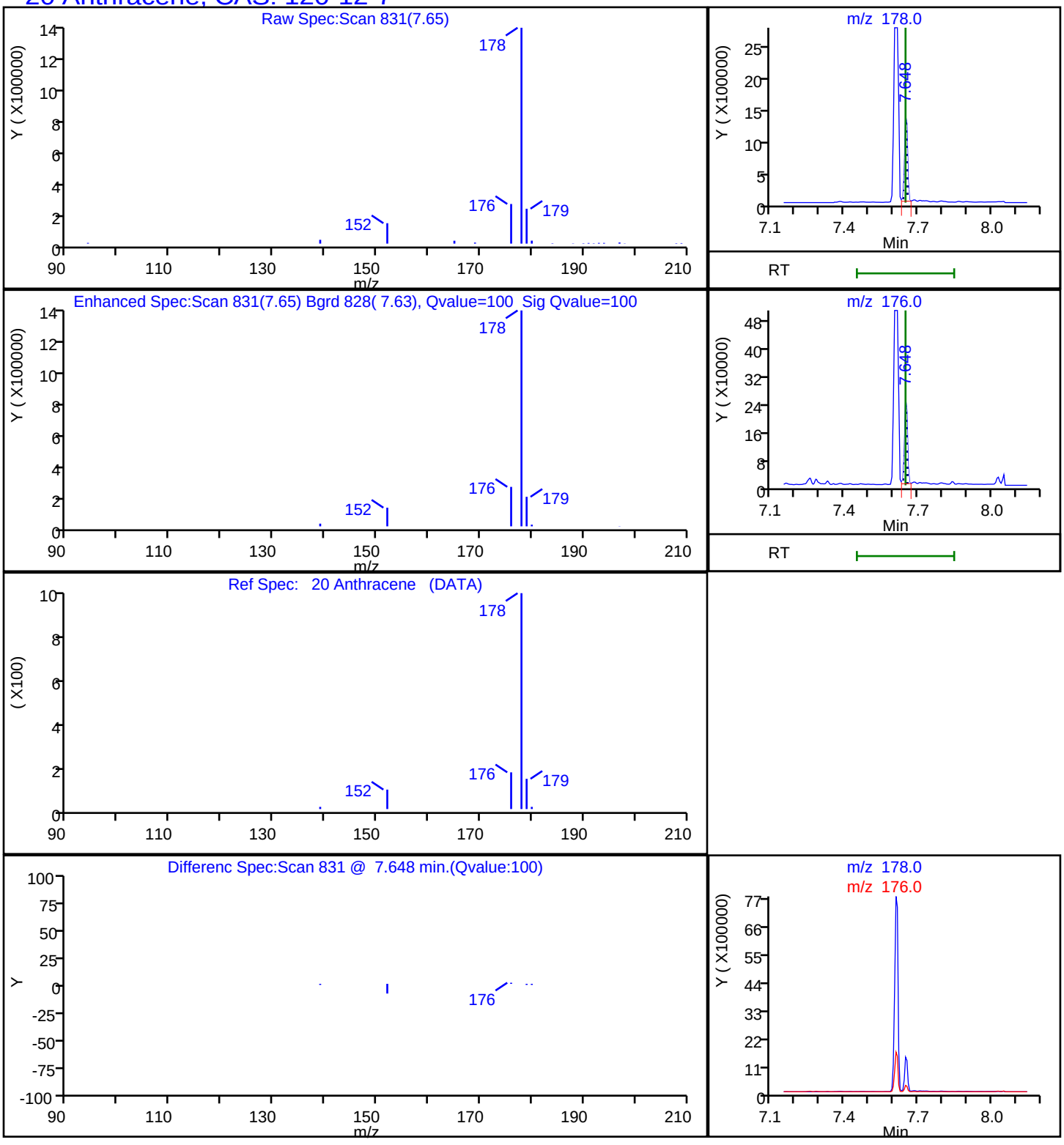


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7

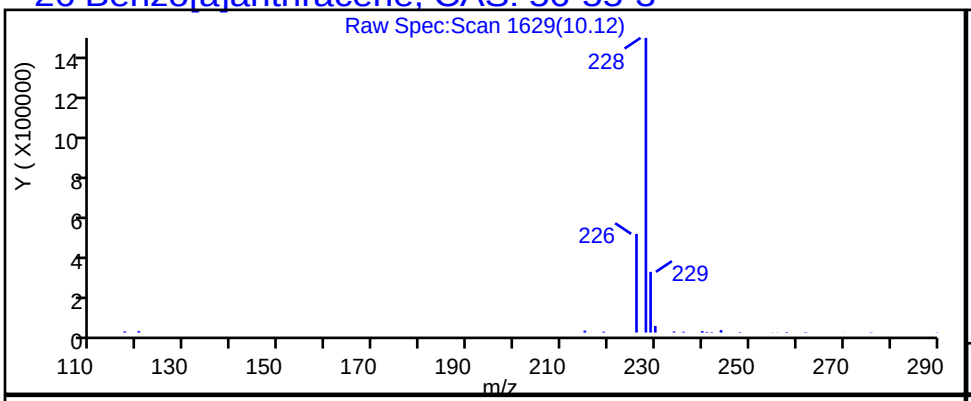


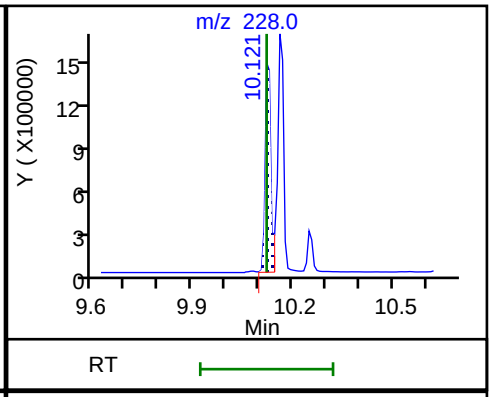
Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

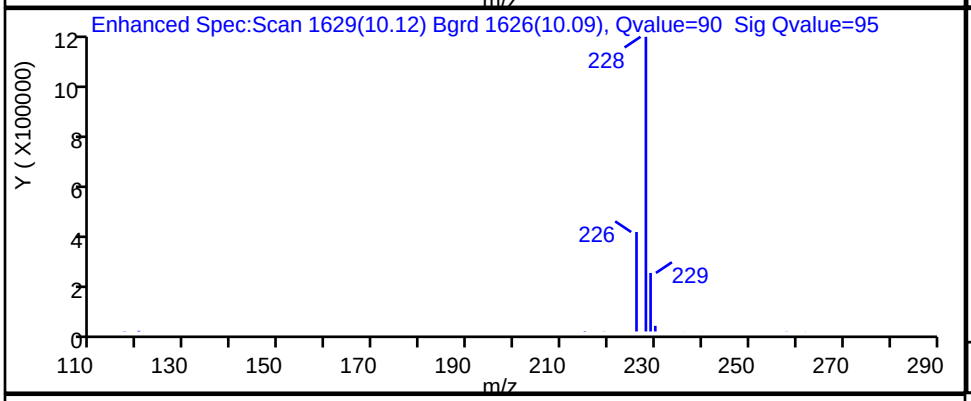
Eurofins TestAmerica, Knoxville

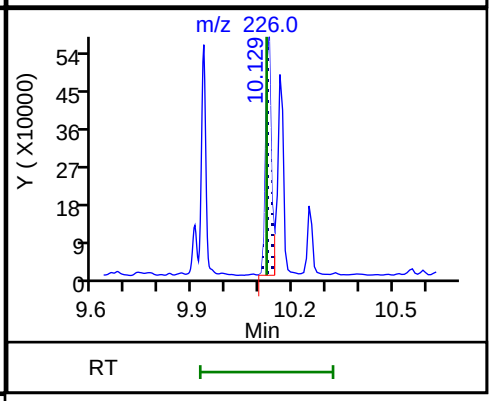
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

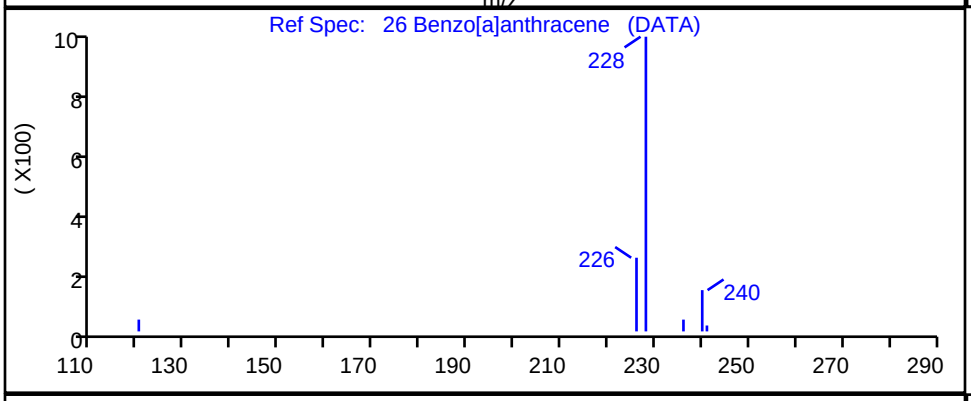
26 Benzo[a]anthracene, CAS: 56-55-3

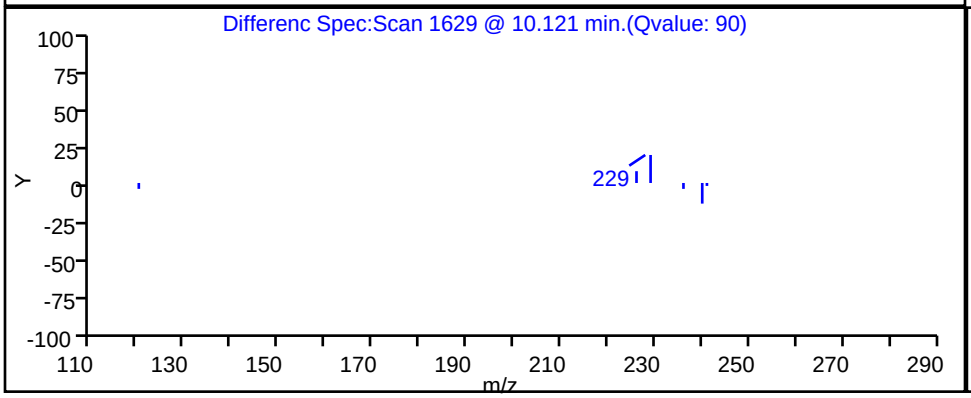


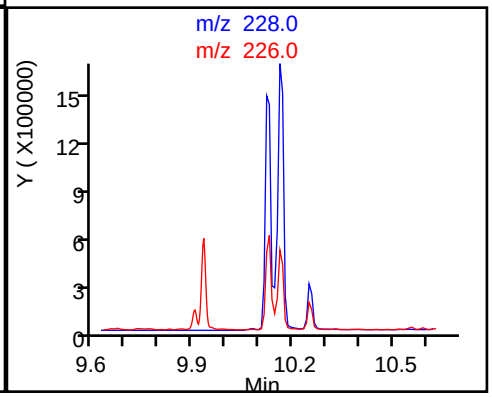










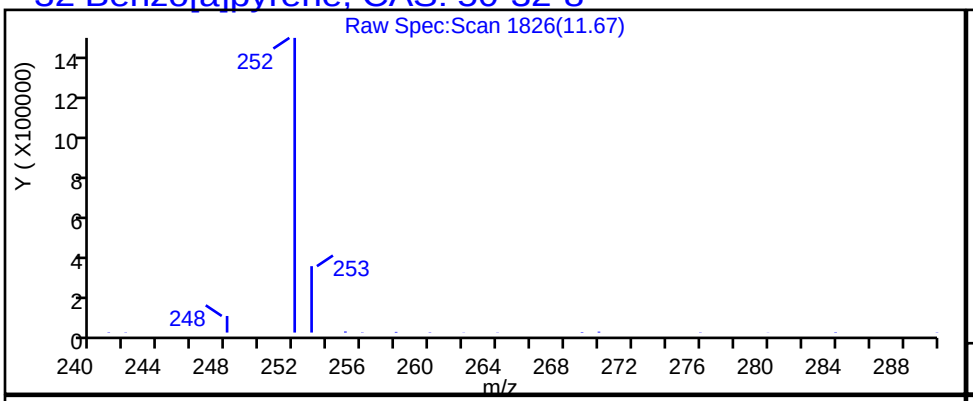


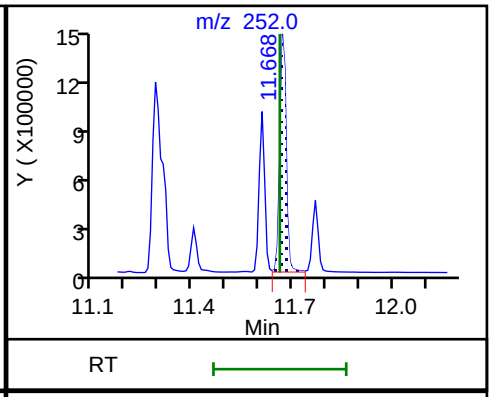
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

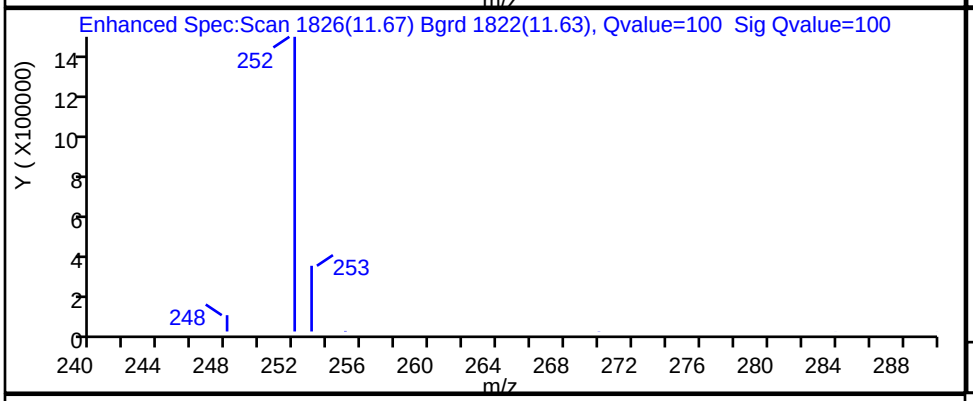
Eurofins TestAmerica, Knoxville

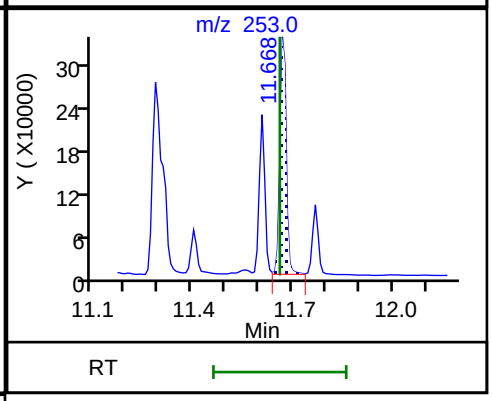
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

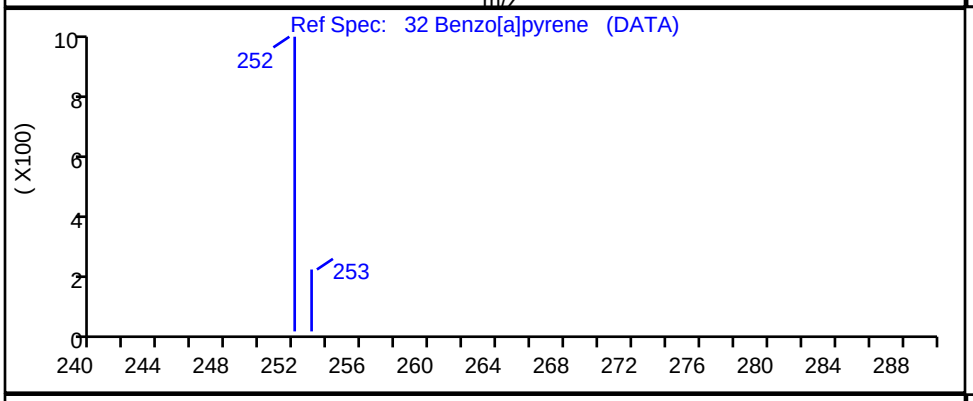
32 Benzo[a]pyrene, CAS: 50-32-8

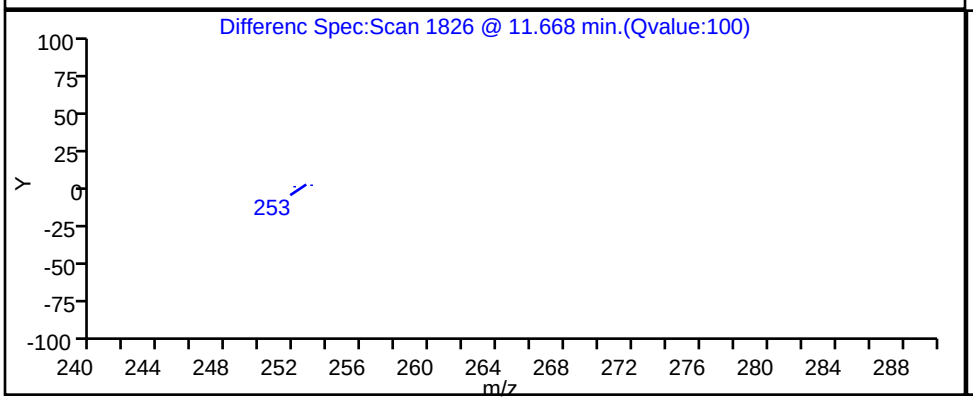


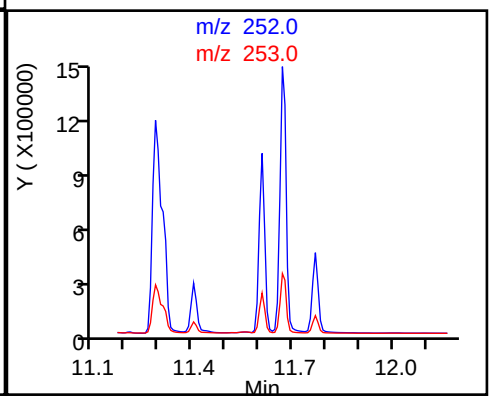










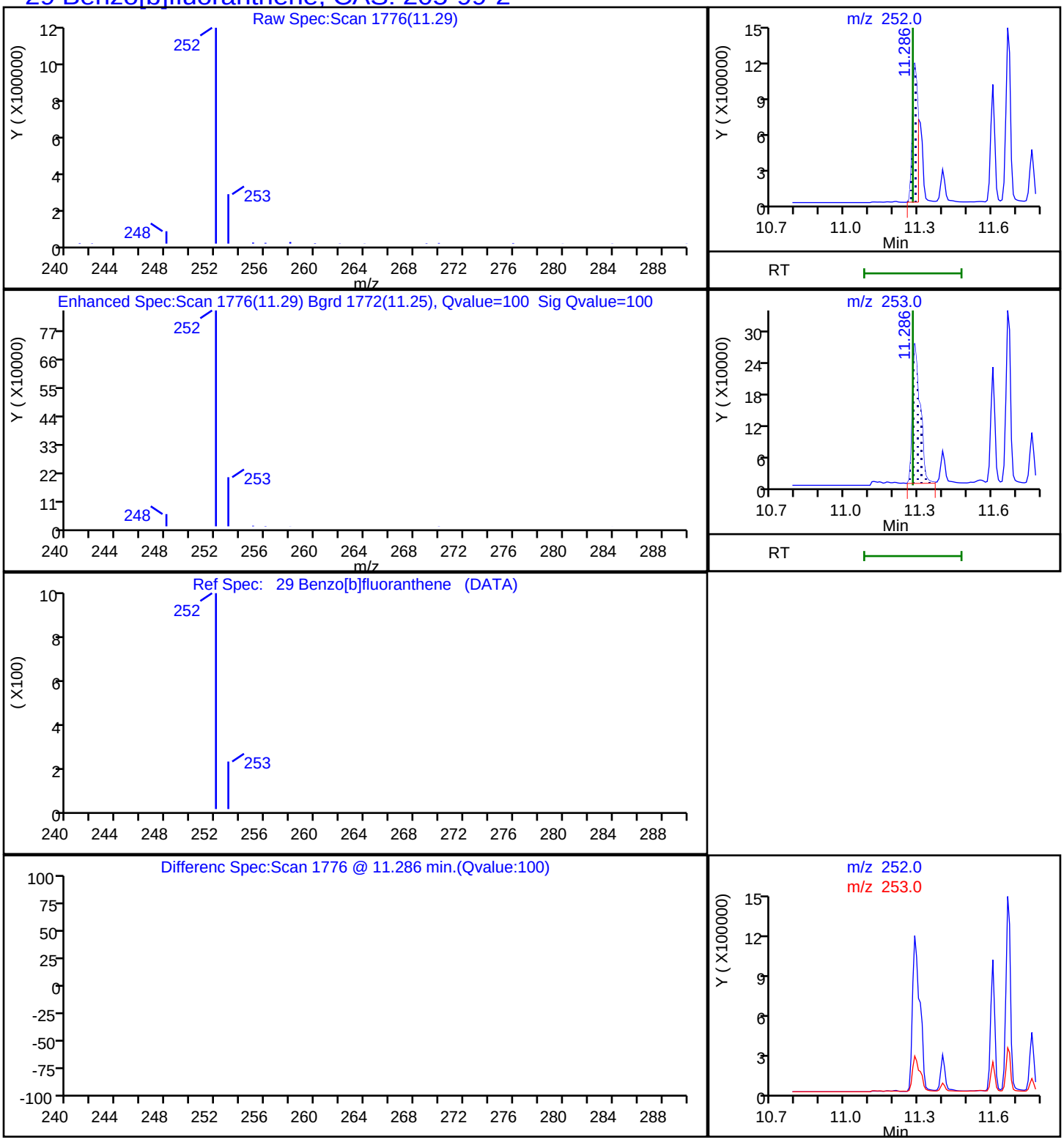


Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

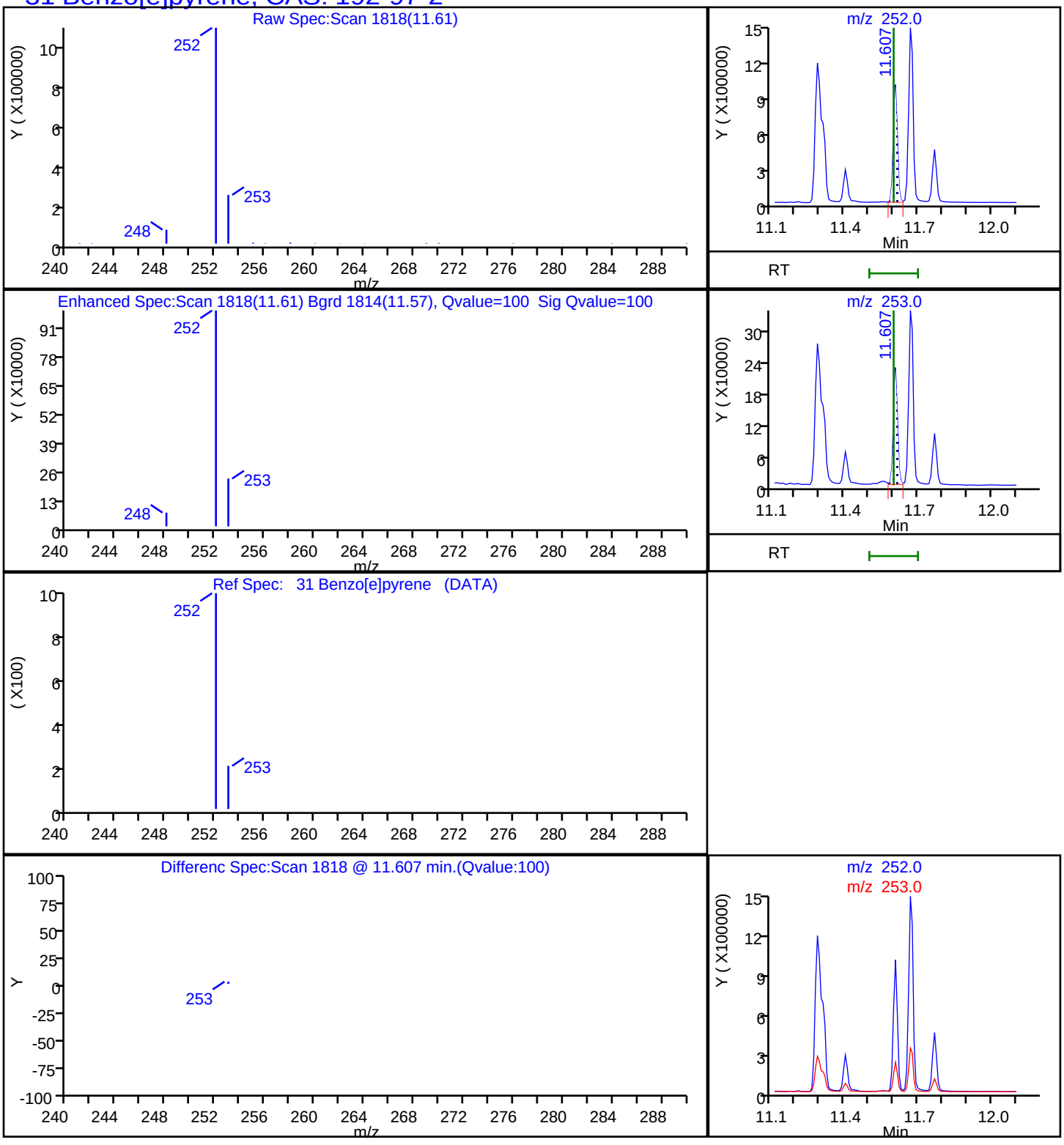


Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

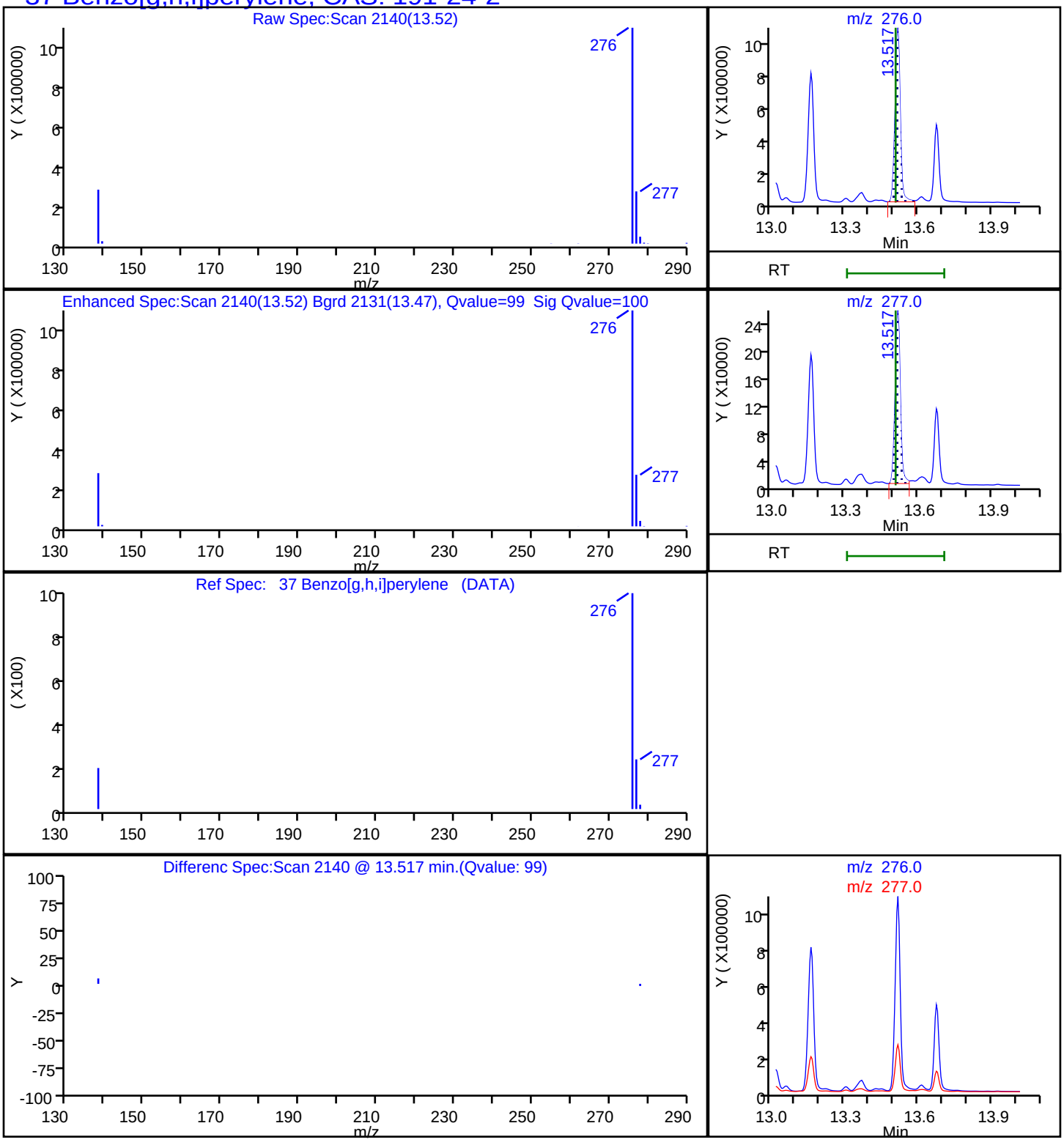
31 Benzo[e]pyrene, CAS: 192-97-2



Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2

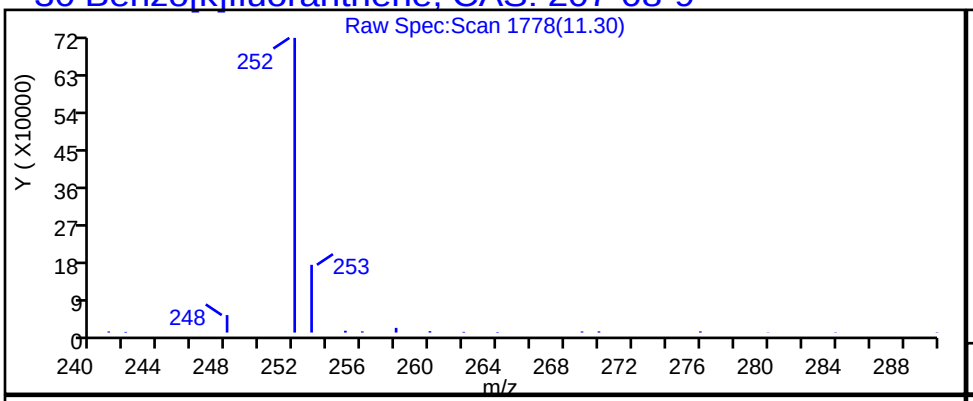


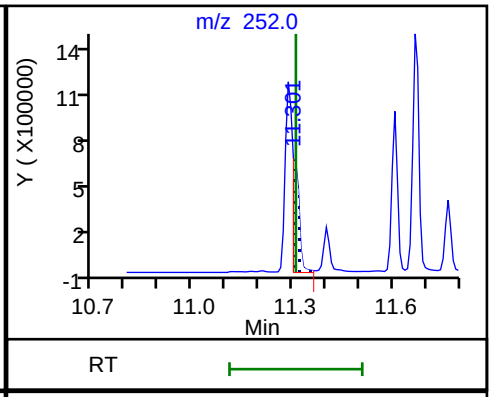
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

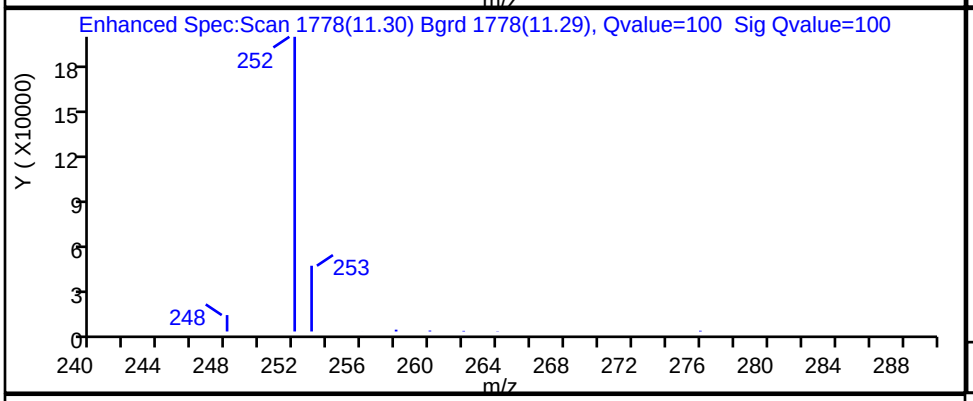
Eurofins TestAmerica, Knoxville

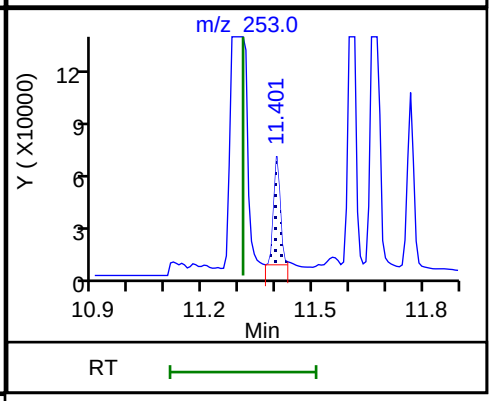
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

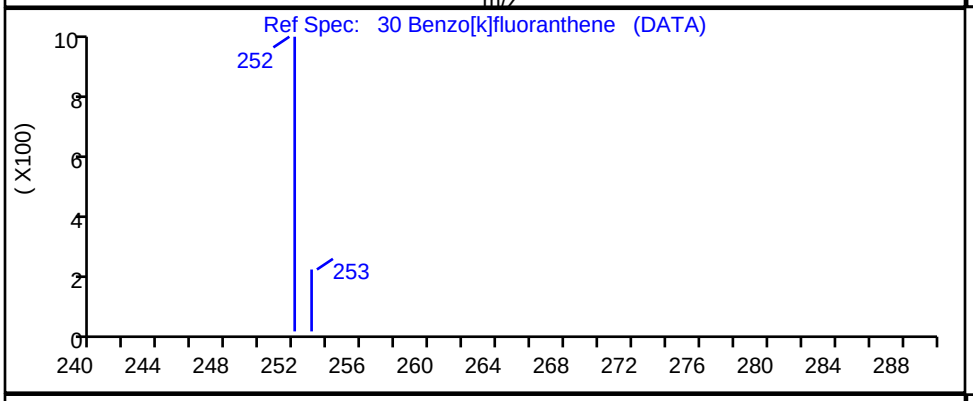
30 Benzo[k]fluoranthene, CAS: 207-08-9

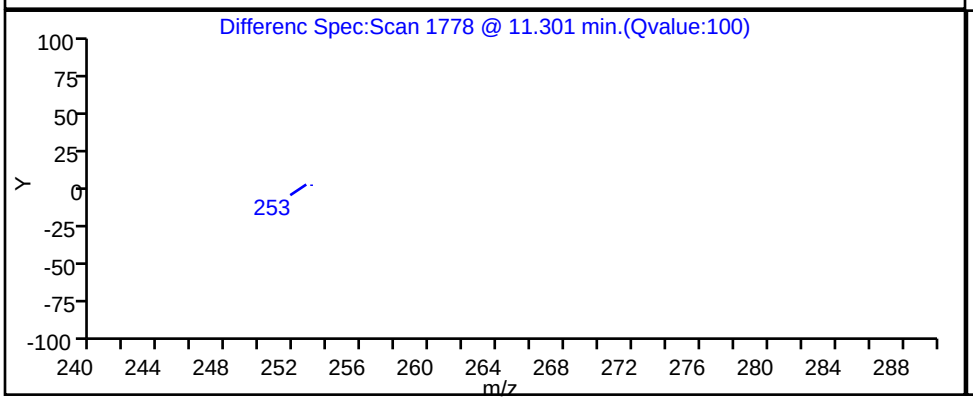


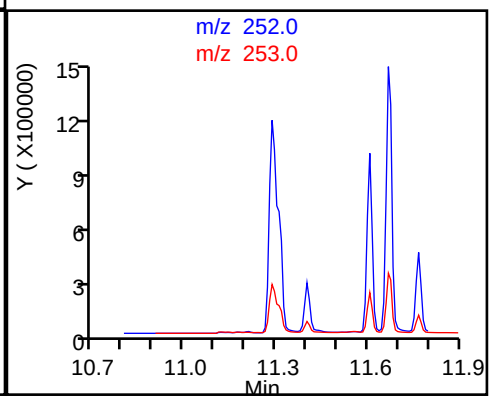












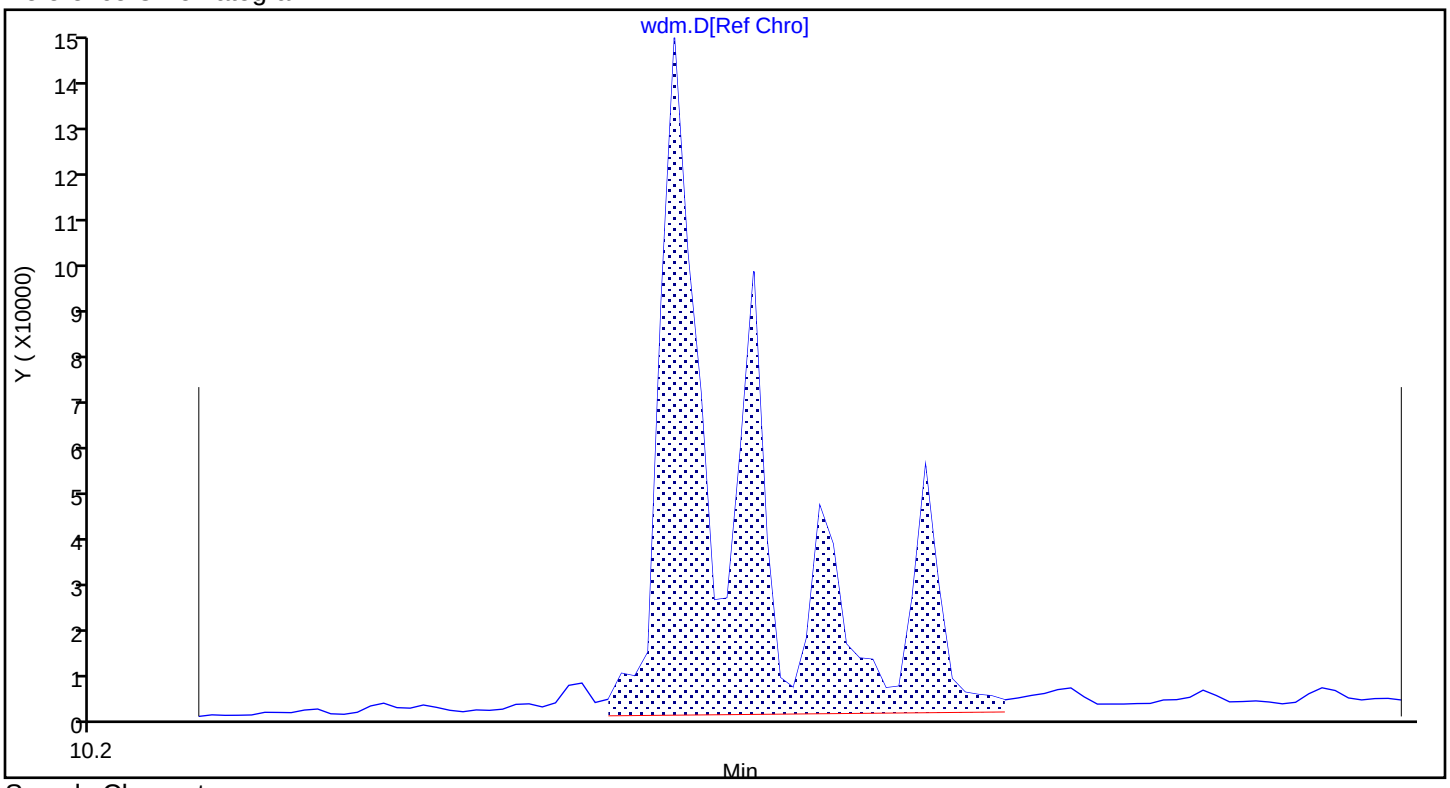
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

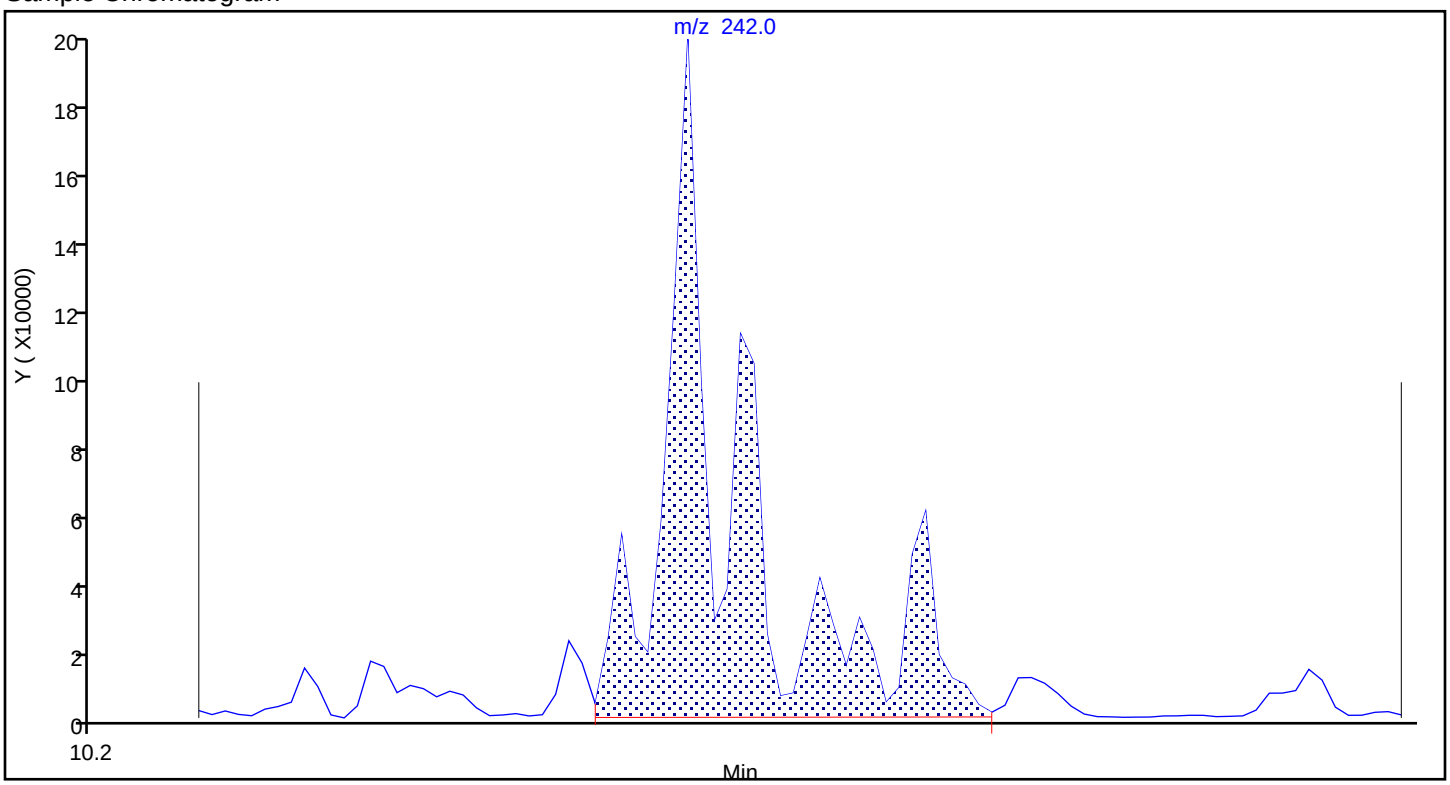
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



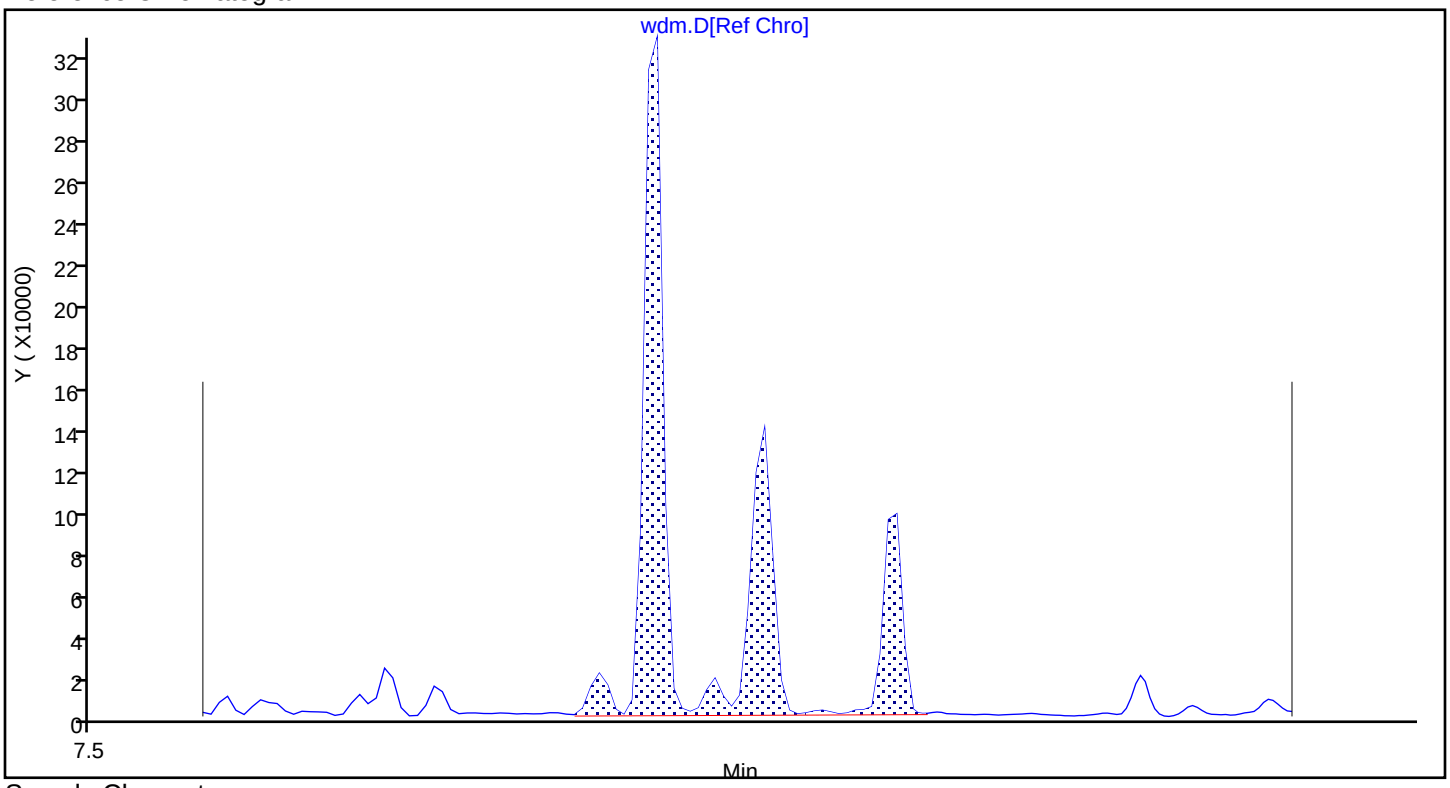
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

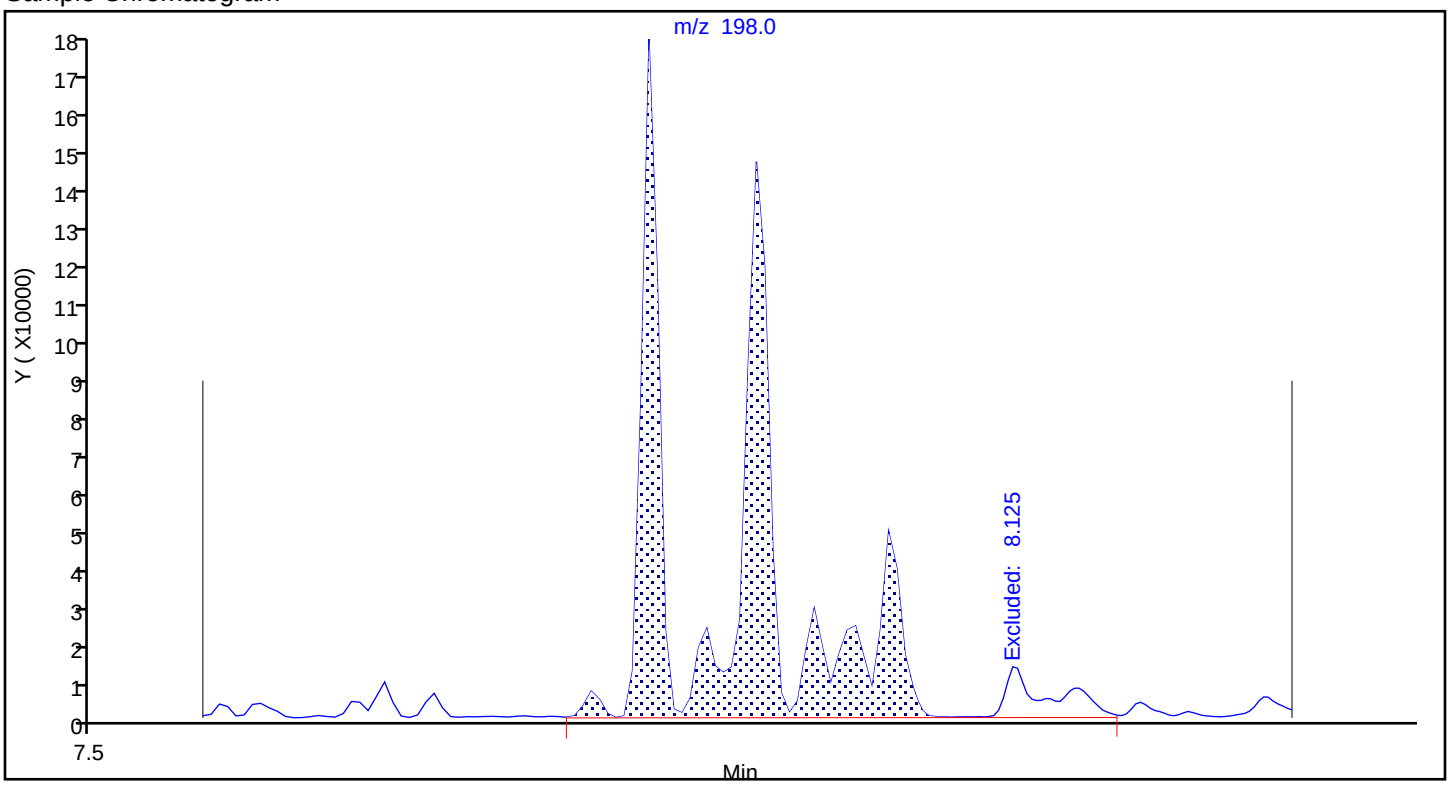
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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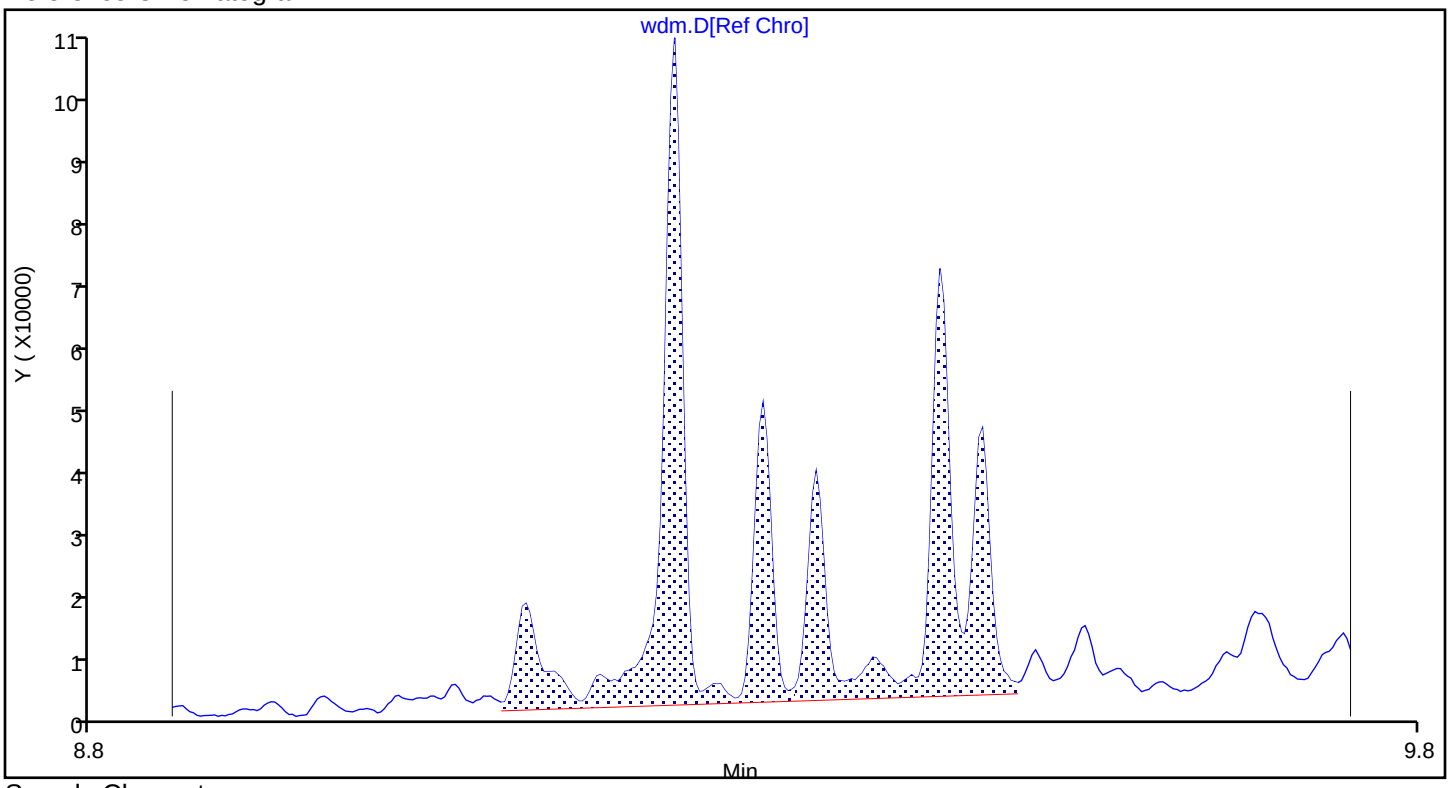
Eurofins TestAmerica, Knoxville

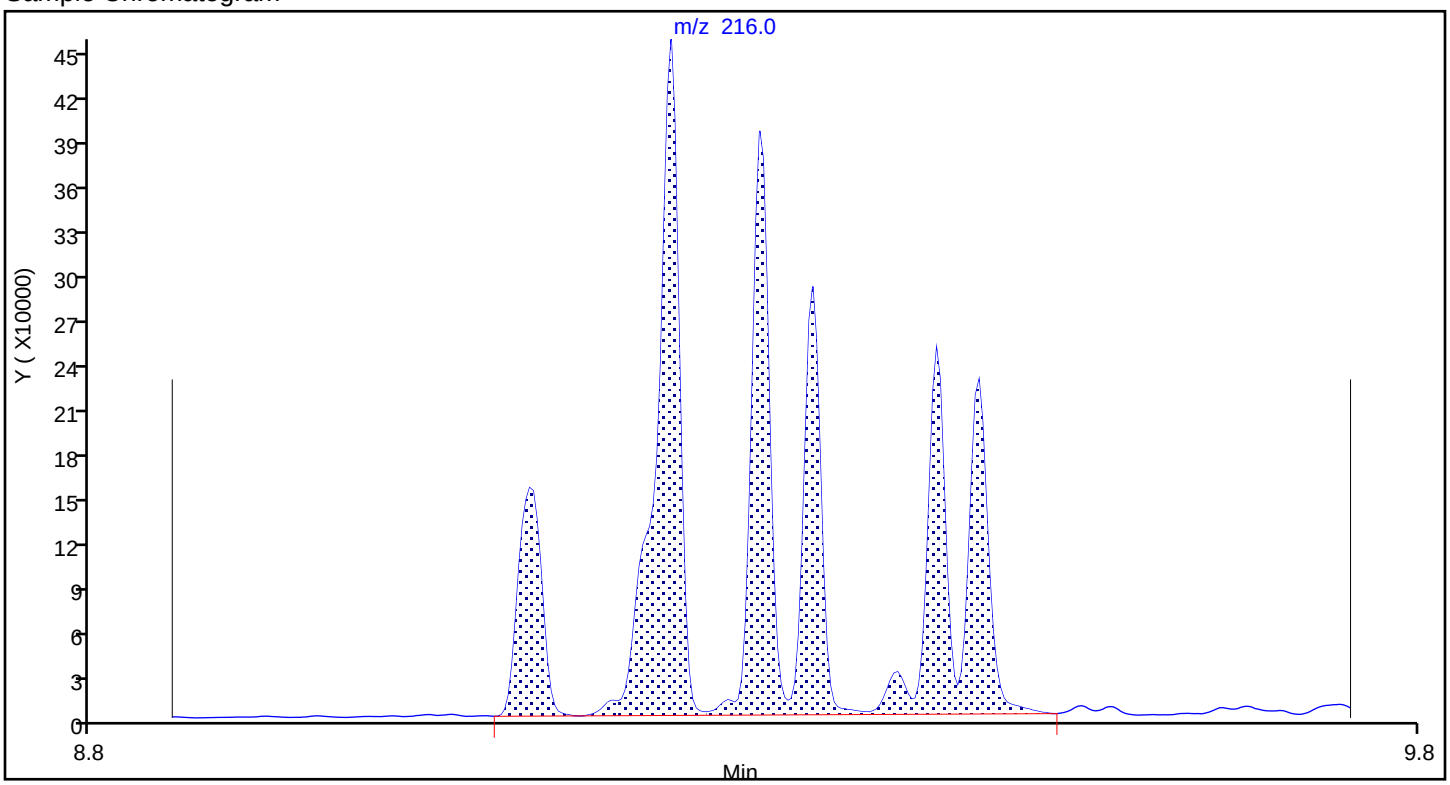
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



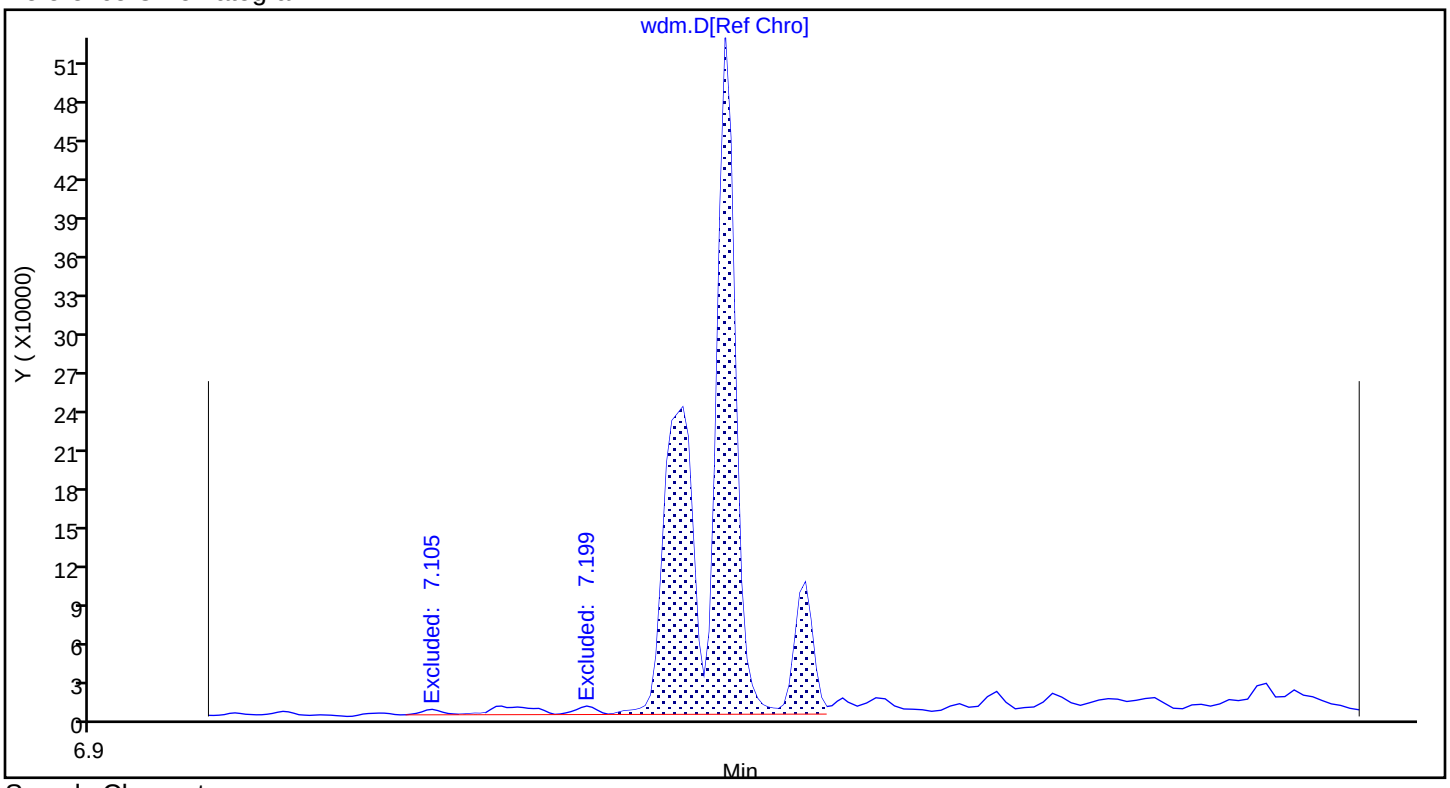
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

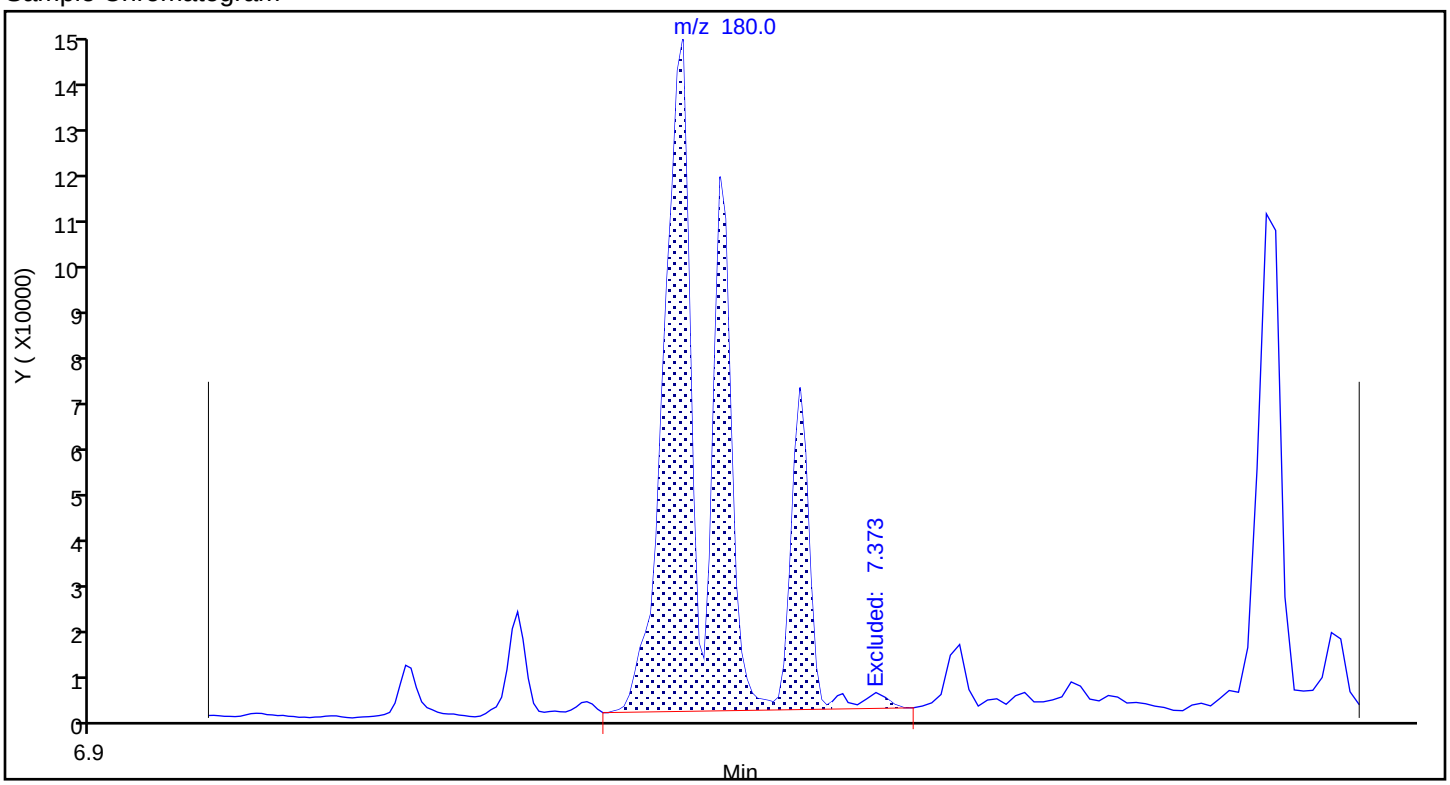
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



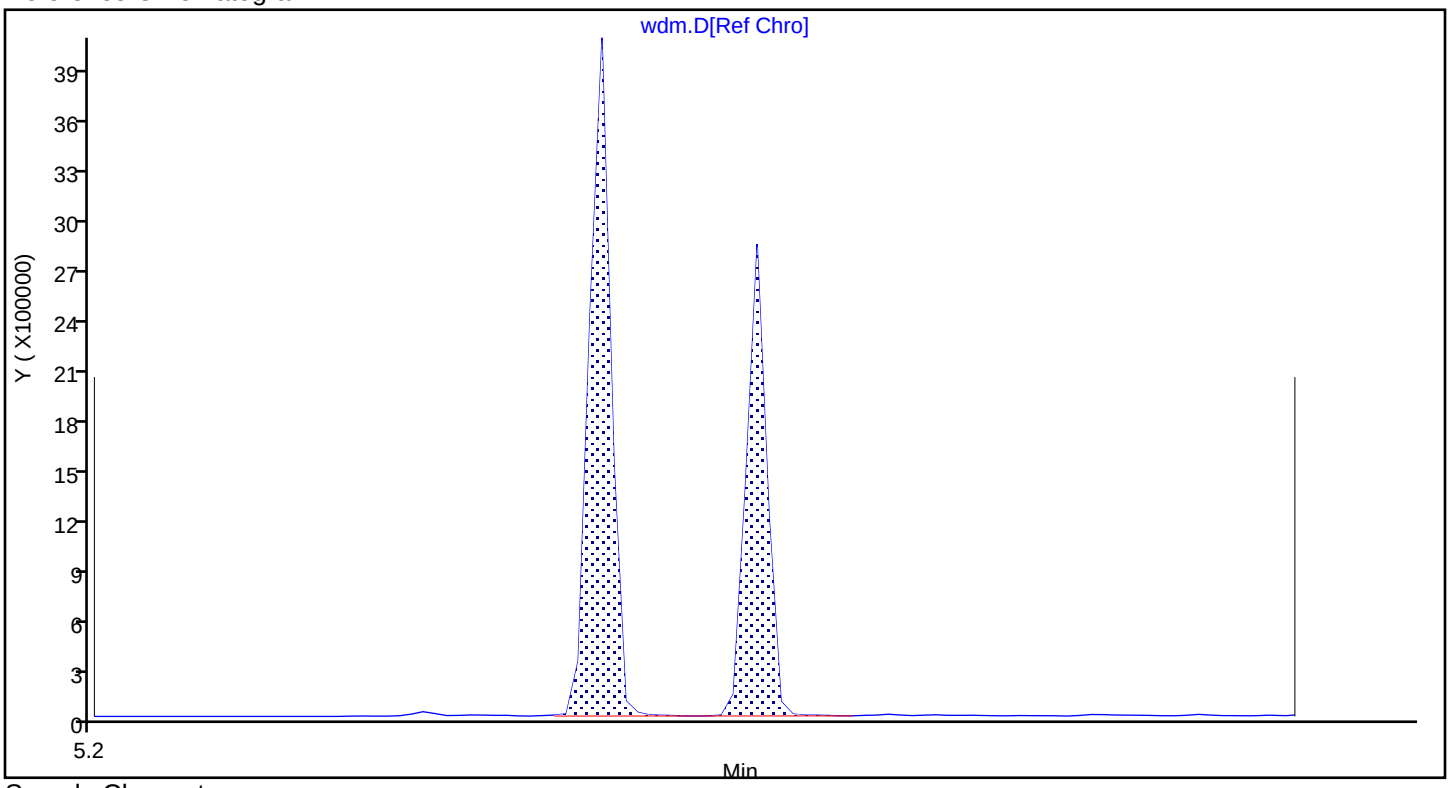
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

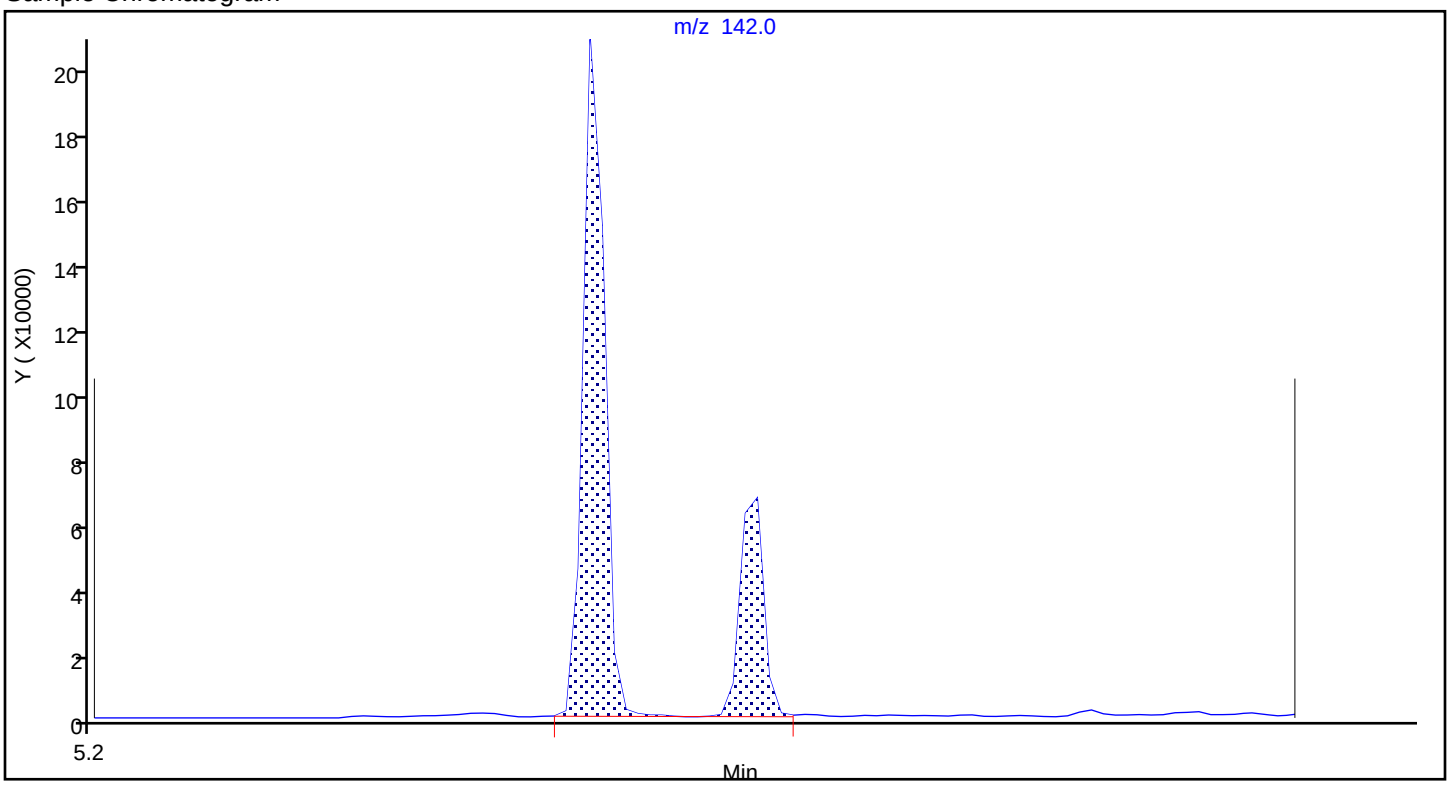
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



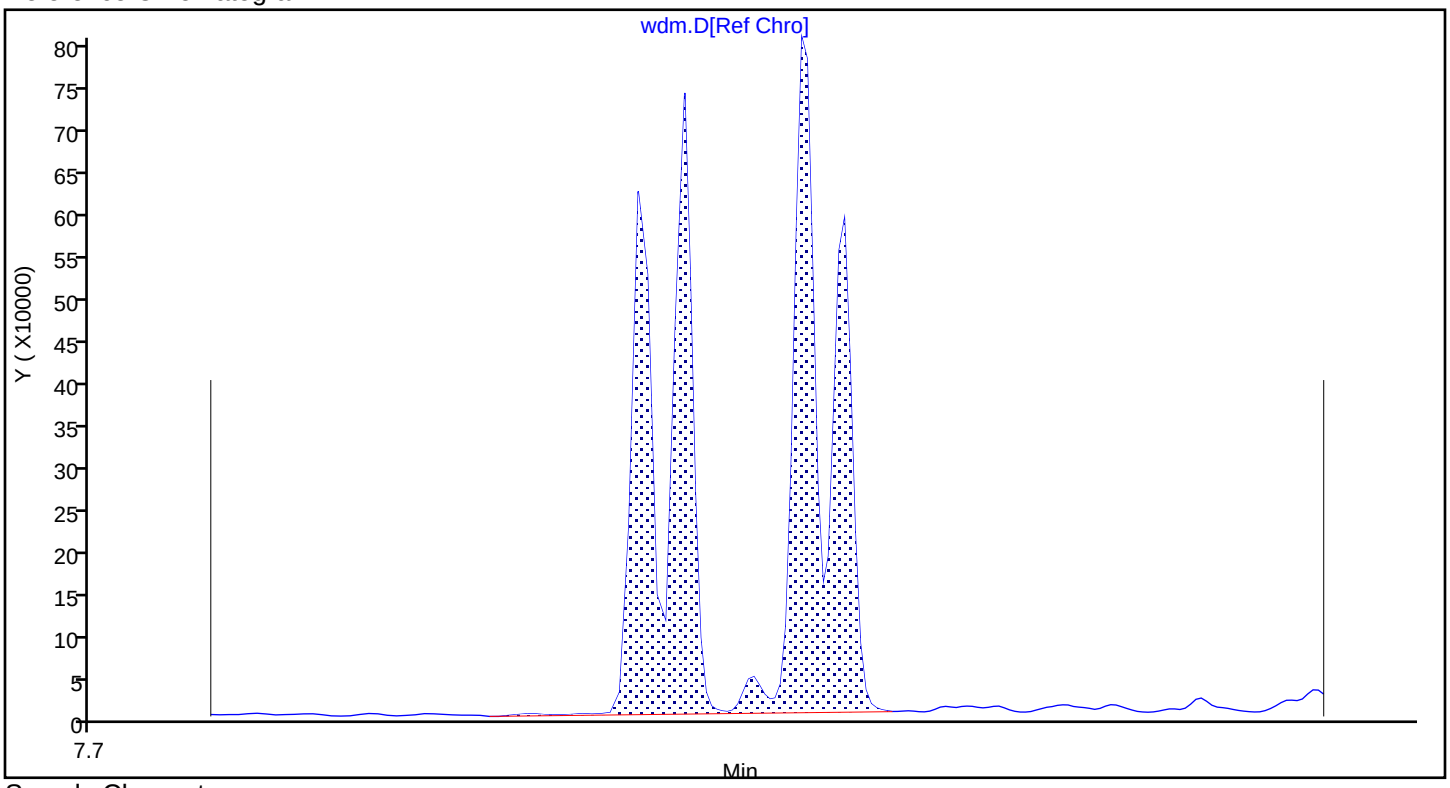
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

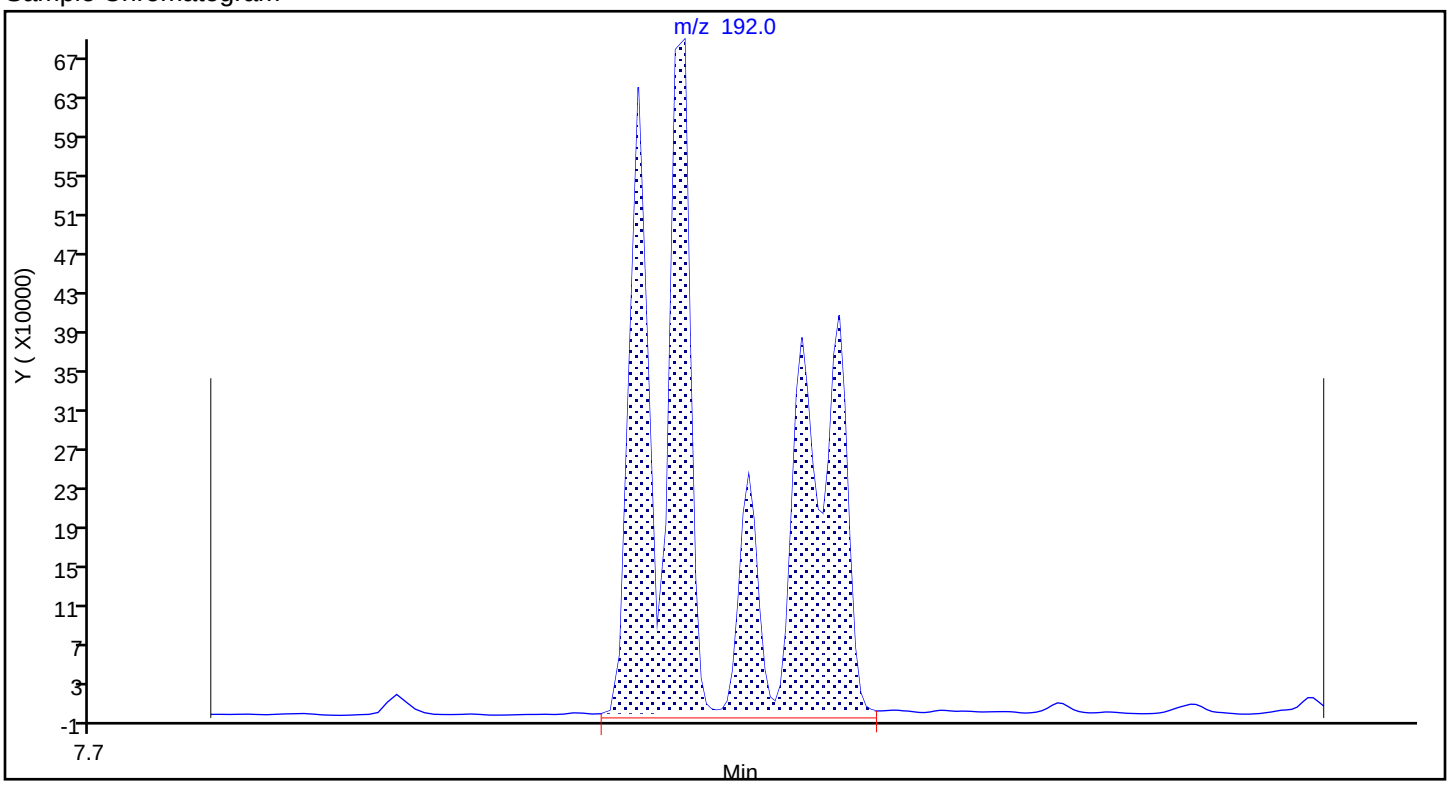
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



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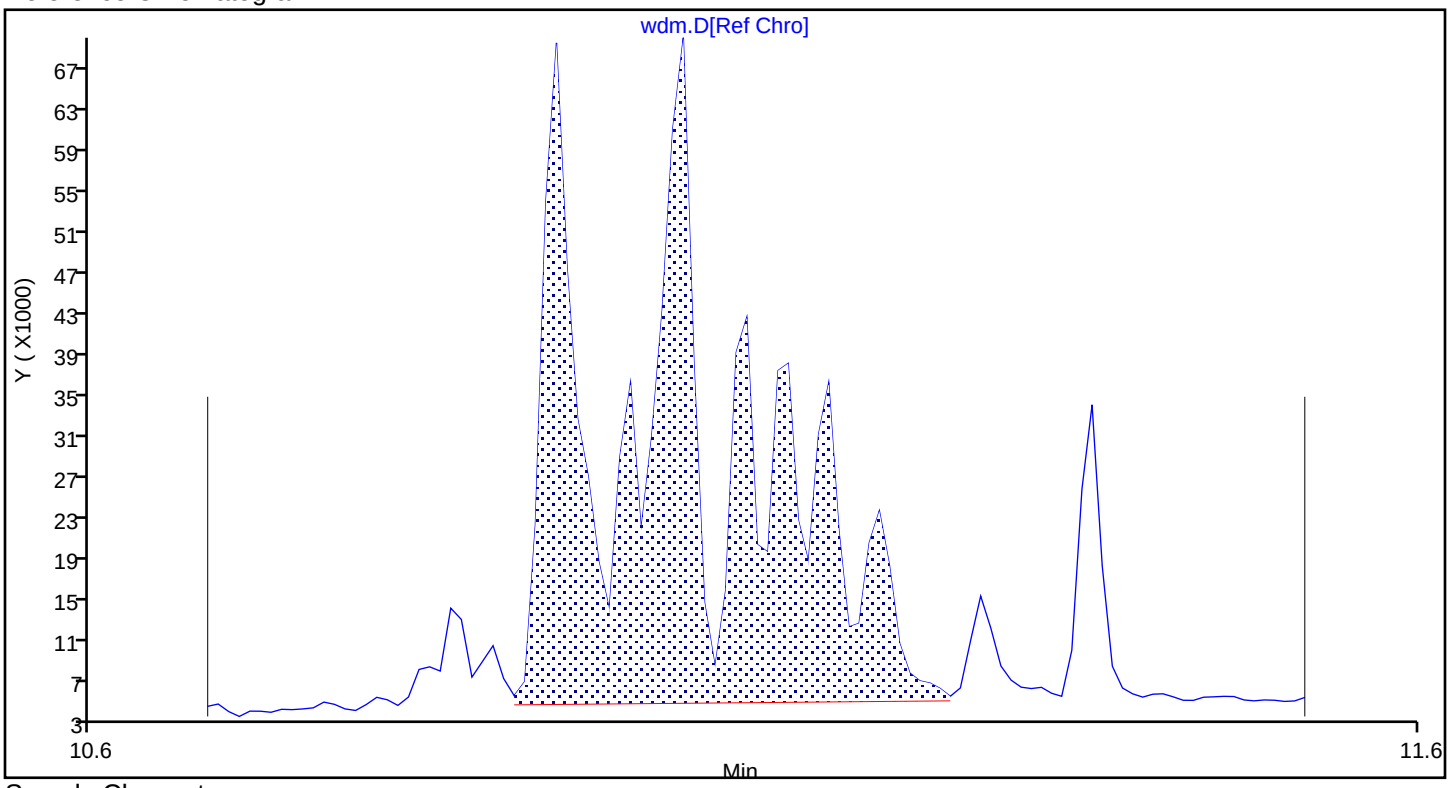
Eurofins TestAmerica, Knoxville

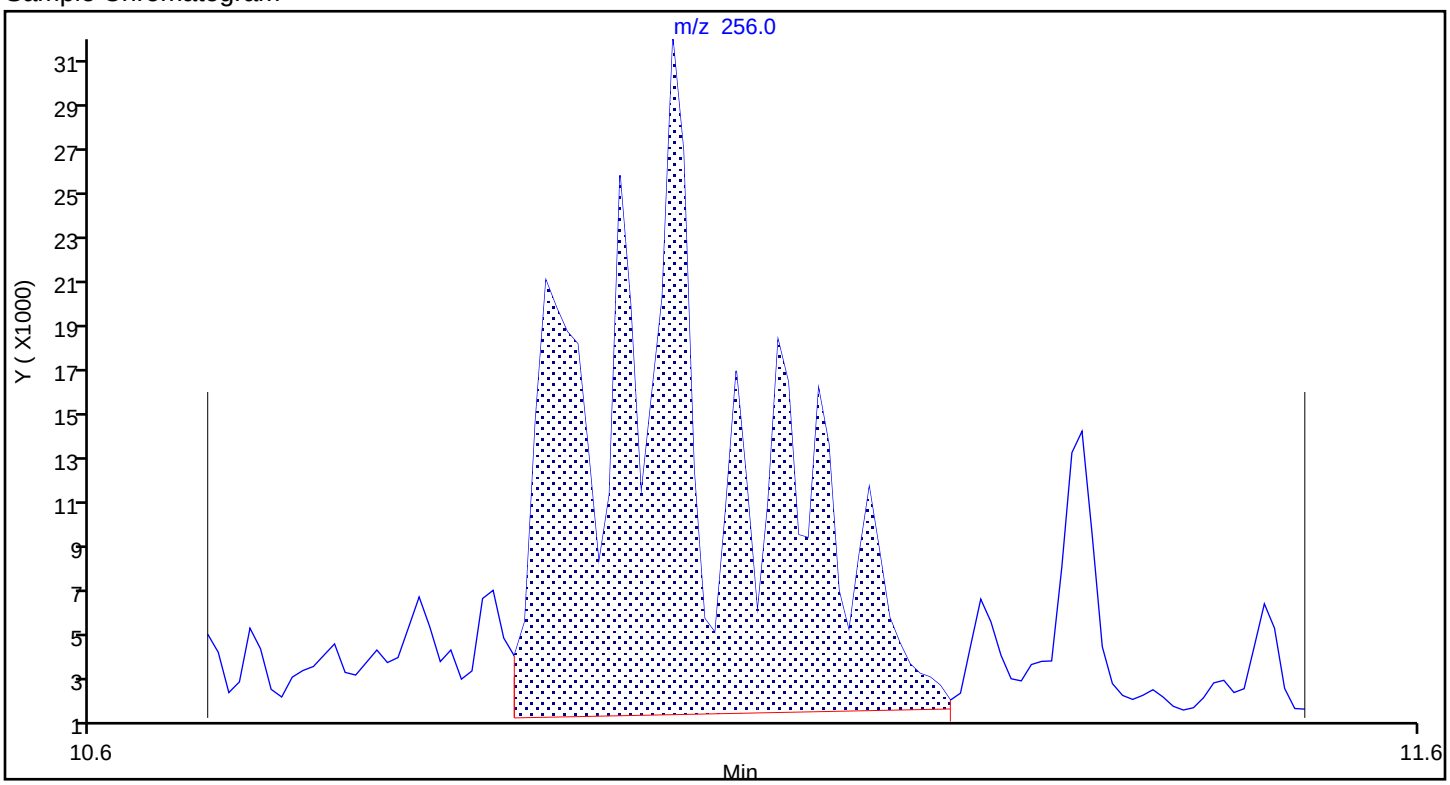
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



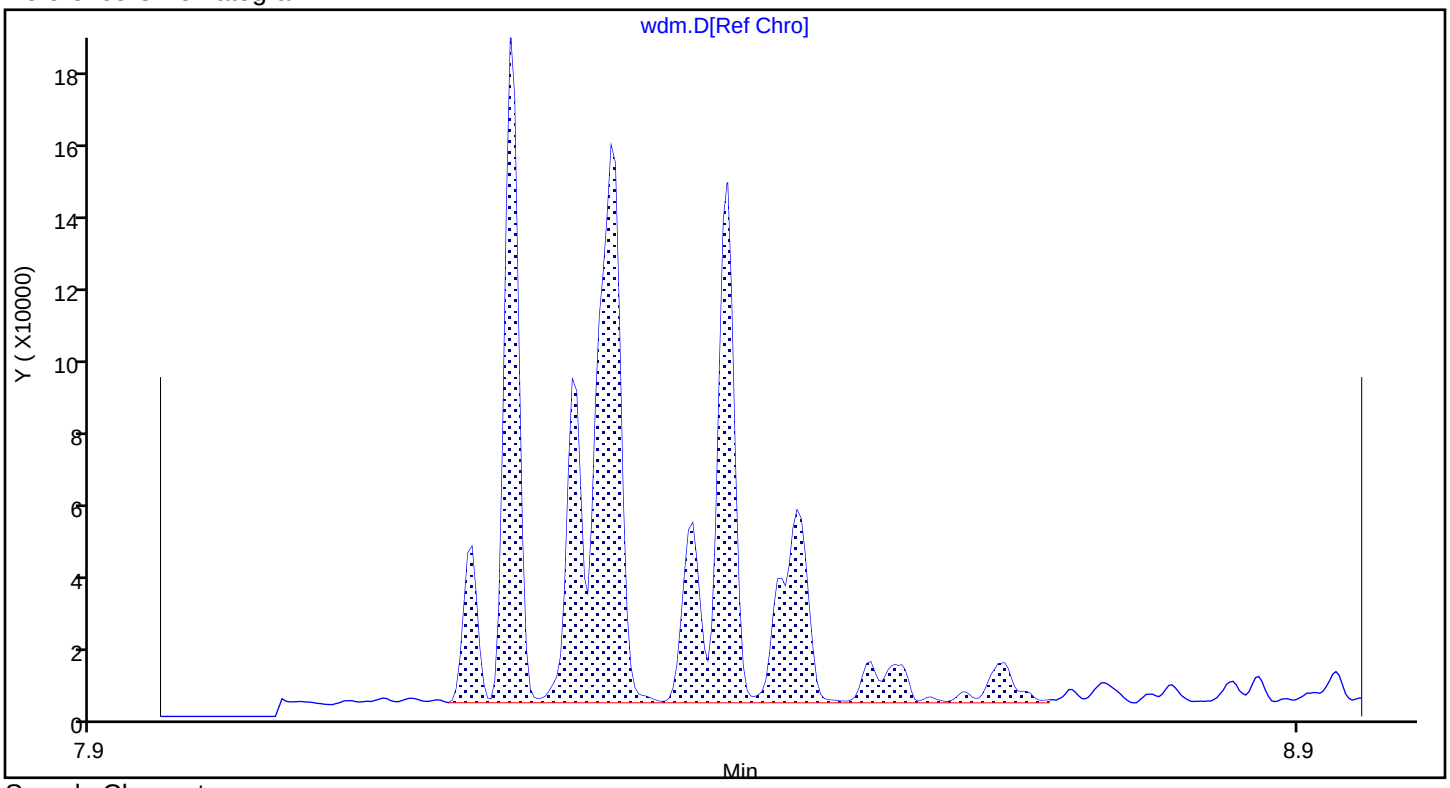
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

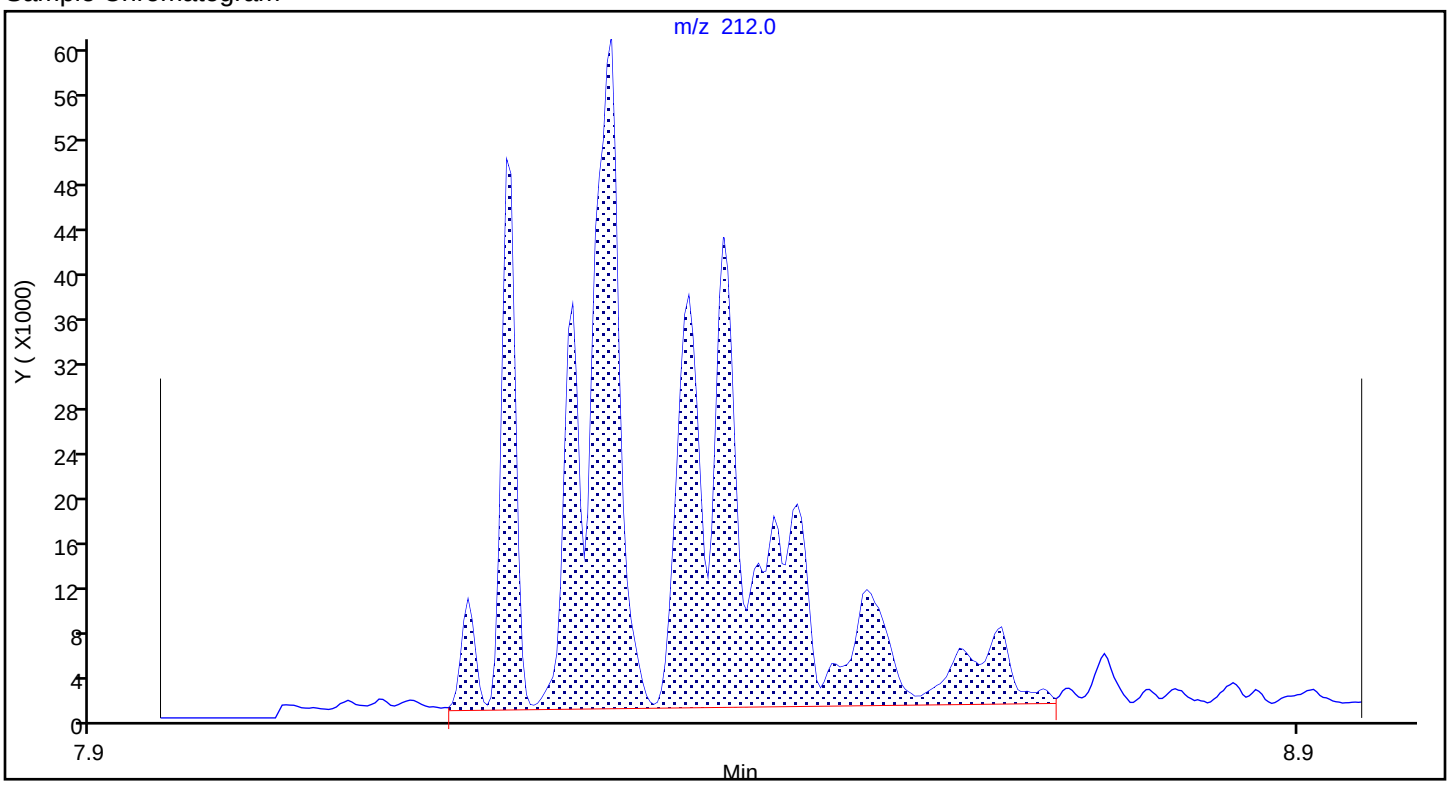
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



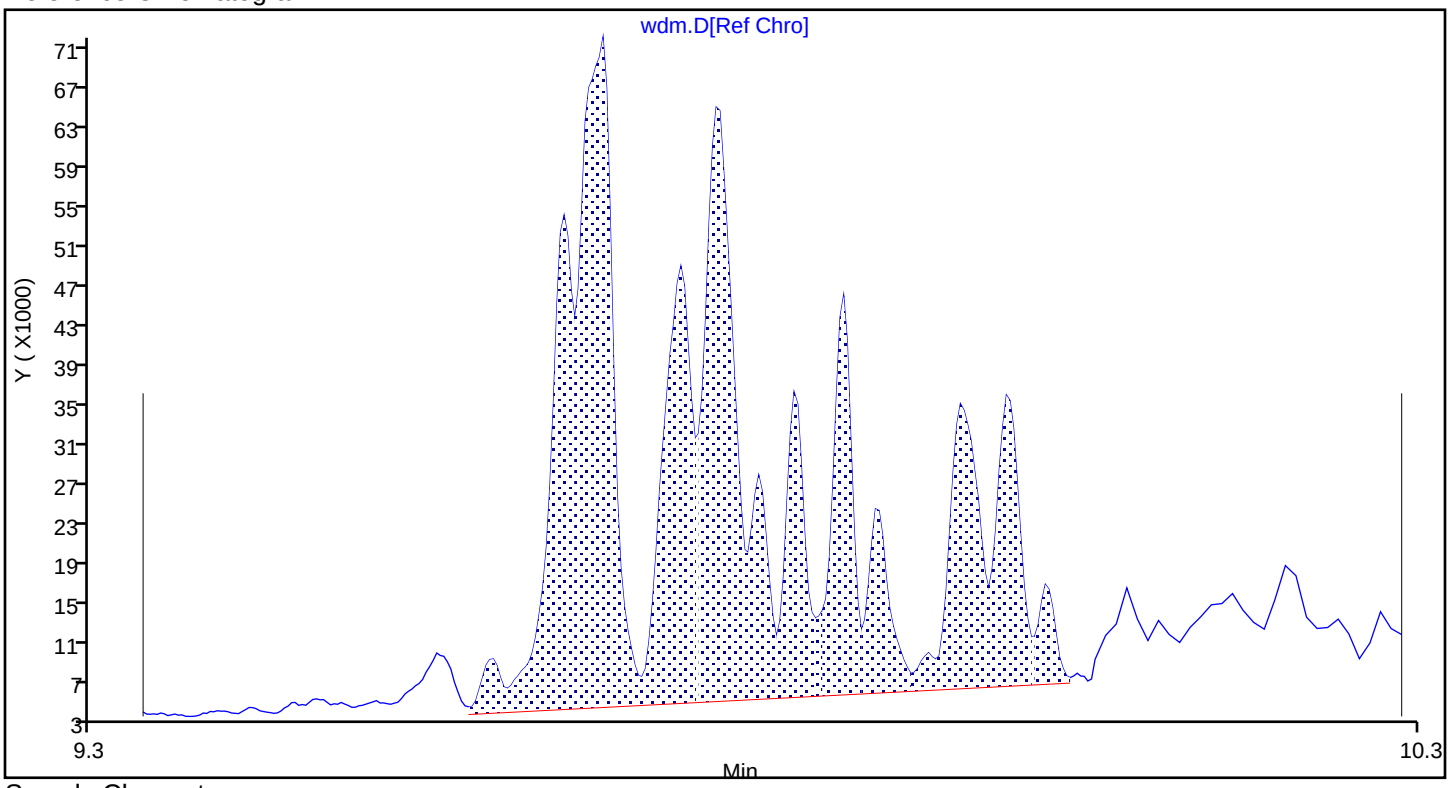
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

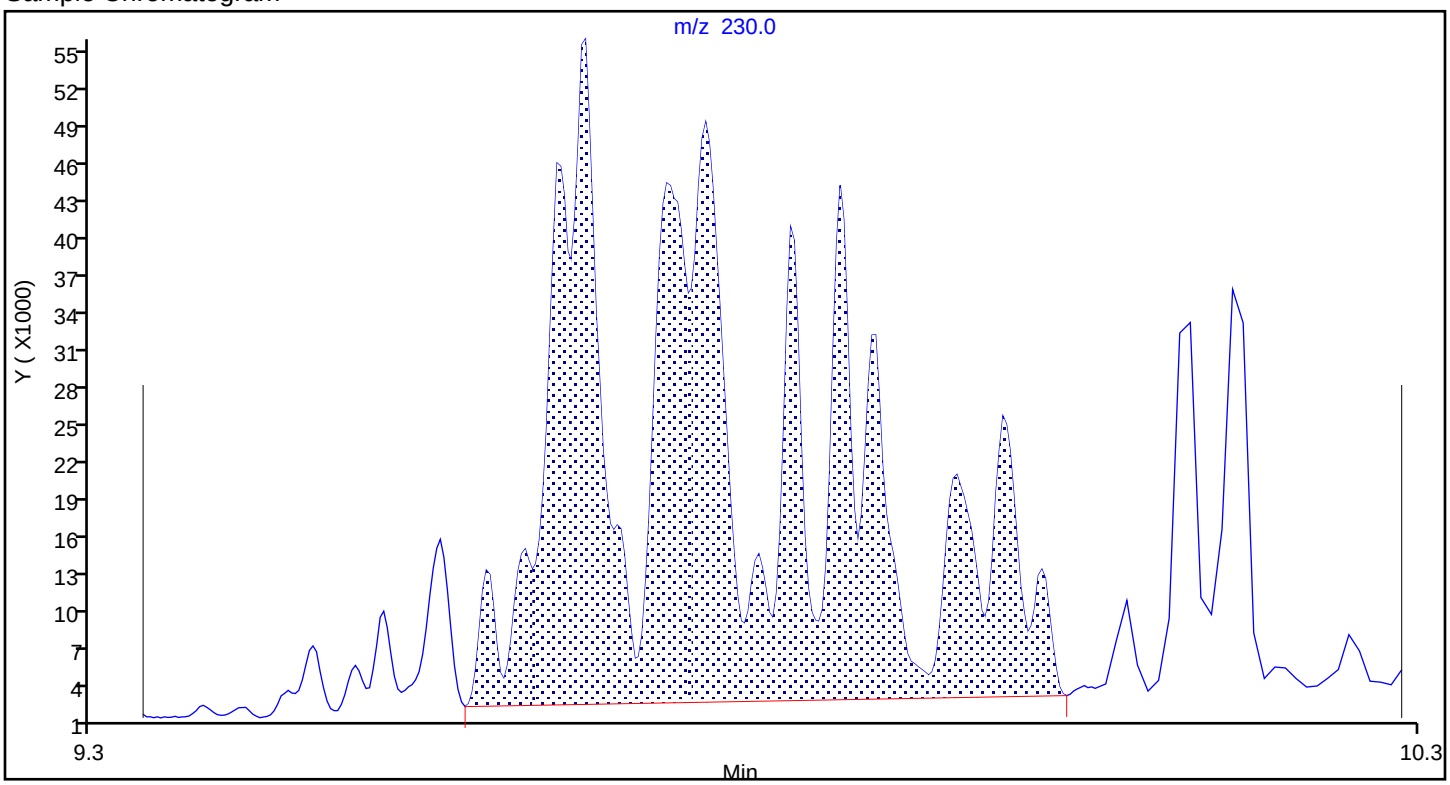
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



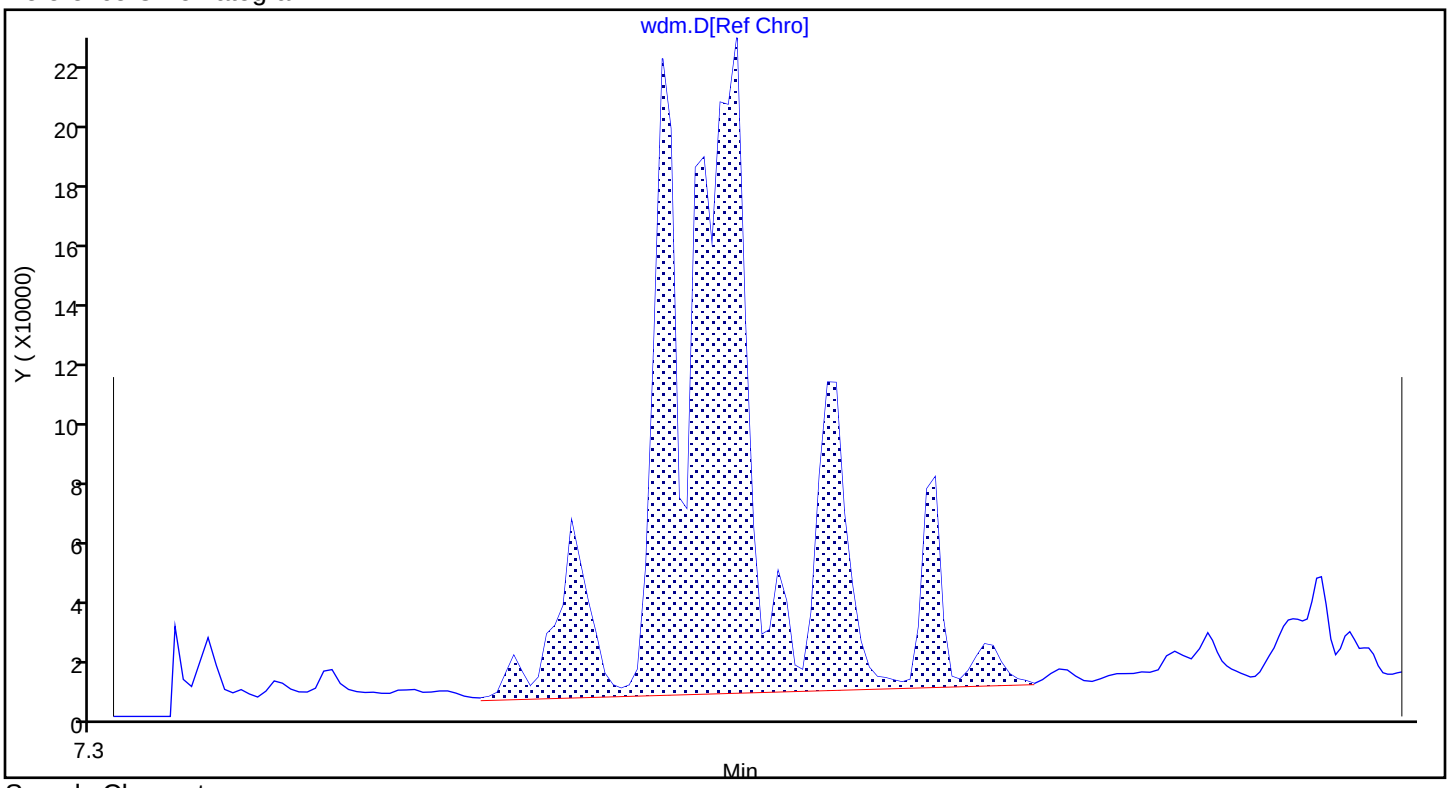
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

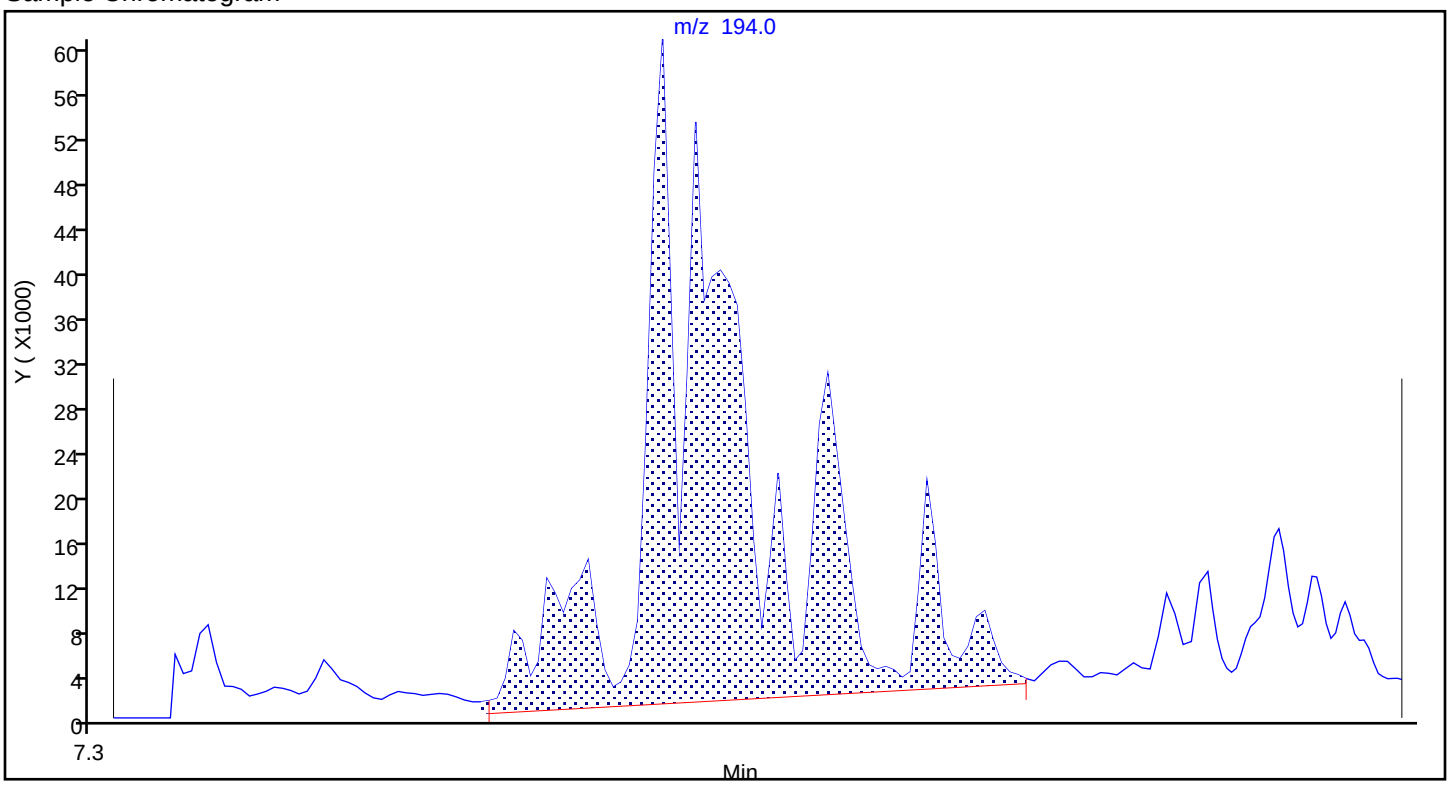
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



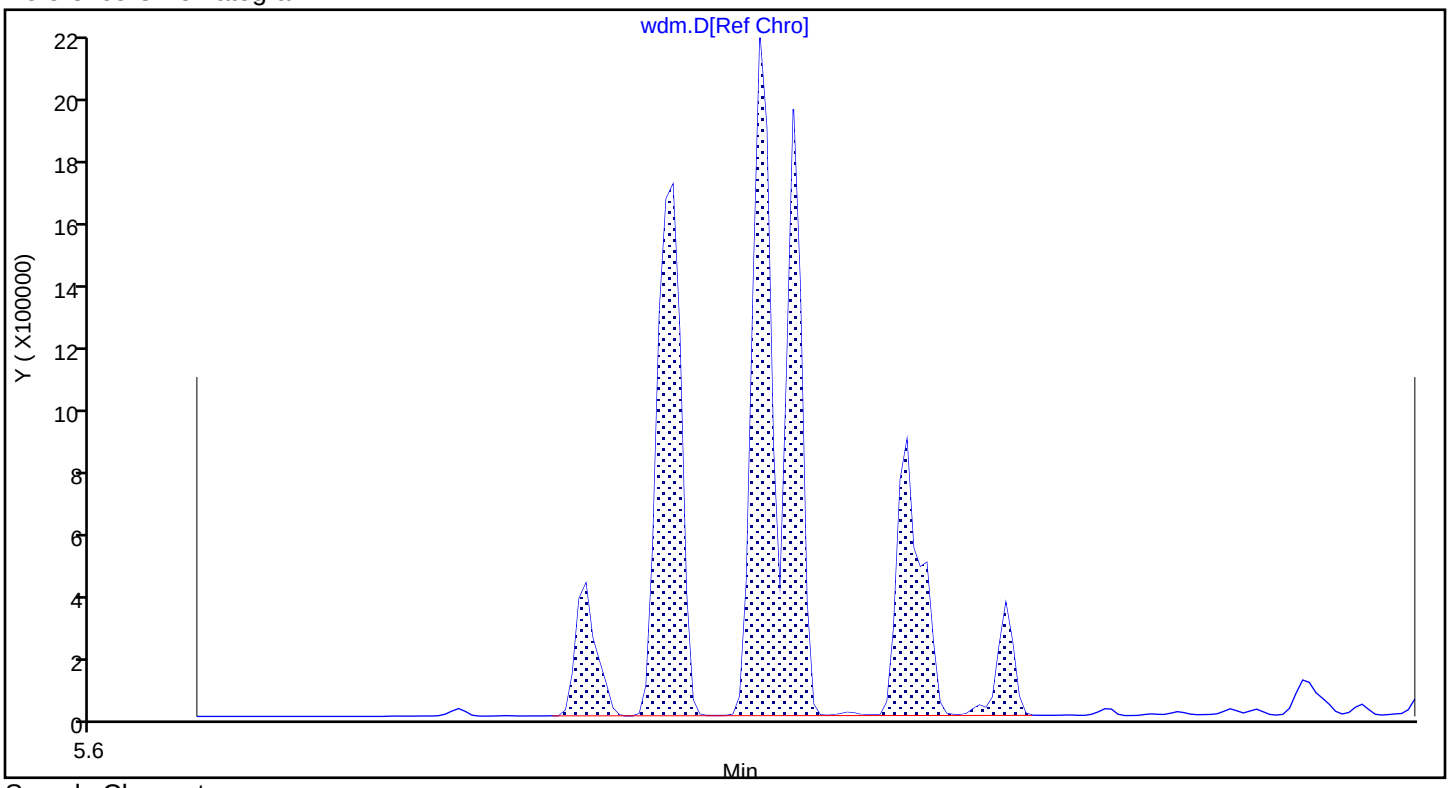
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

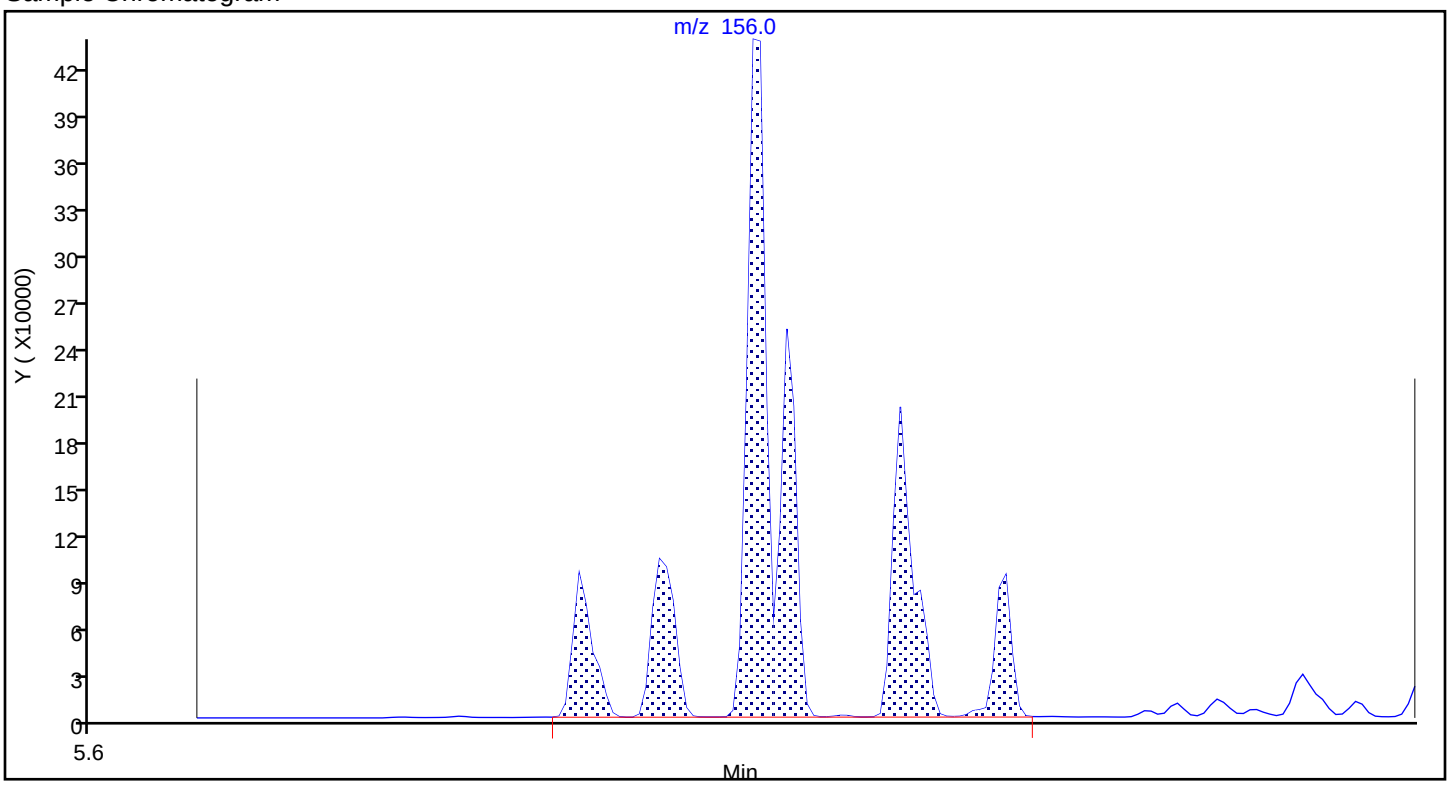
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



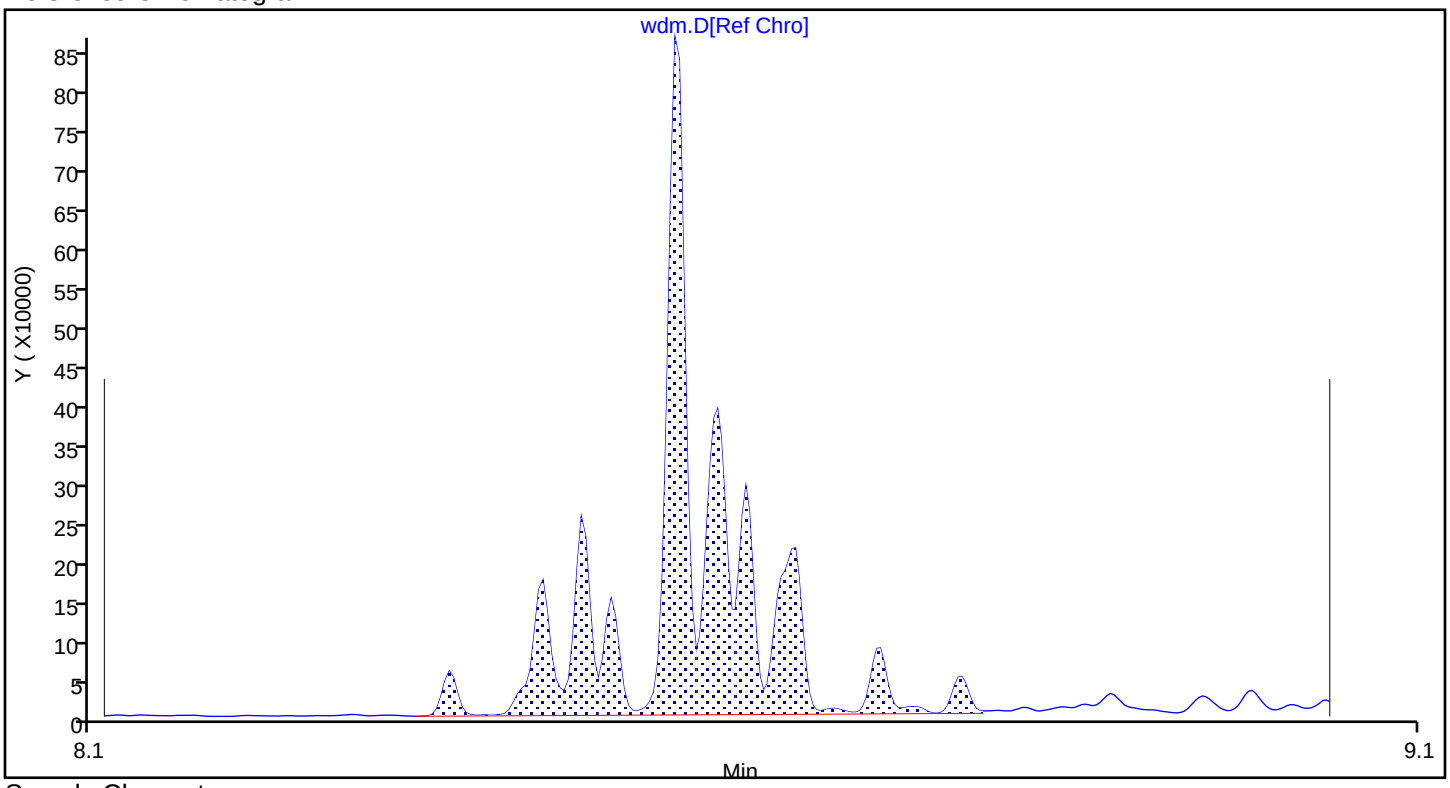
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

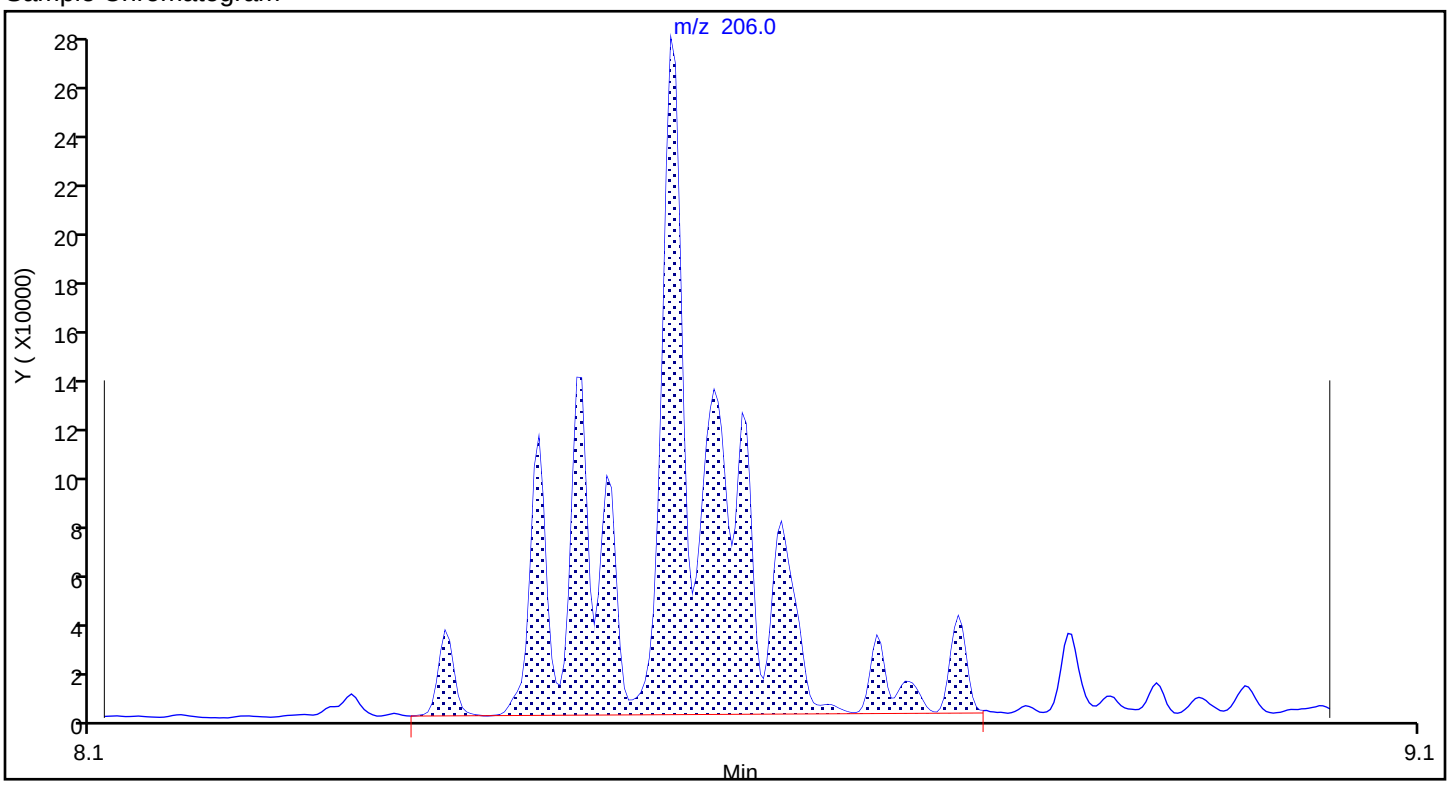
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



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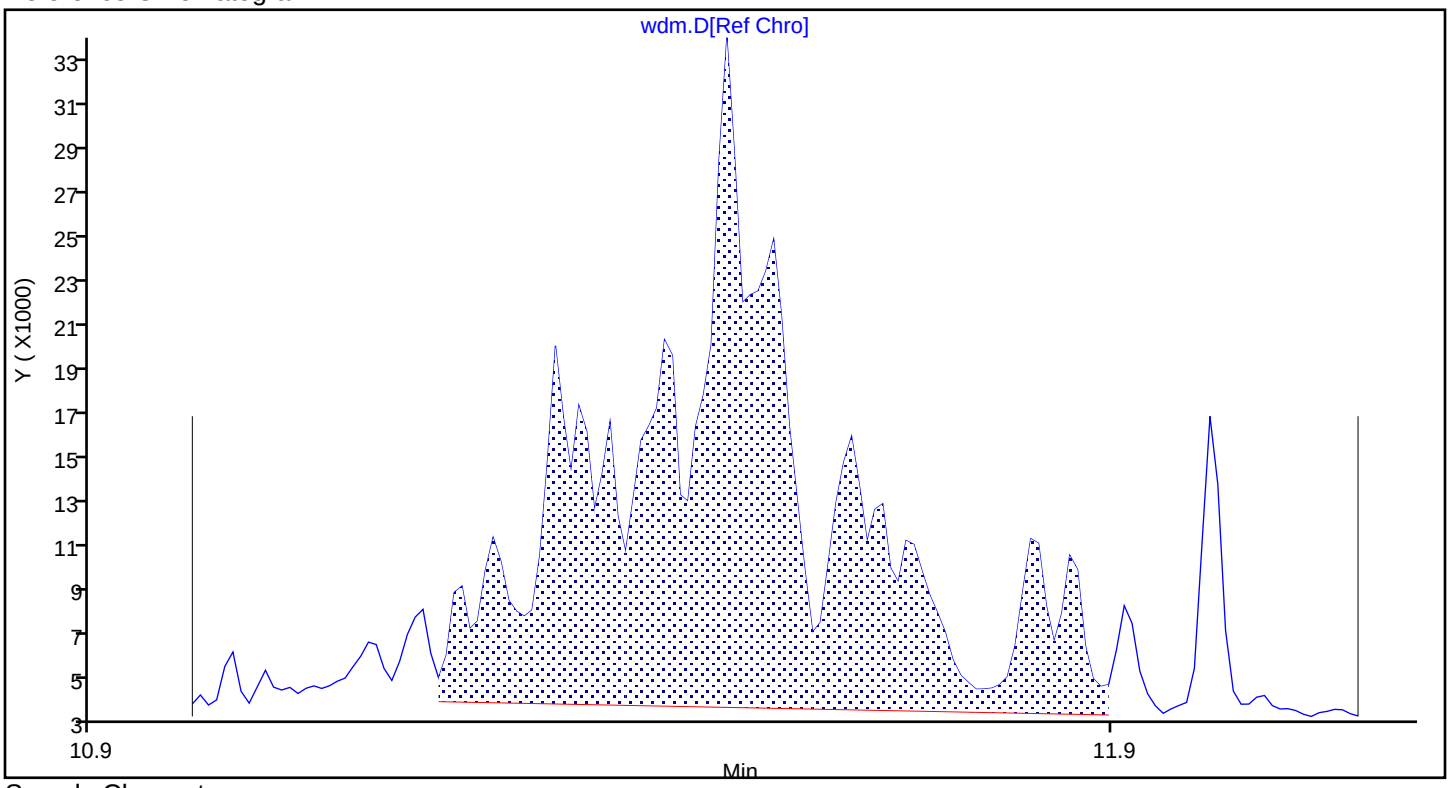
Eurofins TestAmerica, Knoxville

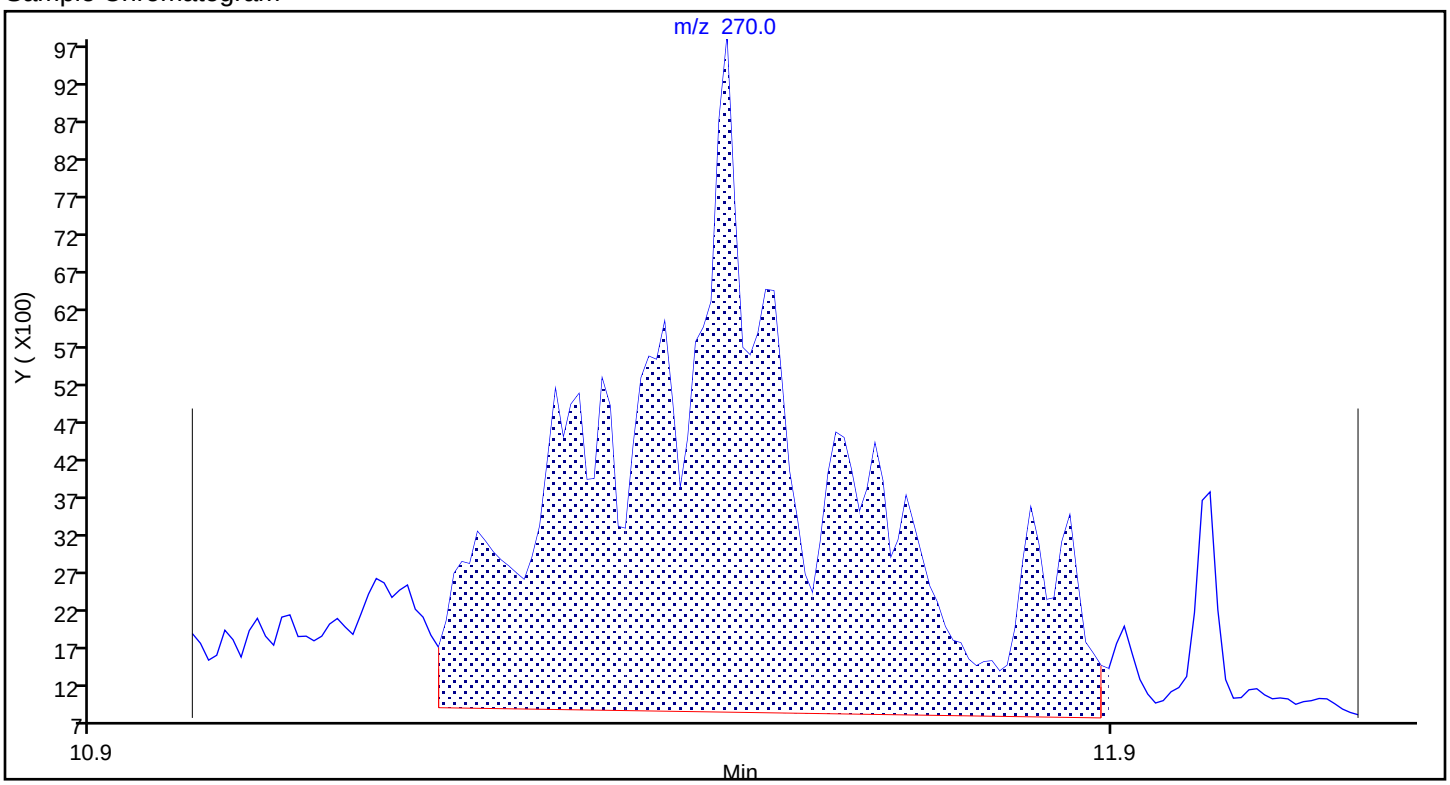
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



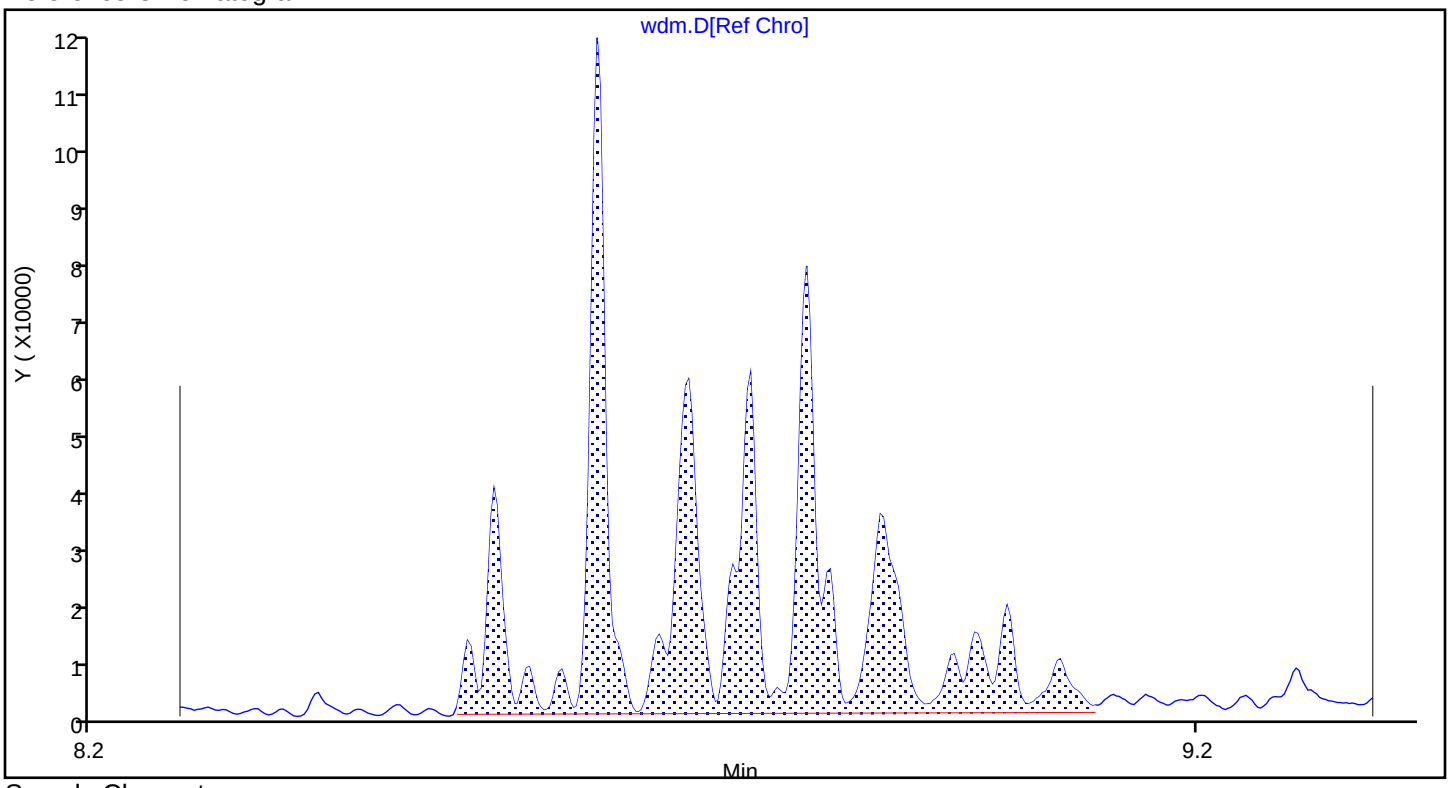
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

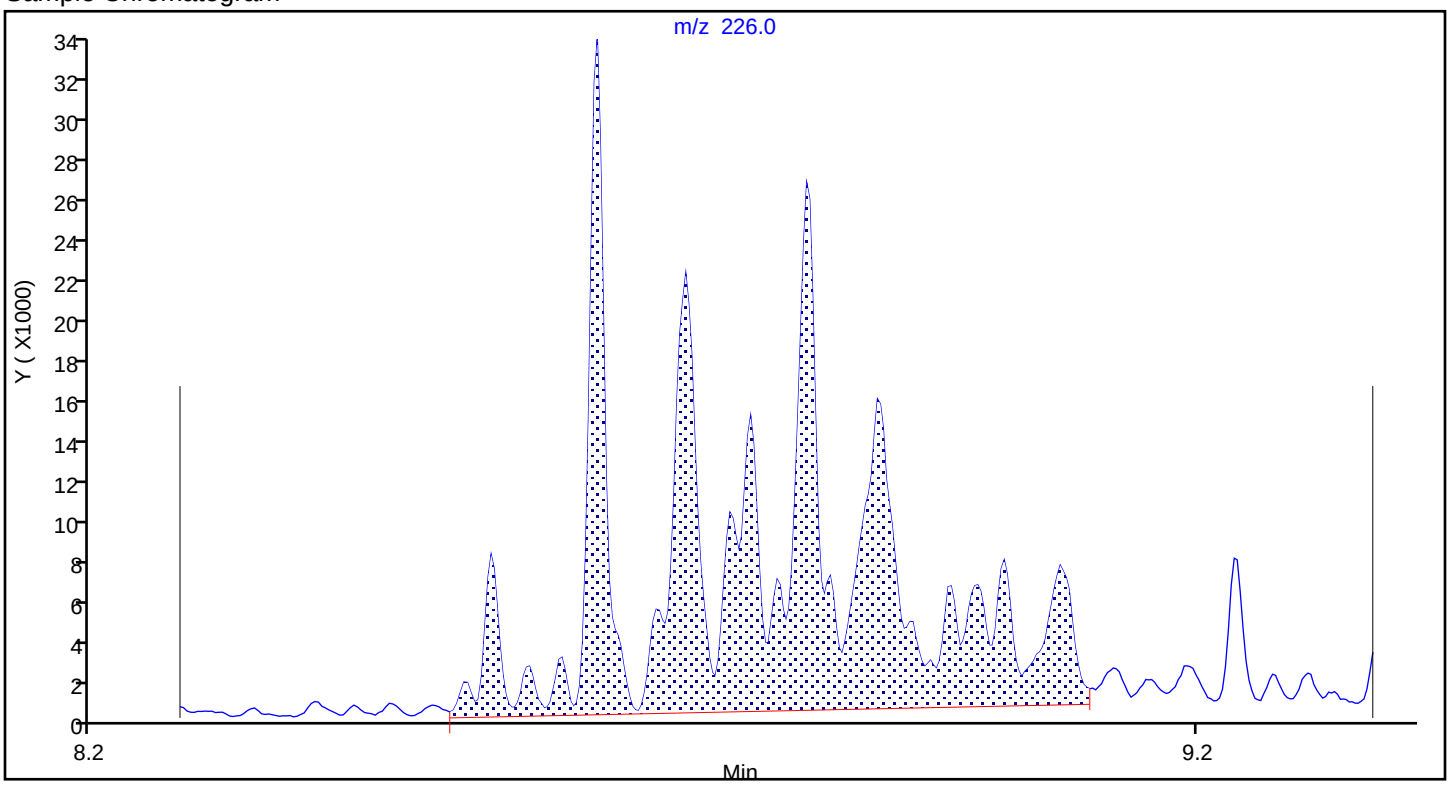
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



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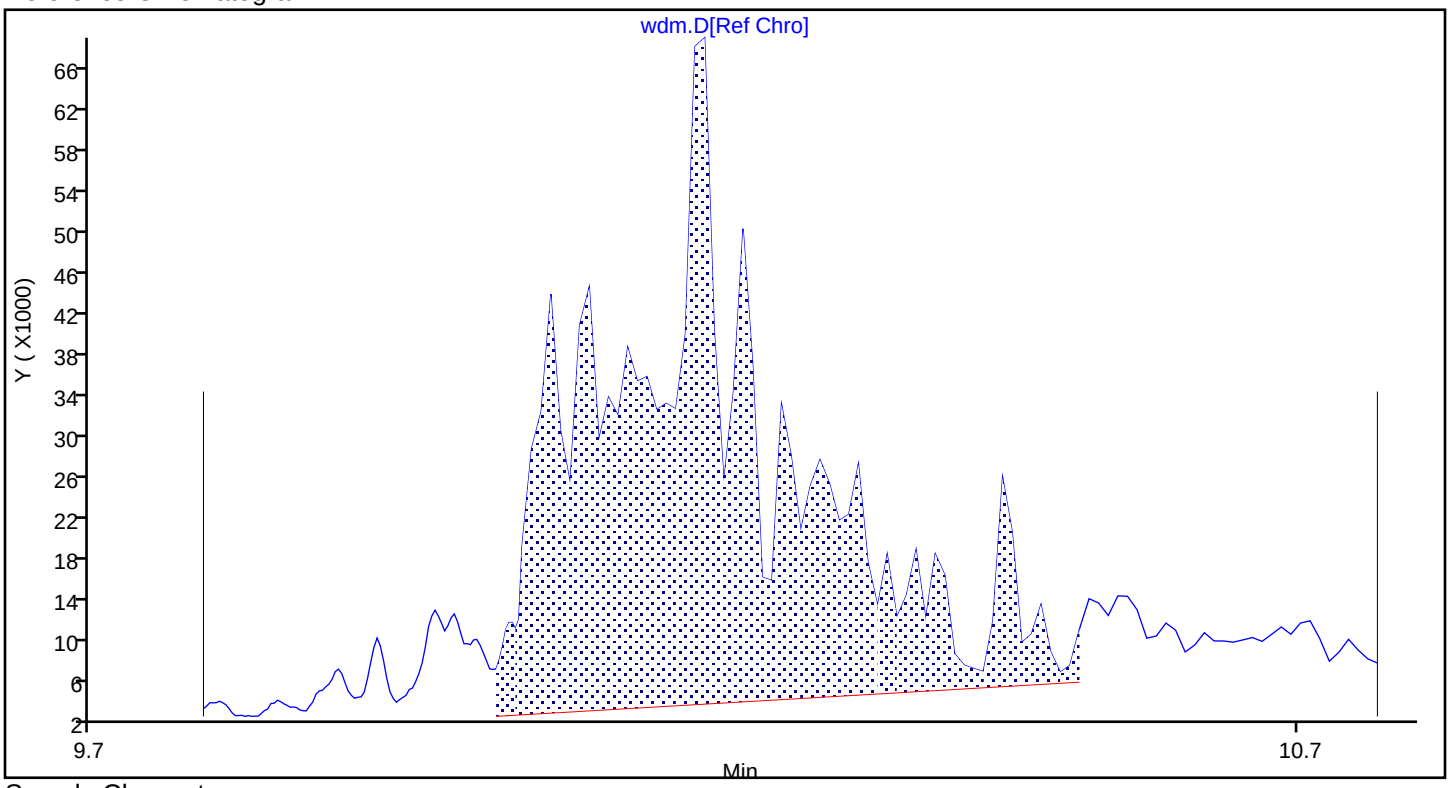
Eurofins TestAmerica, Knoxville

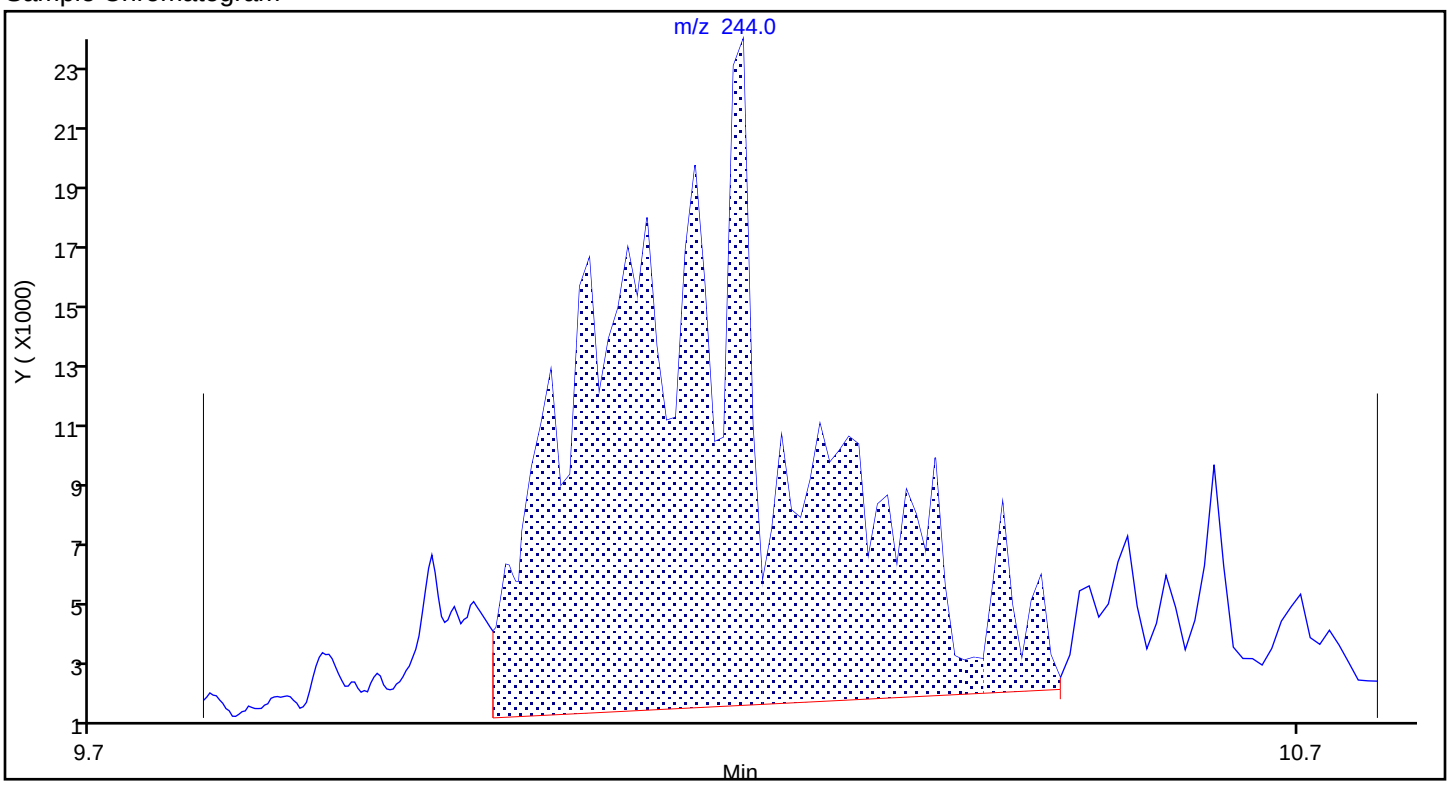
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
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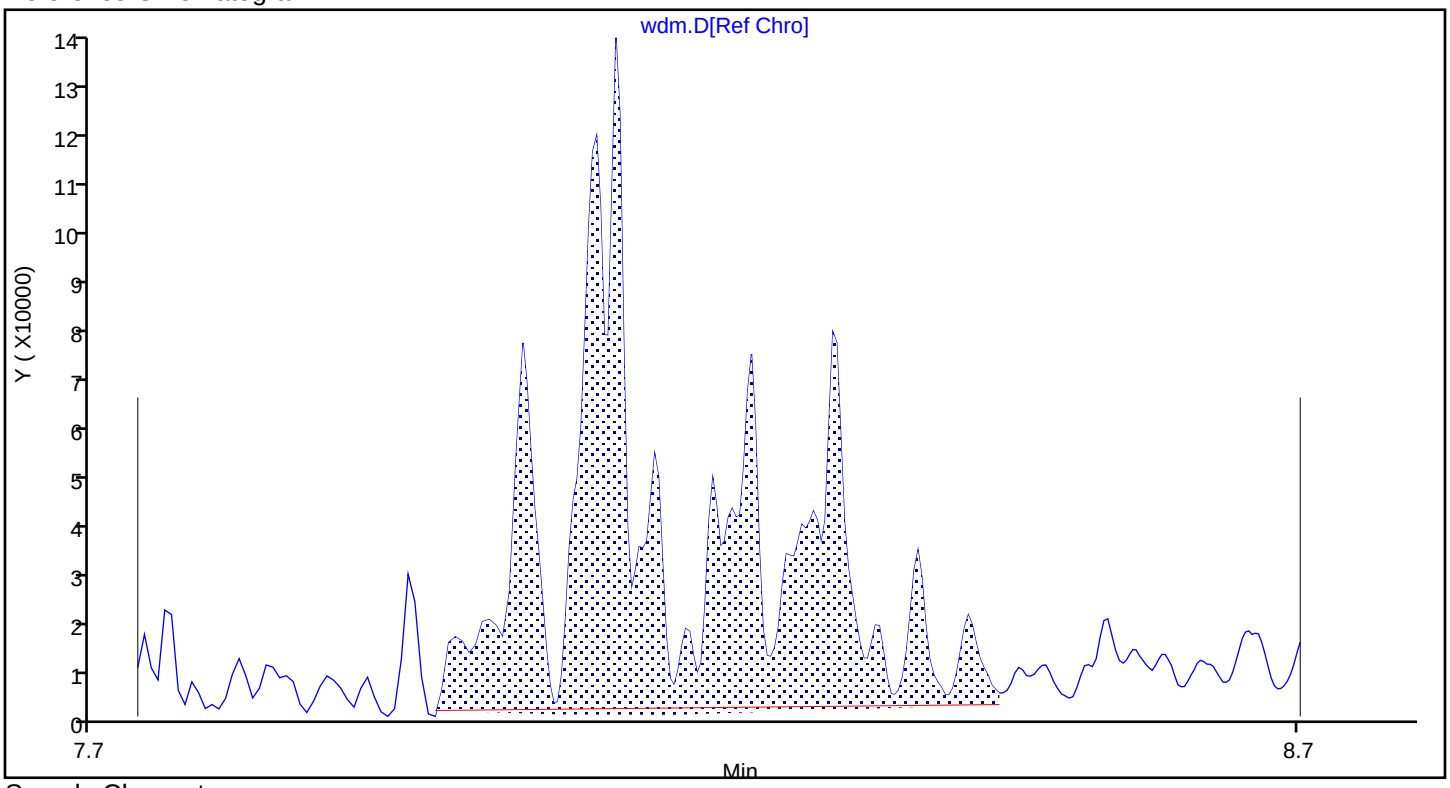
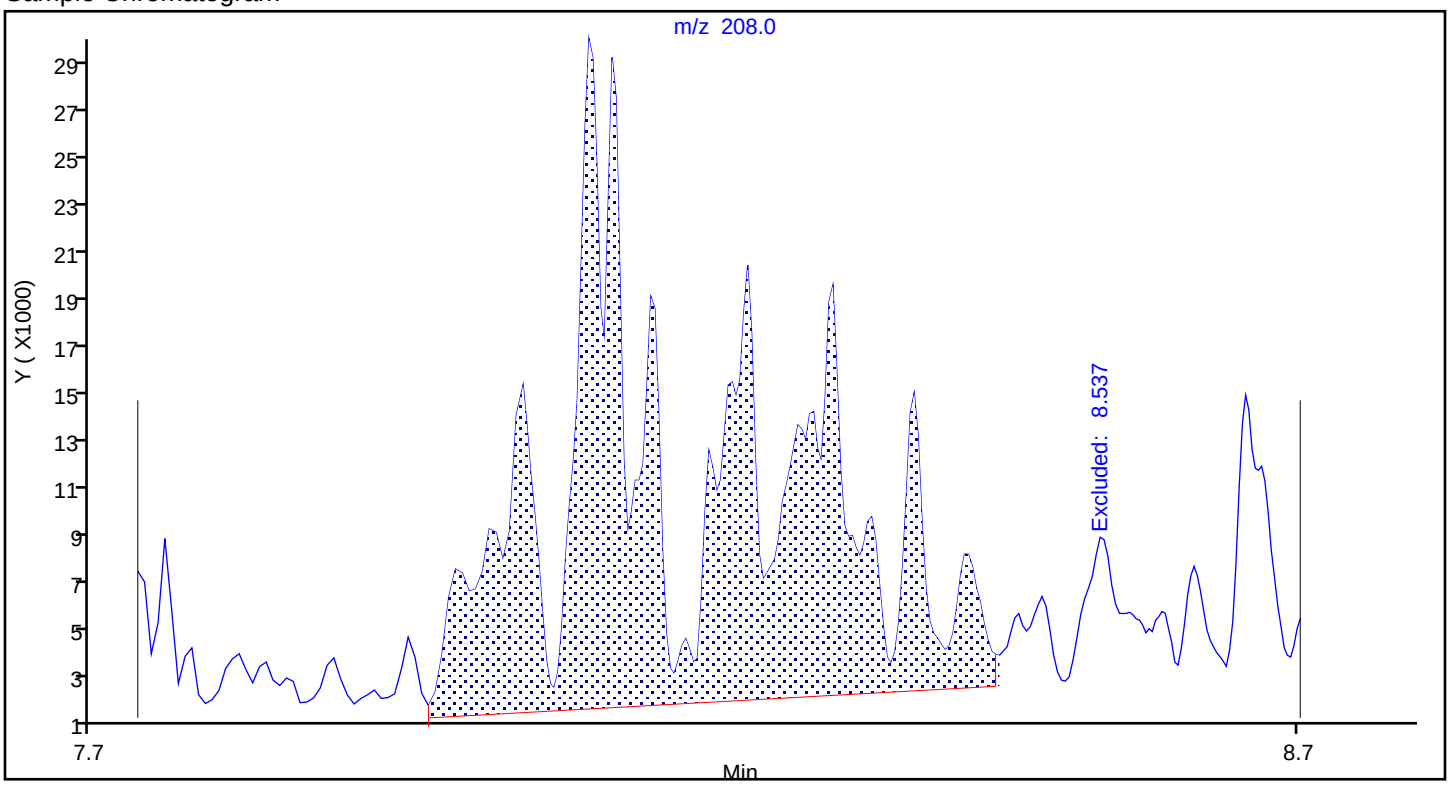
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



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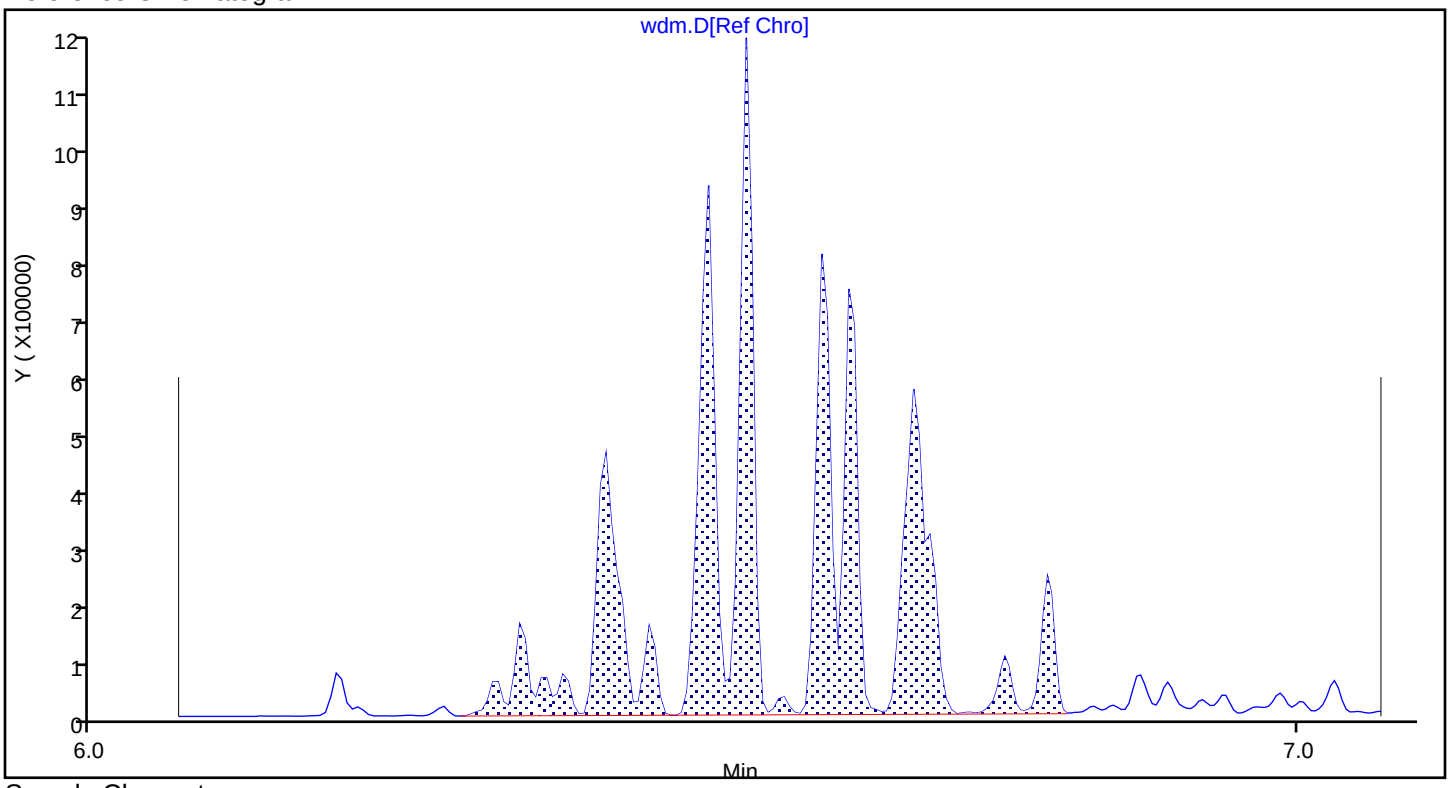
Eurofins TestAmerica, Knoxville

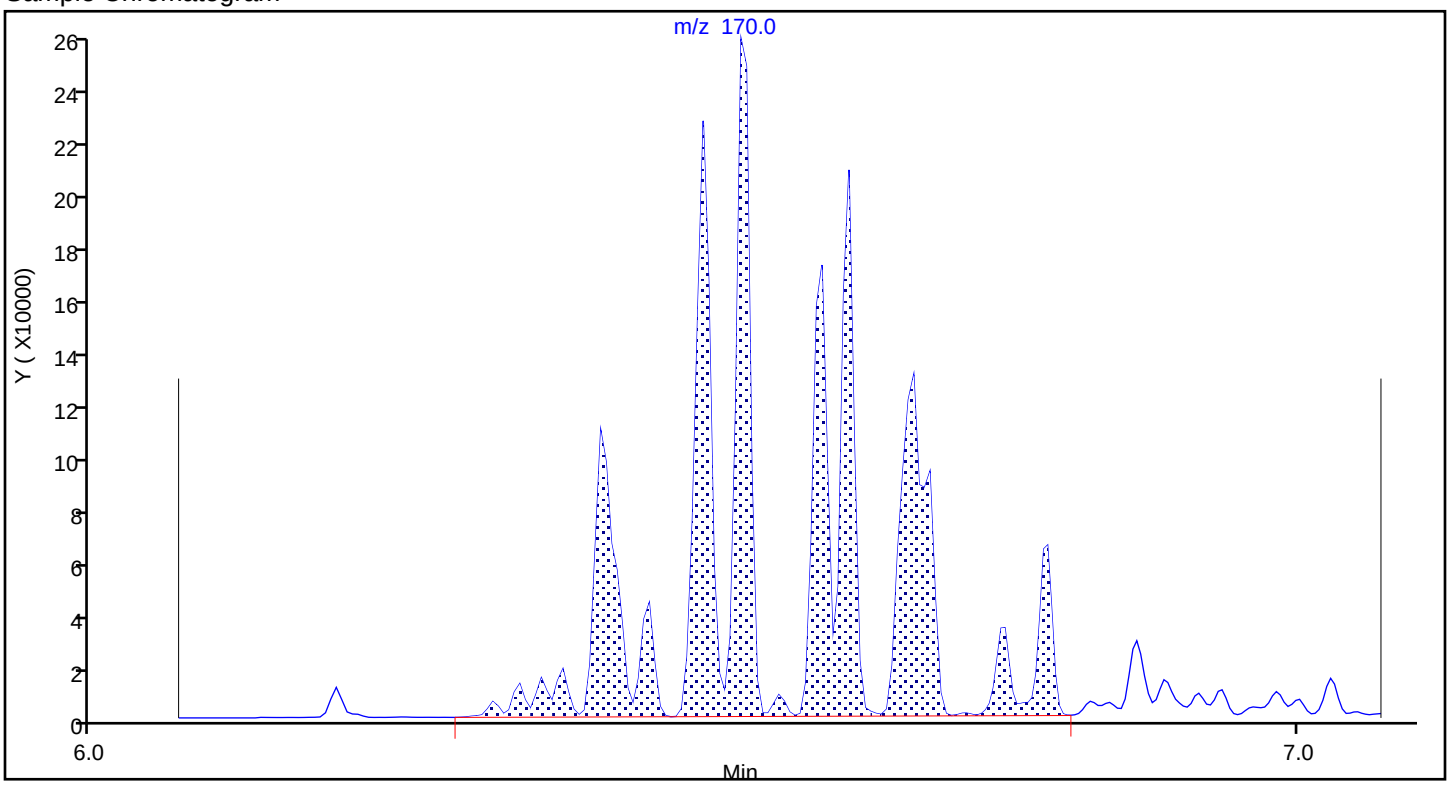
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



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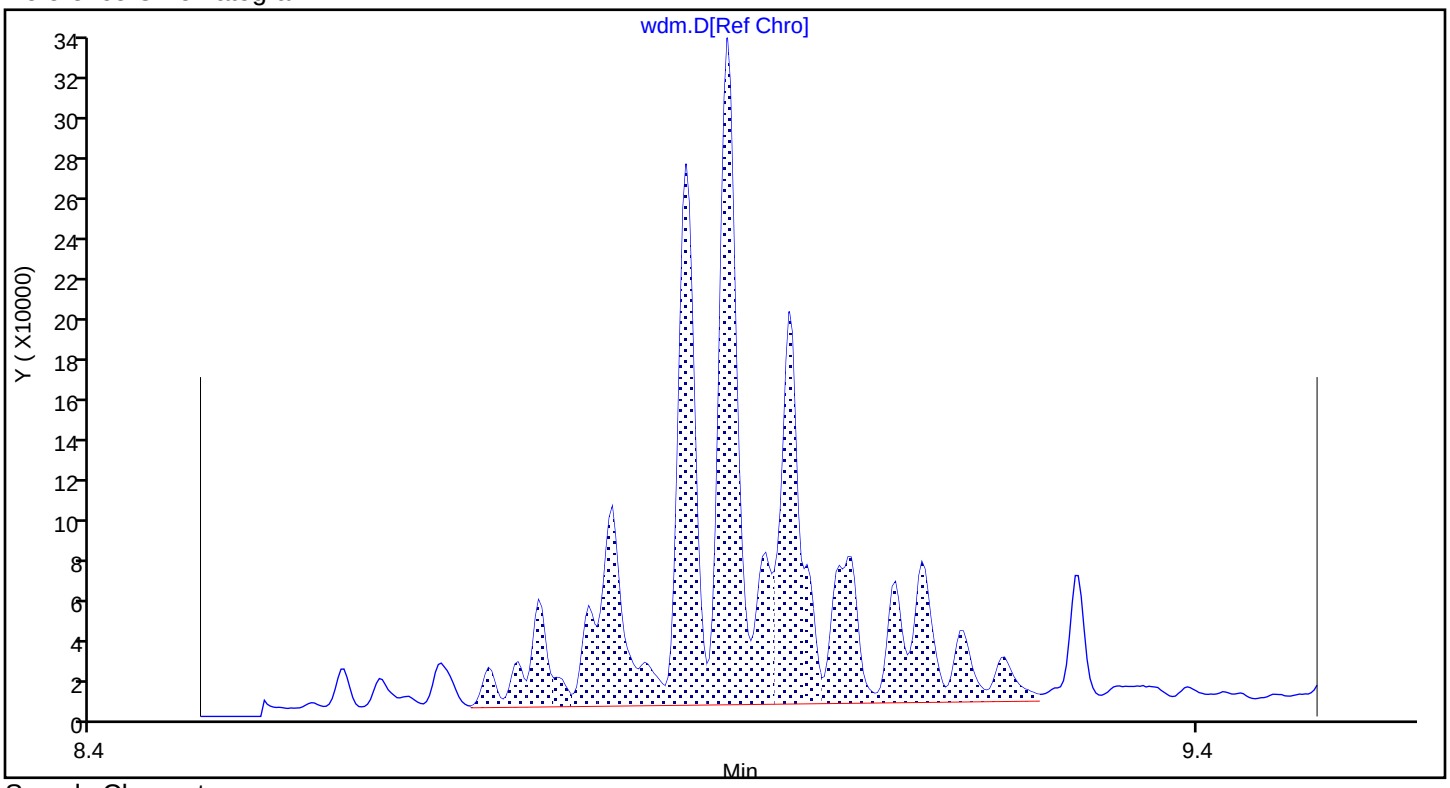
Eurofins TestAmerica, Knoxville

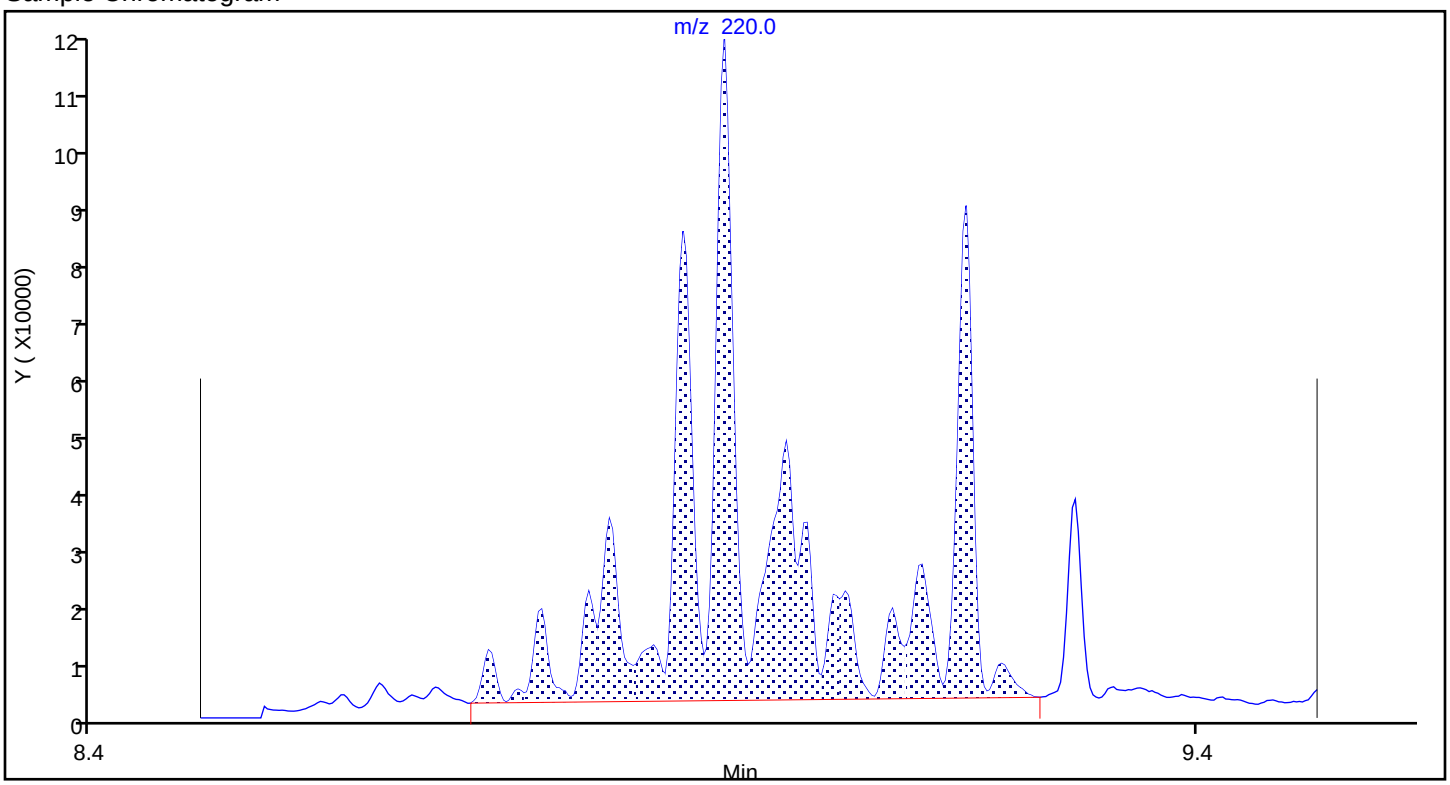
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



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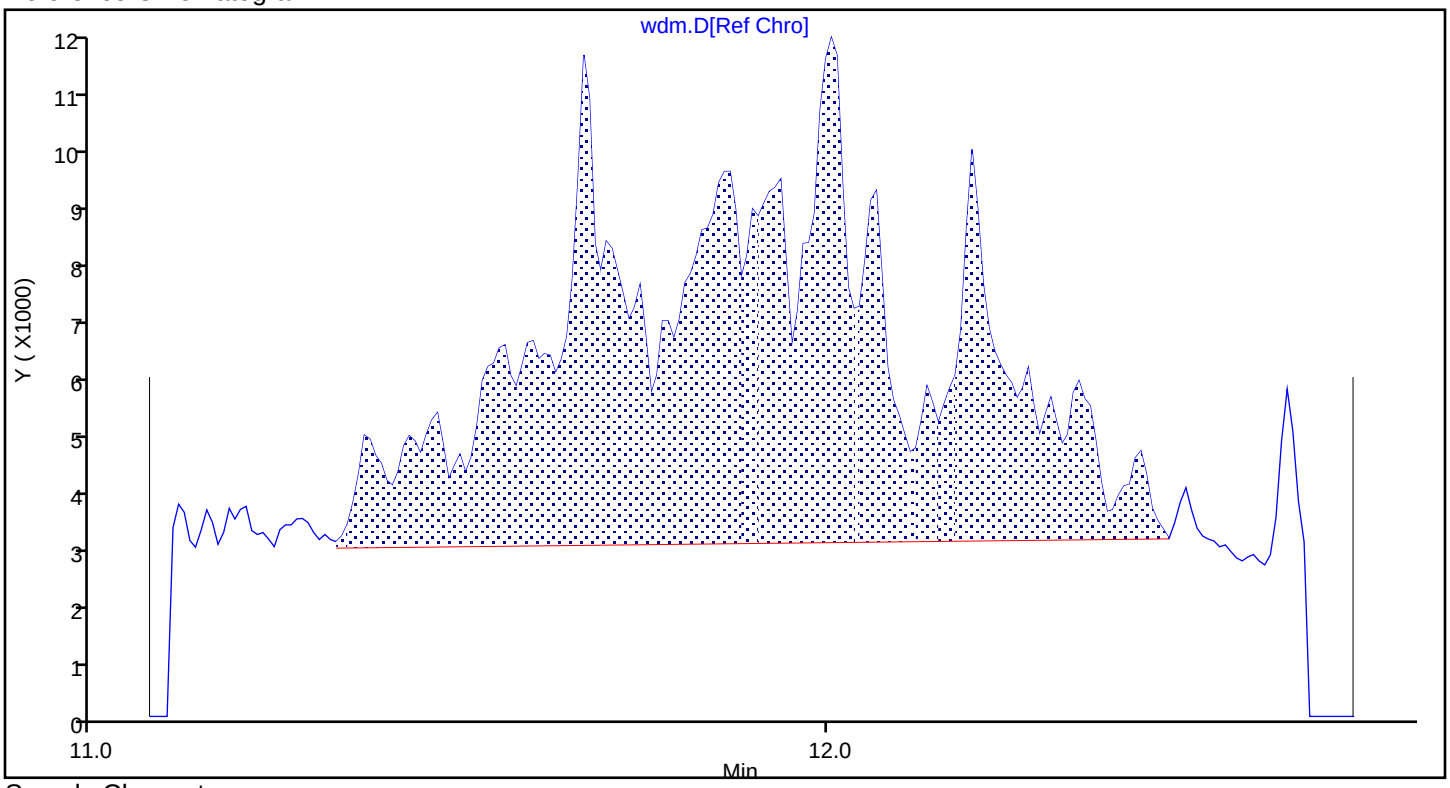
Eurofins TestAmerica, Knoxville

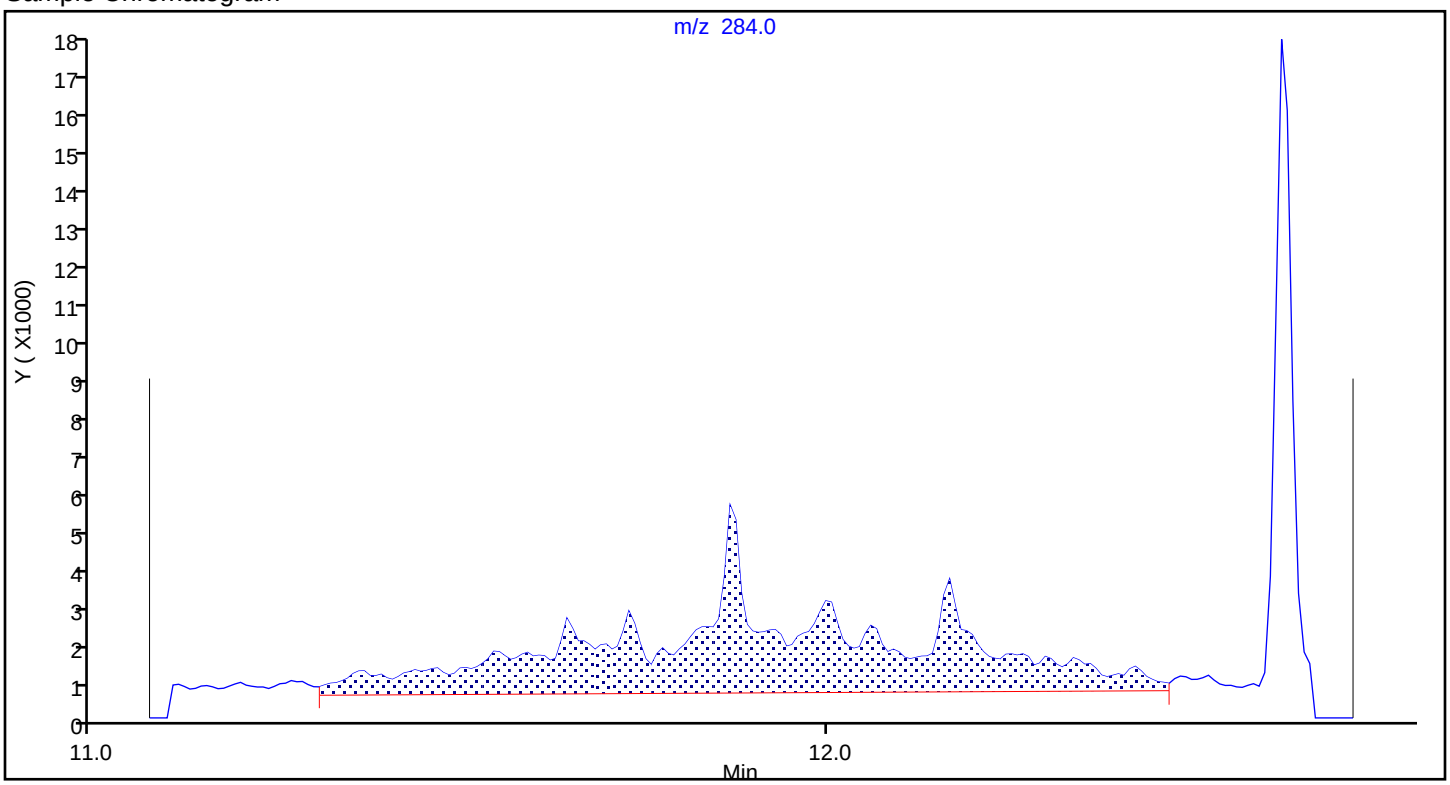
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



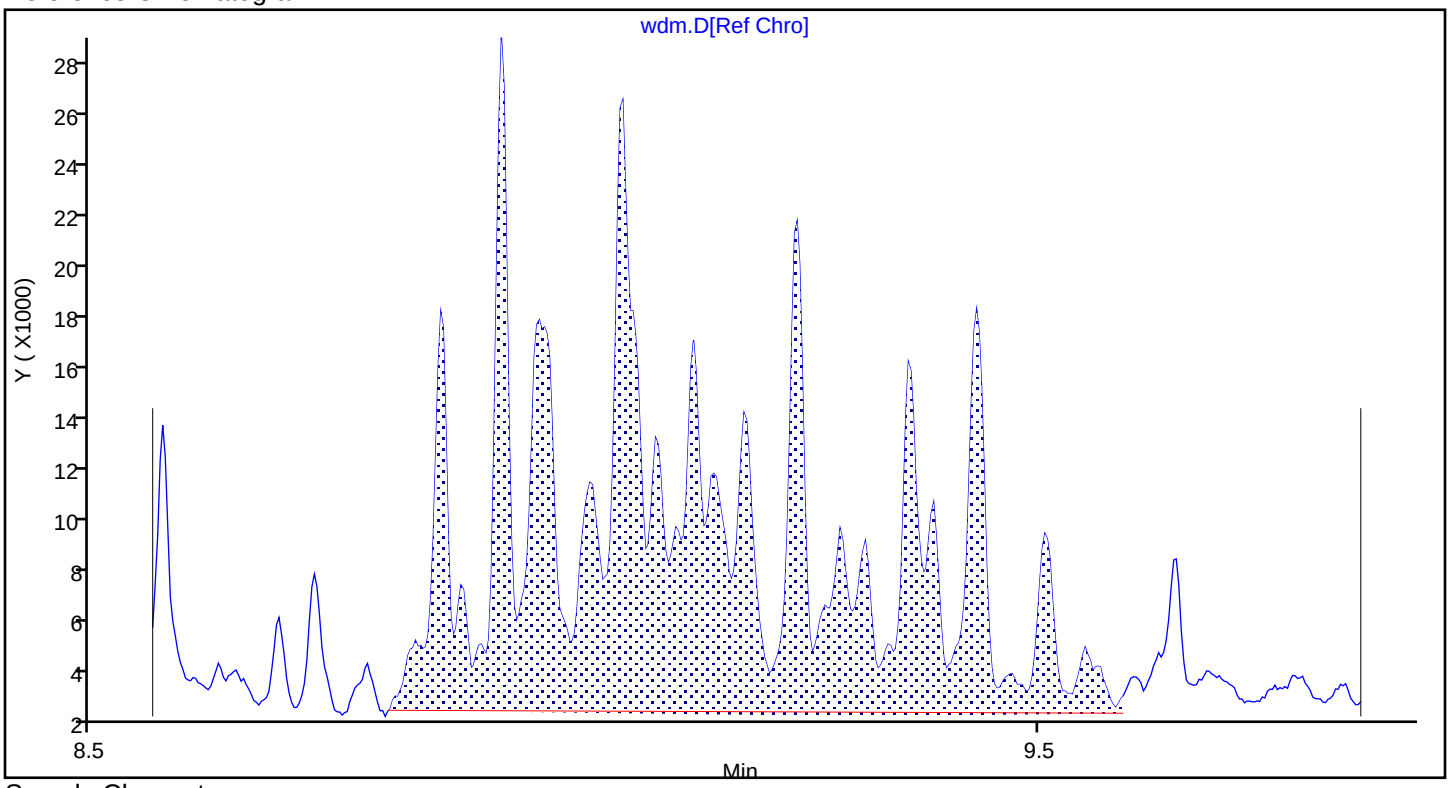
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

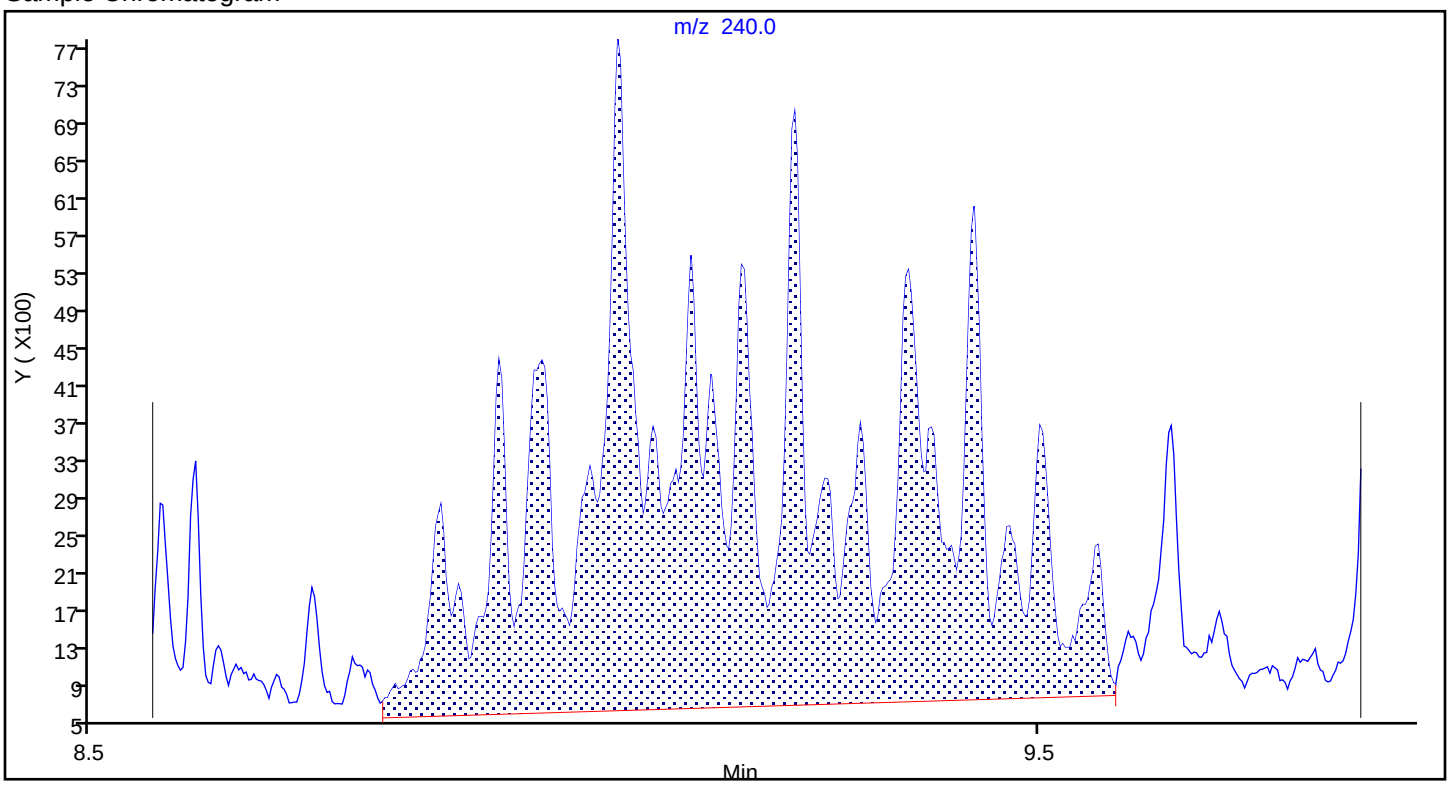
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



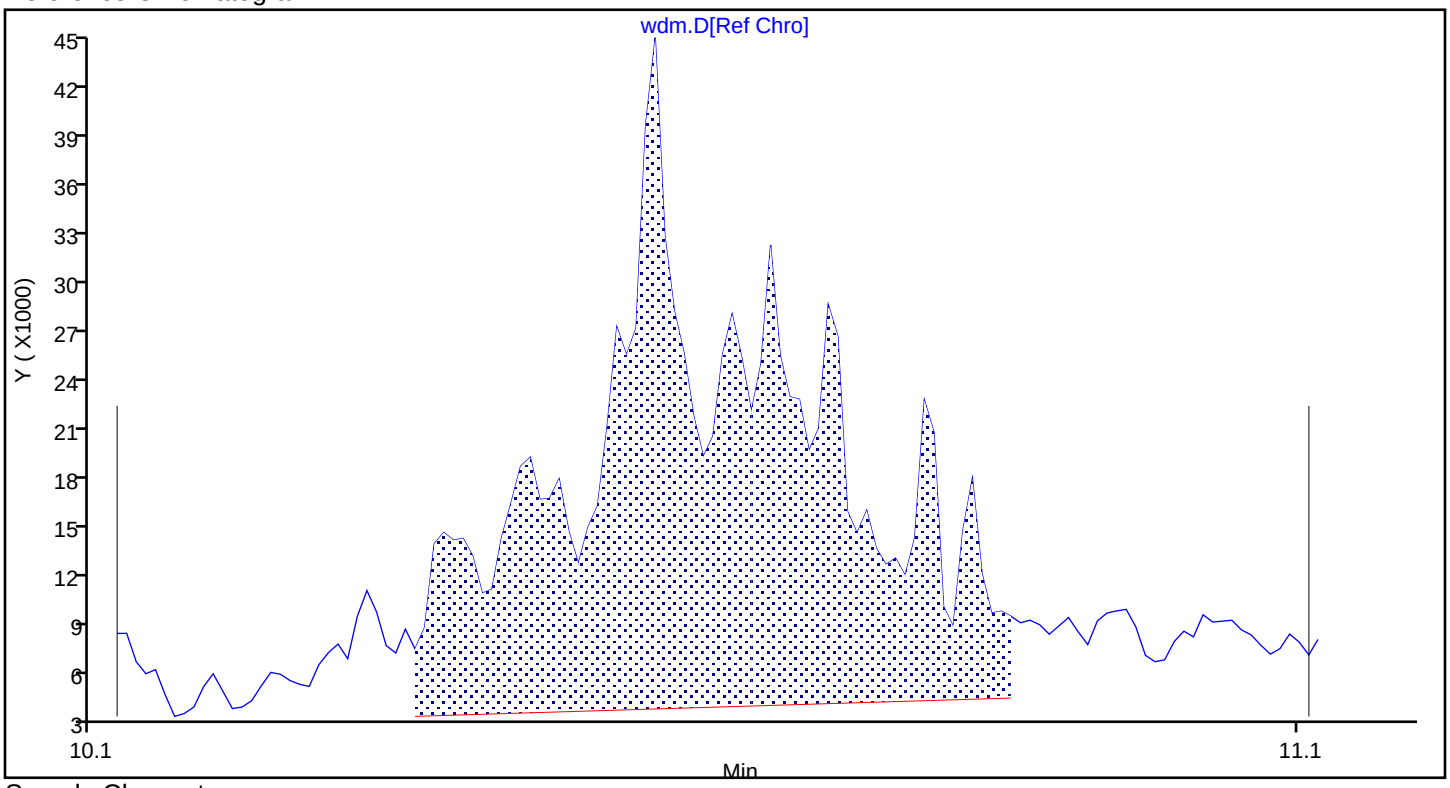
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

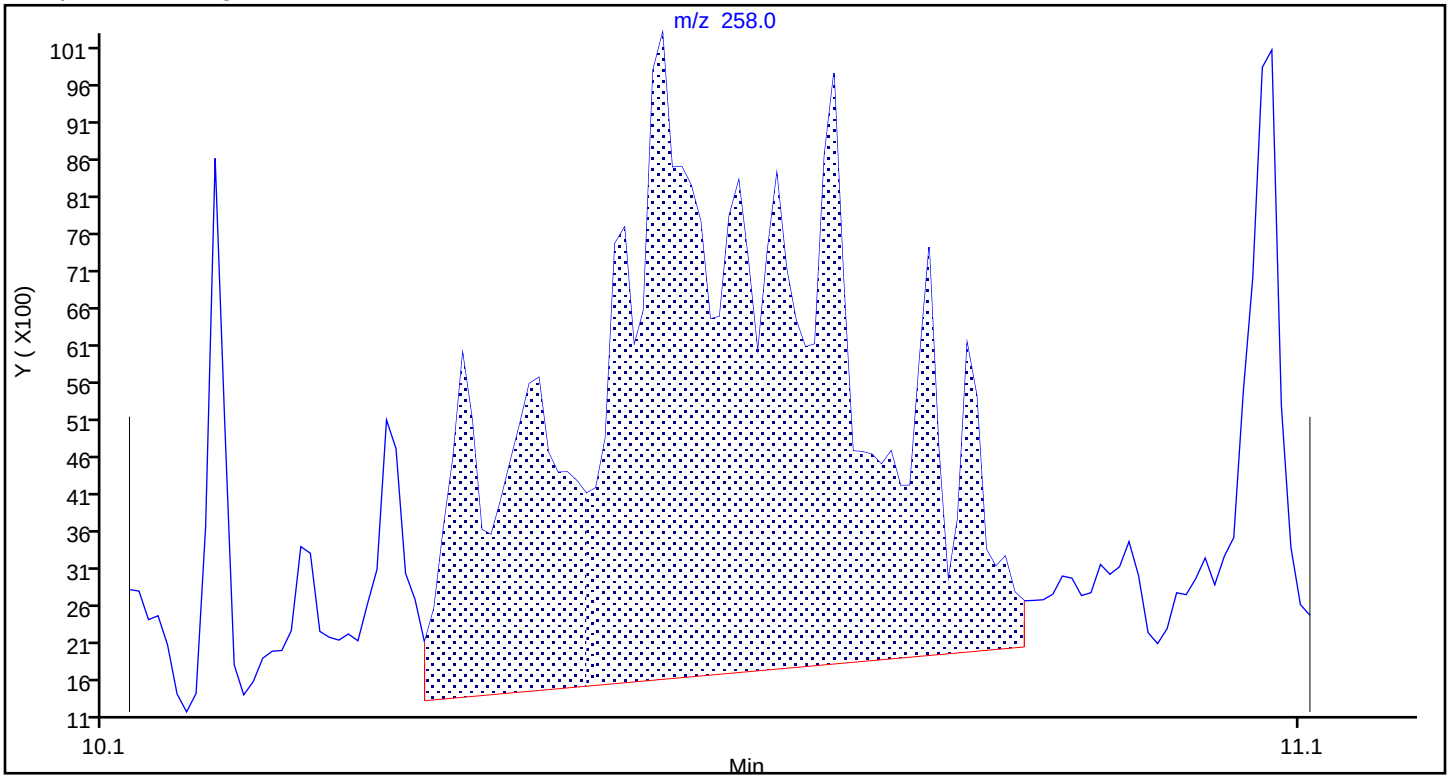
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



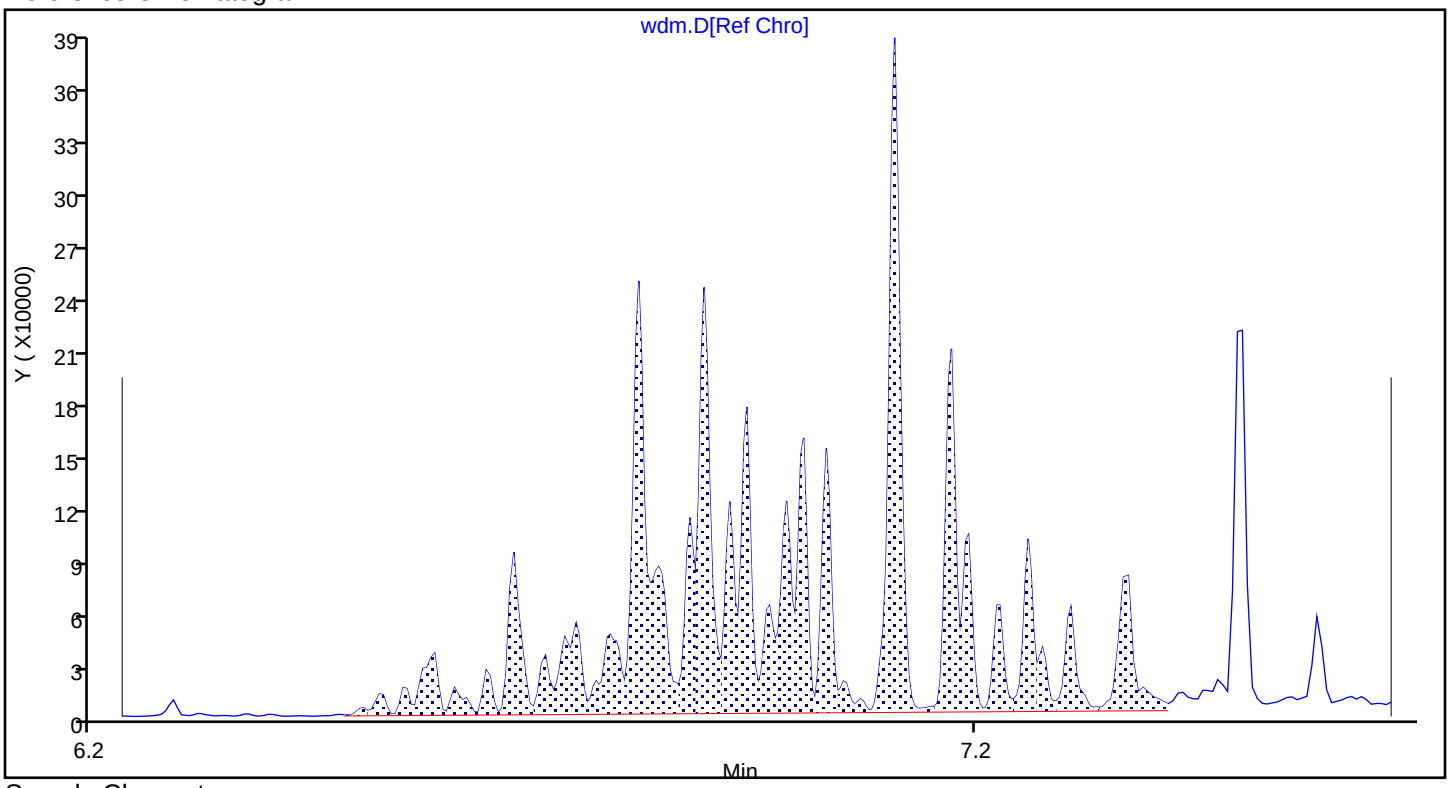
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

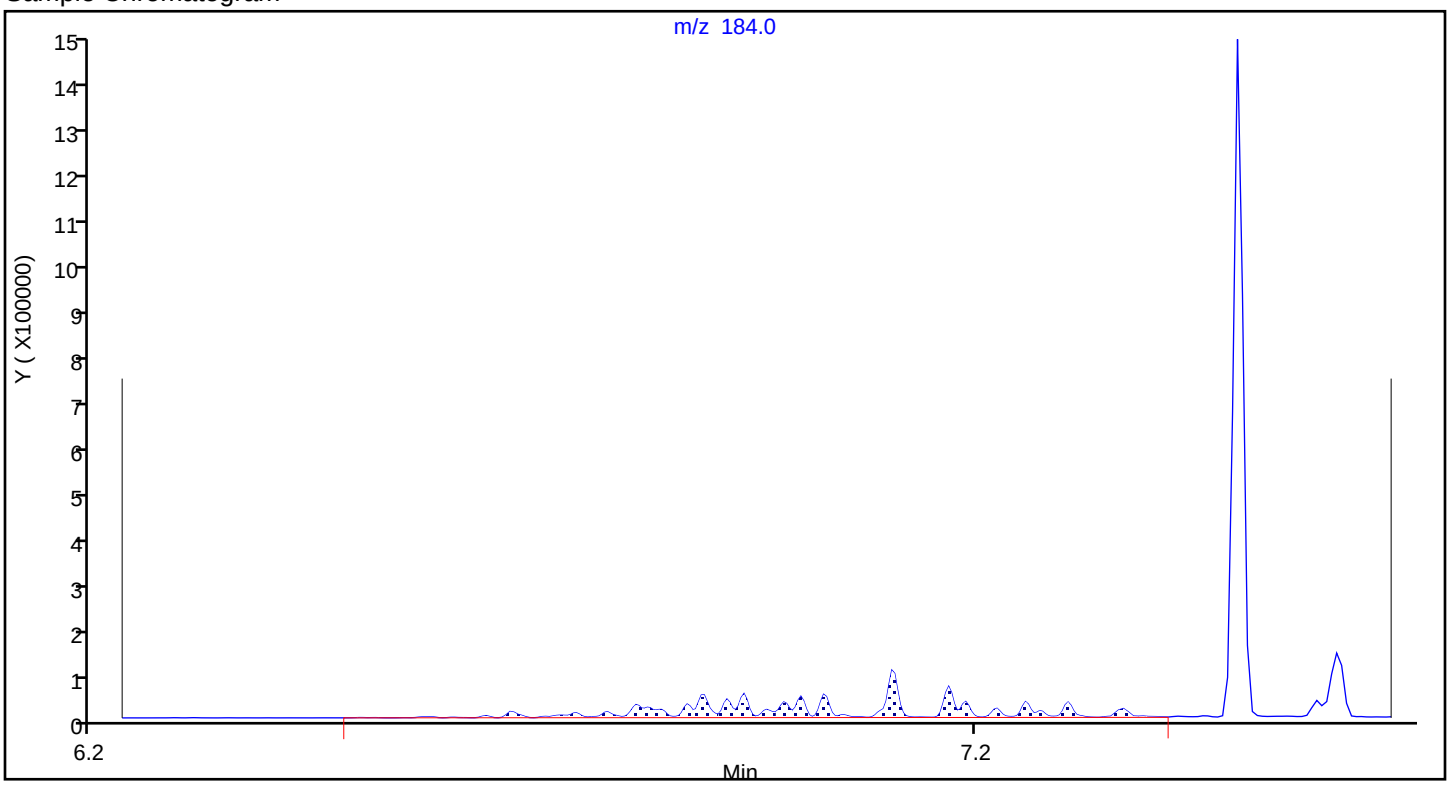
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



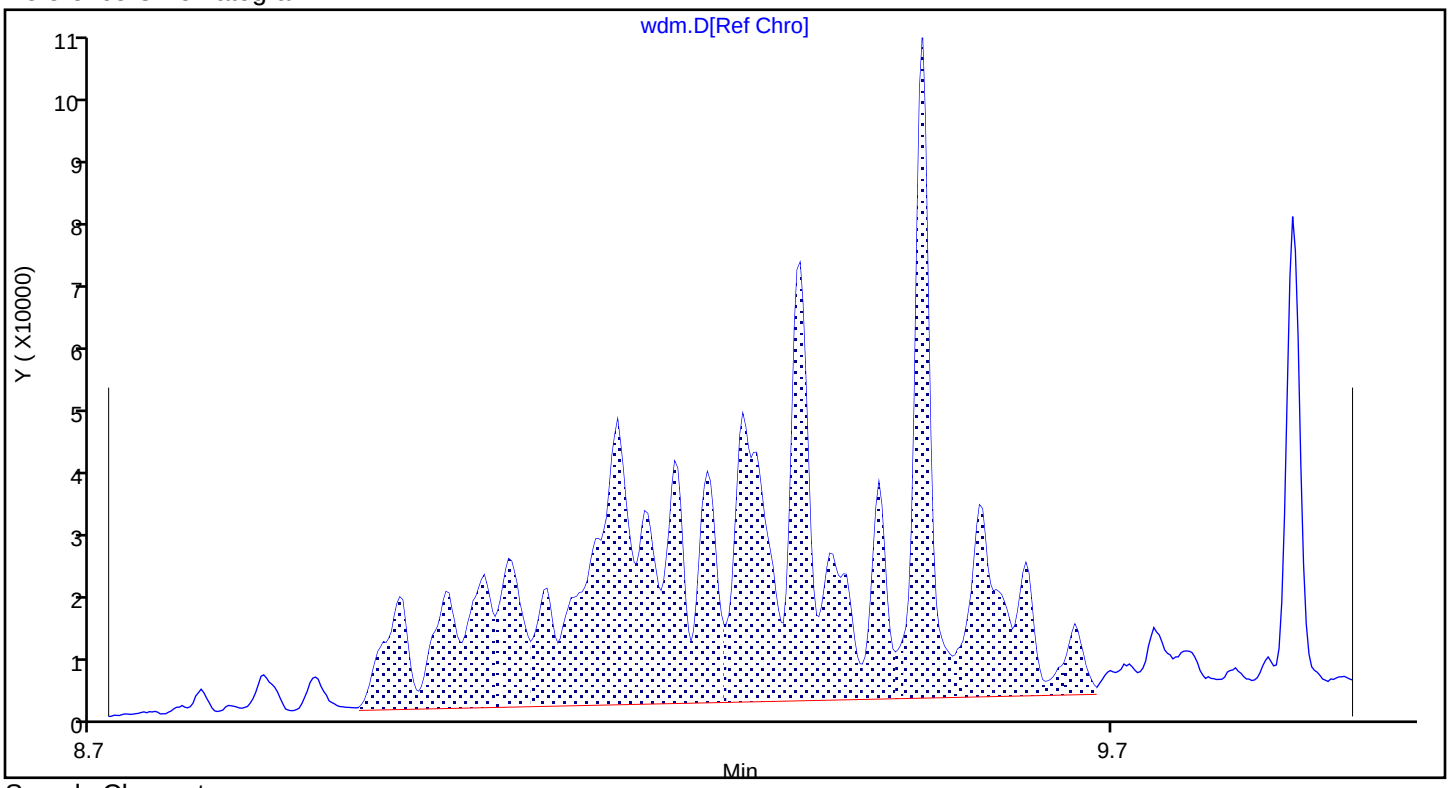
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

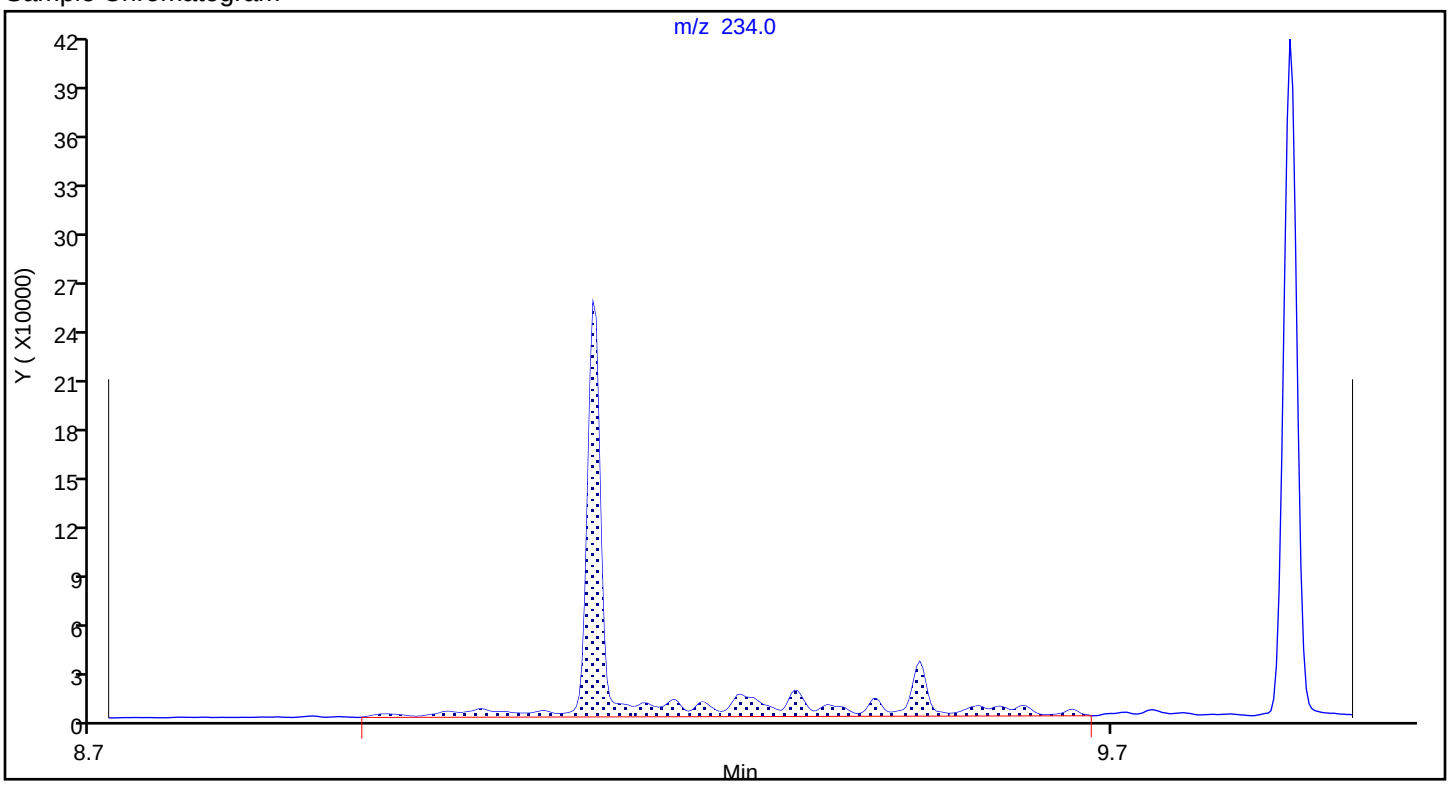
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

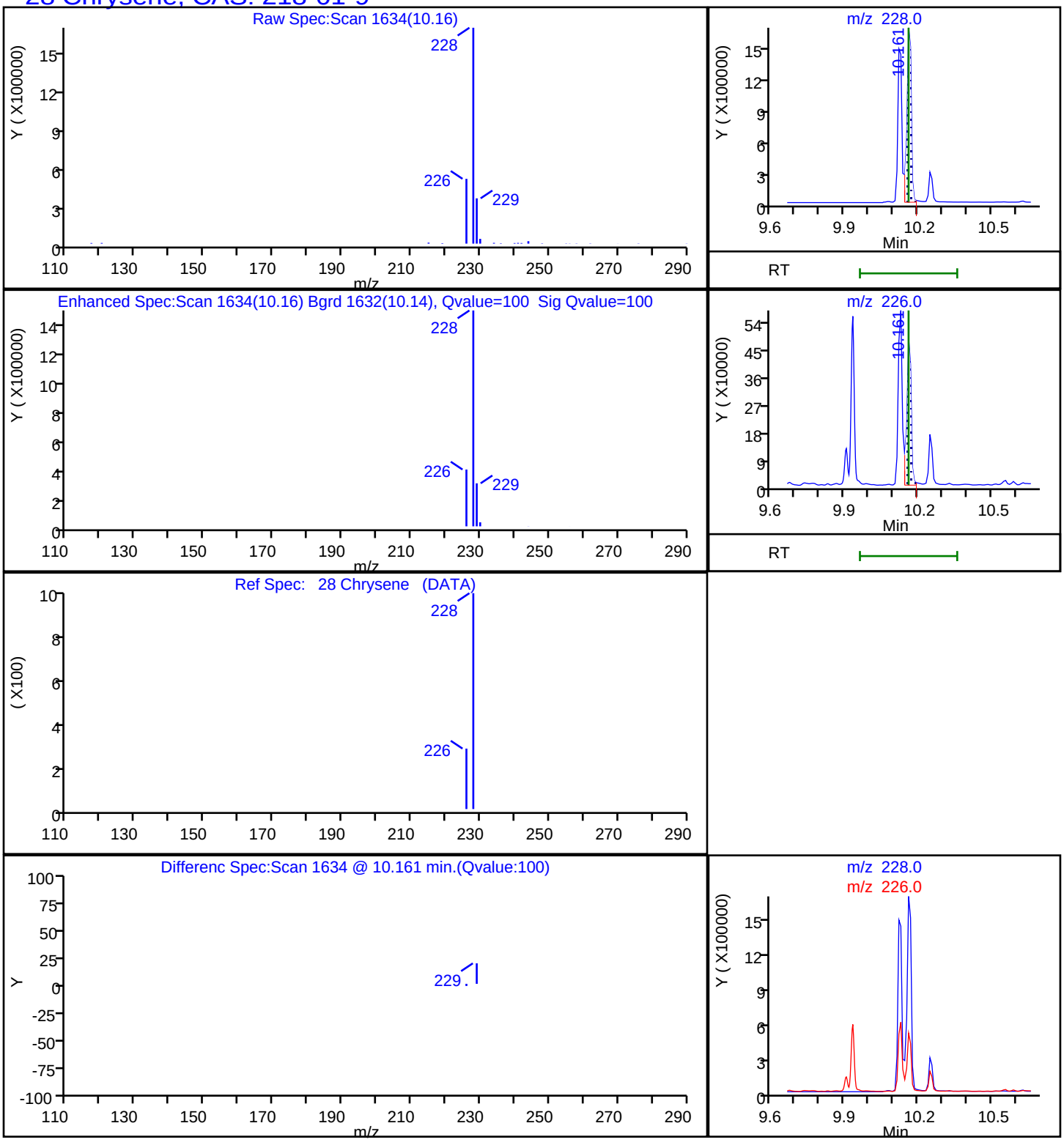


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

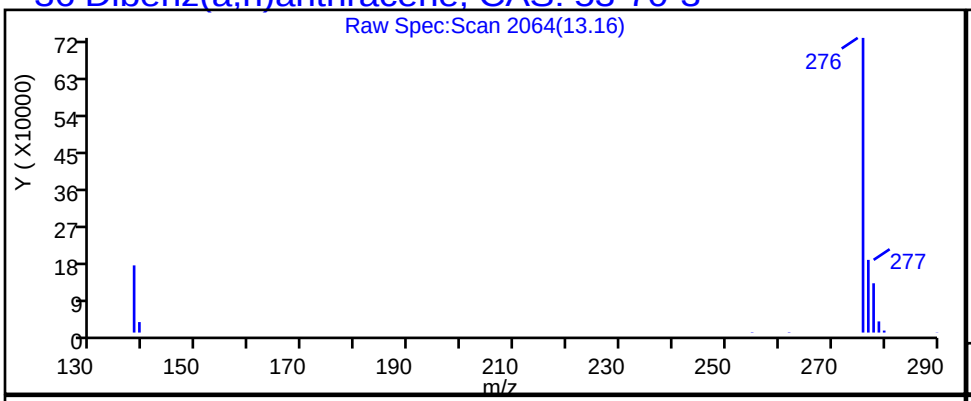


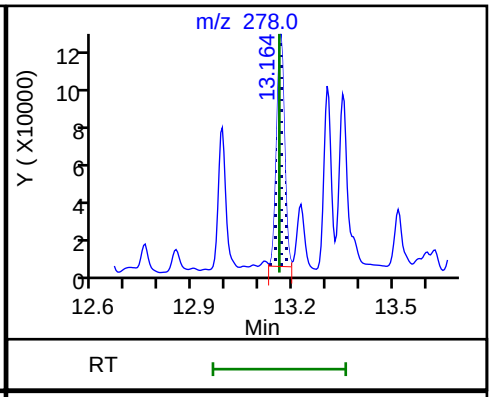
Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

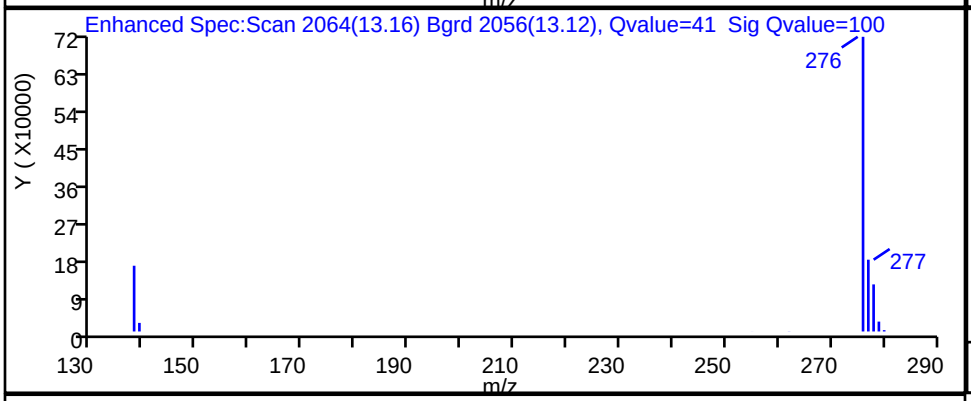
Eurofins TestAmerica, Knoxville

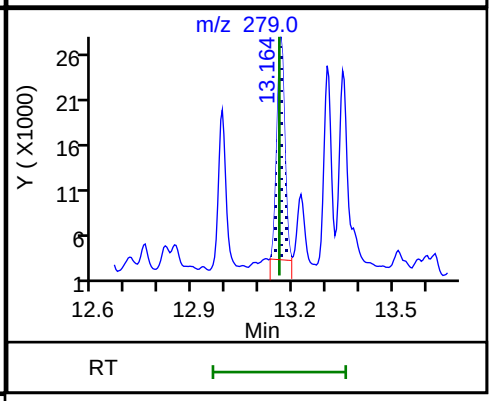
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

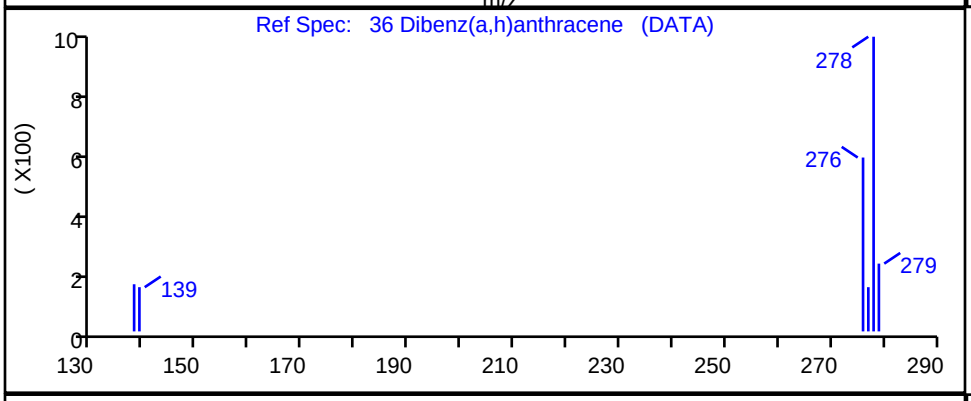
36 Dibenz(a,h)anthracene, CAS: 53-70-3

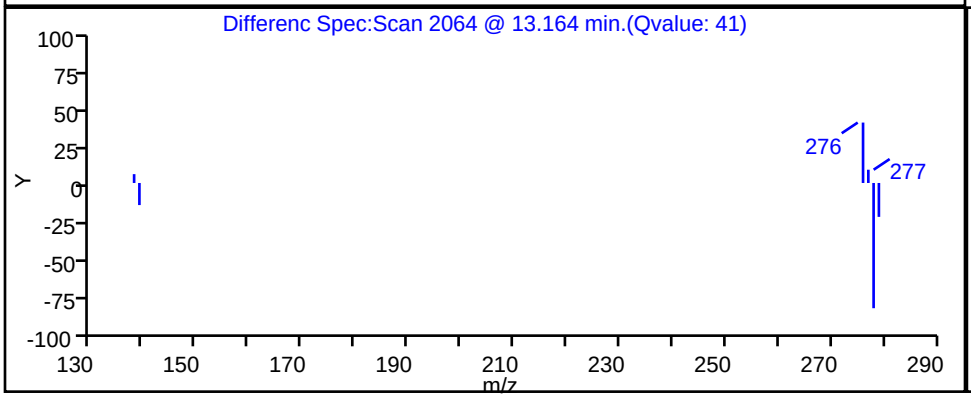


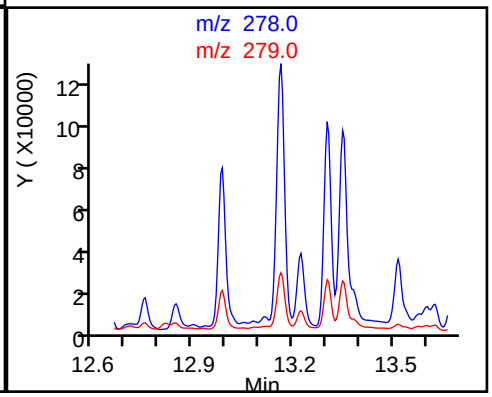










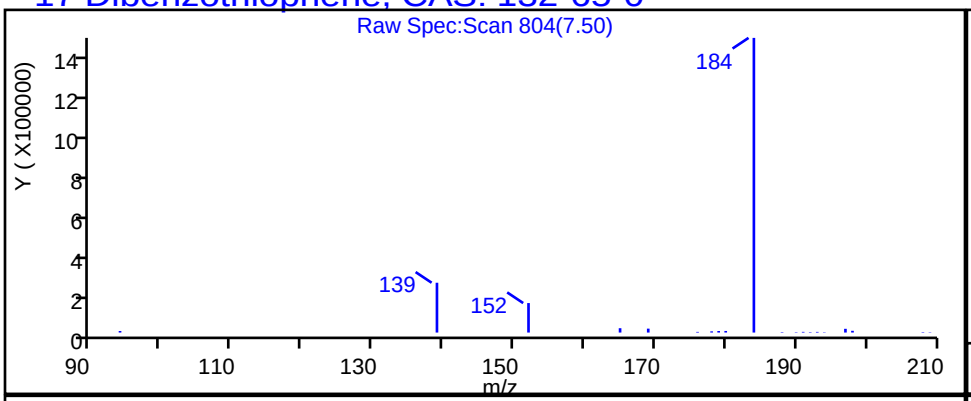


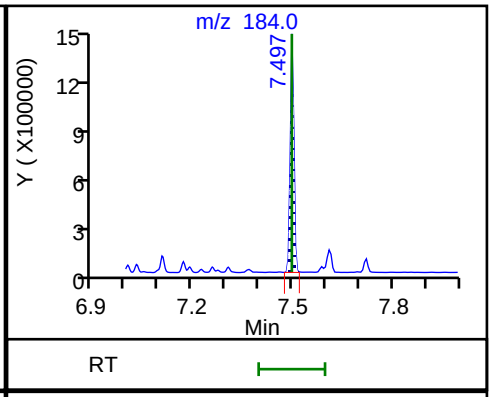
Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

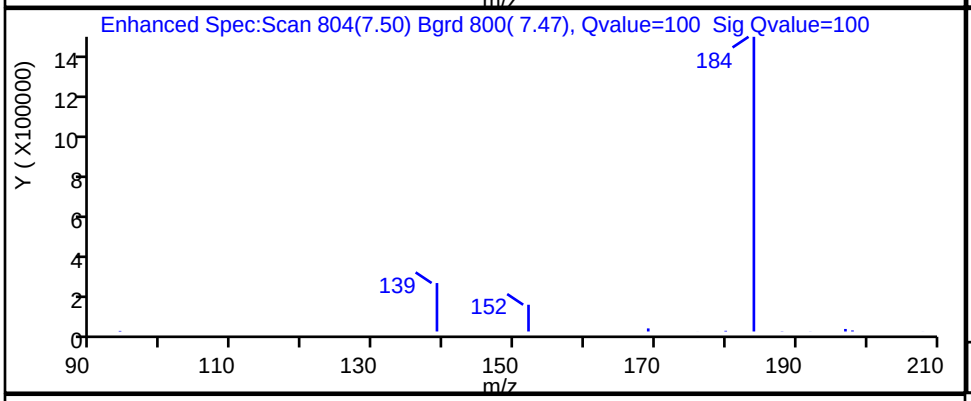
Eurofins TestAmerica, Knoxville

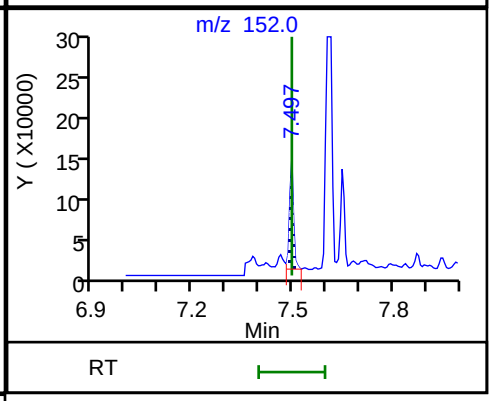
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

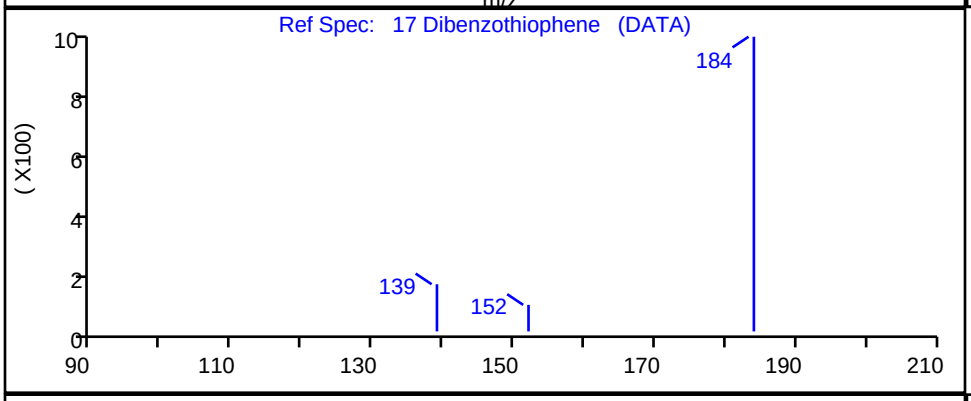
17 Dibenzothiophene, CAS: 132-65-0

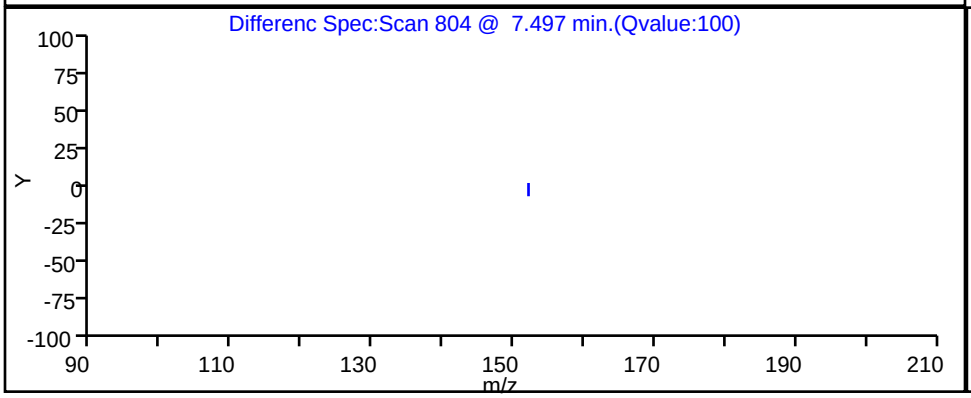


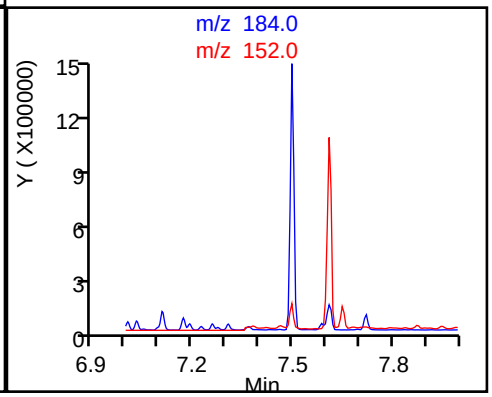










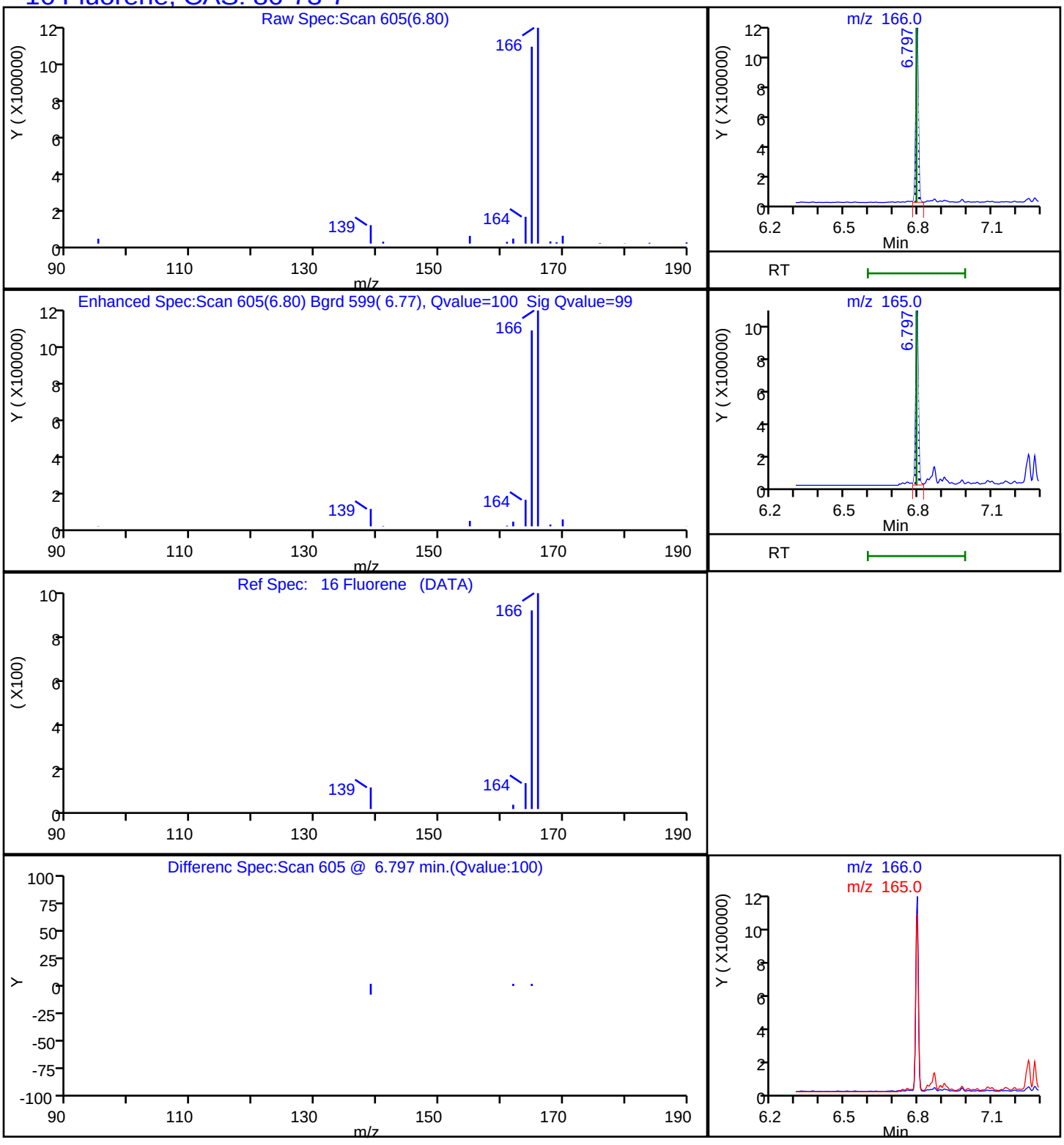


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

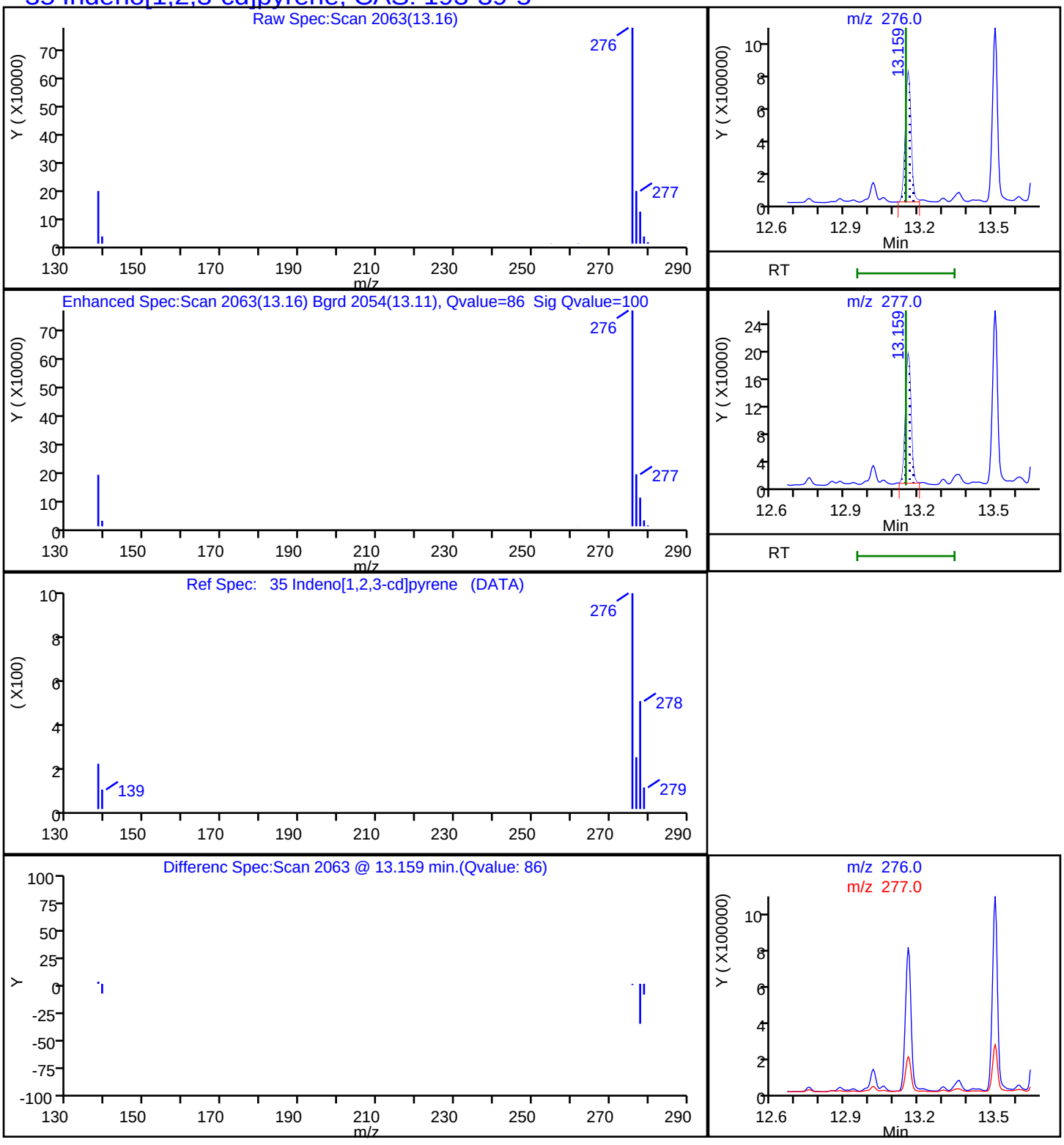


Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

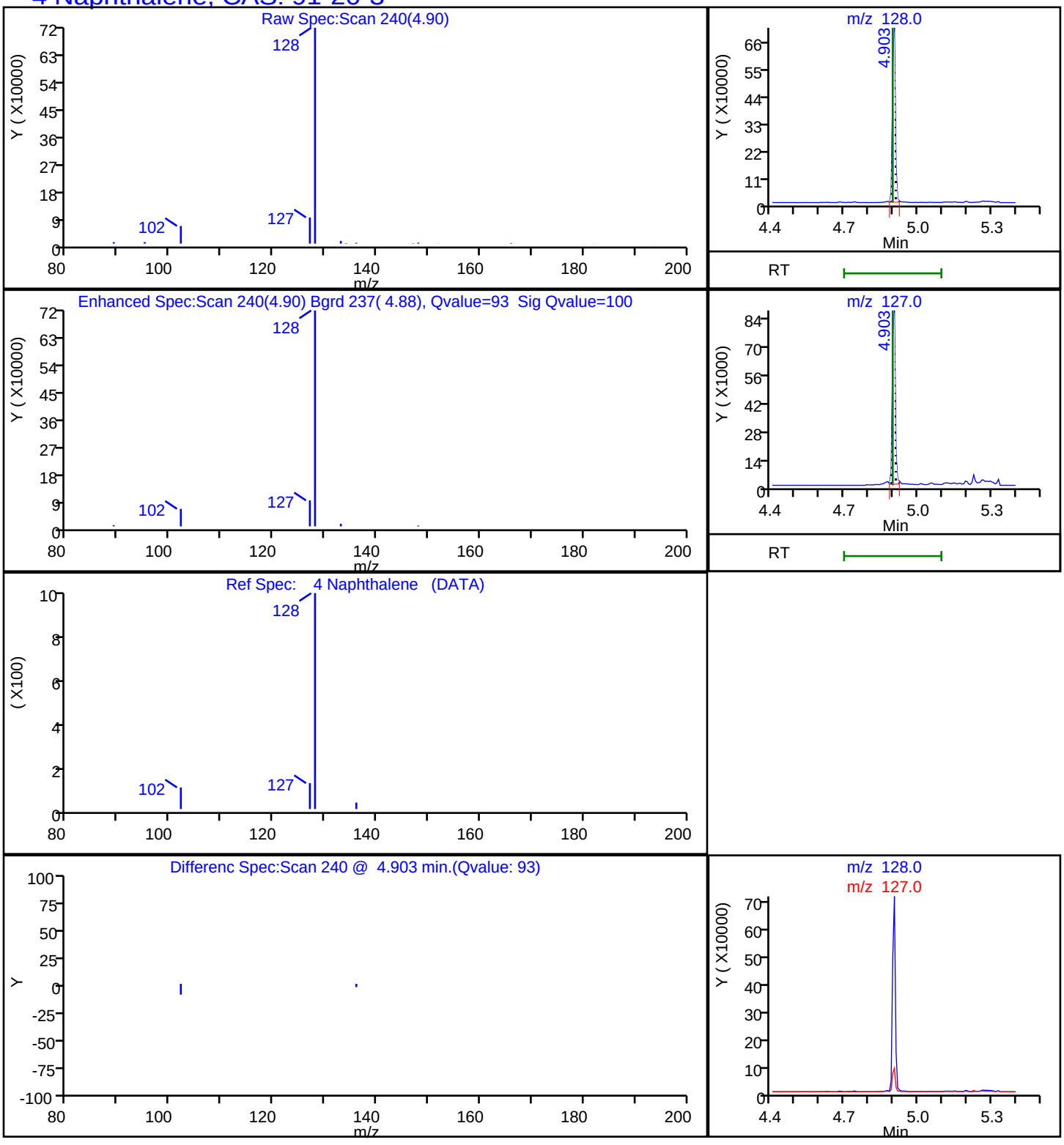


Report Date: 03-Sep-2019 17:44:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

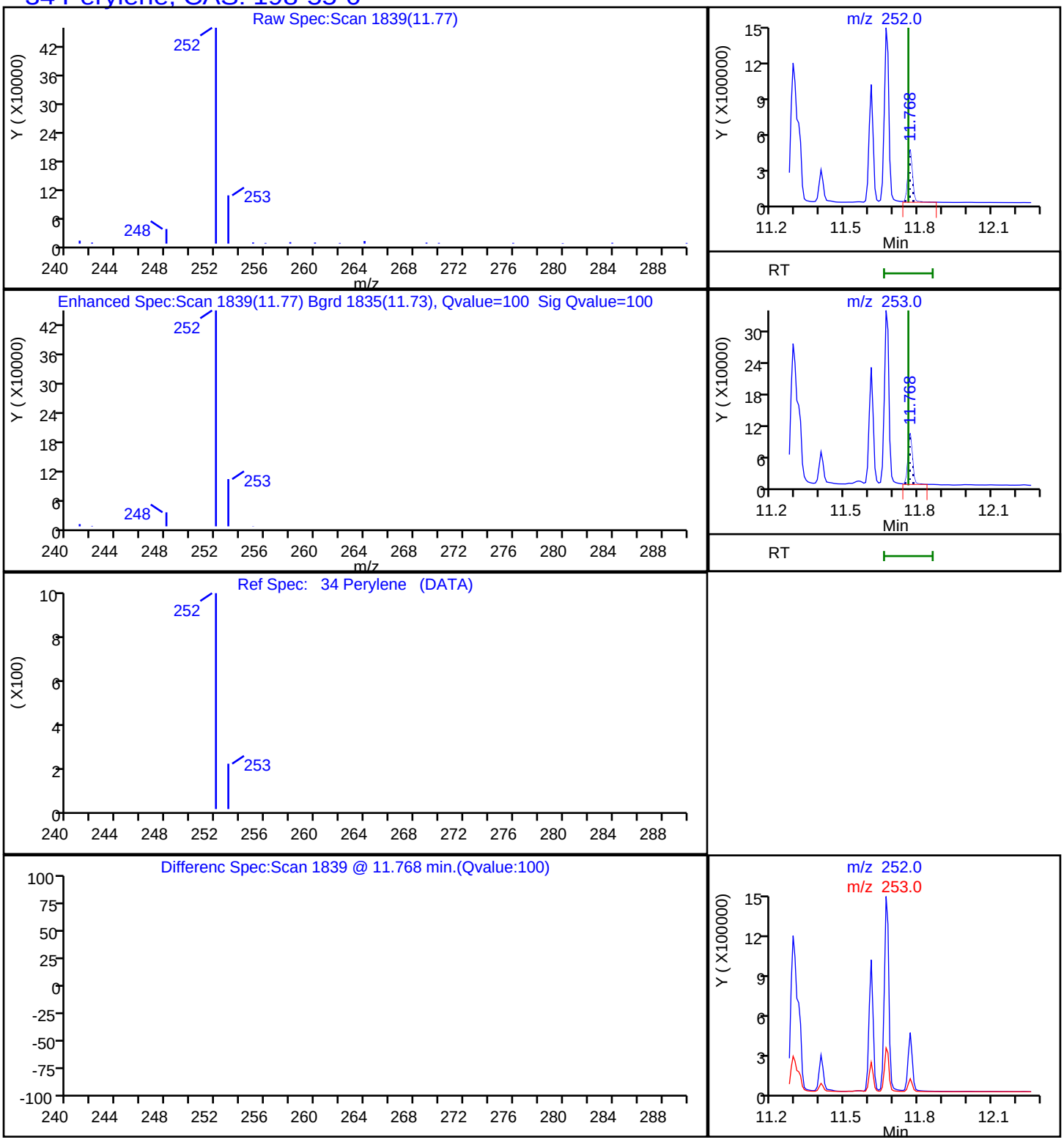


Report Date: 03-Sep-2019 17:44:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



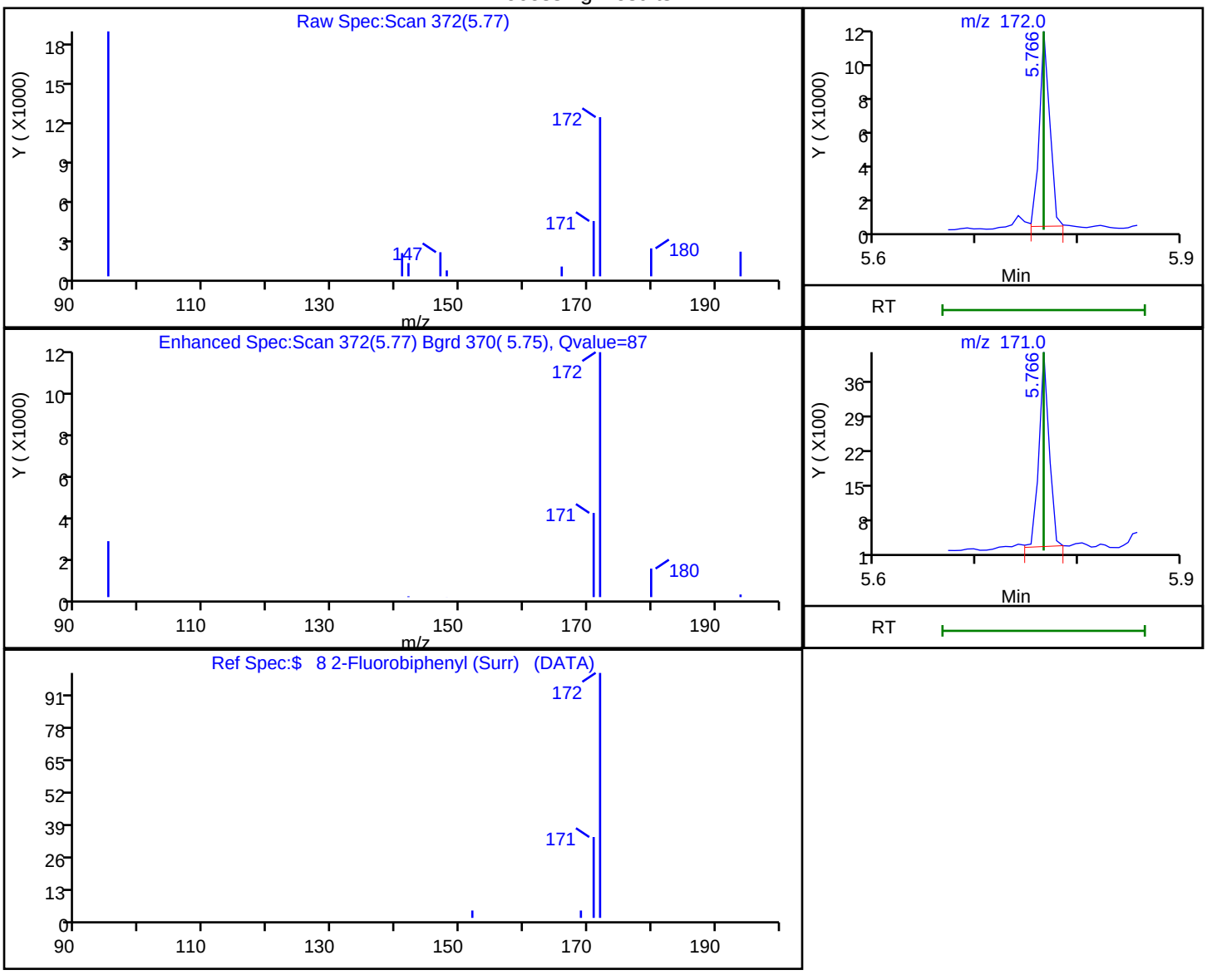
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	8208	0.022875
5.77	171.00	2720	

Reviewer: cochranj, 31-Aug-2019 10:57:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

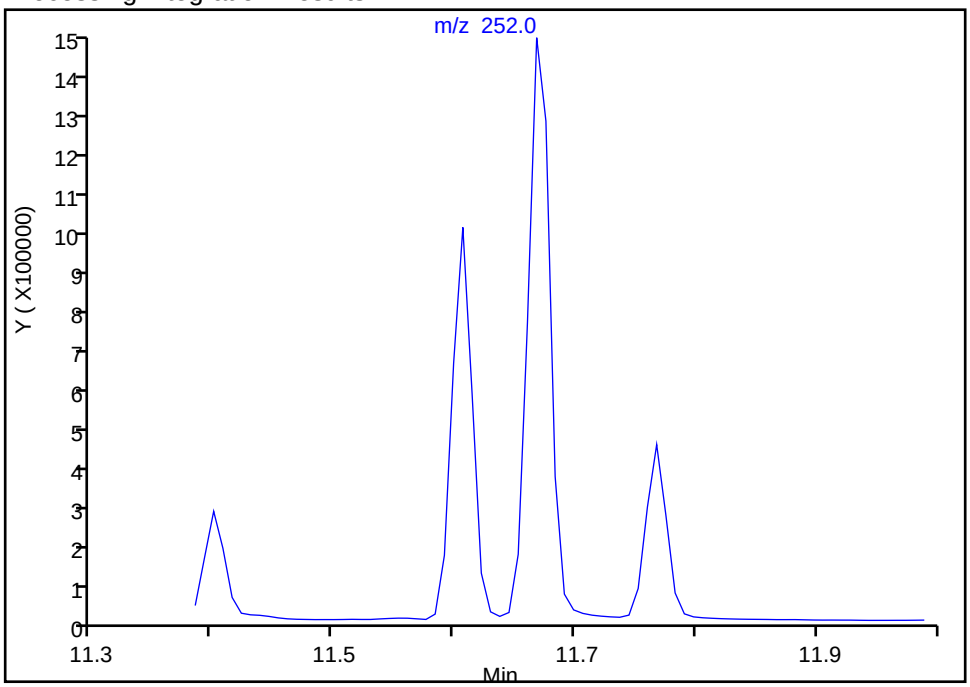
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

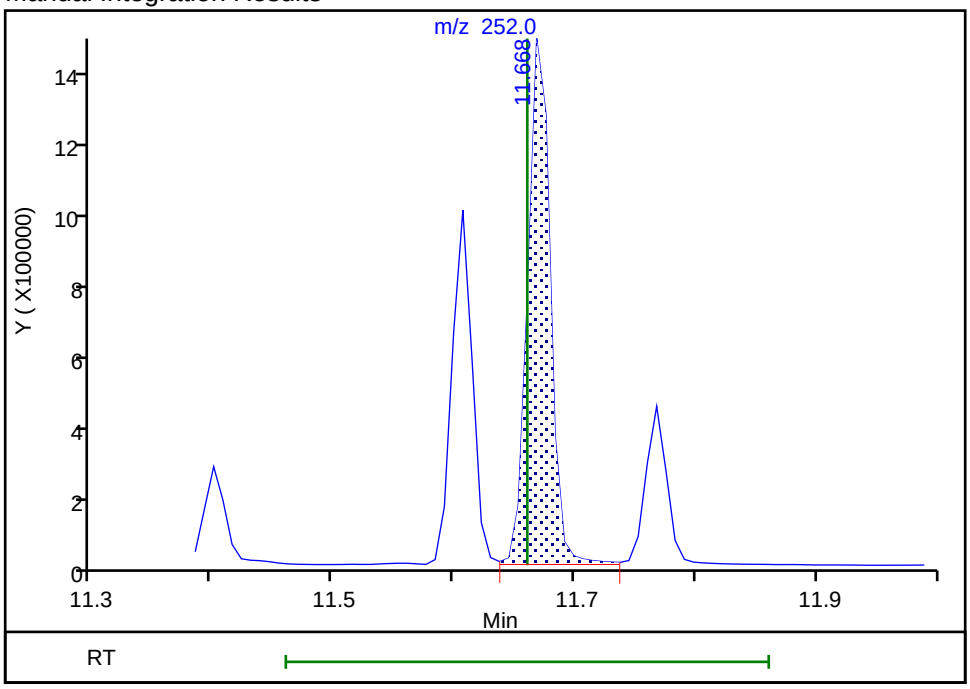
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 1927337
Amount: 4.079983
Amount Units: ug/ml



Reviewer: cochranj, 03-Sep-2019 17:43:37
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

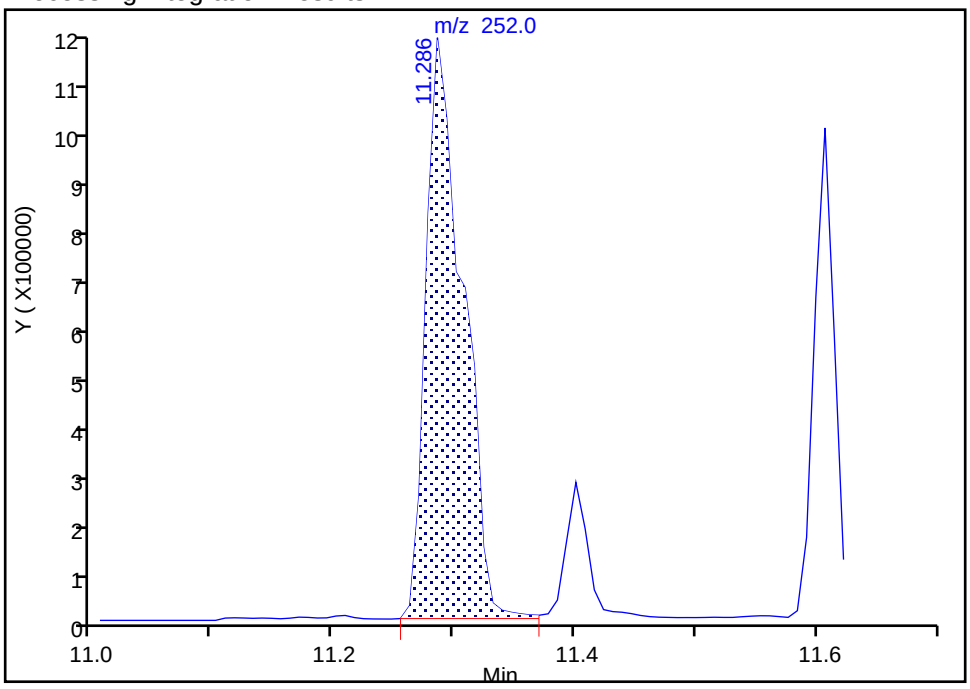
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

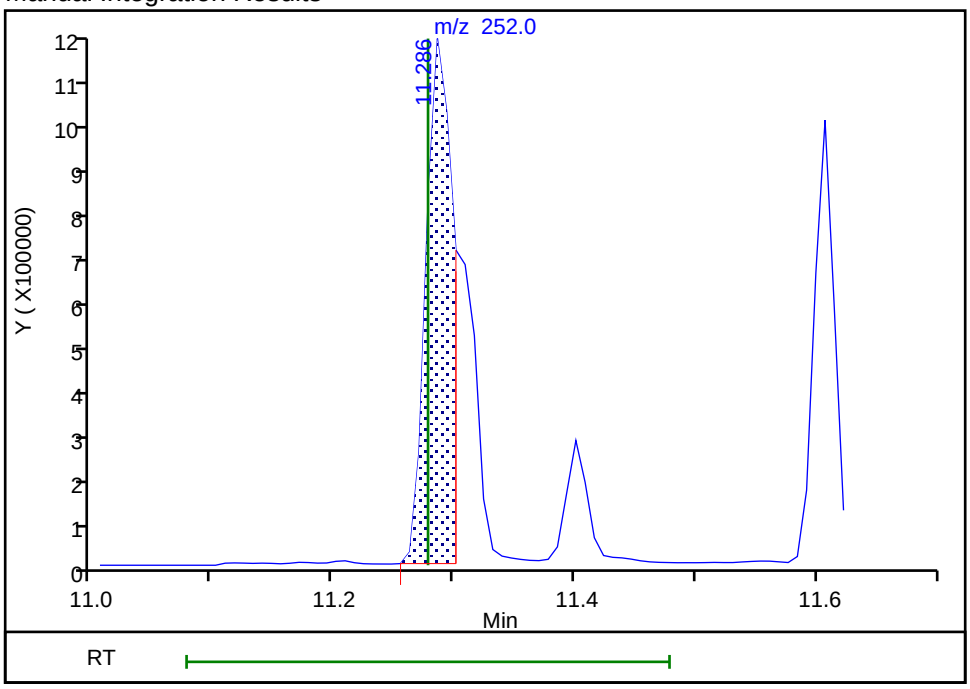
Processing Integration Results

RT: 11.29
Area: 2495971
Amount: 4.545797
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 1844633
Amount: 3.359545
Amount Units: ug/ml



Reviewer: cochranj, 03-Sep-2019 17:43:06
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

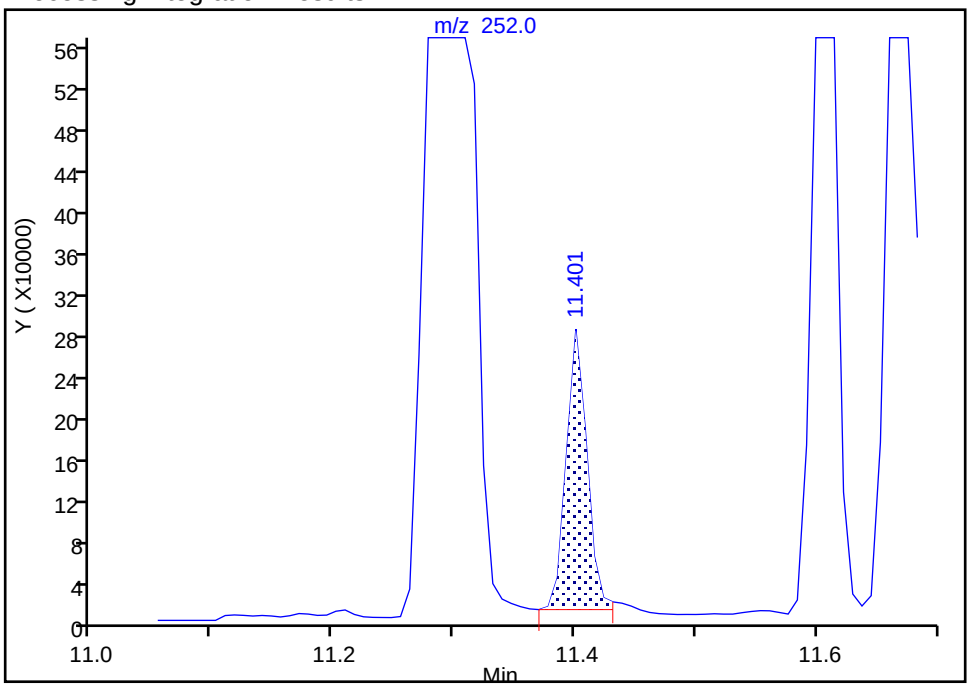
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

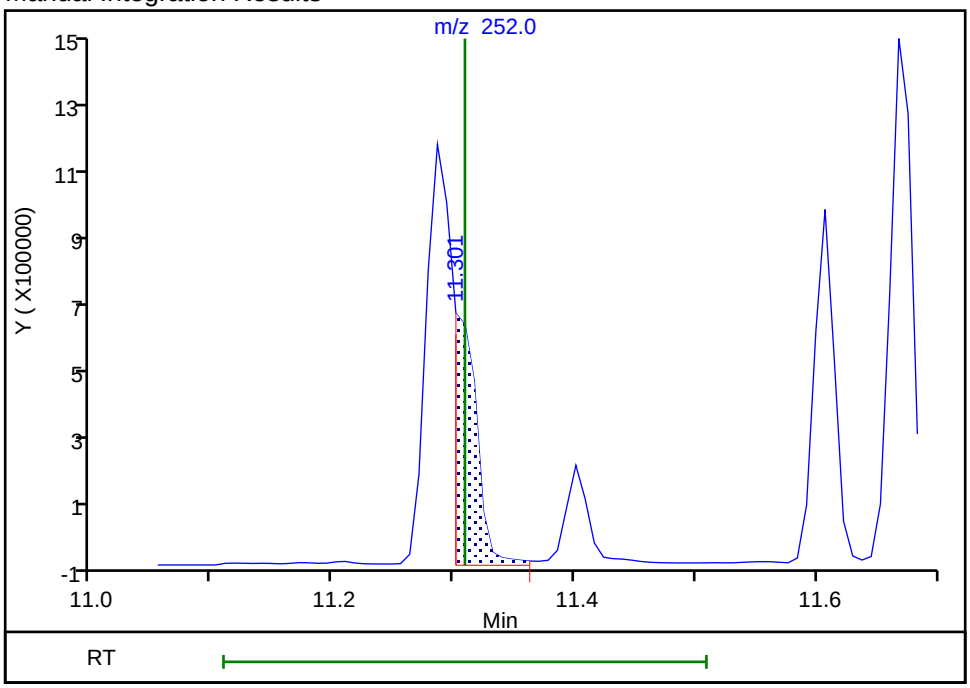
Processing Integration Results

RT: 11.40
Area: 323344
Amount: 0.519255
Amount Units: ug/ml



Manual Integration Results

RT: 11.30
Area: 991845
Amount: 1.592795
Amount Units: ug/ml



Reviewer: cochranj, 03-Sep-2019 17:43:31

Audit Action: Manually Integrated Audit Reason: Missed Peak

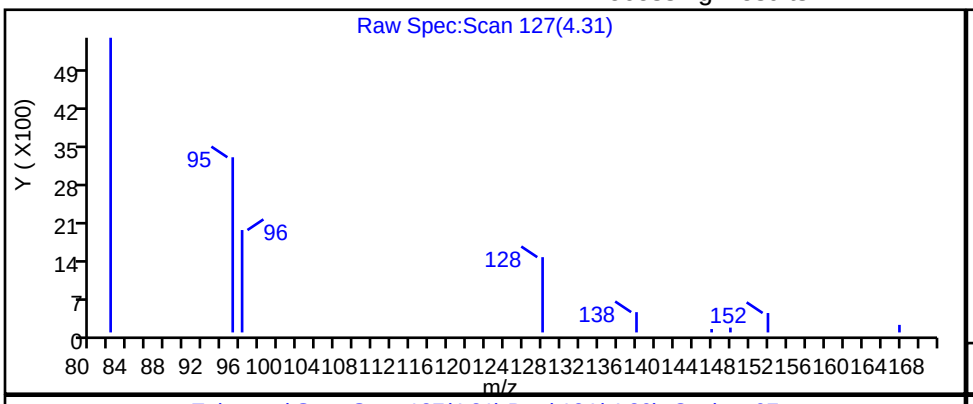
User Disabled Compound Report

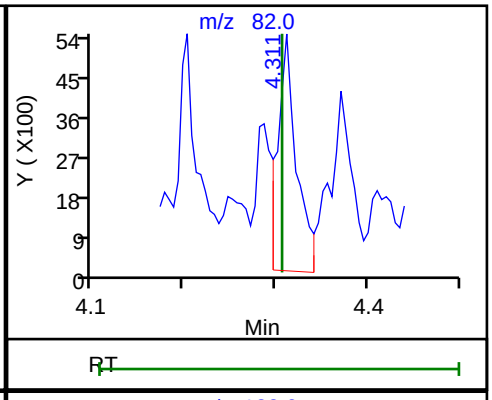
Eurofins TestAmerica, Knoxville

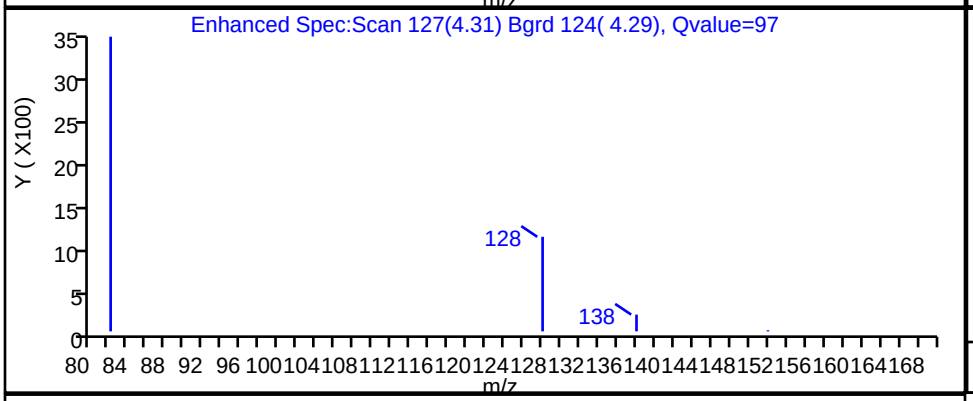
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

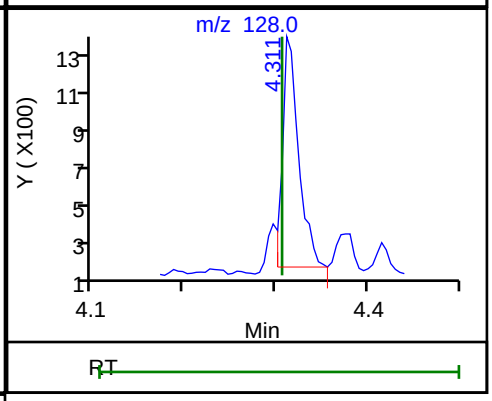
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

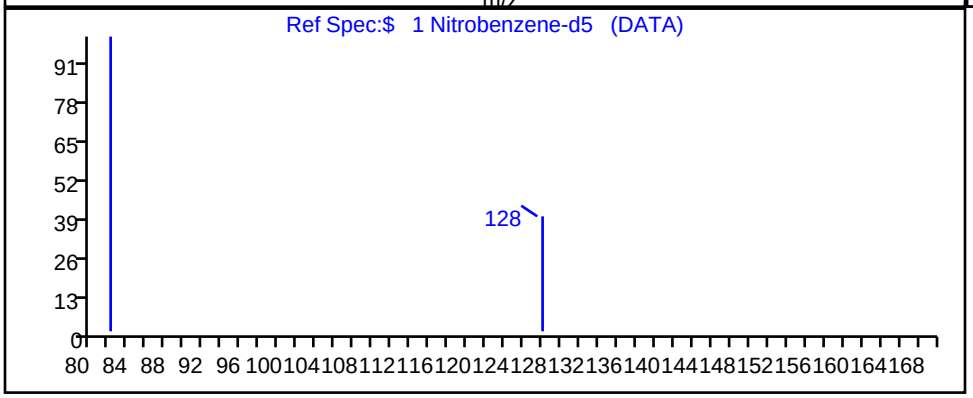
Processing Results











RT	Mass	Response	Amount
4.31	82.00	7812	0.063764
4.31	128.00	1481	

Reviewer: cochranj, 31-Aug-2019 10:57:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

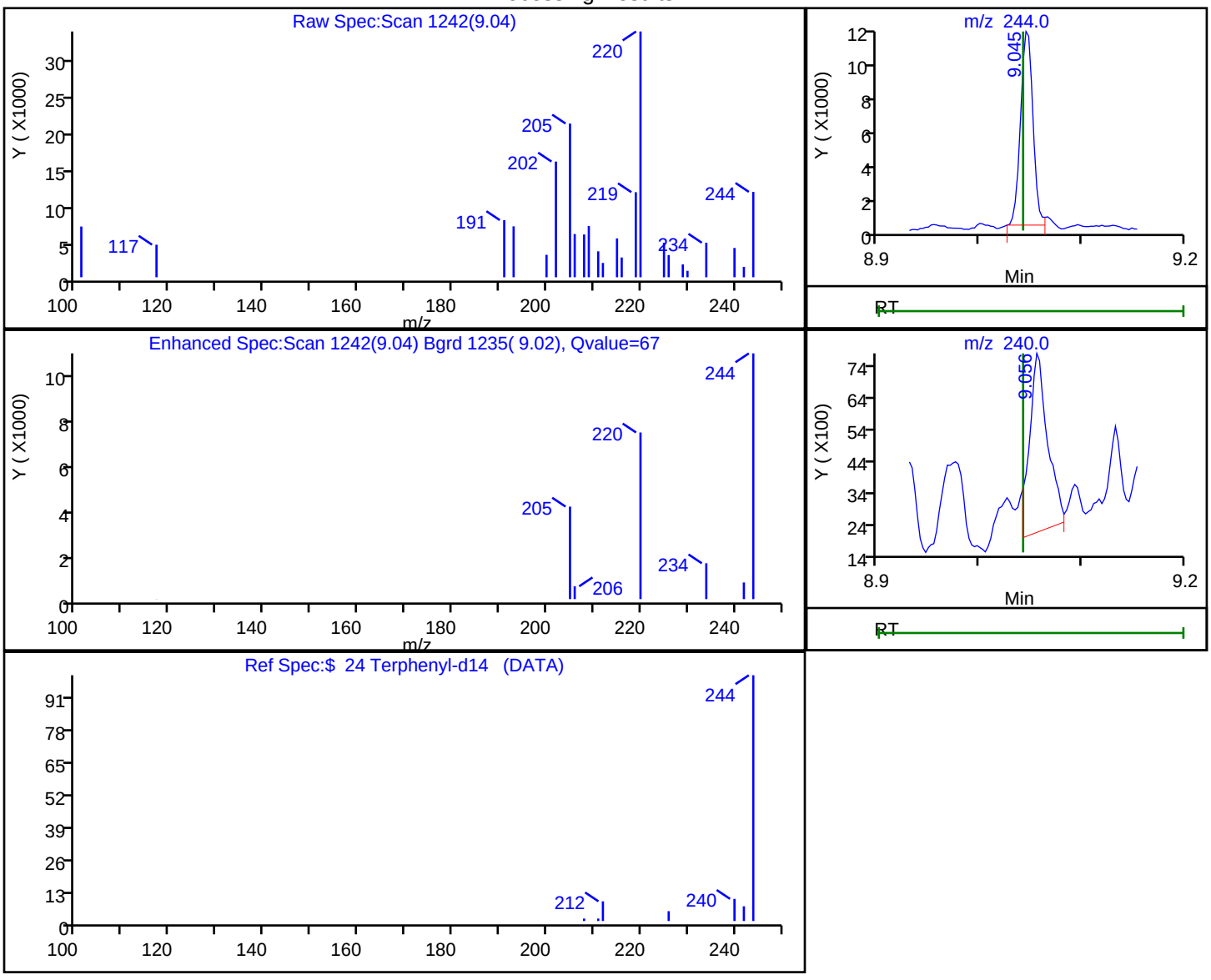
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-13-a.D				
Injection Date:	29-Aug-2019 17:59:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	8	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 24 Terphenyl-d14, CAS: 1718-51-0

Processing Results



RT	Mass	Response	Amount
9.04	244.00	9122	0.028911
9.06	240.00	7037	

Reviewer: cochranj, 31-Aug-2019 10:57:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0_20190717 DL Lab Sample ID: 580-87761-13 DL

Matrix: Solid Lab File ID: 580-87761-b-13-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:40

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.24(g) Date Analyzed: 08/30/2019 16:09

Con. Extract Vol.: 0.5(mL) Dilution Factor: 200

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 40.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
206-44-0	Fluoranthene	22000		200	180
85-01-8	Phenanthrene	29000		390	340
129-00-0	Pyrene	24000		390	120

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D
Lims ID: 580-87761-B-13-A
Client ID: 22T-VB-03-4.0-6.0_20190717
Sample Type: Client
Inject. Date: 30-Aug-2019 16:09:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 200.0000
Sample Info: 140-0012910-015
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 17:45:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	191093	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	85793	0.2040	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	96	23679	0.0859	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	98	8480	0.0323	
11 Acenaphthylene	152	6.216	6.216	0.000	87	11668	0.0343	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	99	98826	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	167268	0.6361	
16 Fluorene	166	6.797	6.793	0.004	100	121931	0.4192	
17 Dibenzothiophene	184	7.497	7.491	0.006	100	155156	0.3832	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	98	169637	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1297201	2.97	
20 Anthracene	178	7.648	7.648	0.000	100	159615	0.4380	
22 Fluoranthene	202	8.687	8.684	0.003	99	935399	2.20	
23 Pyrene	202	8.909	8.906	0.003	99	1172176	2.49	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	95	226653	0.6128	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	155551	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	279410	0.6317	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	280618	0.6256	M
30 Benzo[k]fluoranthene	252	11.301	11.301	0.000	100	99984	0.1965	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	158970	0.3774	
32 Benzo[a]pyrene	252	11.661	11.660	0.001	100	262892	0.6812	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	164289	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	73318	0.1682	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	85	171658	0.3617	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	42	25983	0.0645	M
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	99	214969	0.4841	
A 38 C1-Naphthalenes	142	5.507	(5.444-5.596)		0	32319	0.0768	
A 39 C2-Naphthalenes	156	6.076	(5.913-6.239)		0	148073	0.3521	
A 40 C3-Naphthalenes	170	6.557	(6.306-6.809)		0	156380	0.3718	
A 41 C4-Naphthalenes	184	6.934	(6.489-7.384)		0	85358	0.2029	
A 42 C1-Fluorenes	180	7.221	(7.134-7.311)		0	34432	0.1184	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.564-7.934)		0	36423	0.1252	
A 44 C3-Fluorenes	208	8.113	(7.985-8.453)		0	28367	0.0975	
A 45 C1-Dibenzothiophenes	198	7.945	(7.822-8.064)		0	54317	0.1342	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	45369	0.1121	
A 47 C3-Dibenzothiophenes	226	8.652	(8.524-9.104)		0	28107	0.0694	
A 48 C4-Dibenzothiophenes	240	9.053	(8.810-9.579)		0	13276	0.0328	
A 49 C1-Phenanthrenes/Anthracen	192	8.091	(8.002-8.183)		0	265284	0.6071	
A 50 C2-Phenanthrenes/Anthracen	206	8.560	(8.341-8.770)		0	136986	0.3135	
A 51 C3-Phenanthrenes/Anthracen	220	8.999	(8.743-9.258)		0	69432	0.1589	
A 52 C4-Phenanthrenes/Anthracen	234	9.189	(8.959-9.683)		0	55222	0.1264	
A 53 C1-Fluoranthenes/pyrene	216	9.312	(9.109-9.496)		0	233381	0.4958	
A 54 C2-Fluoranthenes/Pyrene	230	9.805	(9.584-10.051)		0	60919	0.1294	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.030-10.504)		0	30313	0.0644	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	13387	0.0284	
A 57 C1-Chrysenes	242	10.623	(10.504-10.751)		0	71813	0.1624	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	27736	0.0627	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	14323	0.0324	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	8735	0.0197	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

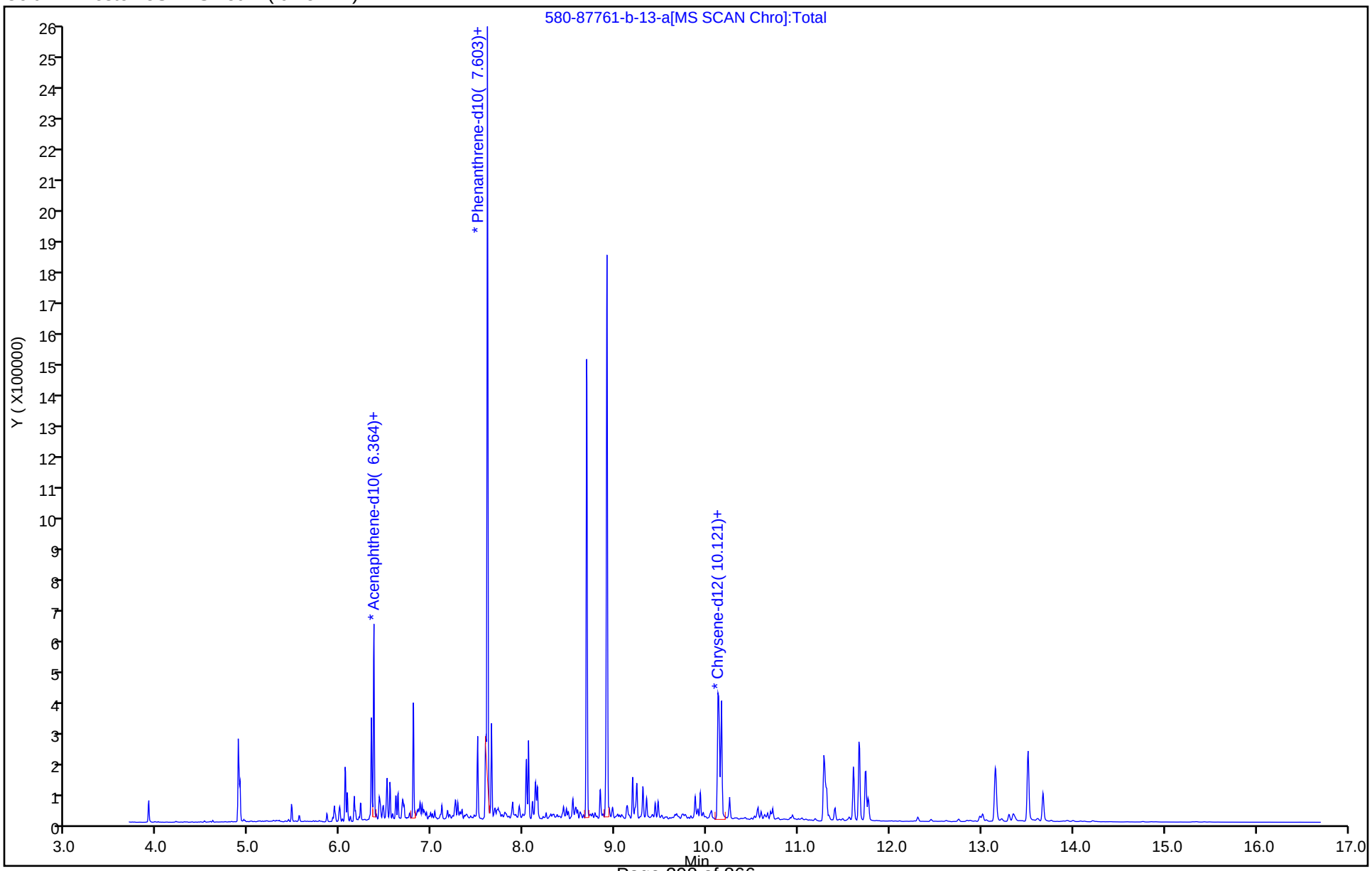
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 31-Aug-2019 13:32:18 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13	Worklist Smp#:	15
Client ID:	22T-VB-03-4.0-6.0_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	200.0000	ALS Bottle#:	15
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

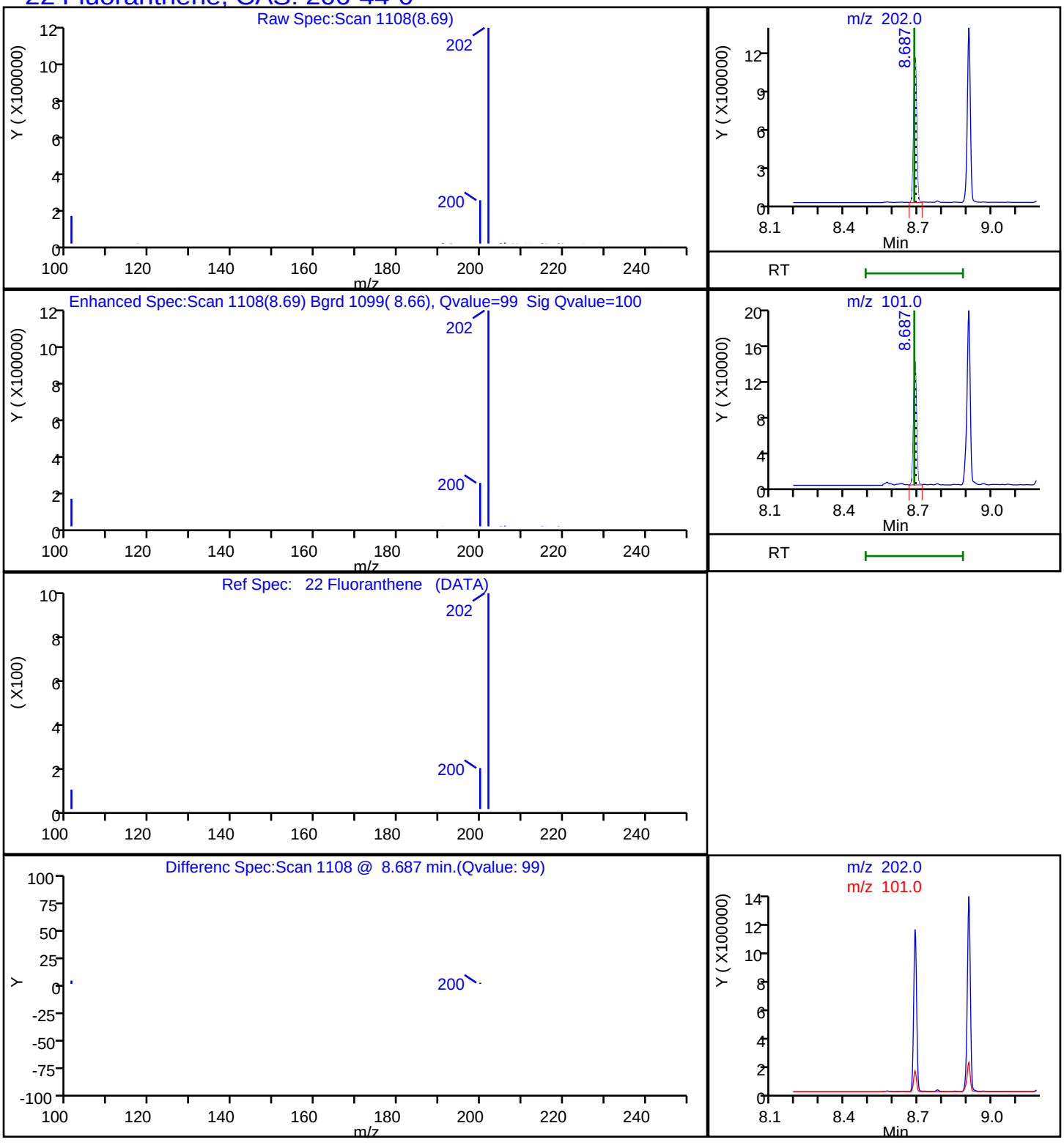


Report Date: 31-Aug-2019 13:32:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

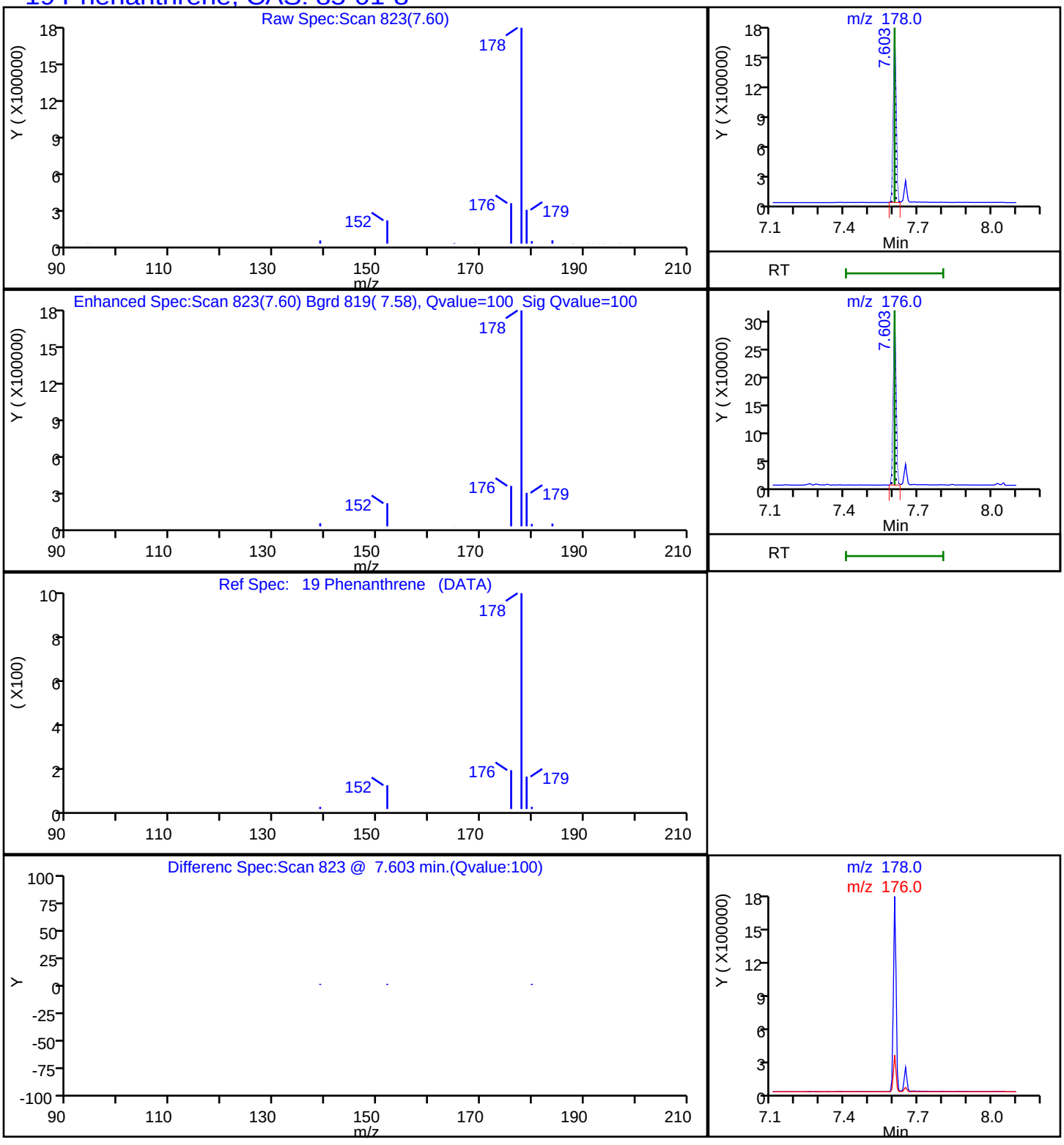


Report Date: 31-Aug-2019 13:32:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

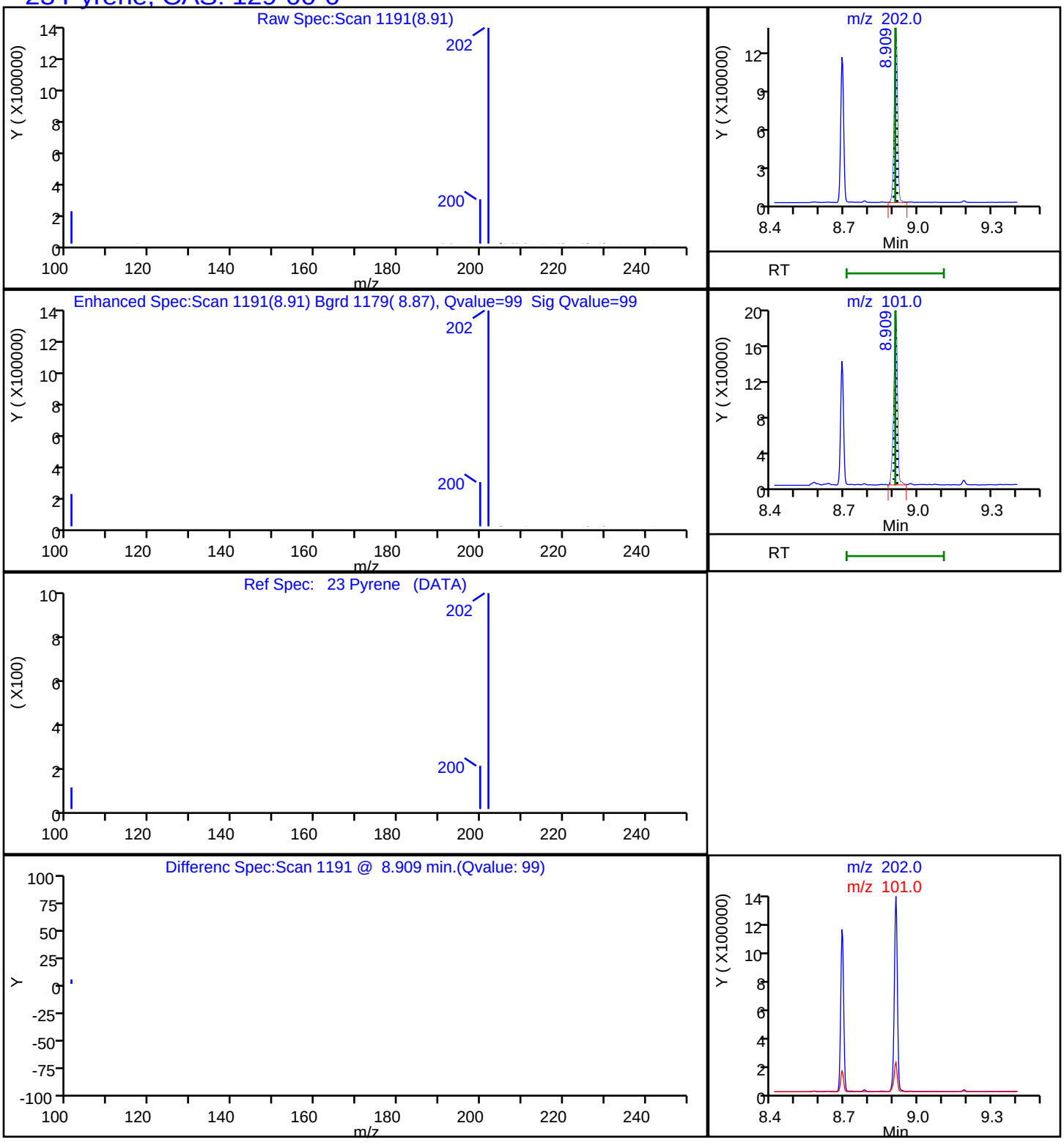


Report Date: 31-Aug-2019 13:32:19 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



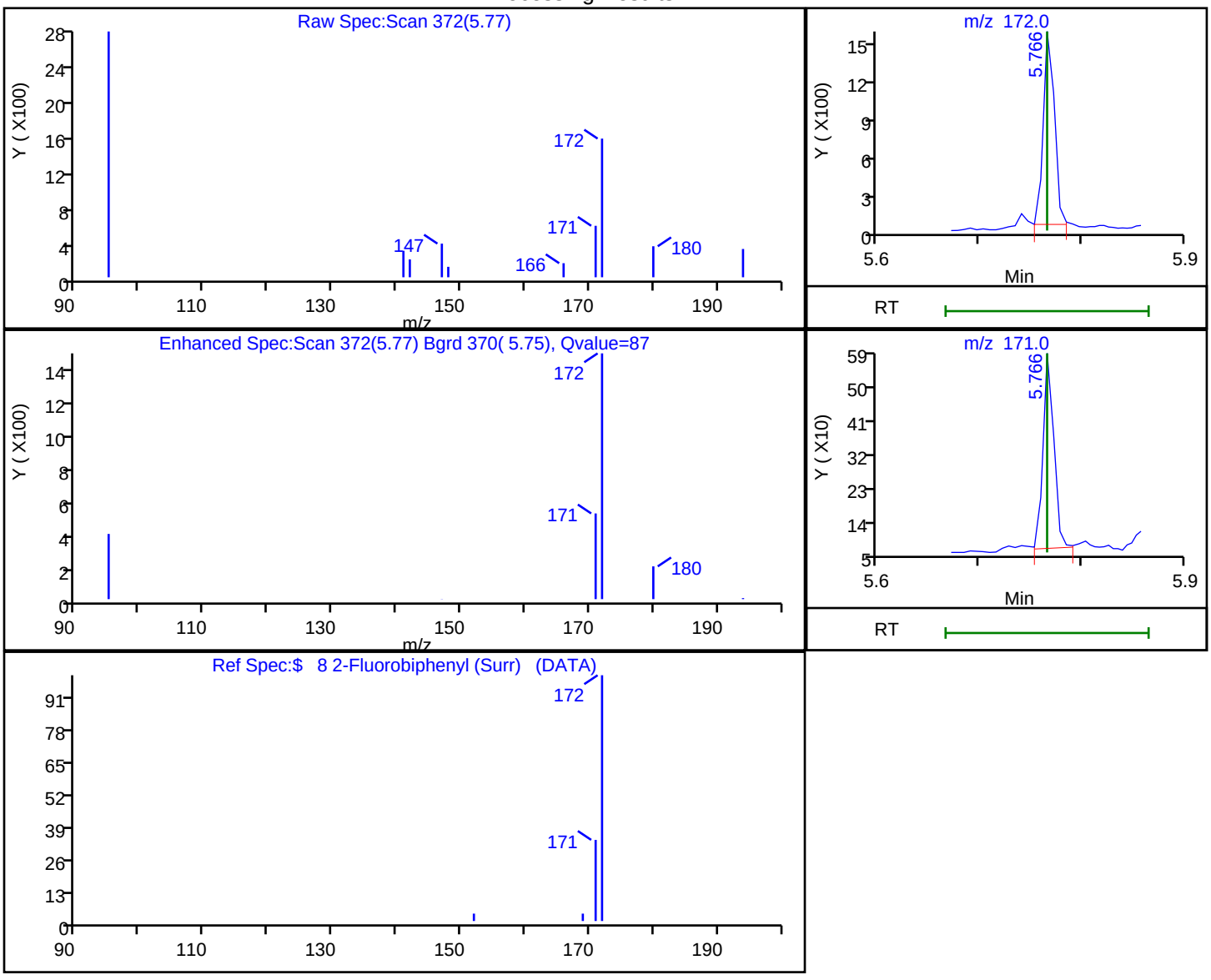
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	1126	0.003524
5.77	171.00	383	

Reviewer: cochranj, 31-Aug-2019 13:16:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

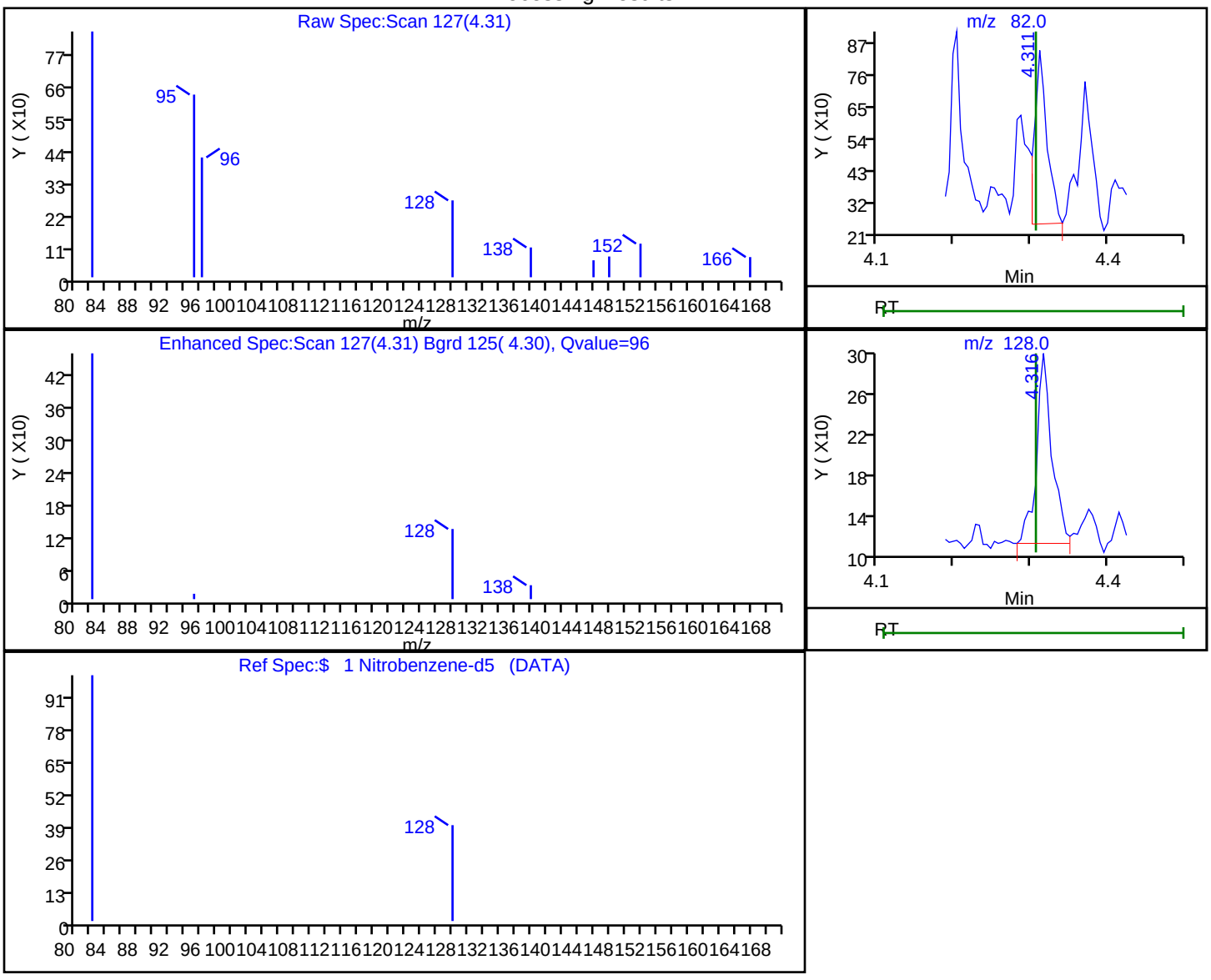
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	683	0.006122
4.32	128.00	265	

Reviewer: cochranj, 31-Aug-2019 13:16:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

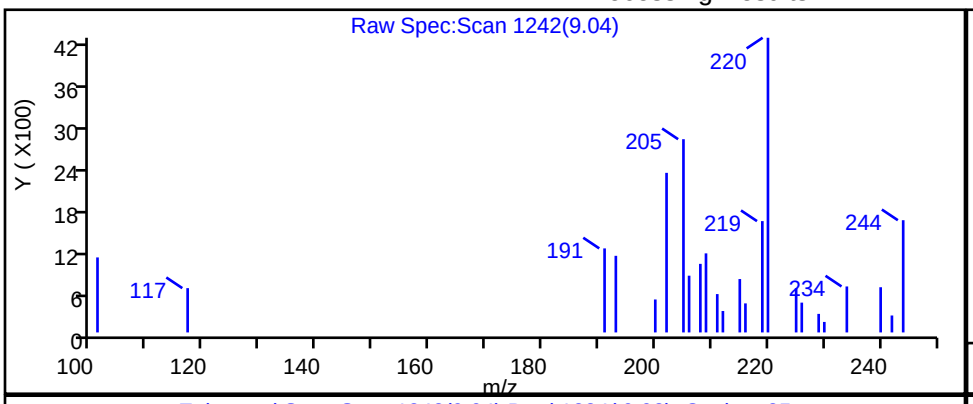
User Disabled Compound Report

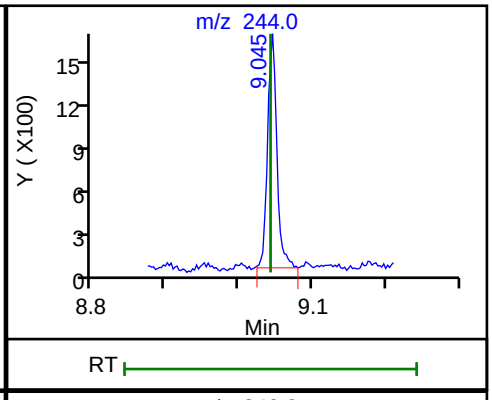
Eurofins TestAmerica, Knoxville

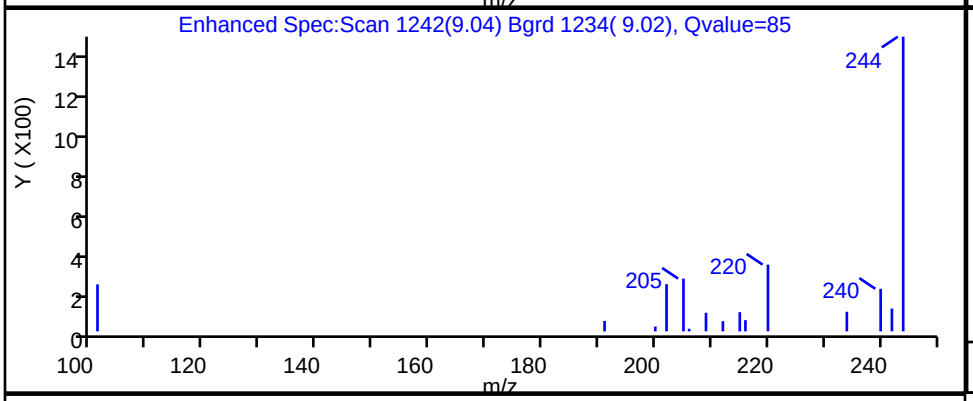
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-13-a.D				
Injection Date:	30-Aug-2019 16:09:30	Instrument ID:	MP		
Lims ID:	580-87761-B-13-A	Lab Sample ID:	140-87761-13		
Client ID:	22T-VB-03-4.0-6.0_20190717				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	200.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

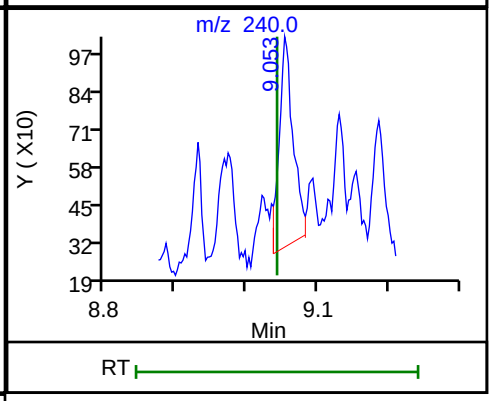
$ 24 Terphenyl-d14, CAS: 1718-51-0

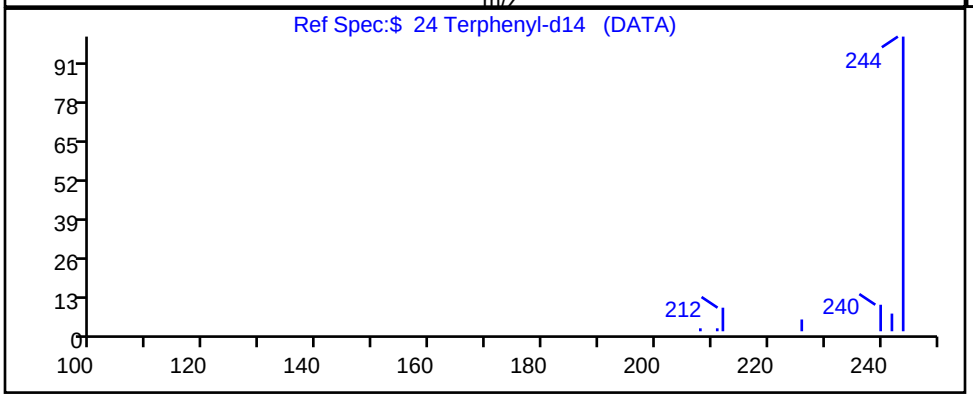
Processing Results











RT	Mass	Response	Amount
9.04	244.00	1306	0.005134
9.05	240.00	1002	

Reviewer: cochranj, 31-Aug-2019 13:16:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-8.0-9.0_20190717 Lab Sample ID: 580-87761-15

Matrix: Solid Lab File ID: 580-87761-b-15-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:50

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 16.45(g) Date Analyzed: 08/29/2019 18:24

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 38.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	400		150	21
91-57-6	2-Methylnaphthalene	970		300	30
83-32-9	Acenaphthene	4000		30	14
208-96-8	Acenaphthylene	300		30	7.5
120-12-7	Anthracene	1700		30	24
56-55-3	Benzo[a]anthracene	3700		30	12
50-32-8	Benzo[a]pyrene	4300		30	11
205-99-2	Benzo[b]fluoranthene	3500		30	15
192-97-2	Benzo[e]pyrene	2400		30	10
191-24-2	Benzo[g,h,i]perylene	3000		30	18
207-08-9	Benzo[k]fluoranthene	1500		30	14
STL00905	C1-Chrysenes	1300		30	7.8
STL00909	C1-Dibenzothiophenes	980		30	19
STL00912	C1-Fluoranthenes/pyrene	3500		30	16
STL00913	C1-Fluorenes	1000		30	17
STL00916	C1-Naphthalenes	880		300	24
STL00901	C1-Phenanthrenes/Anthracenes	4400		60	33
STL00906	C2-Chrysenes	510		30	9.2
STL00910	C2-Dibenzothiophenes	900		30	28
STL00968	C2-Fluoranthenes/Pyrene	1000		30	13
STL00914	C2-Fluorenes	1100		60	36
STL00917	C2-Naphthalenes	2300		60	23
STL00902	C2-Phenanthrenes/Anthracenes	2600		120	73
STL00907	C3-Chrysenes	290		30	8.9
STL00911	C3-Dibenzothiophenes	580		60	33
STL00969	C3-Fluoranthenes/Pyrene	550		30	16
STL00915	C3-Fluorenes	800		60	32
STL00918	C3-Naphthalenes	3000		60	29
STL00903	C3-Phenanthrenes/Anthracenes	1900	AP	60	47
STL00908	C4-Chrysenes	170		30	10
STL00967	C4-Dibenzothiophenes	280		30	28
STL01791	C4-Fluoranthenes/Pyrene	290		30	11
STL00919	C4-Naphthalenes	1800		120	62

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-8.0-9.0_20190717 Lab Sample ID: 580-87761-15

Matrix: Solid Lab File ID: 580-87761-b-15-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:50

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 16.45(g) Date Analyzed: 08/29/2019 18:24

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 38.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	3100	AP	60	56
218-01-9	Chrysene	4000		30	11
53-70-3	Dibenz(a,h)anthracene	420		30	17
132-65-0	Dibenzothiophene	2300		30	10
86-73-7	Fluorene	2600		30	14
193-39-5	Indeno[1,2,3-cd]pyrene	2300		30	21
91-20-3	Naphthalene	2200		600	55
198-55-0	Perylene	1100		30	6.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D
Lims ID: 580-87761-B-15-A
Client ID: 22T-VB-03-8.0-9.0_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 18:24:30 ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-017
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 10:42:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	207282	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	677620	1.49	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	194356	0.6502	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	97	75666	0.2657	
11 Acenaphthylene	152	6.216	6.216	0.000	98	76195	0.2008	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	110237	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	788645	2.69	
16 Fluorene	166	6.797	6.793	0.004	100	576003	1.78	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	729145	1.53	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	95	200202	0.5000	
19 Phenanthrene	178	7.609	7.603	0.006	99	5246090	10.2	E
20 Anthracene	178	7.648	7.648	0.000	99	496220	1.15	
22 Fluoranthene	202	8.692	8.687	0.005	99	4254419	8.48	E
23 Pyrene	202	8.917	8.906	0.011	99	5348826	9.33	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	1119675	2.49	
* 27 Chrysene-d12	240	10.137	10.129	0.008	70	189454	0.5000	
28 Chrysene	228	10.161	10.161	0.000	99	1446071	2.68	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	1304874	2.38	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	641217	1.03	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	832264	1.61	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	1350992	2.86	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	201078	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	387127	0.7257	
35 Indeno[1,2,3-cd]pyrene	276	13.159	13.150	0.009	86	876523	1.51	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	40	140091	0.2842	M
37 Benzo[g,h,i]perylene	276	13.512	13.508	0.004	98	1088628	2.00	
A 38 C1-Naphthalenes	142	5.507	(5.454-5.583)		0	268972	0.5895	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	717789	1.57	
A 40 C3-Naphthalenes	170	6.555	(6.323-6.820)		0	903522	1.98	
A 41 C4-Naphthalenes	184	6.952	(6.483-7.421)		0	547605	1.20	
A 42 C1-Fluorenes	180	7.299	(7.219-7.413)		0	217829	0.6714	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	247631	0.7633	
A 44 C3-Fluorenes	208	8.113	(7.989-8.454)		0	174023	0.5364	
A 45 C1-Dibenzothiophenes	198	7.953	(7.827-8.065)		0	313165	0.6554	
A 46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	287149	0.6009	
A 47 C3-Dibenzothiophenes	226	8.658	(8.529-9.109)		0	187390	0.3922	
A 48 C4-Dibenzothiophenes	240	9.056	(8.814-9.591)		0	88128	0.1844	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	1519447	2.95	
A 50 C2-Phenanthrenes/Anthracen	206	8.555	(8.358-8.785)		0	885169	1.72	
A 51 C3-Phenanthrenes/Anthracen	220	9.002	(8.747-9.260)		0	664540	1.29	
A 52 C4-Phenanthrenes/Anthracen	234	9.194	(8.966-9.686)		0	1056320	2.05	
A 53 C1-Fluoranthenes/pyrene	216	9.317	(9.112-9.500)		0	1353280	2.36	
A 54 C2-Fluoranthenes/Pyrene	230	9.809	(9.587-10.039)		0	400269	0.6981	
A 55 C3-Fluoranthenes/Pyrene	244	10.241	(10.043-10.519)		0	210836	0.3677	
A 56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	112471	0.1962	
A 57 C1-Chrysenes	242	10.624	(10.512-10.741)		0	452040	0.8391	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	184876	0.3432	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	105894	0.1966	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	62231	0.1155	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

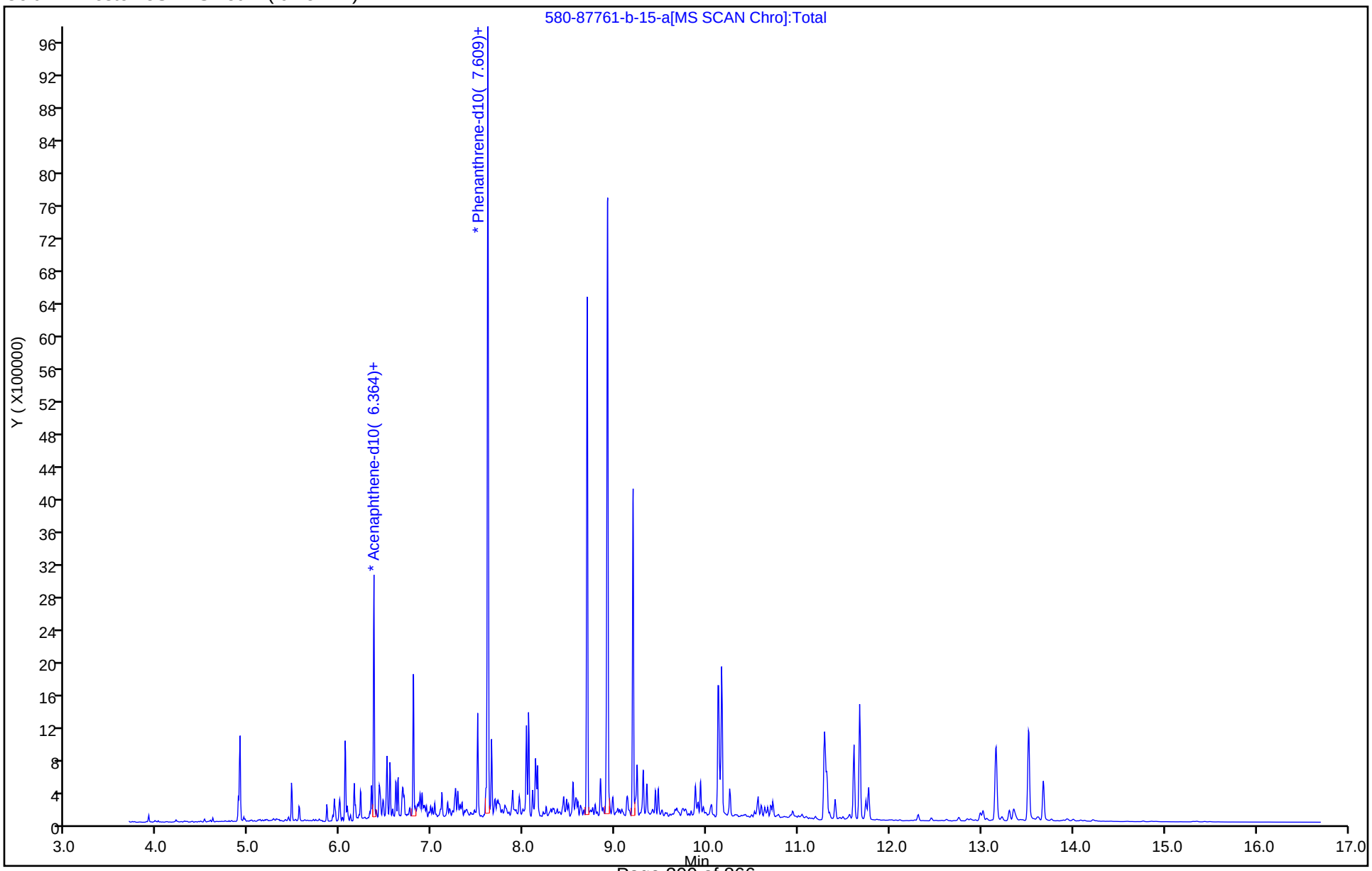
Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D

Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15	Worklist Smp#:	17
Client ID:	22T-VB-03-8.0-9.0_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	9
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

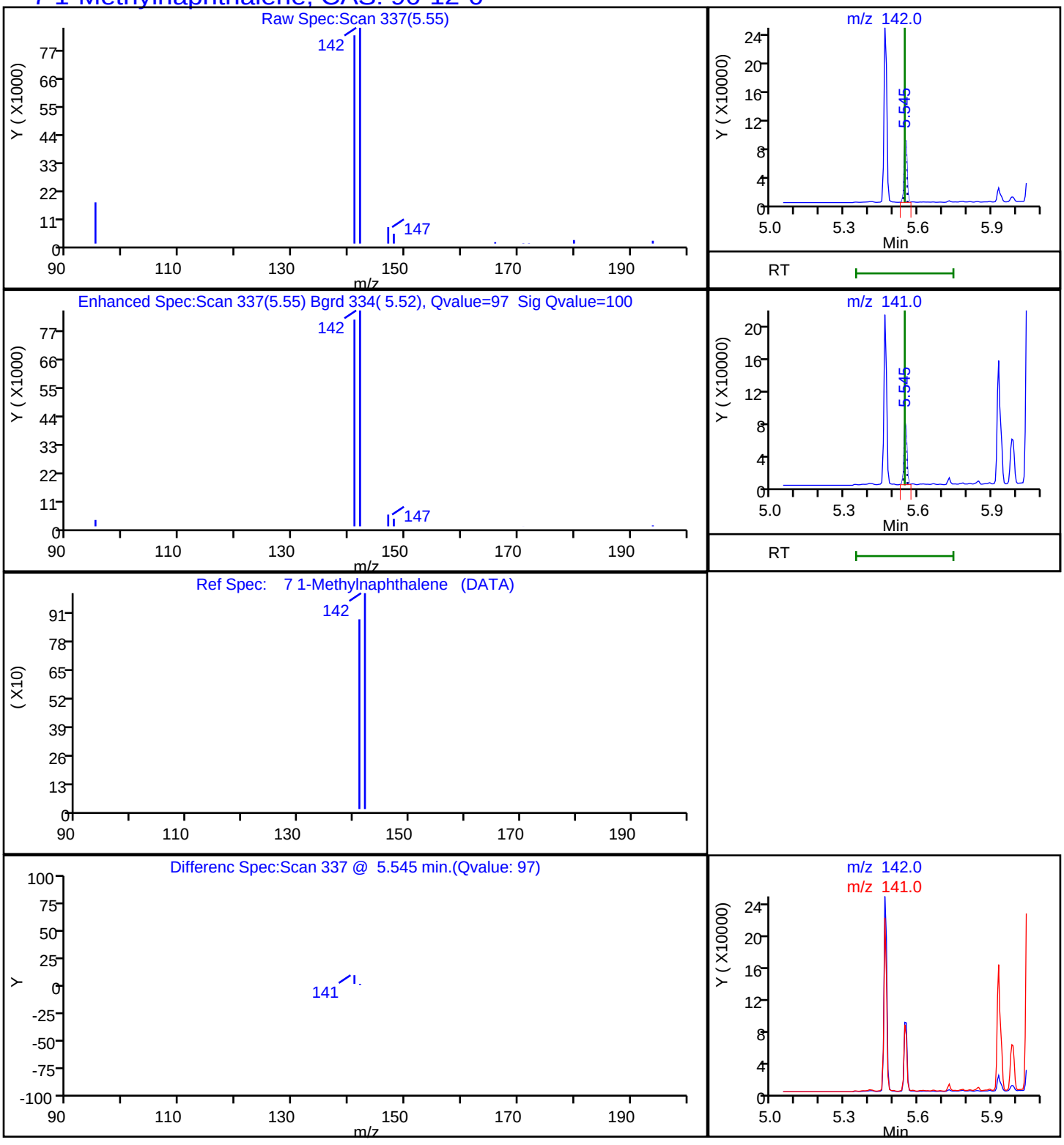


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

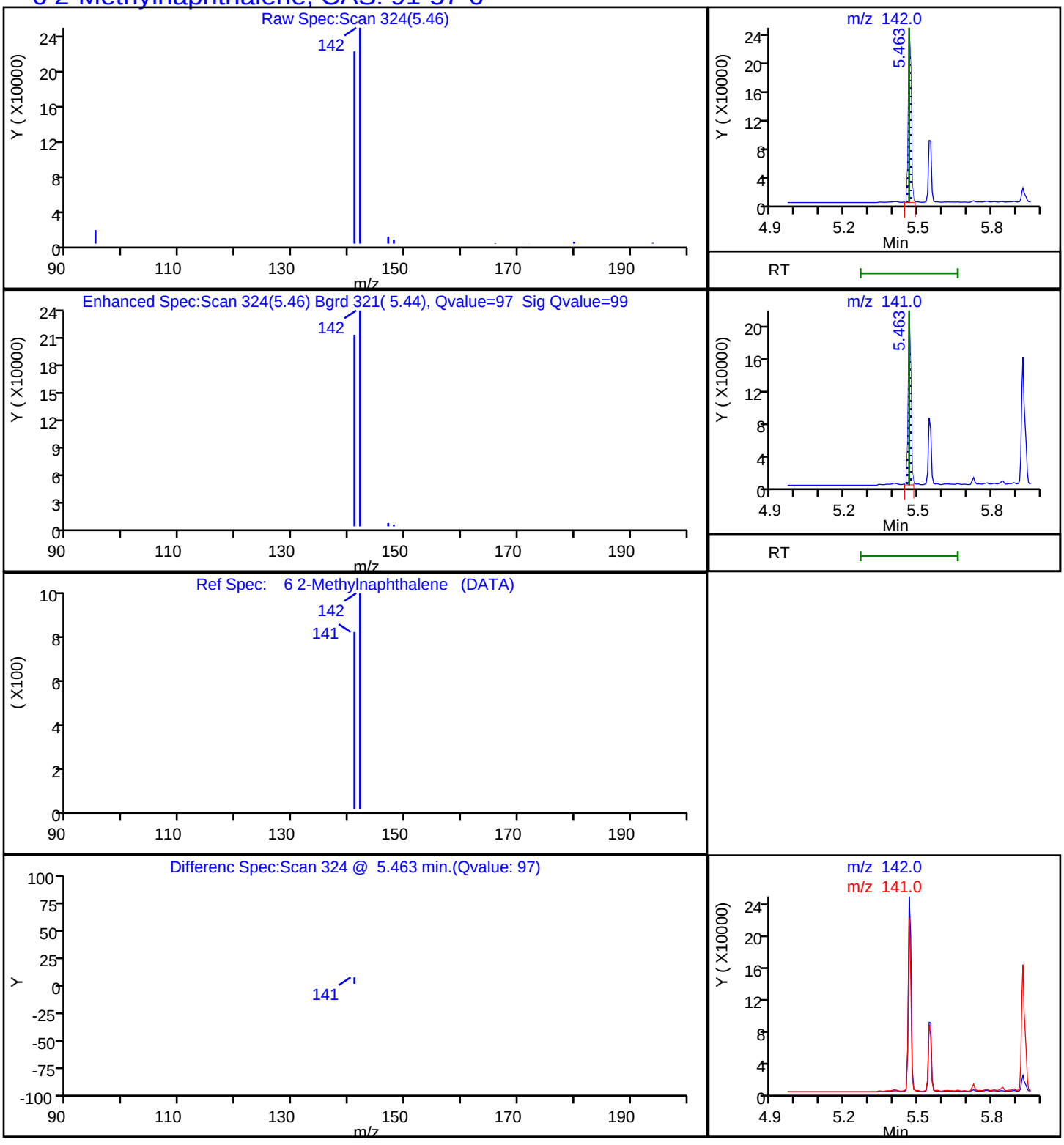


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

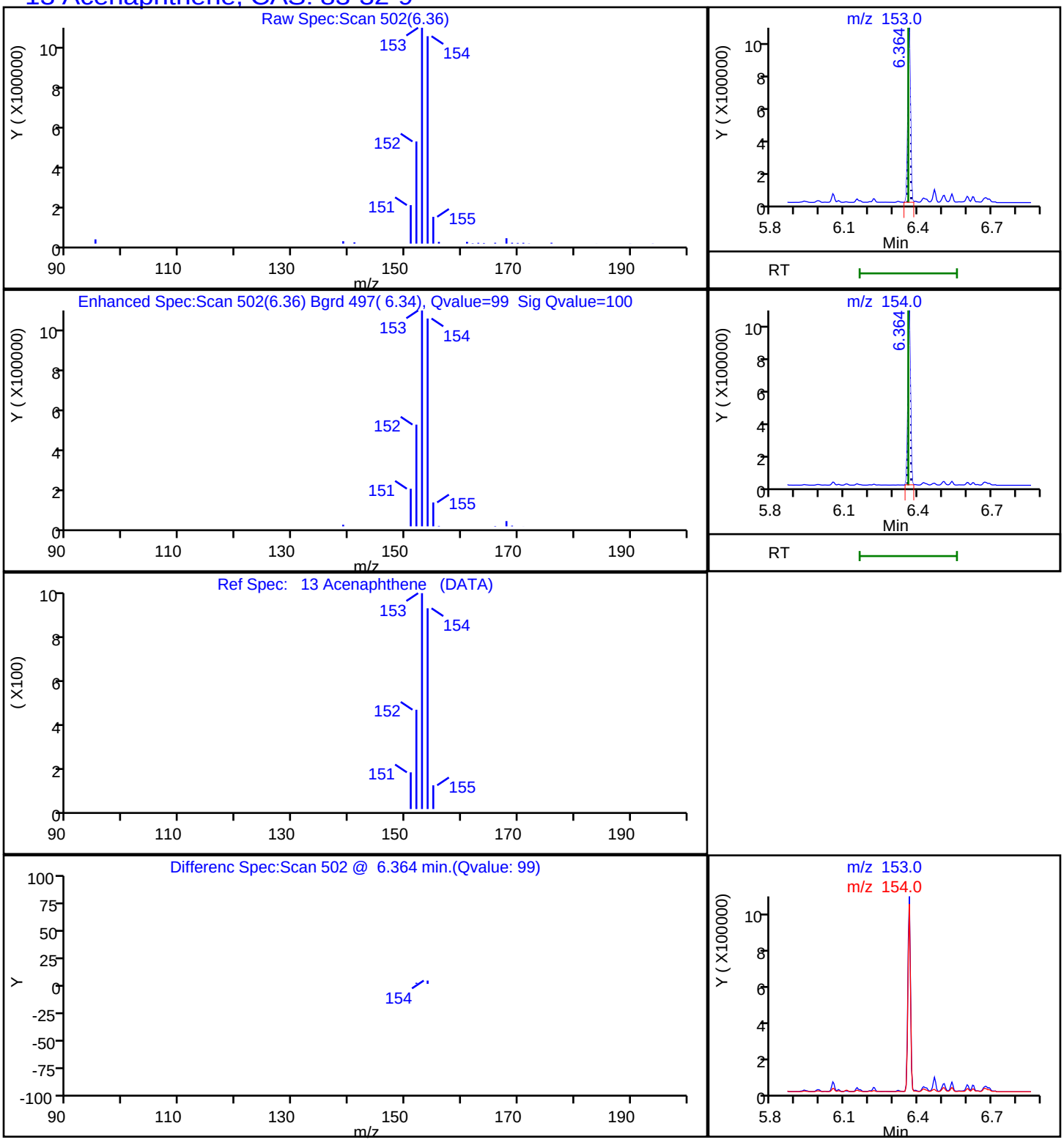


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9

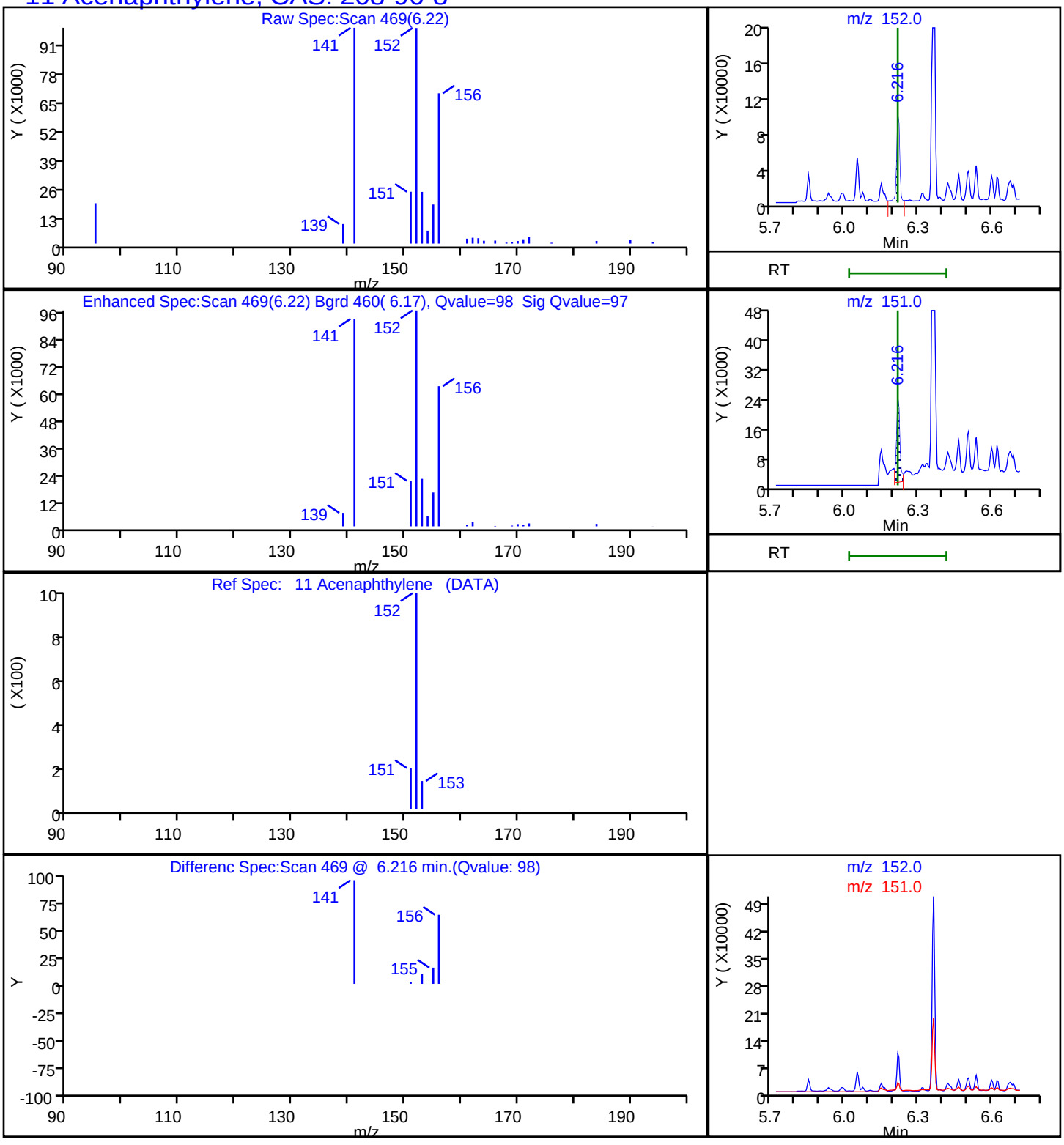


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8

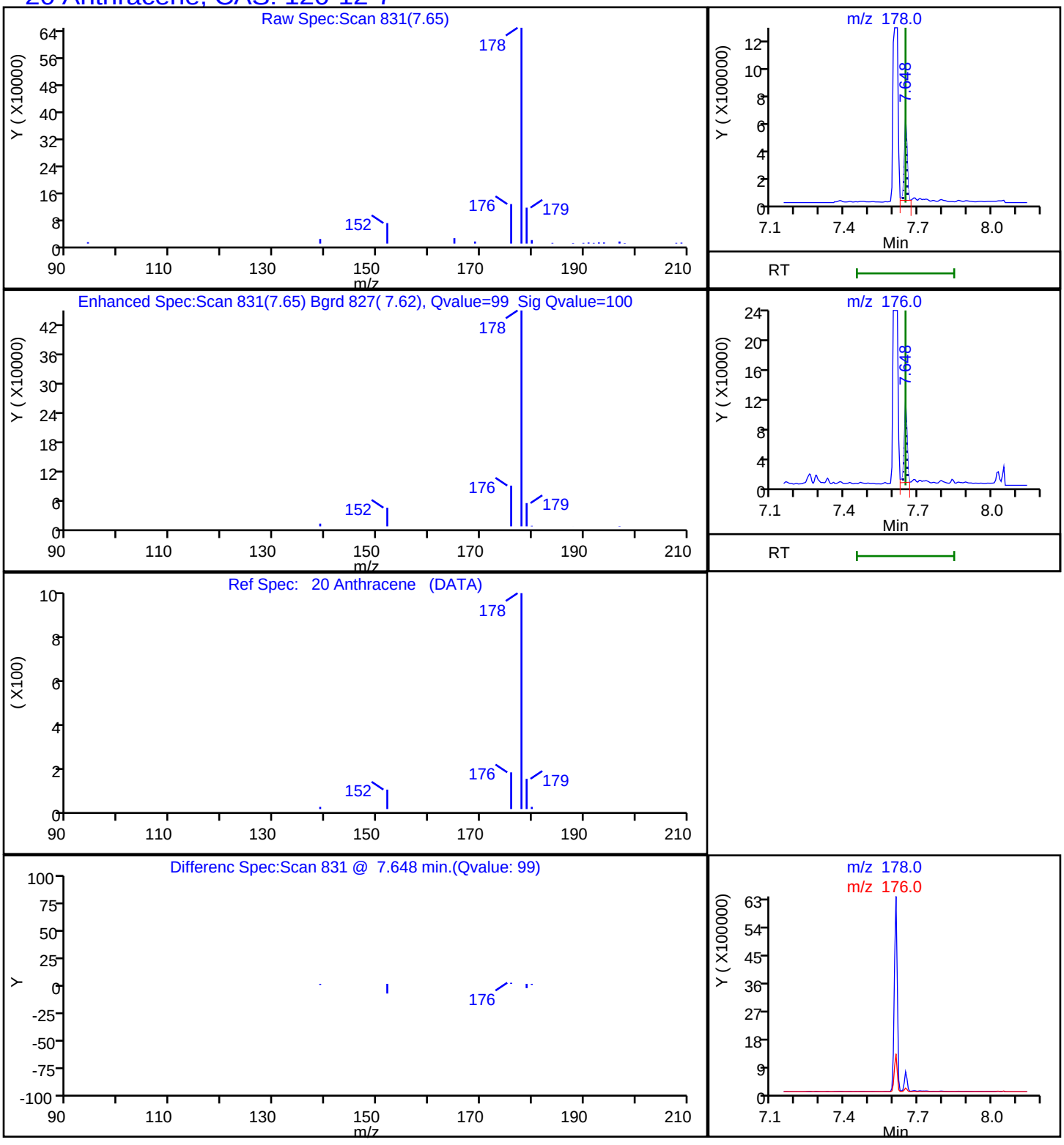


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7



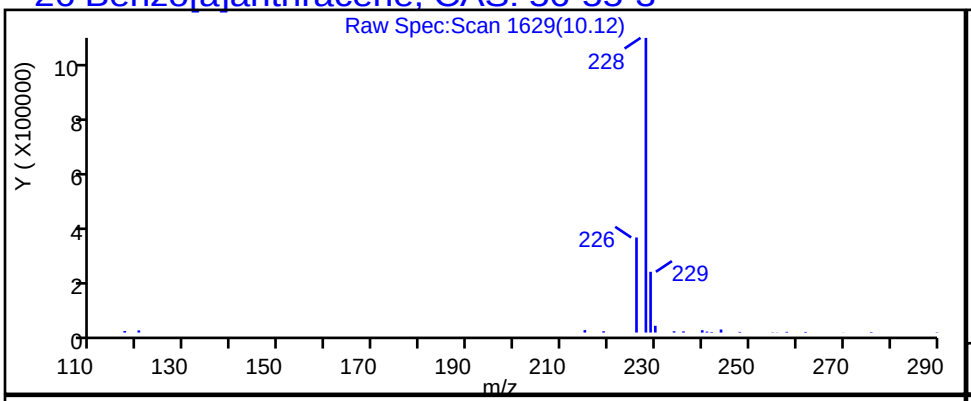
Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

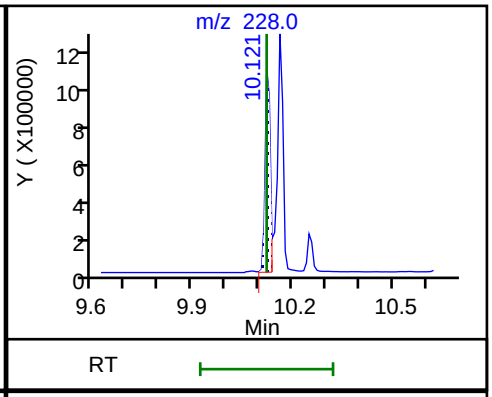
Eurofins TestAmerica, Knoxville

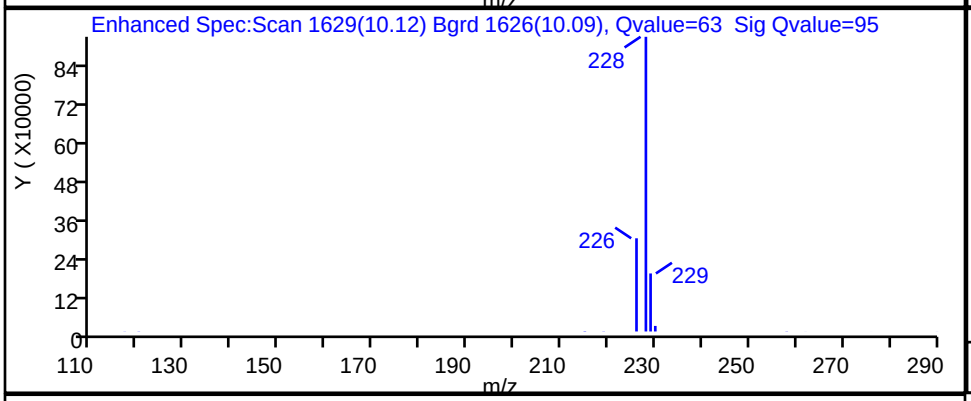
Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D

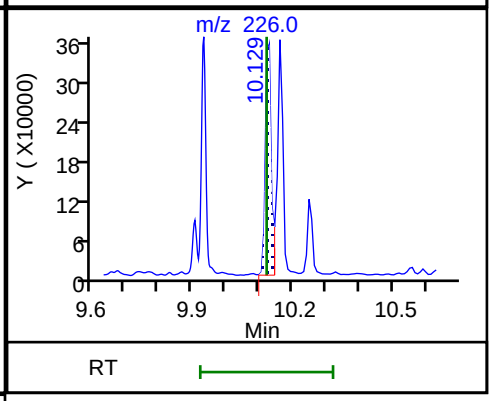
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

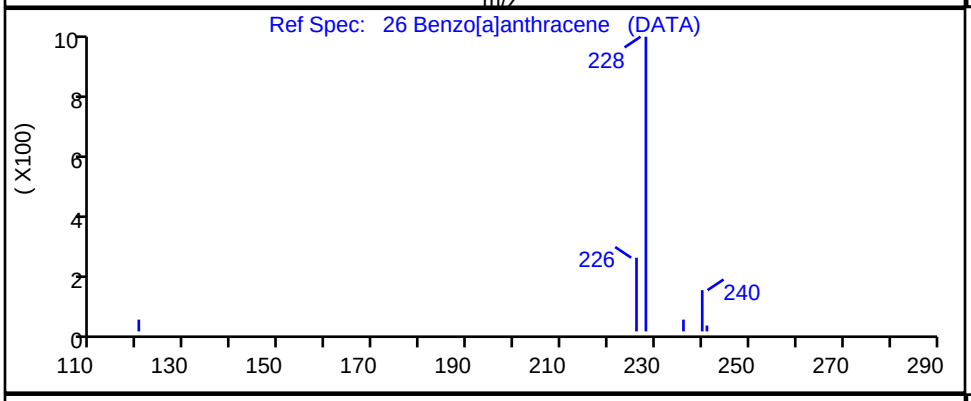
26 Benzo[a]anthracene, CAS: 56-55-3

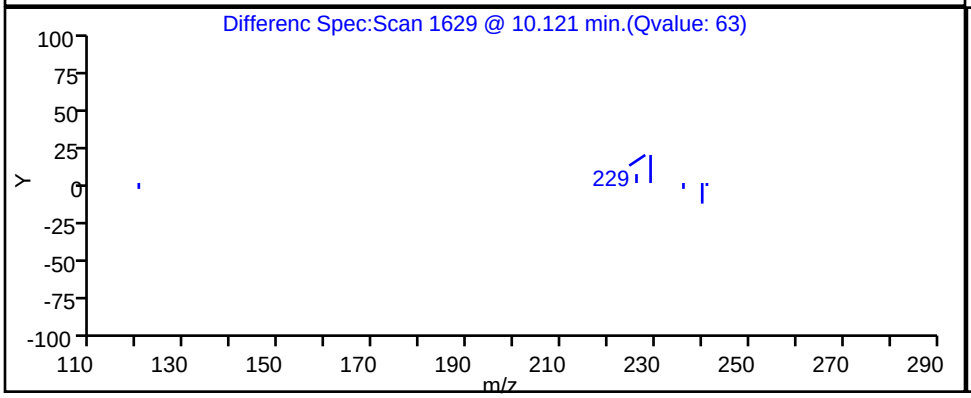


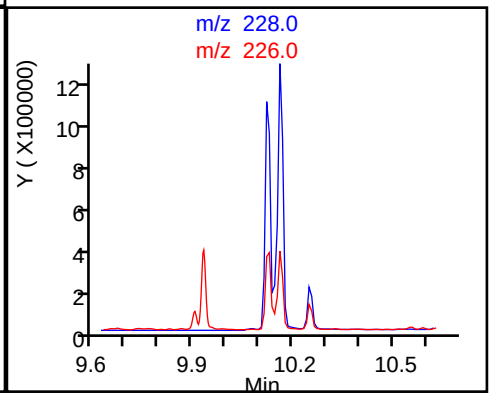












Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
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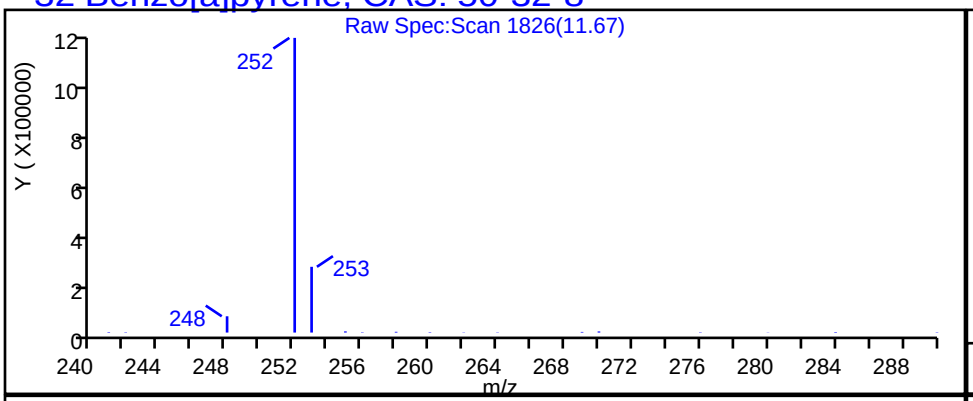
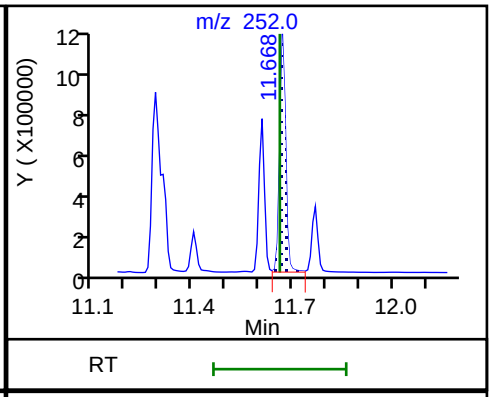
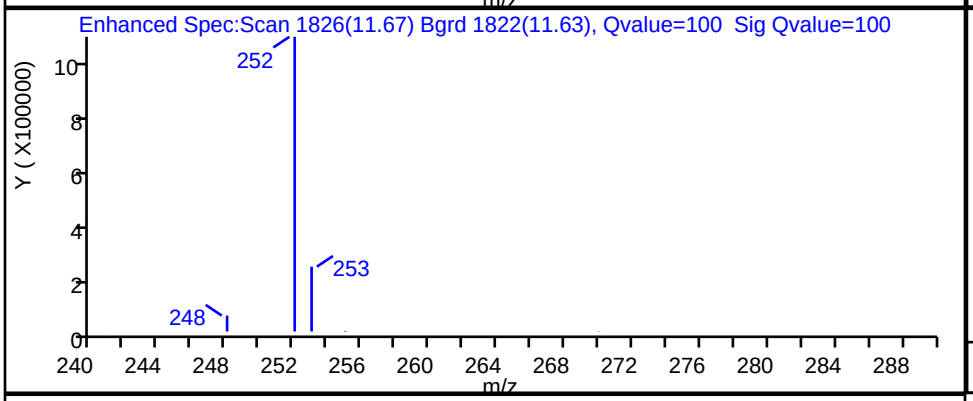
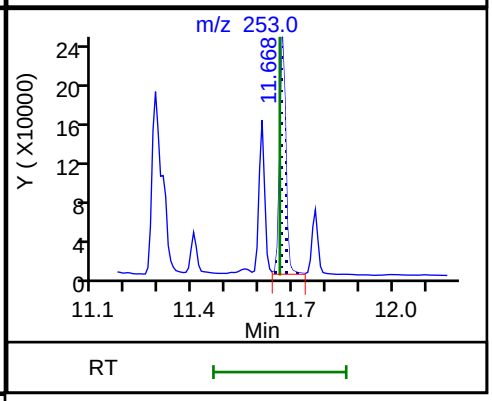
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

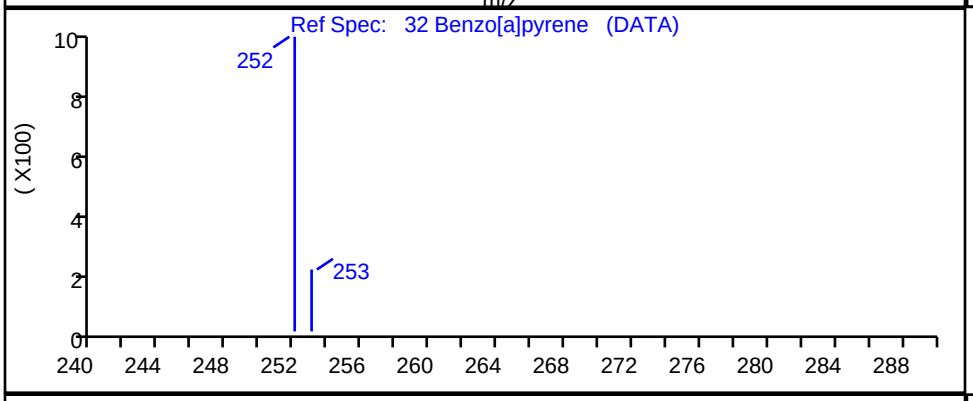
32 Benzo[a]pyrene, CAS: 50-32-8

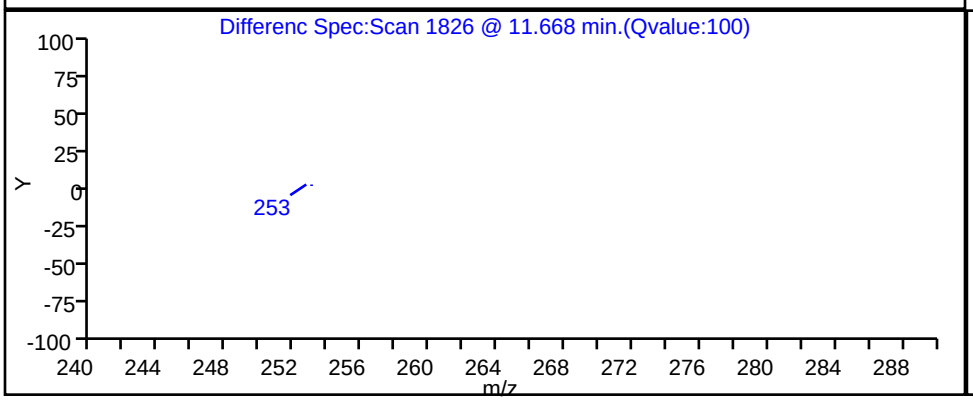


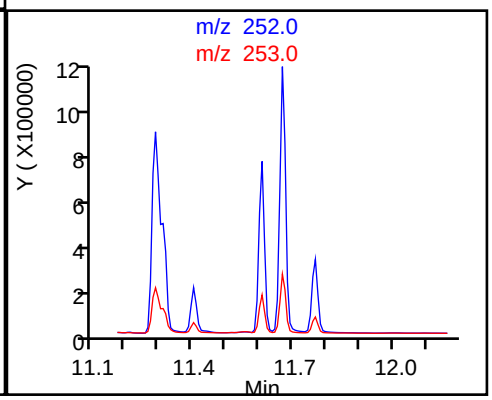












Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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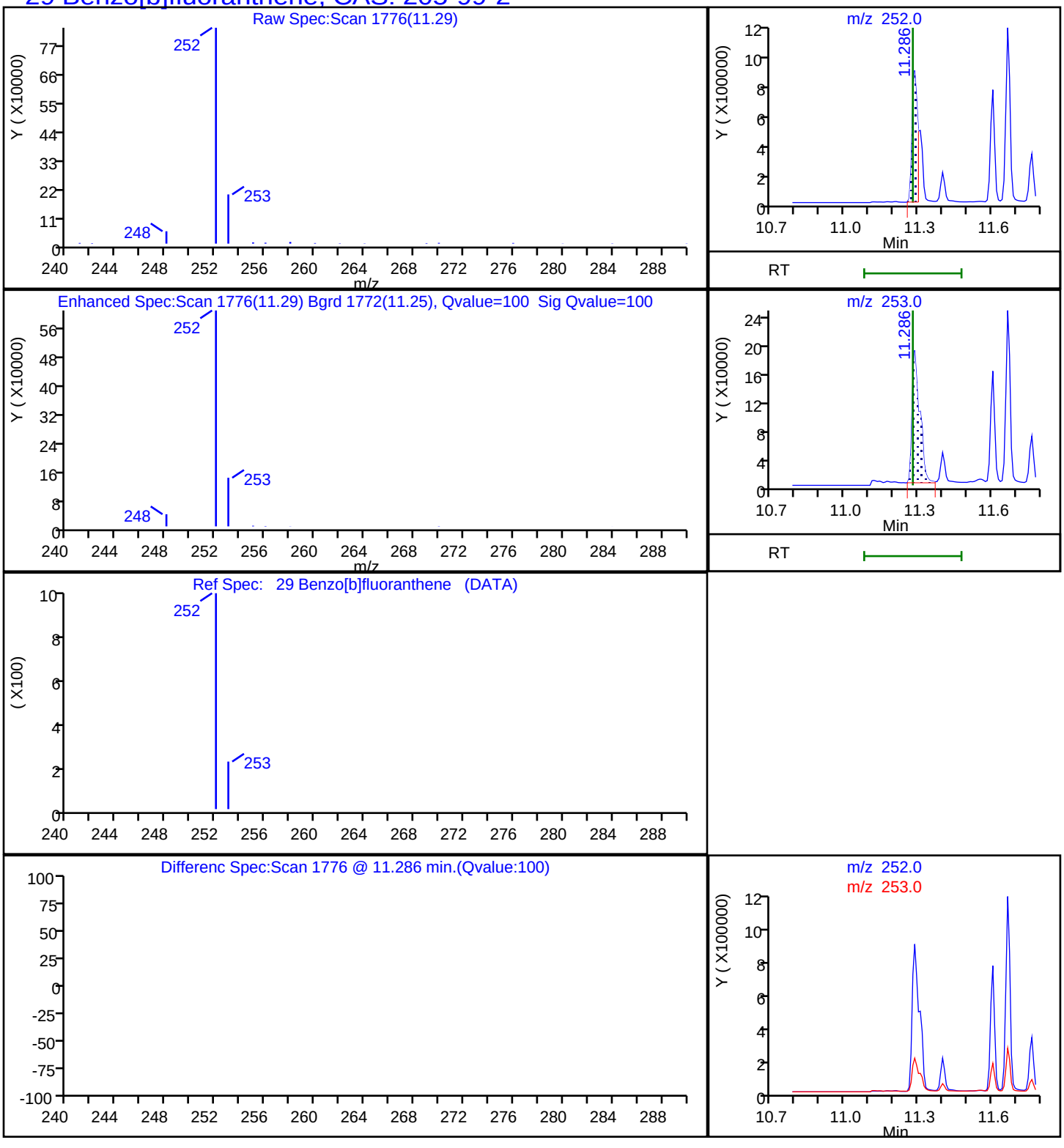
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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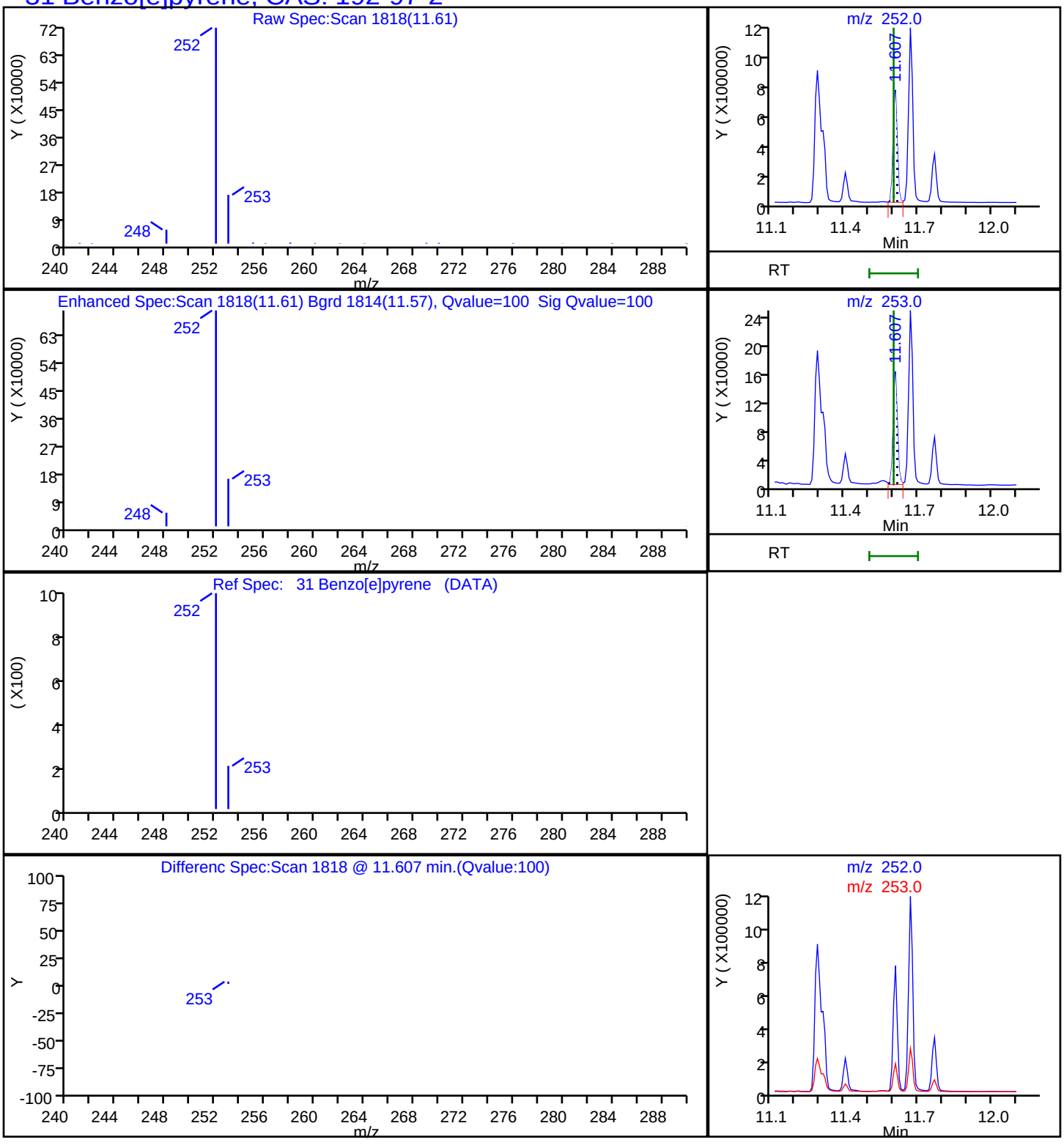
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



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Eurofins TestAmerica, Knoxville

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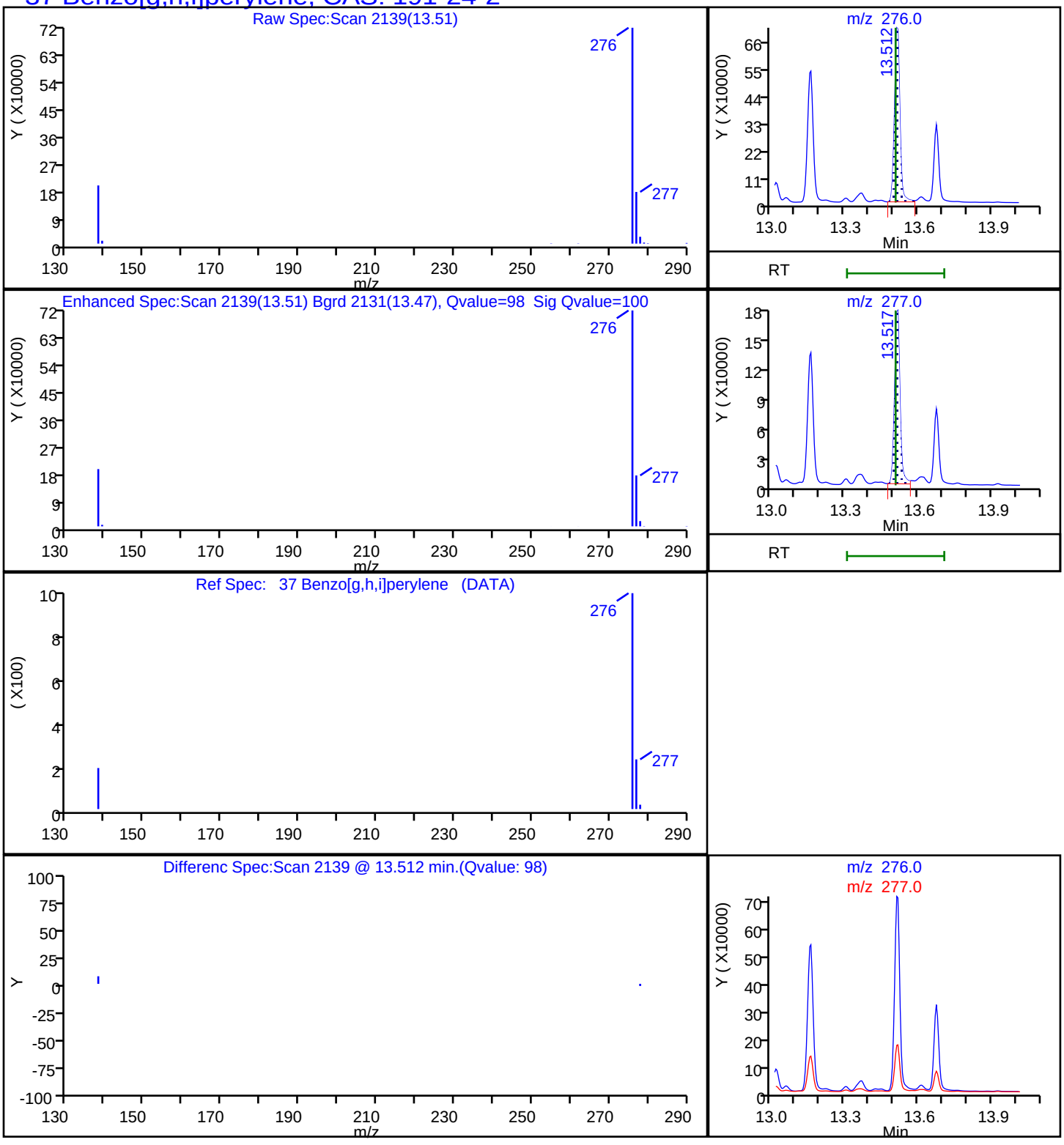
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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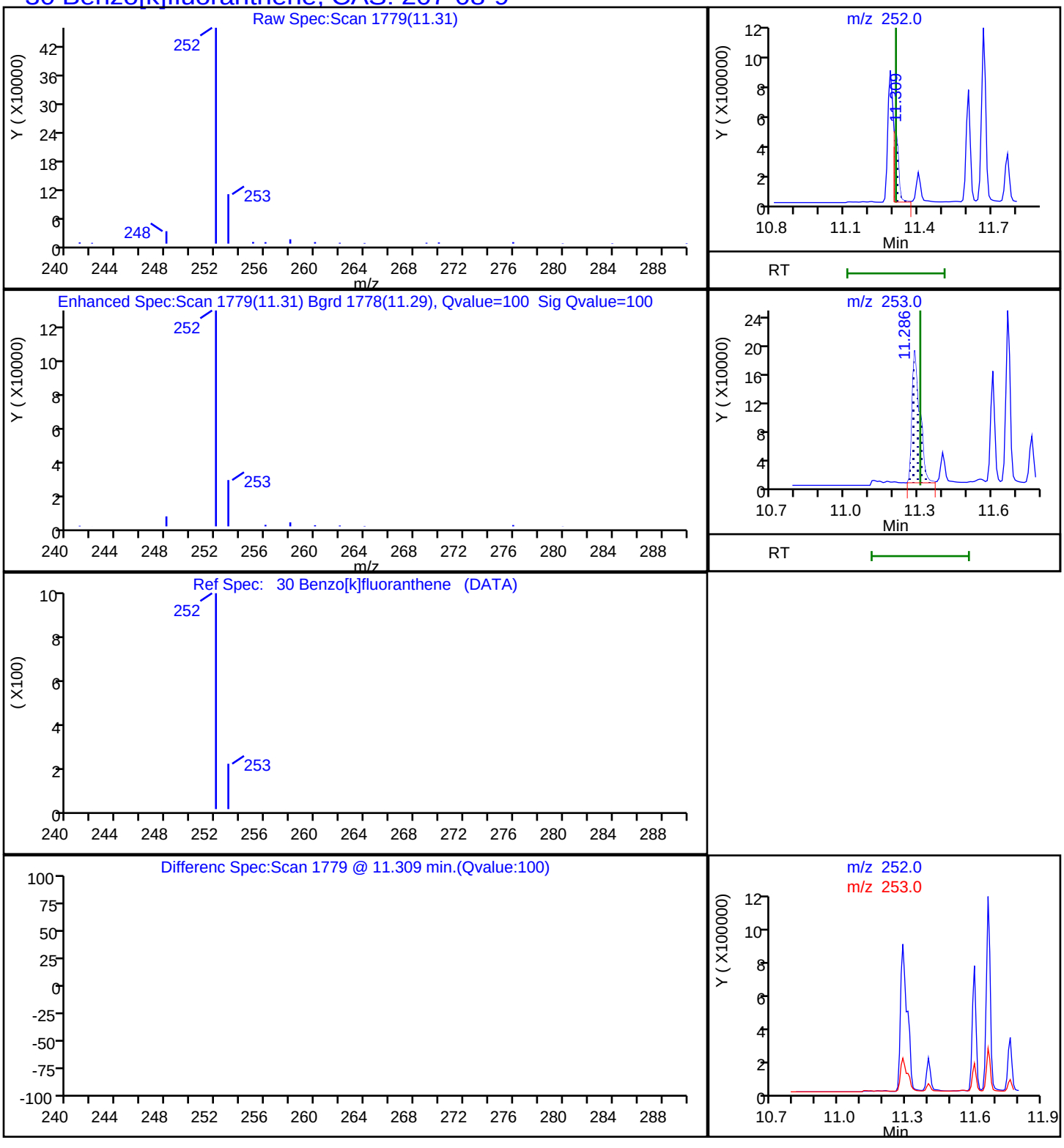
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



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Eurofins TestAmerica, Knoxville

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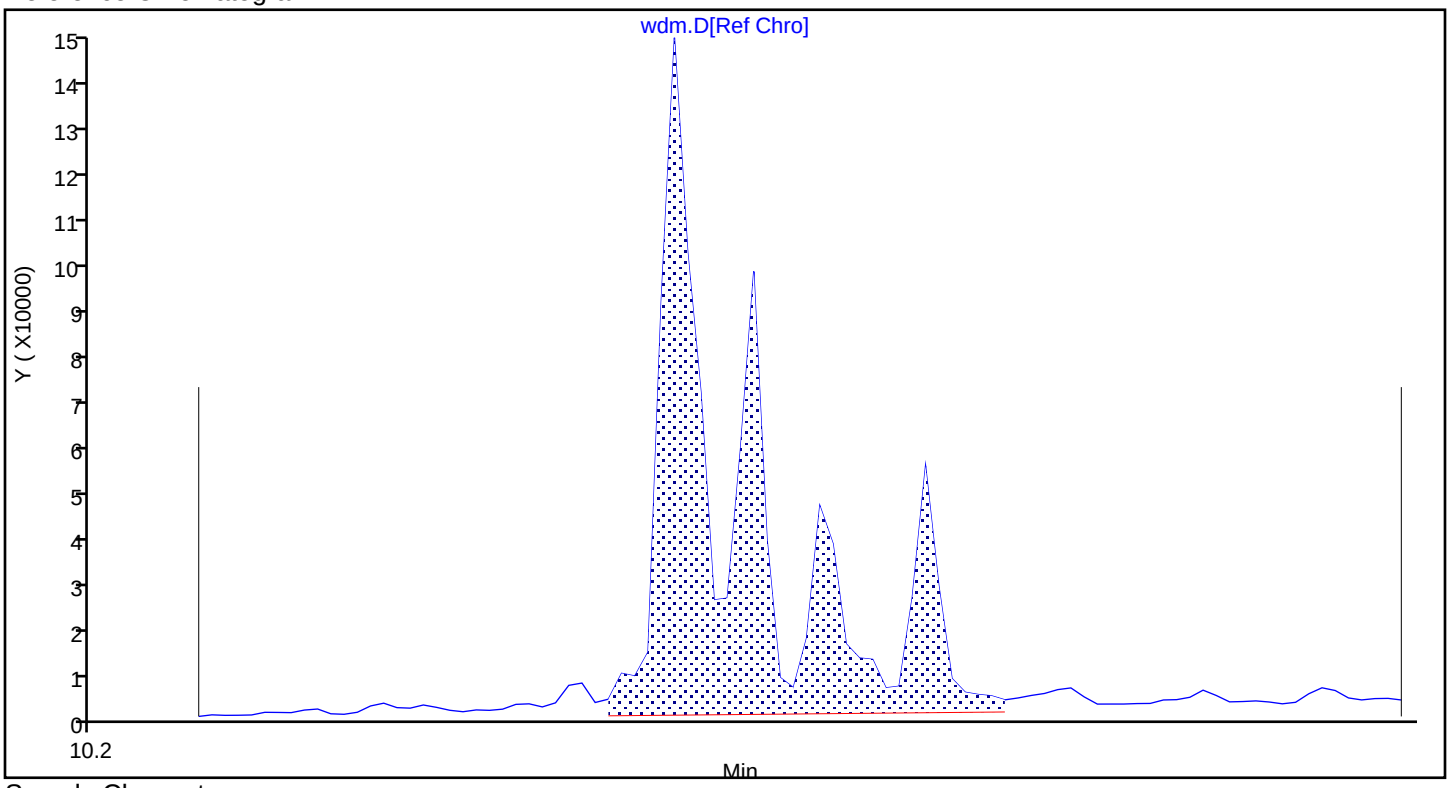
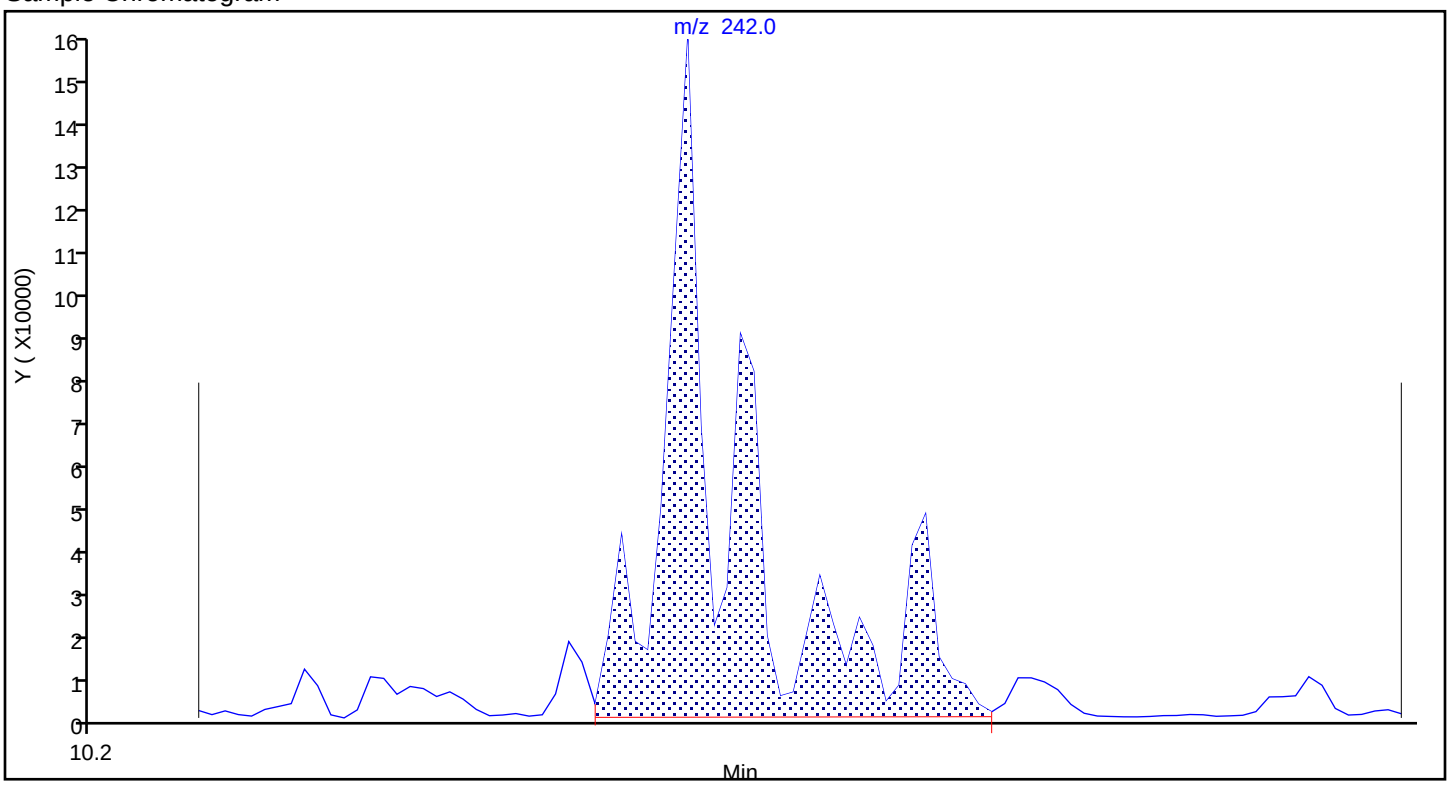
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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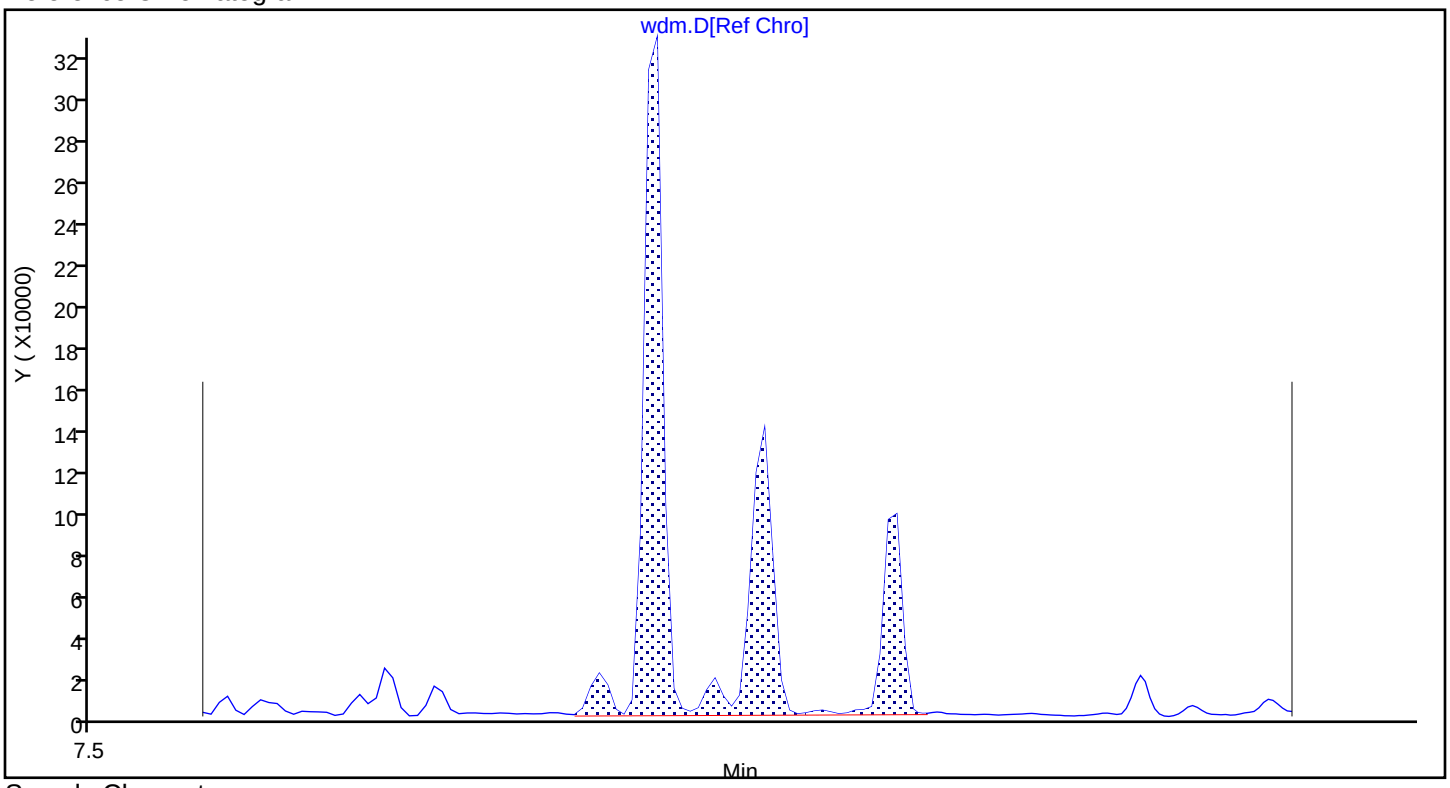
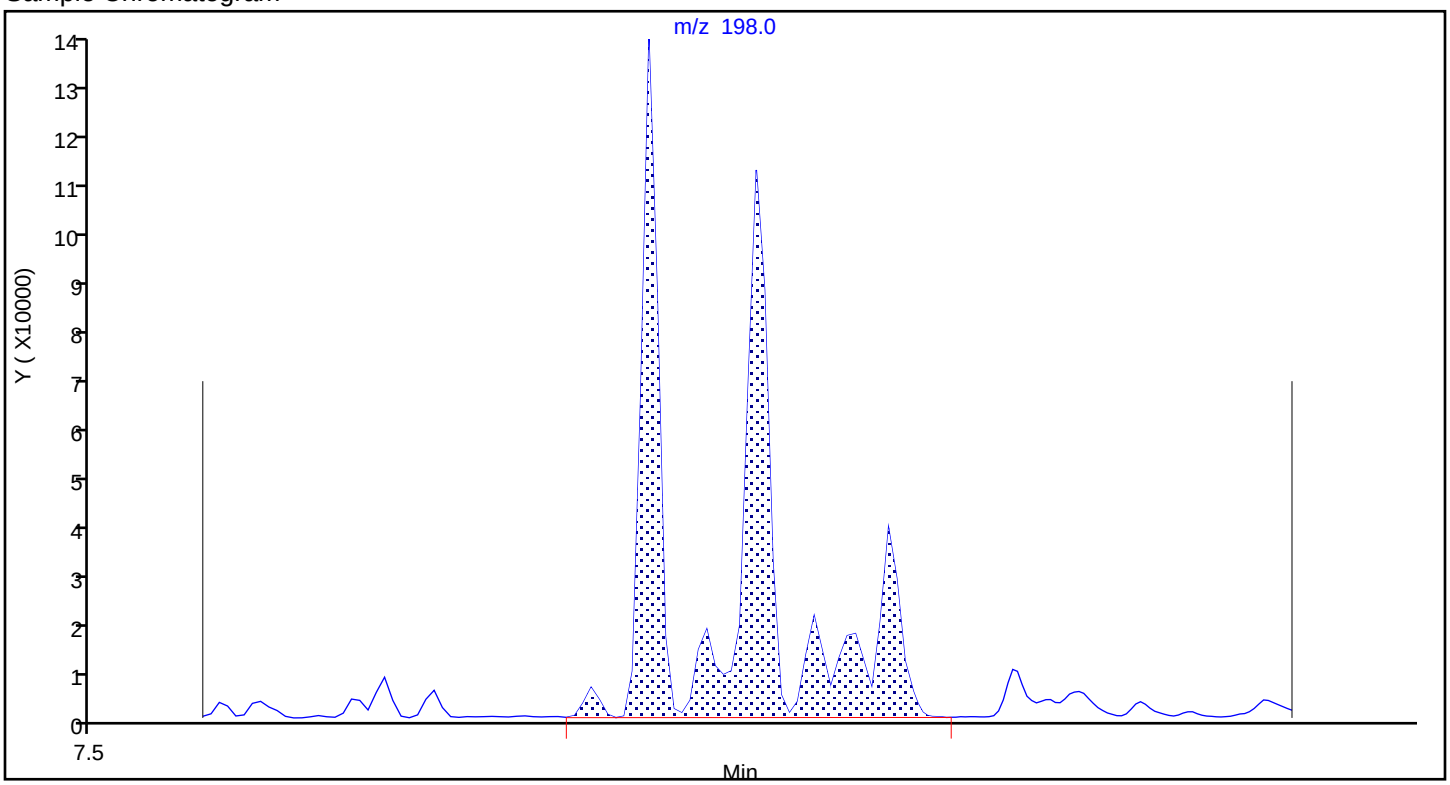
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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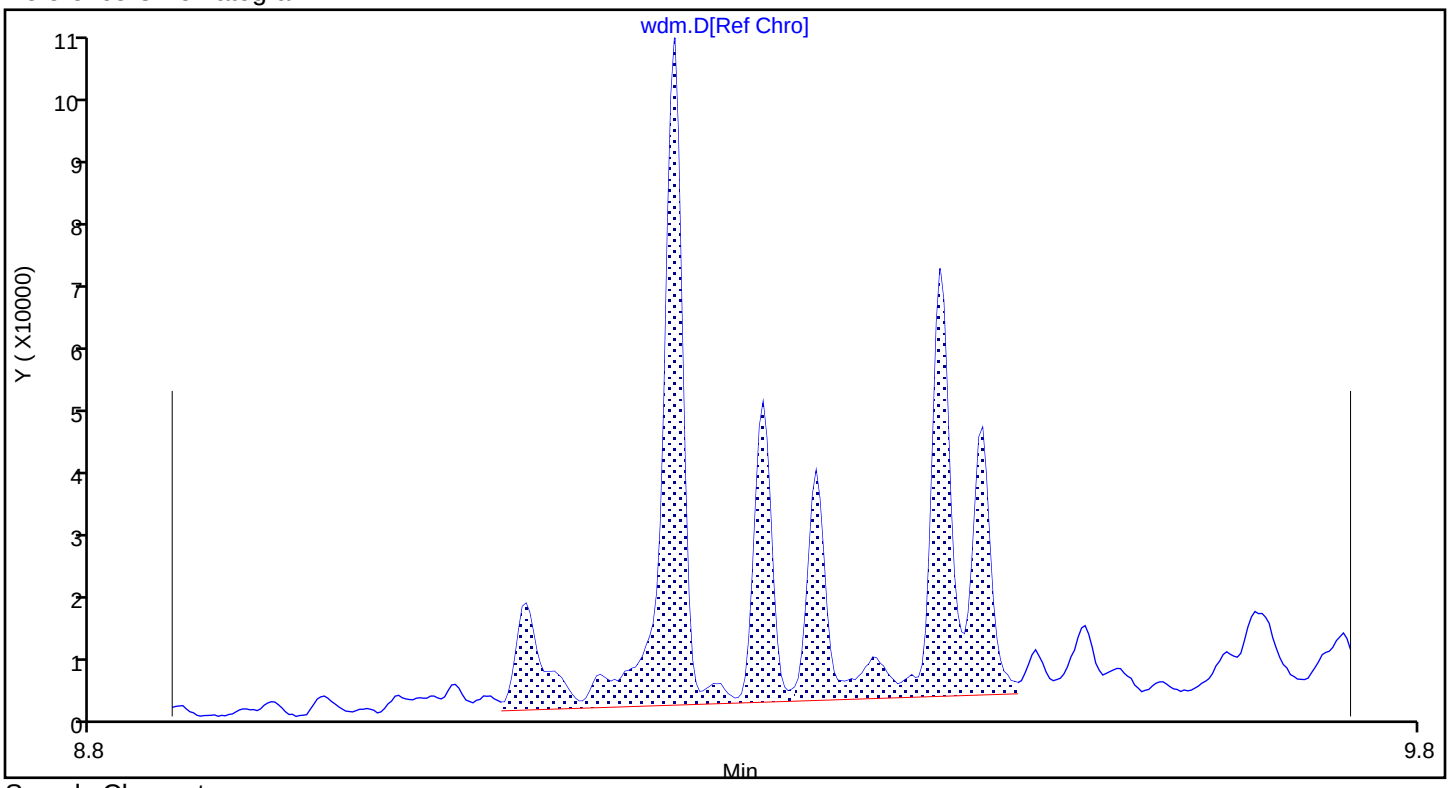
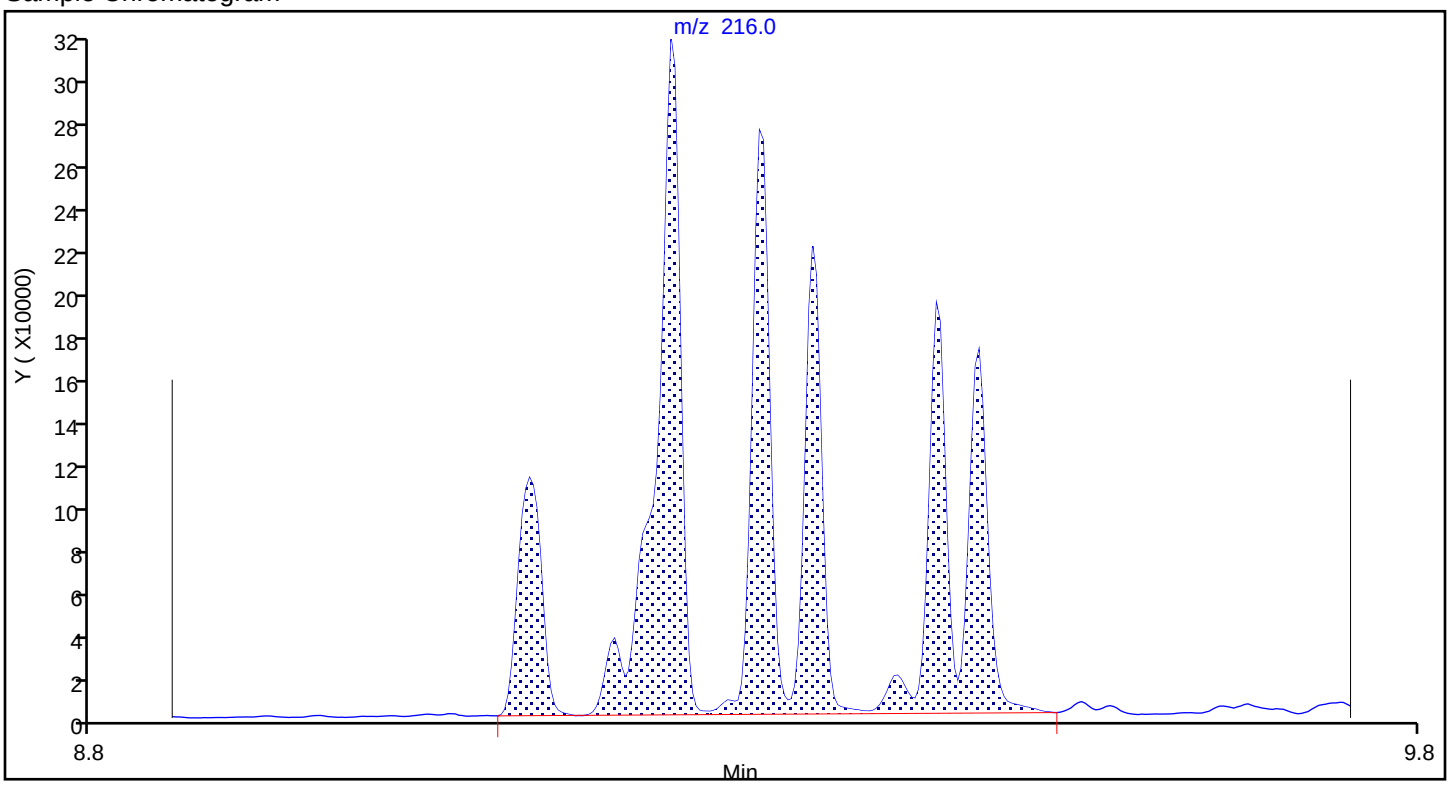
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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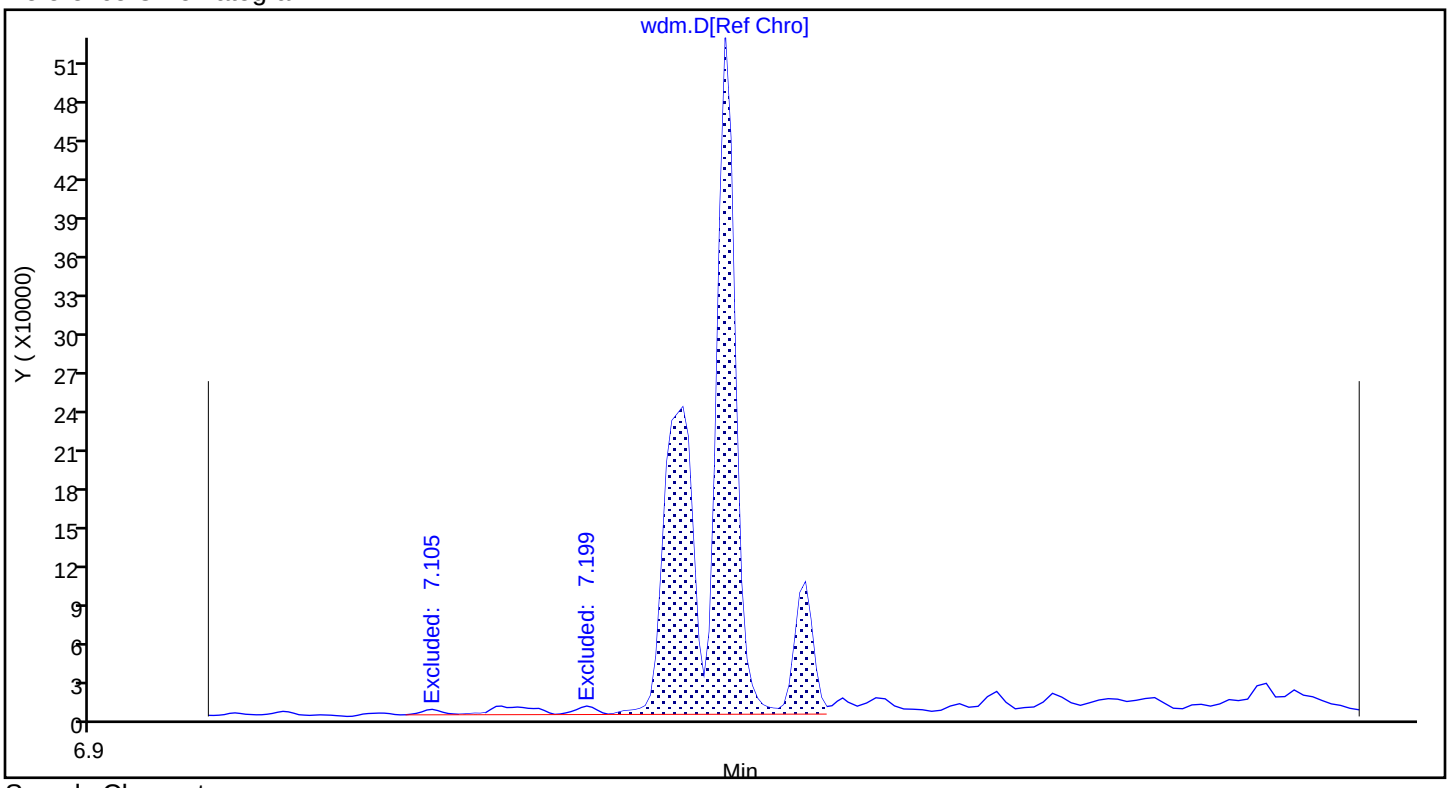
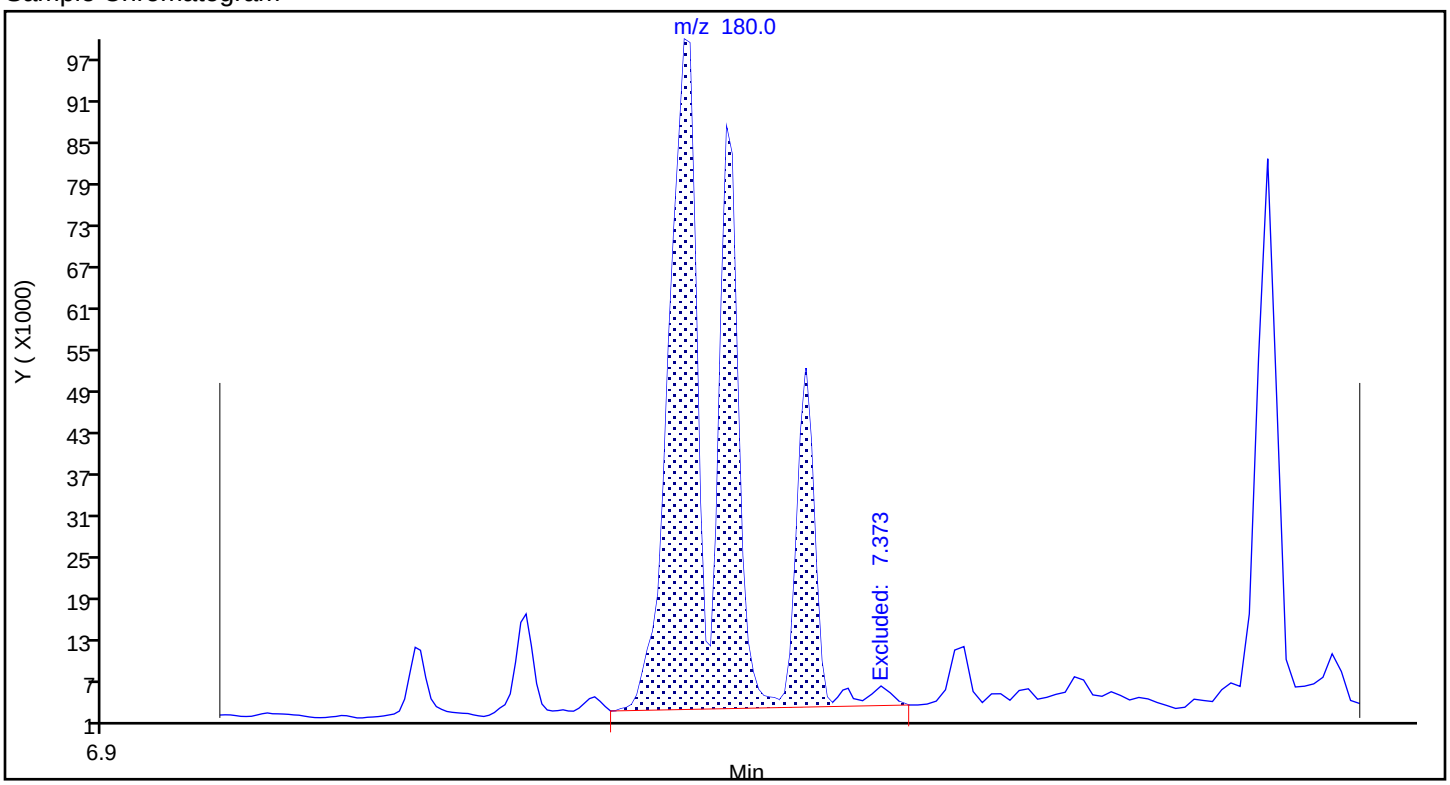
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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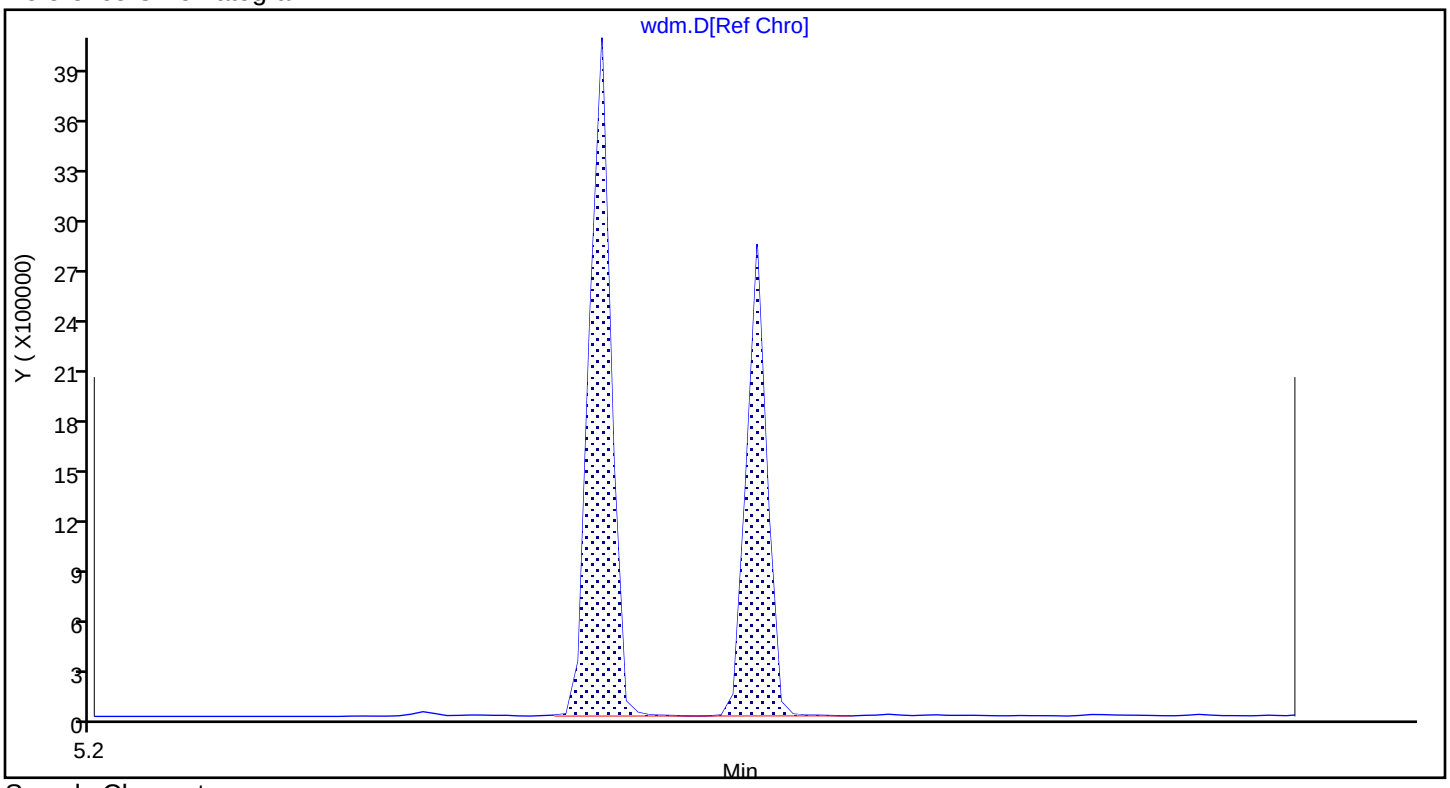
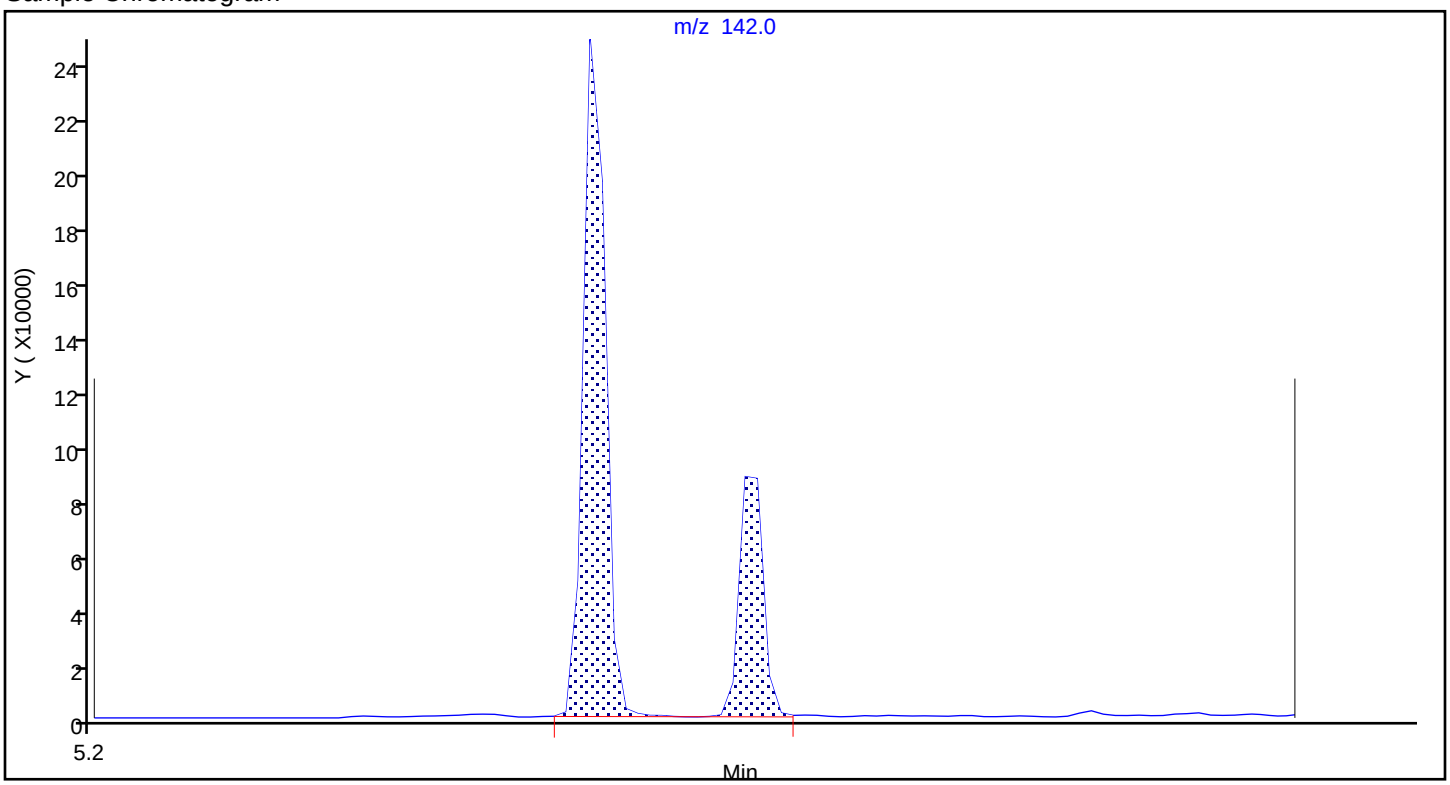
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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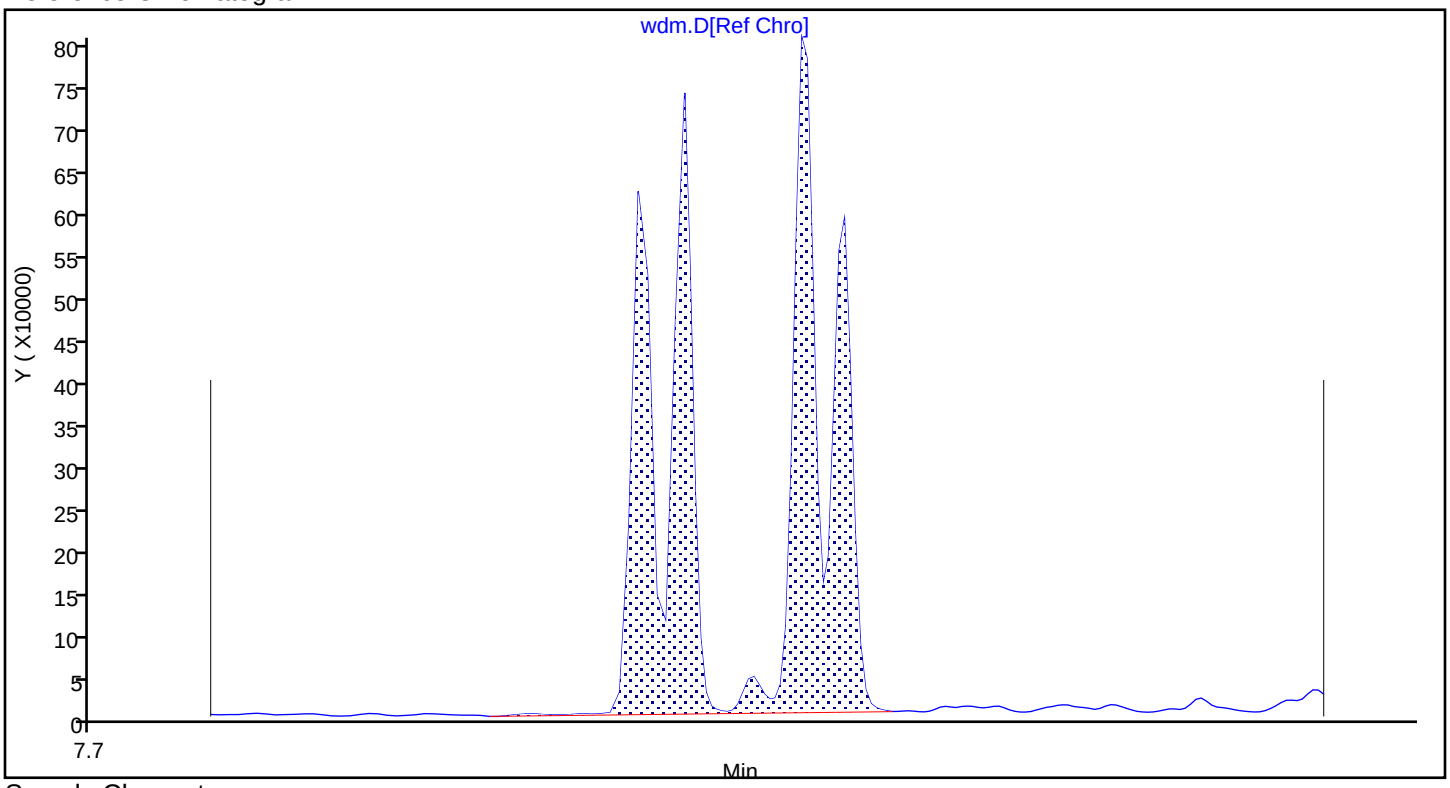
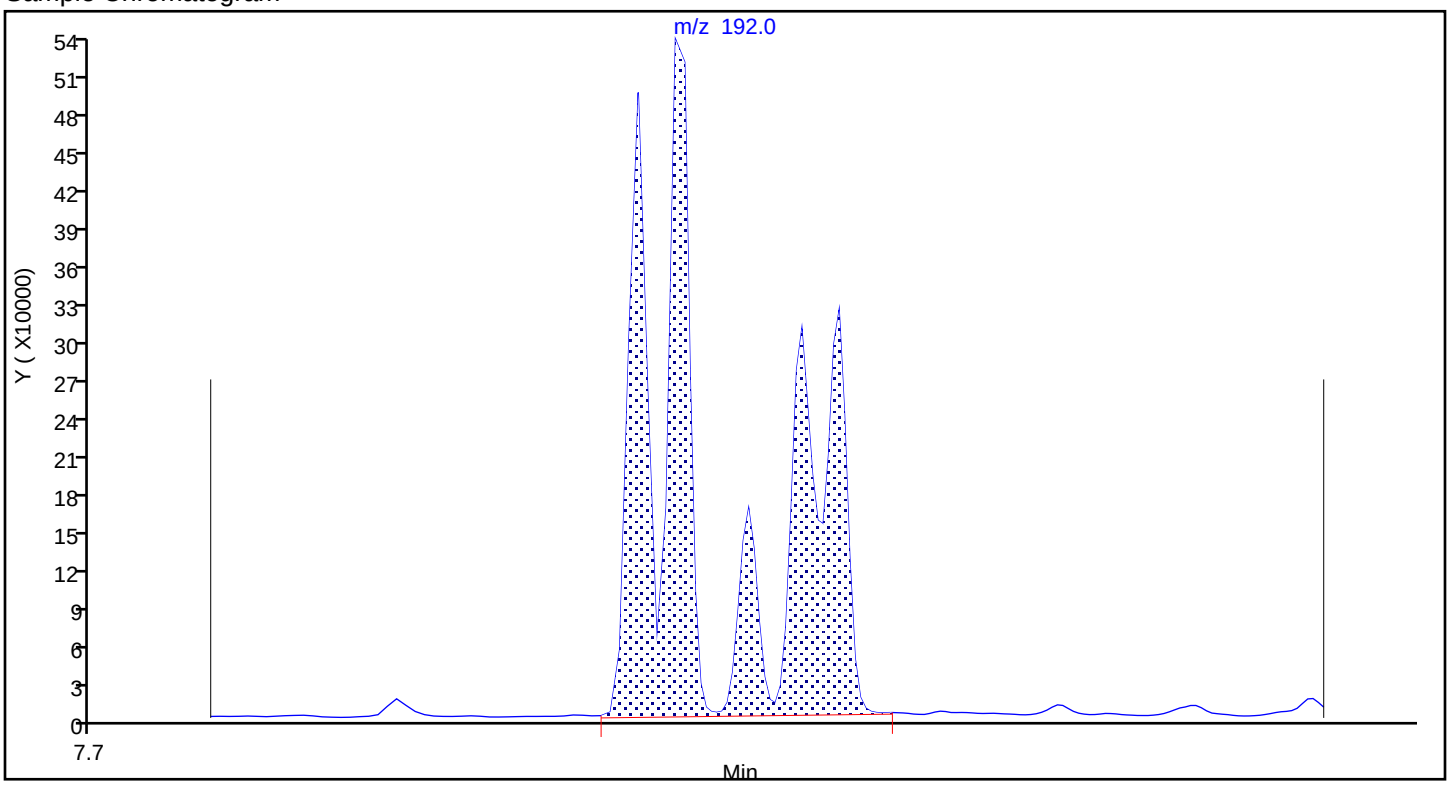
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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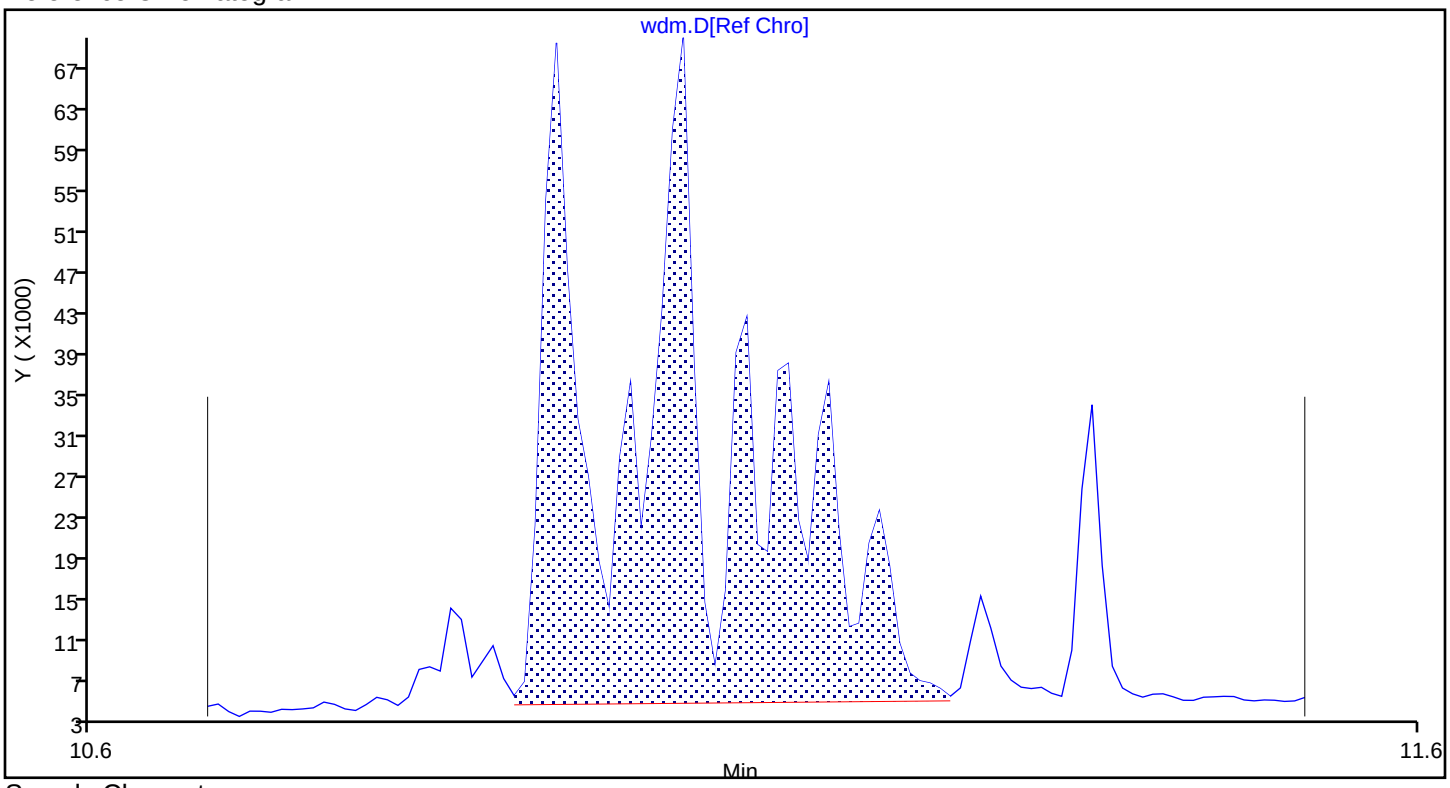
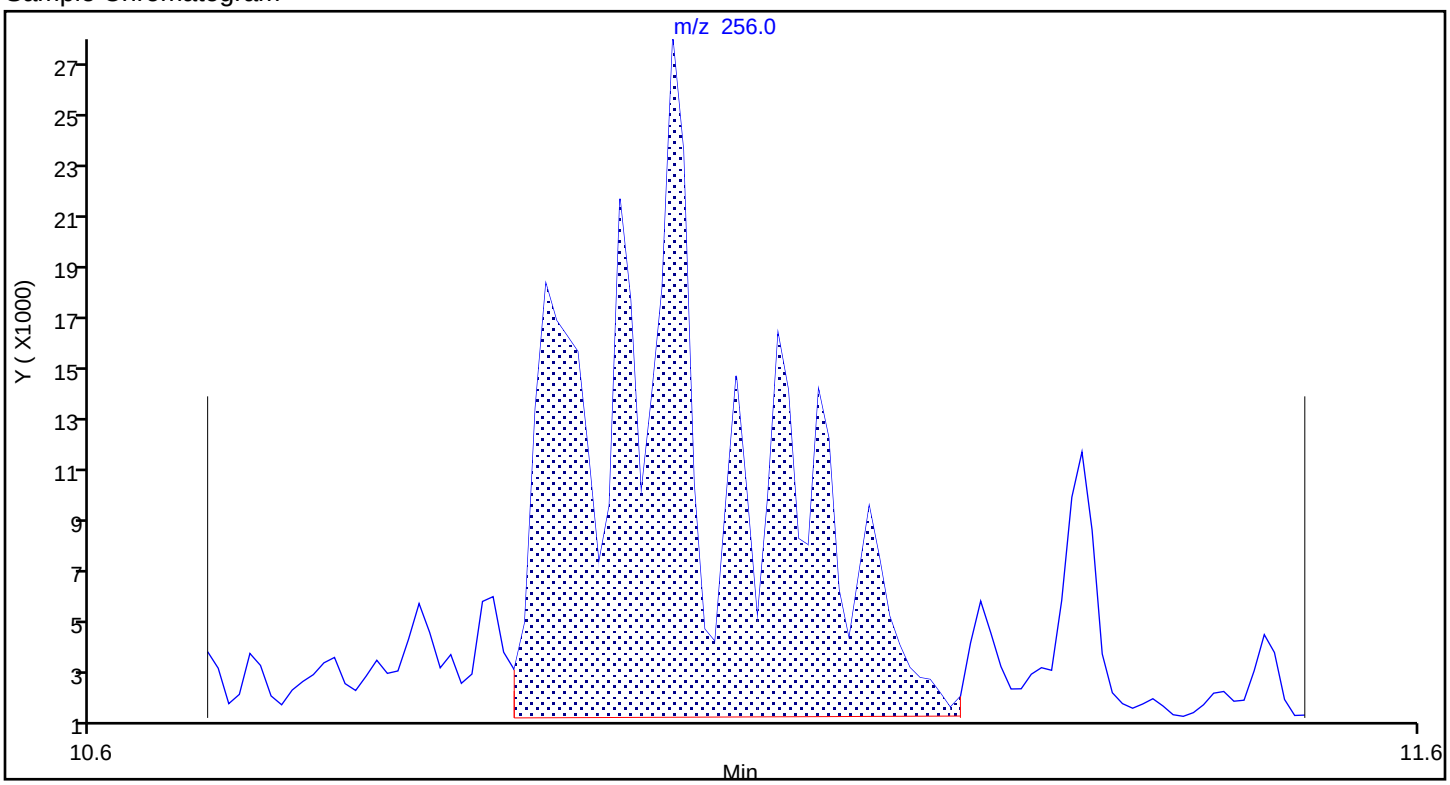
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



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Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
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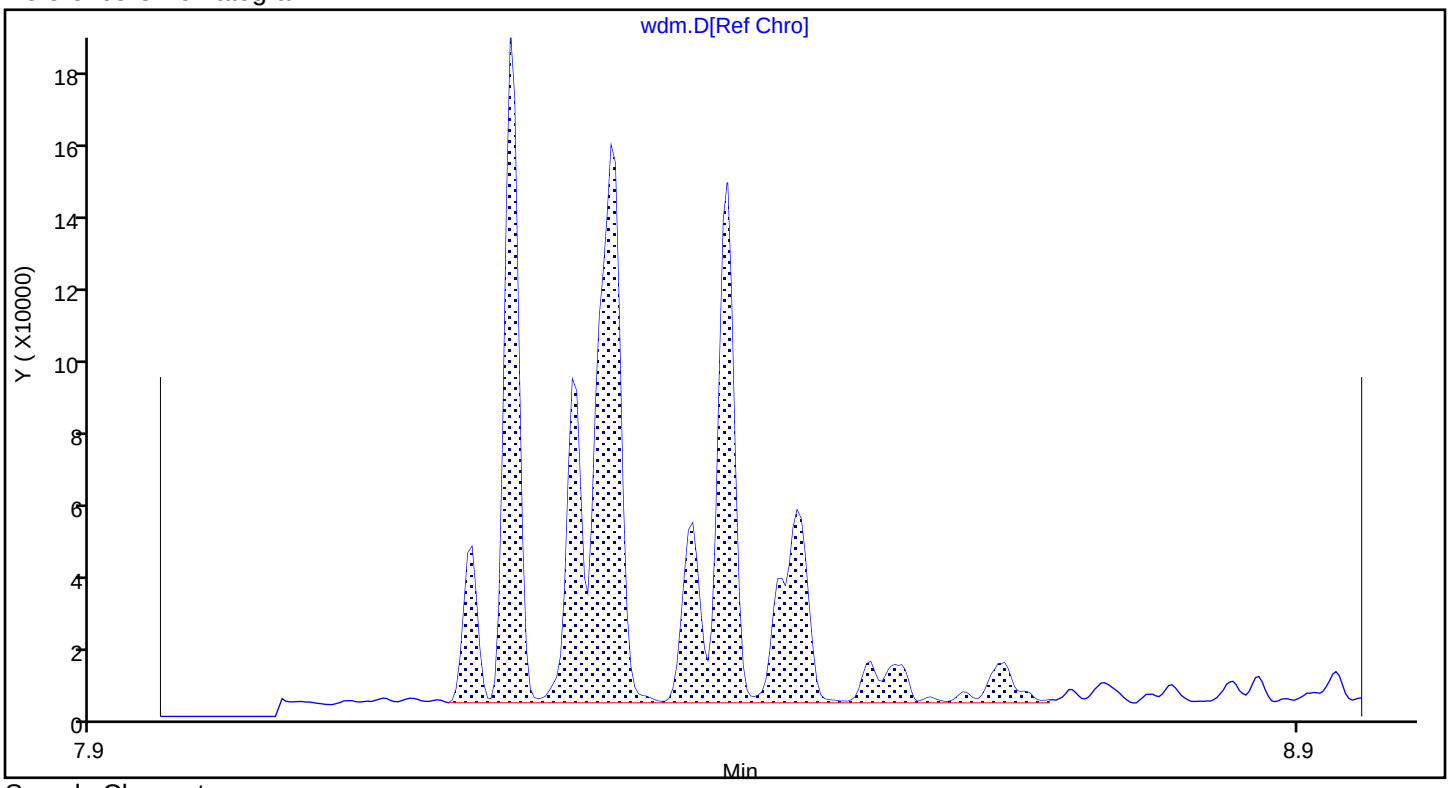
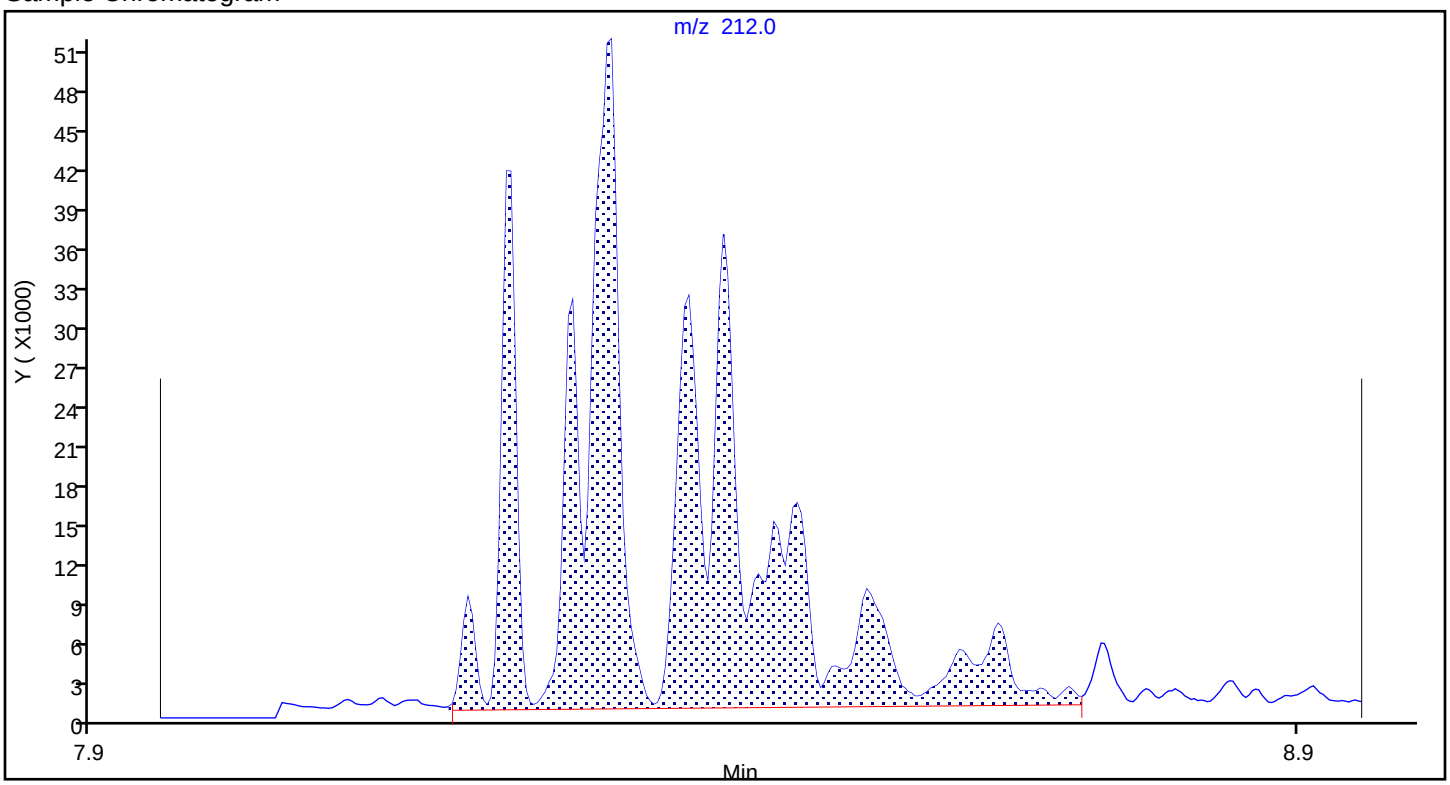
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



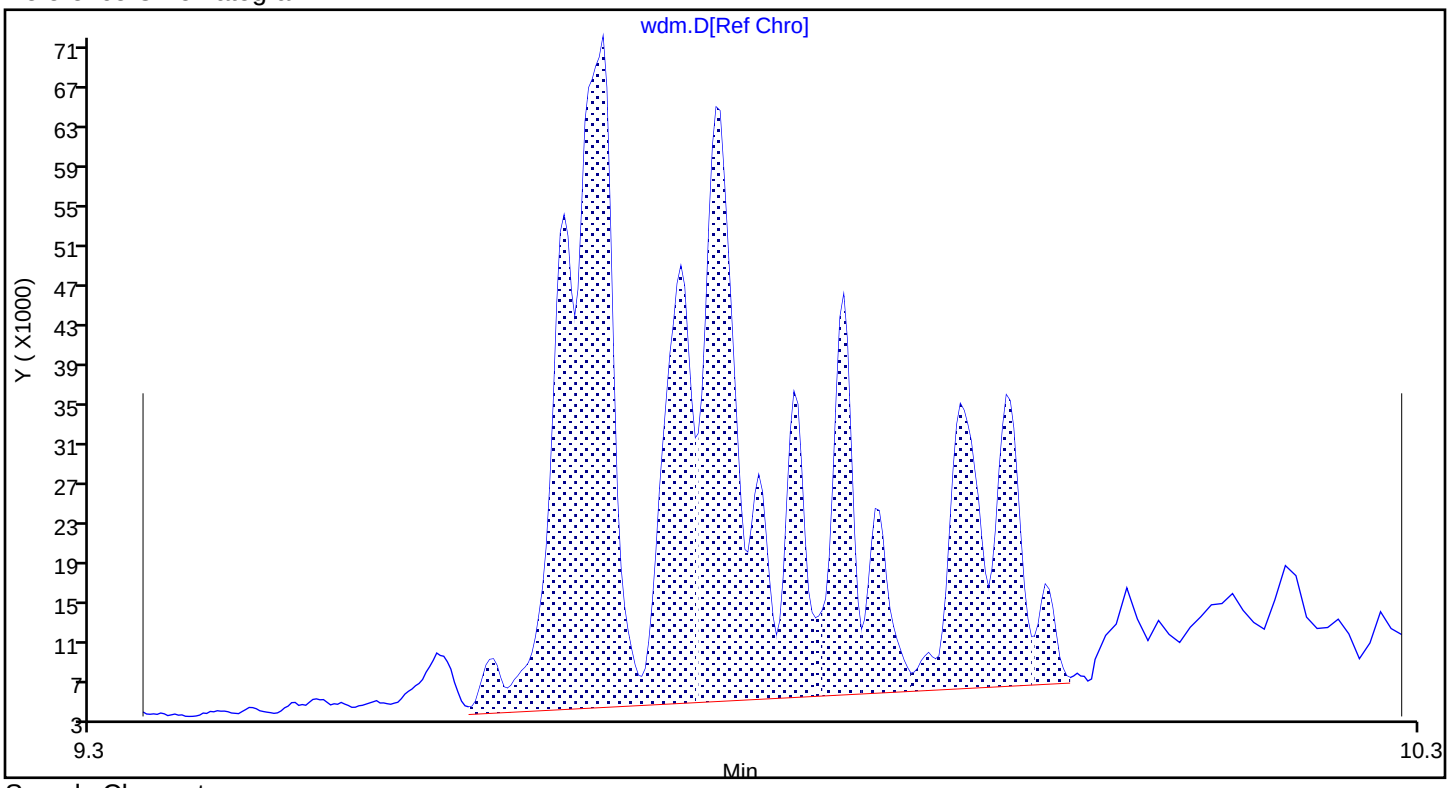
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

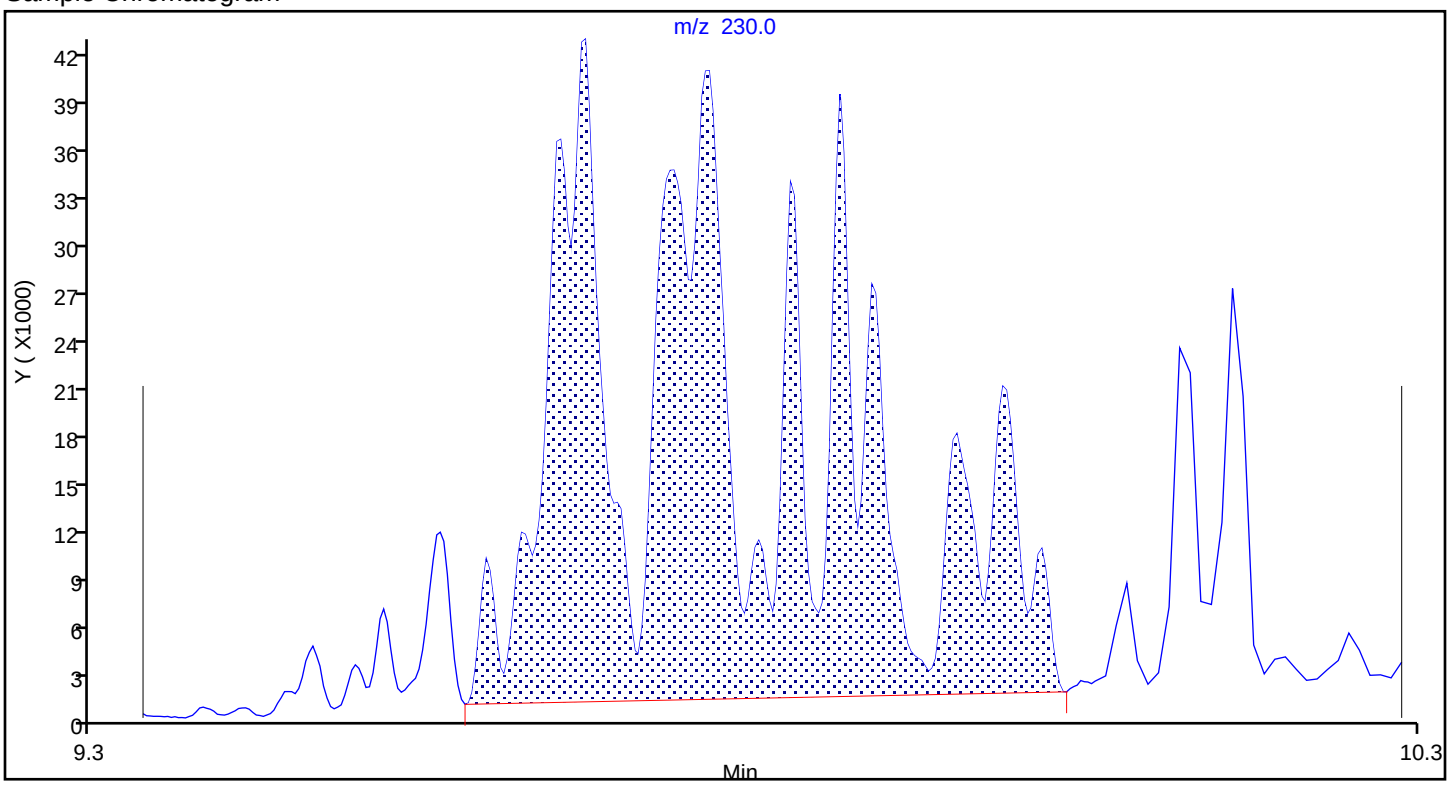
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



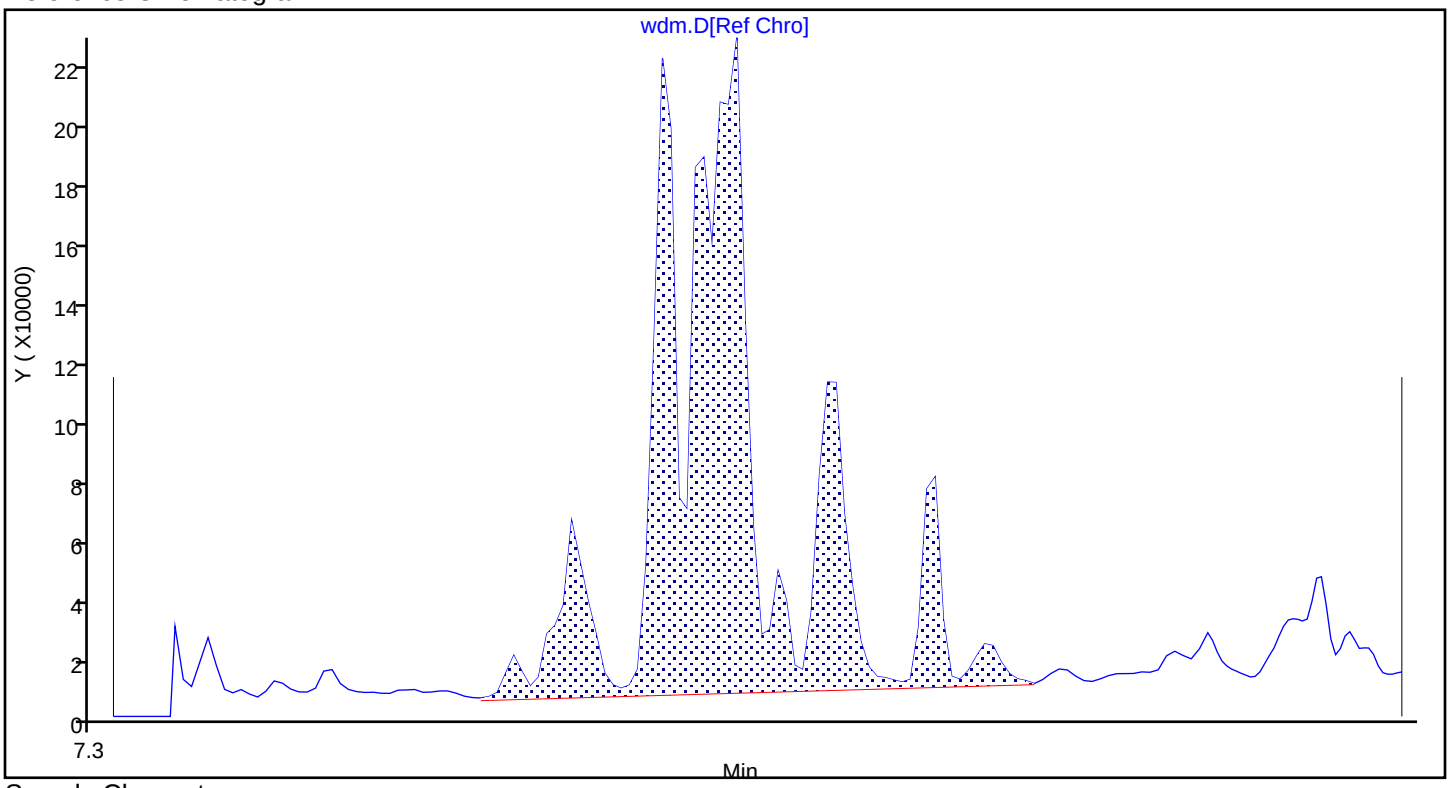
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

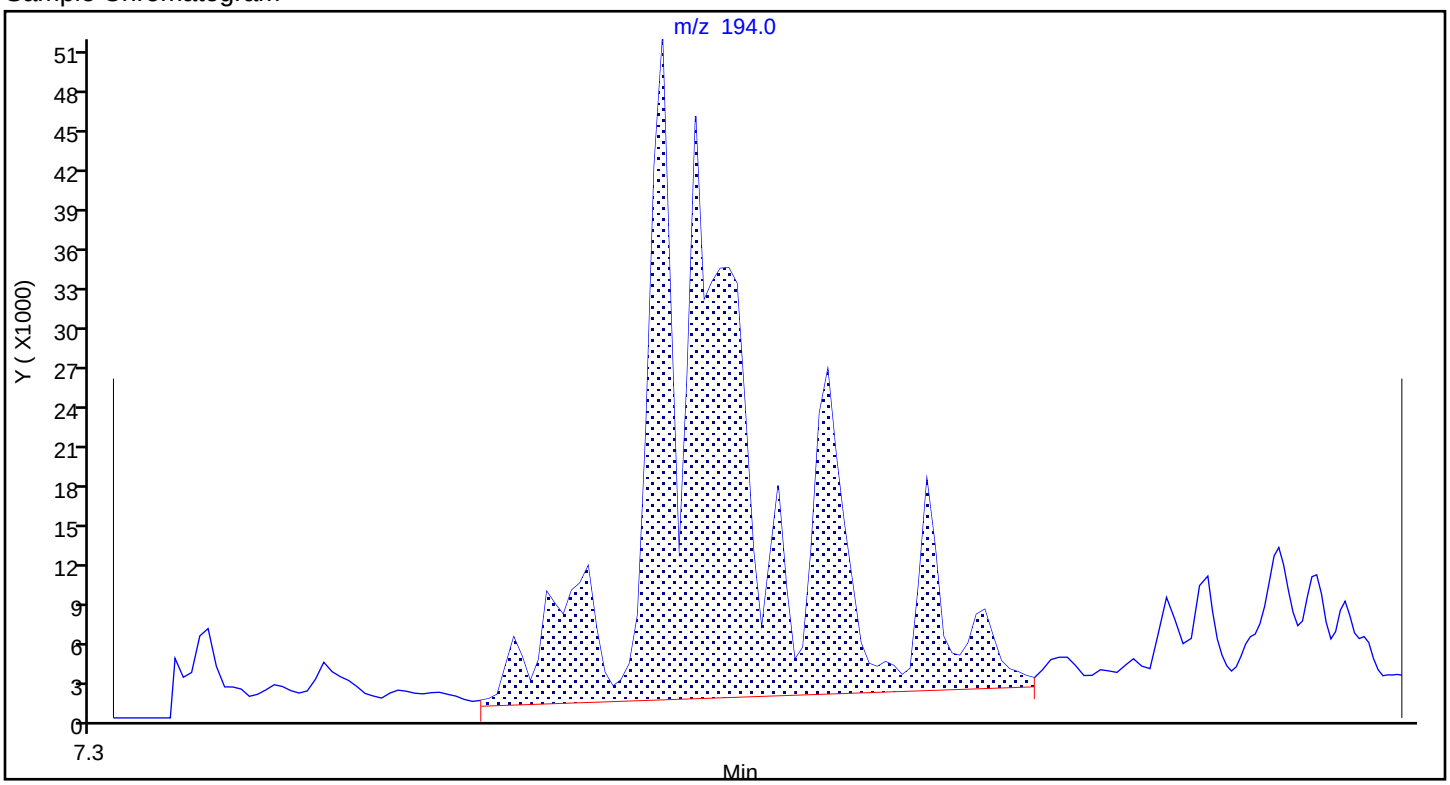
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



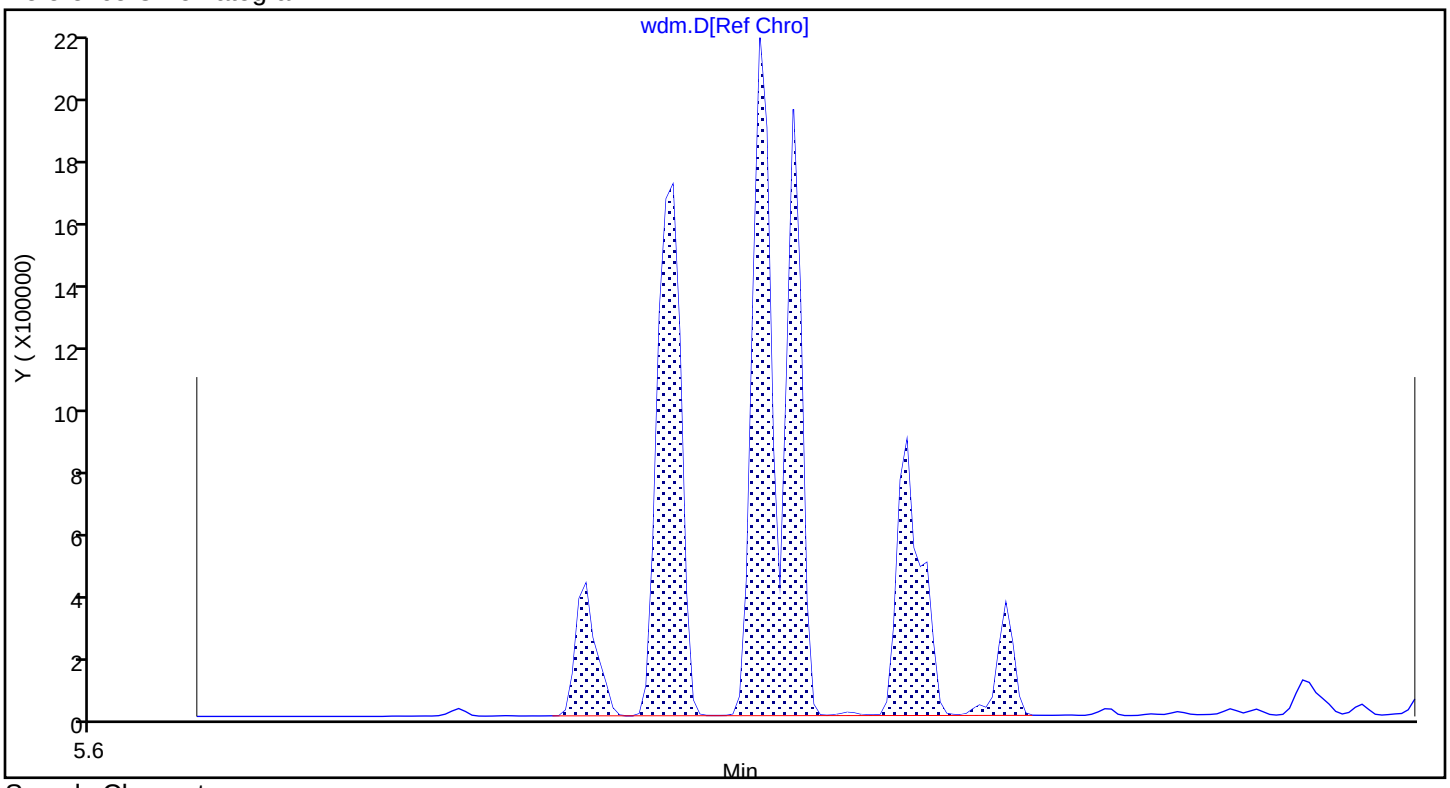
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

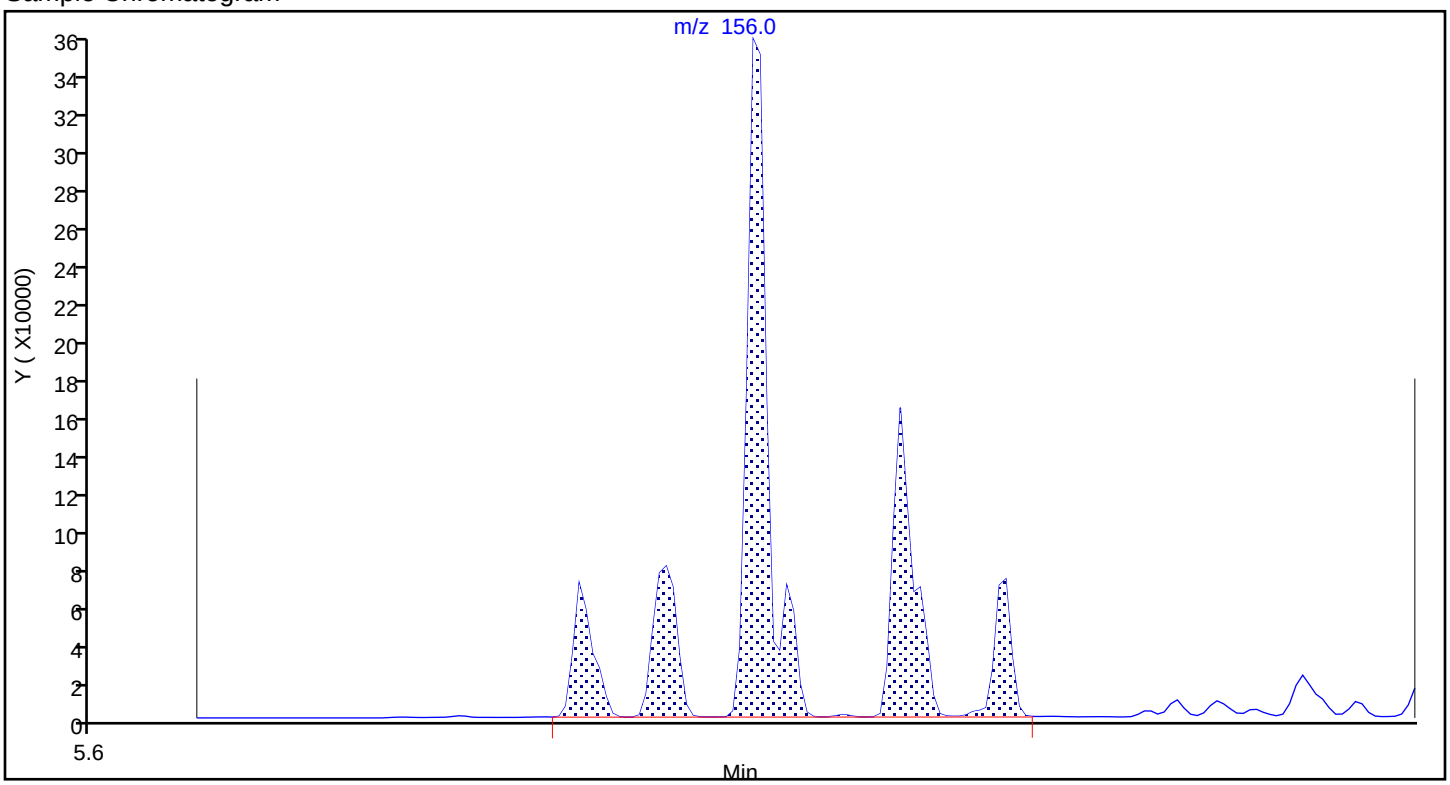
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



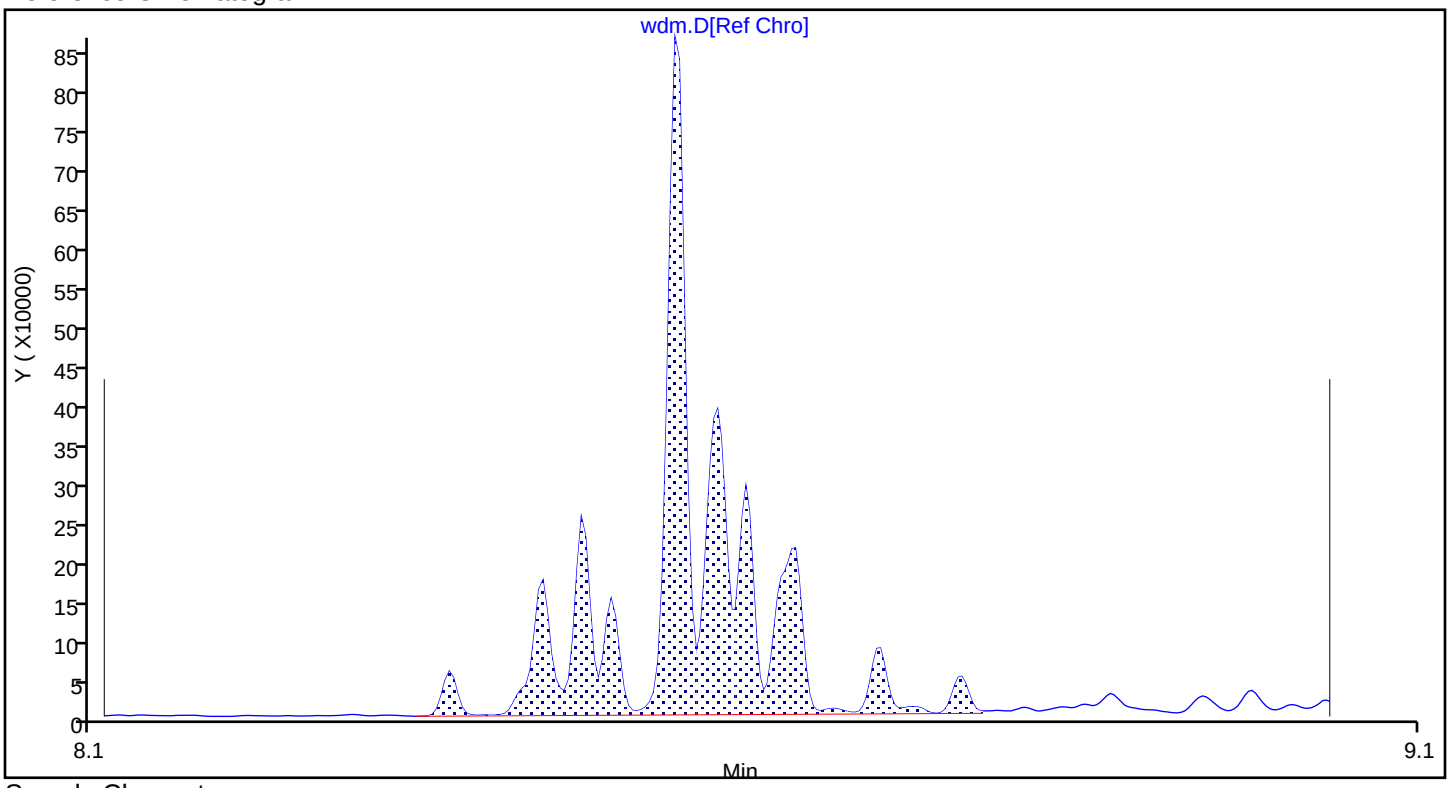
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

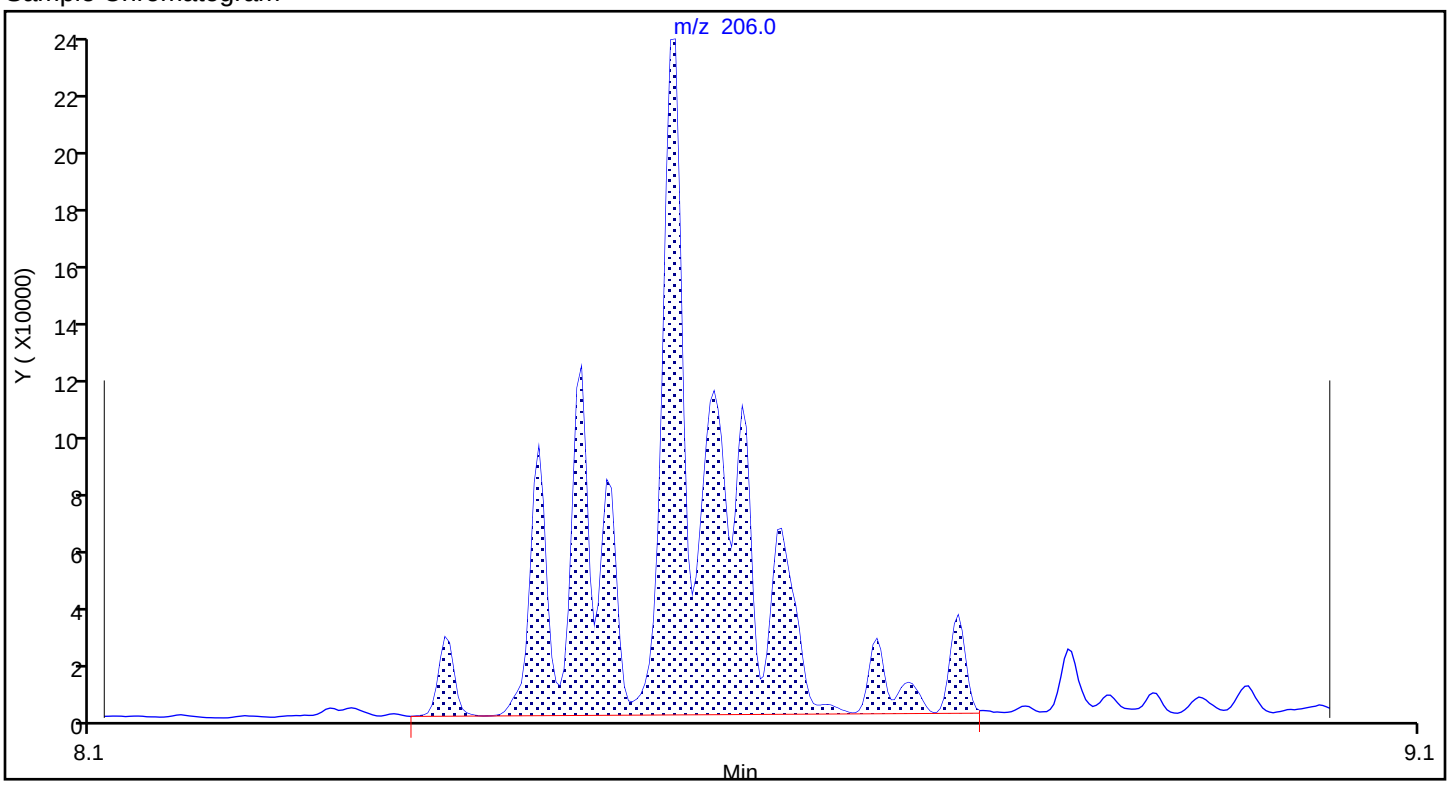
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



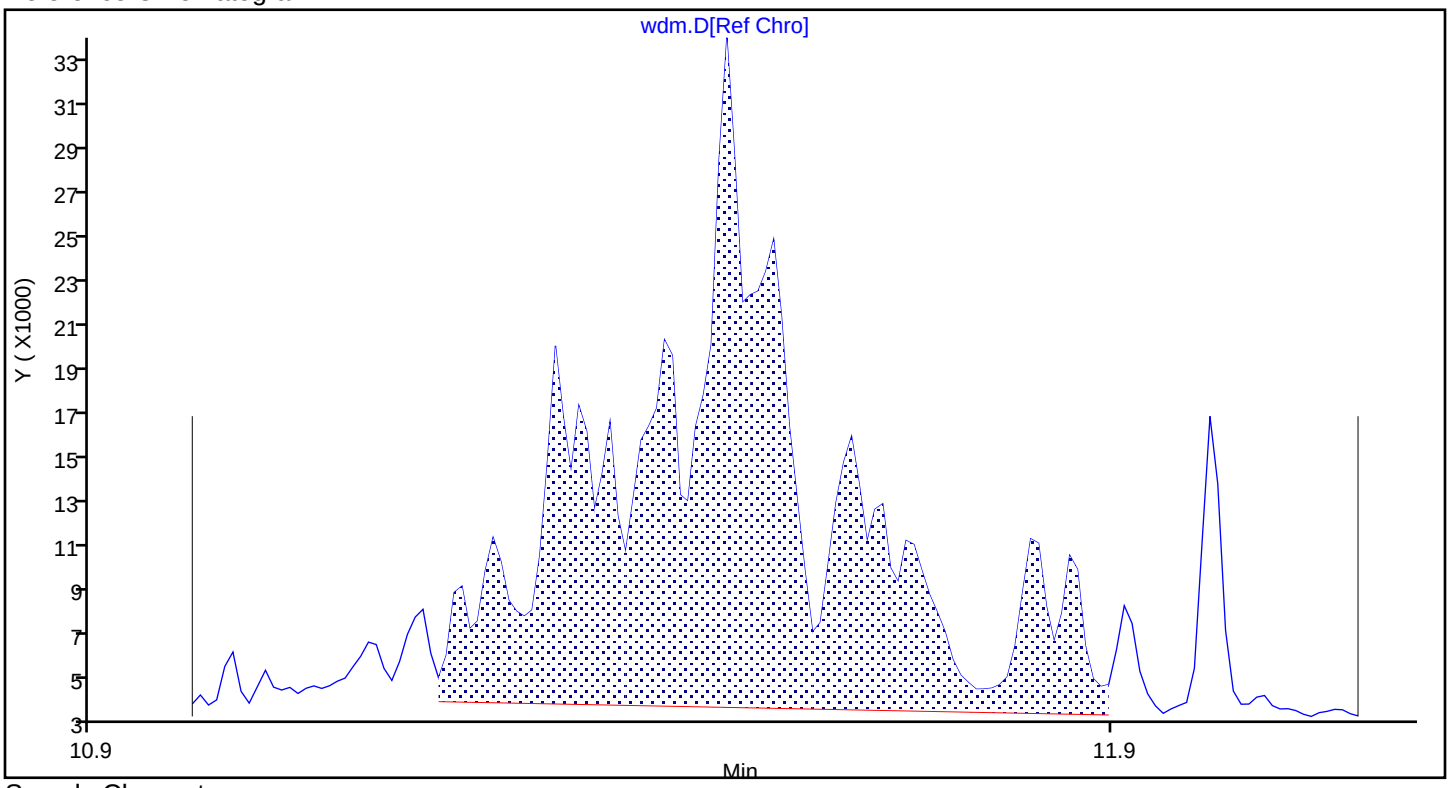
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

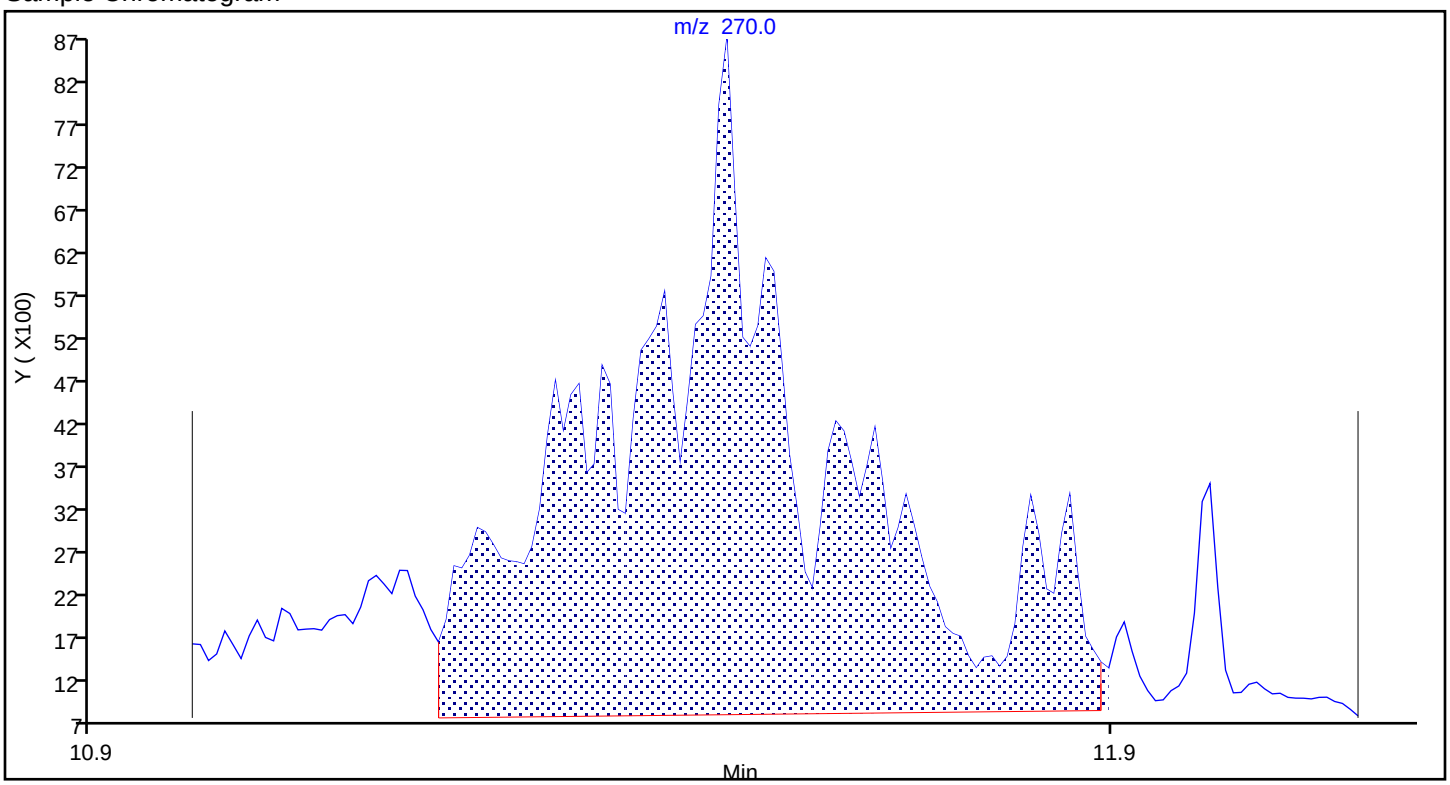
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



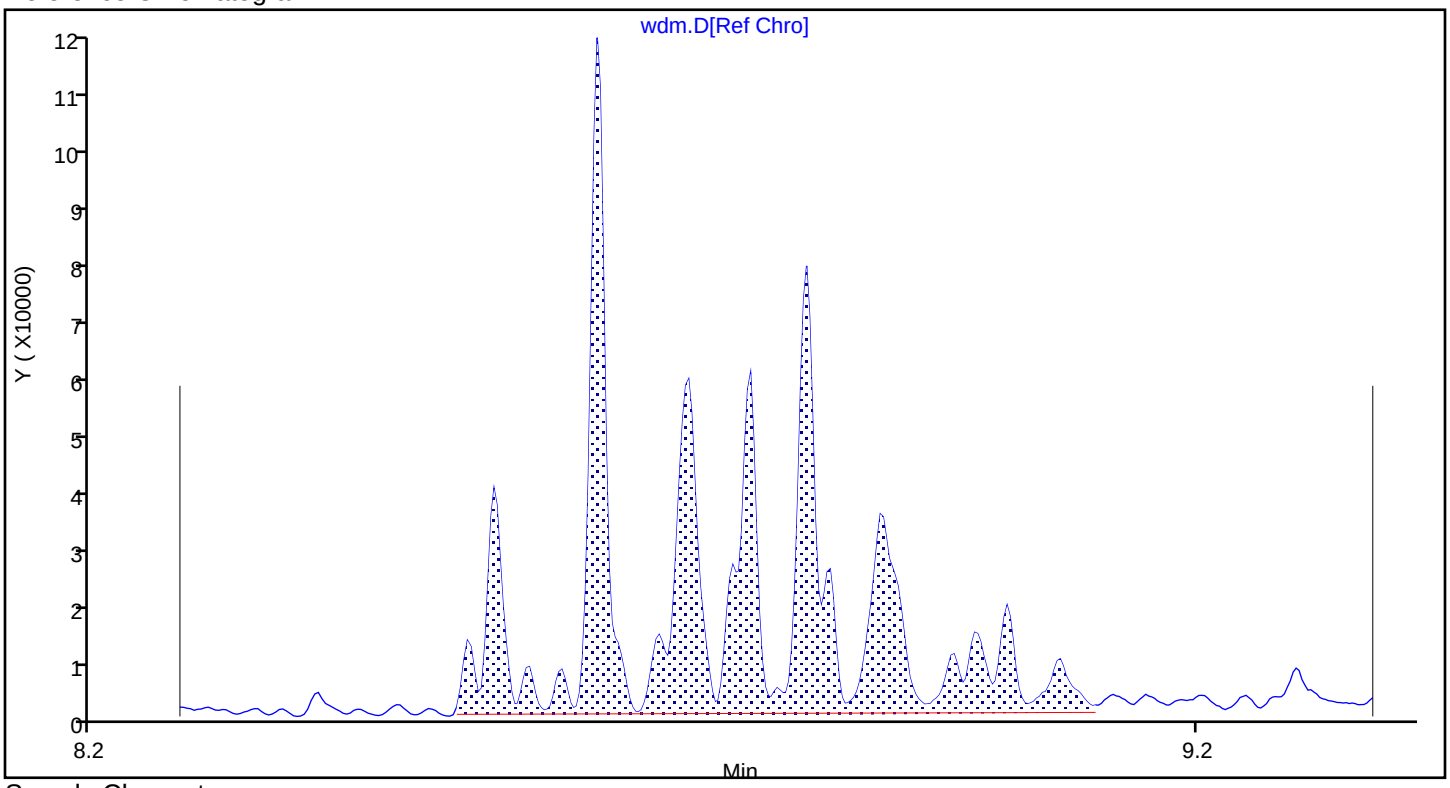
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

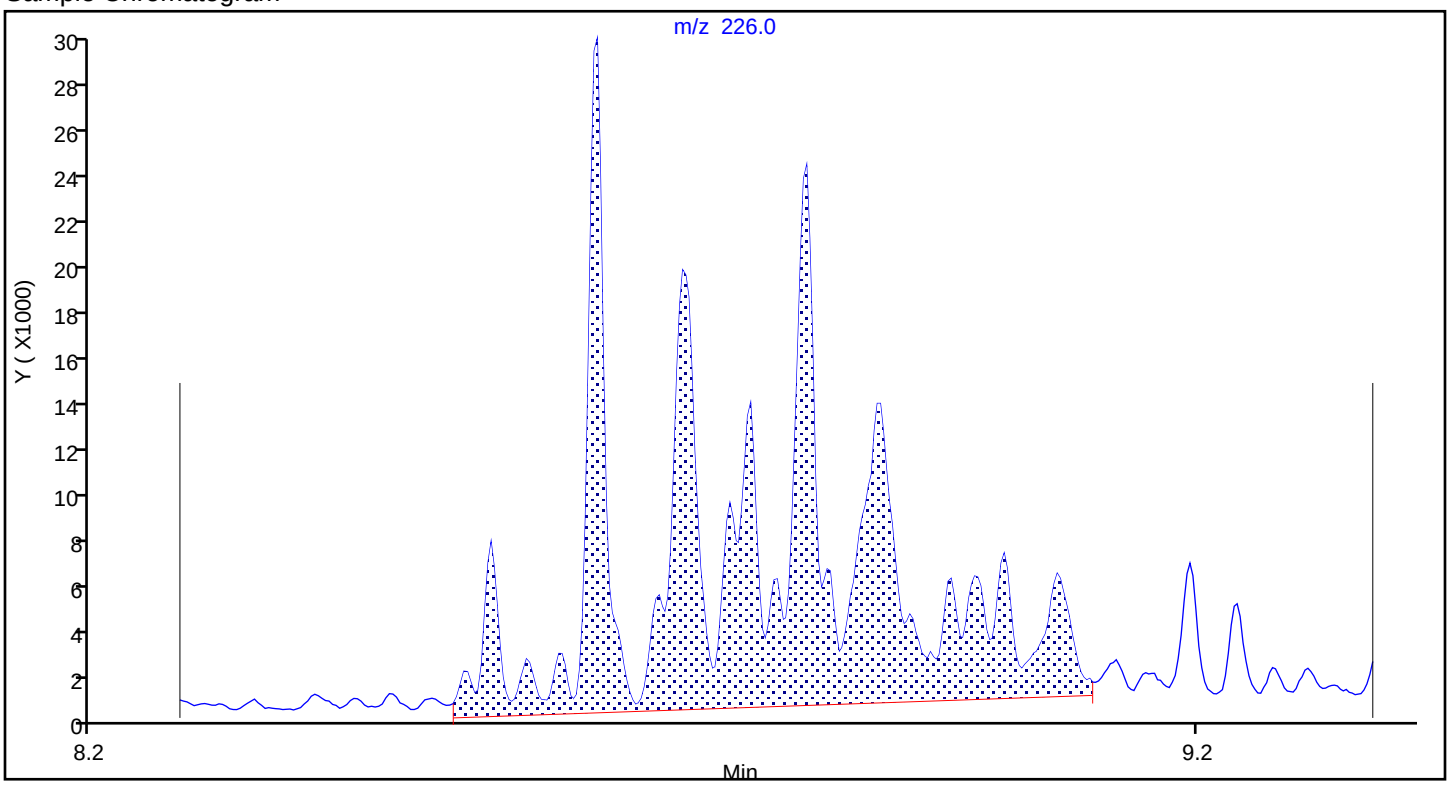
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



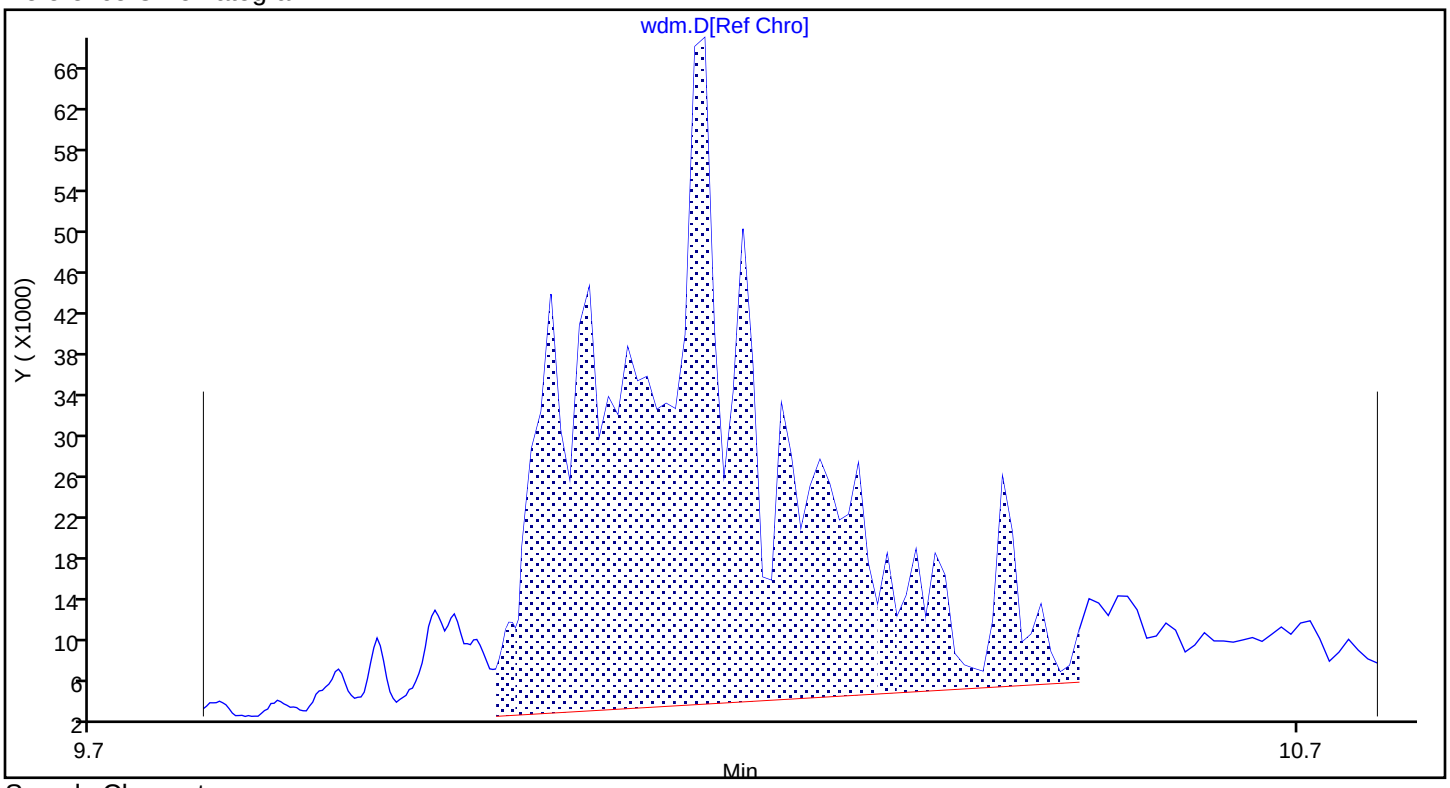
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

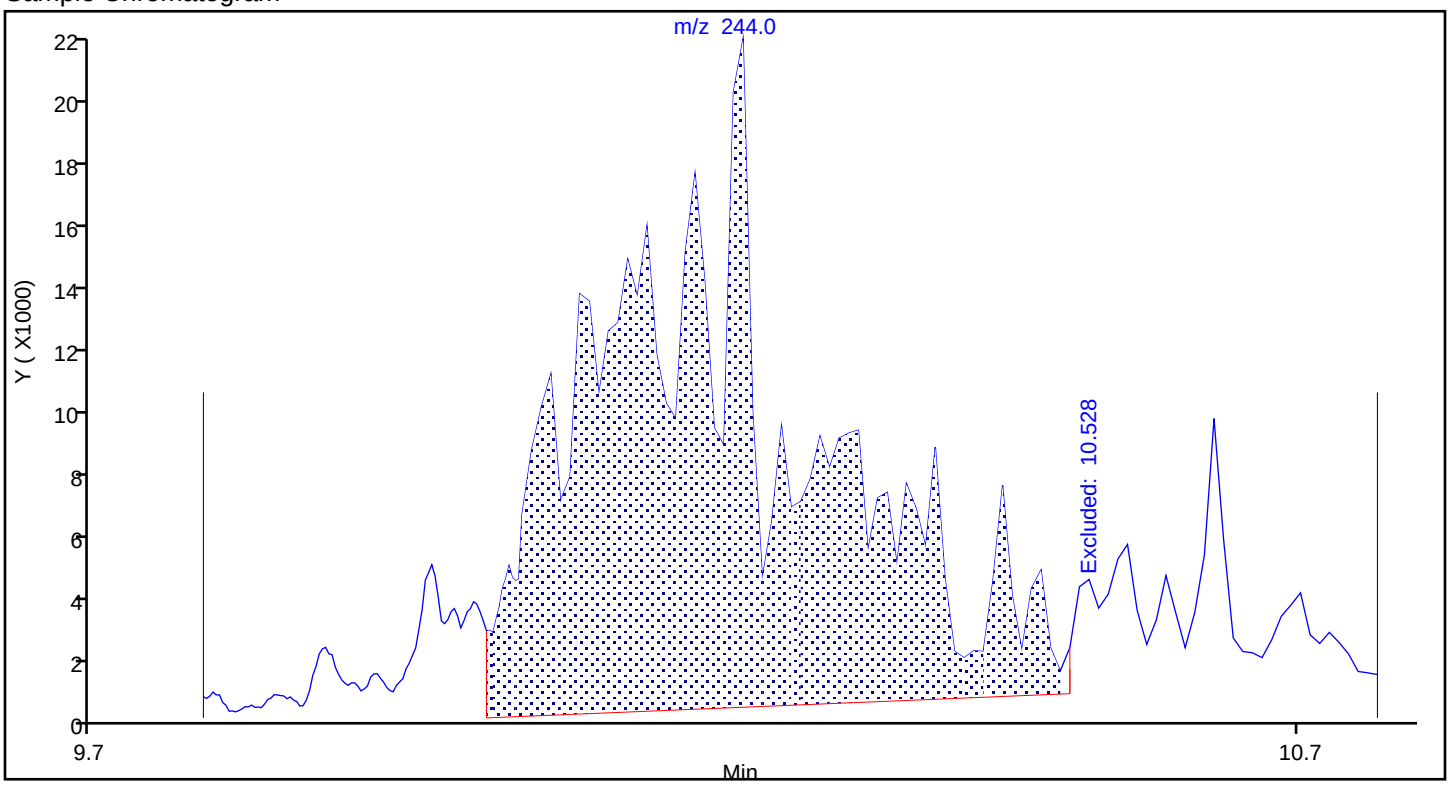
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



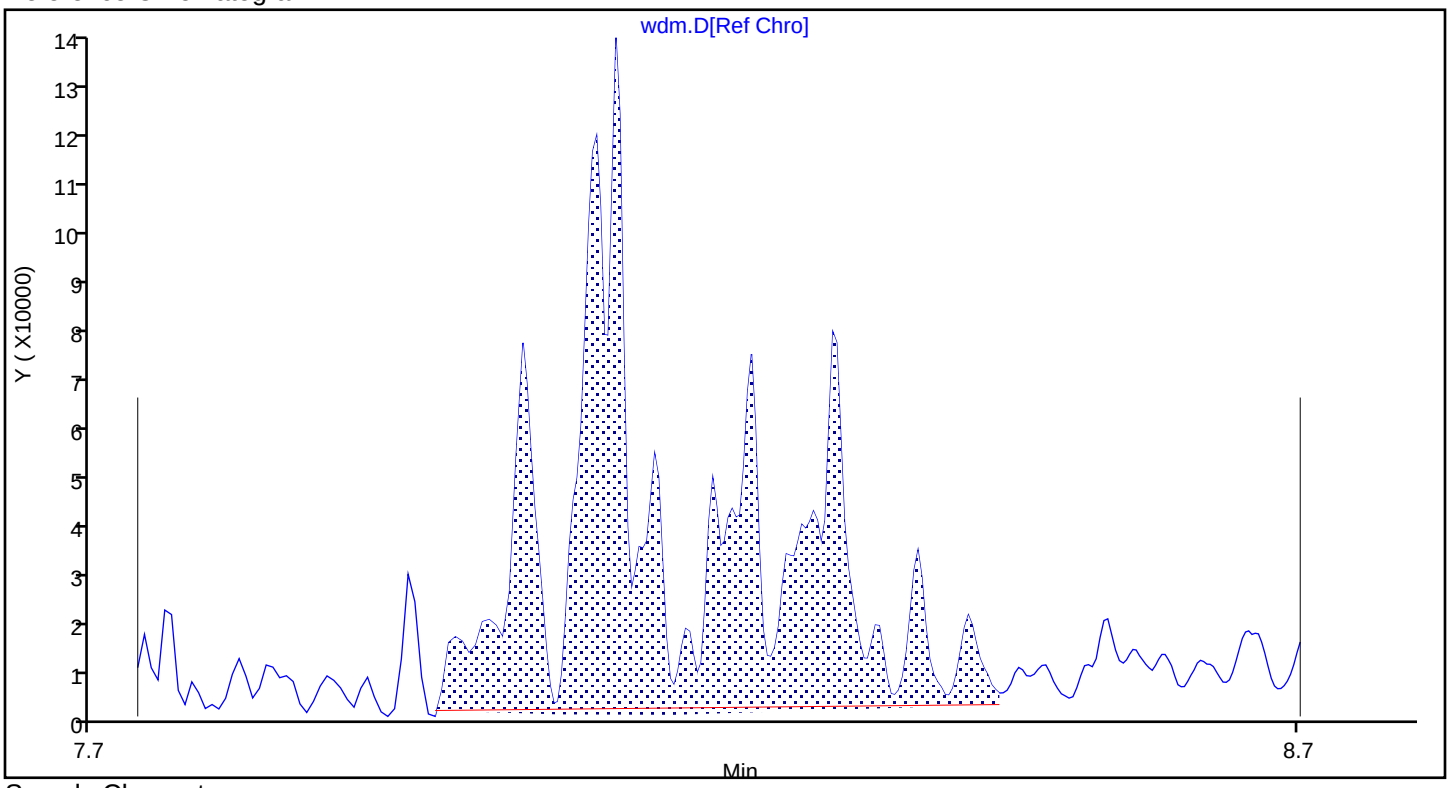
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

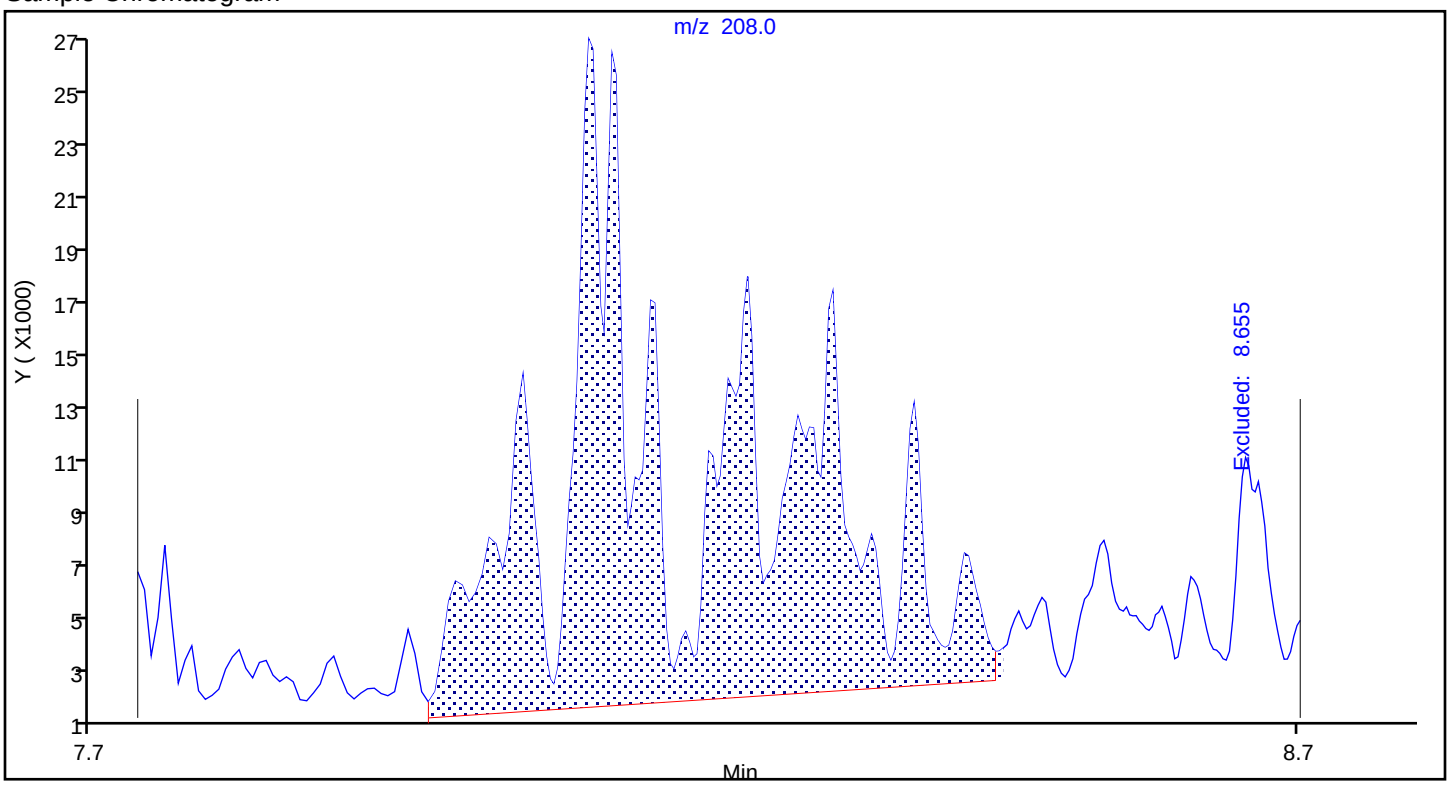
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



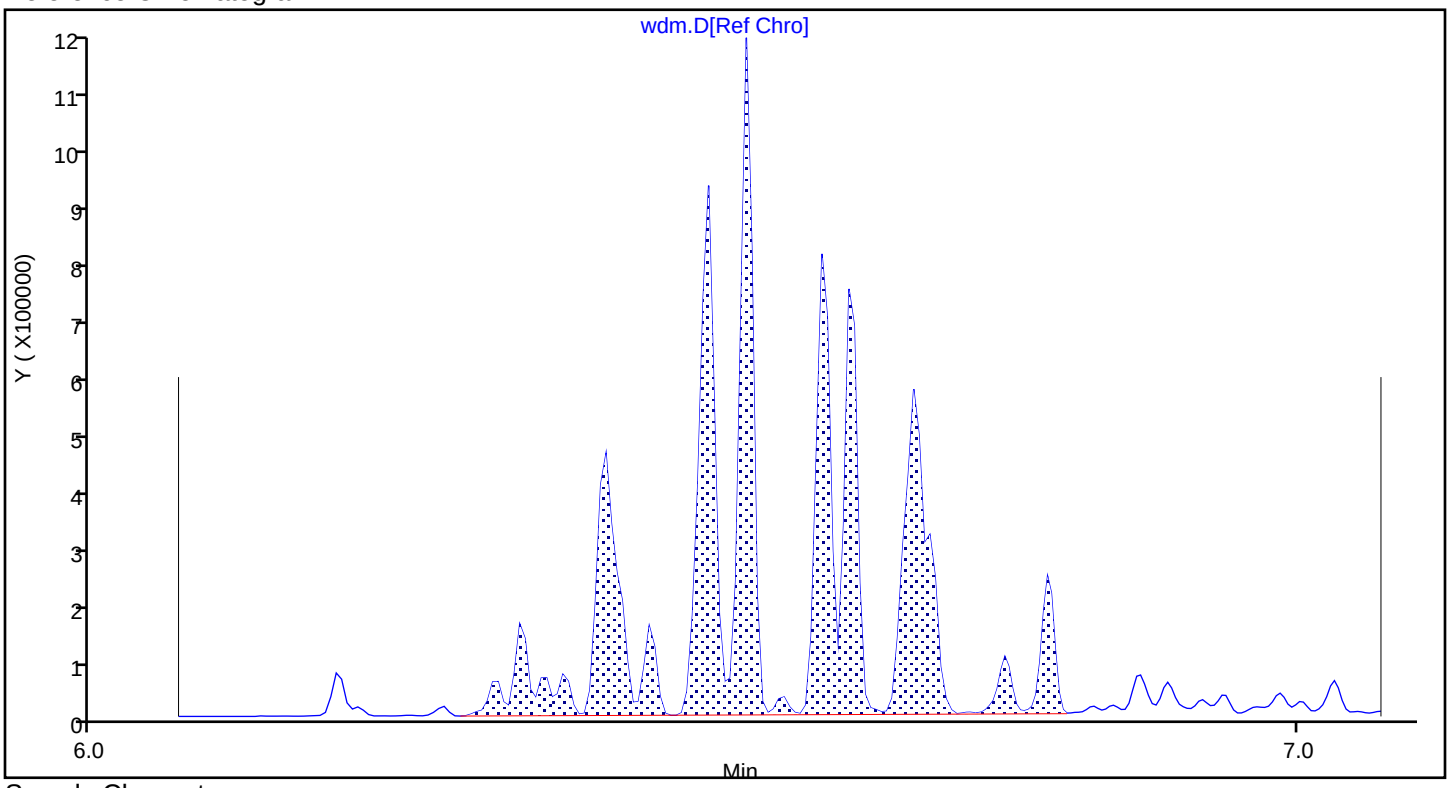
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

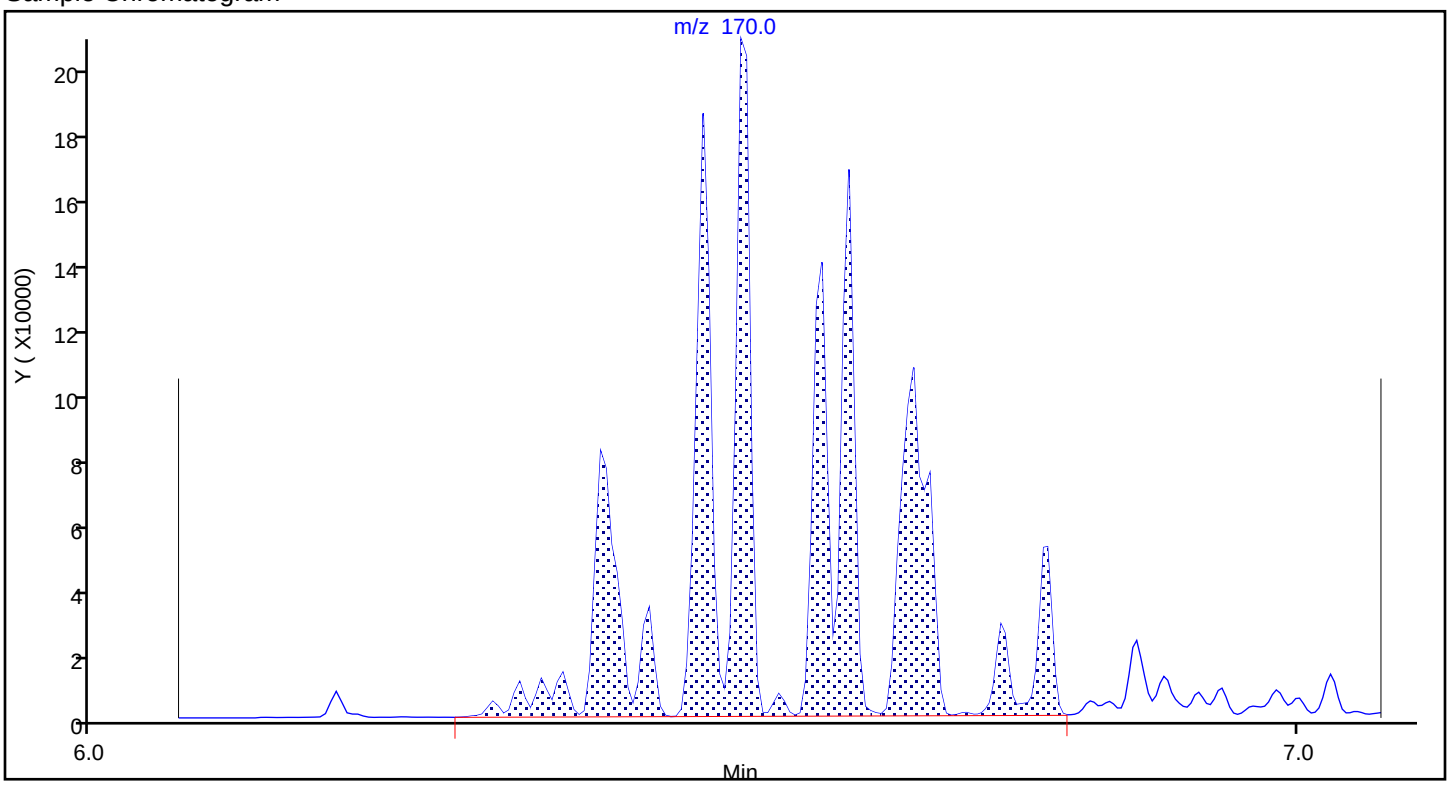
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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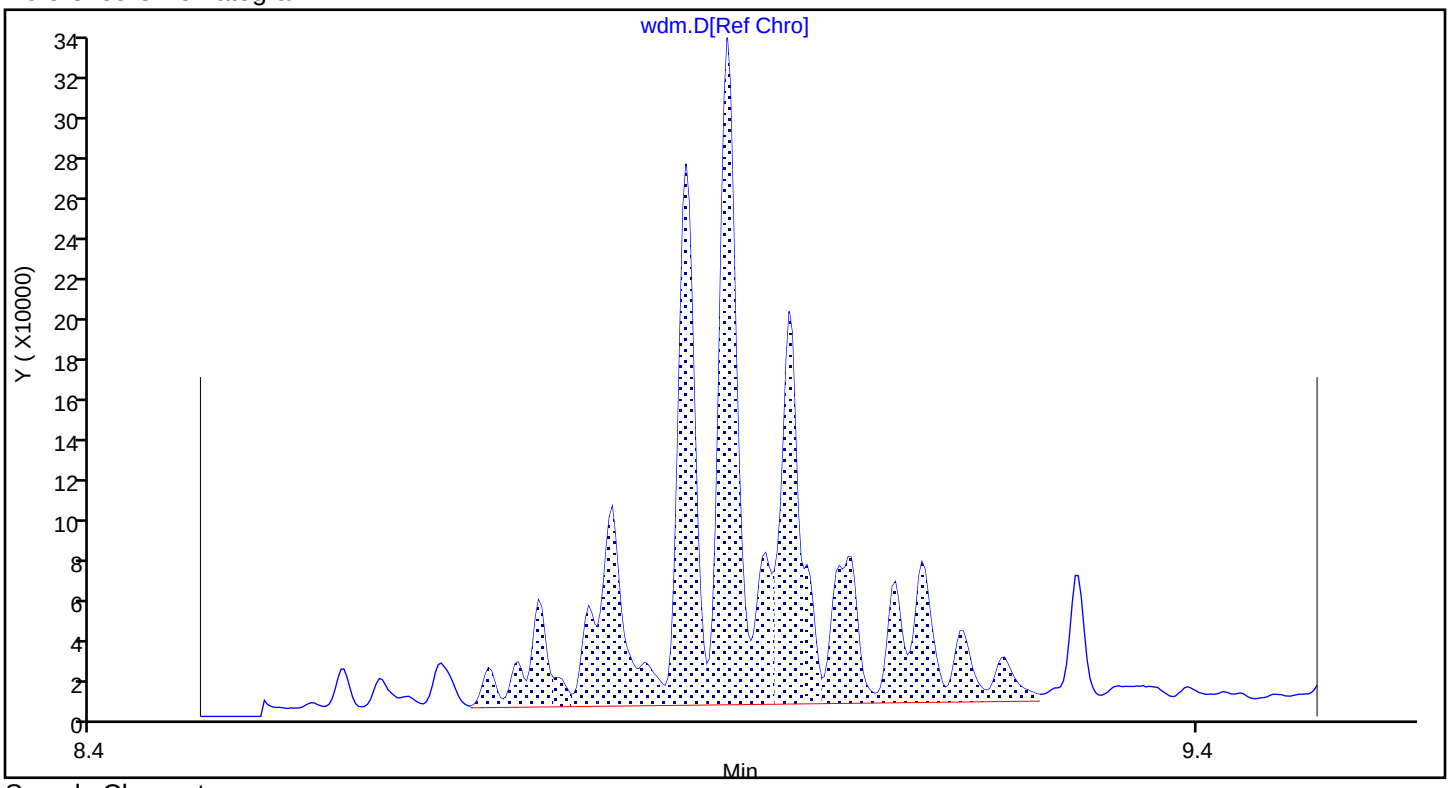
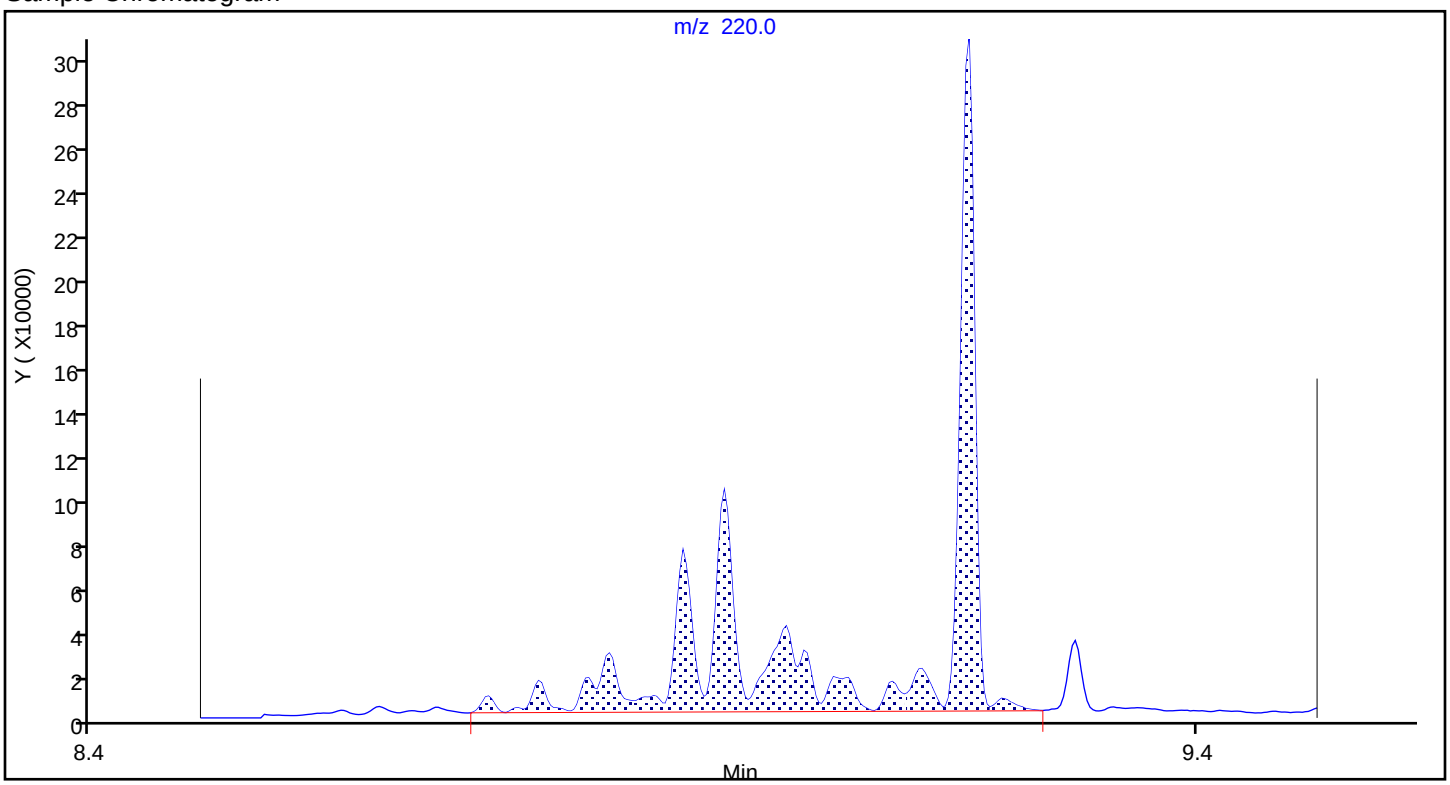
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



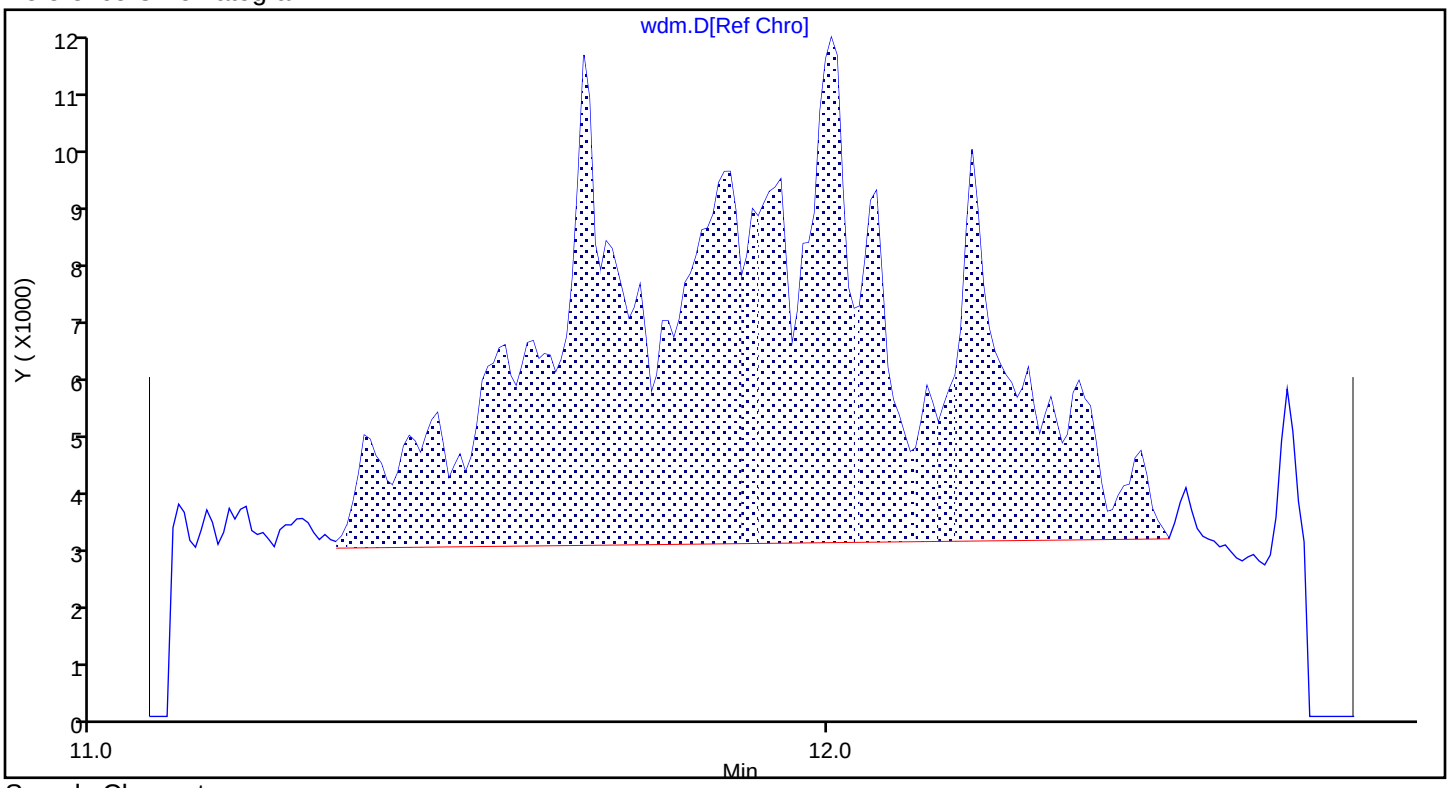
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

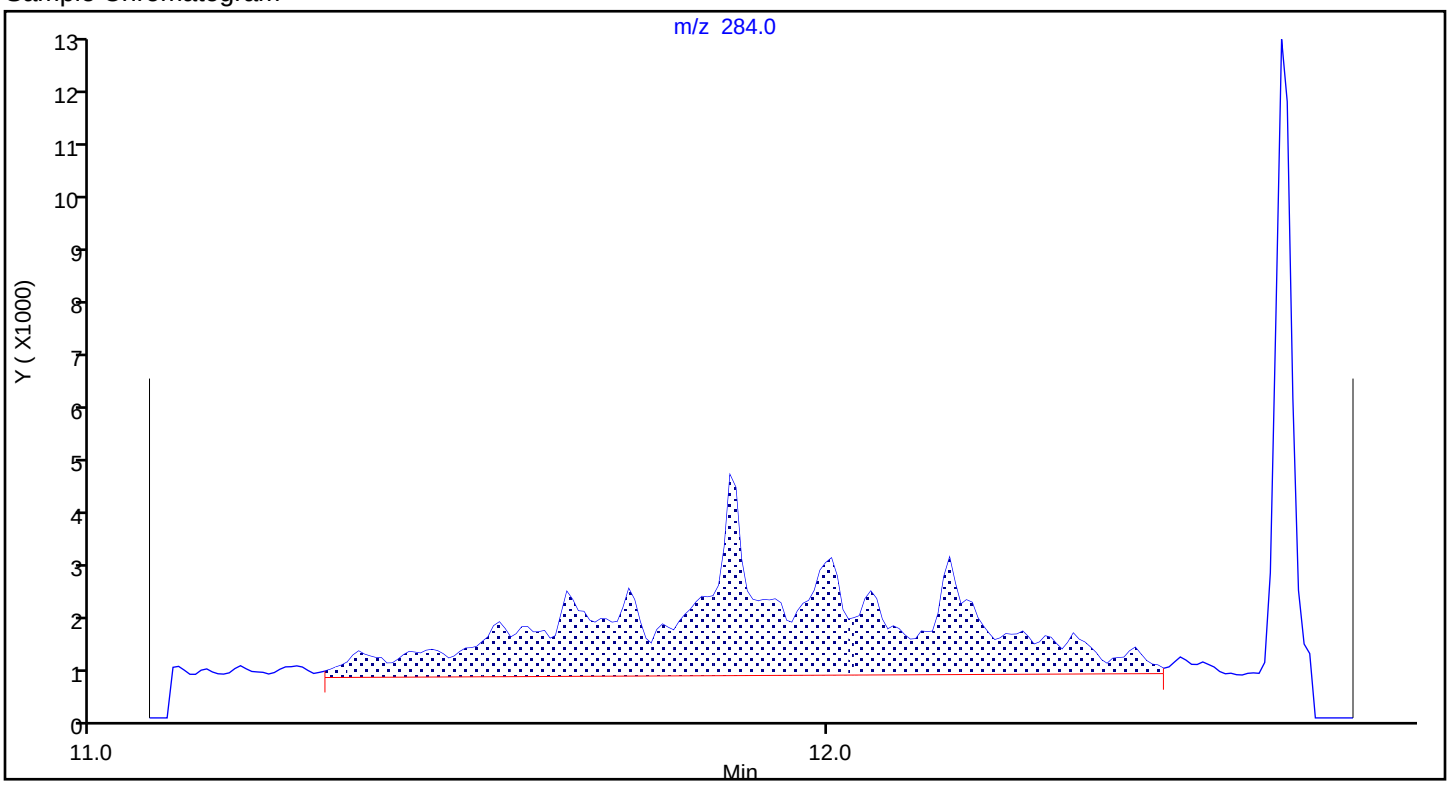
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



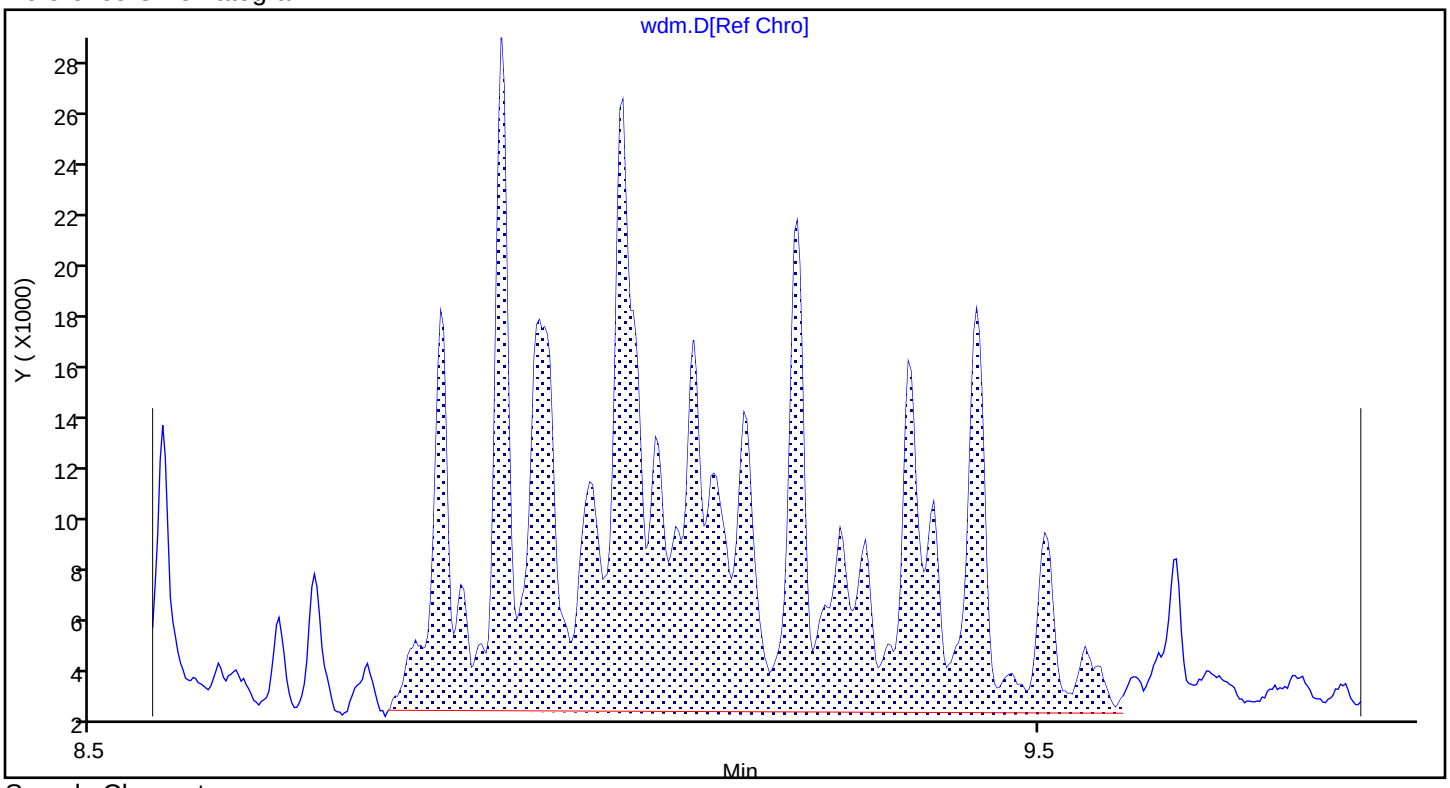
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

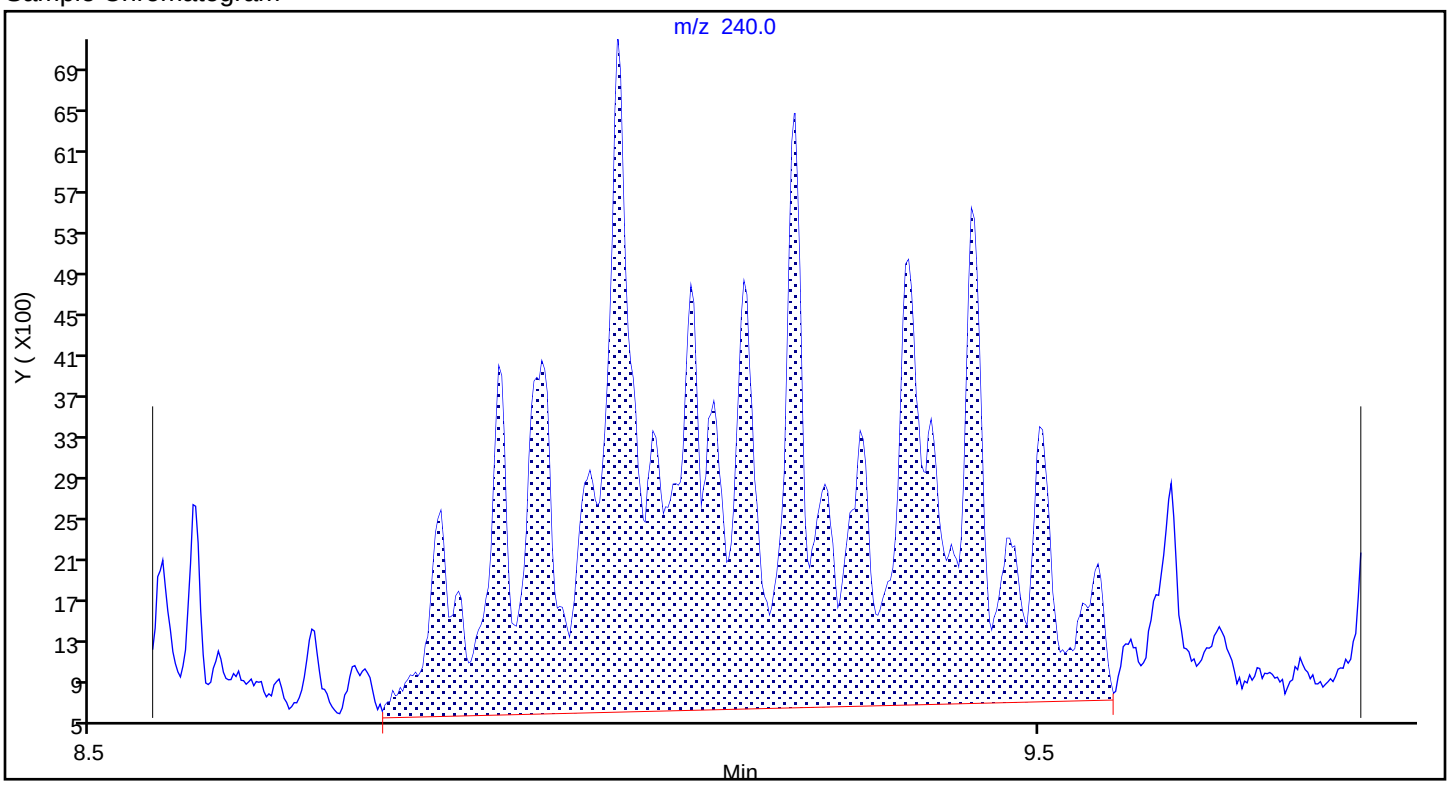
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



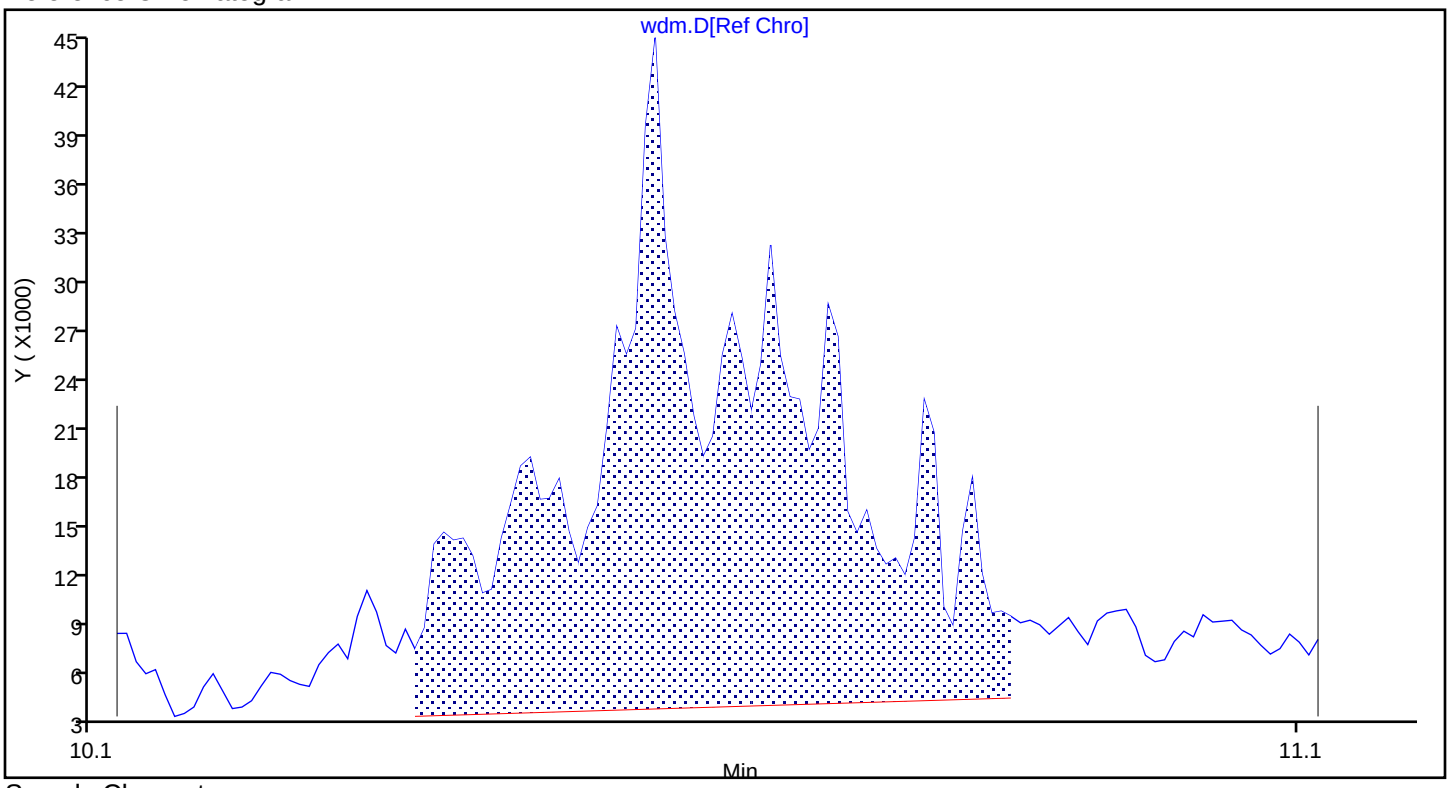
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

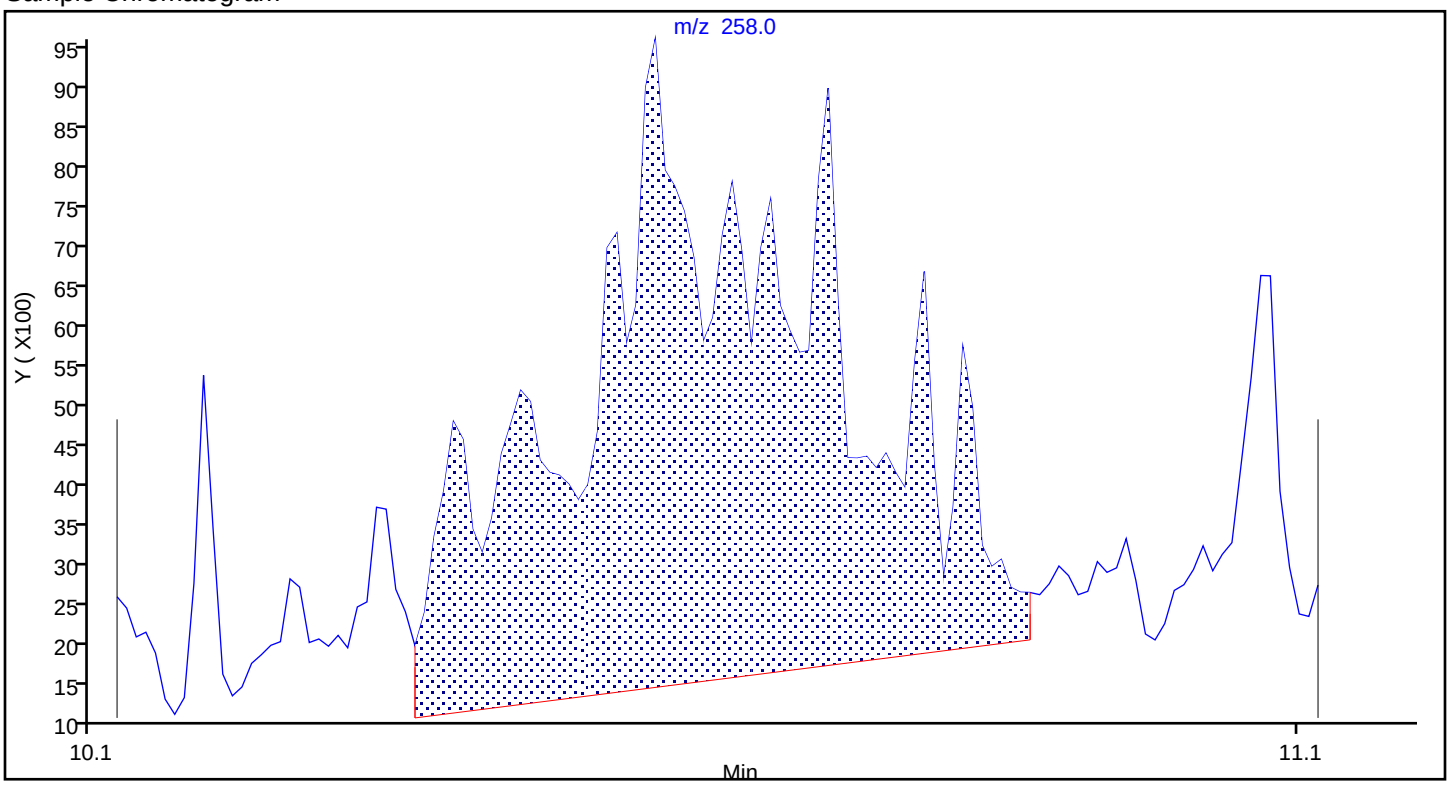
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



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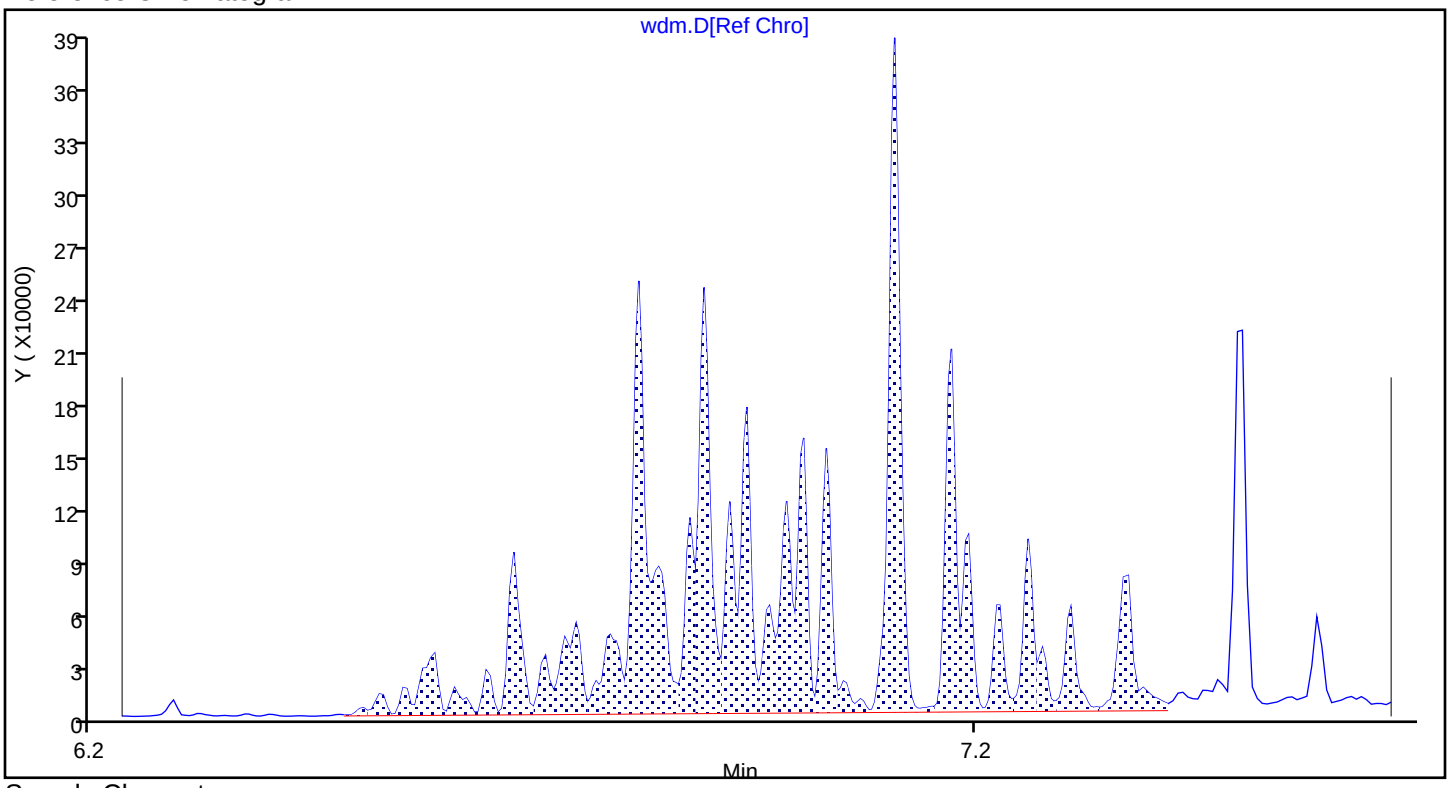
Eurofins TestAmerica, Knoxville

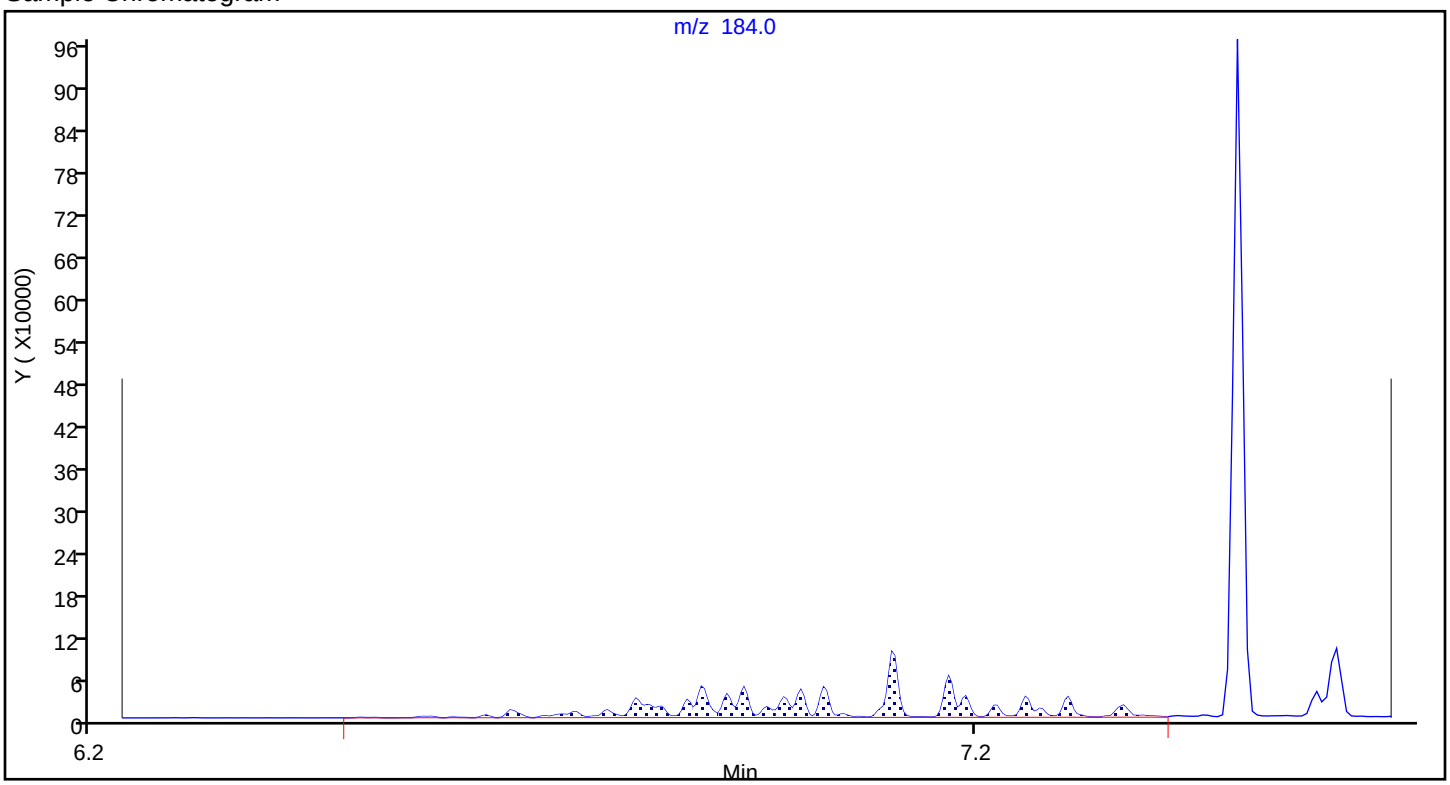
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



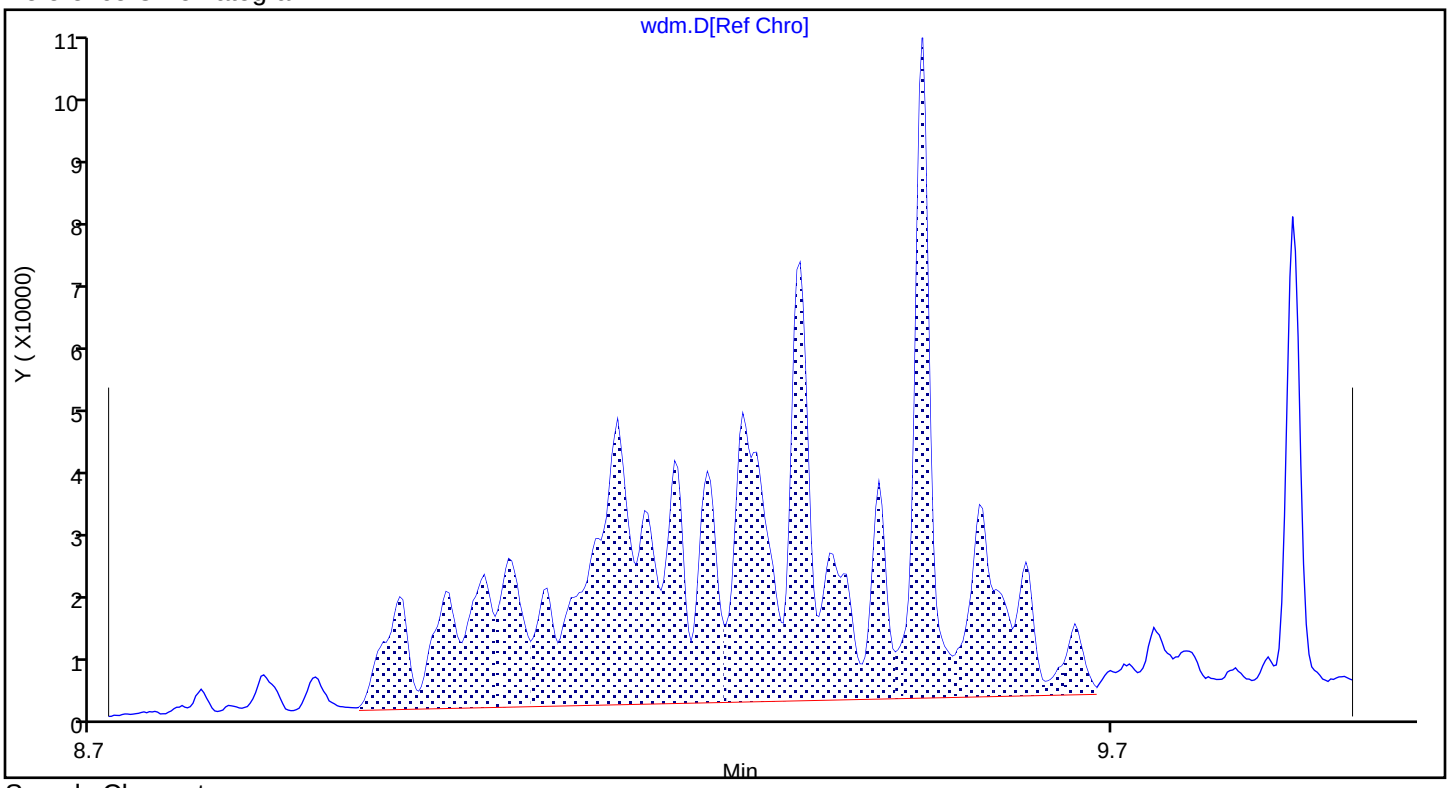
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

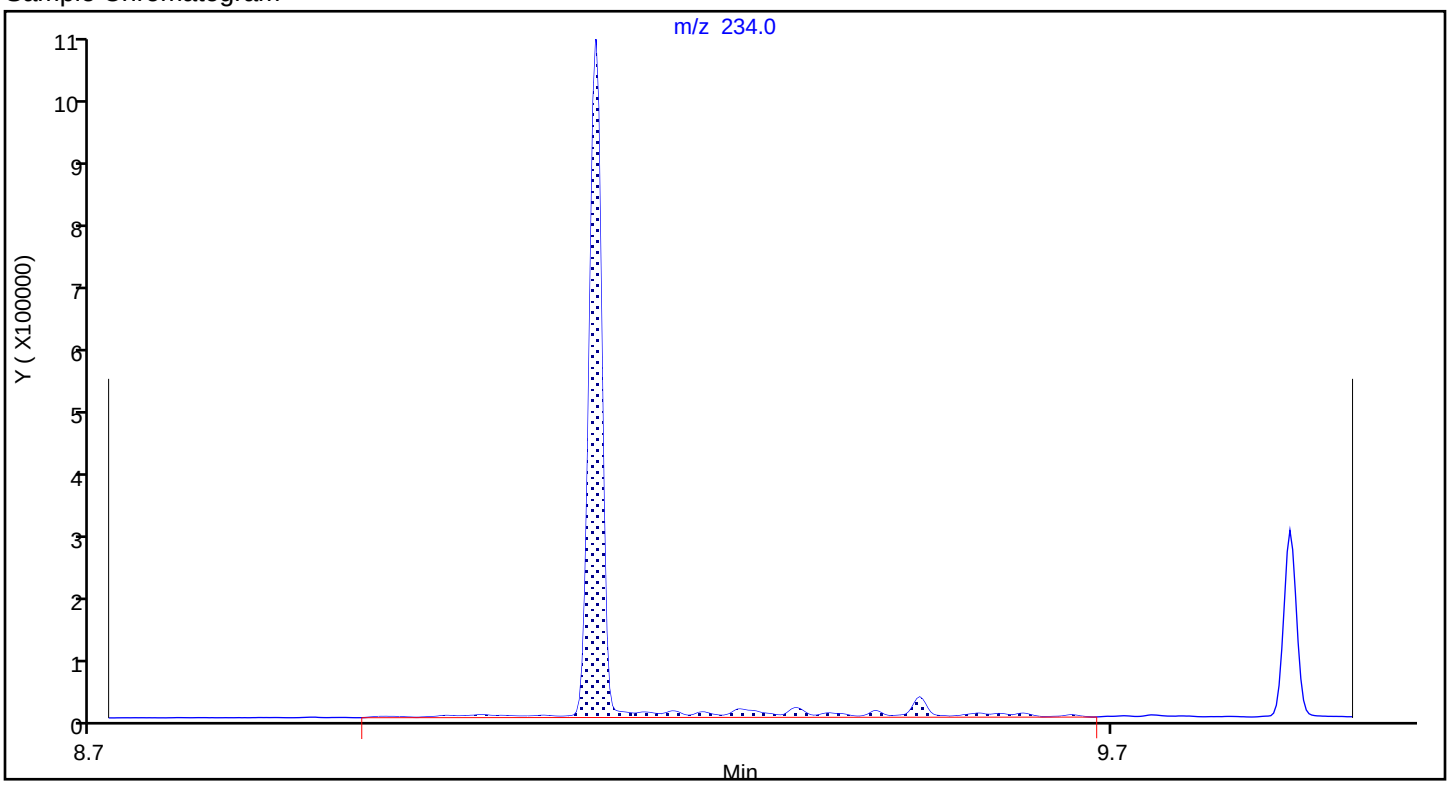
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

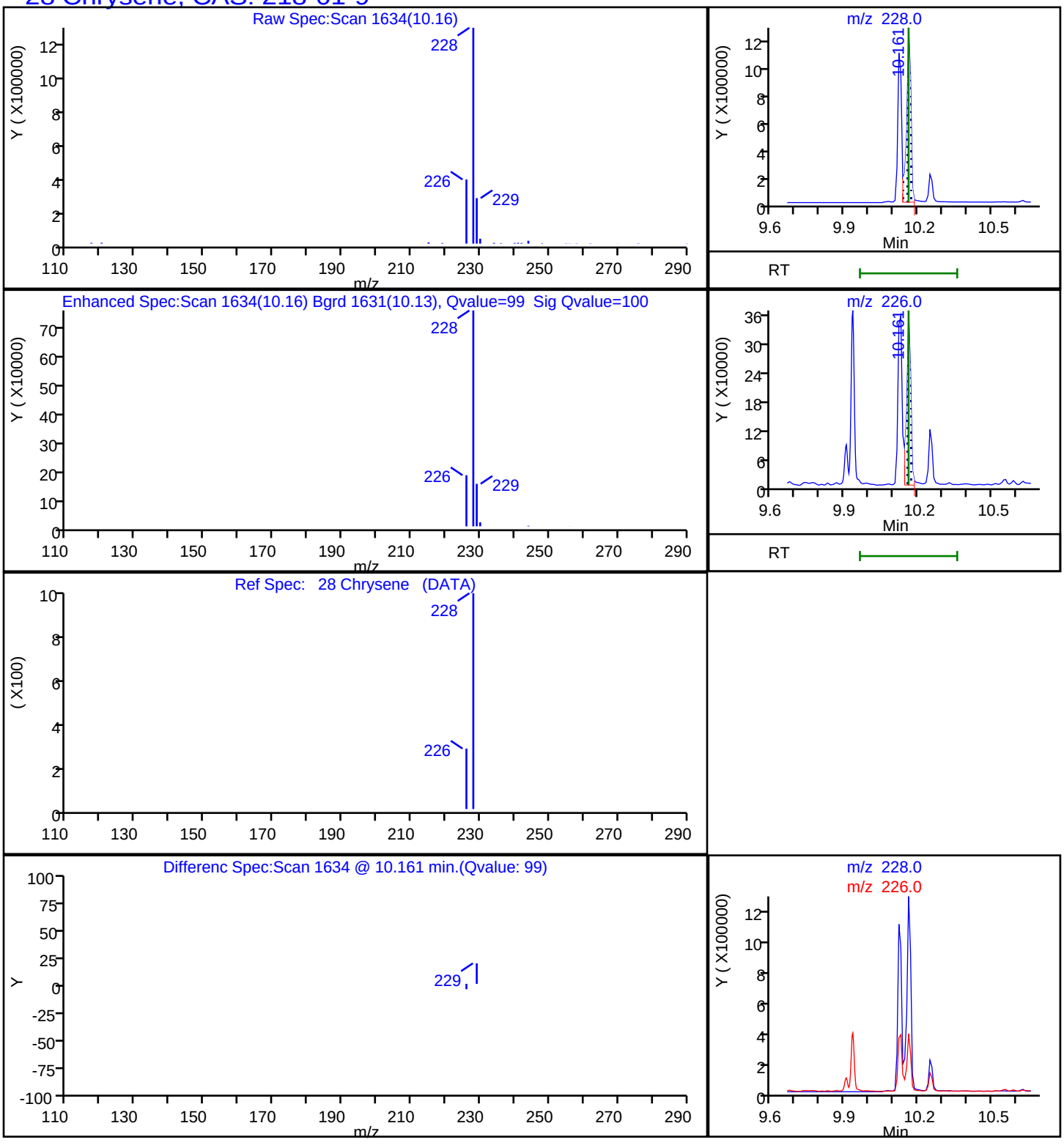


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

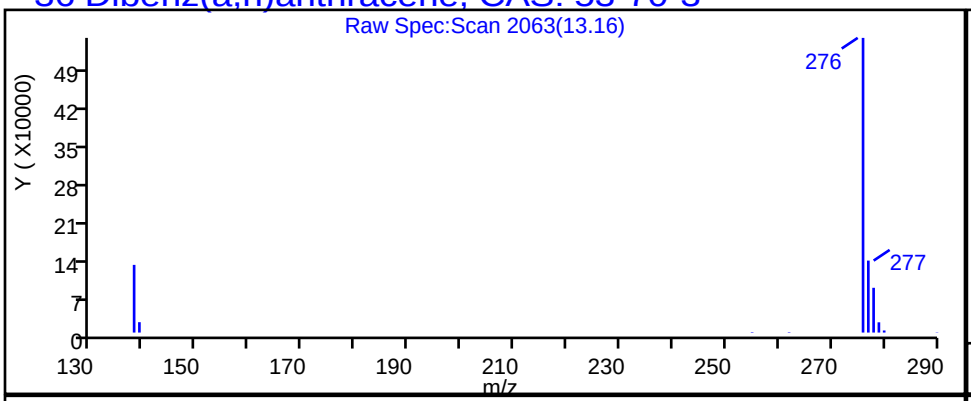


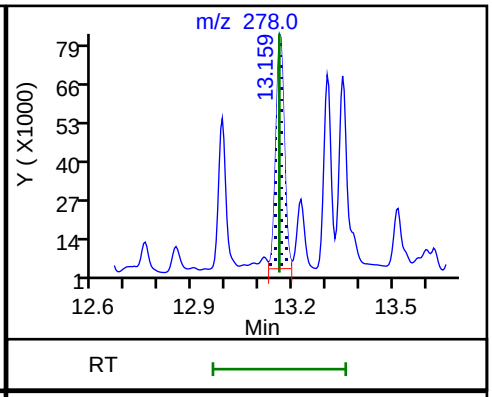
Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

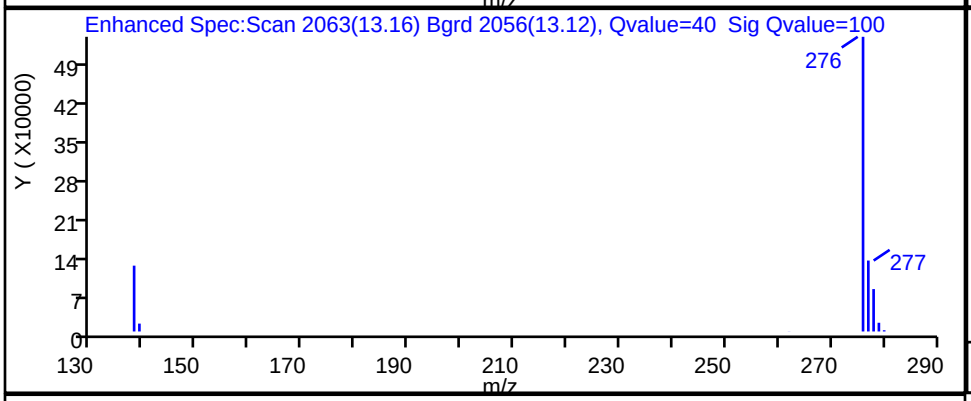
Eurofins TestAmerica, Knoxville

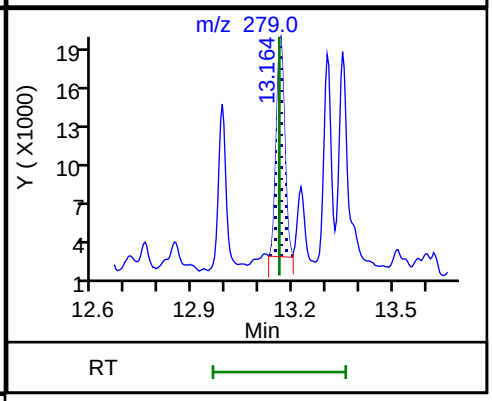
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

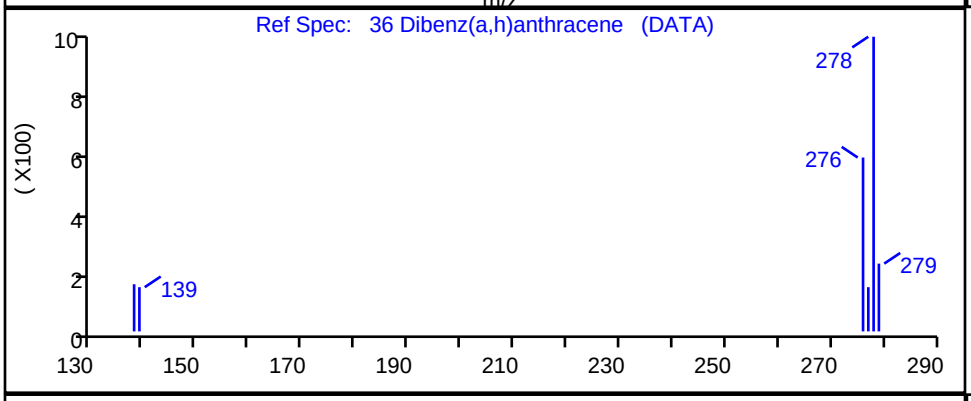
36 Dibenz(a,h)anthracene, CAS: 53-70-3

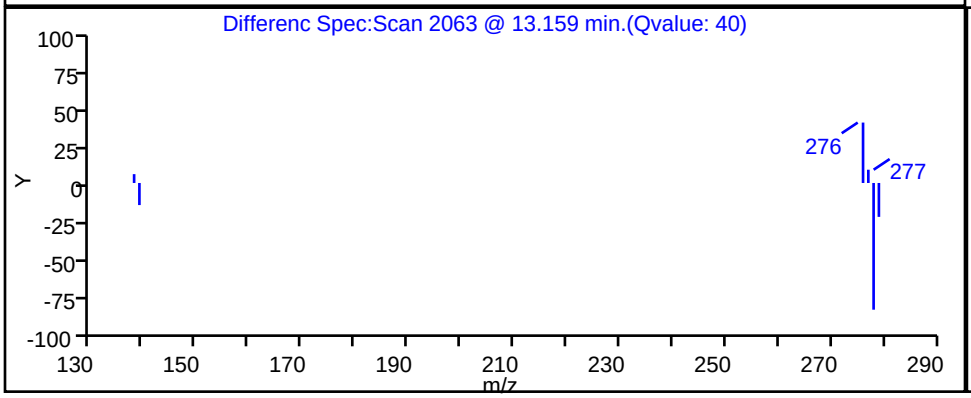


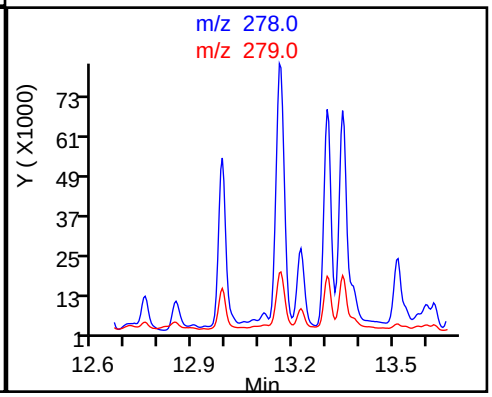










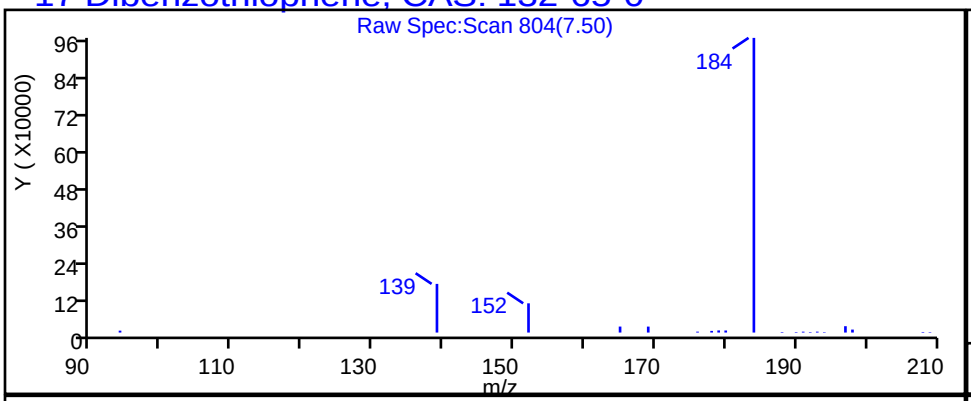


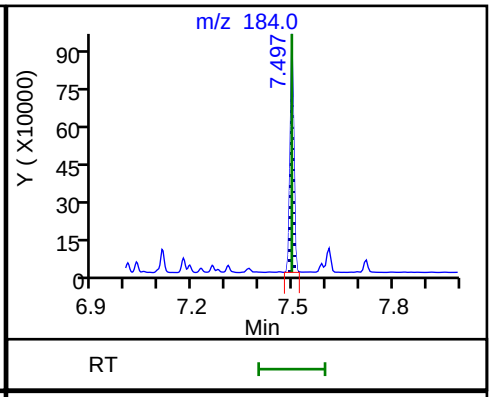
Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

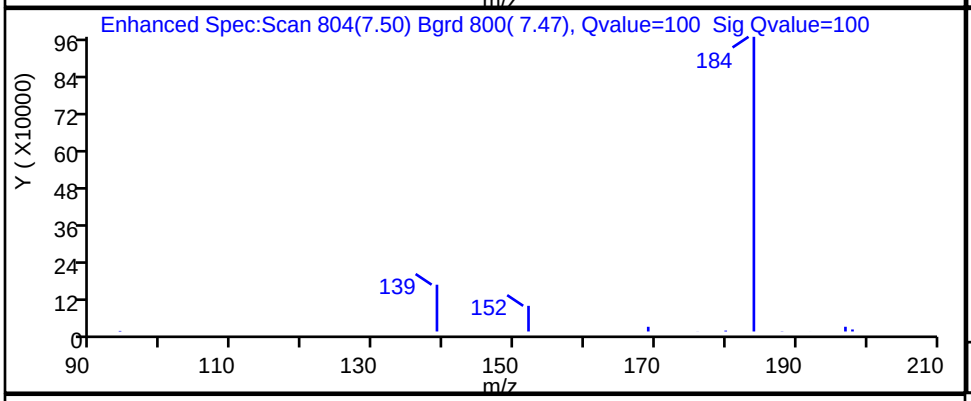
Eurofins TestAmerica, Knoxville

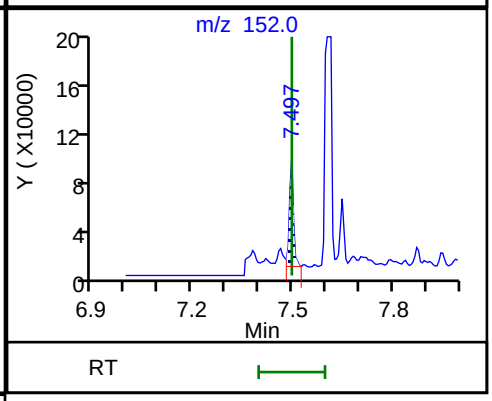
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

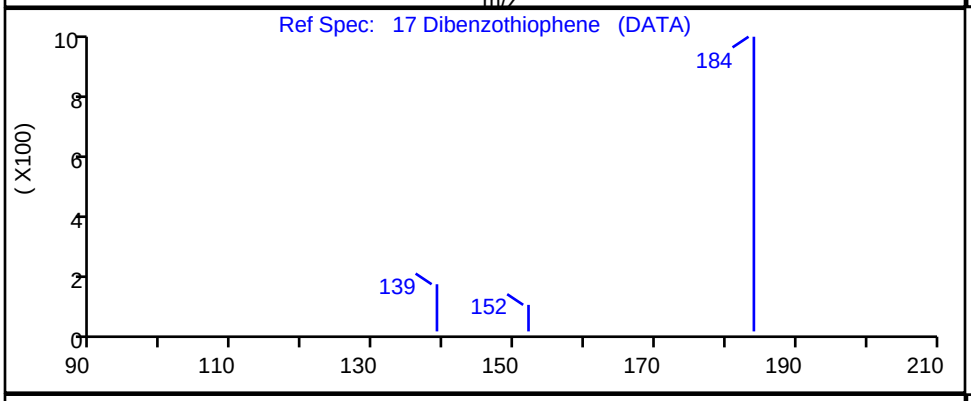
17 Dibenzothiophene, CAS: 132-65-0

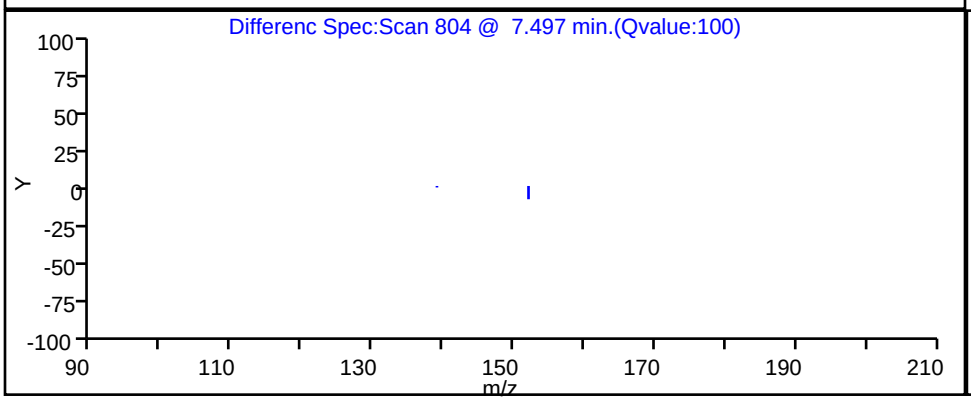


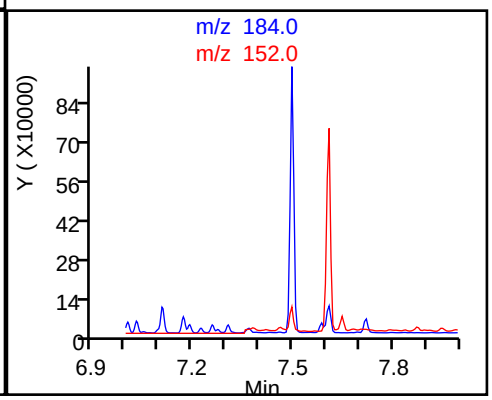










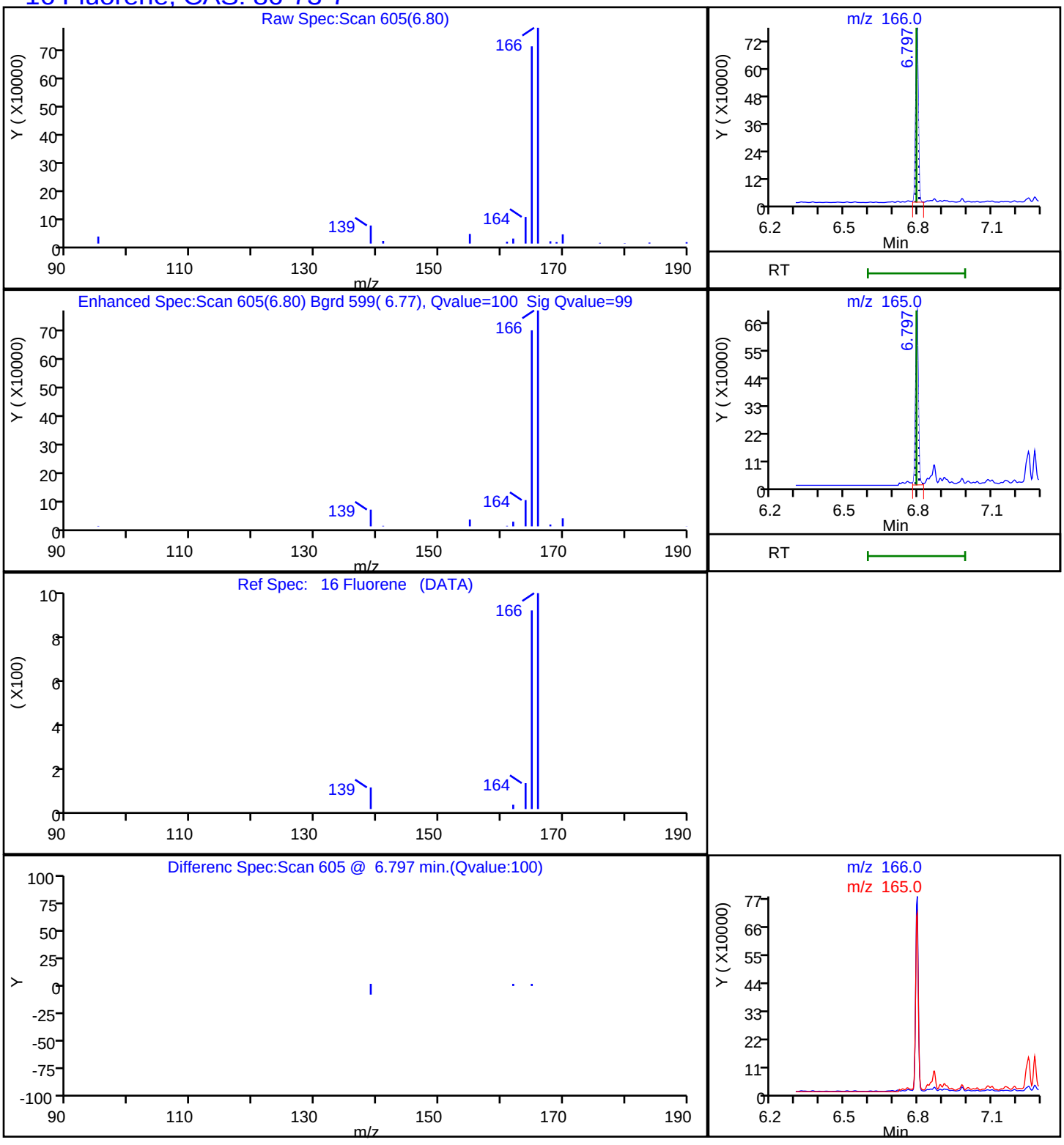


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

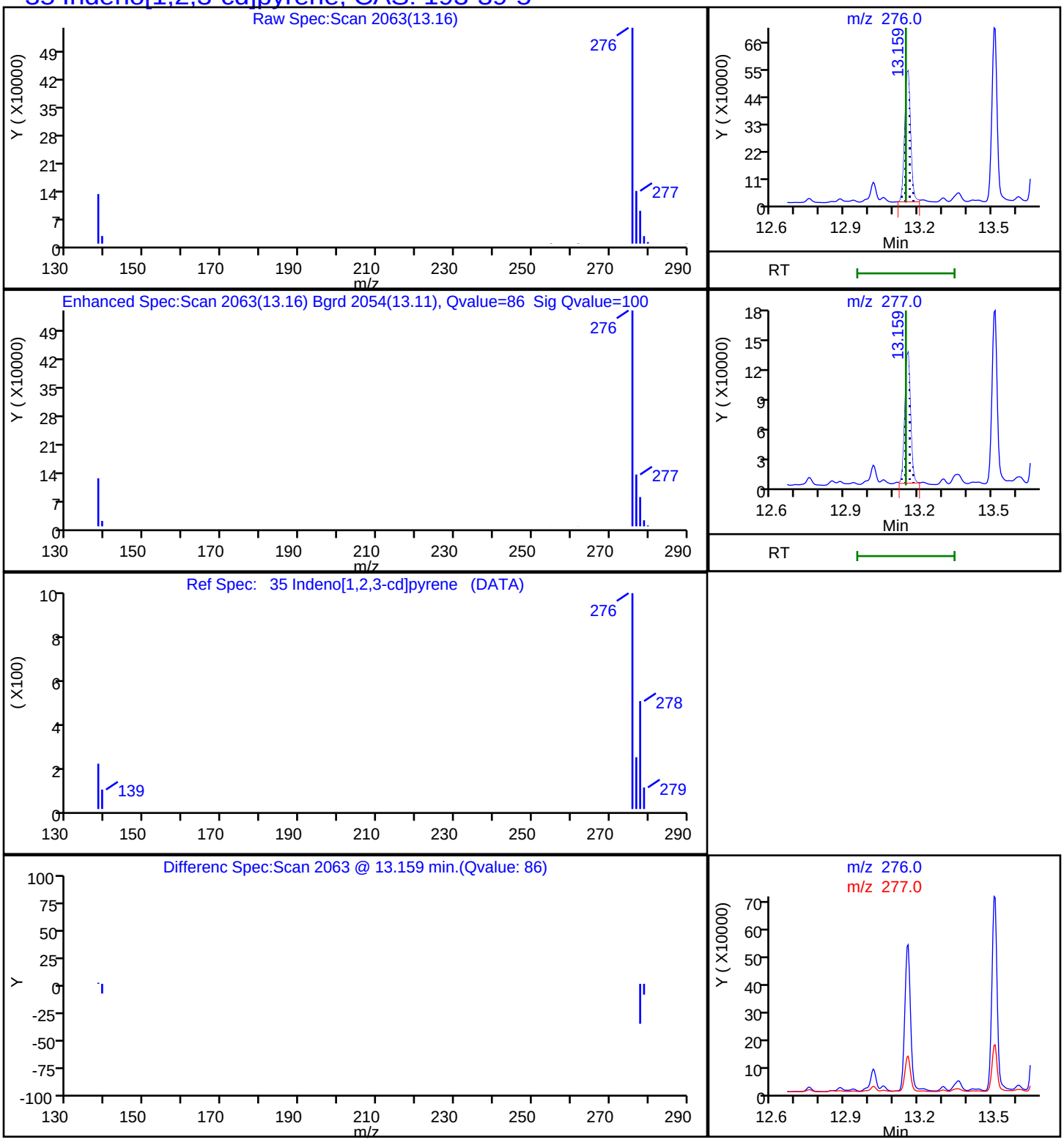


Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

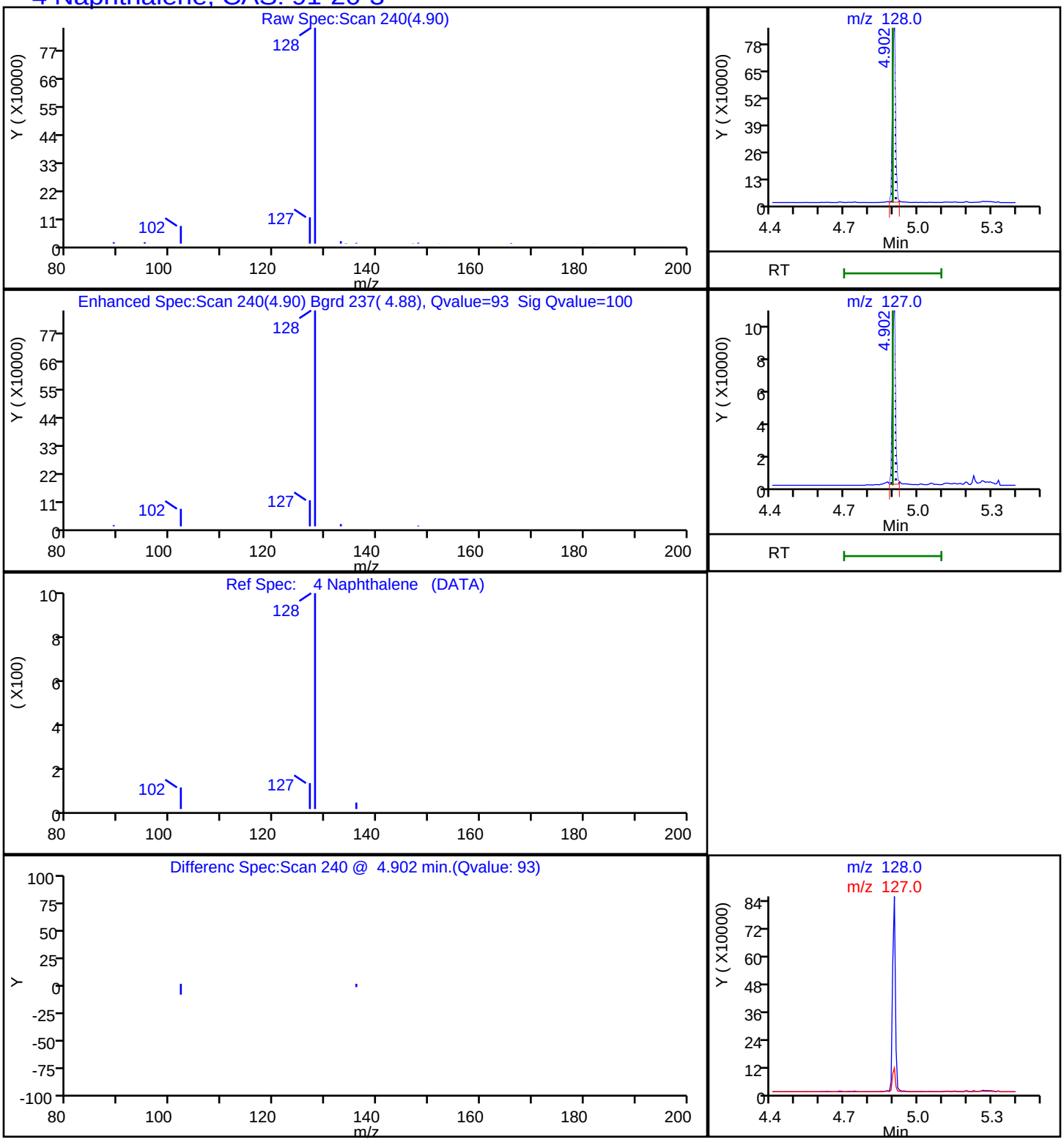


Report Date: 31-Aug-2019 11:48:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

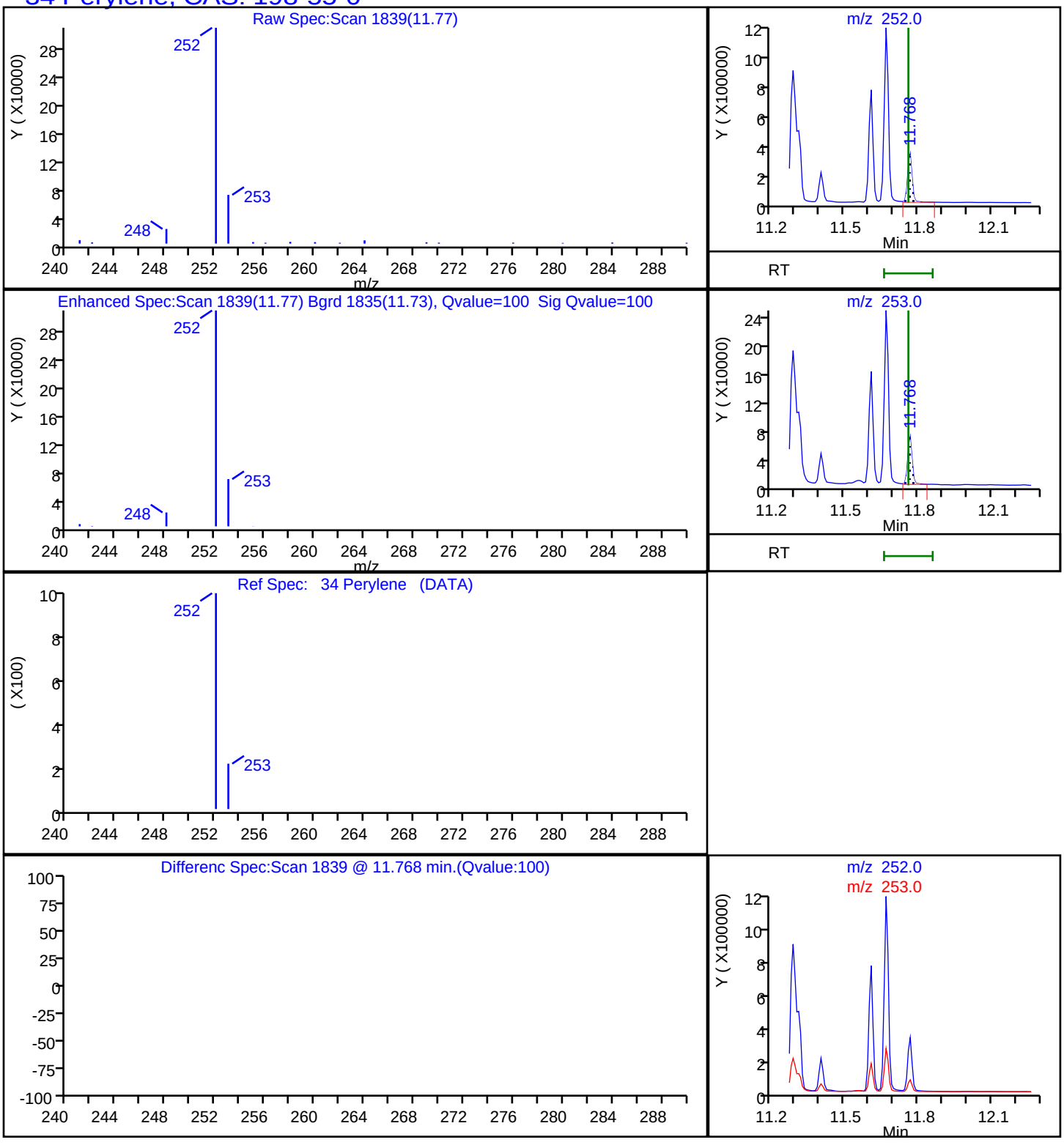


Report Date: 31-Aug-2019 11:48:55 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



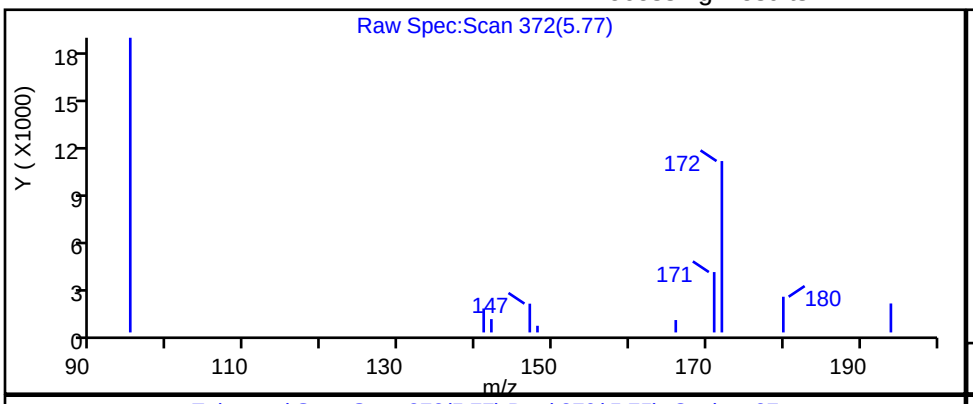
User Disabled Compound Report

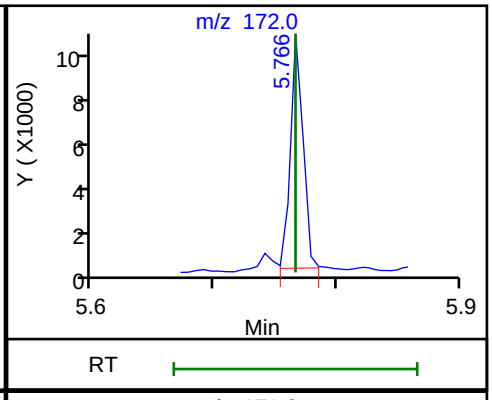
Eurofins TestAmerica, Knoxville

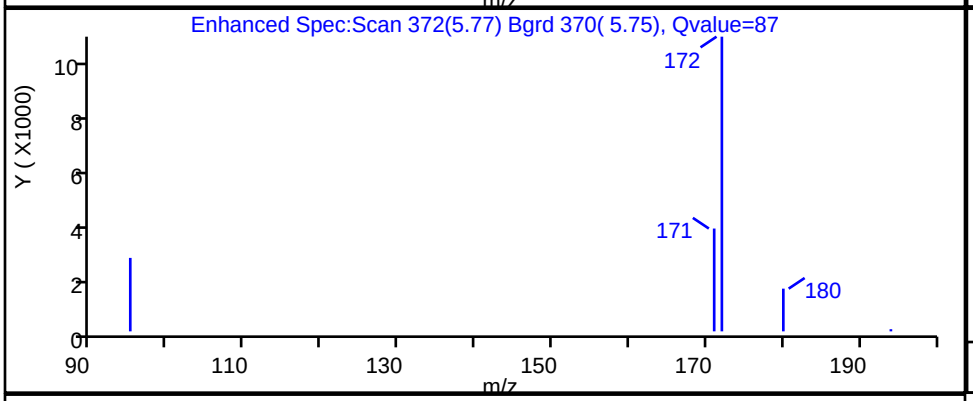
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

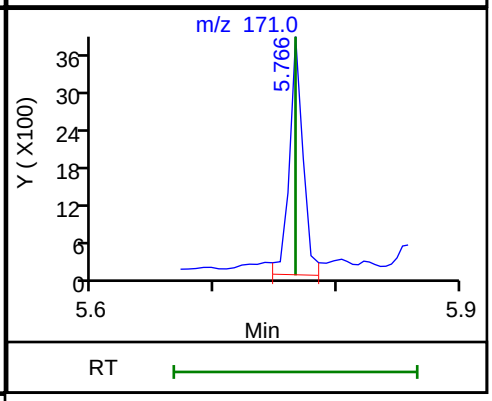
$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

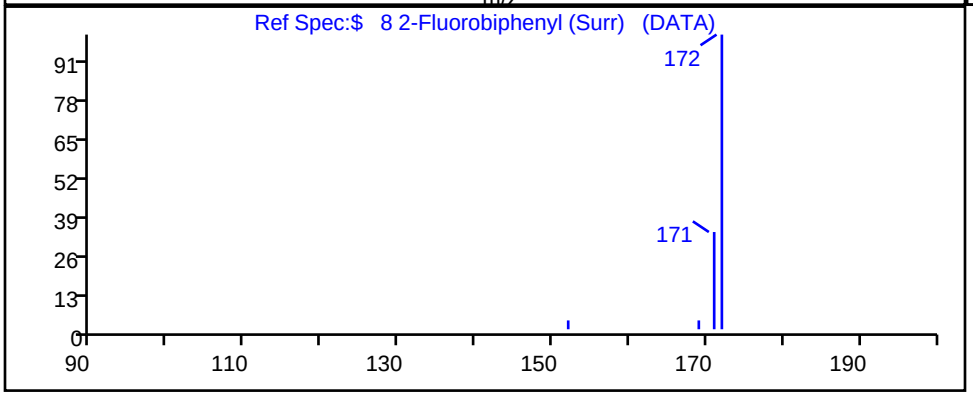
Processing Results











RT	Mass	Response	Amount
5.77	172.00	7608	0.021343
5.77	171.00	3005	

Reviewer: cochranj, 31-Aug-2019 10:57:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

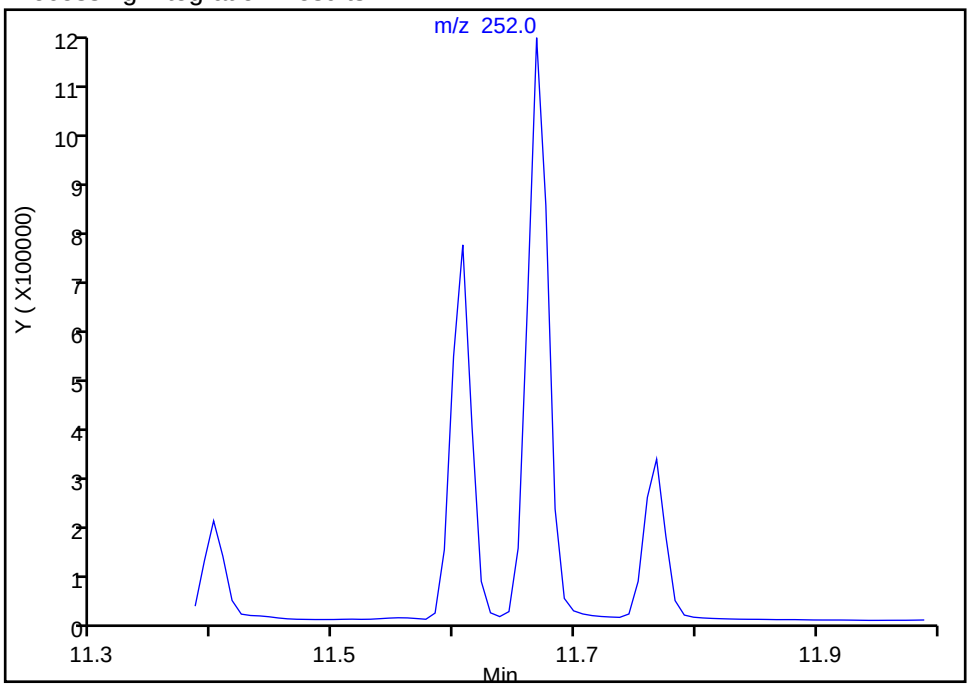
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

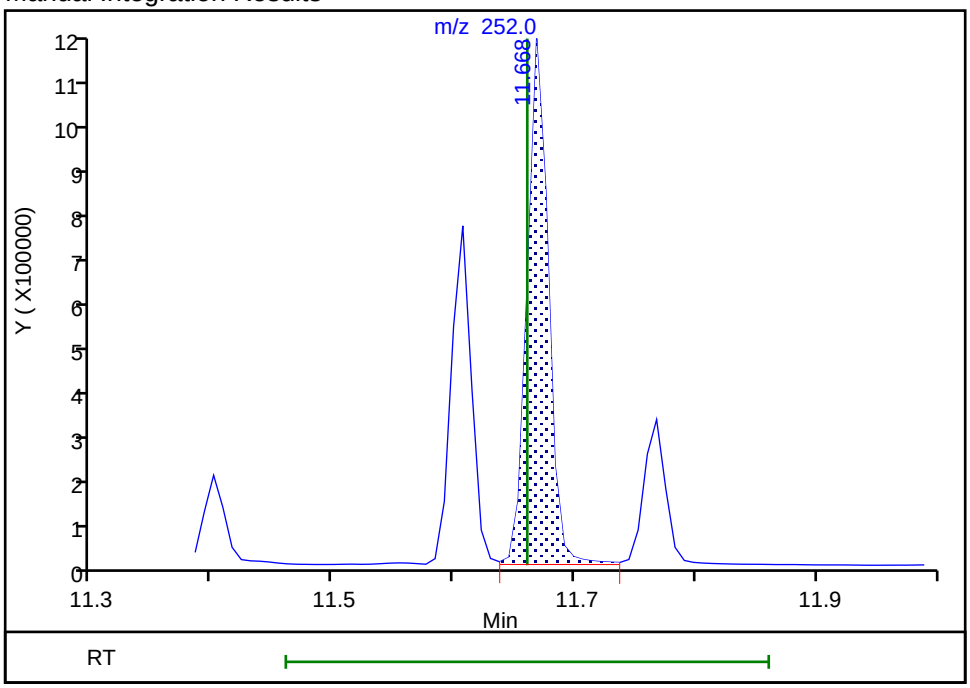
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 1350992
Amount: 2.860131
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:34:29
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

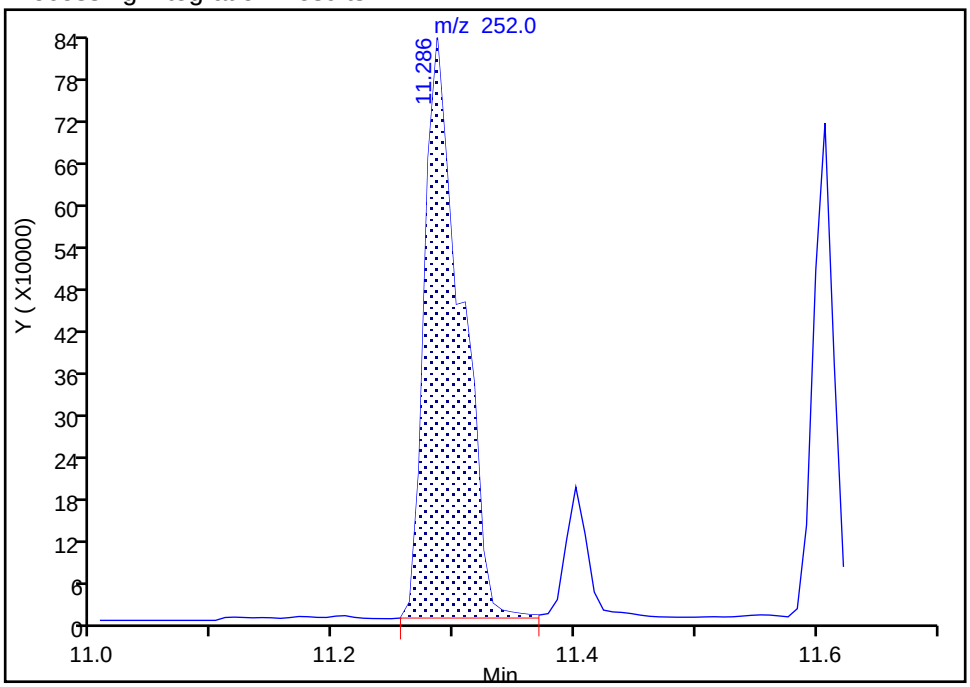
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

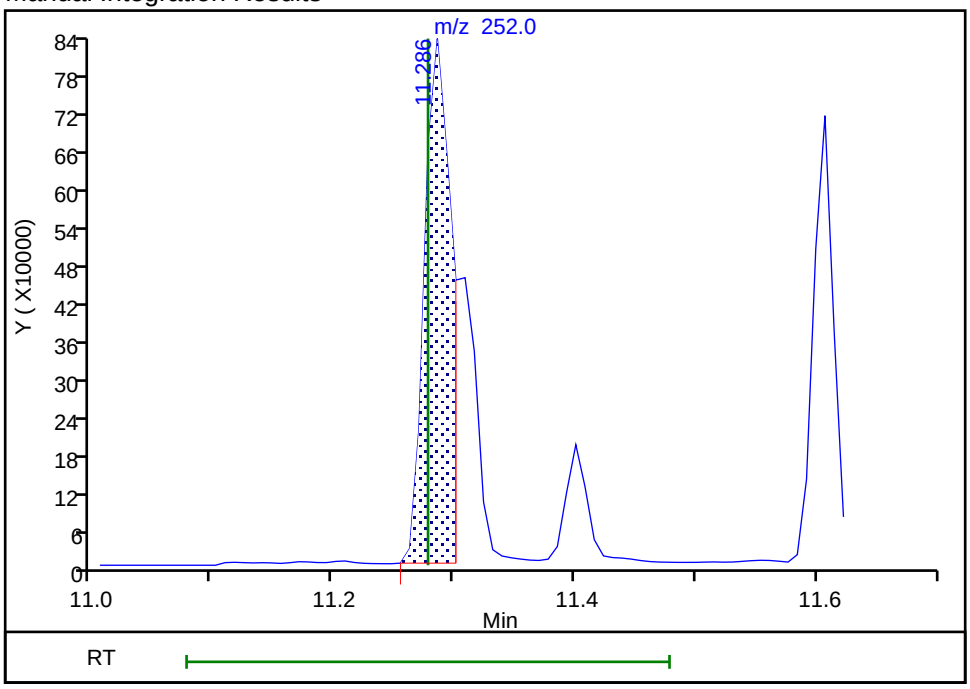
Processing Integration Results

RT: 11.29
Area: 1739115
Amount: 3.167606
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 1304874
Amount: 2.376684
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:34:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

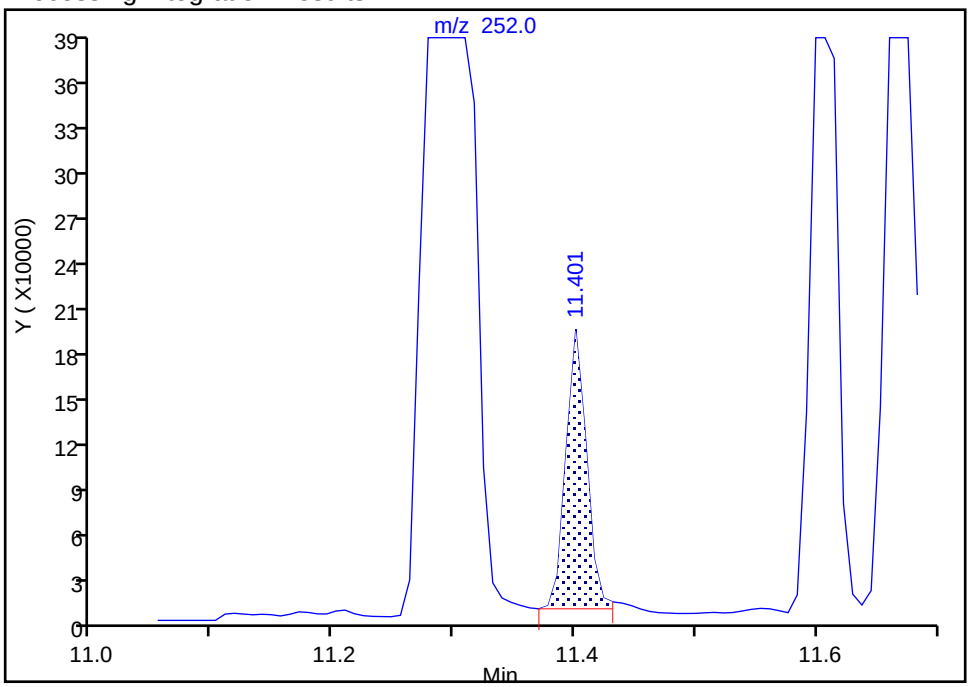
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

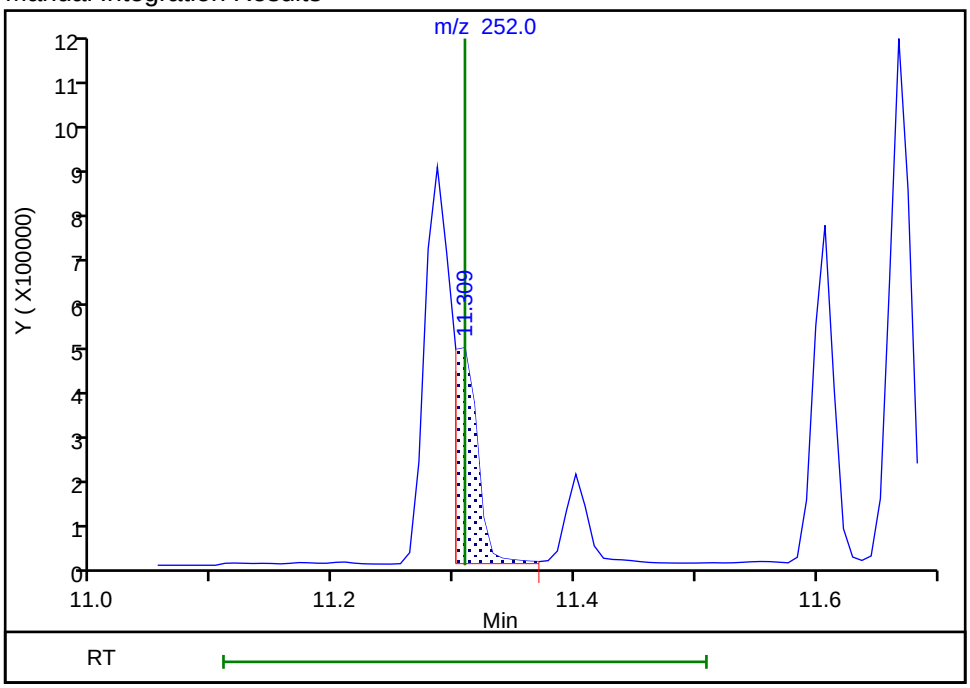
Processing Integration Results

RT: 11.40
Area: 219893
Amount: 0.353151
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 641217
Amount: 1.029802
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:34:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

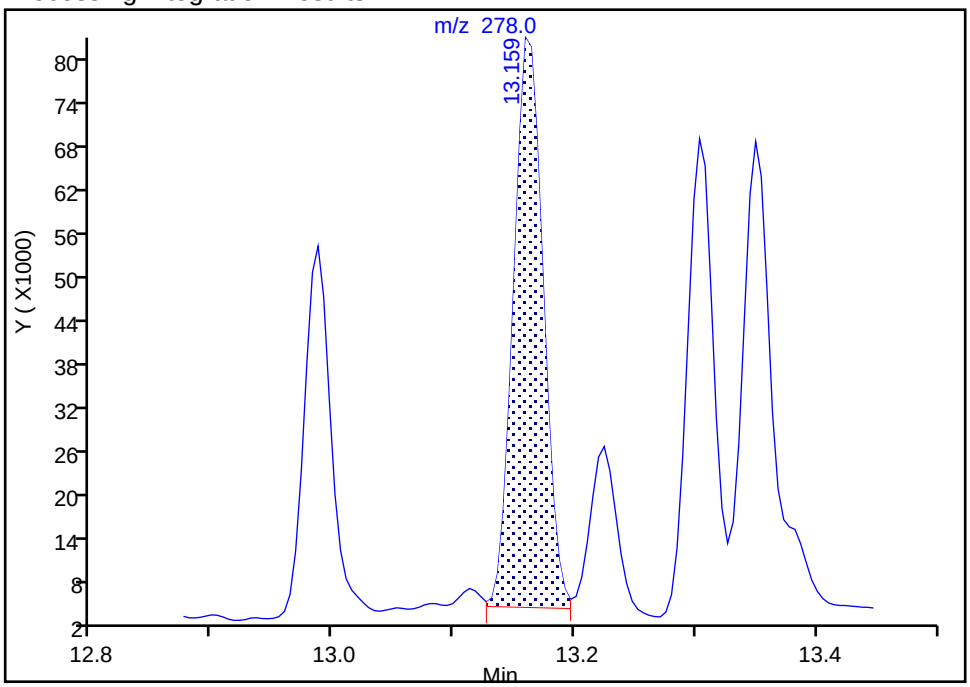
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

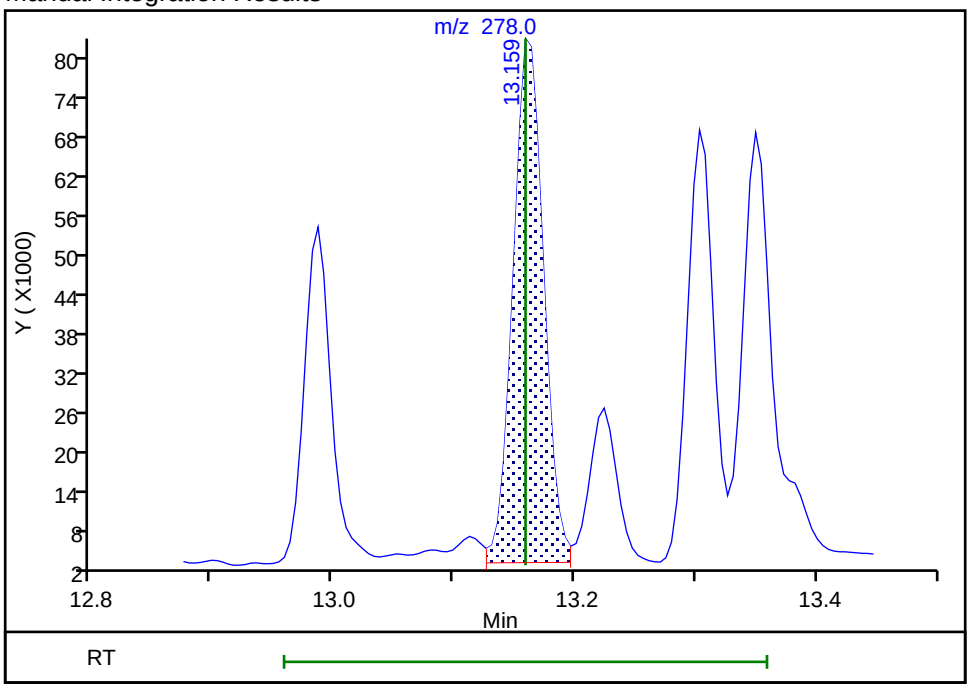
Processing Integration Results

RT: 13.16
Area: 133984
Amount: 0.271802
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 140091
Amount: 0.284191
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:34:51

Audit Action: Manually Integrated Audit Reason: Baseline

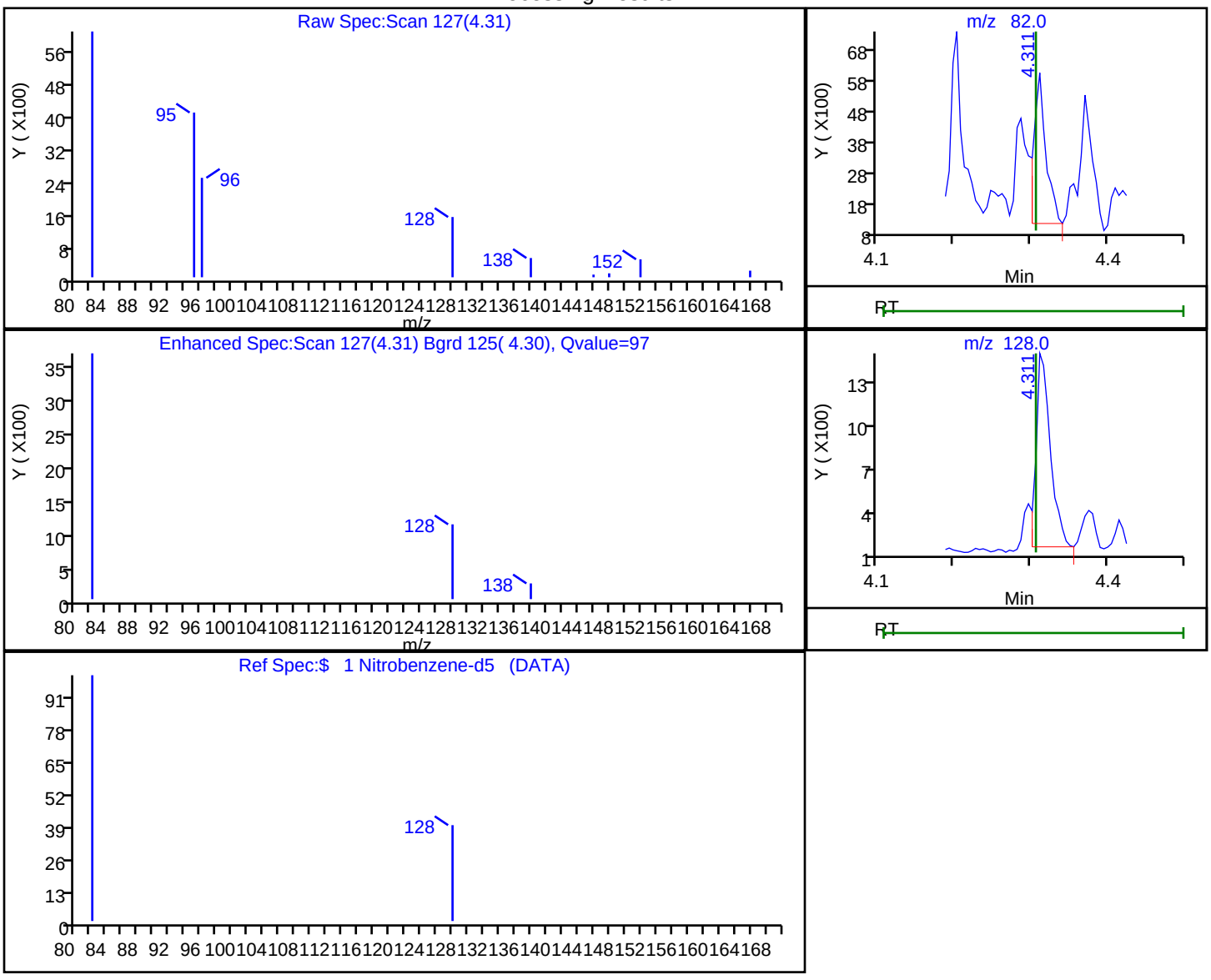
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	5274	0.043581
4.31	128.00	1652	

Reviewer: cochranj, 31-Aug-2019 10:57:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

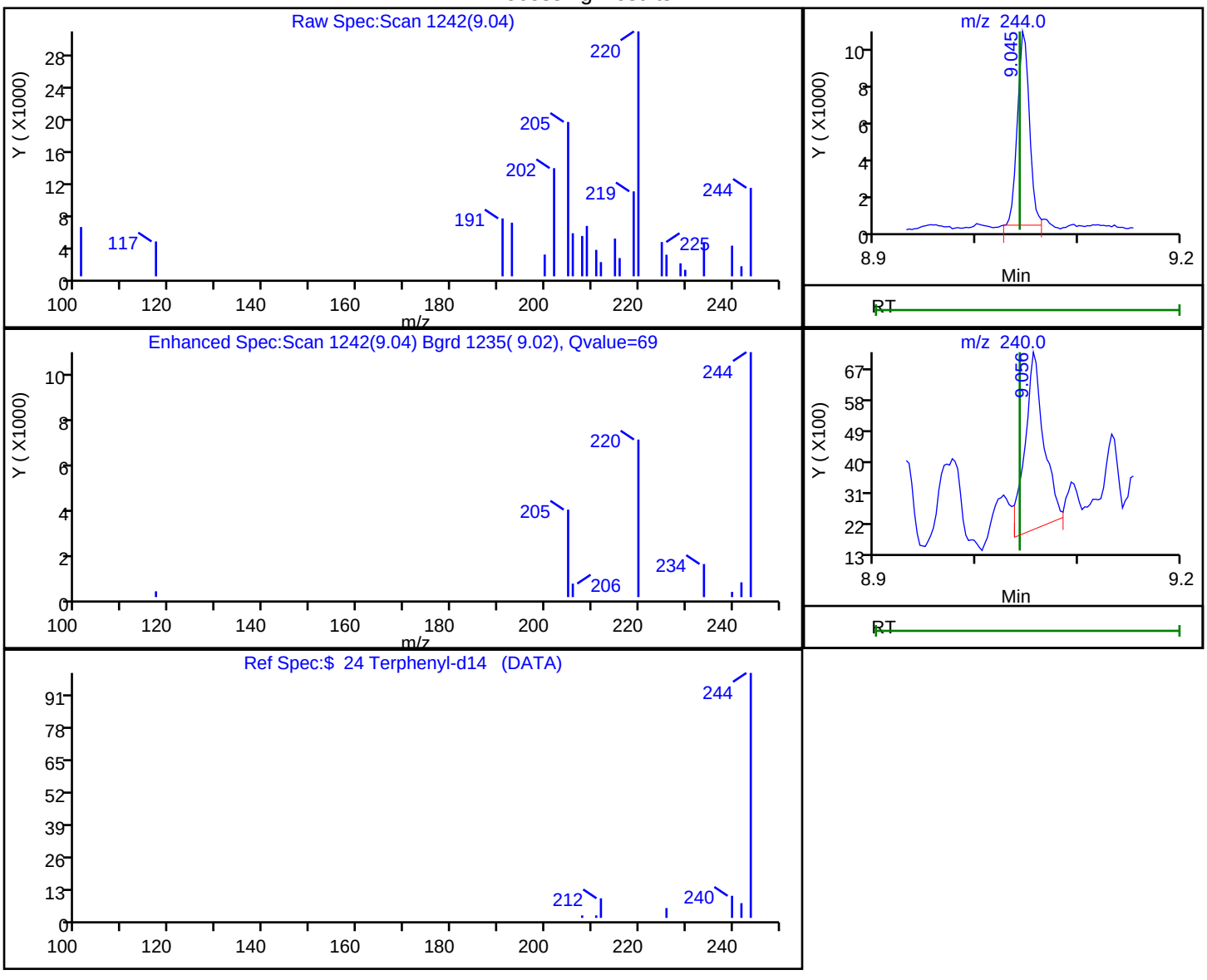
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-15-a.D				
Injection Date:	29-Aug-2019 18:24:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	9	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 24 Terphenyl-d14, CAS: 1718-51-0

Processing Results



RT	Mass	Response	Amount
9.04	244.00	8358	0.026974
9.06	240.00	6695	

Reviewer: cochranj, 31-Aug-2019 10:57:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-8.0-9.0_20190717 DL Lab Sample ID: 580-87761-15 DL

Matrix: Solid Lab File ID: 580-87761-b-15-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 16:50

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 16.45(g) Date Analyzed: 08/30/2019 14:27

Con. Extract Vol.: 0.5(mL) Dilution Factor: 100

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 38.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
206-44-0	Fluoranthene	14000		99	90
85-01-8	Phenanthrene	19000		200	170
129-00-0	Pyrene	17000		200	60

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D
Lims ID: 580-87761-B-15-A
Client ID: 22T-VB-03-8.0-9.0_20190717
Sample Type: Client
Inject. Date: 30-Aug-2019 14:27:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 100.0000
Sample Info: 140-0012910-011
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 15:54:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	192834	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	202516	0.4771	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	98	57135	0.2055	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	98	22574	0.0852	
11 Acenaphthylene	152	6.216	6.216	0.000	98	21310	0.0615	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	98	100614	0.5000	
13 Acenaphthene	153	6.359	6.360	-0.001	99	233695	0.8729	
16 Fluorene	166	6.793	6.793	0.000	100	165943	0.5604	
17 Dibenzothiophene	184	7.497	7.491	0.006	99	201632	0.4877	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	97	173213	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1665004	3.73	
20 Anthracene	178	7.648	7.648	0.000	100	132933	0.3573	
22 Fluoranthene	202	8.687	8.684	0.003	99	1257855	2.90	
23 Pyrene	202	8.908	8.906	0.002	99	1602206	3.34	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	95	319504	0.8485	
* 27 Chrysene-d12	240	10.129	10.129	0.000	91	158360	0.5000	
28 Chrysene	228	10.161	10.161	0.000	99	391674	0.8698	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	400786	0.8475	M
30 Benzo[k]fluoranthene	252	11.301	11.301	0.000	100	143717	0.2680	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	232117	0.5227	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	380549	0.9354	a
* 33 Perylene-d12	264	11.729	11.729	0.000	100	173193	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	109740	0.2388	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	85	247908	0.4956	
36 Dibenz(a,h)anthracene	278	13.154	13.159	-0.005	41	36778	0.0866	
37 Benzo[g,h,i]perylene	276	13.507	13.508	-0.001	99	314281	0.6713	
A 38 C1-Naphthalenes	142	5.520	(5.444-5.596)		0	78930	0.1860	
A 39 C2-Naphthalenes	156	6.078	(5.913-6.239)		0	207639	0.4892	
A 40 C3-Naphthalenes	170	6.555	(6.306-6.809)		0	256028	0.6032	
A 41 C4-Naphthalenes	184	6.949	(6.489-7.384)		0	152708	0.3598	
A 42 C1-Fluorenes	180	7.302	(7.134-7.311)		0	60361	0.2038	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.564-7.934)		0	65647	0.2217	
A 44 C3-Fluorenes	208	8.112	(7.985-8.453)		0	47207	0.1594	
A 45 C1-Dibenzothiophenes	198	7.950	(7.822-8.064)		0	85011	0.2056	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	78215	0.1892	
A 47 C3-Dibenzothiophenes	226	8.652	(8.524-9.104)		0	52361	0.1267	
A 48 C4-Dibenzothiophenes	240	9.053	(8.810-9.579)		0	22518	0.0545	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.002-8.183)		0	418077	0.9371	
A 50 C2-Phenanthrenes/Anthracen	206	8.554	(8.341-8.770)		0	239385	0.5366	
A 51 C3-Phenanthrenes/Anthracen	220	8.994	(8.743-9.258)		0	182207	0.4084	
A 52 C4-Phenanthrenes/Anthracen	234	9.189	(8.959-9.683)		0	292415	0.6554	
A 53 C1-Fluoranthenes/pyrene	216	9.312	(9.109-9.496)		0	363864	0.7593	
A 54 C2-Fluoranthenes/Pyrene	230	9.804	(9.584-10.051)		0	106428	0.2221	
A 55 C3-Fluoranthenes/Pyrene	244	10.232	(10.030-10.504)		0	60510	0.1263	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	29400	0.0613	
A 57 C1-Chrysenes	242	10.623	(10.504-10.751)		0	118650	0.2635	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	50313	0.1117	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	27038	0.0600	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	15677	0.0348	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

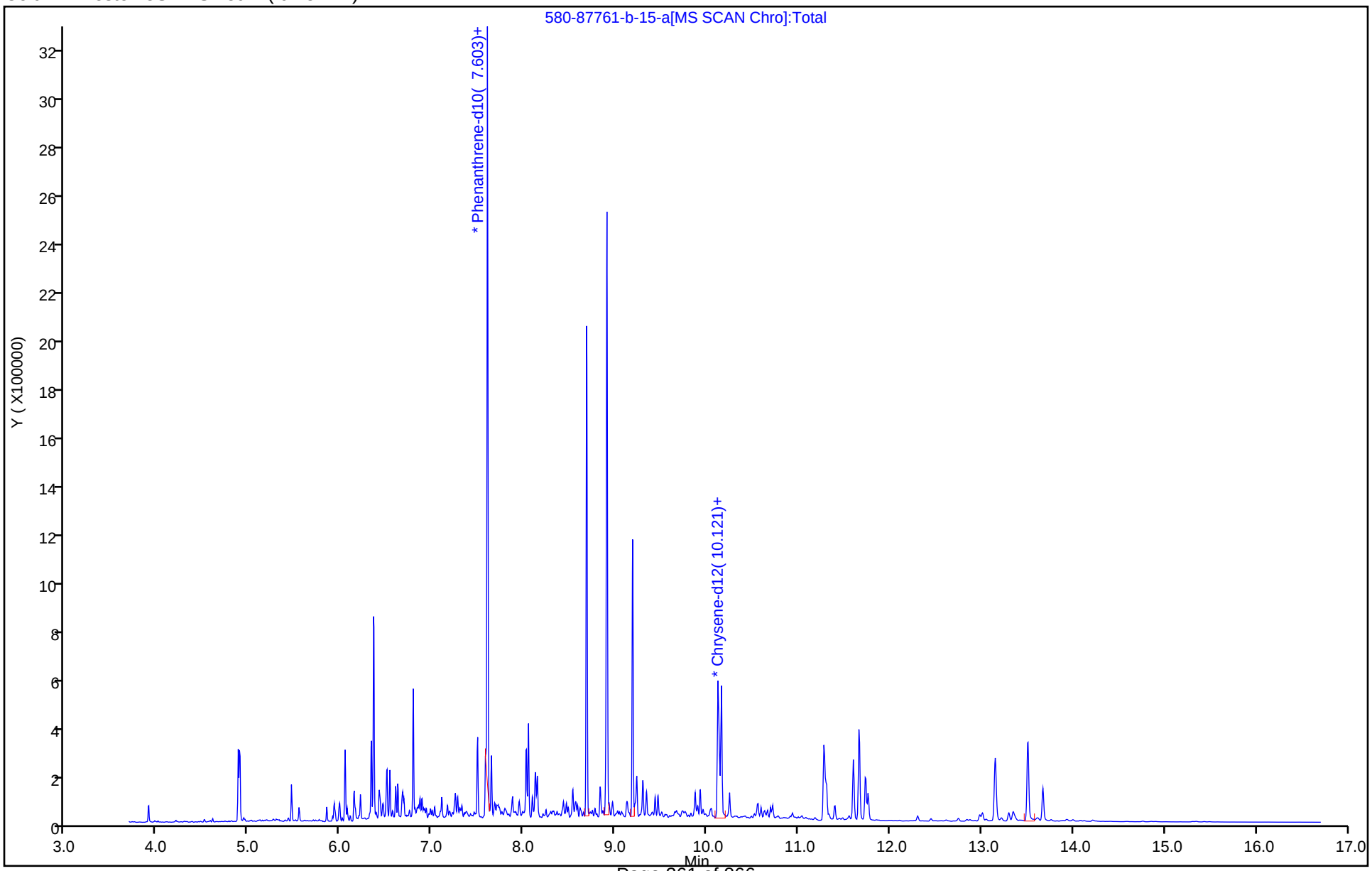
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 31-Aug-2019 13:17:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15	Worklist Smp#:	11
Client ID:	22T-VB-03-8.0-9.0_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	11
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

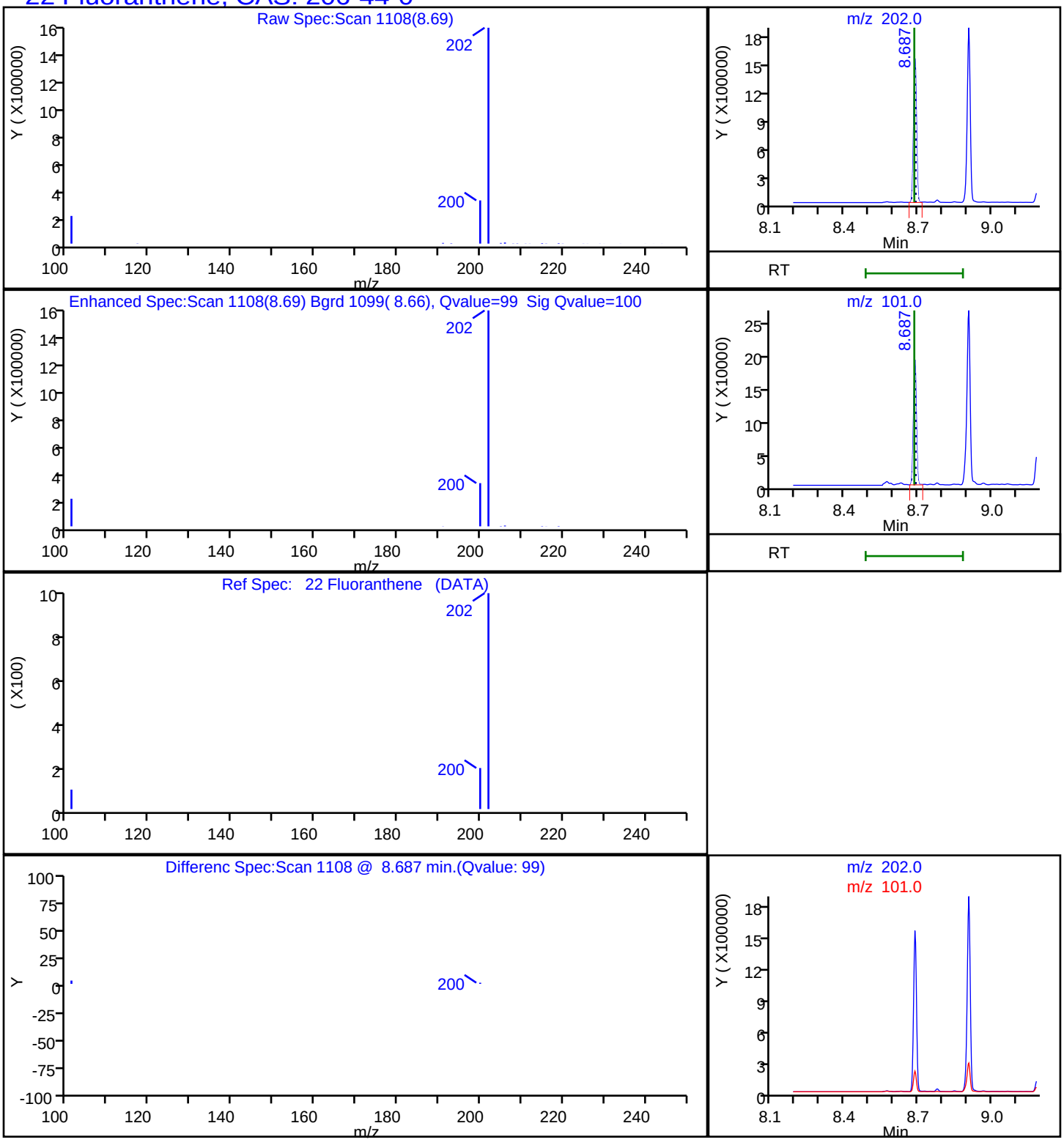


Report Date: 31-Aug-2019 13:17:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

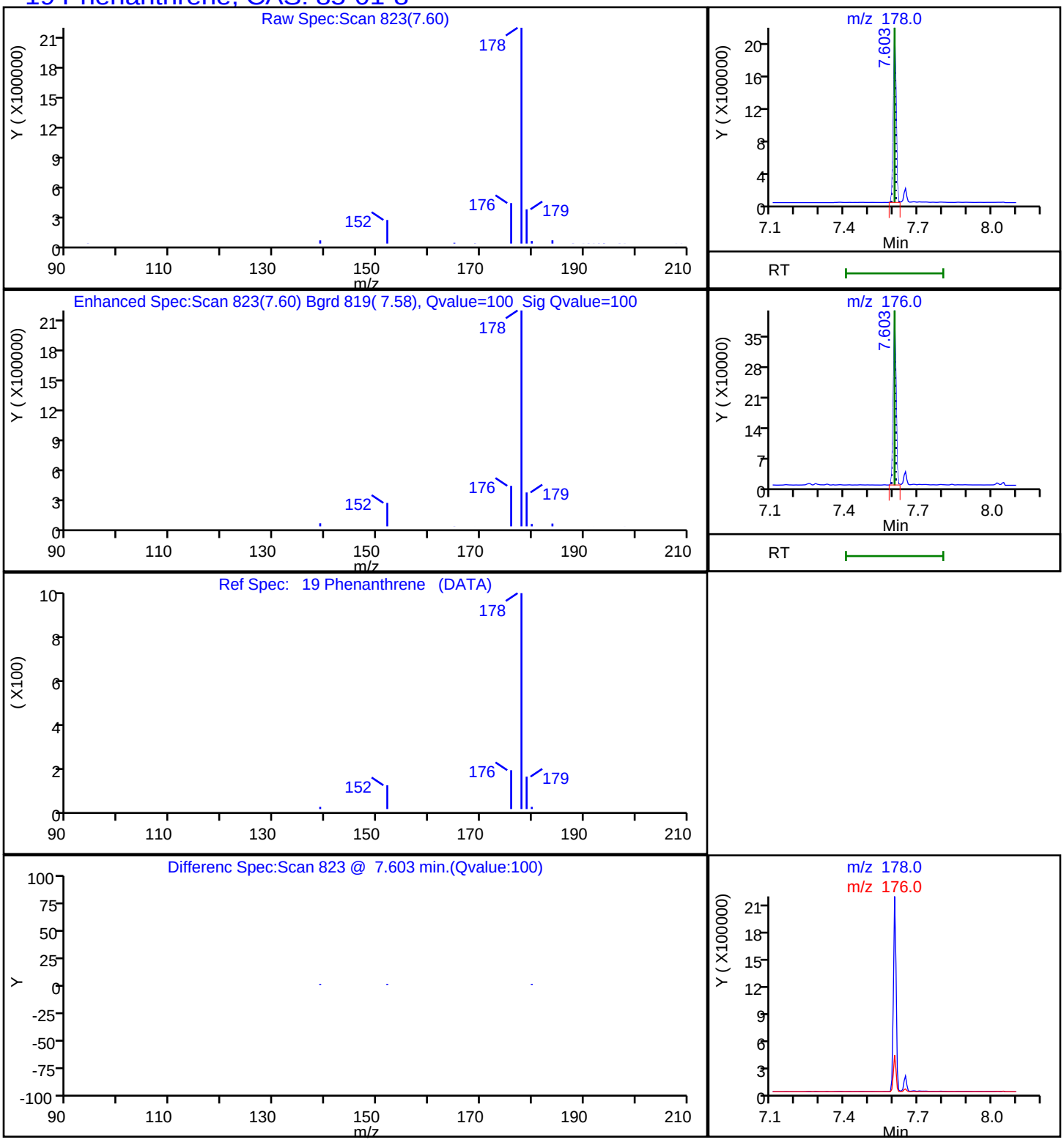


Report Date: 31-Aug-2019 13:17:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

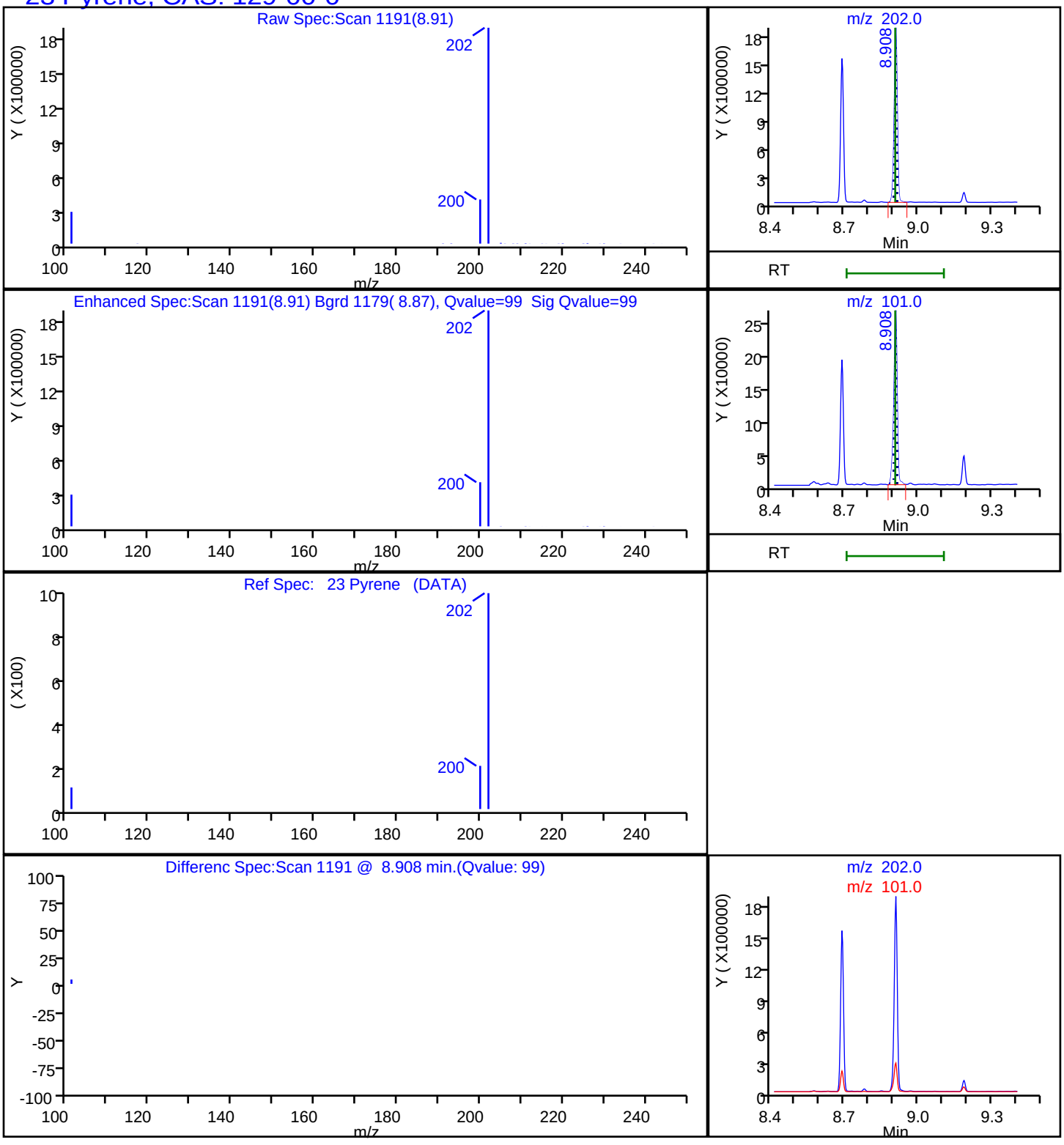


Report Date: 31-Aug-2019 13:17:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



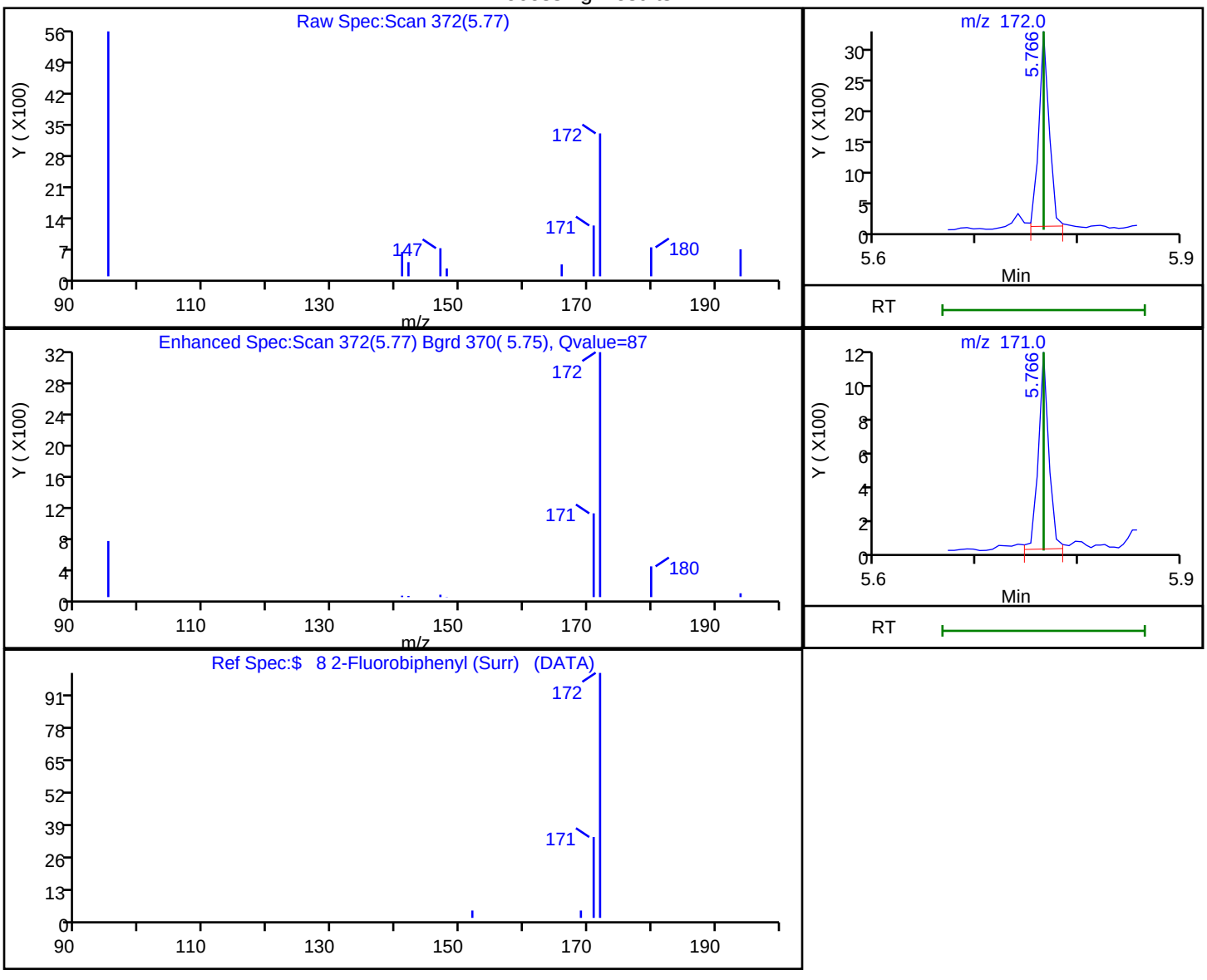
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	2195	0.006747
5.77	171.00	770	

Reviewer: cochranj, 31-Aug-2019 13:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

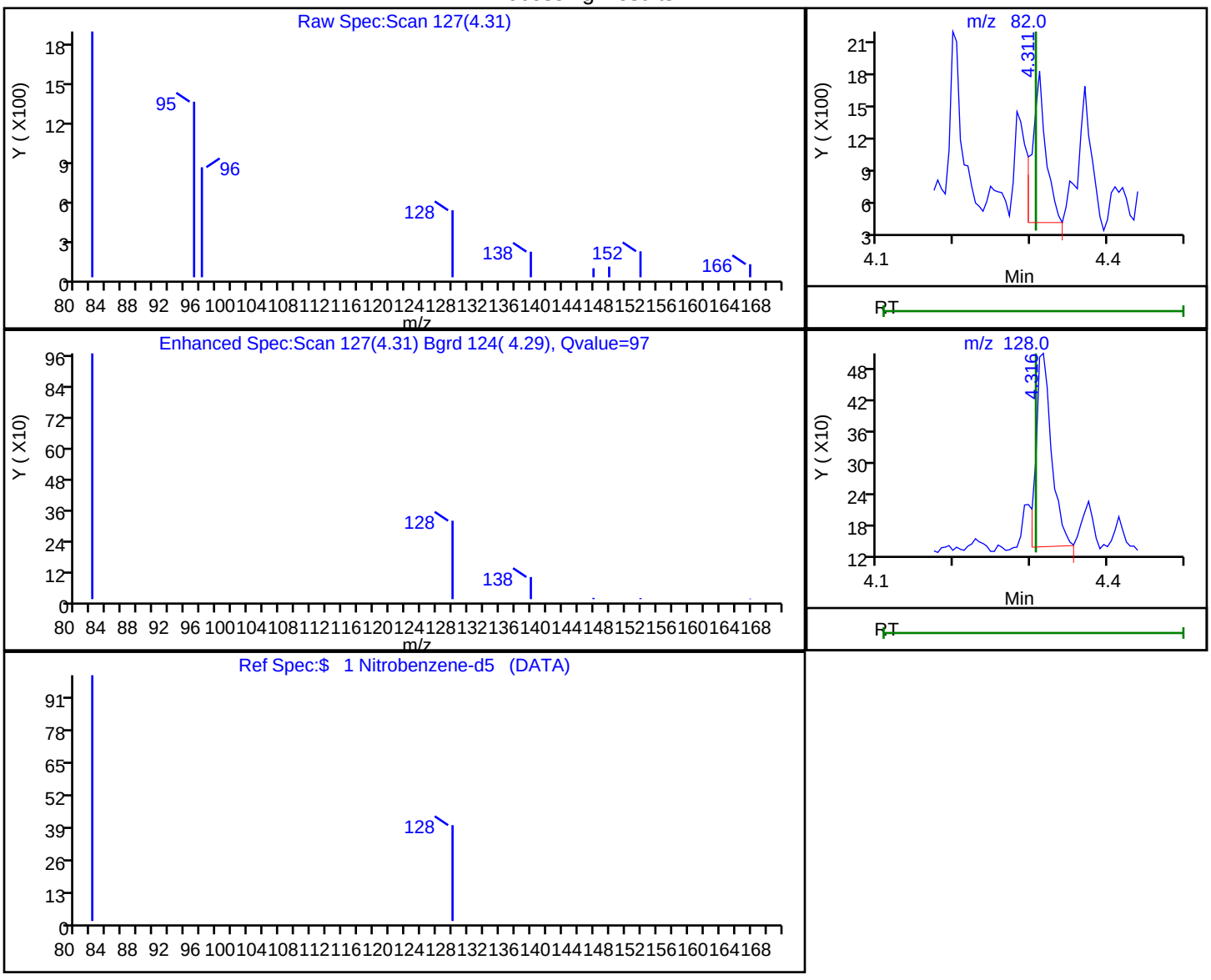
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	1700	0.015100
4.32	128.00	511	

Reviewer: cochranj, 31-Aug-2019 13:15:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

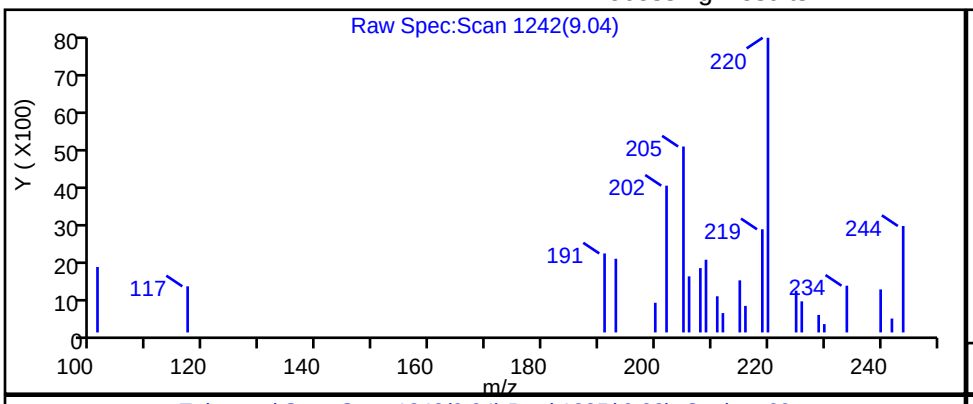
User Disabled Compound Report

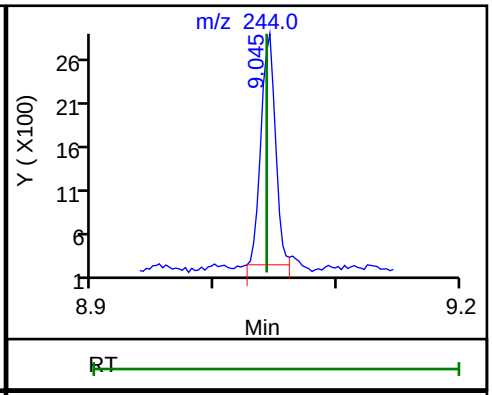
Eurofins TestAmerica, Knoxville

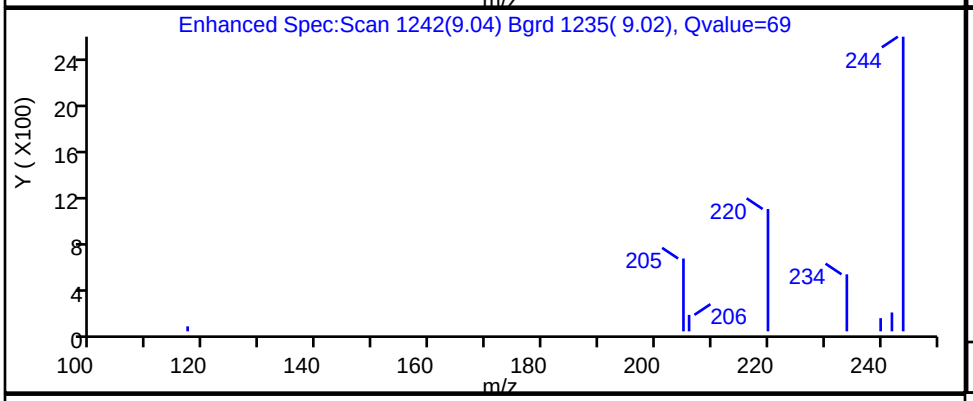
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-15-a.D				
Injection Date:	30-Aug-2019 14:27:30	Instrument ID:	MP		
Lims ID:	580-87761-B-15-A	Lab Sample ID:	140-87761-15		
Client ID:	22T-VB-03-8.0-9.0_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

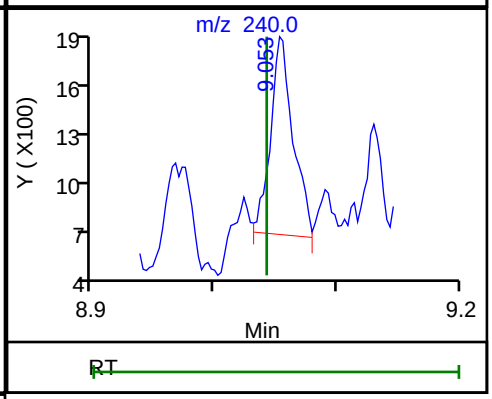
$ 24 Terphenyl-d14, CAS: 1718-51-0

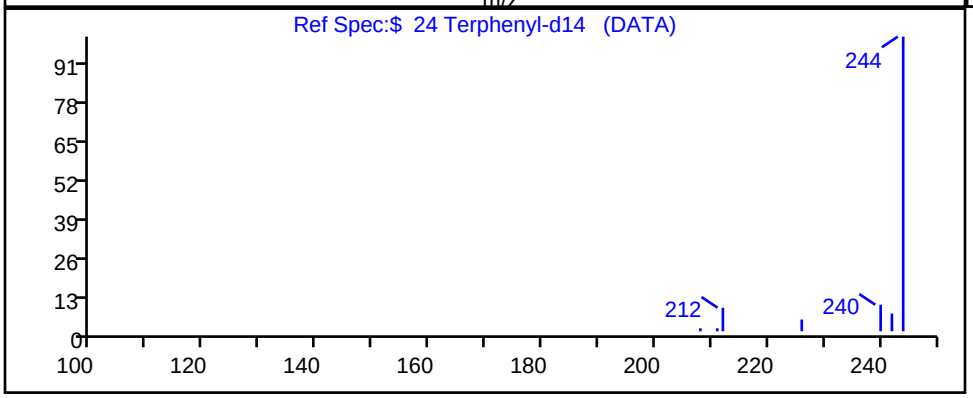
Processing Results











RT	Mass	Response	Amount
9.04	244.00	2166	0.008363
9.05	240.00	1568	

Reviewer: cochranj, 31-Aug-2019 13:15:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-11.2-12_20190717 Lab Sample ID: 580-87761-17

Matrix: Solid Lab File ID: 580-87761-b-17-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:00

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 14.71(g) Date Analyzed: 08/29/2019 18:50

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 31.6 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	260		150	21
91-57-6	2-Methylnaphthalene	430		300	30
83-32-9	Acenaphthene	1700		30	14
208-96-8	Acenaphthylene	340		30	7.5
120-12-7	Anthracene	1200		30	24
56-55-3	Benzo[a]anthracene	2800		30	12
50-32-8	Benzo[a]pyrene	3800		30	11
205-99-2	Benzo[b]fluoranthene	3200		30	15
192-97-2	Benzo[e]pyrene	2200		30	10
191-24-2	Benzo[g,h,i]perylene	3000		30	18
207-08-9	Benzo[k]fluoranthene	1300		30	14
STL00905	C1-Chrysenes	840		30	7.8
STL00909	C1-Dibenzothiophenes	550		30	19
STL00912	C1-Fluoranthenes/pyrene	2400		30	16
STL00913	C1-Fluorenes	480		30	17
STL00916	C1-Naphthalenes	440		300	24
STL00901	C1-Phenanthrenes/Anthracenes	2400		60	33
STL00906	C2-Chrysenes	380		30	9.2
STL00910	C2-Dibenzothiophenes	560		30	28
STL00968	C2-Fluoranthenes/Pyrene	700		30	13
STL00914	C2-Fluorenes	620		60	36
STL00917	C2-Naphthalenes	900		60	23
STL00902	C2-Phenanthrenes/Anthracenes	1500		120	73
STL00907	C3-Chrysenes	250		30	9.0
STL00911	C3-Dibenzothiophenes	410		60	33
STL00969	C3-Fluoranthenes/Pyrene	410		30	16
STL00915	C3-Fluorenes	560		60	32
STL00918	C3-Naphthalenes	1200		60	29
STL00903	C3-Phenanthrenes/Anthracenes	840		60	47
STL00908	C4-Chrysenes	180		30	10
STL00967	C4-Dibenzothiophenes	250		30	28
STL01791	C4-Fluoranthenes/Pyrene	260		30	11
STL00919	C4-Naphthalenes	850		120	62

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-11.2-12_20190717 Lab Sample ID: 580-87761-17

Matrix: Solid Lab File ID: 580-87761-b-17-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:00

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 14.71(g) Date Analyzed: 08/29/2019 18:50

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 31.6 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	560	AP	60	56
218-01-9	Chrysene	3100		30	11
53-70-3	Dibenz(a,h)anthracene	340		30	17
132-65-0	Dibenzothiophene	1100		30	10
86-73-7	Fluorene	1000		30	14
193-39-5	Indeno[1,2,3-cd]pyrene	2200		30	21
91-20-3	Naphthalene	1300		600	55
198-55-0	Perylene	1100		30	6.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D
Lims ID: 580-87761-B-17-A
Client ID: 22T-VB-03-11.2-12_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 18:50:30 ALS Bottle#: 10 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-018
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 10:50:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	207048	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	386661	0.8485	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	85431	0.2861	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	97	49372	0.1736	
11 Acenaphthylene	152	6.216	6.216	0.000	99	84879	0.2253	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	109463	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	323801	1.11	
16 Fluorene	166	6.797	6.793	0.004	100	219248	0.6806	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	357508	0.7646	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	98	195897	0.5000	
19 Phenanthrene	178	7.609	7.603	0.006	100	2858670	5.67	E
20 Anthracene	178	7.648	7.648	0.000	100	344779	0.8193	
22 Fluoranthene	202	8.692	8.687	0.005	99	3307479	6.74	E
23 Pyrene	202	8.914	8.906	0.008	99	4225029	7.31	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	62	854472	1.88	
* 27 Chrysene-d12	240	10.137	10.129	0.008	76	191111	0.5000	
28 Chrysene	228	10.161	10.161	0.000	96	1127583	2.07	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	1164654	2.12	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	521966	0.8391	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	761308	1.48	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	1188623	2.52	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	200890	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	382567	0.7178	
35 Indeno[1,2,3-cd]pyrene	276	13.159	13.150	0.009	85	837871	1.44	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	39	113652	0.2308	
37 Benzo[g,h,i]perylene	276	13.517	13.508	0.009	99	1078764	1.99	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	133870	0.2938	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	273543	0.6002	
A 40 C3-Naphthalenes	170	6.555	(6.323-6.820)		0	369878	0.8116	
A 41 C4-Naphthalenes	184	6.947	(6.483-7.421)		0	259442	0.5693	
A 42 C1-Fluorenes	180	7.301	(7.219-7.413)		0	103171	0.3202	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	133140	0.4133	
A 44 C3-Fluorenes	208	8.242	(7.989-8.454)		0	120216	0.3732	
A 45 C1-Dibenzothiophenes	198	7.950	(7.827-8.065)		0	172367	0.3686	
A 46 C2-Dibenzothiophenes	212	8.328	(8.209-8.703)		0	174821	0.3739	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	128851	0.2756	
A 48 C4-Dibenzothiophenes	240	9.056	(8.814-9.591)		0	78527	0.1679	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	814536	1.61	
A 50 C2-Phenanthrenes/Anthracen	206	8.554	(8.358-8.785)		0	511997	1.01	
A 51 C3-Phenanthrenes/Anthracen	220	8.999	(8.747-9.260)		0	284616	0.5641	
A 52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	189509	0.3756	
A 53 C1-Fluoranthenes/pyrene	216	9.313	(9.112-9.500)		0	932664	1.61	
A 54 C2-Fluoranthenes/Pyrene	230	9.807	(9.587-10.039)		0	273249	0.4725	
A 55 C3-Fluoranthenes/Pyrene	244	10.241	(10.043-10.519)		0	158396	0.2739	
A 56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	101573	0.1756	
A 57 C1-Chrysenes	242	10.623	(10.512-10.741)		0	307211	0.5653	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	136743	0.2516	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	90235	0.1660	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	64393	0.1185	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

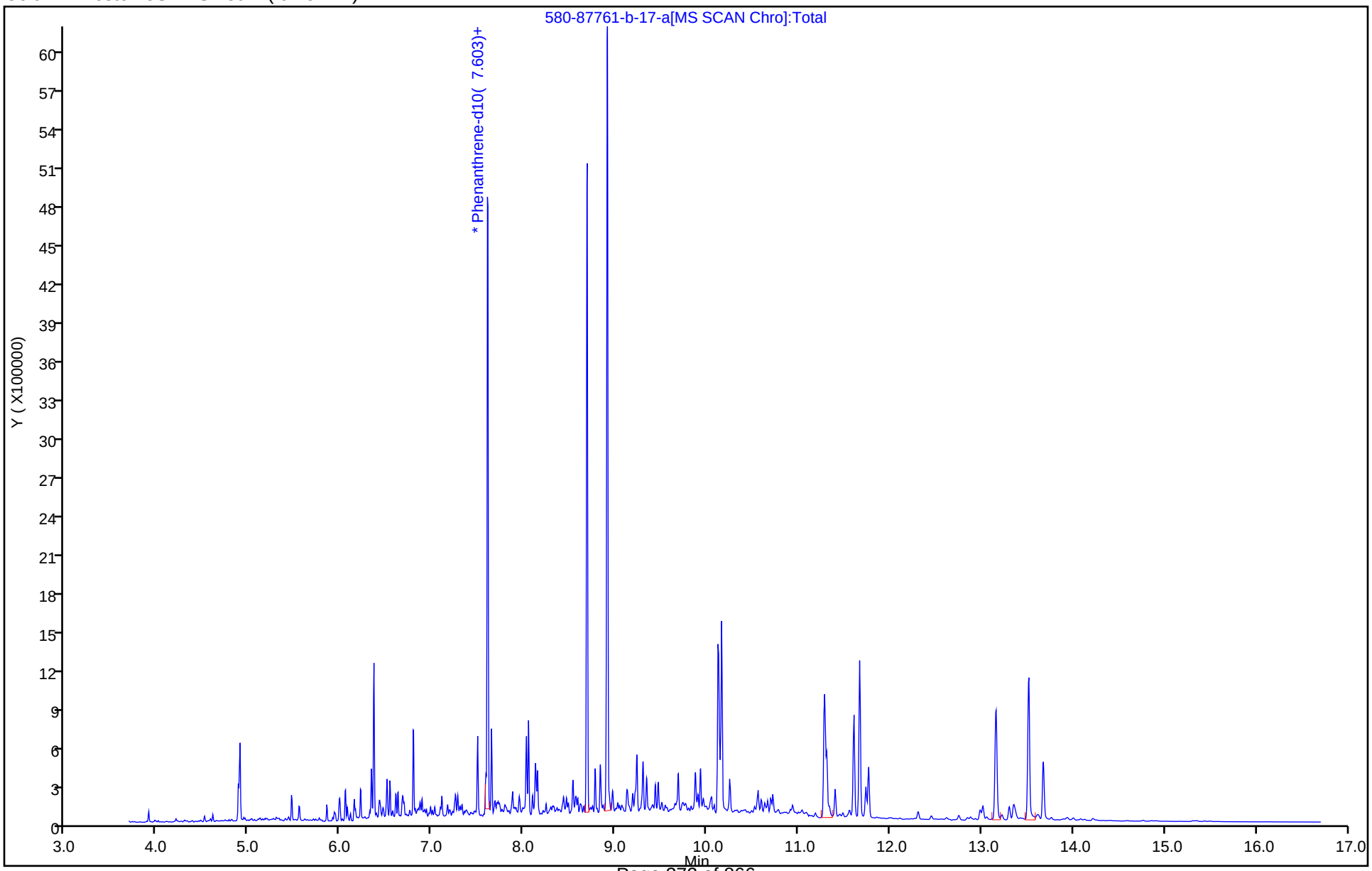
Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D

Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17	Worklist Smp#:	18
Client ID:	22T-VB-03-11.2-12_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	10
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

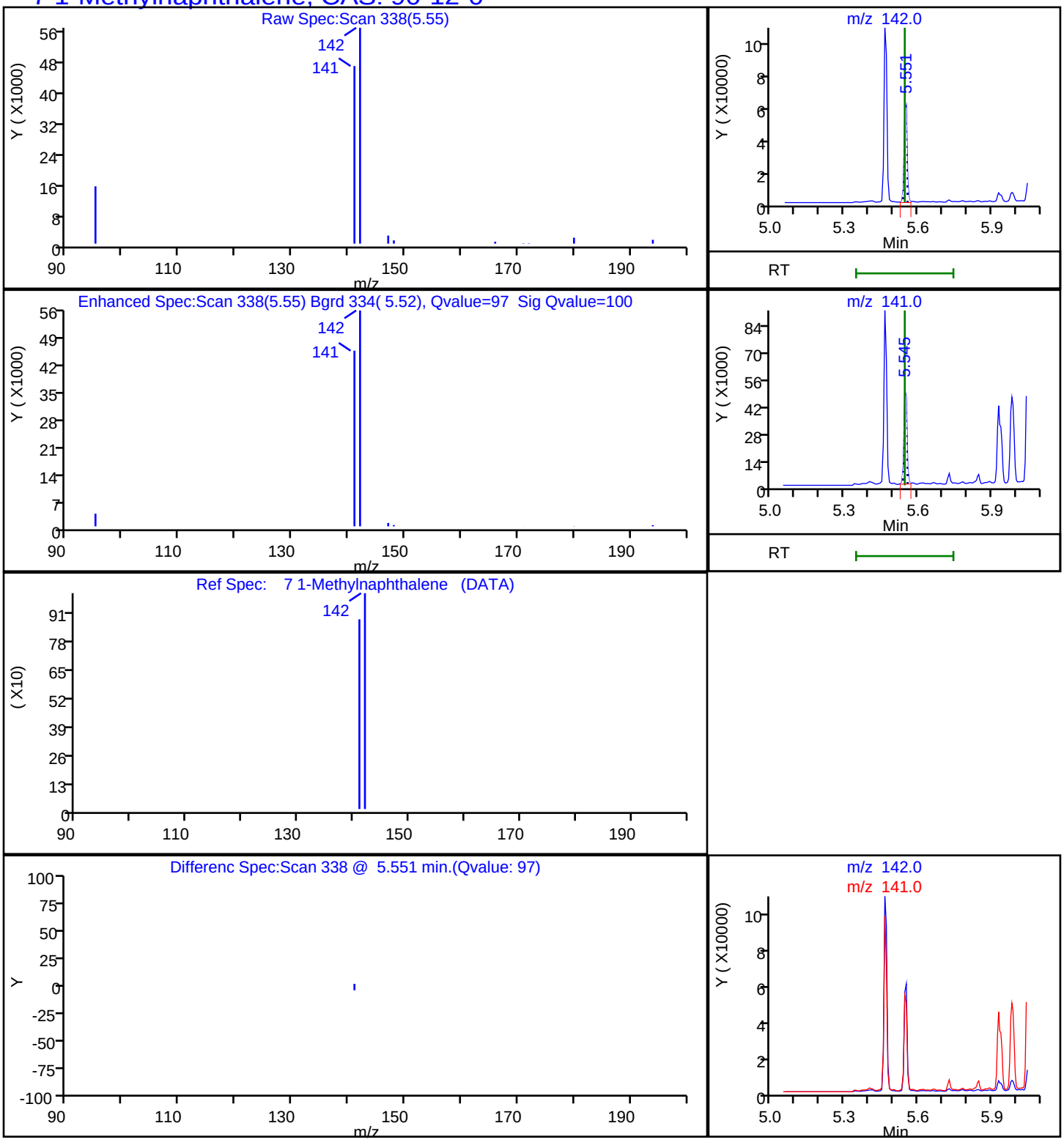


Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

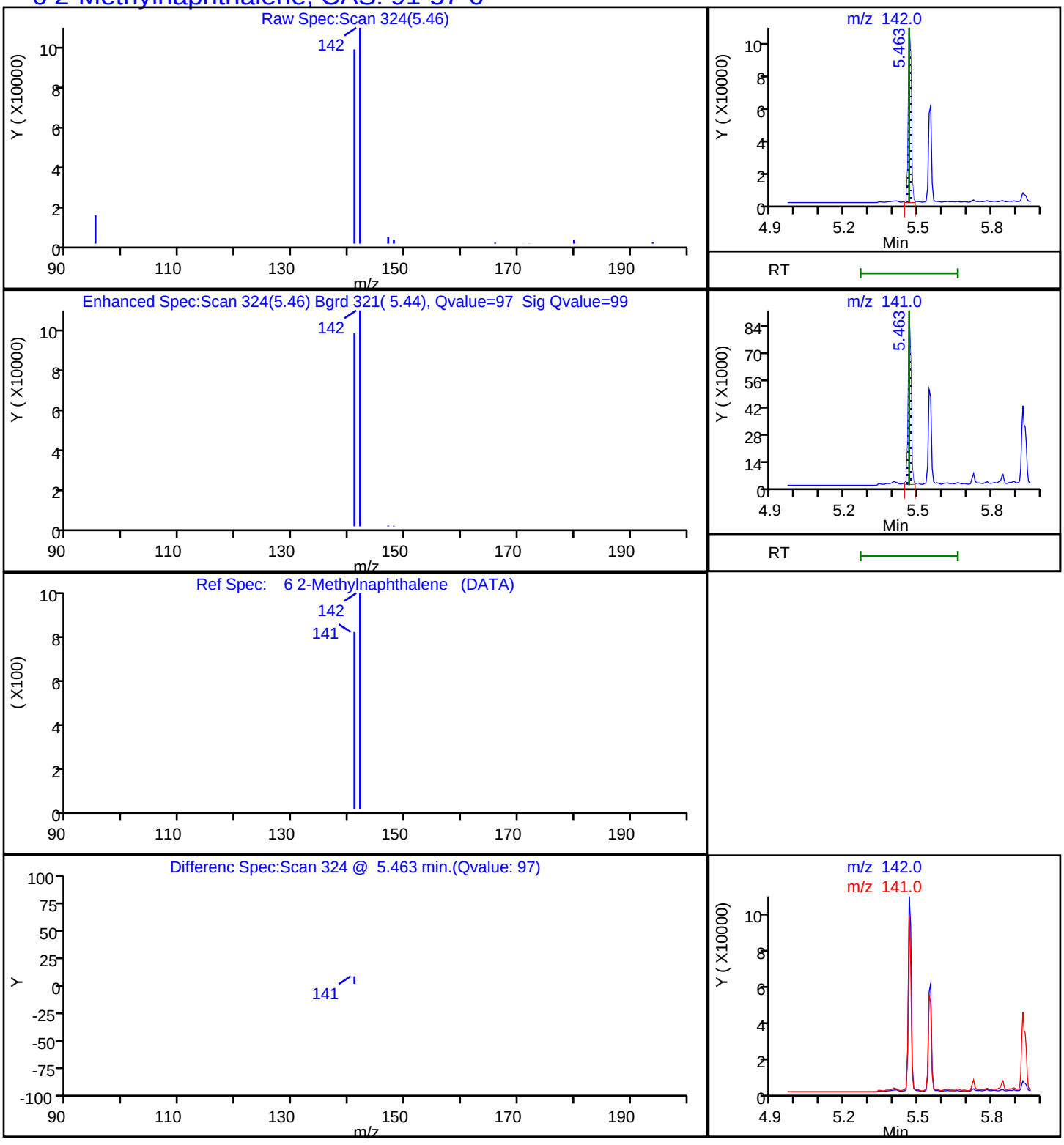


Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

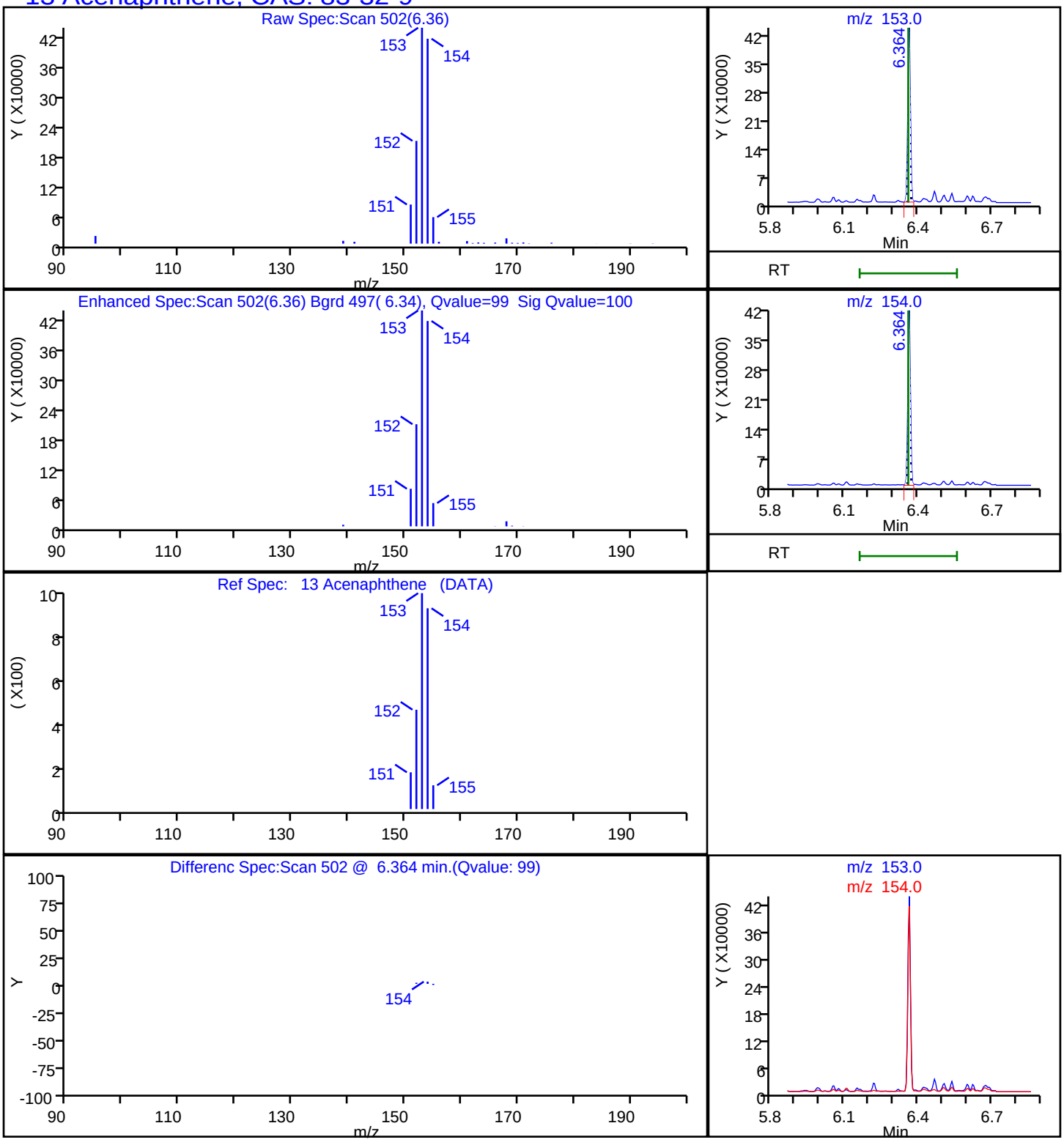


Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9



Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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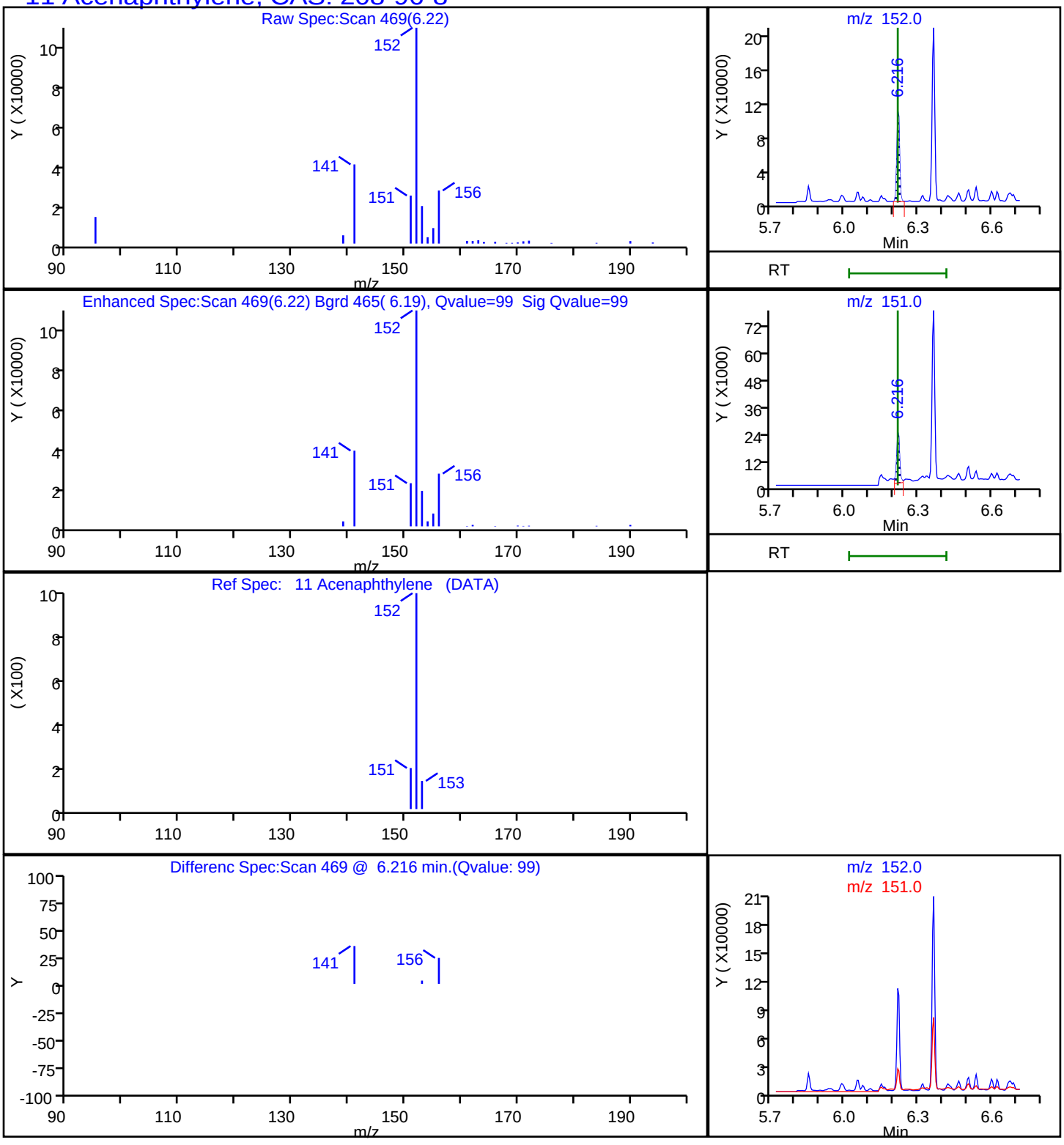
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8



Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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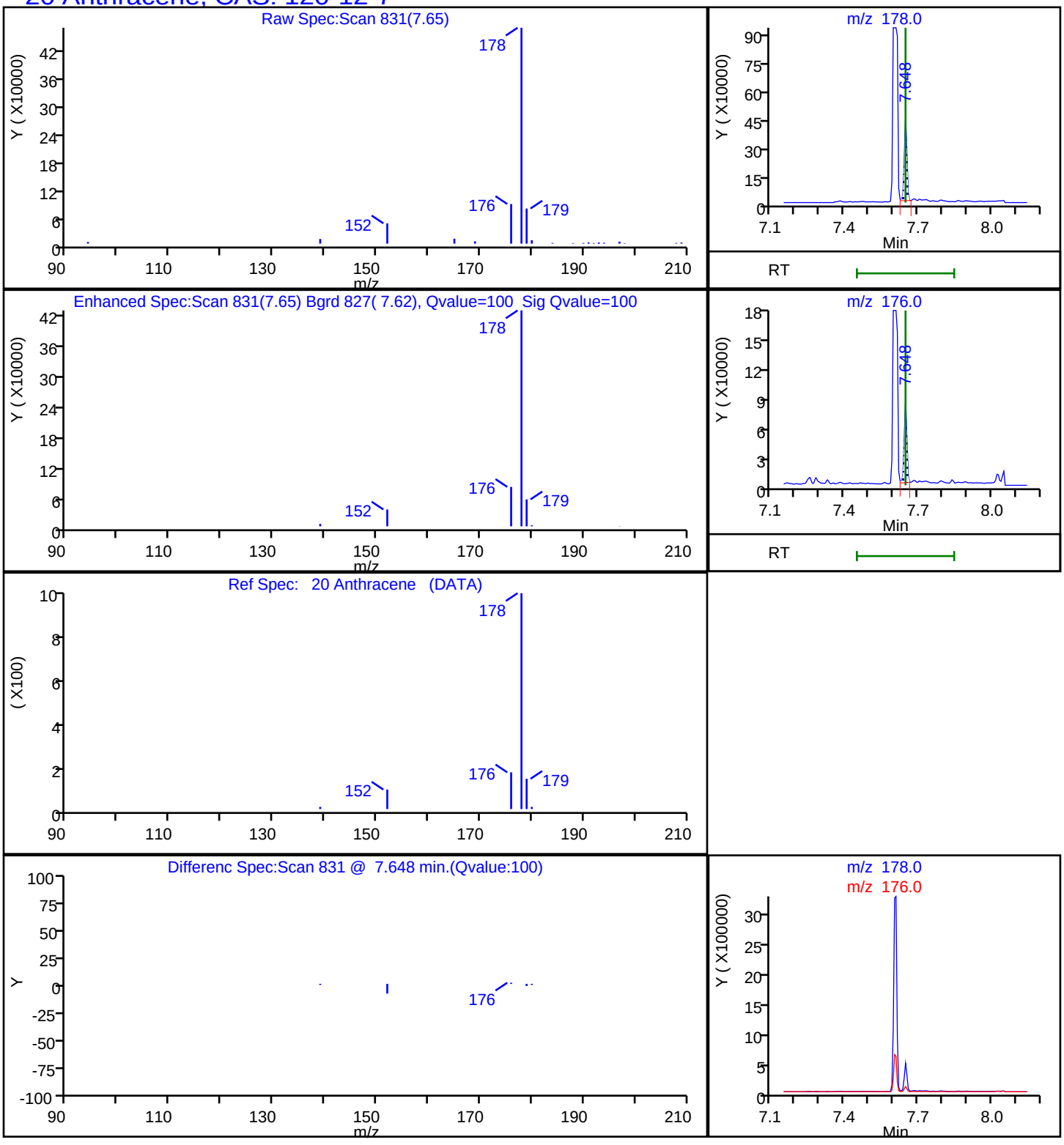
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7



Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D

Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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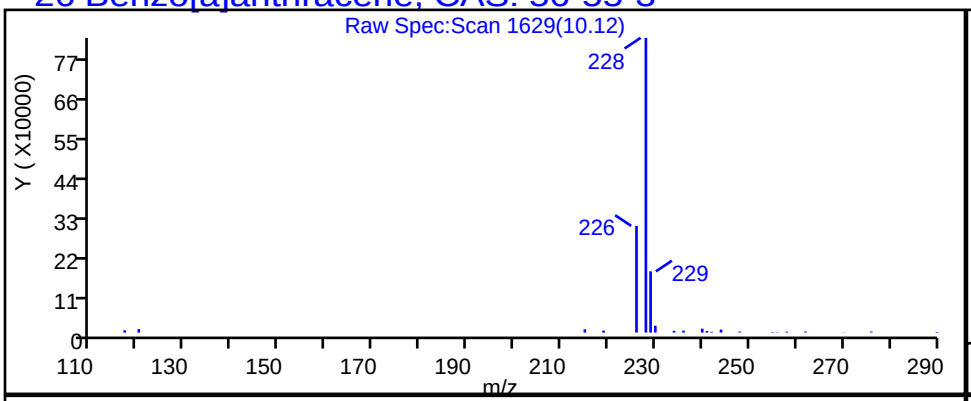
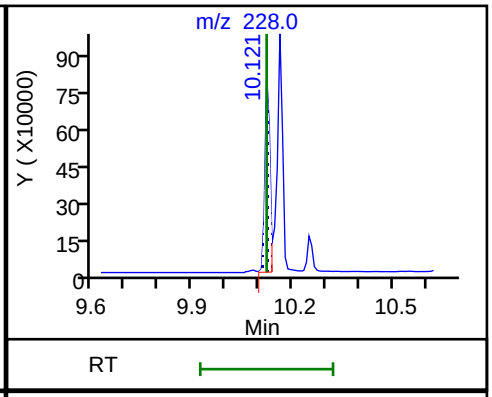
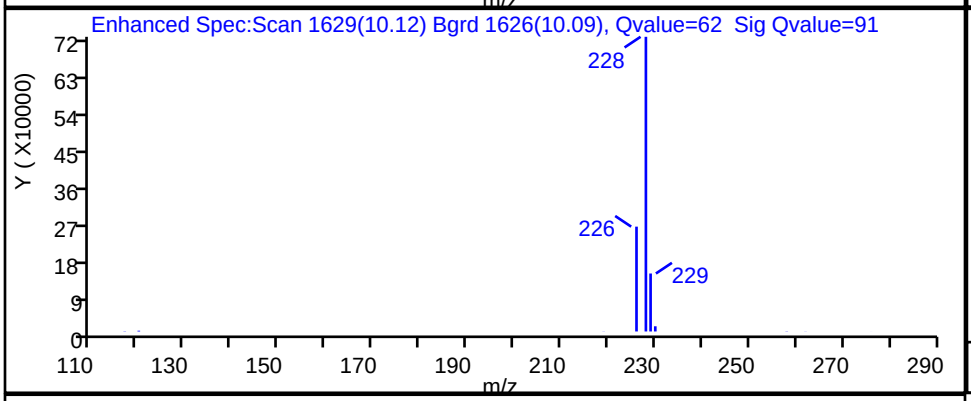
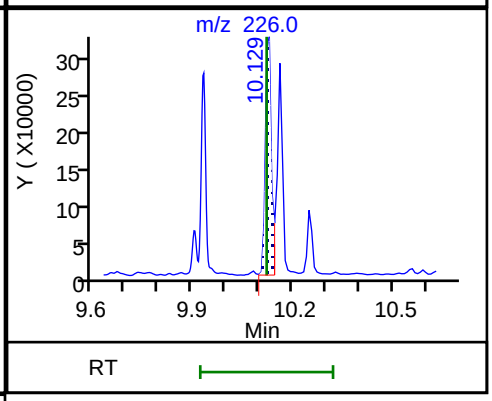
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

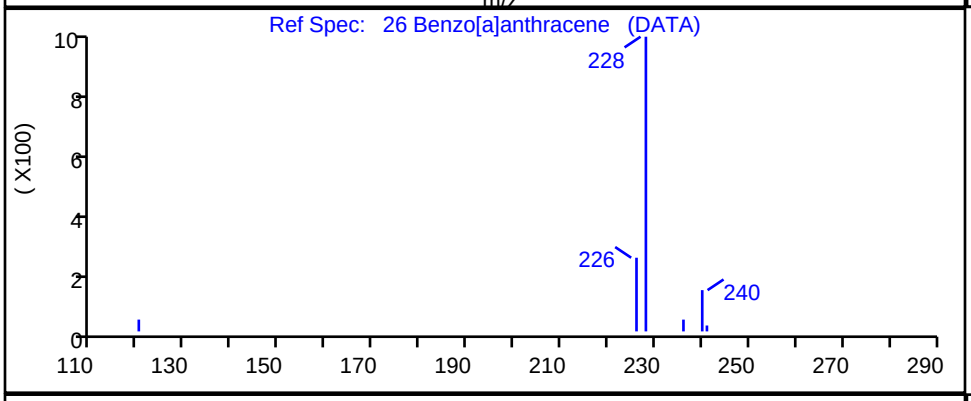
26 Benzo[a]anthracene, CAS: 56-55-3

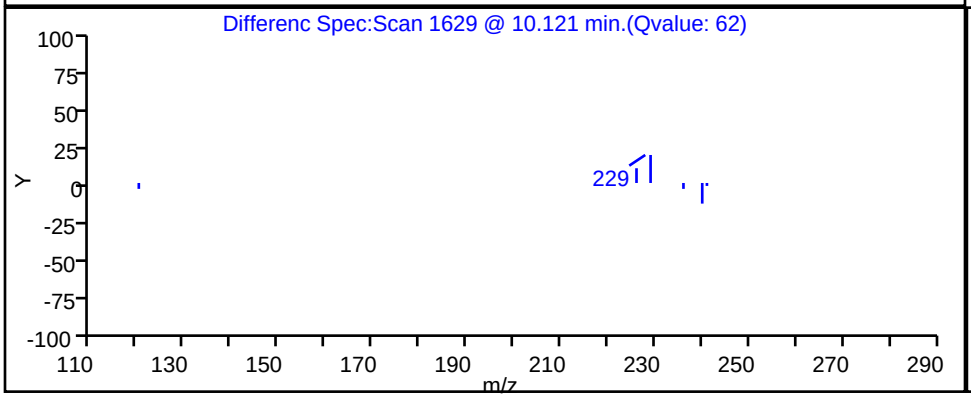


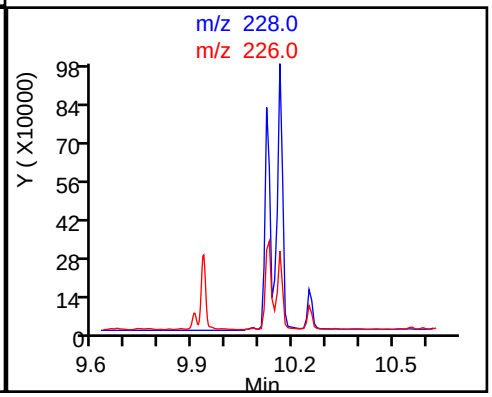










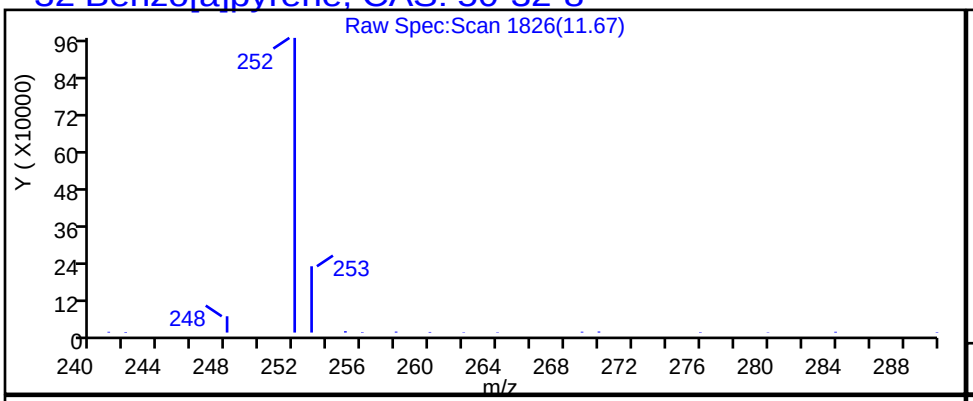


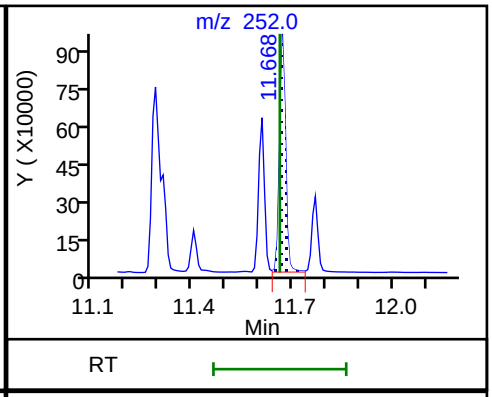
Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

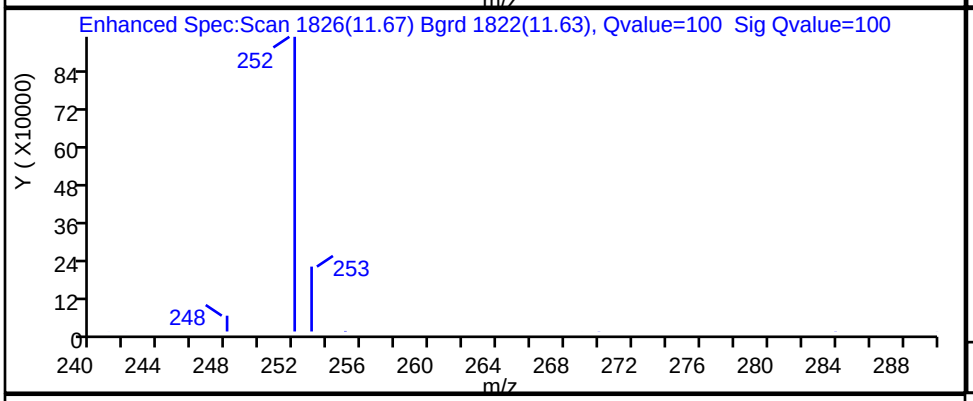
Eurofins TestAmerica, Knoxville

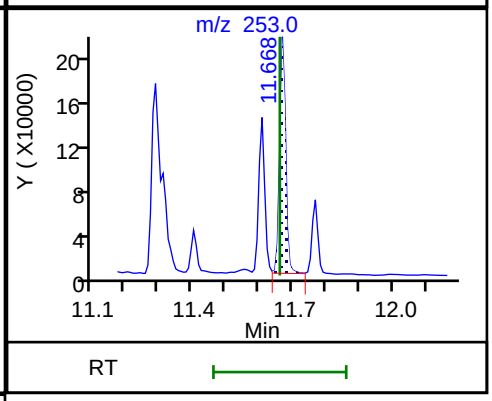
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

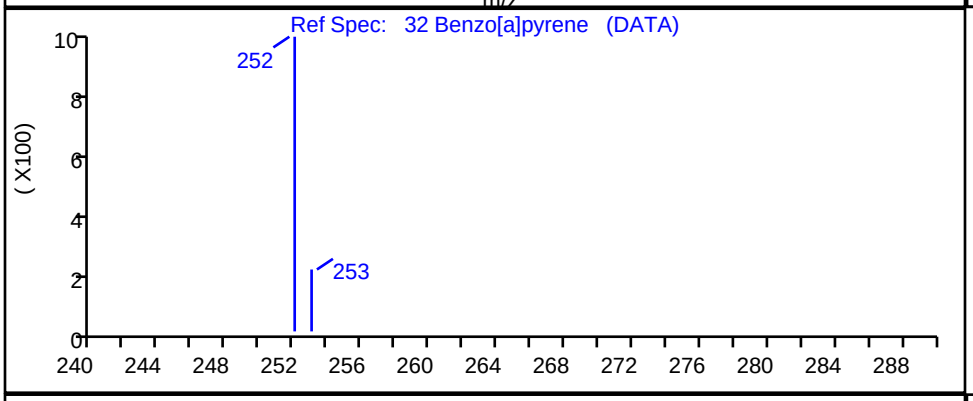
32 Benzo[a]pyrene, CAS: 50-32-8

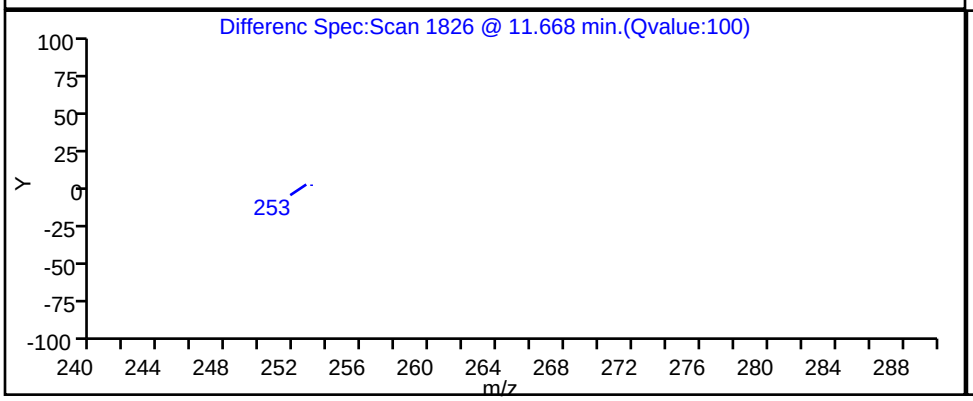


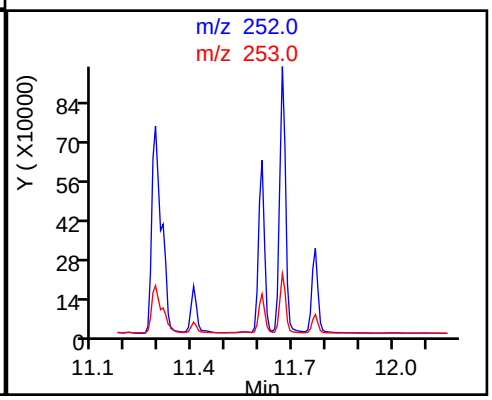












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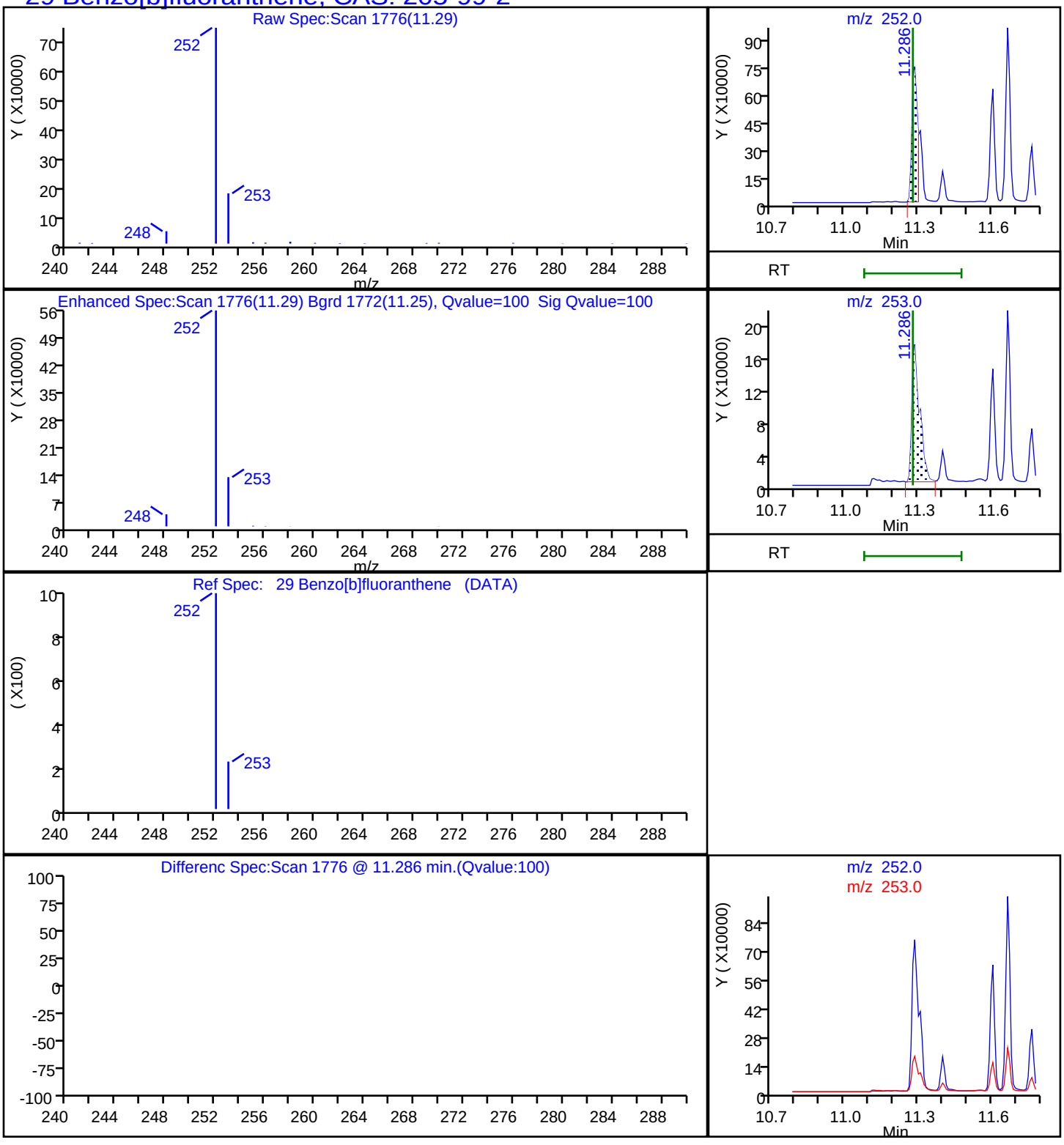
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



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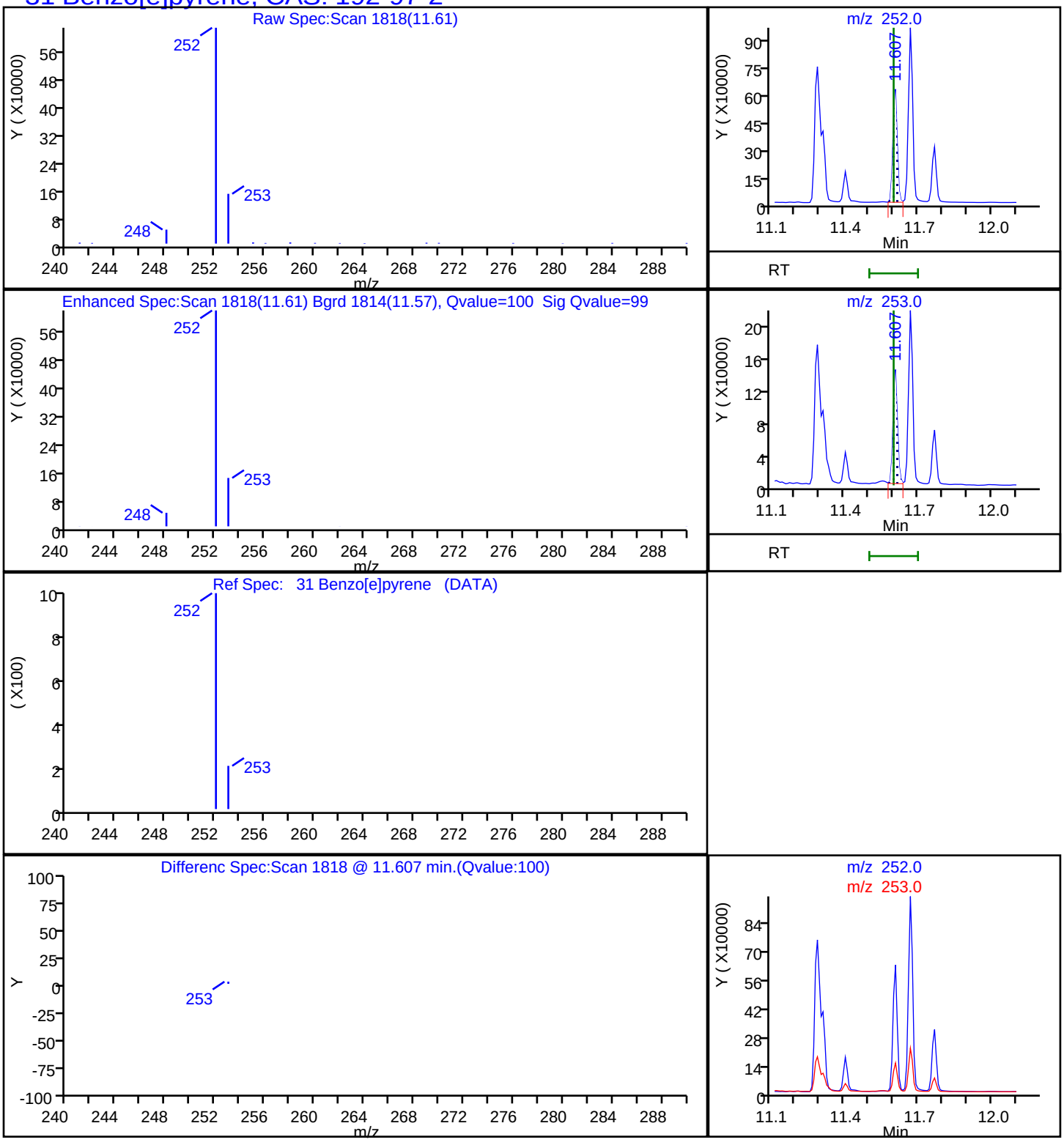
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



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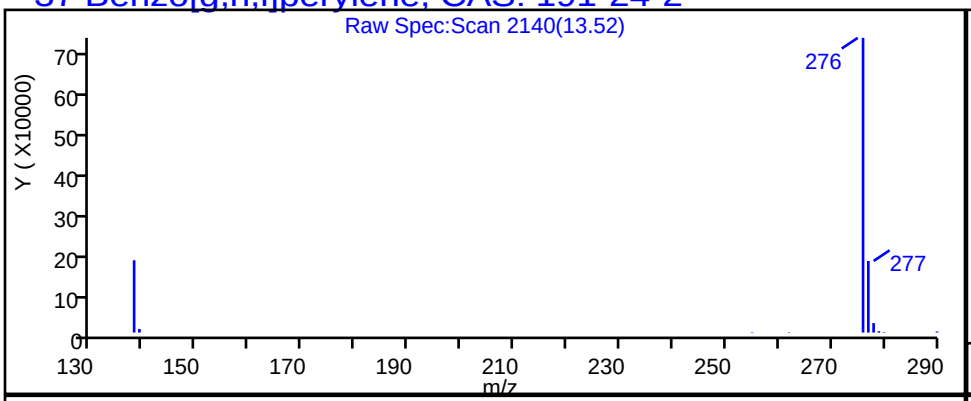
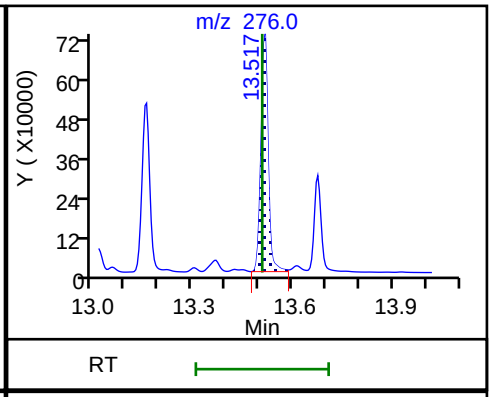
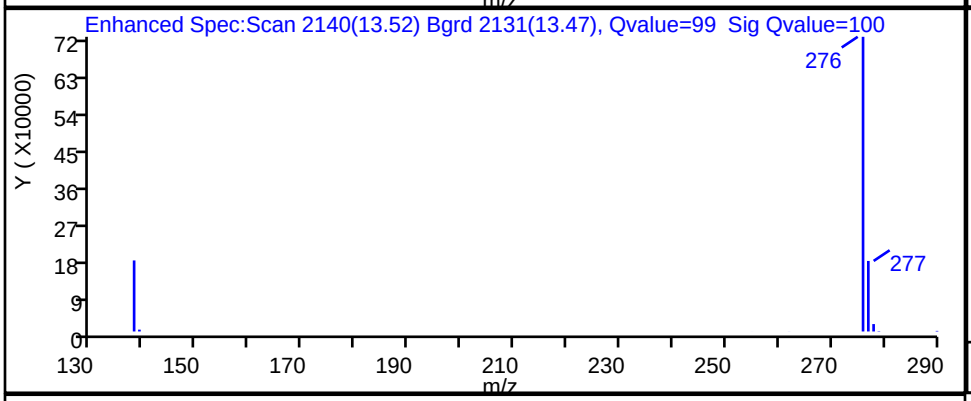
Eurofins TestAmerica, Knoxville

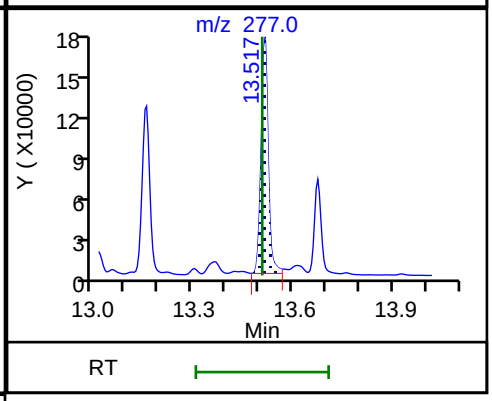
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

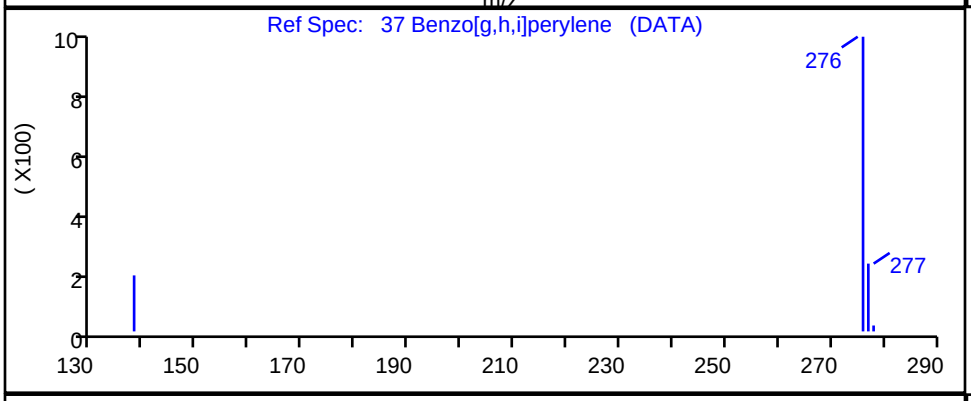
37 Benzo[g,h,i]perylene, CAS: 191-24-2

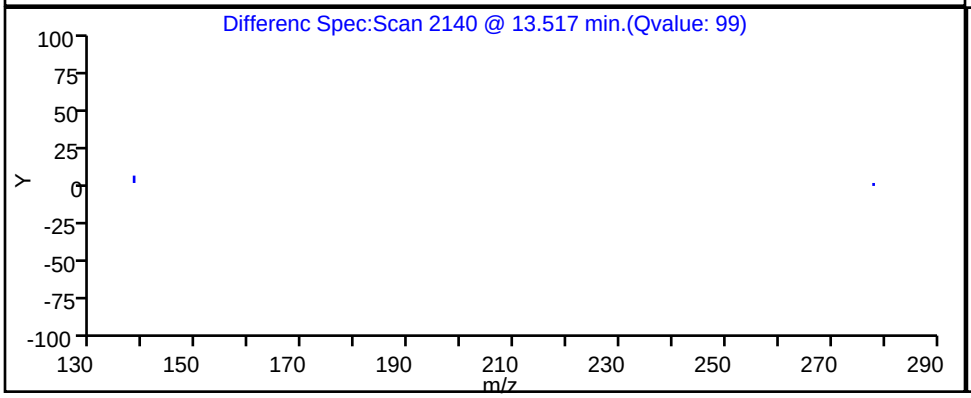


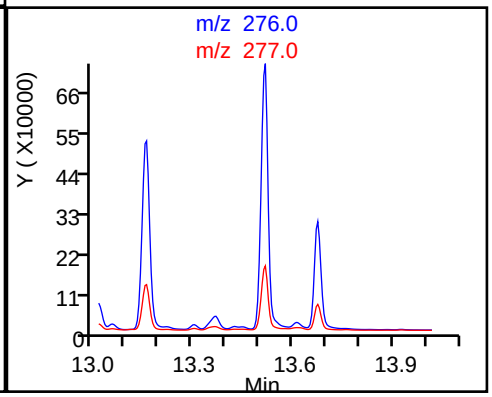












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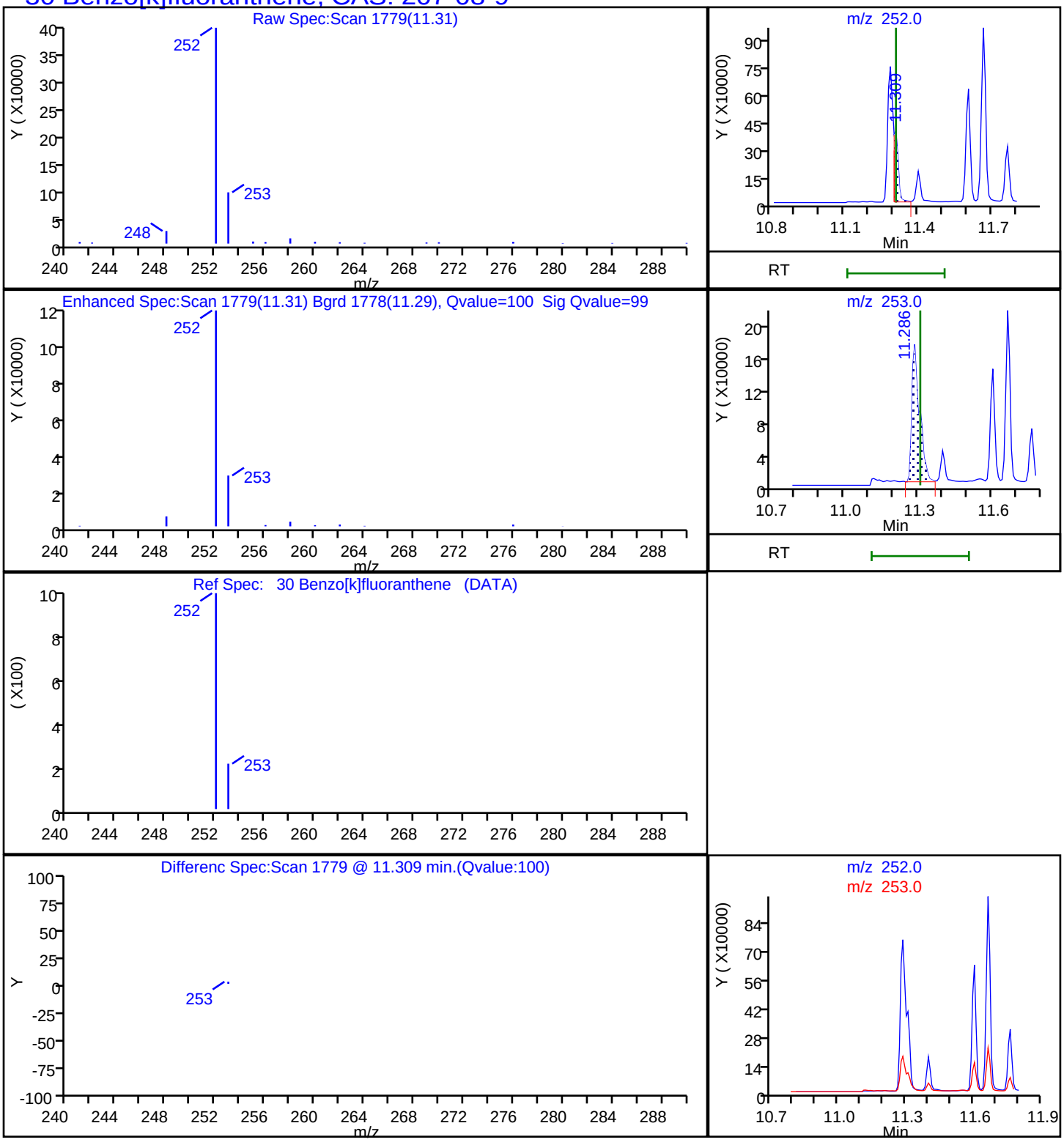
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



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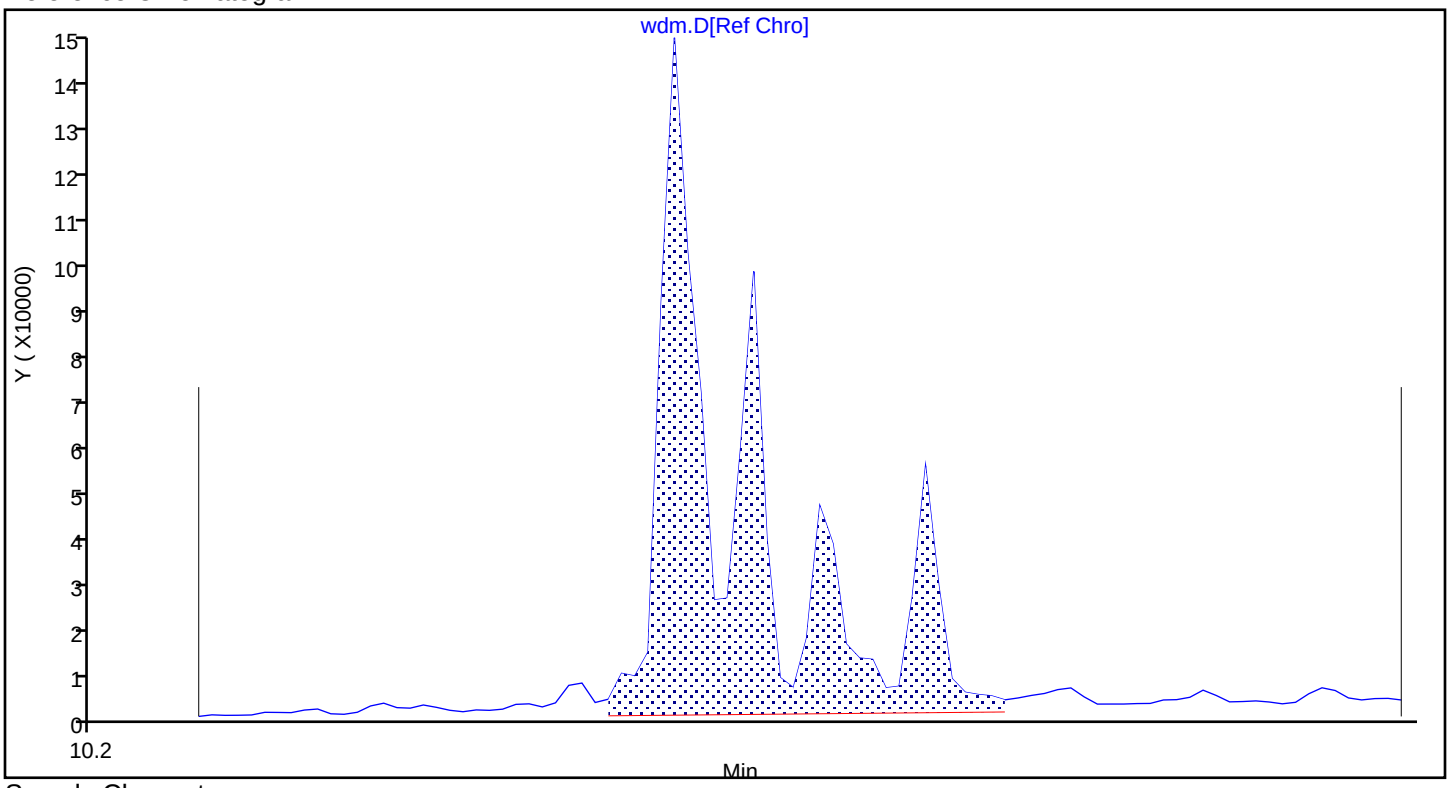
Eurofins TestAmerica, Knoxville

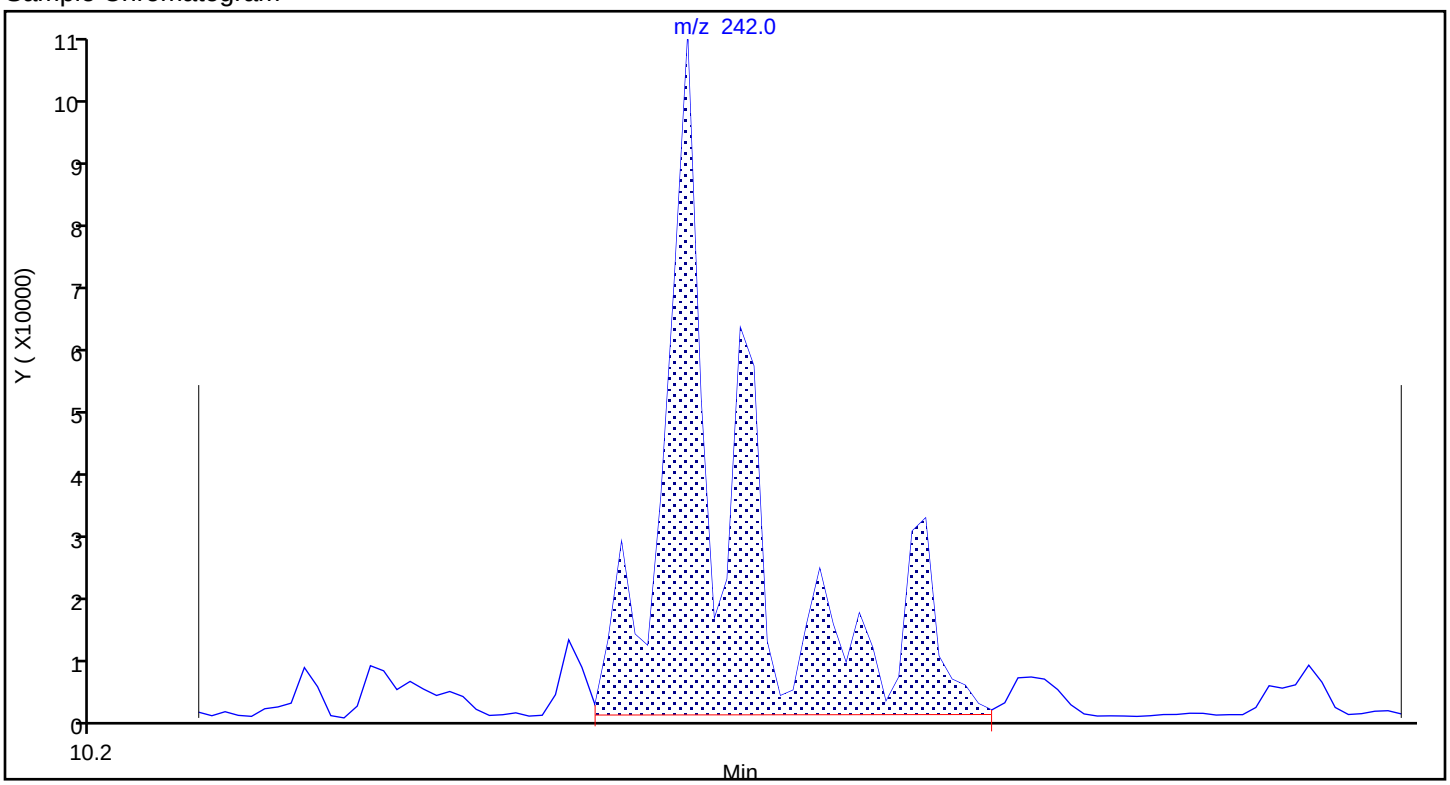
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



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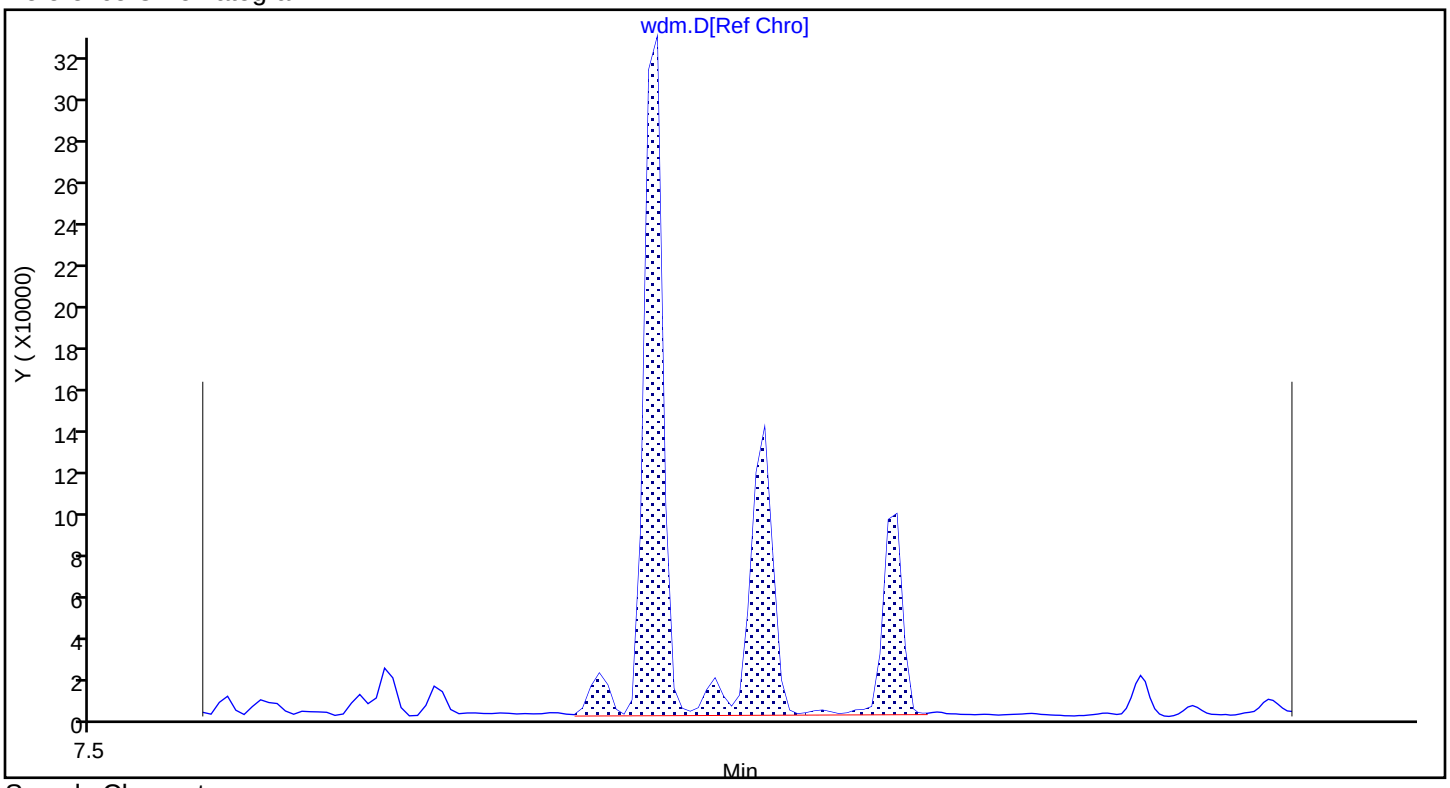
Eurofins TestAmerica, Knoxville

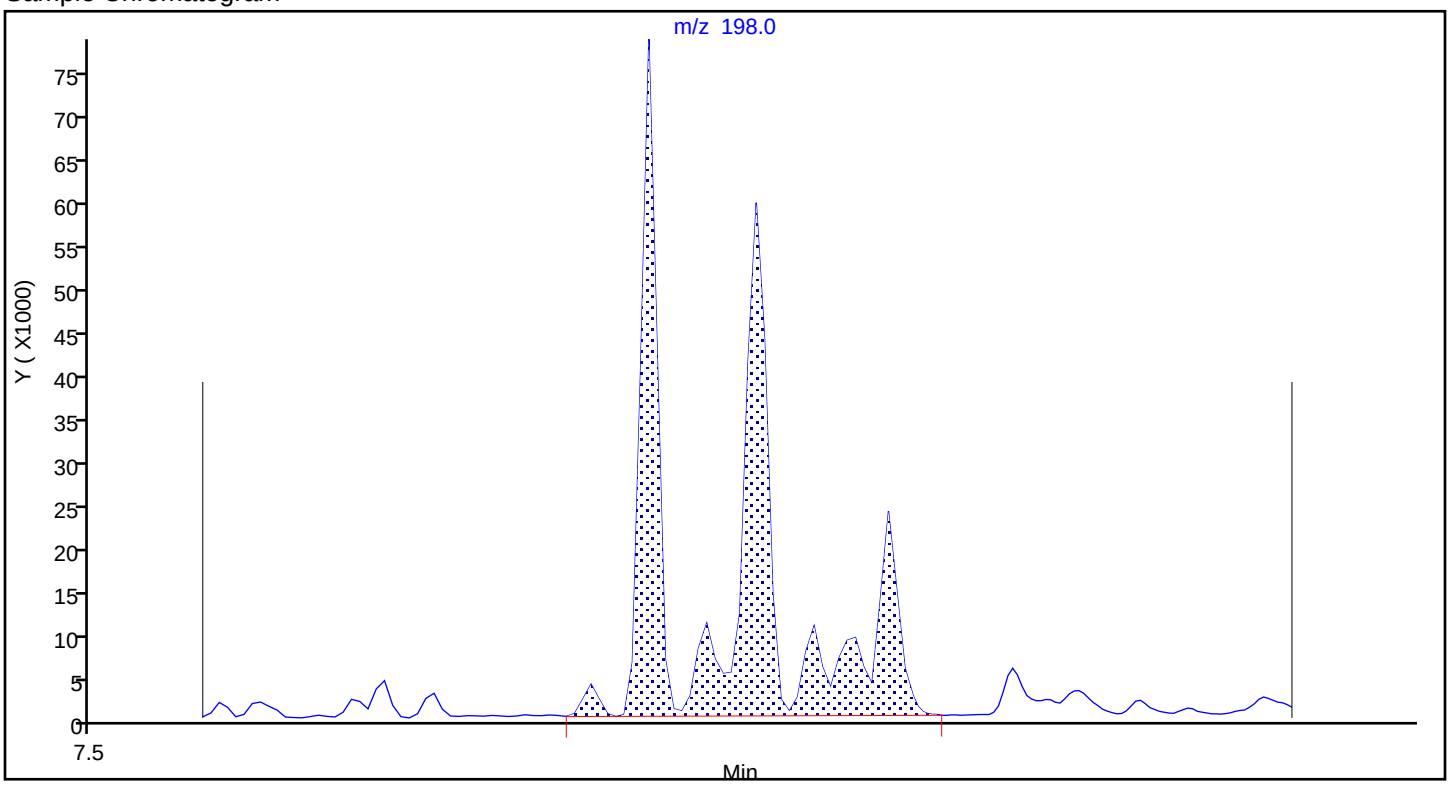
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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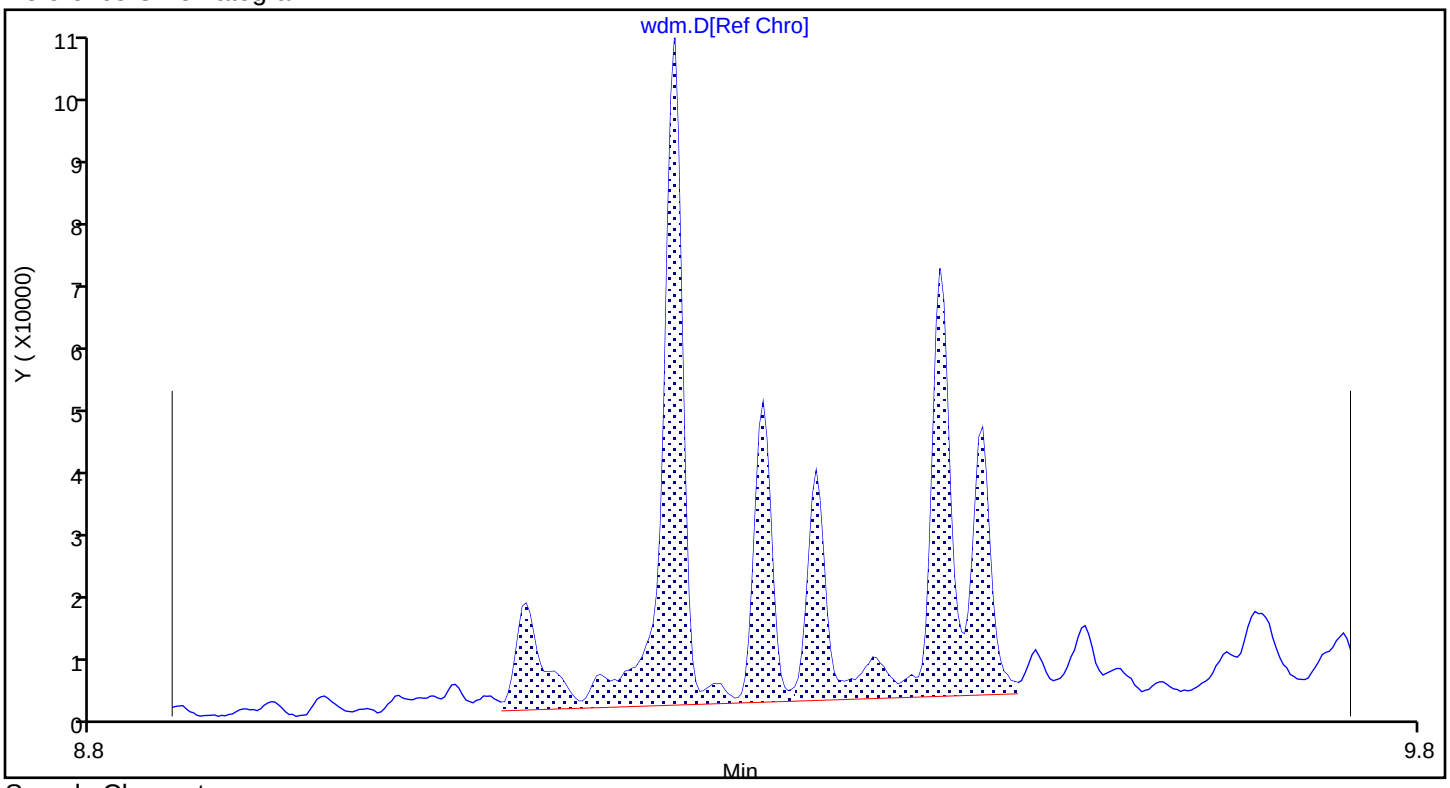
Eurofins TestAmerica, Knoxville

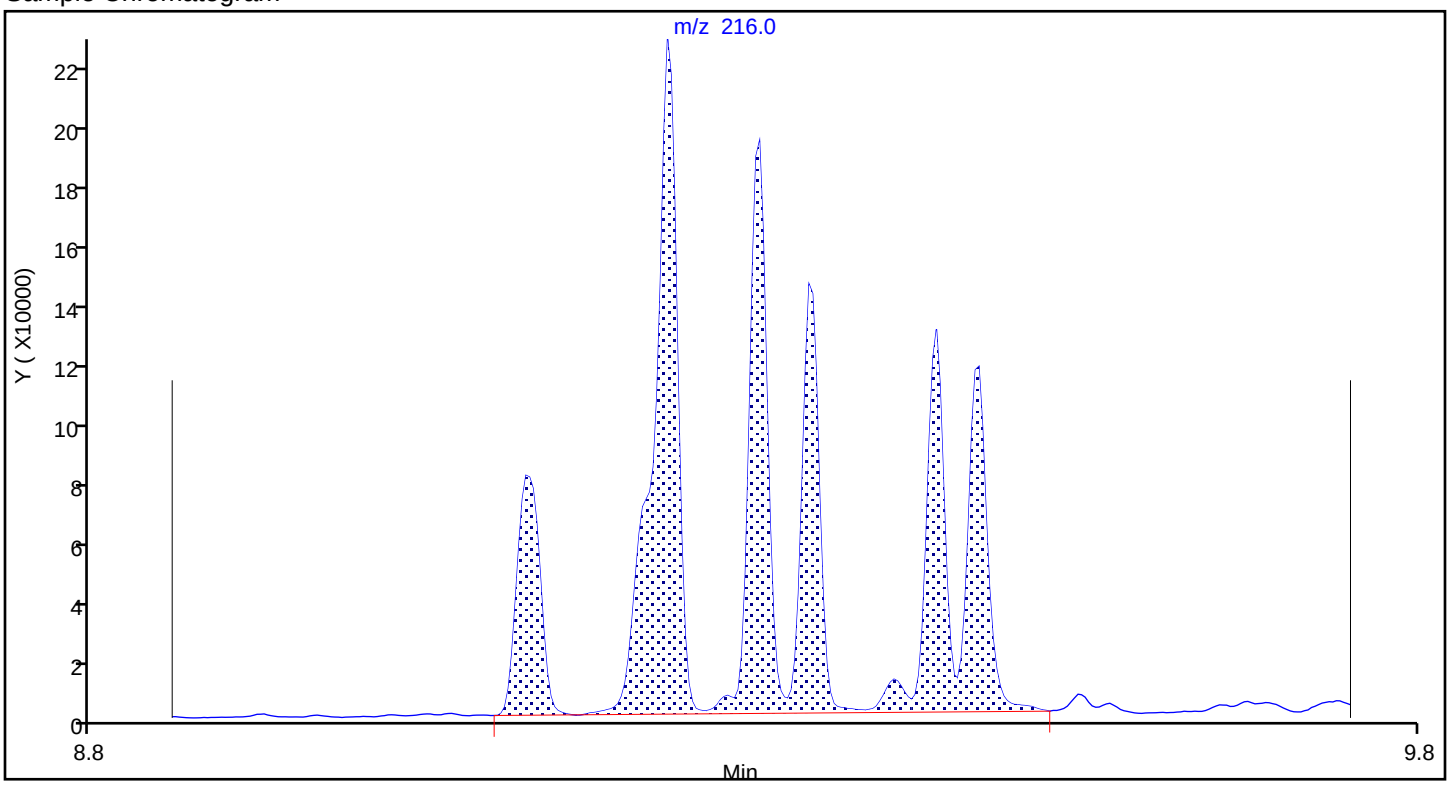
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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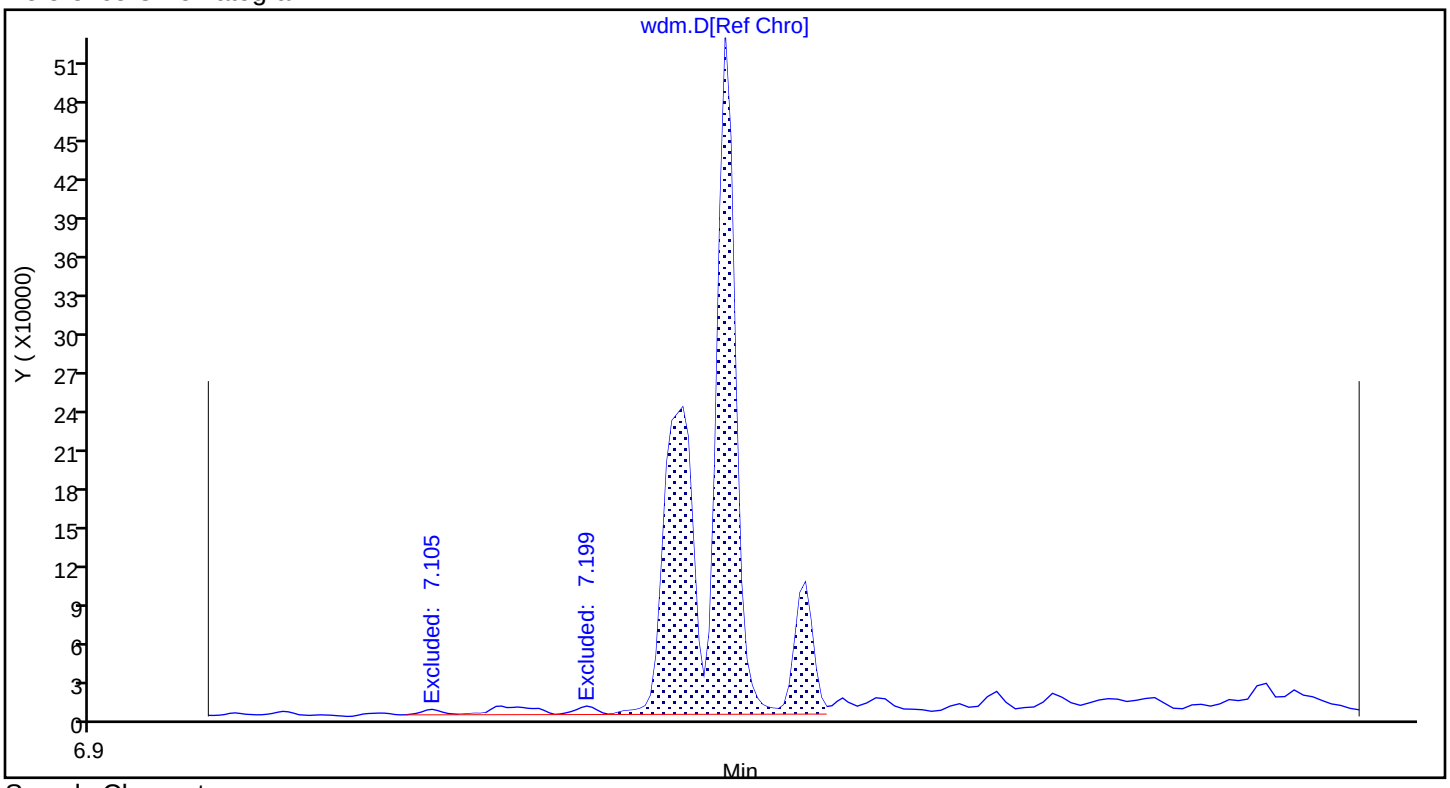
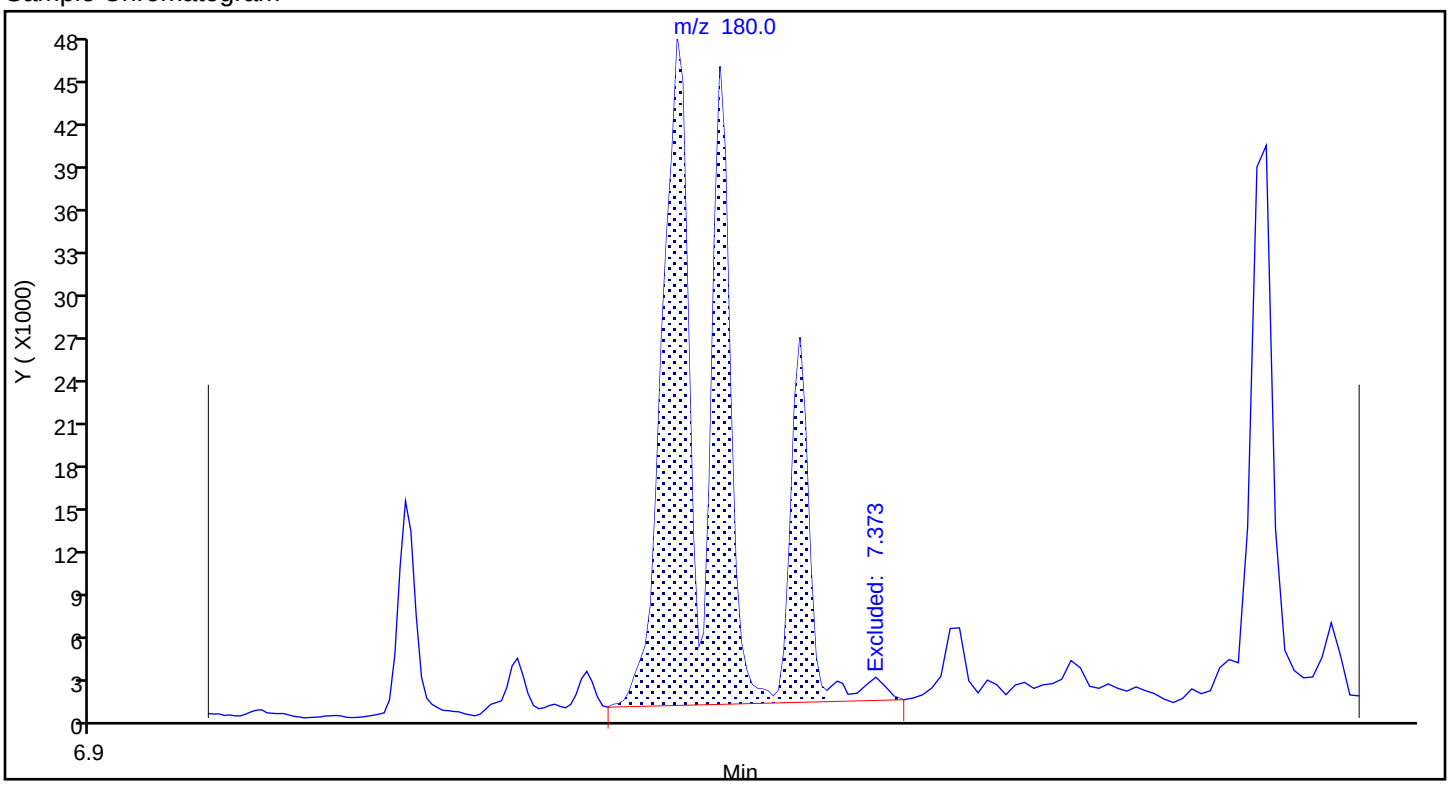
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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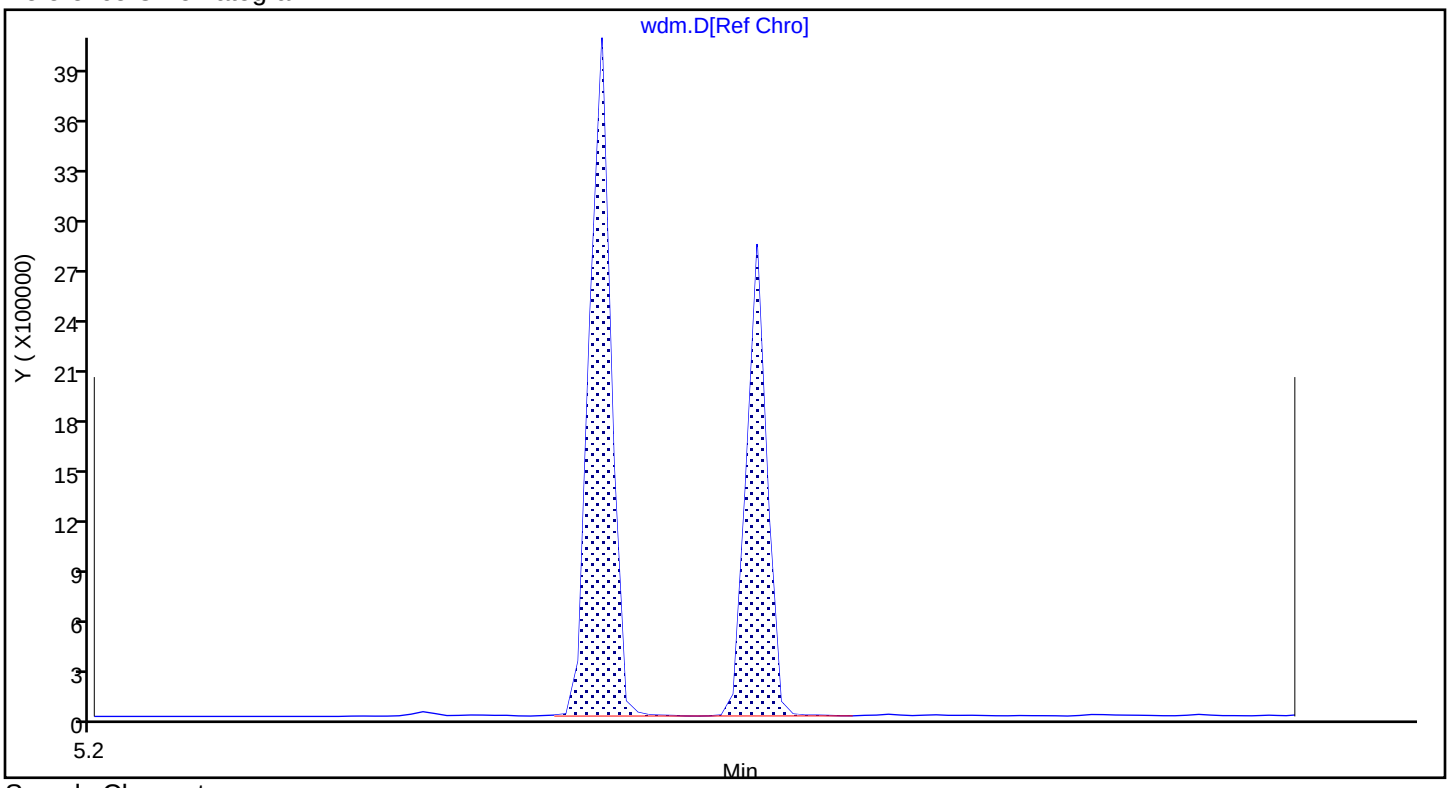
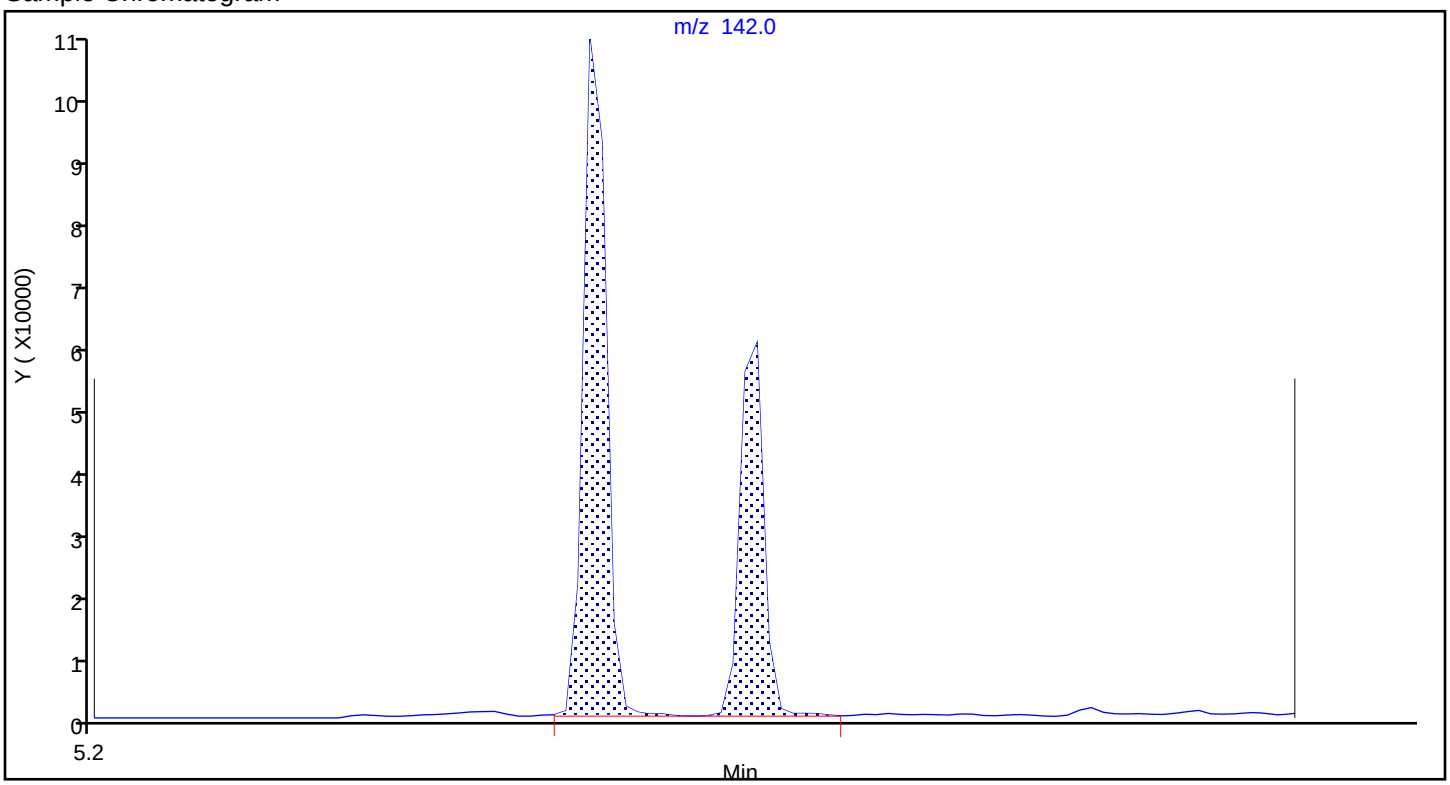
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



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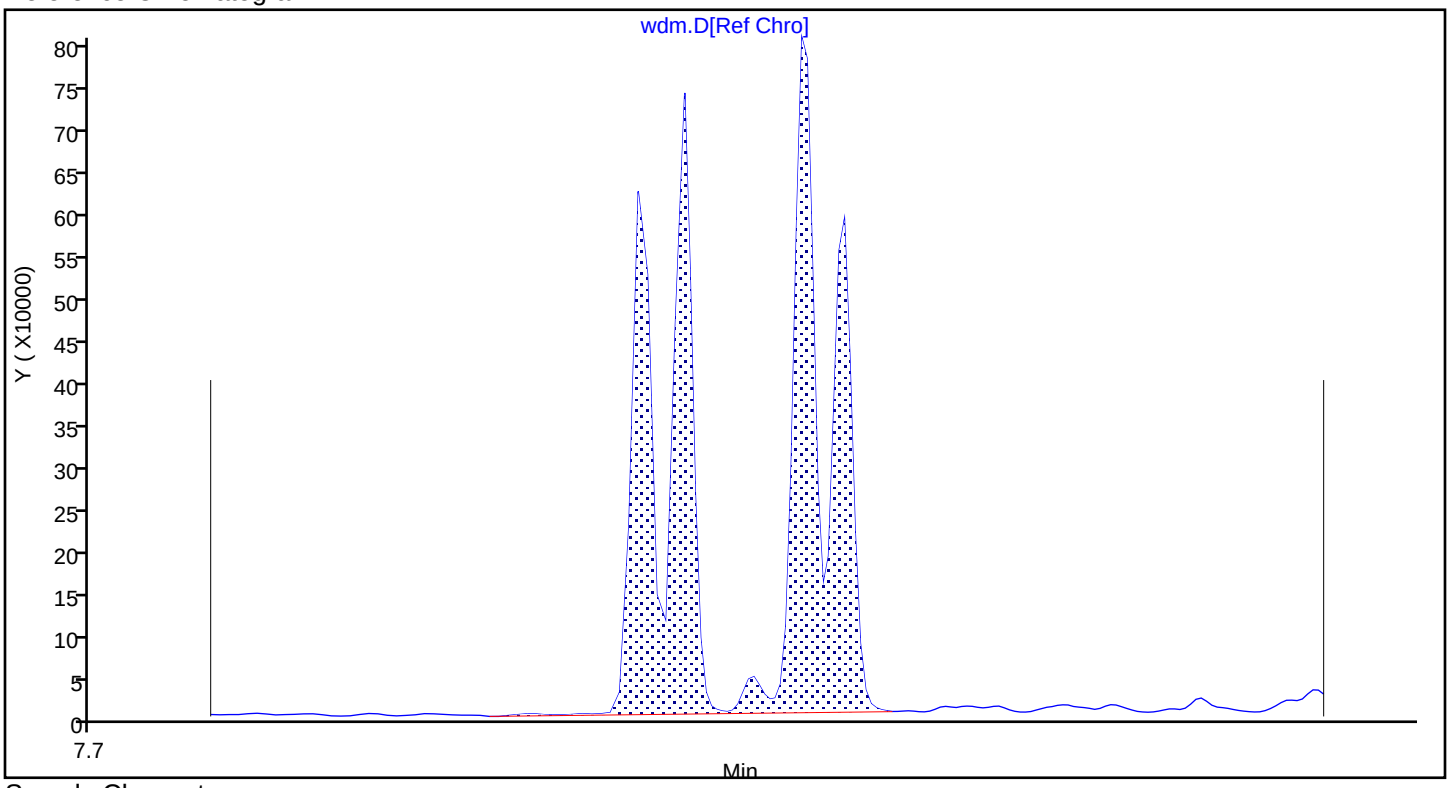
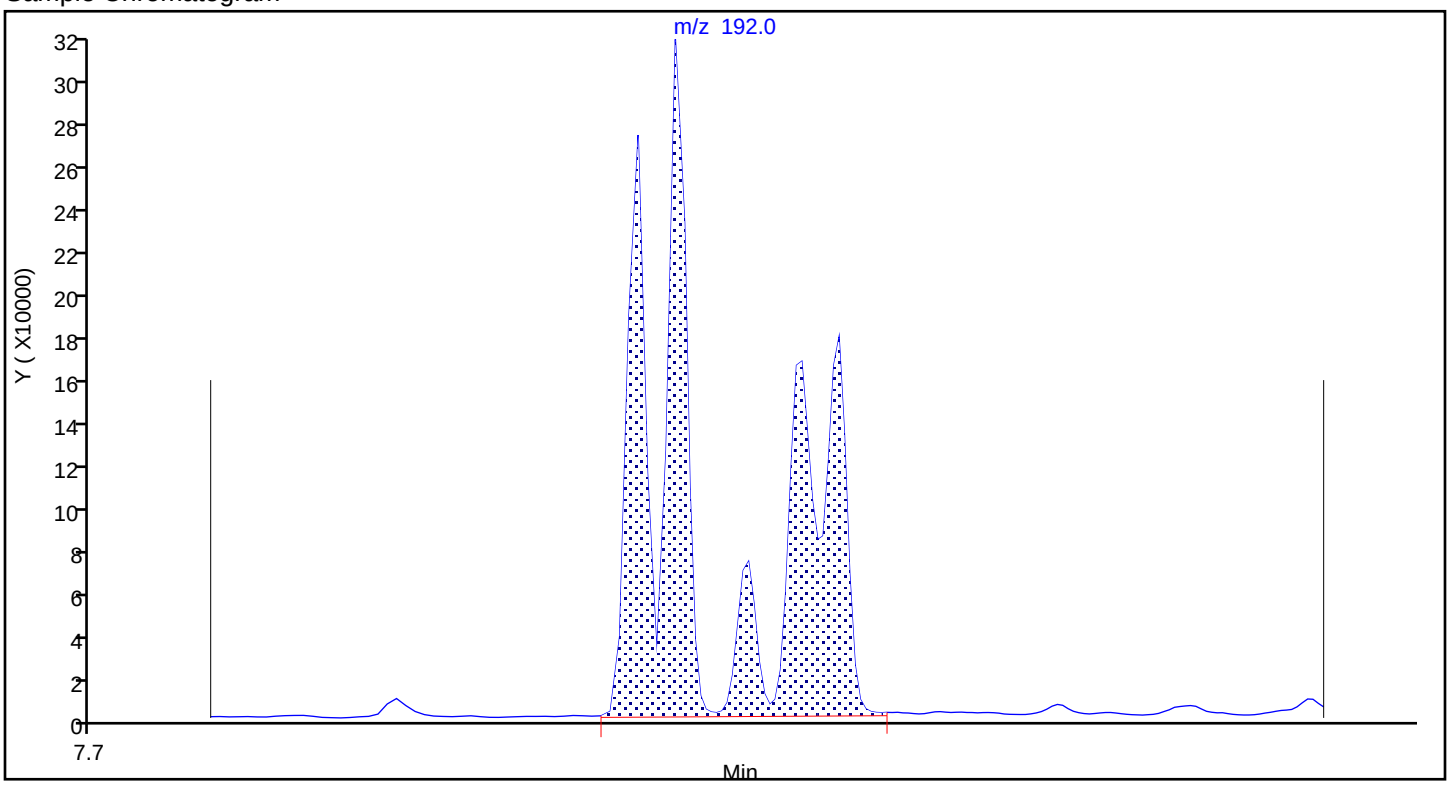
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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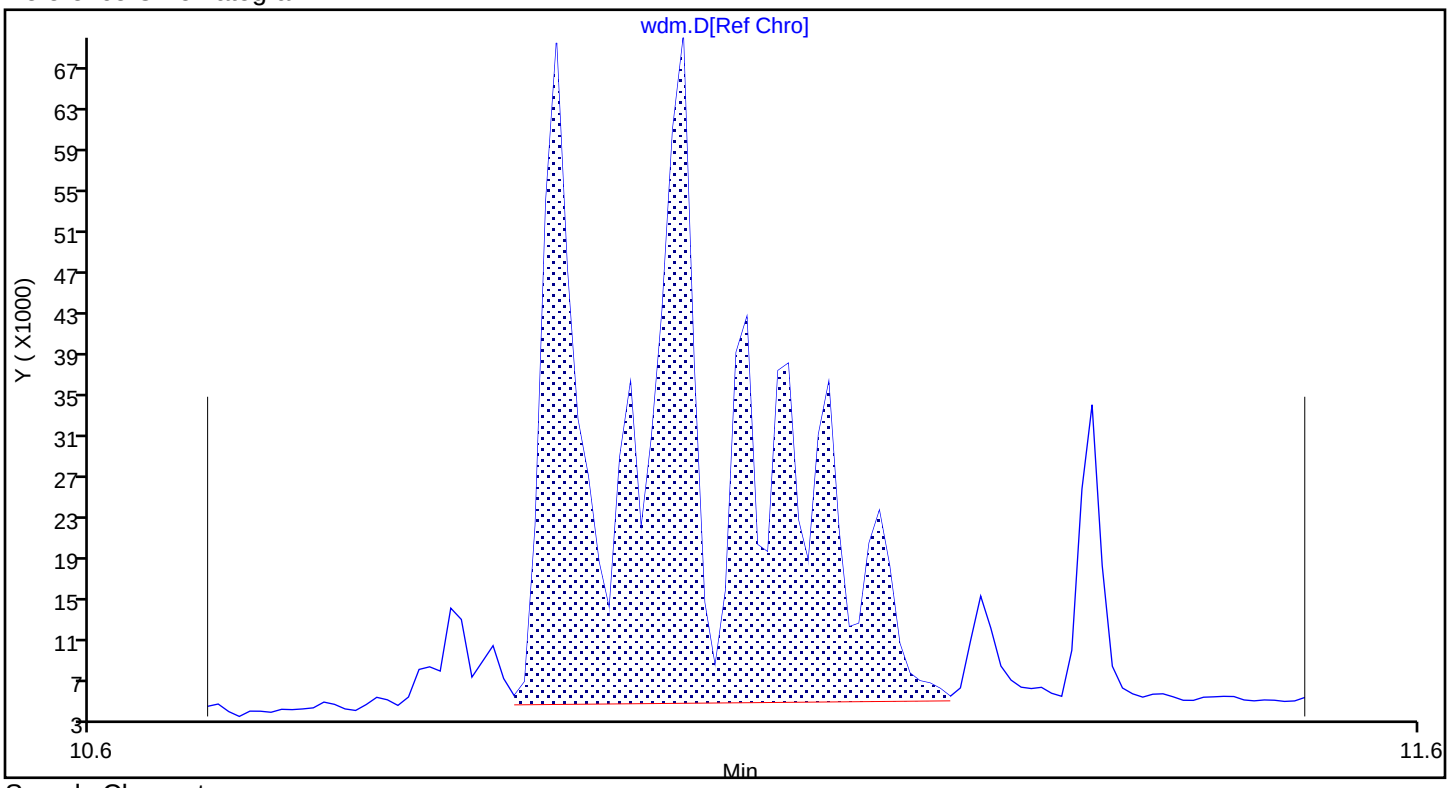
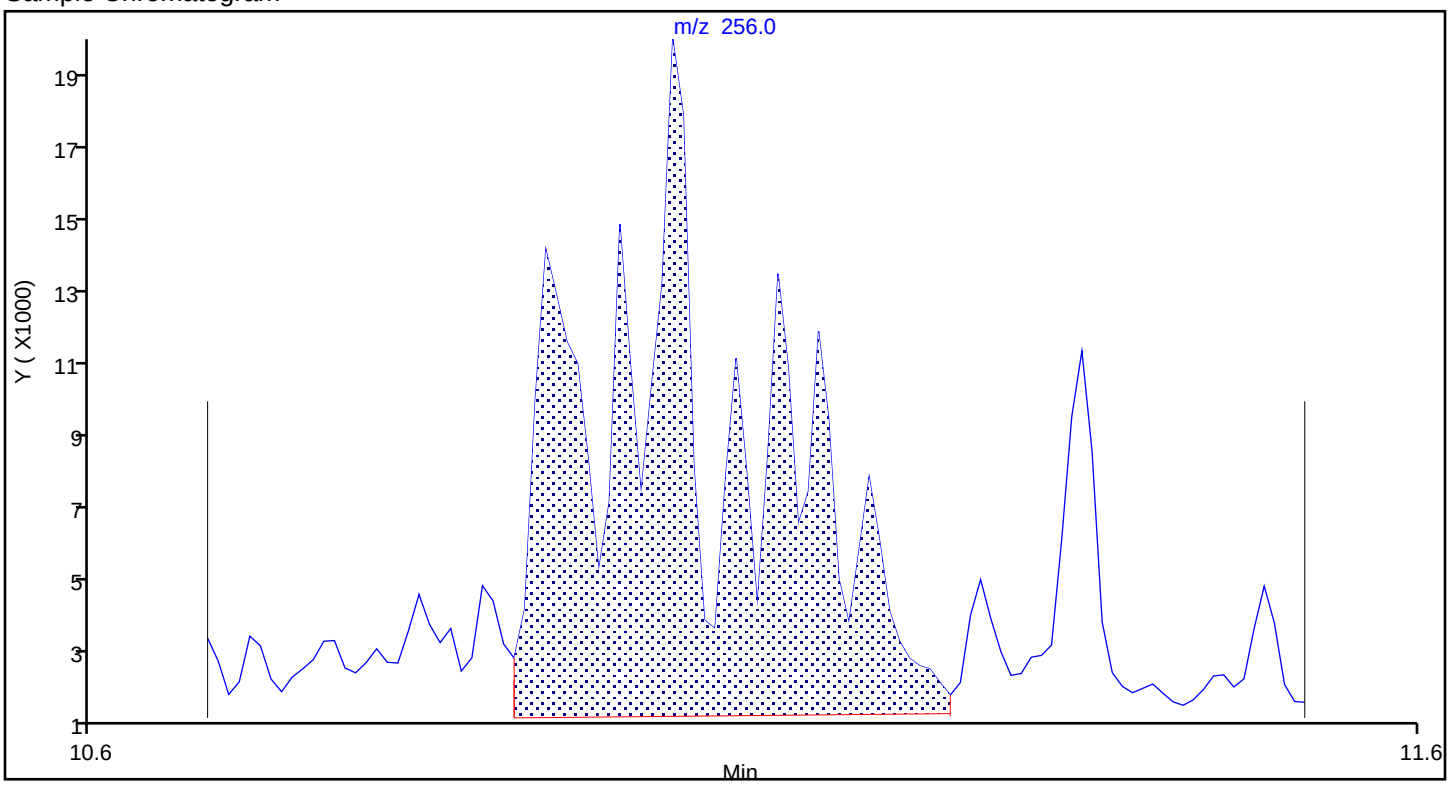
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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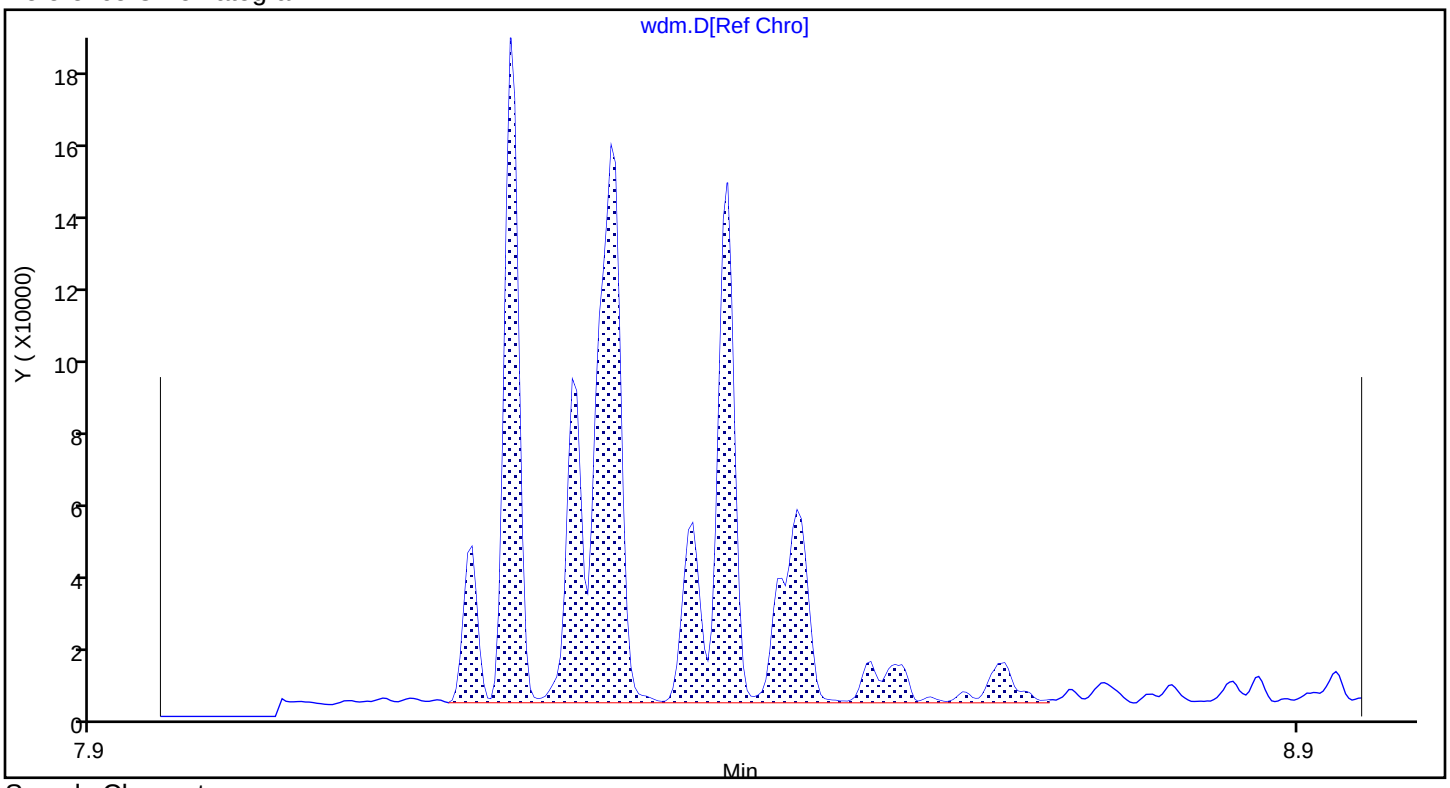
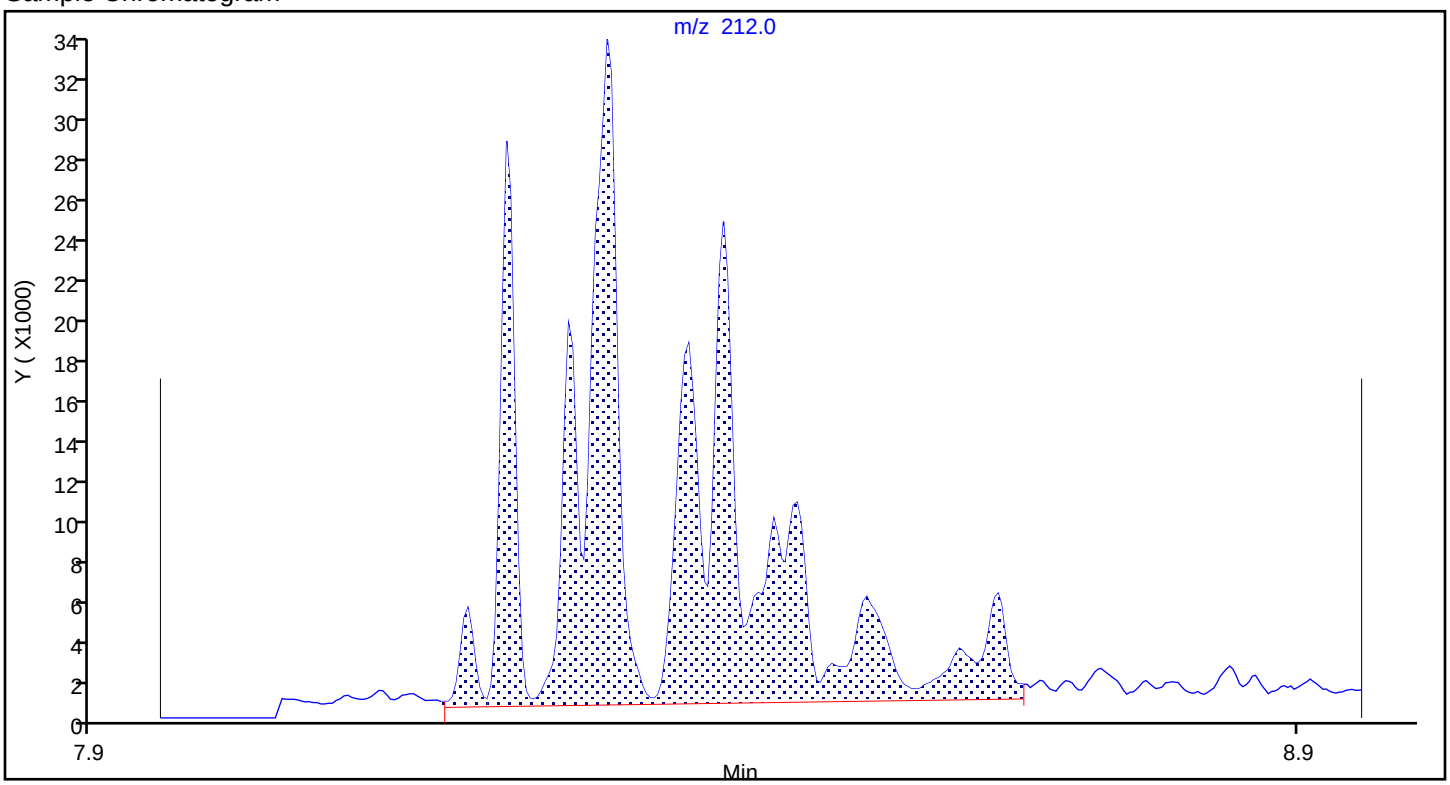
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



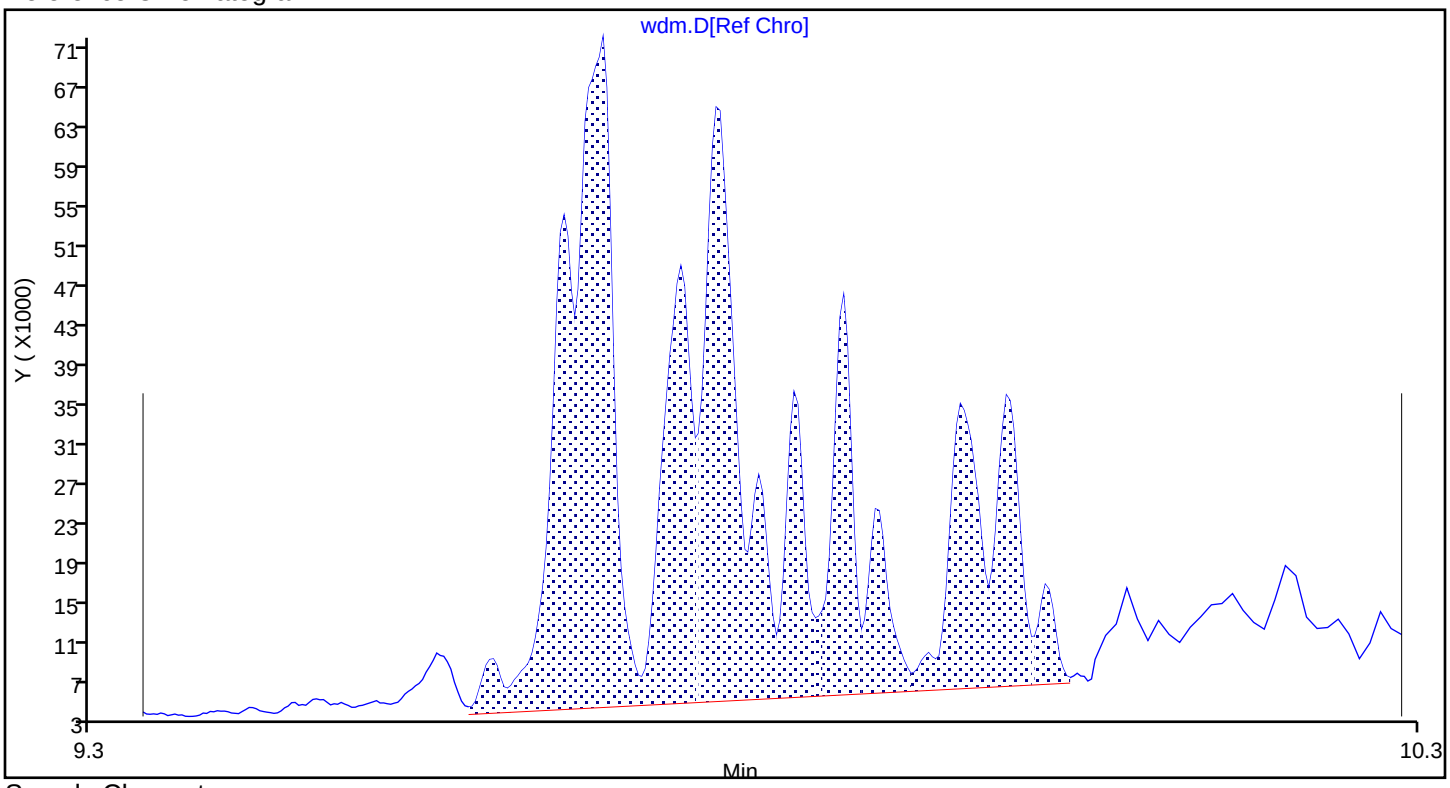
Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

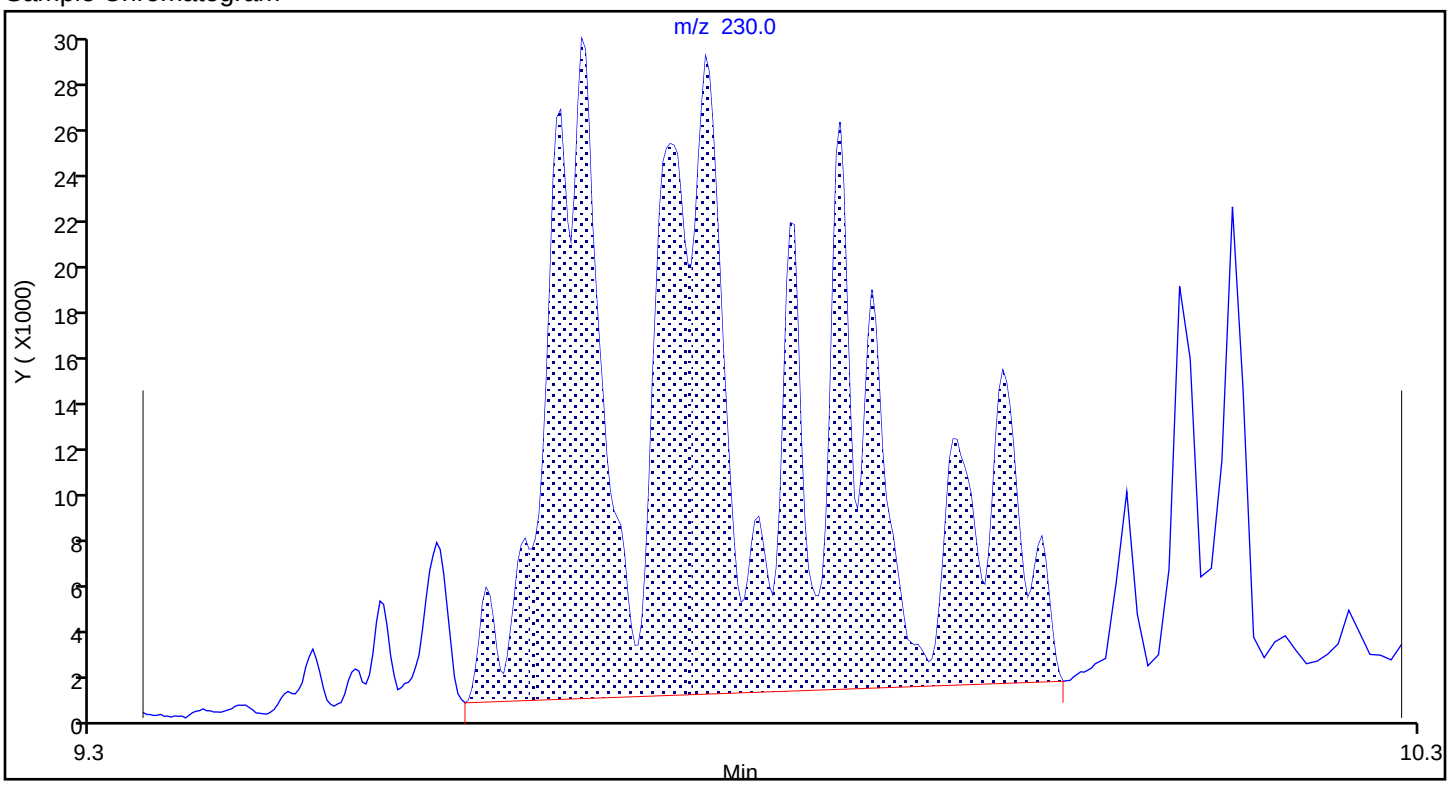
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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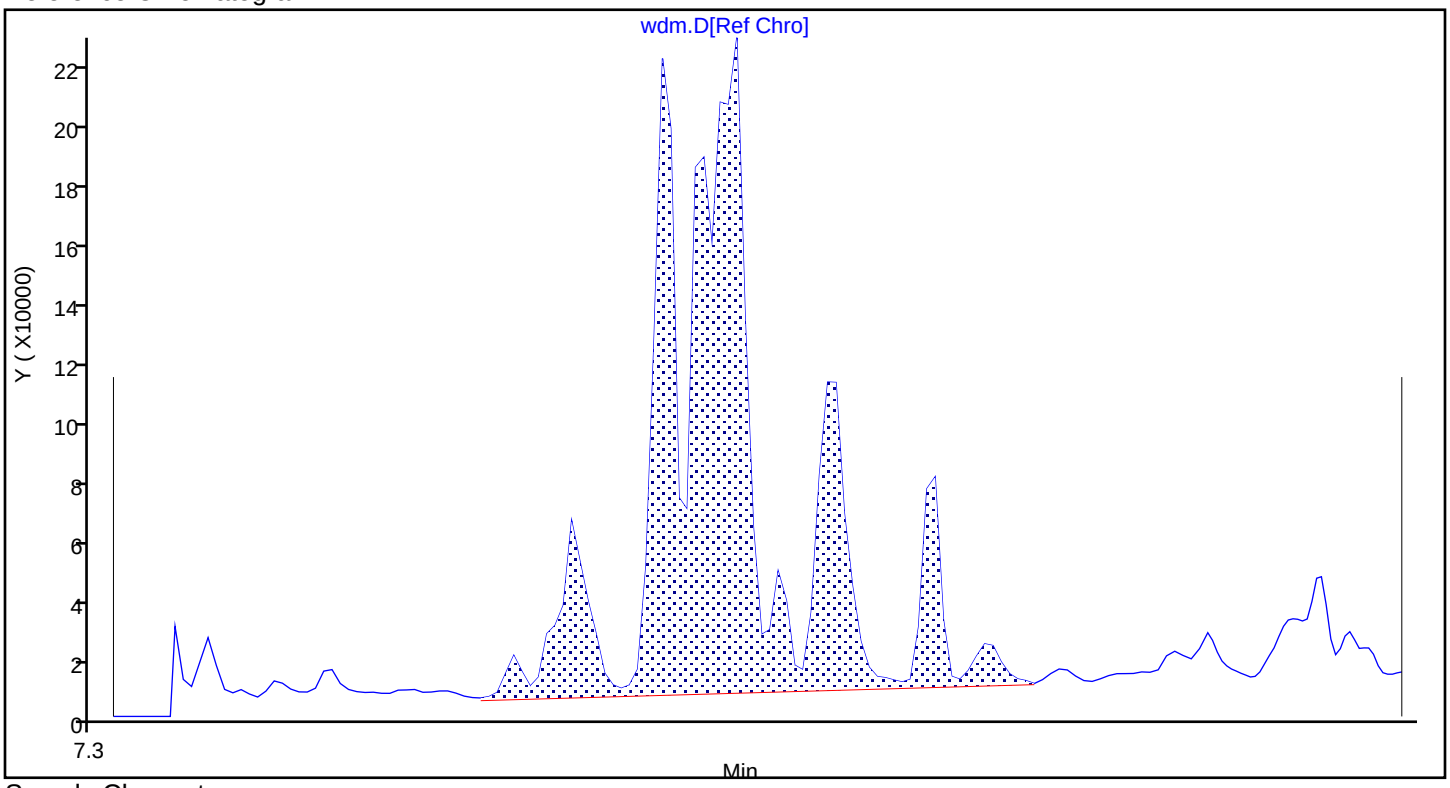
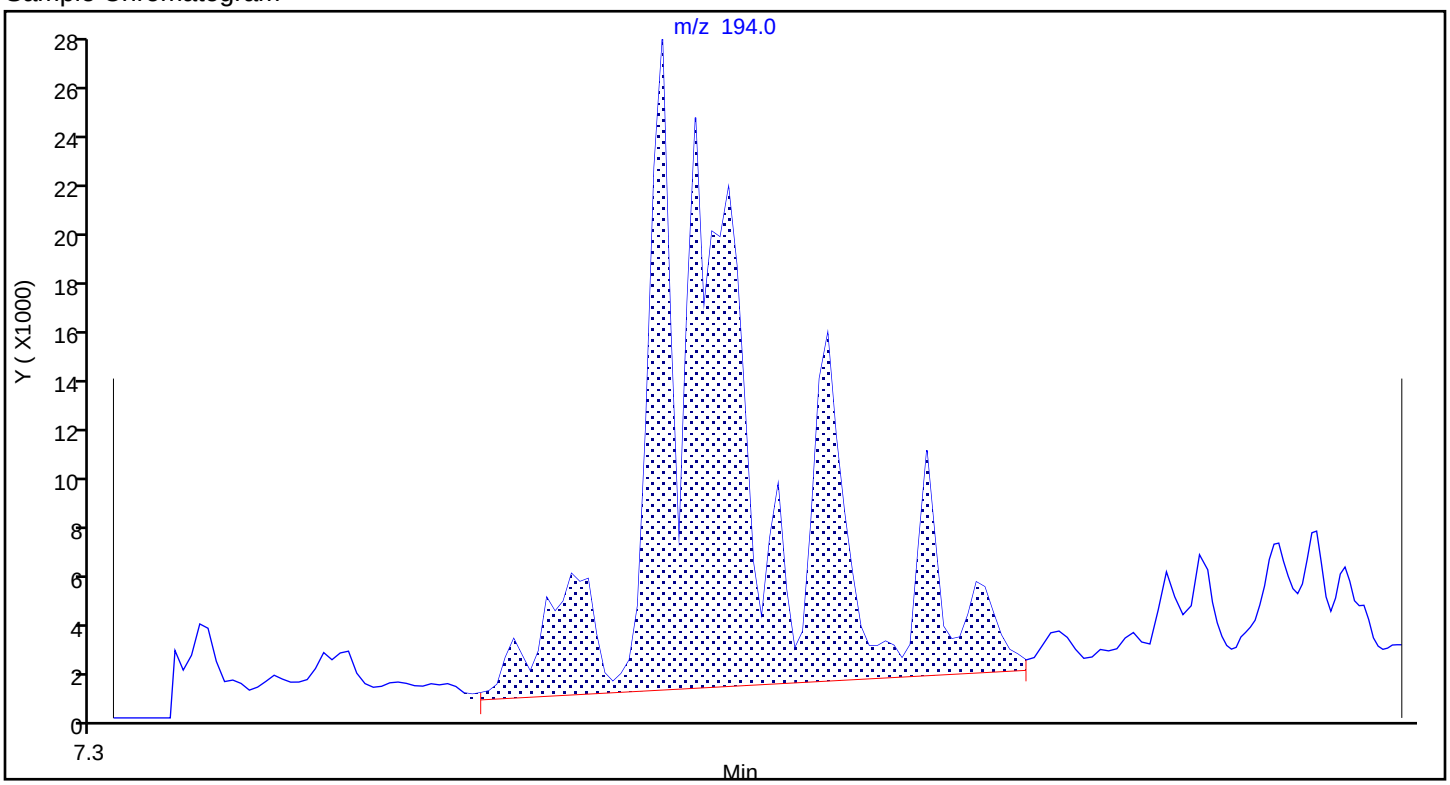
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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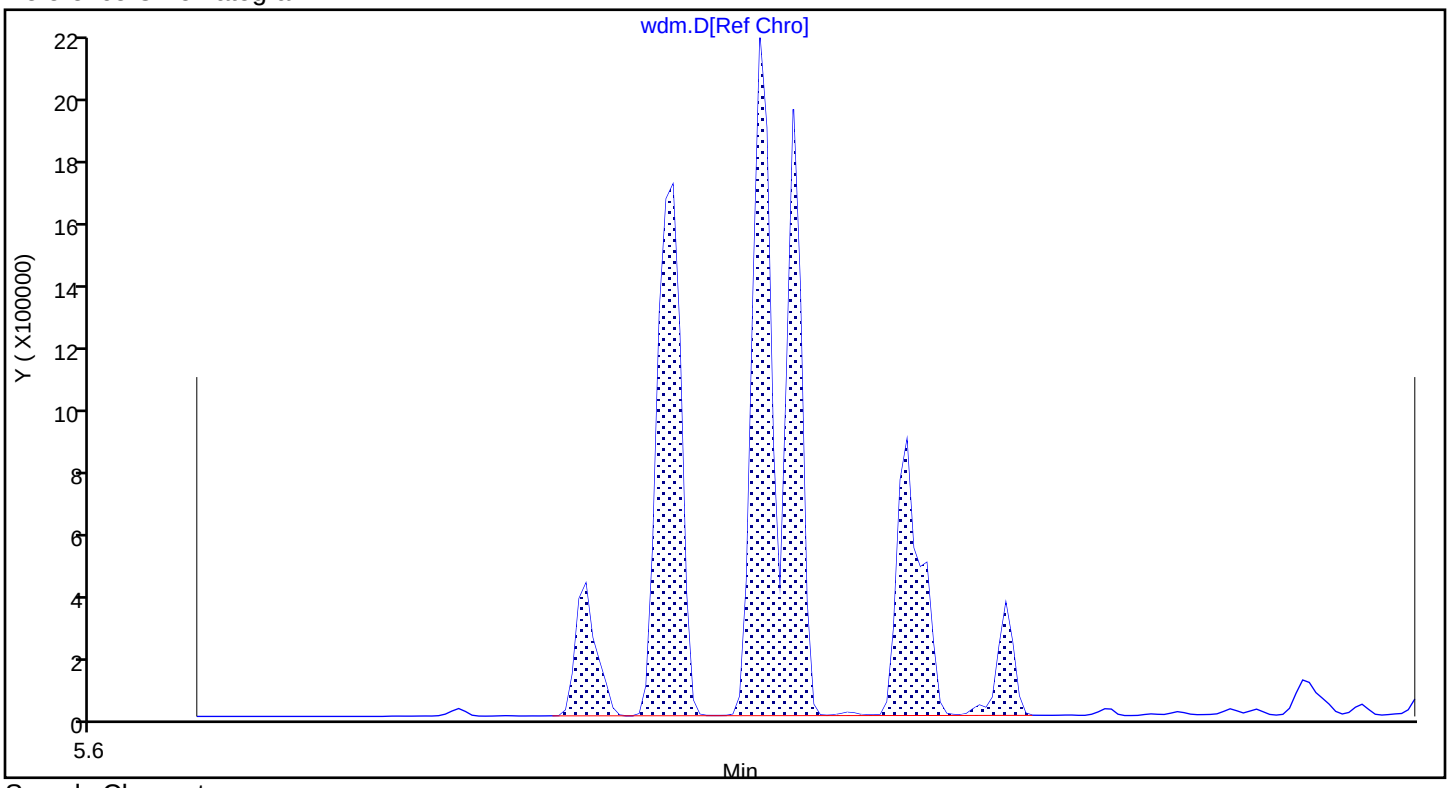
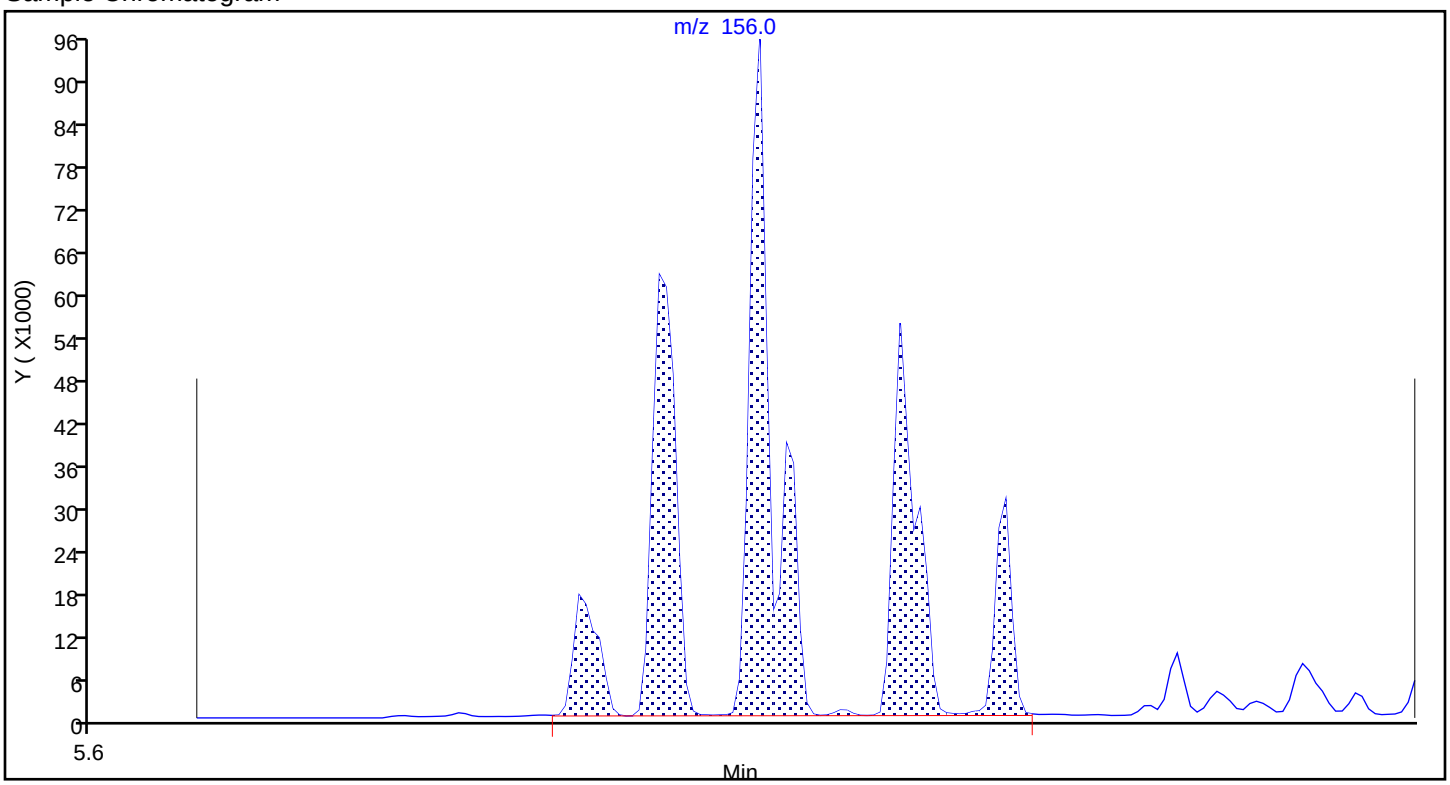
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



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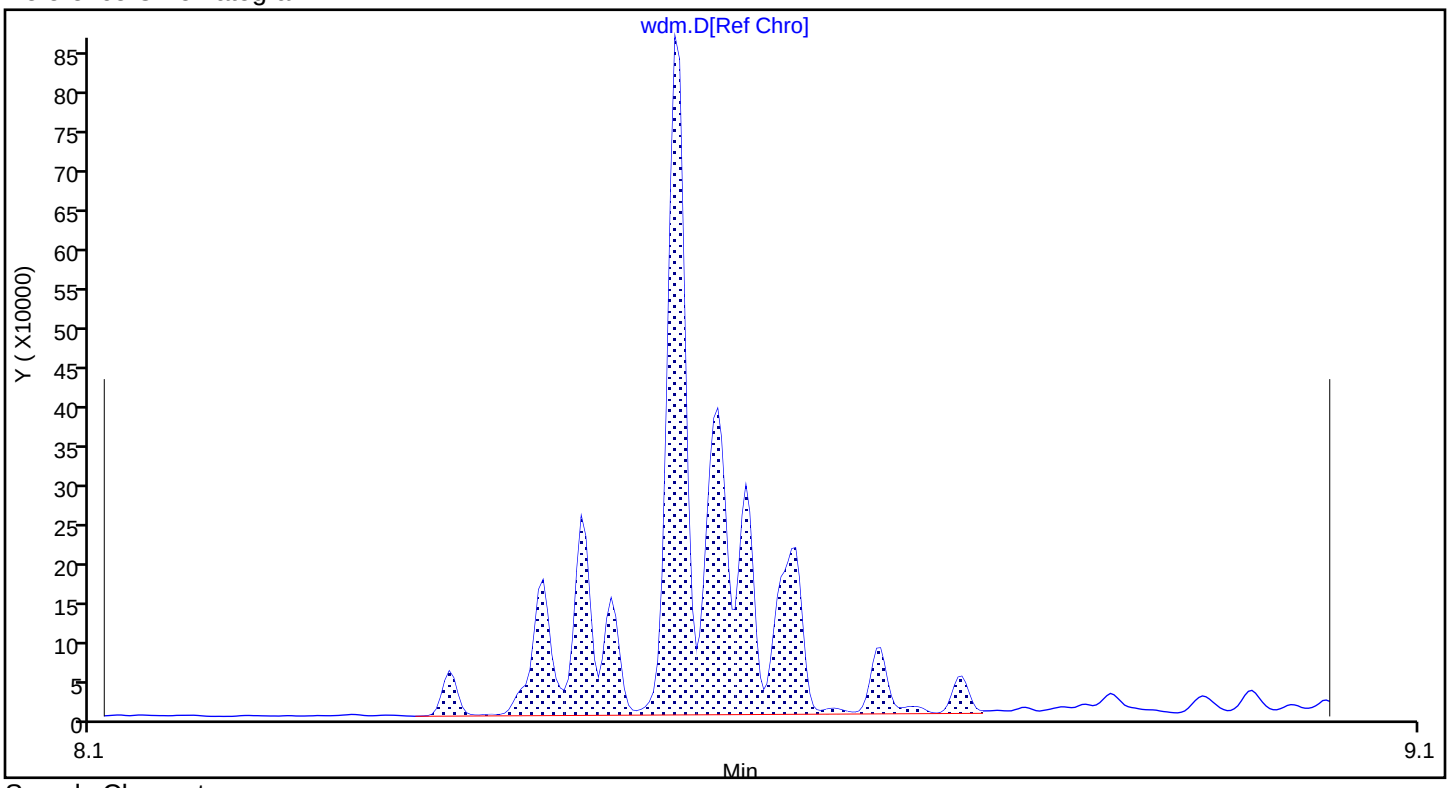
Eurofins TestAmerica, Knoxville

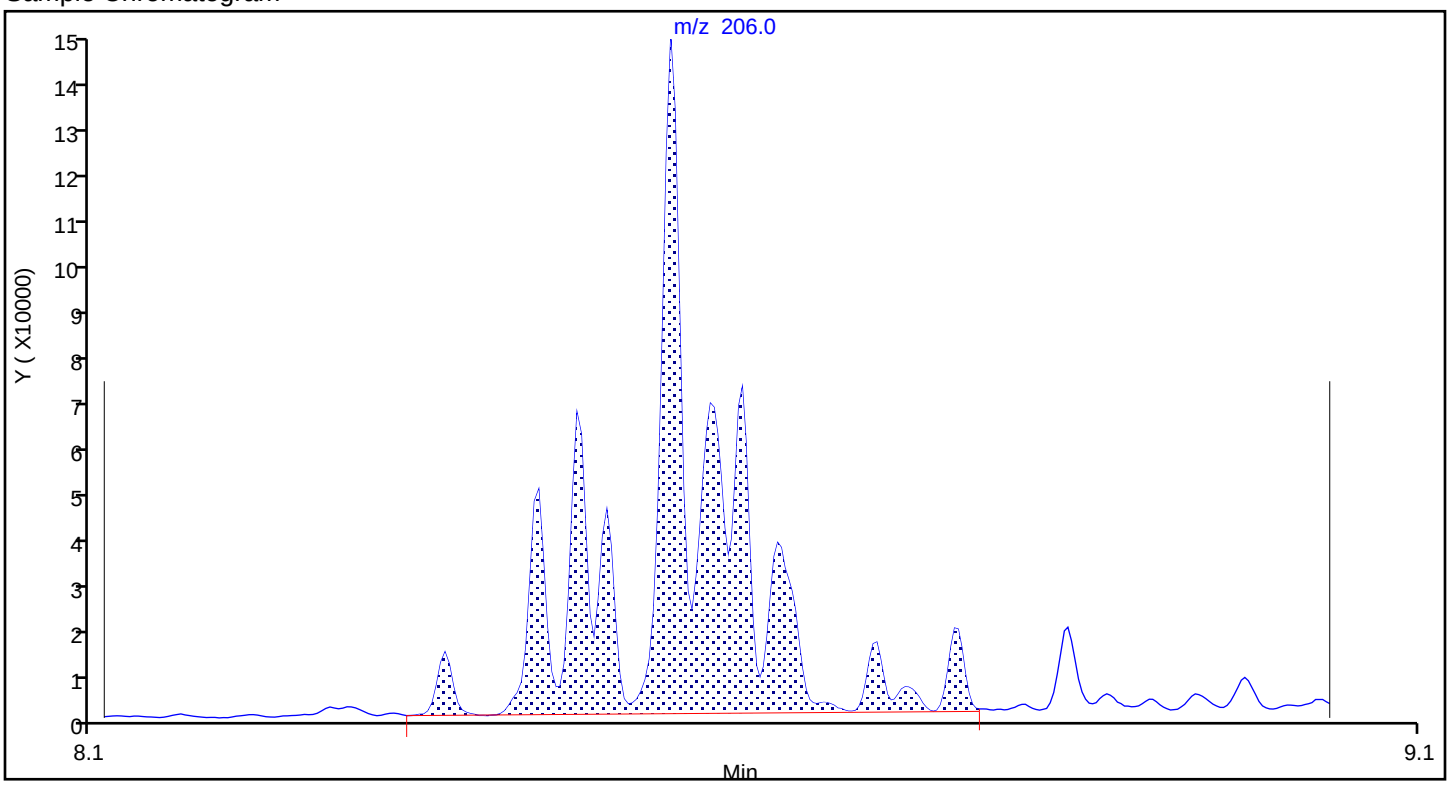
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



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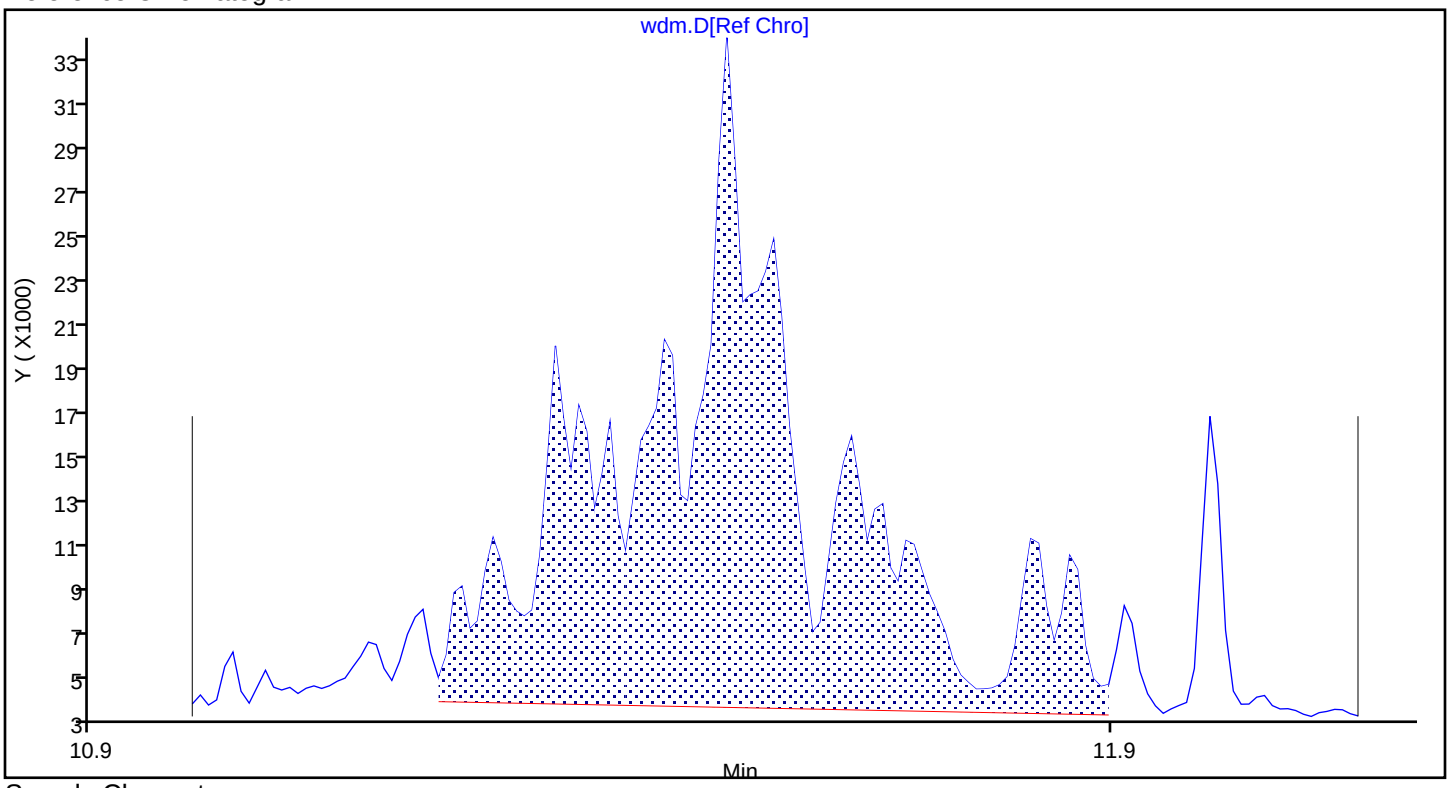
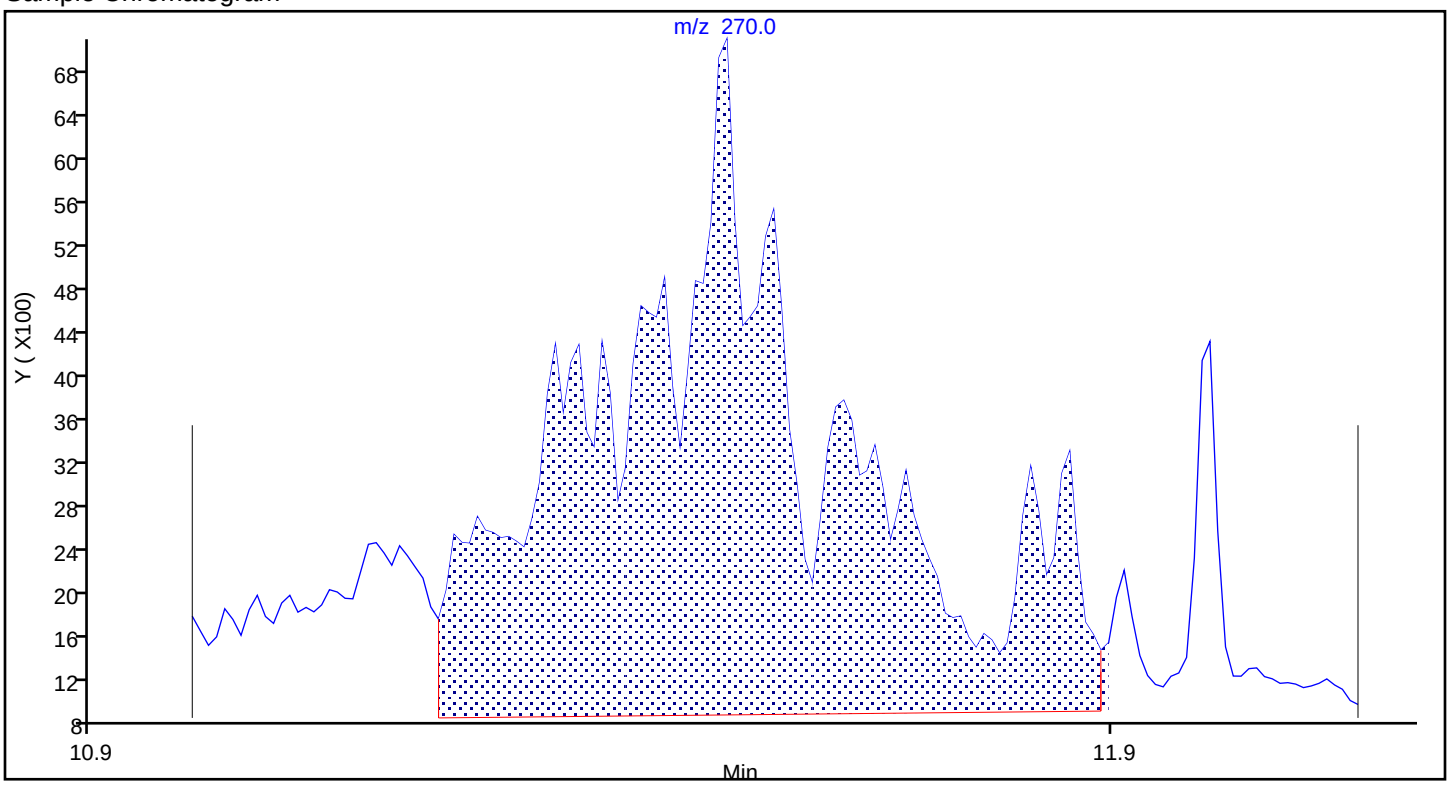
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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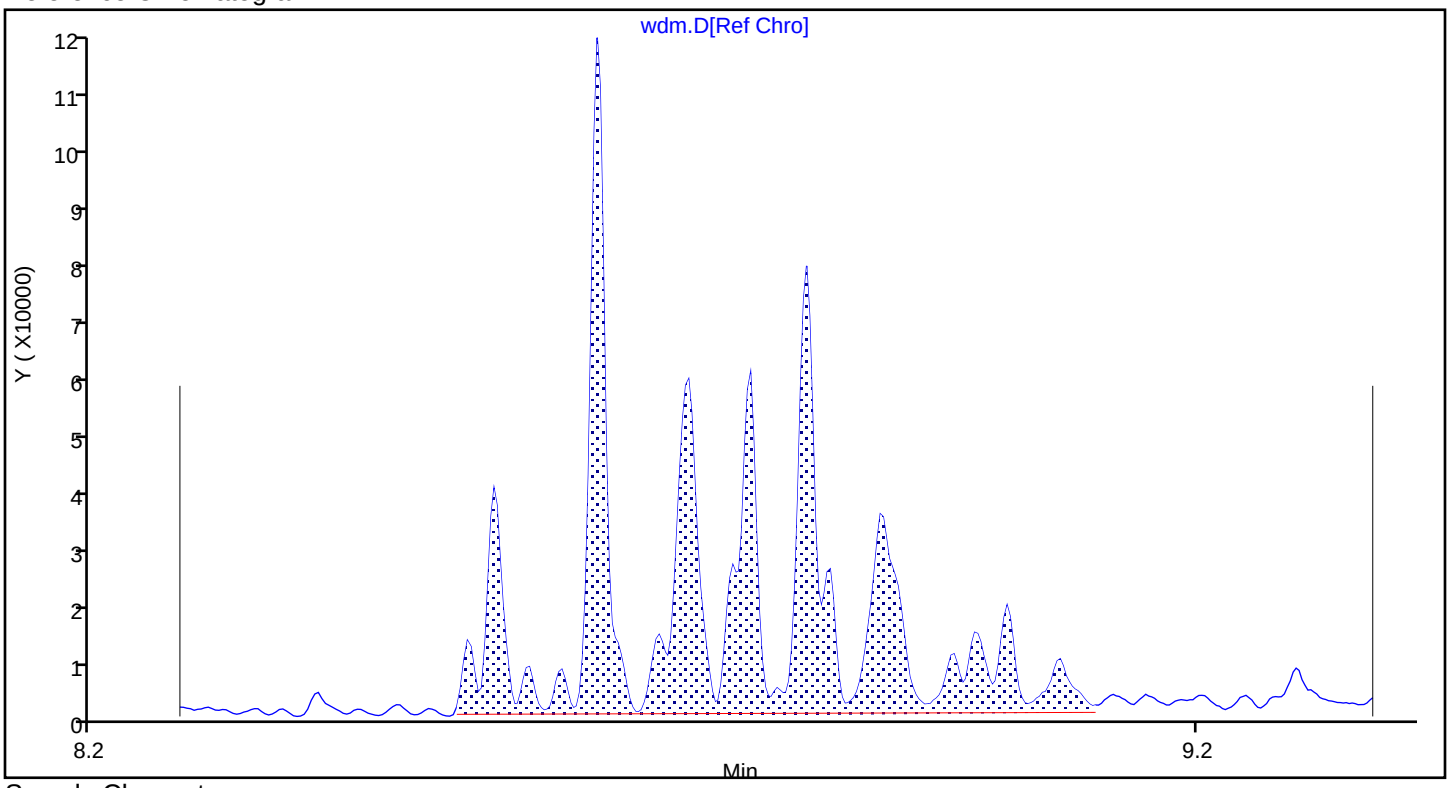
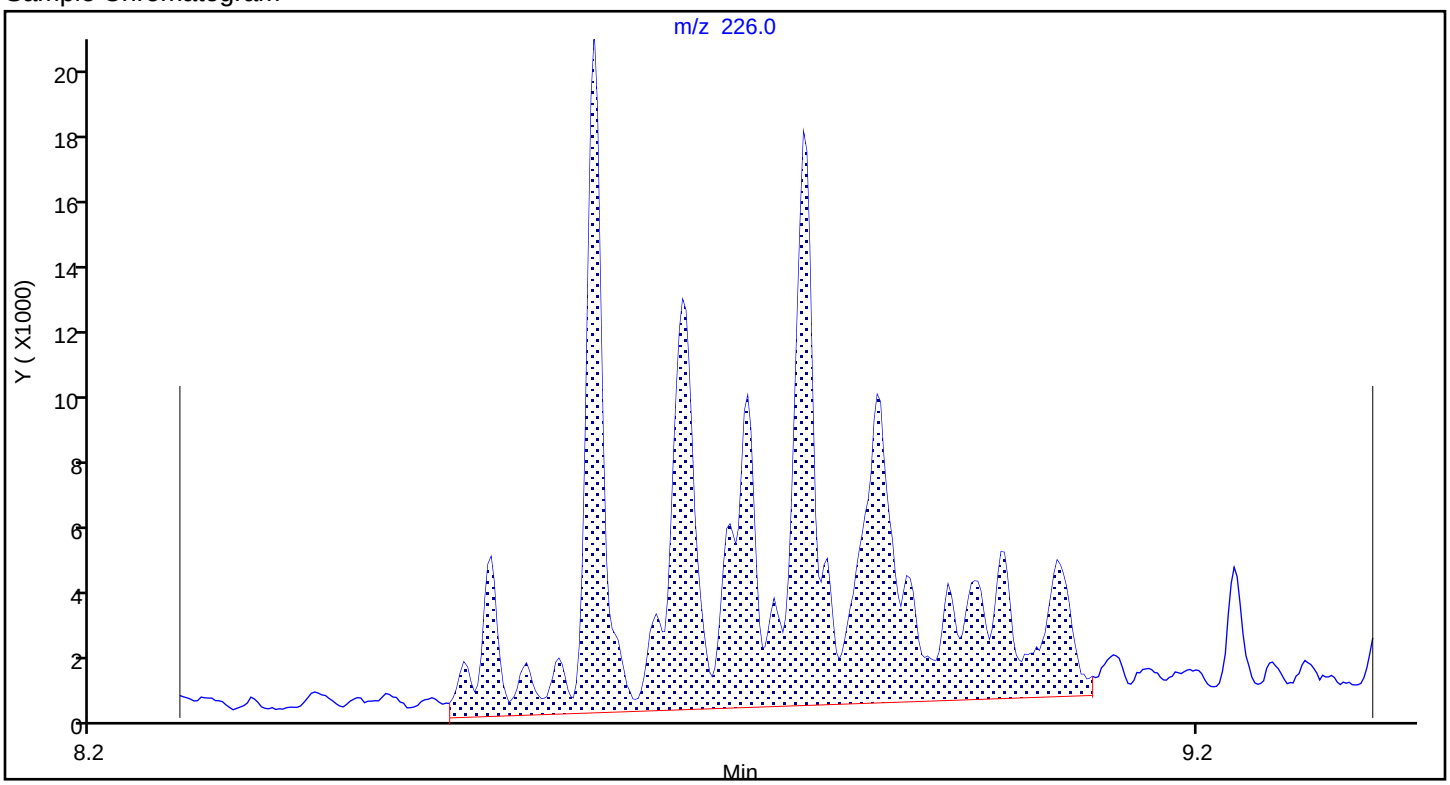
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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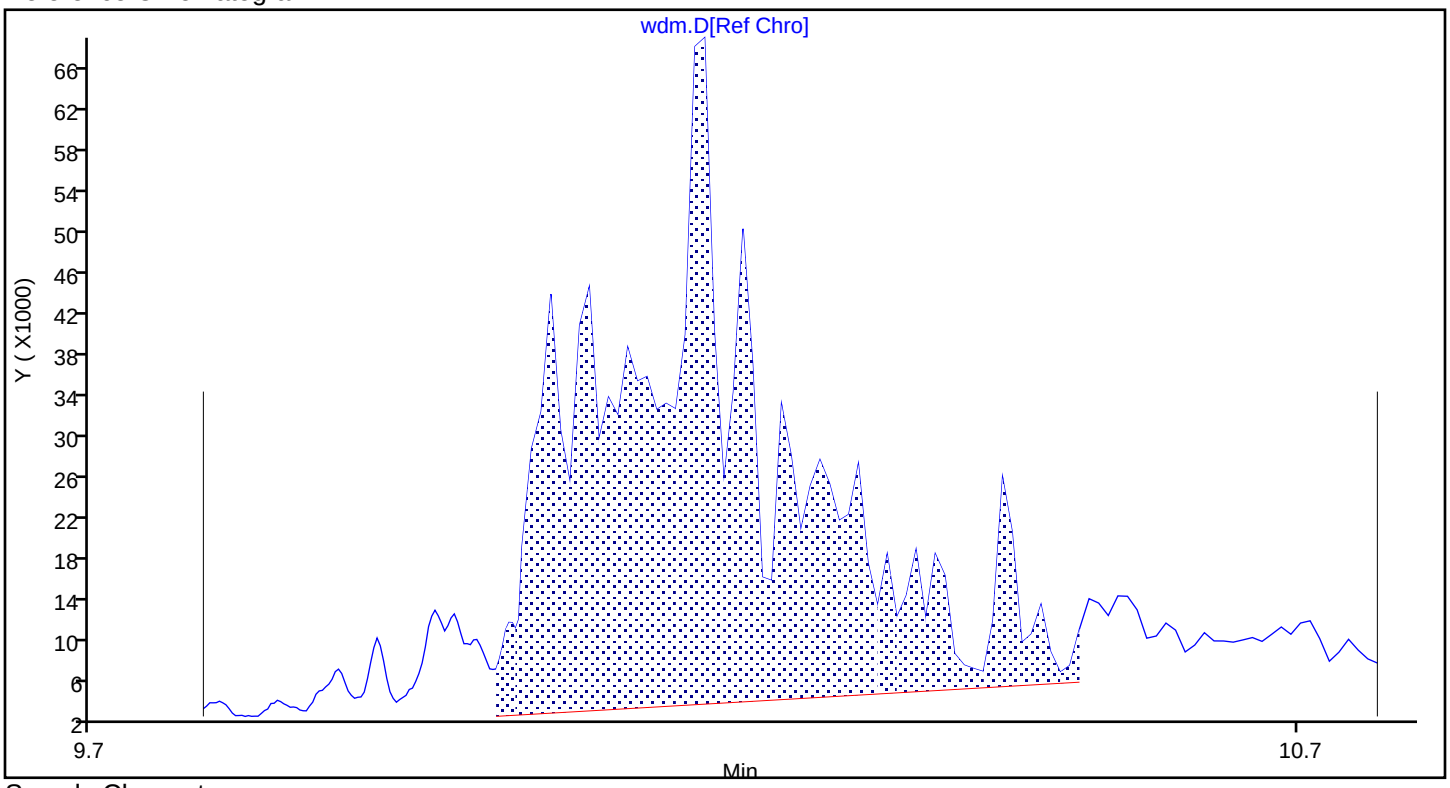
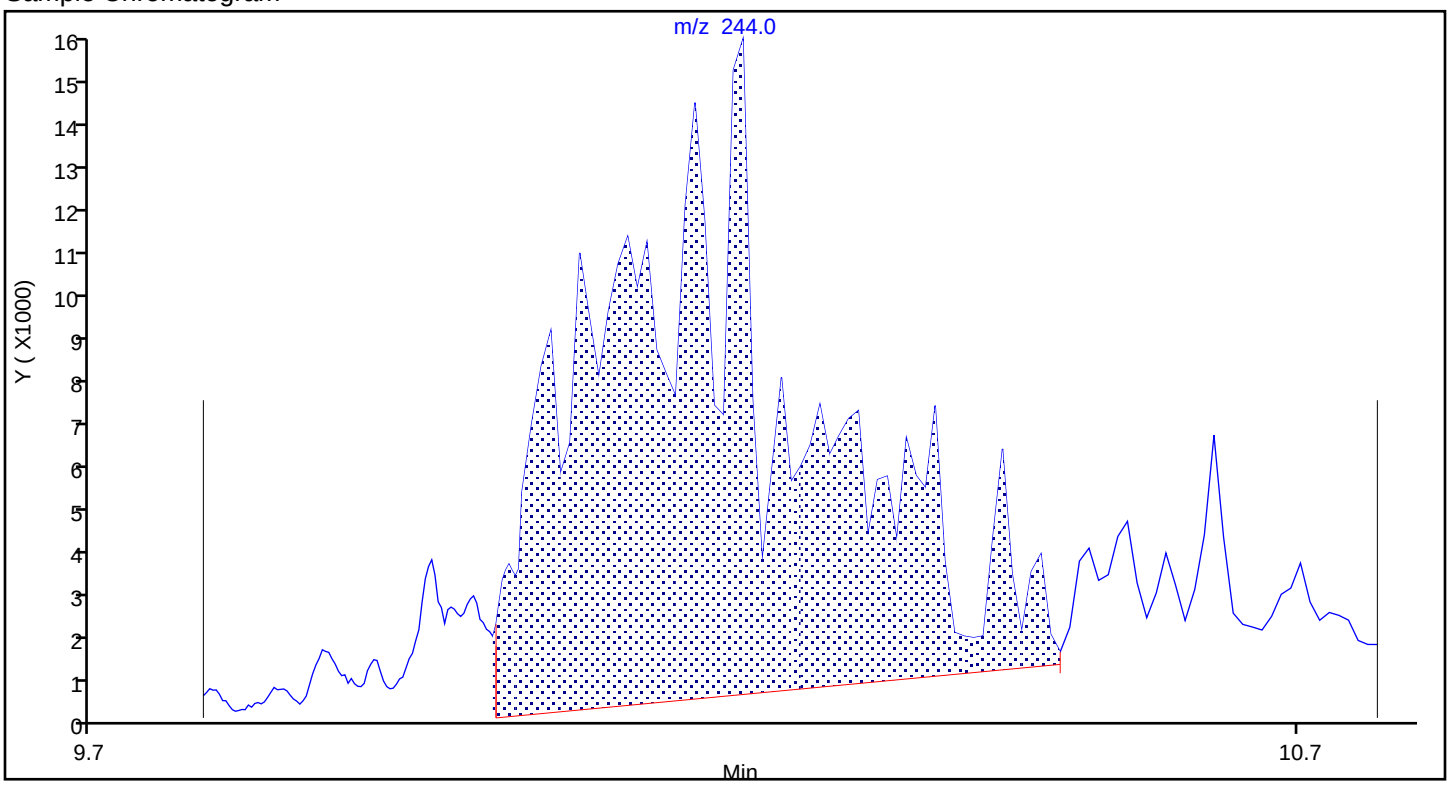
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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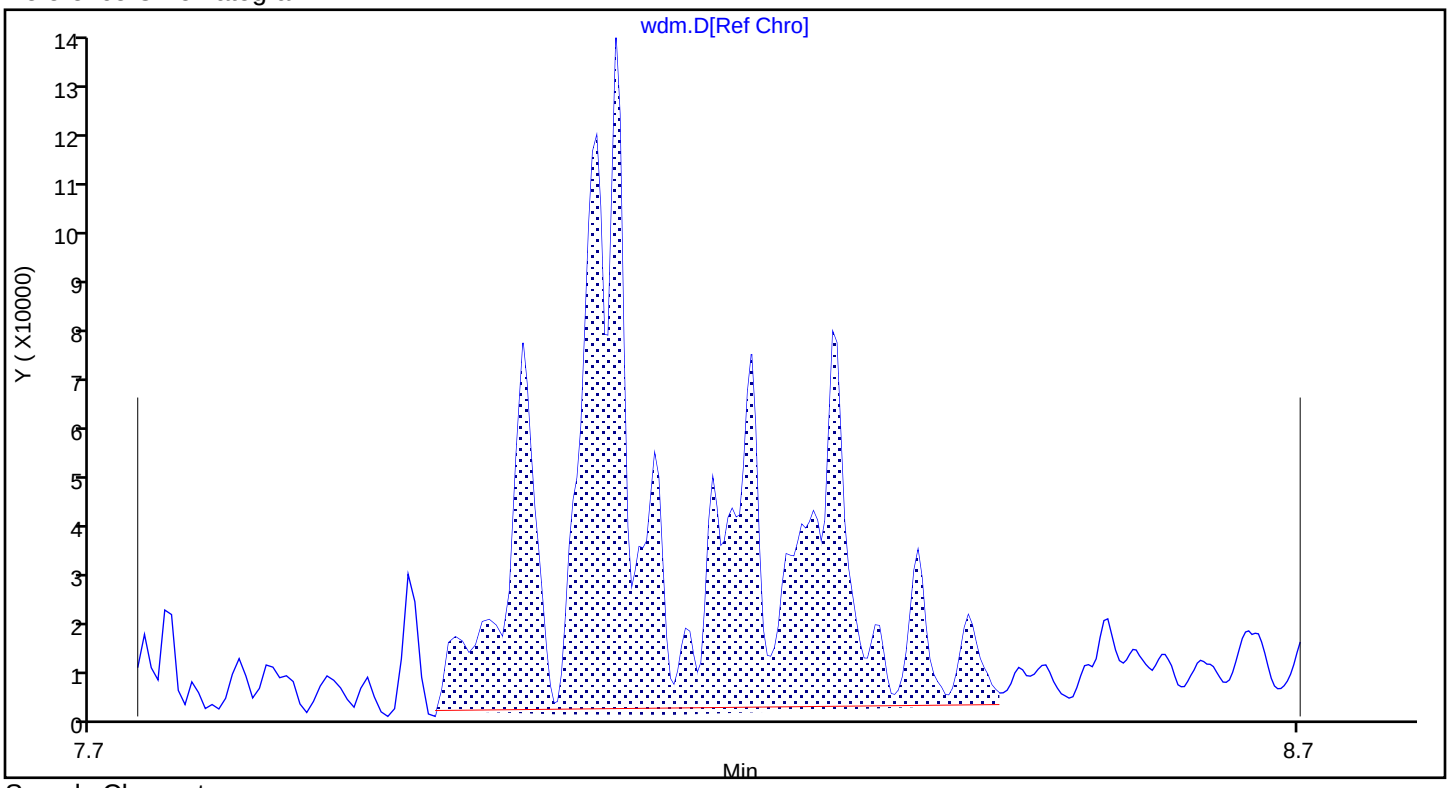
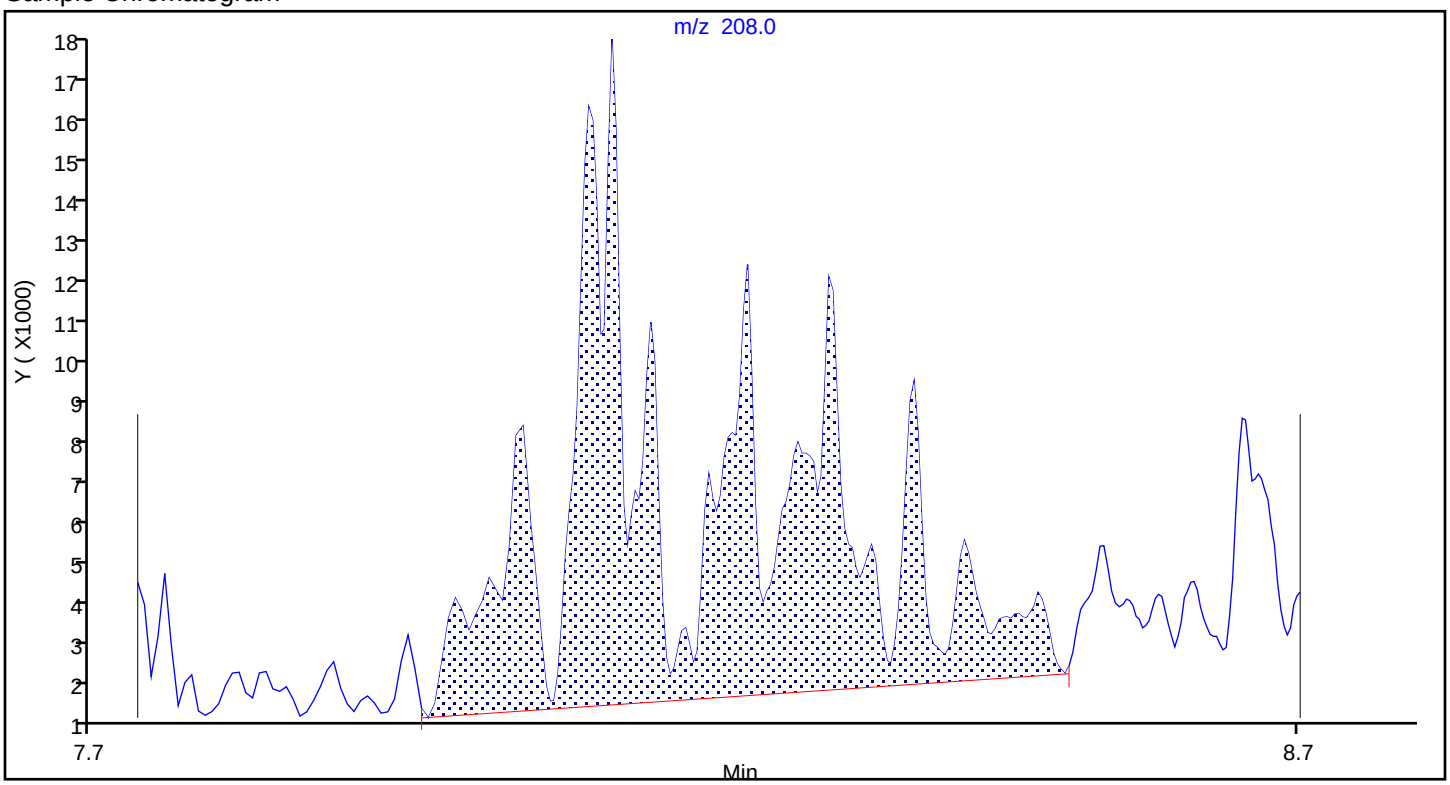
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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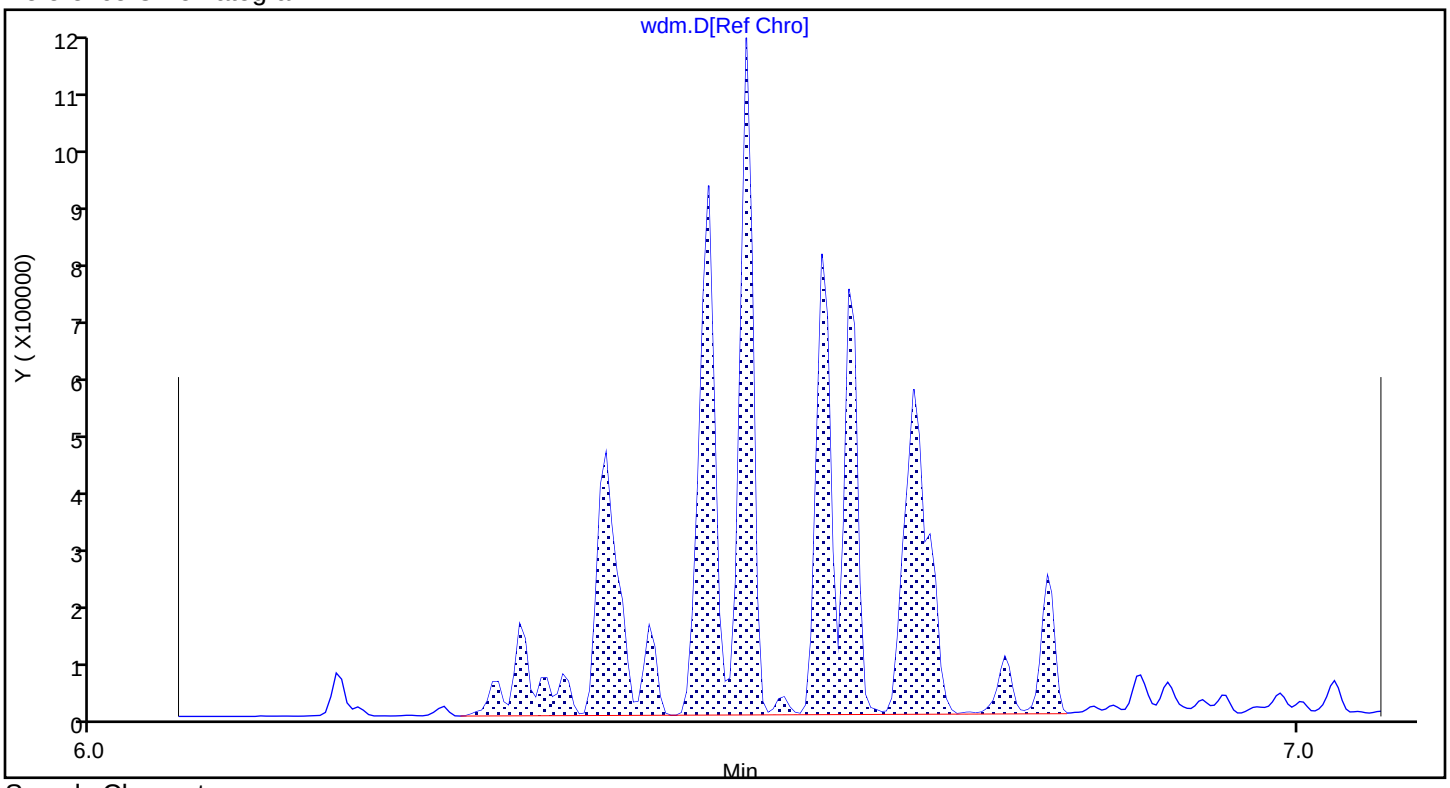
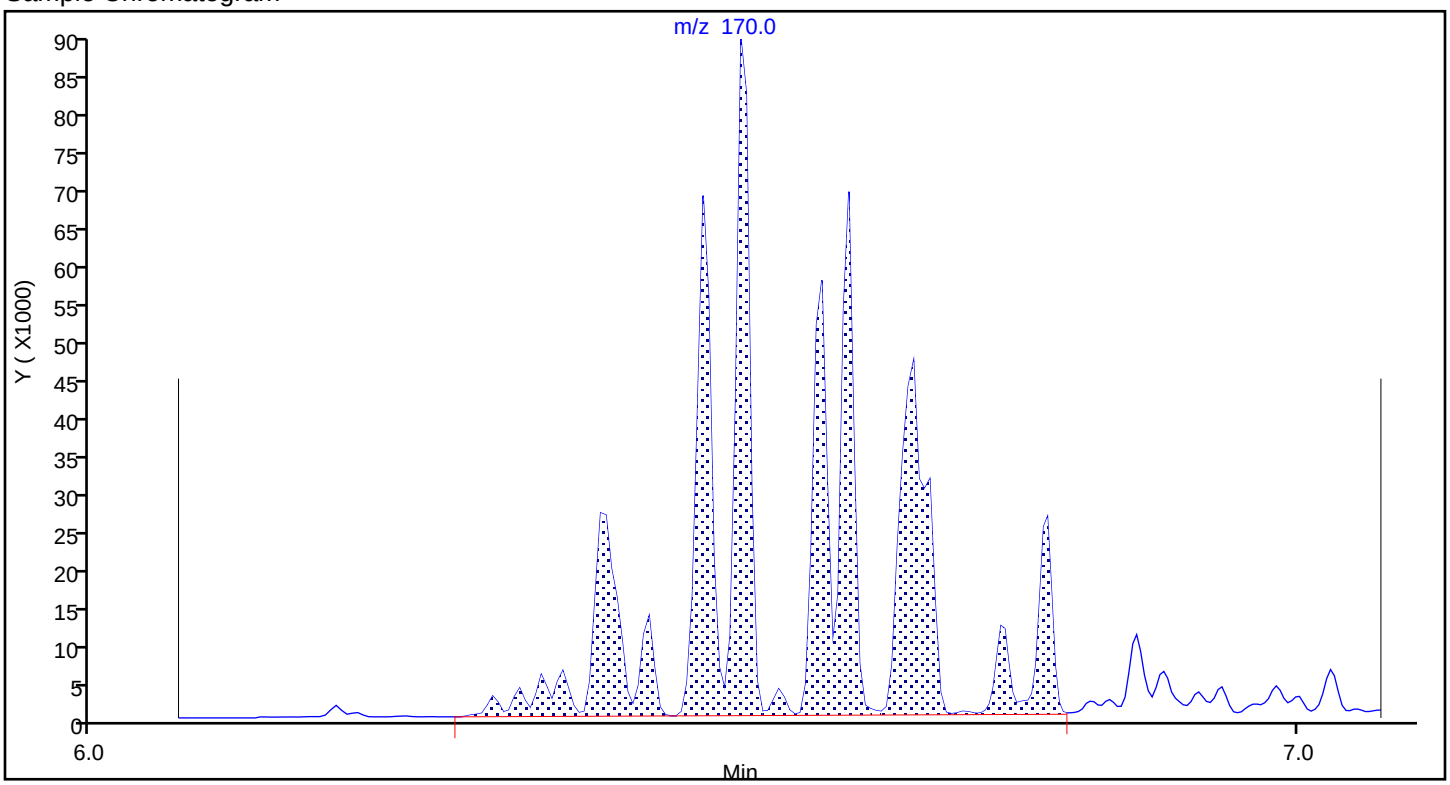
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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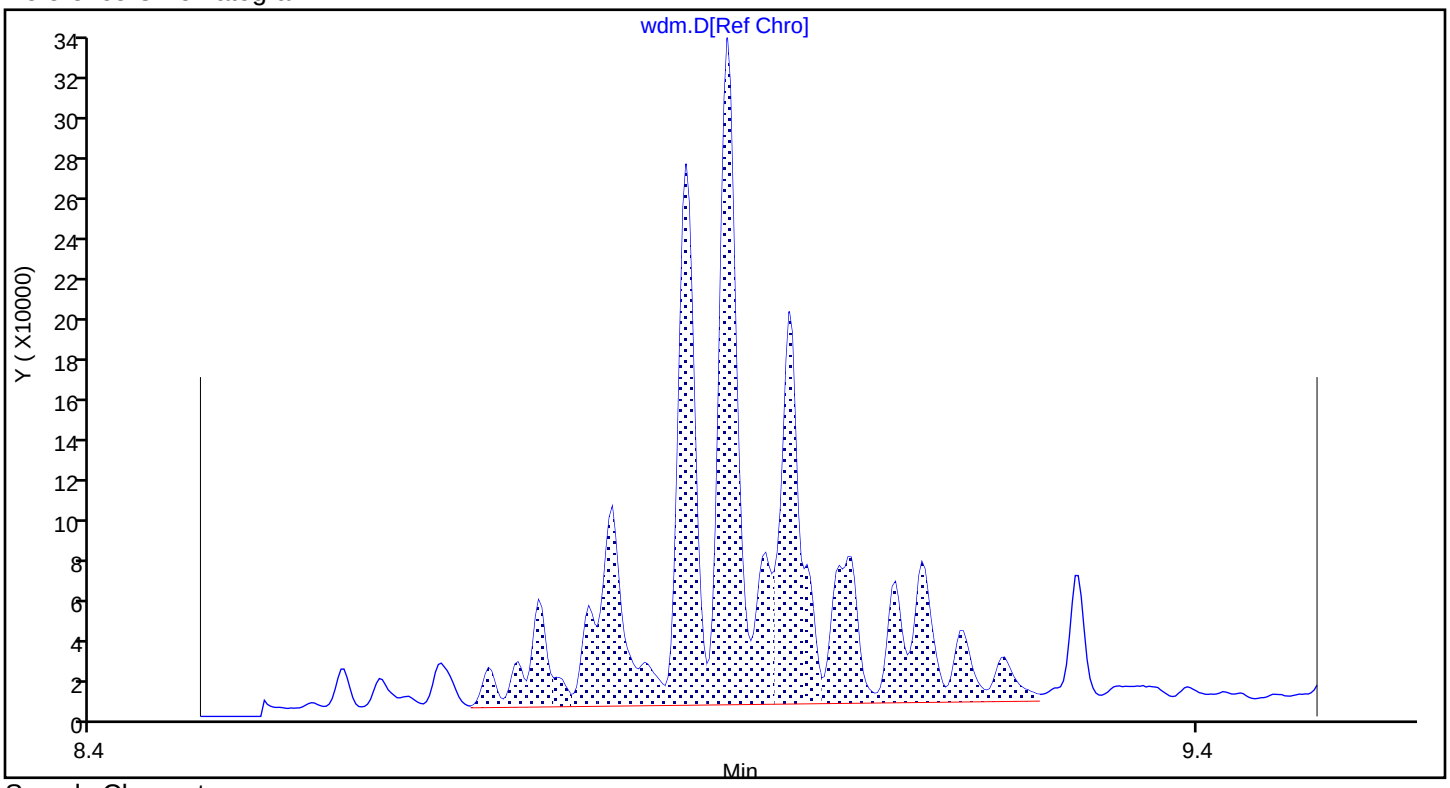
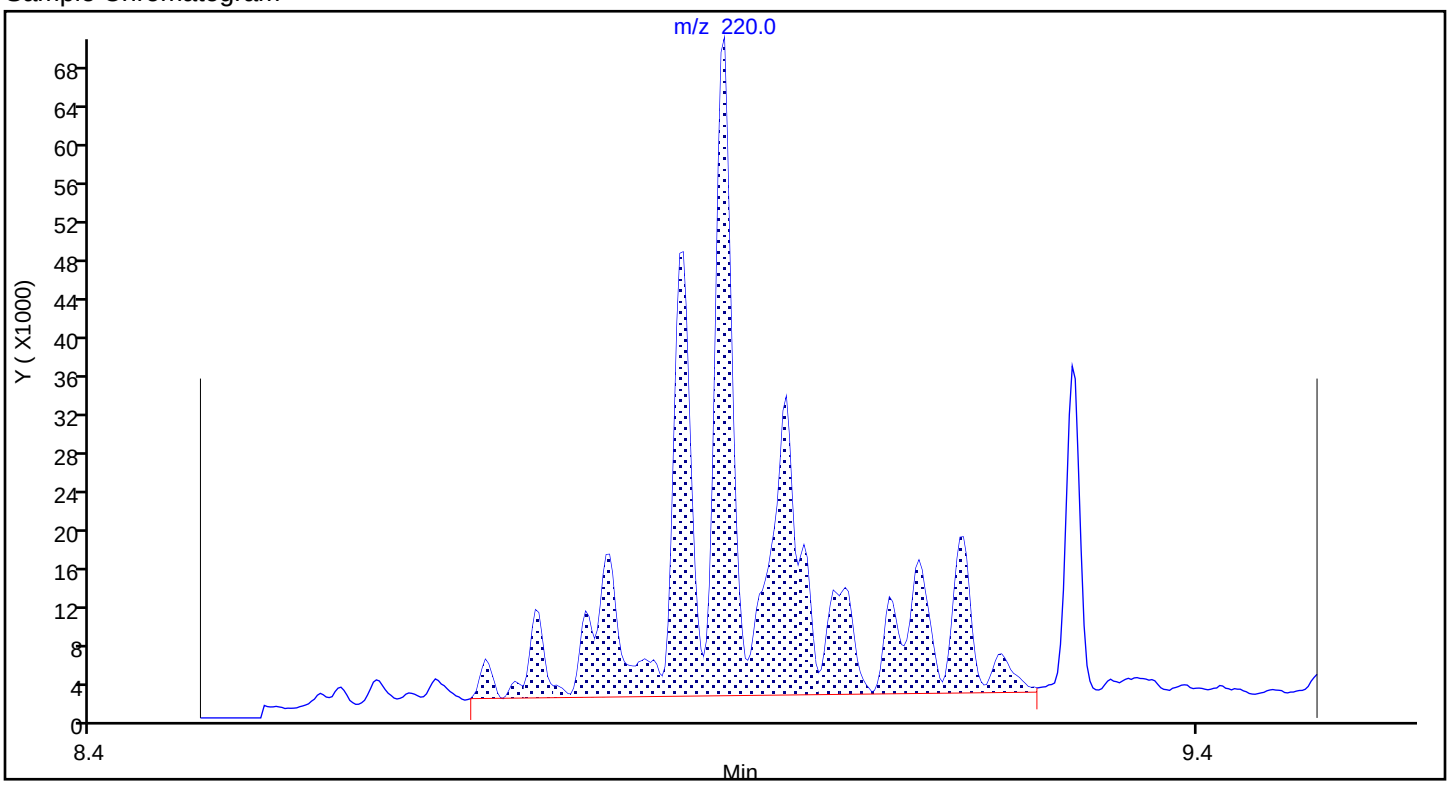
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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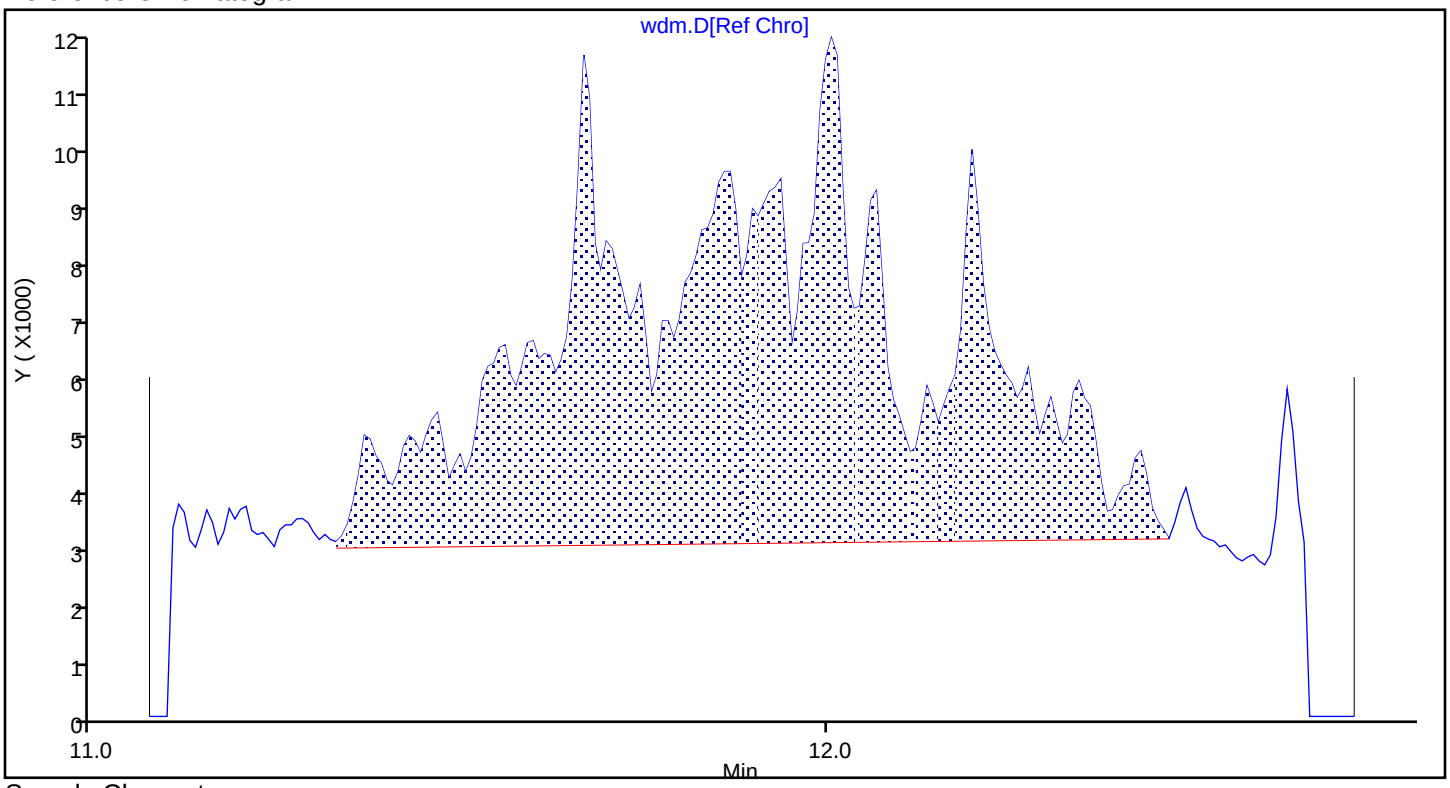
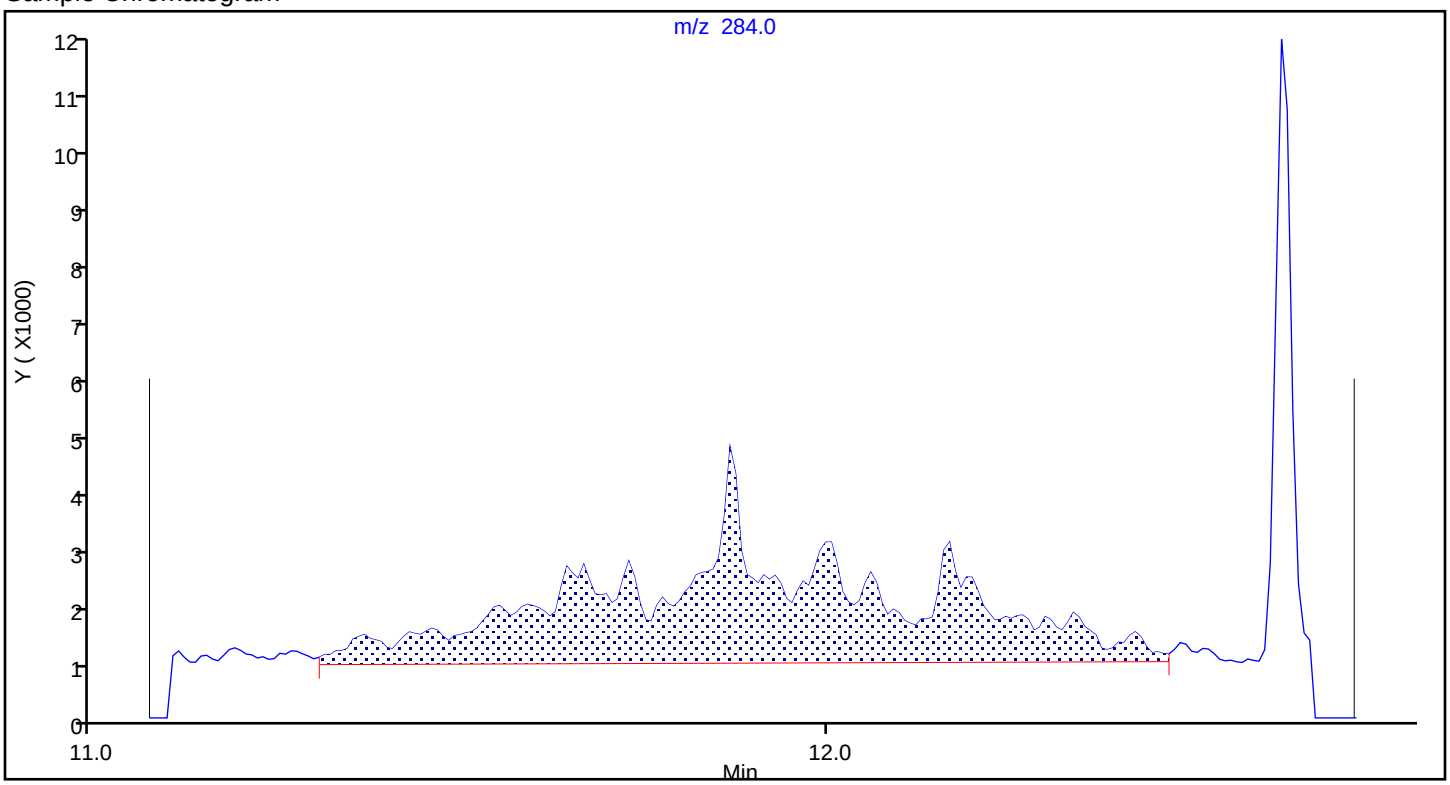
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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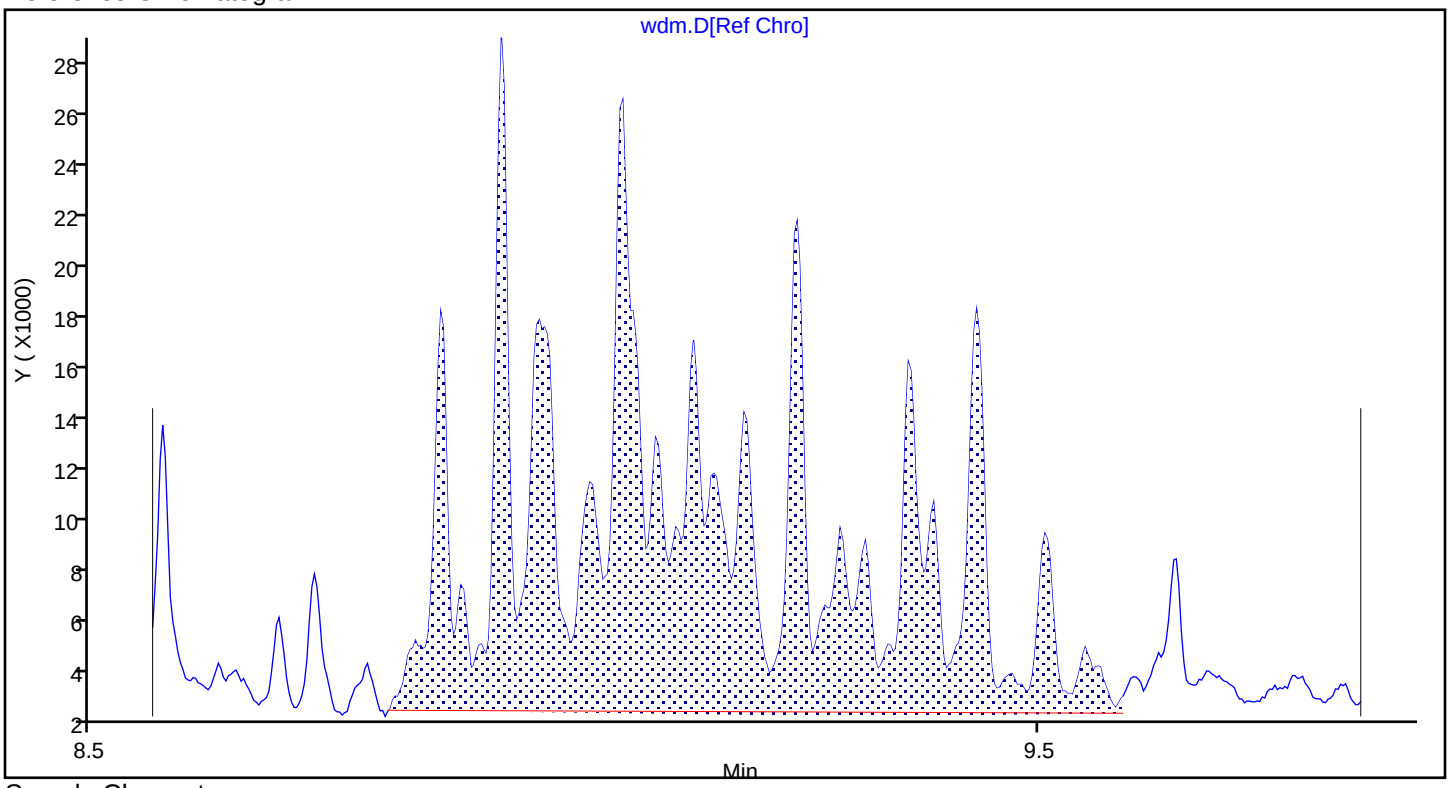
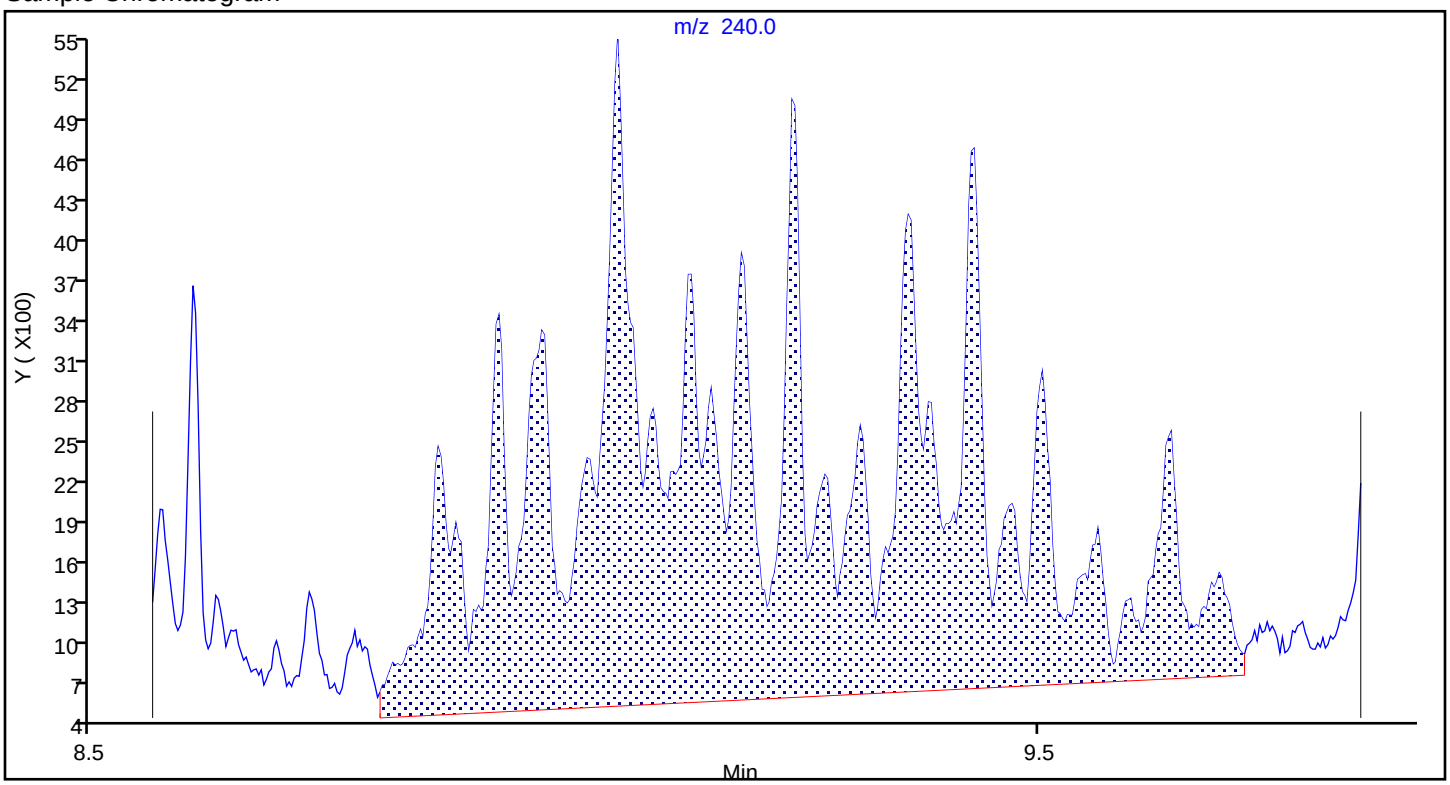
A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



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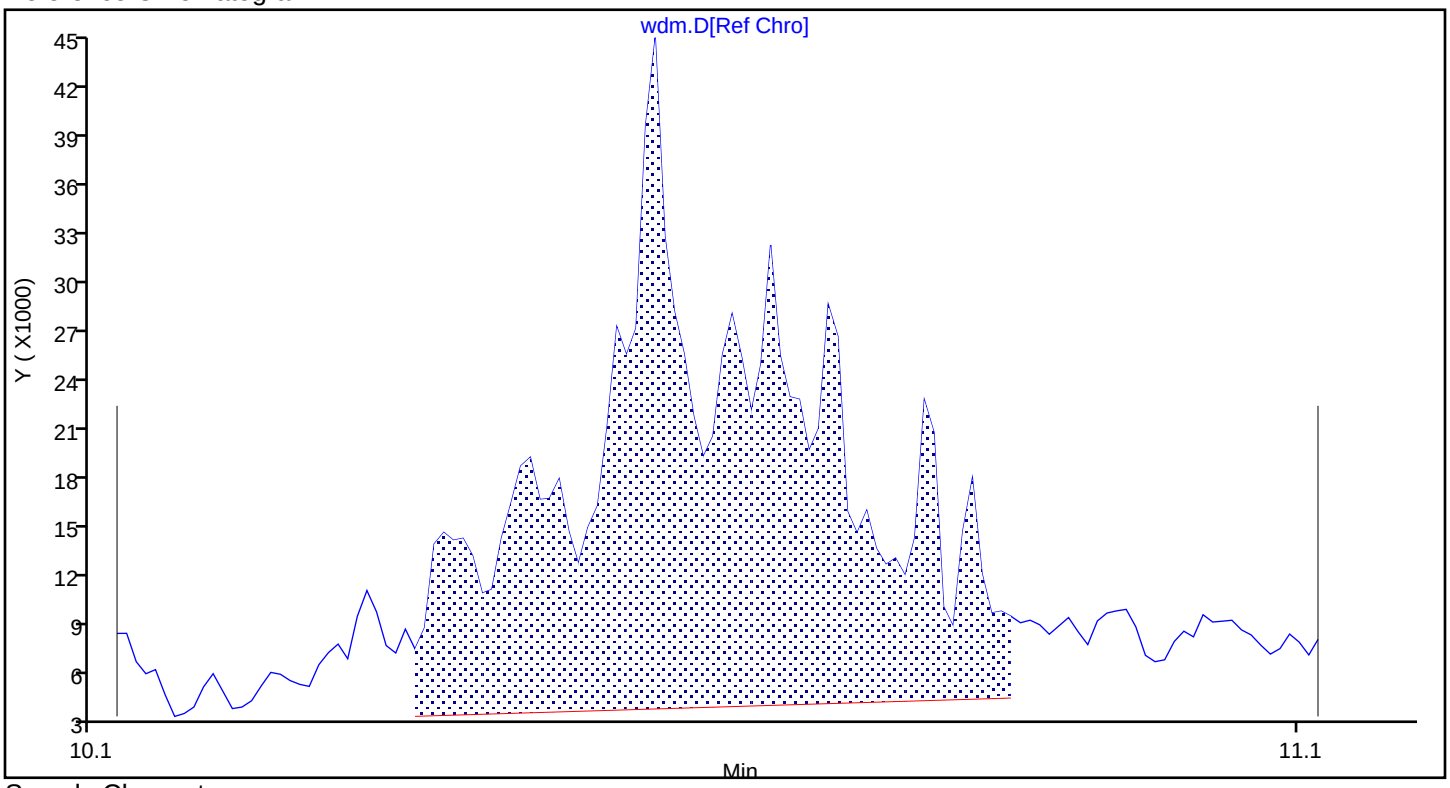
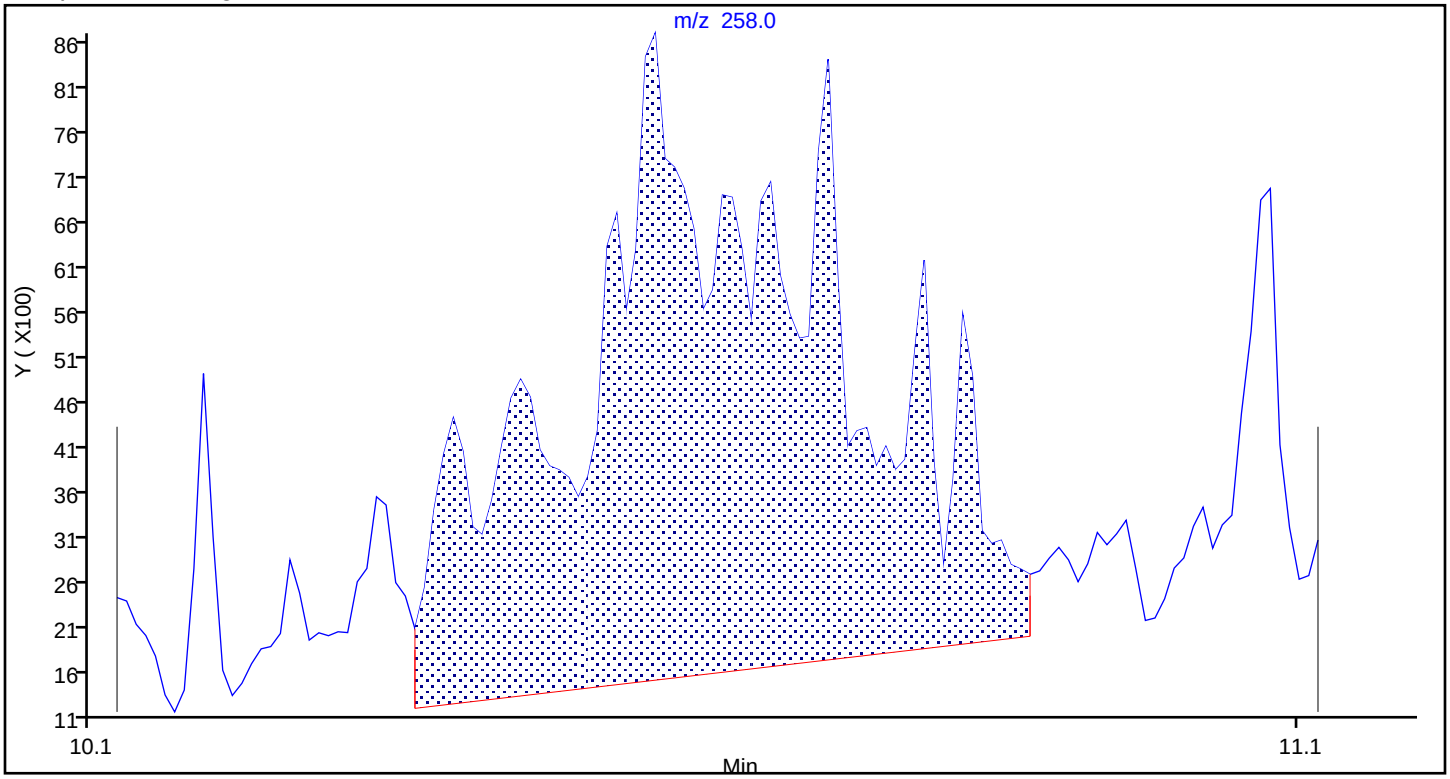
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



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Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
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Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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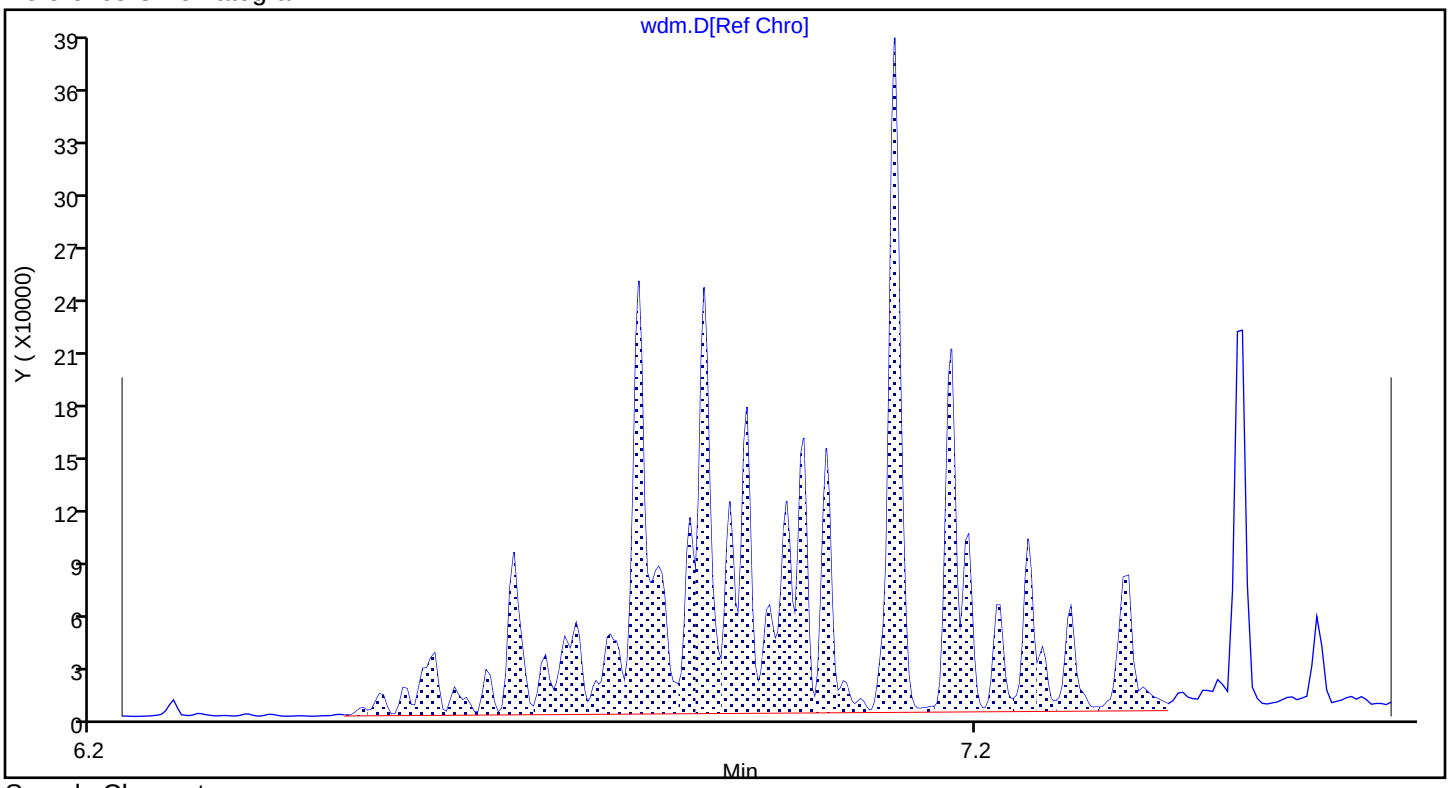
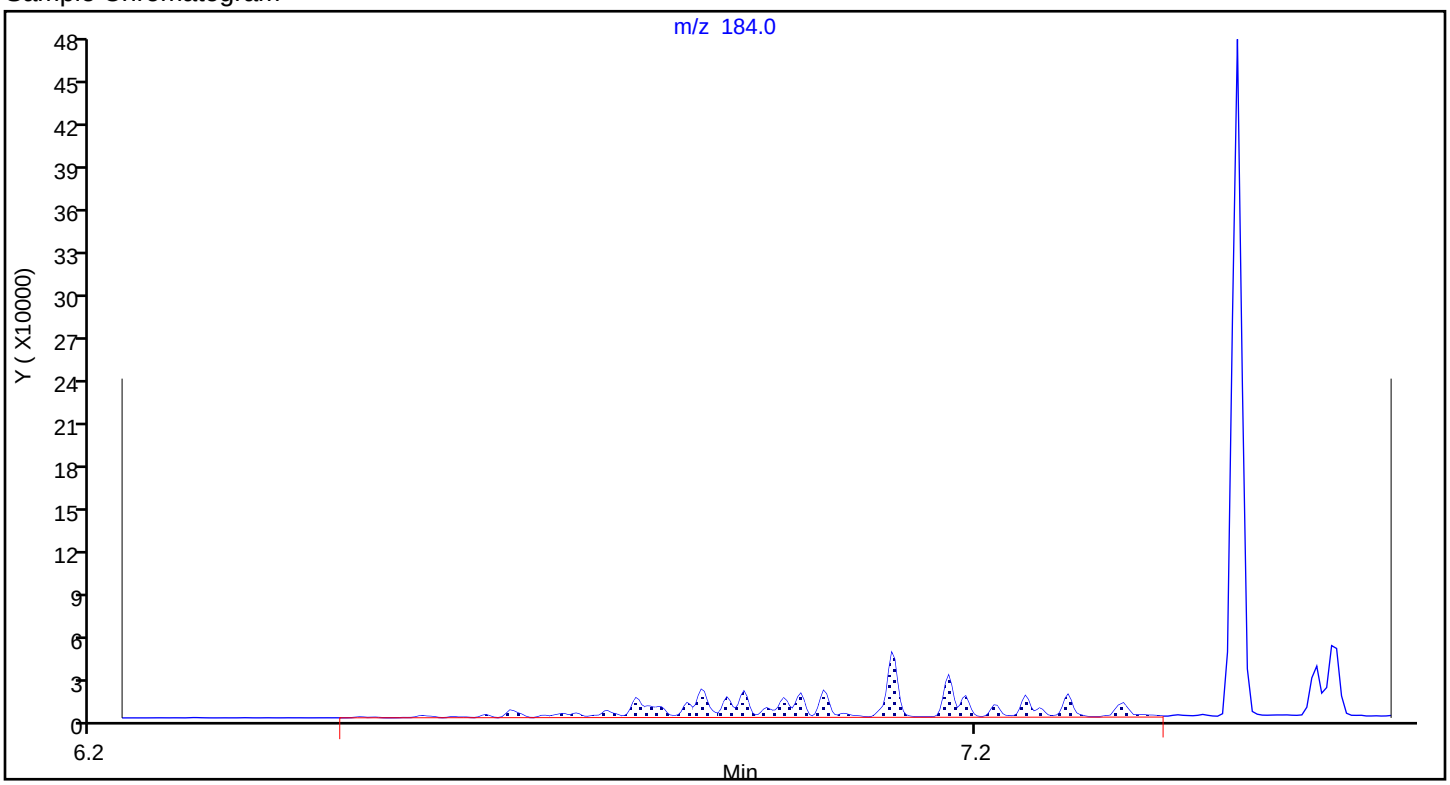
A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



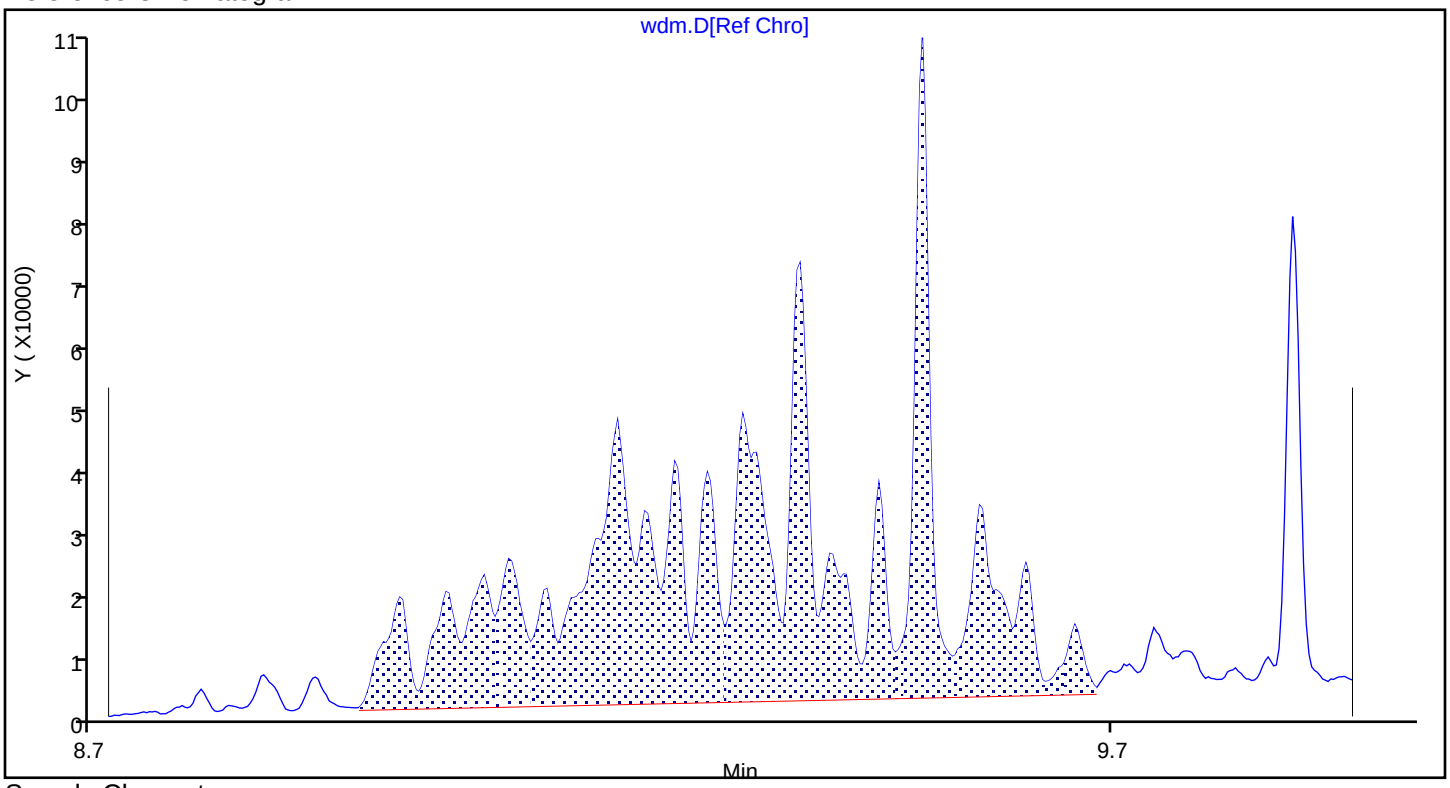
Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

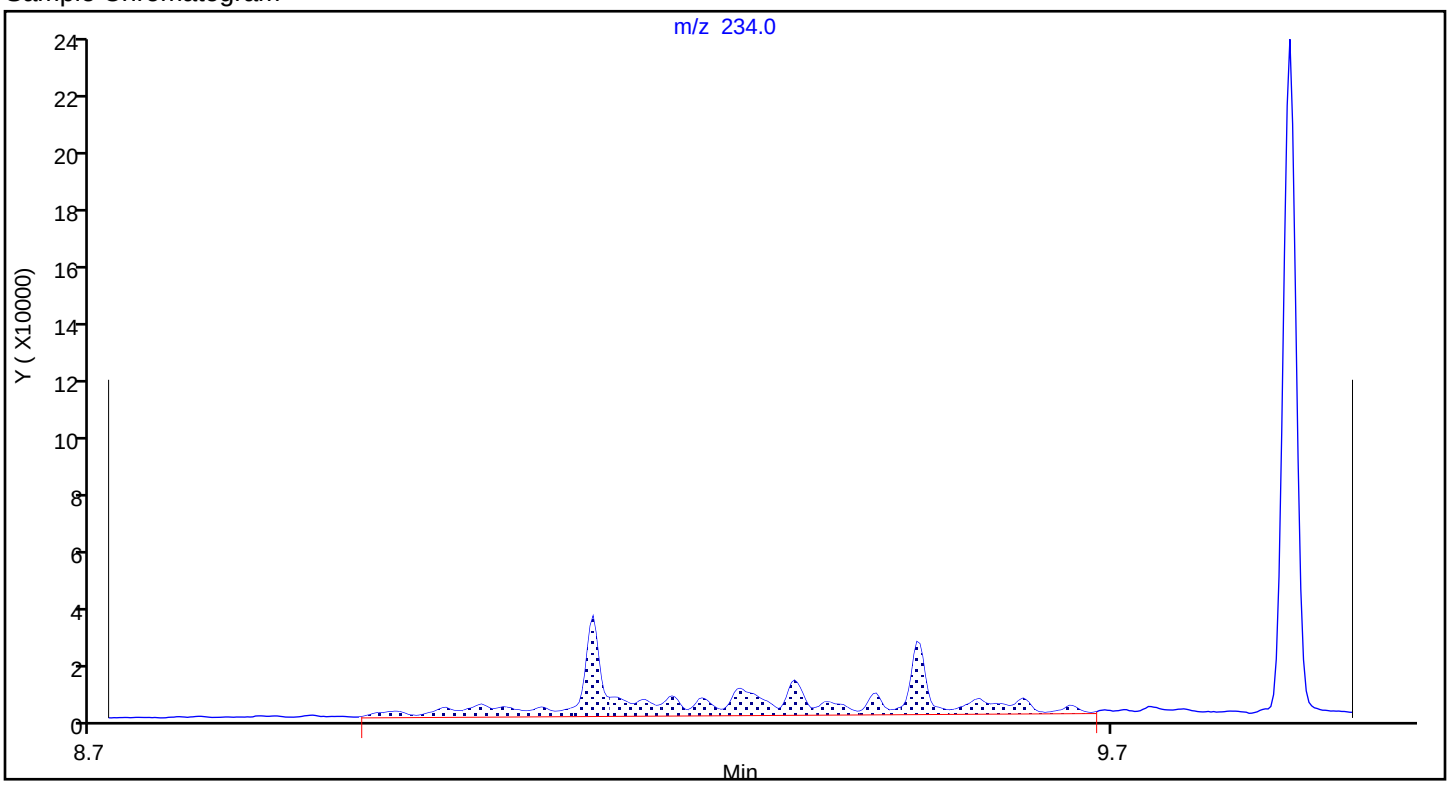
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram



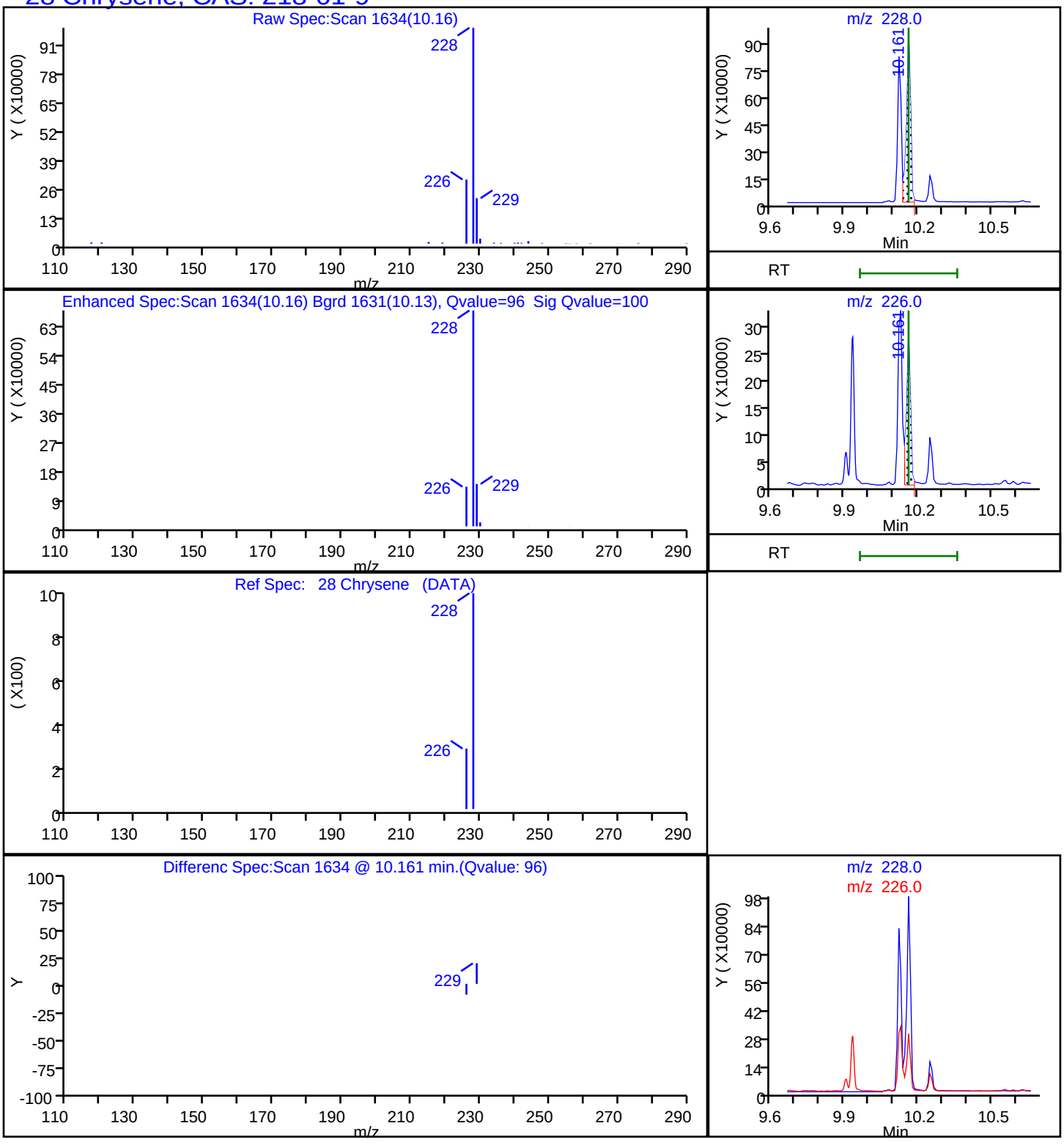
Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D

Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

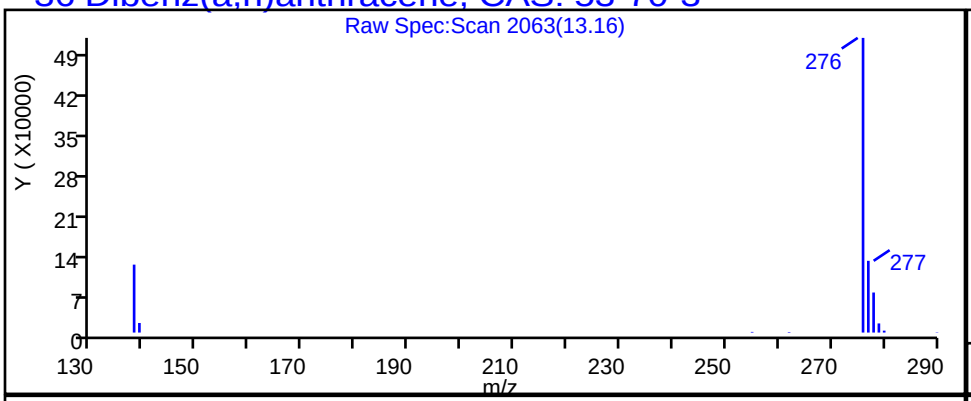


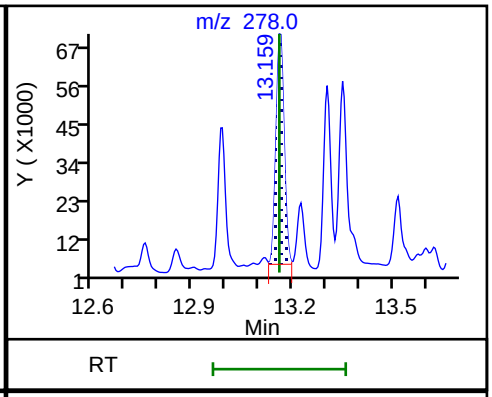
Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

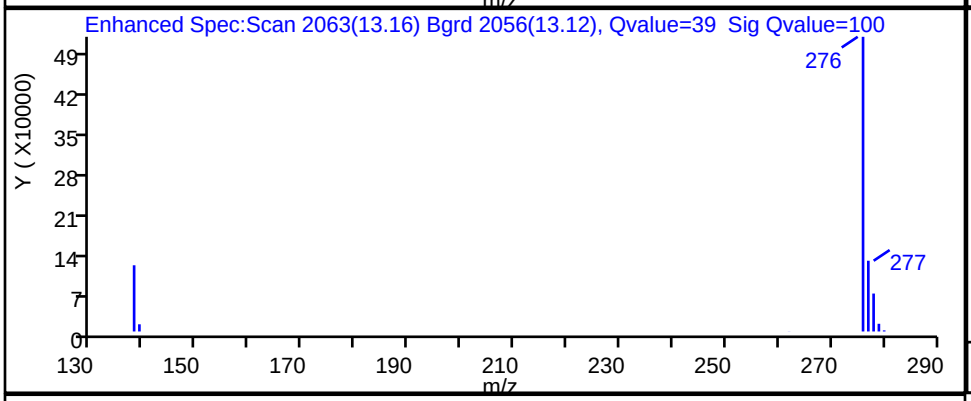
Eurofins TestAmerica, Knoxville

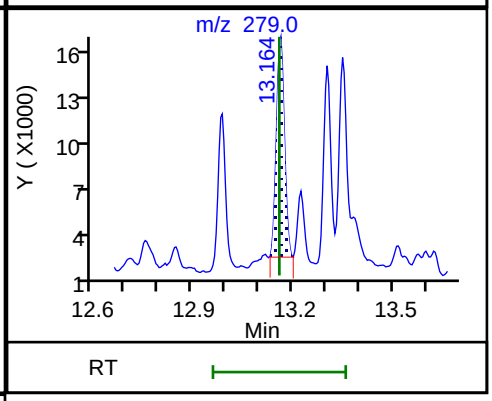
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

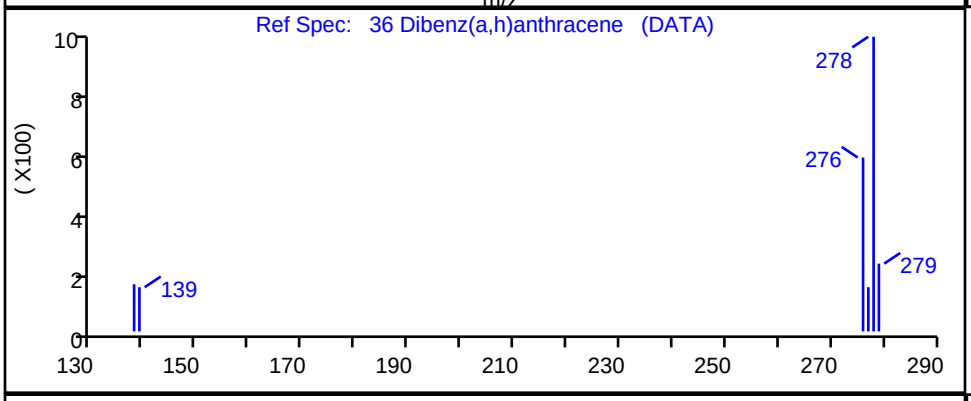
36 Dibenz(a,h)anthracene, CAS: 53-70-3

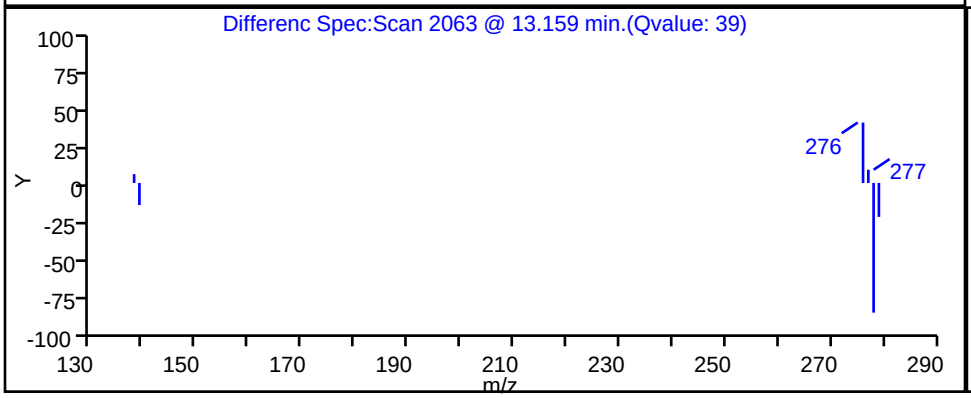


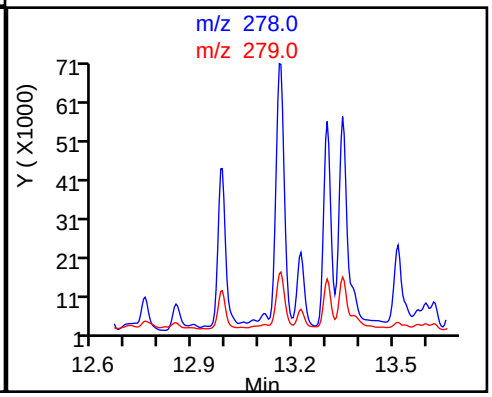










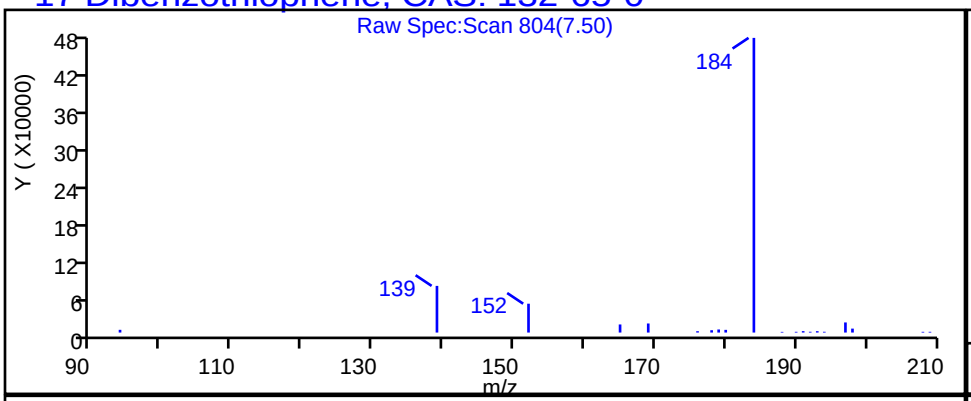


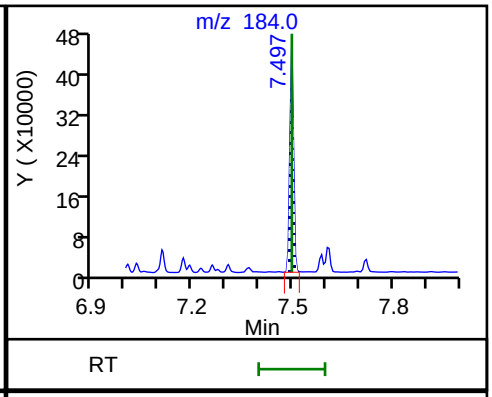
Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

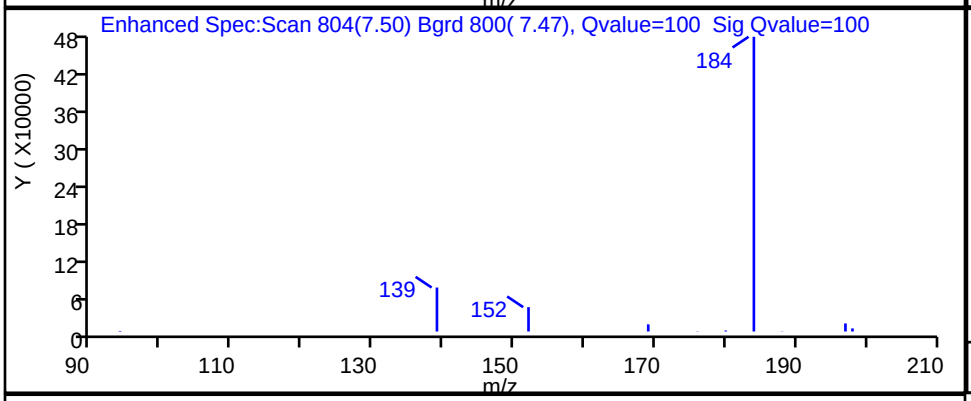
Eurofins TestAmerica, Knoxville

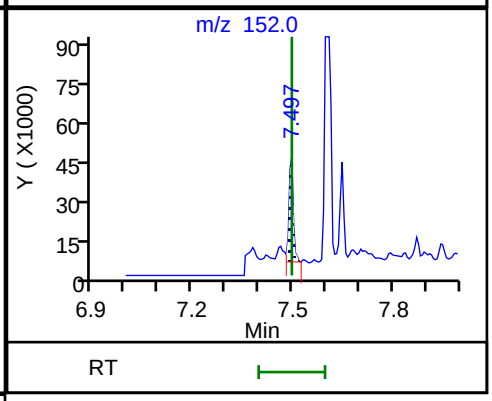
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

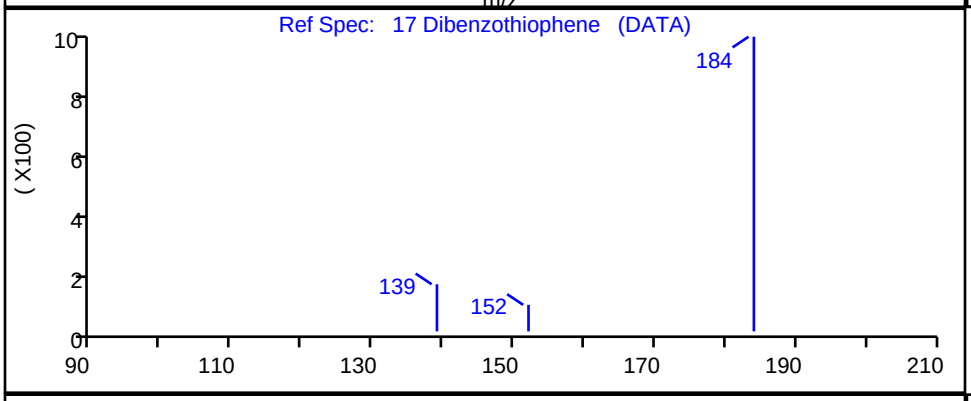
17 Dibenzothiophene, CAS: 132-65-0

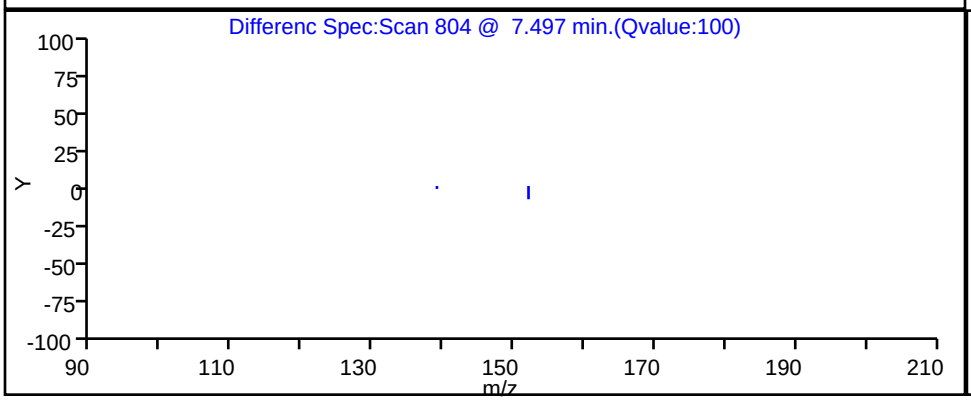


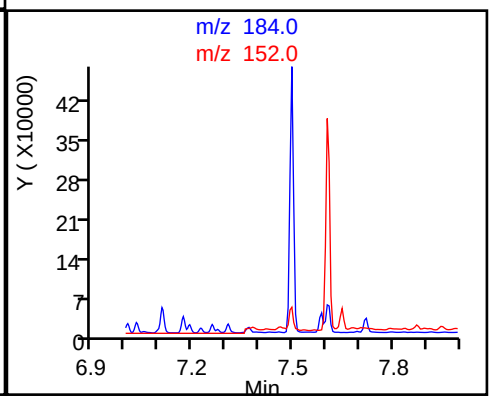










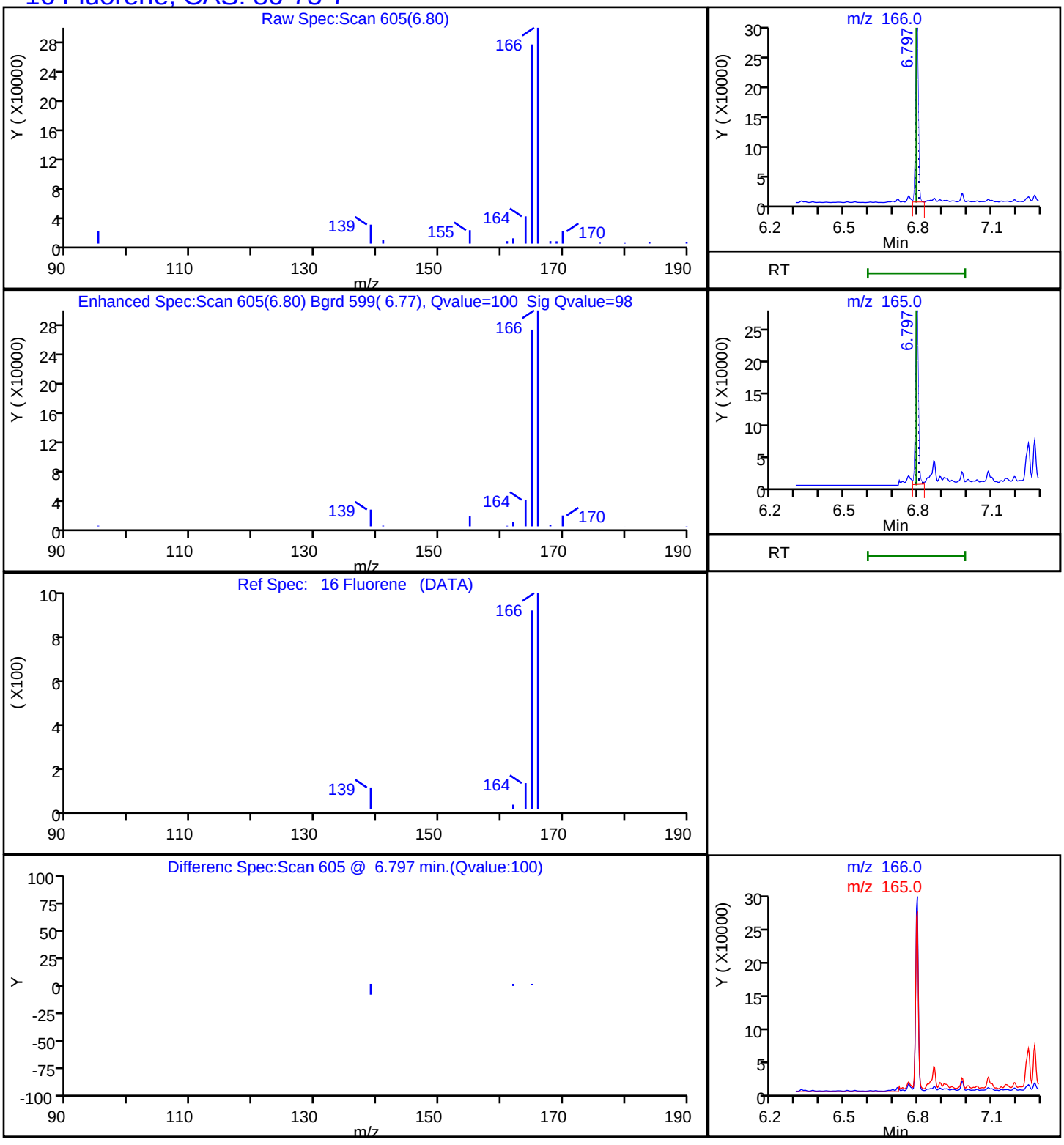


Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

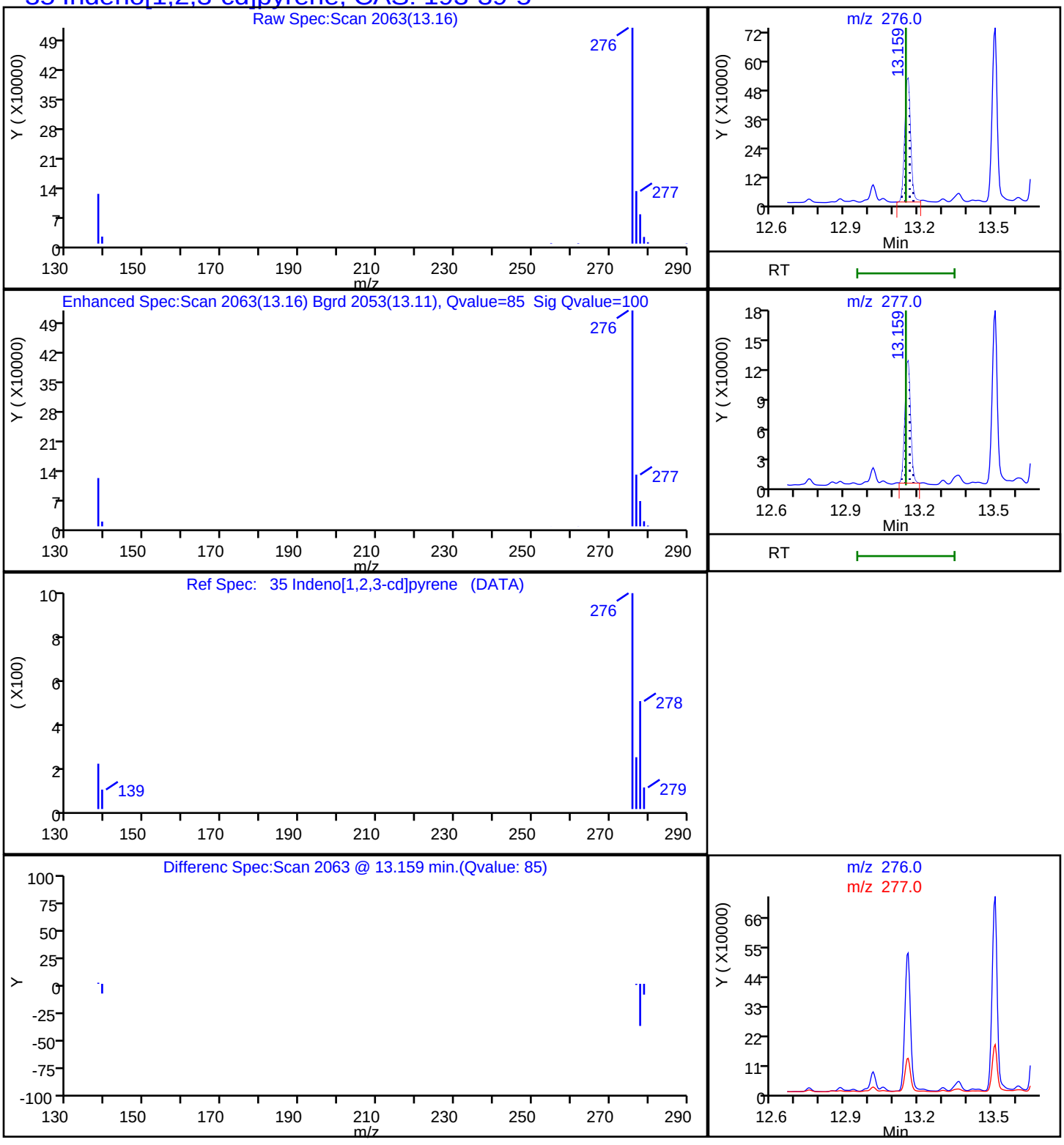


Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

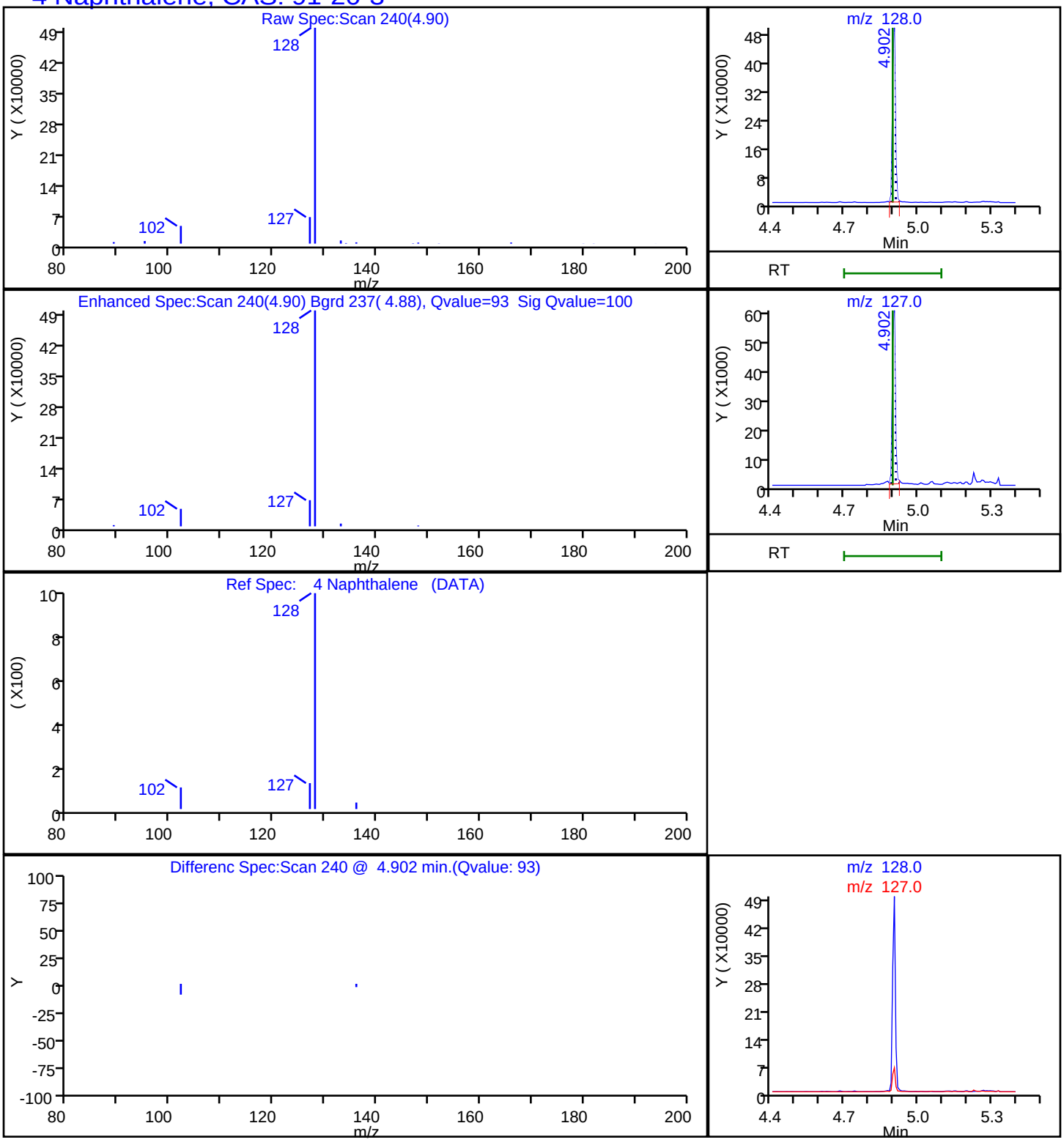


Report Date: 31-Aug-2019 11:48:59 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

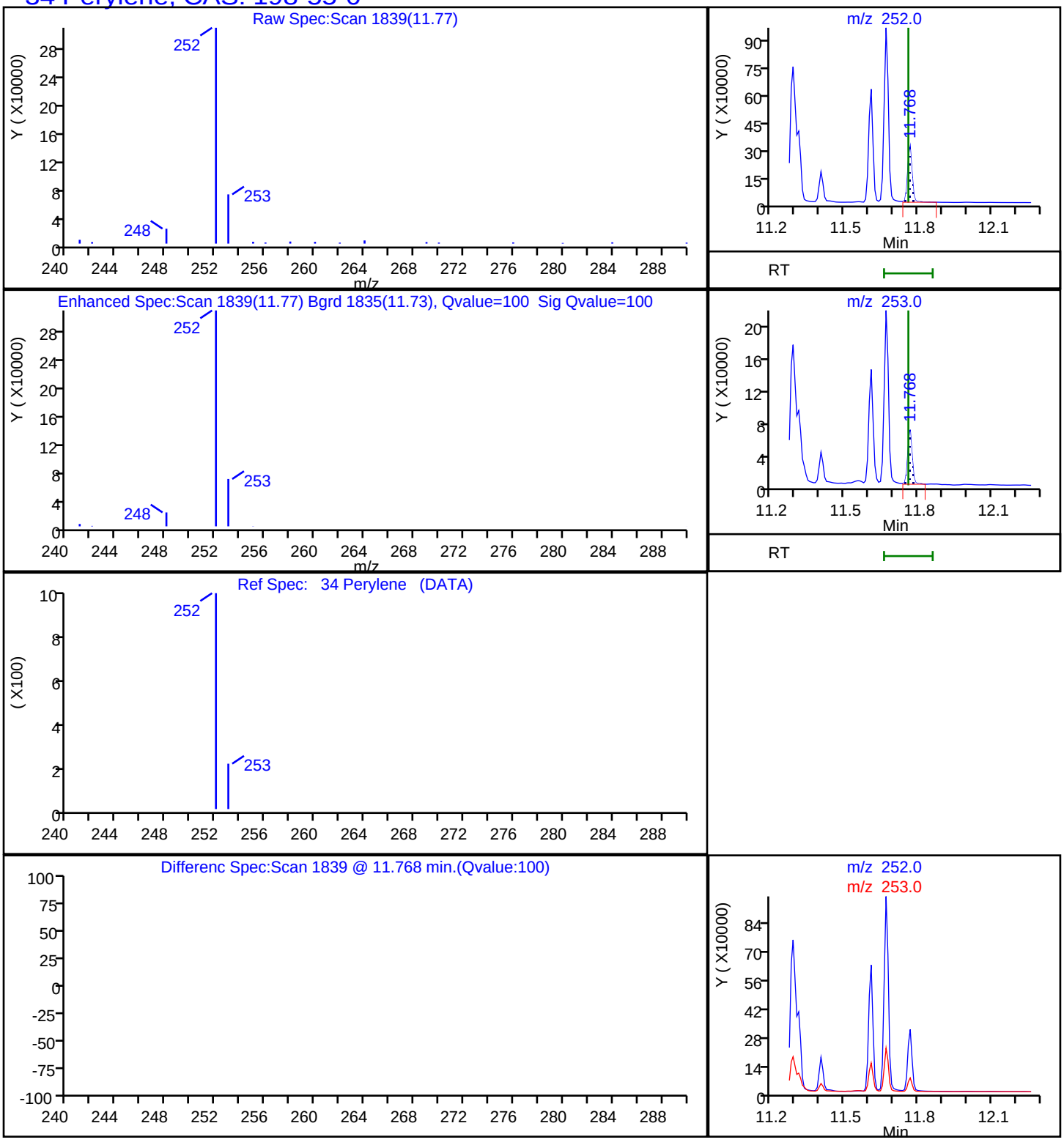


Report Date: 31-Aug-2019 11:49:00 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



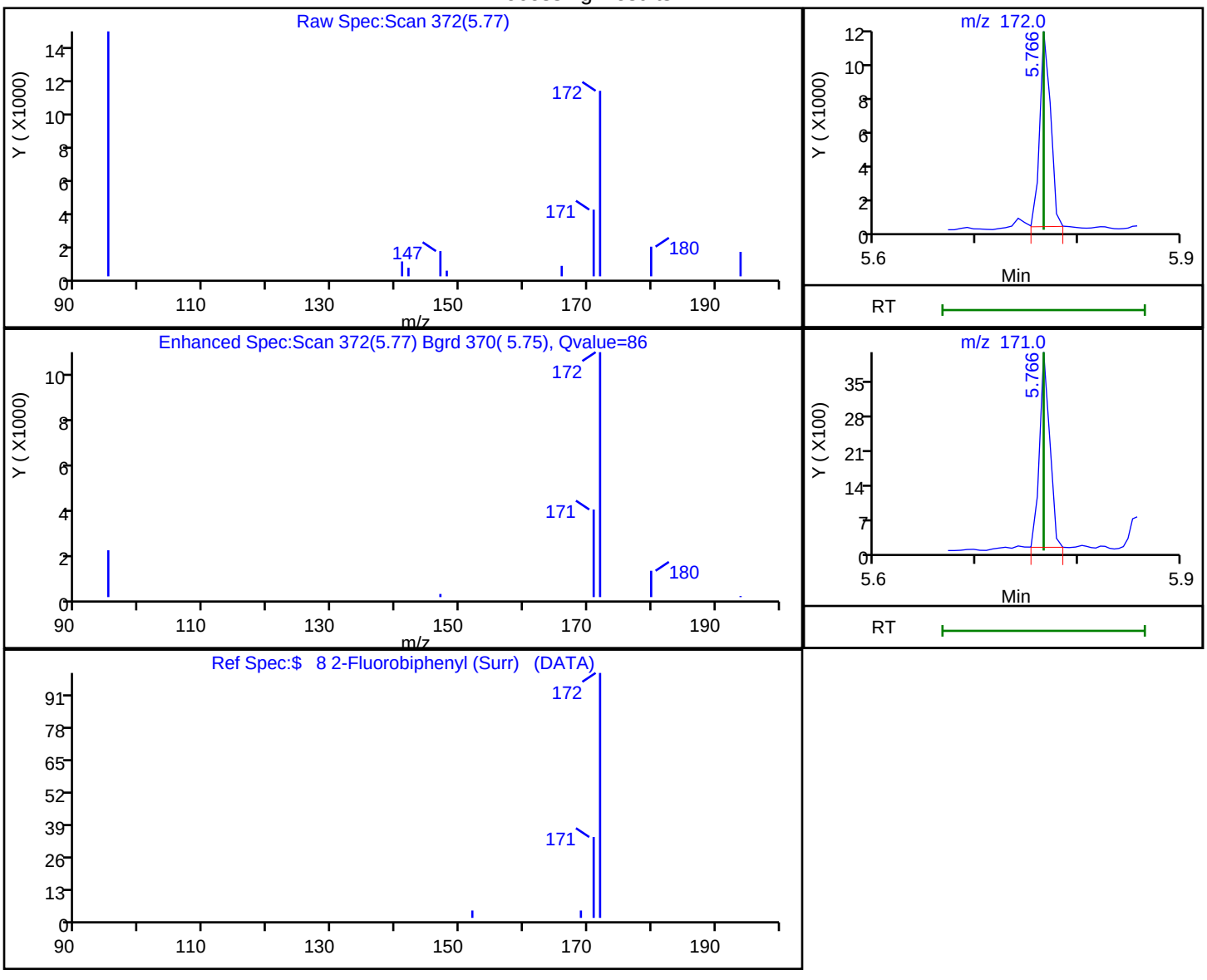
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	8034	0.022697
5.77	171.00	2698	

Reviewer: cochranj, 31-Aug-2019 10:57:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

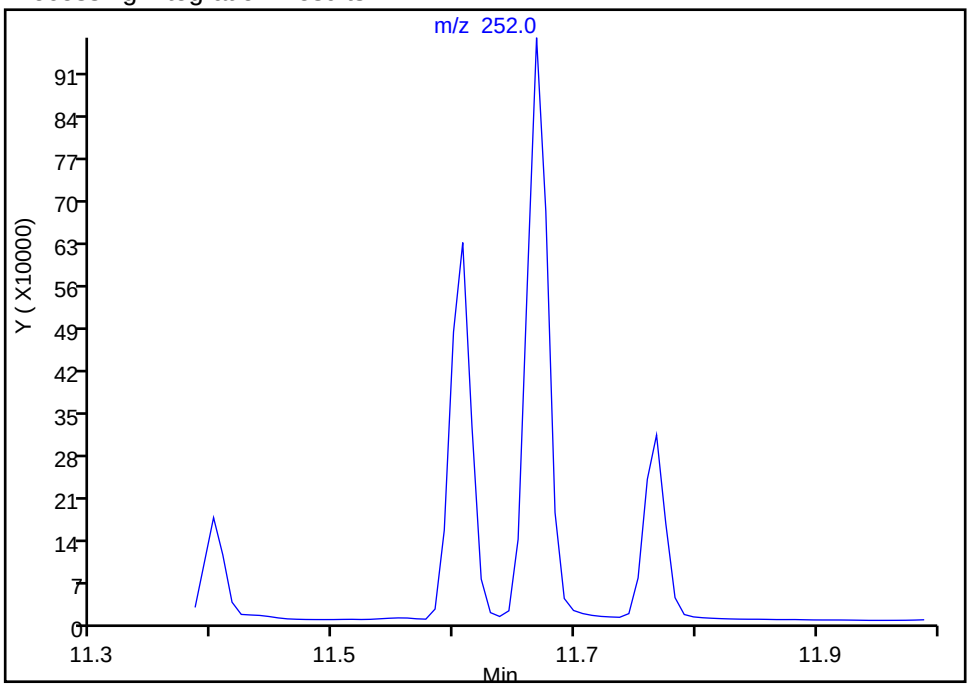
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

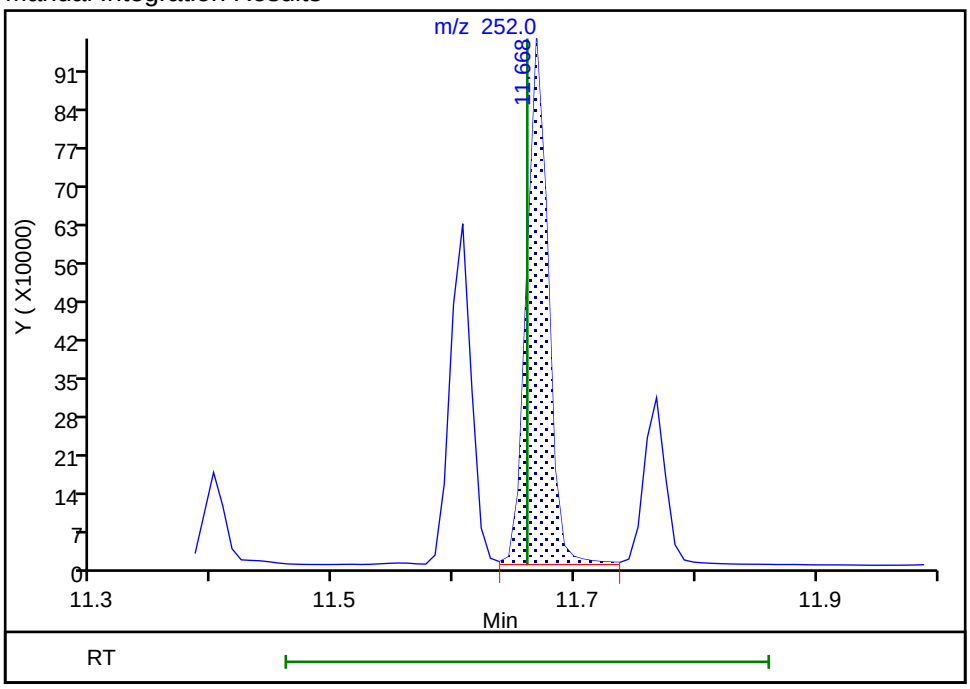
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 1188623
Amount: 2.518741
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:43:32
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

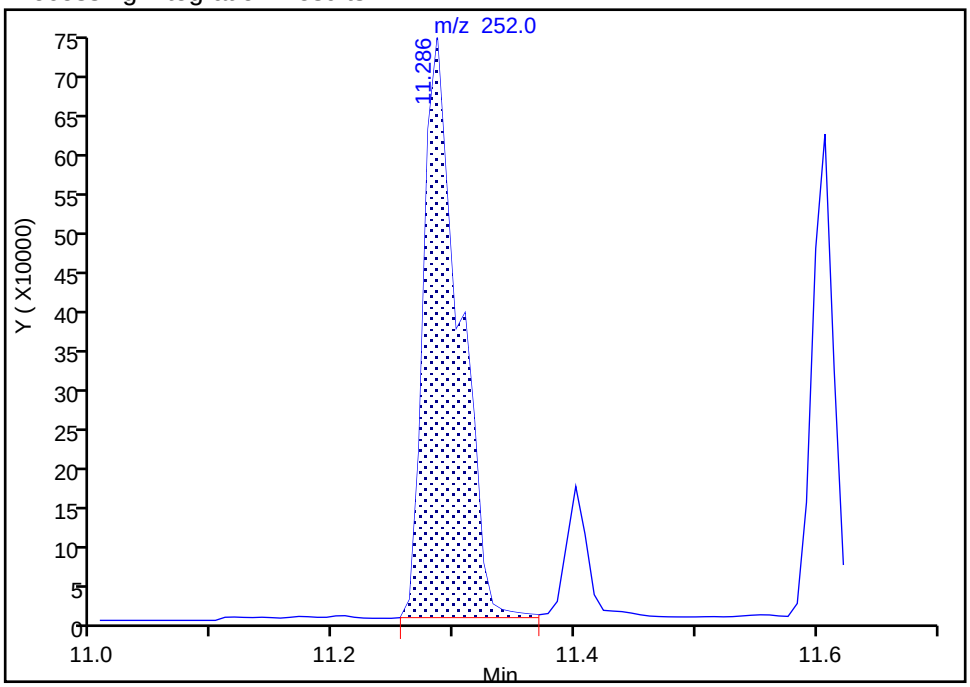
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

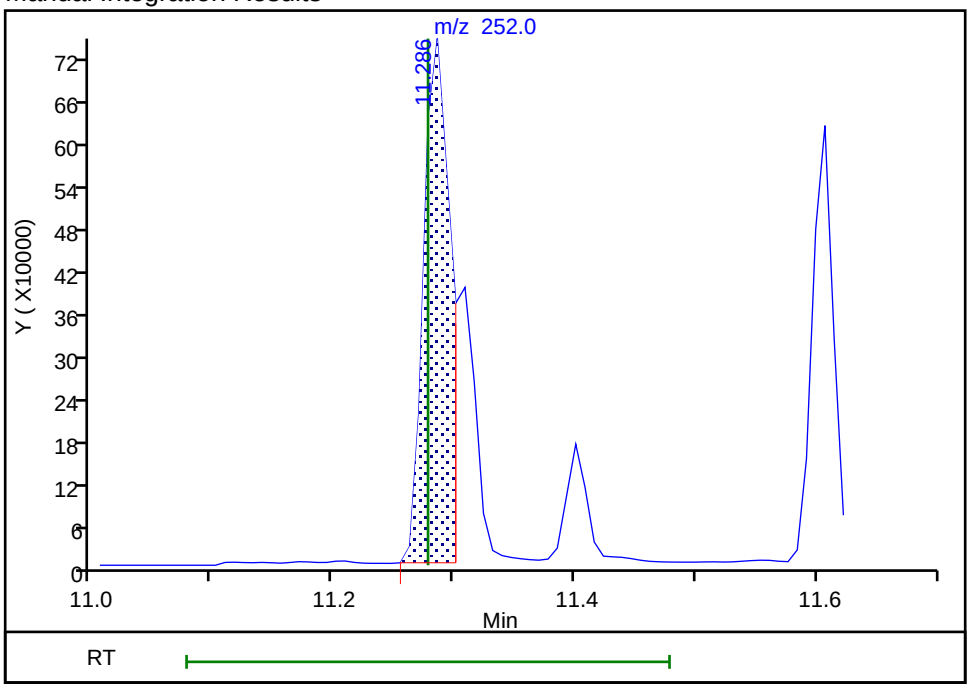
Processing Integration Results

RT: 11.29
Area: 1517216
Amount: 2.766028
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 1164654
Amount: 2.123274
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:43:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

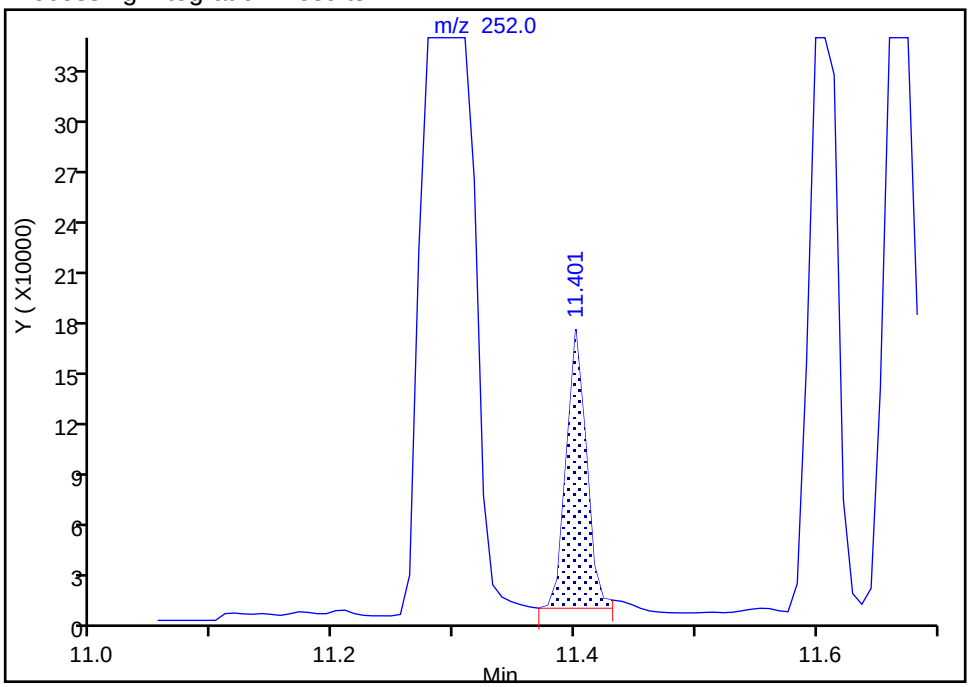
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

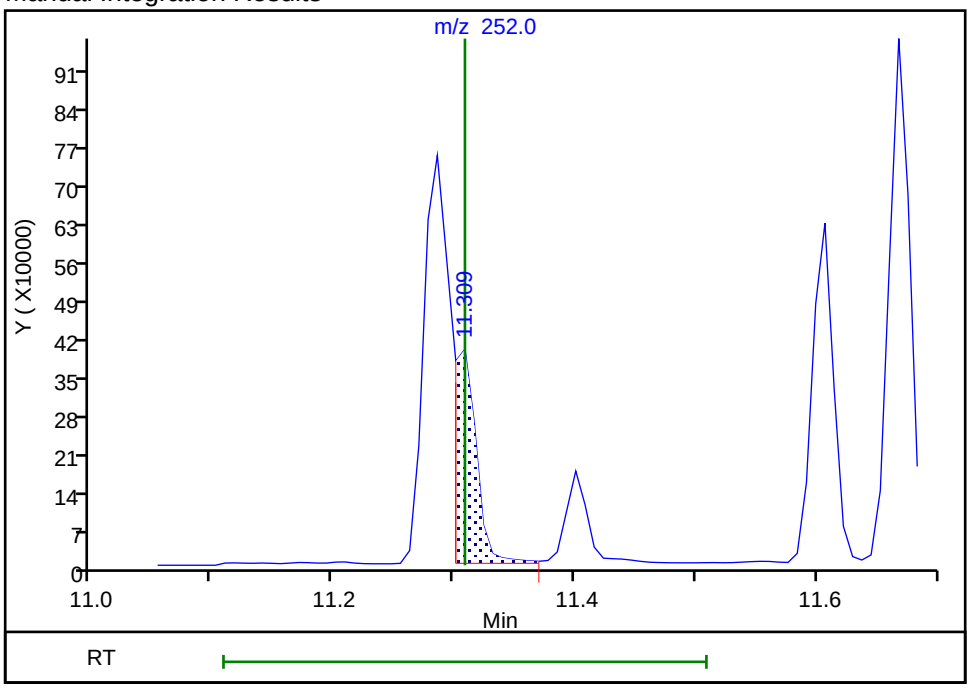
Processing Integration Results

RT: 11.40
Area: 190472
Amount: 0.306186
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 521966
Amount: 0.839068
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:43:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

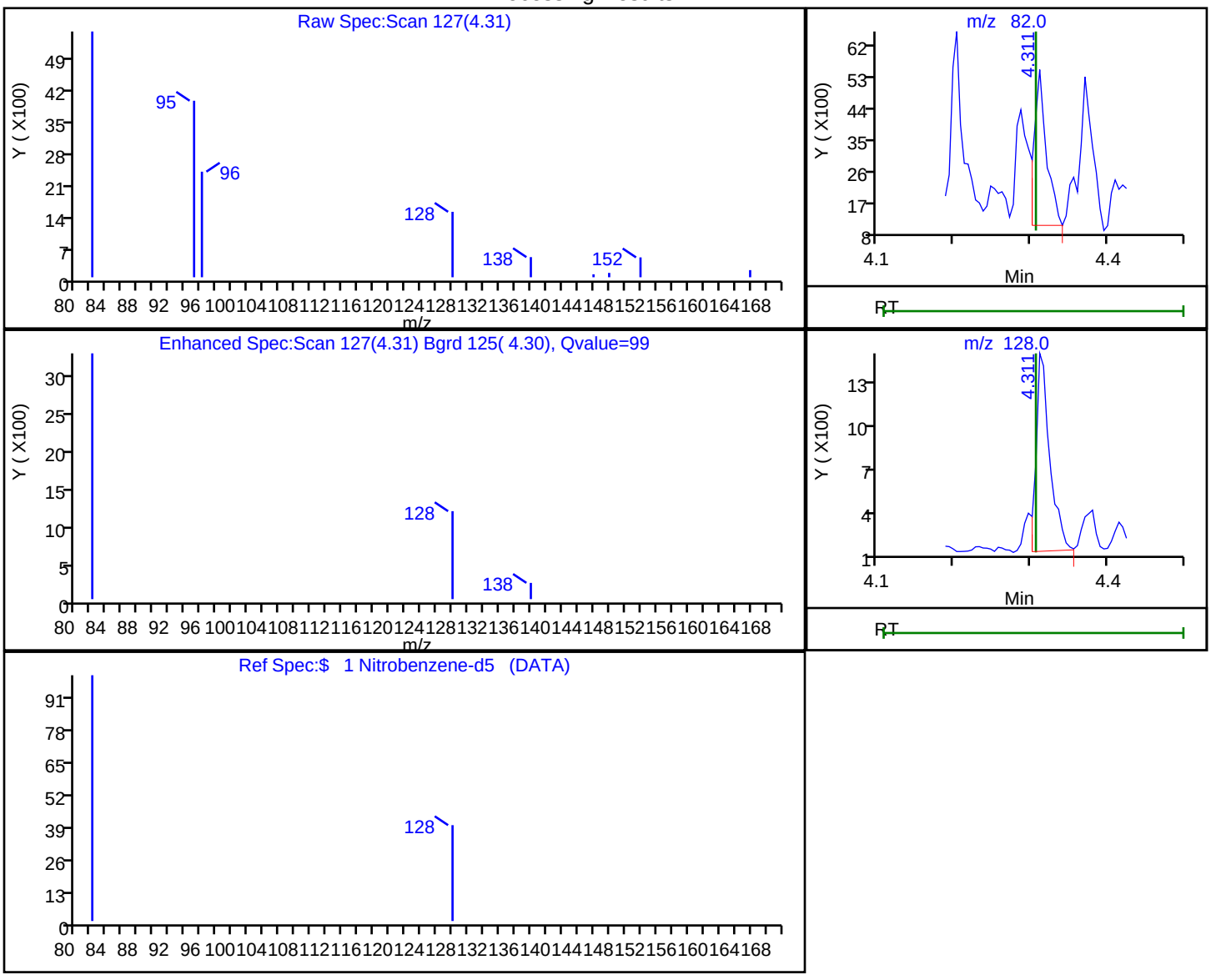
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	4914	0.040652
4.31	128.00	1612	

Reviewer: cochranj, 31-Aug-2019 10:57:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

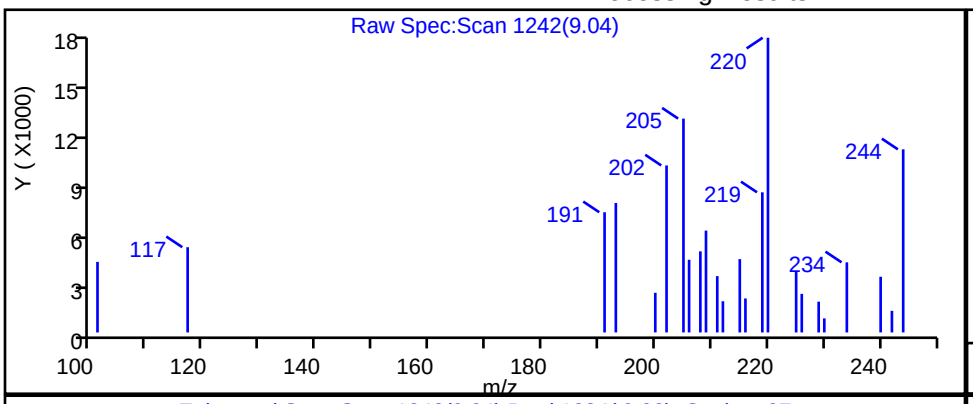
User Disabled Compound Report

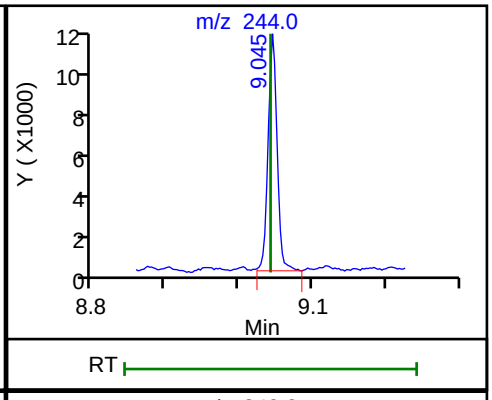
Eurofins TestAmerica, Knoxville

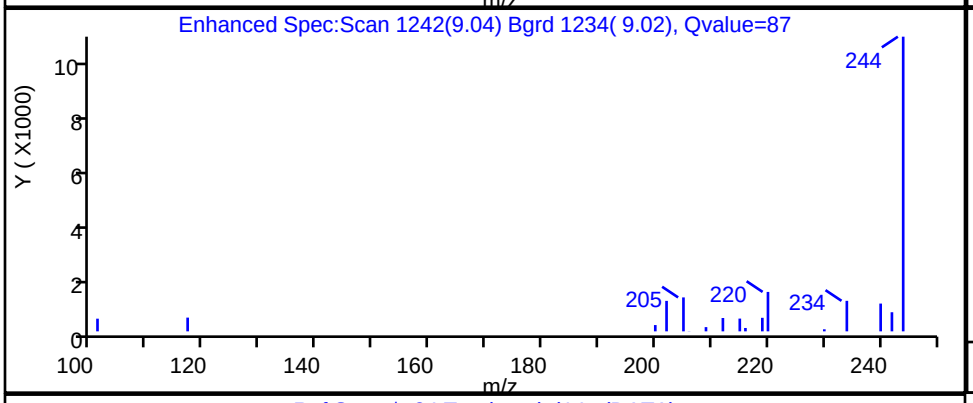
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-17-a.D				
Injection Date:	29-Aug-2019 18:50:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	10	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

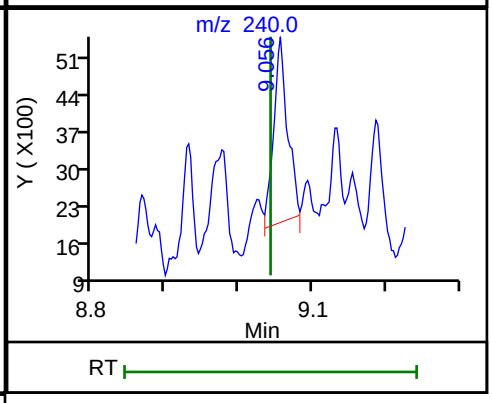
$ 24 Terphenyl-d14, CAS: 1718-51-0

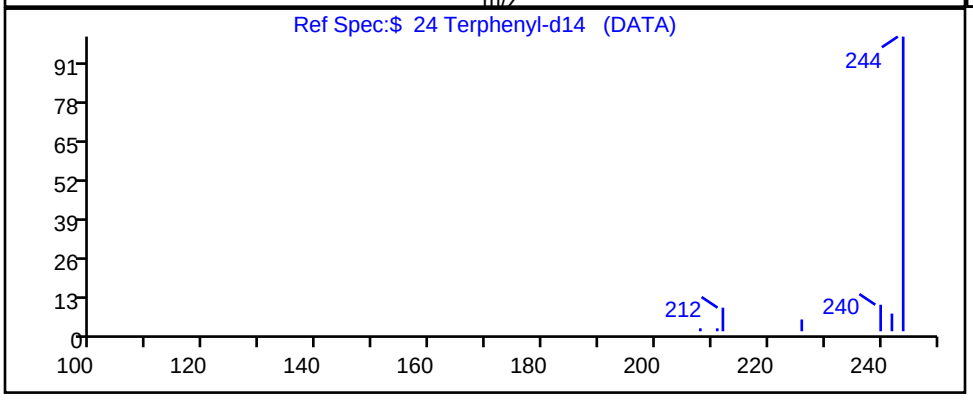
Processing Results











RT	Mass	Response	Amount
9.04	244.00	9060	0.028986
9.06	240.00	4586	

Reviewer: cochranj, 31-Aug-2019 10:57:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-11.2-12_20190717 DL Lab Sample ID: 580-87761-17 DL

Matrix: Solid Lab File ID: 580-87761-b-17-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:00

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 14.71(g) Date Analyzed: 08/30/2019 14:53

Con. Extract Vol.: 0.5(mL) Dilution Factor: 100

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 31.6 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
206-44-0	Fluoranthene	11000		99	91
85-01-8	Phenanthrene	9400		200	180
129-00-0	Pyrene	13000		200	60

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D
Lims ID: 580-87761-B-17-A
Client ID: 22T-VB-03-11.2-12_20190717
Sample Type: Client
Inject. Date: 30-Aug-2019 14:53:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 100.0000
Sample Info: 140-0012910-012
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 15:56:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	190507	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	110517	0.2636	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	23798	0.0866	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	97	13580	0.0519	
11 Acenaphthylene	152	6.216	6.216	0.000	99	22674	0.0660	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	99	99875	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	91147	0.3430	
16 Fluorene	166	6.793	6.793	0.000	100	59120	0.2011	
17 Dibenzothiophene	184	7.497	7.491	0.006	100	95782	0.2366	
* 18 Phenanthrene-d10	188	7.581	7.581	0.000	97	169643	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	827446	1.89	
20 Anthracene	178	7.648	7.648	0.000	99	92354	0.2534	
22 Fluoranthene	202	8.687	8.684	0.003	99	921472	2.17	
23 Pyrene	202	8.909	8.906	0.003	99	1191074	2.52	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	94	230345	0.6202	
* 27 Chrysene-d12	240	10.129	10.129	0.000	91	156182	0.5000	
28 Chrysene	228	10.161	10.161	0.000	97	290537	0.6542	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	331357	0.7035	M
30 Benzo[k]fluoranthene	252	11.301	11.301	0.000	100	112026	0.2097	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	203415	0.4598	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	315187	0.7777	a
* 33 Perylene-d12	264	11.729	11.729	0.000	100	172515	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	107316	0.2345	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	85	223963	0.4495	
36 Dibenz(a,h)anthracene	278	13.154	13.159	-0.005	40	31329	0.0741	M
37 Benzo[g,h,i]perylene	276	13.507	13.508	-0.001	99	295728	0.6342	
A 38 C1-Naphthalenes	142	5.520	(5.444-5.596)		0	36858	0.0879	
A 39 C2-Naphthalenes	156	6.078	(5.913-6.239)		0	74698	0.1781	
A 40 C3-Naphthalenes	170	6.558	(6.306-6.809)		0	100158	0.2389	
A 41 C4-Naphthalenes	184	6.944	(6.489-7.384)		0	69624	0.1660	
A 42 C1-Fluorenes	180	7.296	(7.134-7.311)		0	27244	0.0927	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.564-7.934)		0	36076	0.1227	
A 44 C3-Fluorenes	208	8.239	(7.985-8.453)		0	29214	0.0994	
A 45 C1-Dibenzothiophenes	198	7.946	(7.822-8.064)		0	45117	0.1114	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	45352	0.1120	
A 47 C3-Dibenzothiophenes	226	8.652	(8.524-9.104)		0	31856	0.0787	
A 48 C4-Dibenzothiophenes	240	9.053	(8.810-9.579)		0	18777	0.0464	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.002-8.183)		0	212285	0.4858	
A 50 C2-Phenanthrenes/Anthracen	206	8.555	(8.341-8.770)		0	132737	0.3038	
A 51 C3-Phenanthrenes/Anthracen	220	8.991	(8.743-9.258)		0	73610	0.1685	
A 52 C4-Phenanthrenes/Anthracen	234	9.189	(8.959-9.683)		0	45335	0.1038	
A 53 C1-Fluoranthenes/pyrene	216	9.301	(9.109-9.496)		0	235354	0.4980	
A 54 C2-Fluoranthenes/Pyrene	230	9.804	(9.584-10.051)		0	68094	0.1441	
A 55 C3-Fluoranthenes/Pyrene	244	10.232	(10.030-10.504)		0	43280	0.0916	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	26011	0.0550	
A 57 C1-Chrysenes	242	10.623	(10.504-10.751)		0	77571	0.1747	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	35025	0.0789	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	23597	0.0531	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	15978	0.0360	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

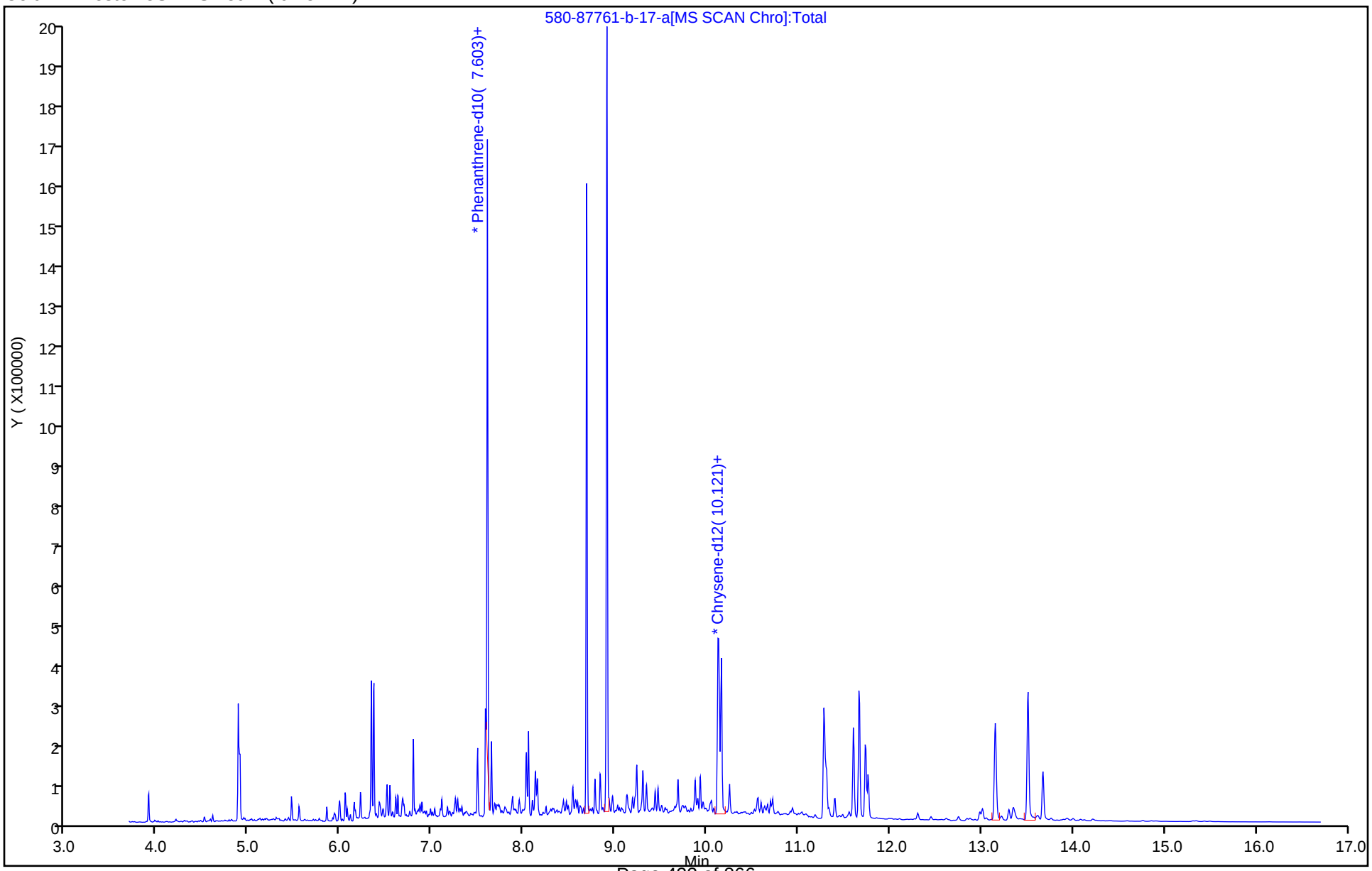
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 31-Aug-2019 13:17:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17	Worklist Smp#:	12
Client ID:	22T-VB-03-11.2-12_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	12
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

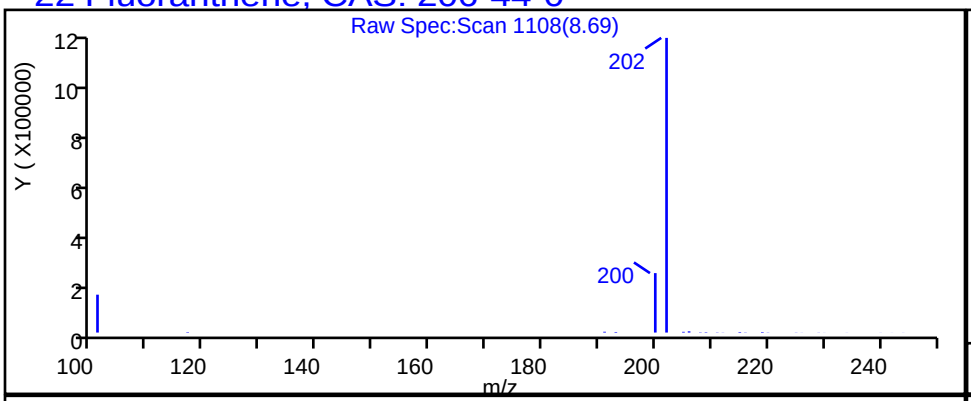


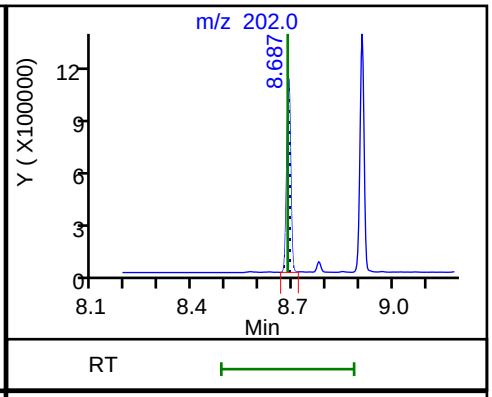
Report Date: 31-Aug-2019 13:17:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

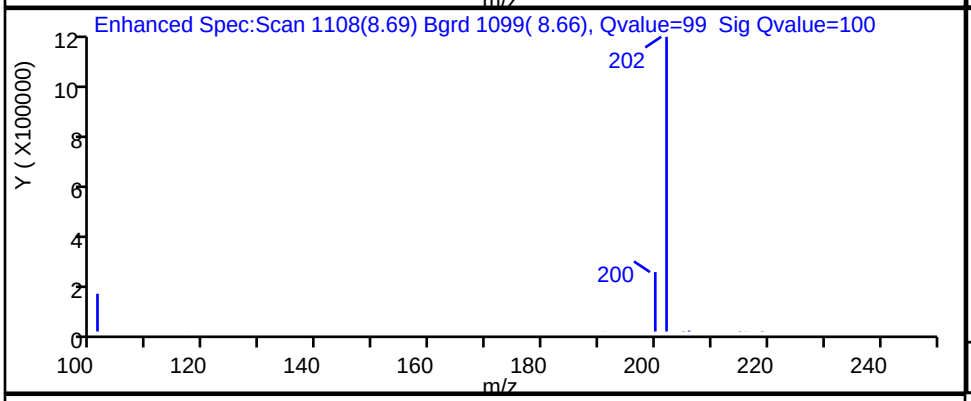
Eurofins TestAmerica, Knoxville

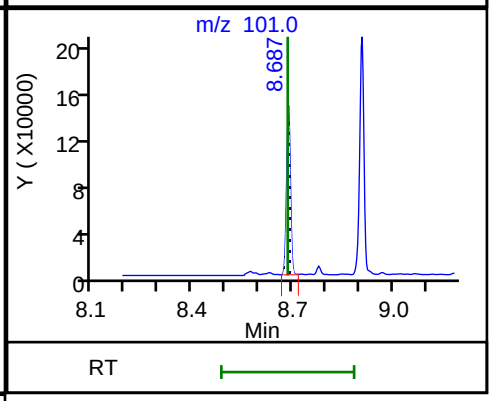
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

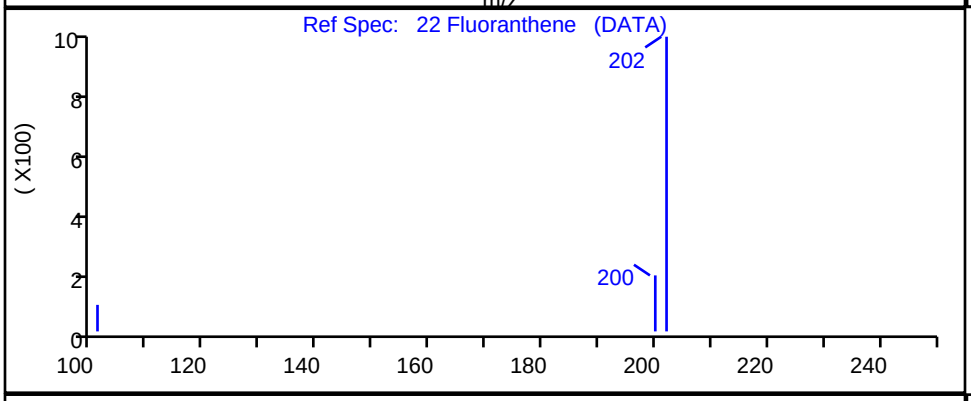
22 Fluoranthene, CAS: 206-44-0

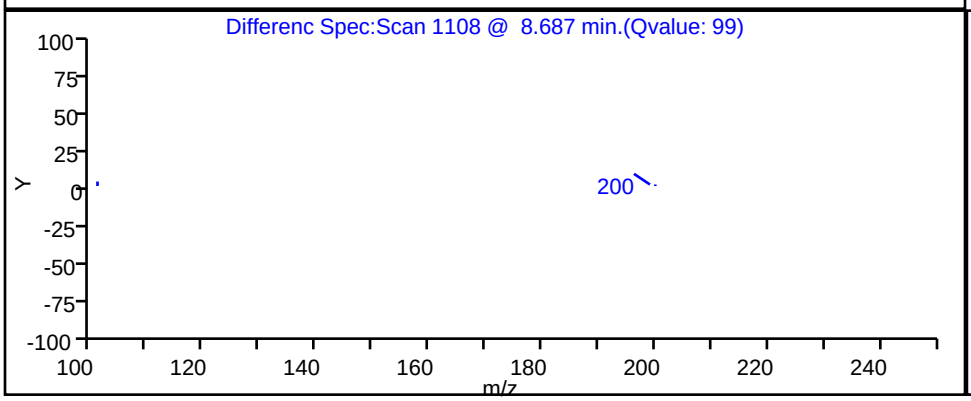


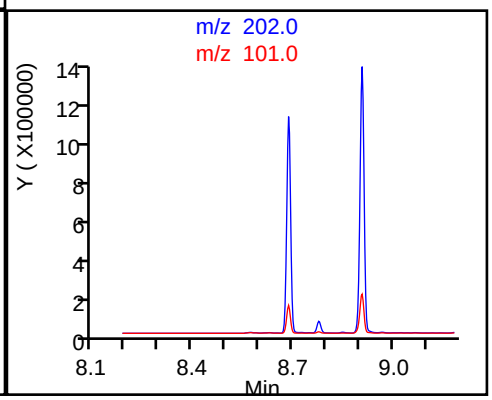










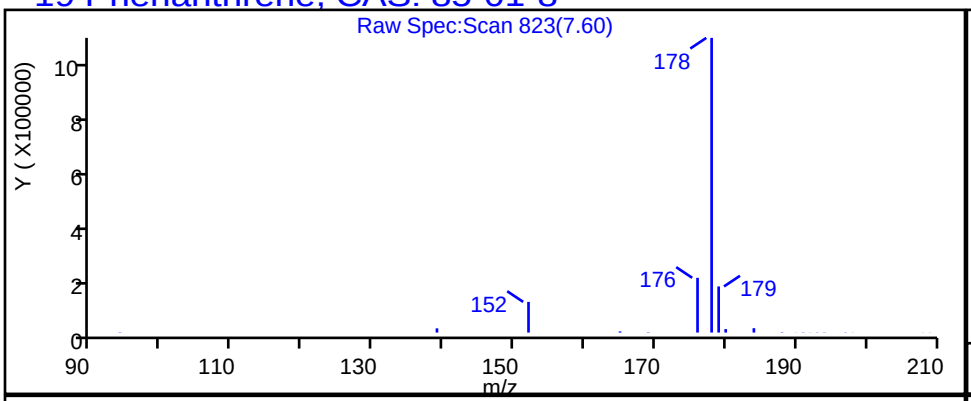


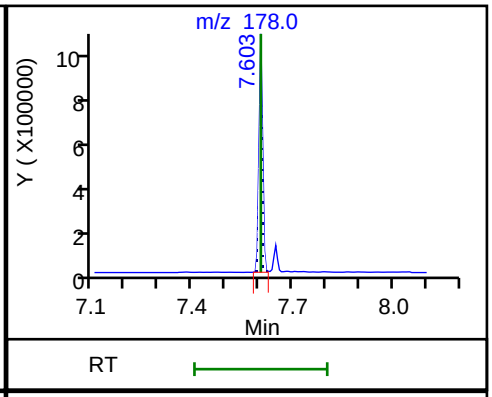
Report Date: 31-Aug-2019 13:17:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

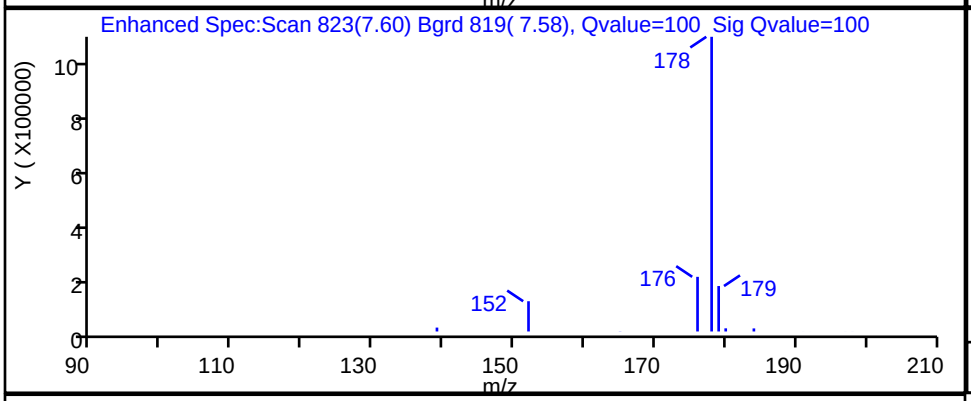
Eurofins TestAmerica, Knoxville

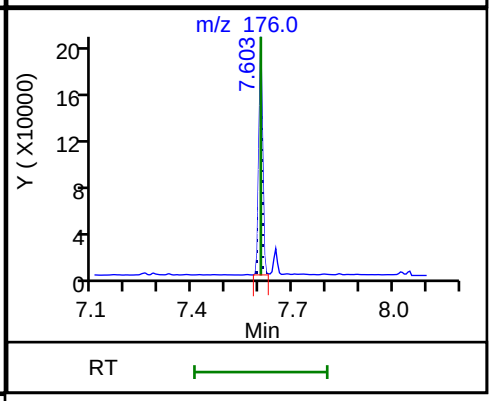
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

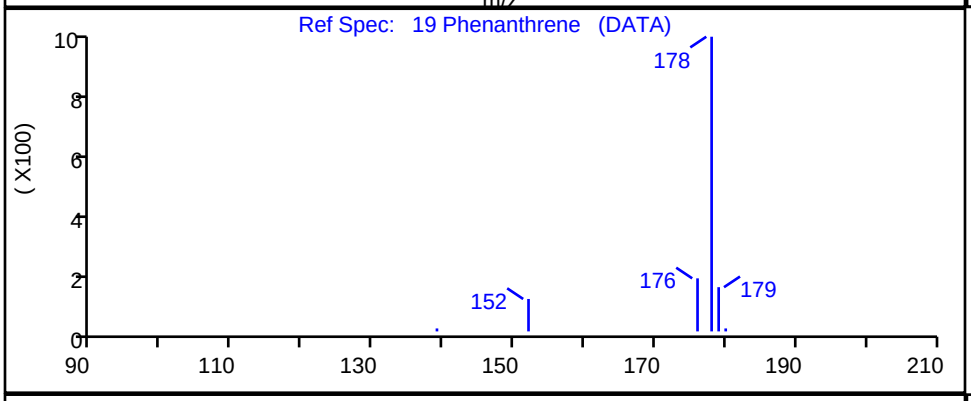
19 Phenanthrene, CAS: 85-01-8

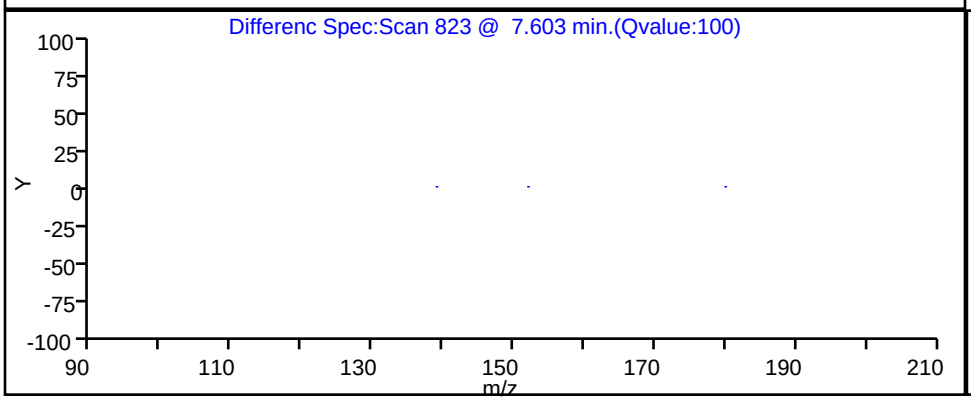


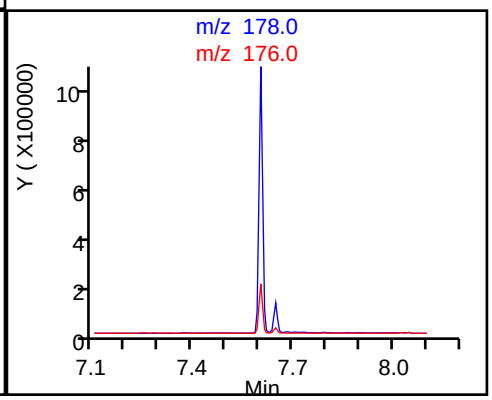










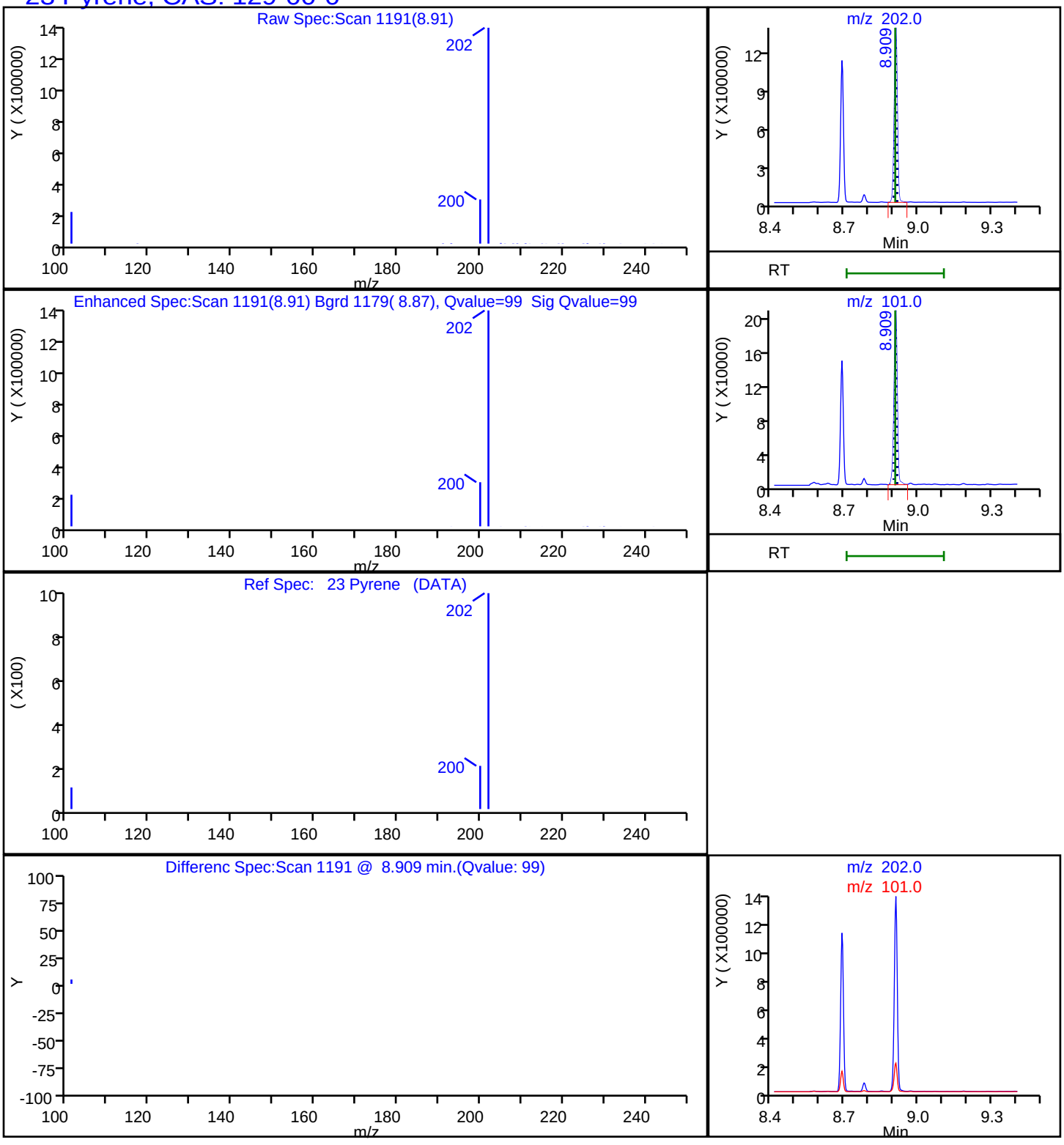


Report Date: 31-Aug-2019 13:17:43 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



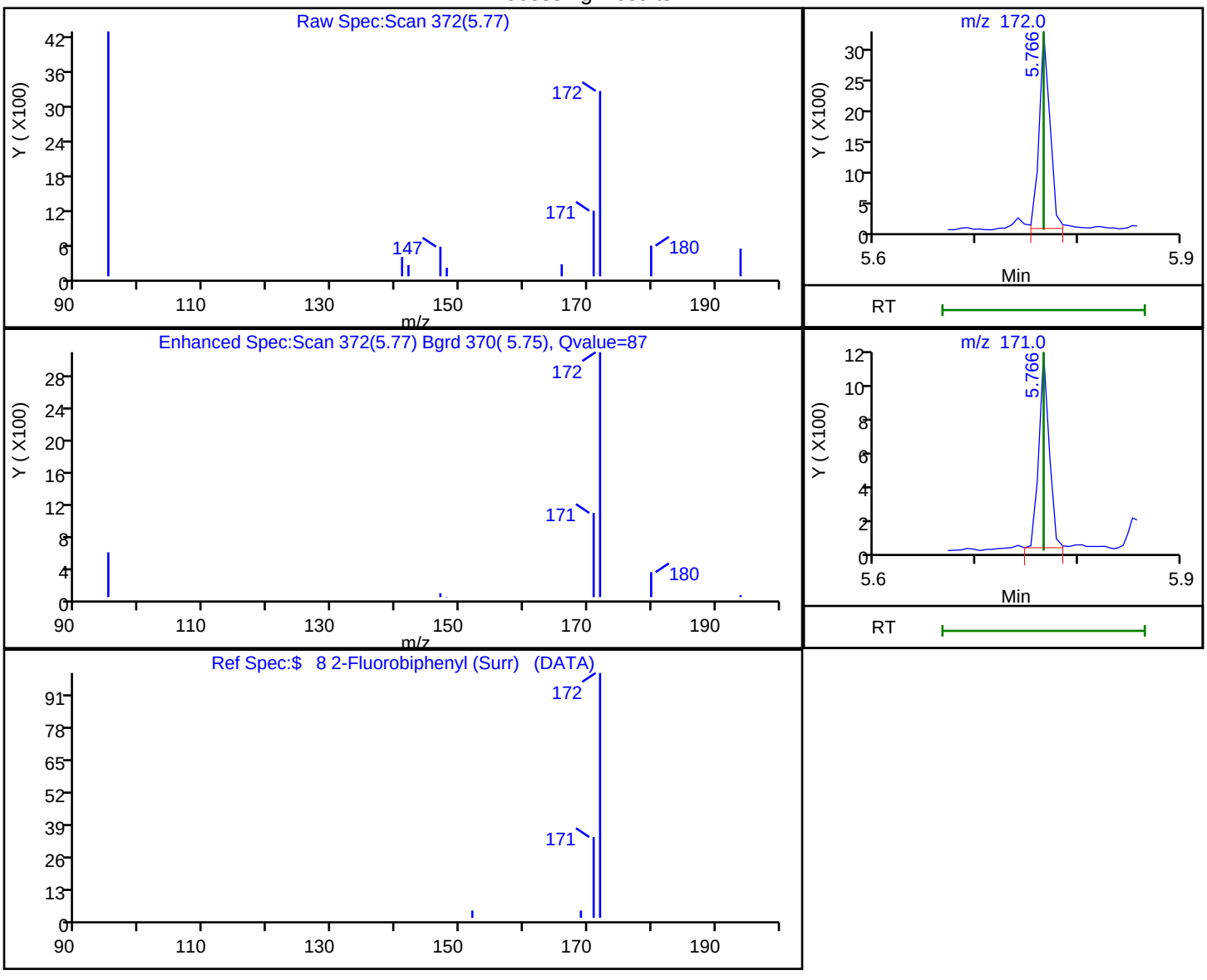
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	2289	0.007088
5.77	171.00	741	

Reviewer: cochranj, 31-Aug-2019 13:15:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

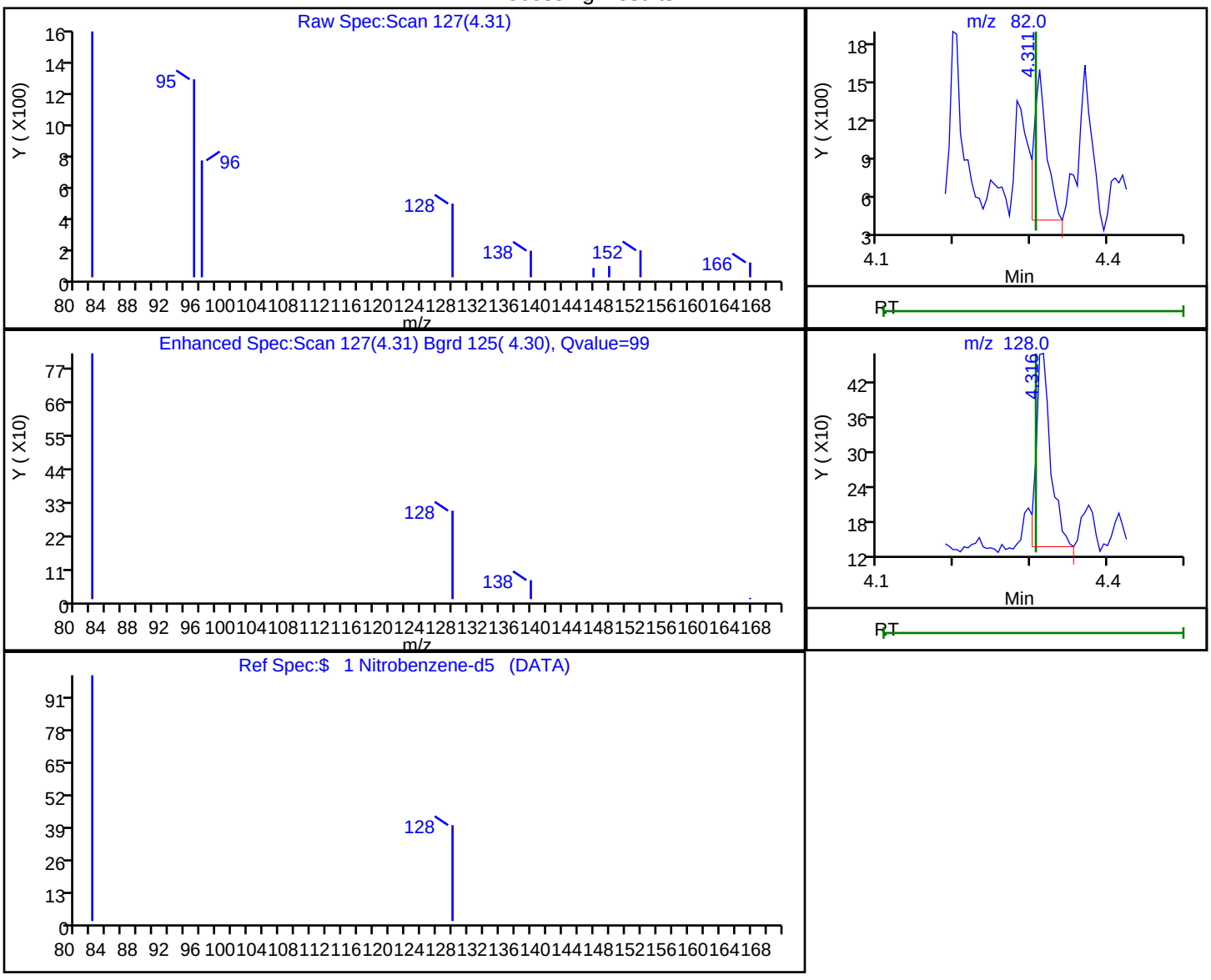
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	1296	0.011652
4.32	128.00	442	

Reviewer: cochranj, 31-Aug-2019 13:15:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

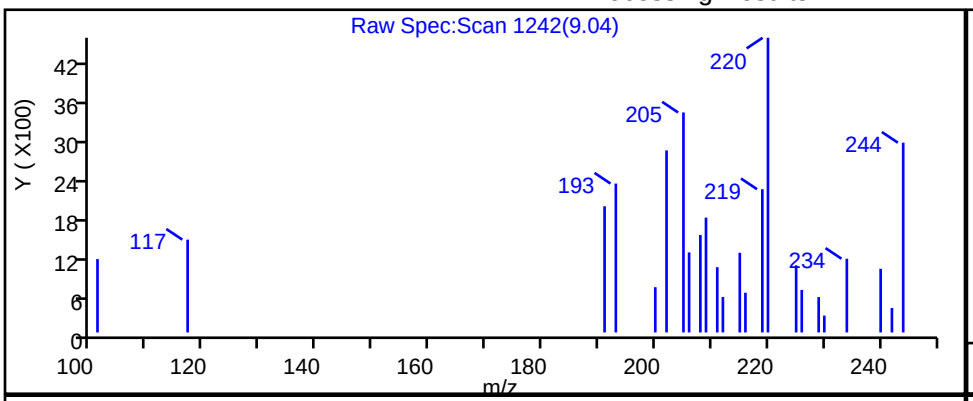
User Disabled Compound Report

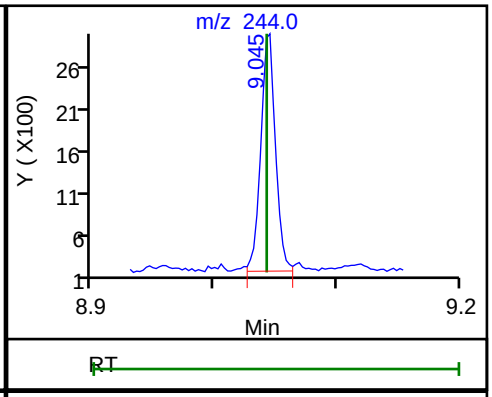
Eurofins TestAmerica, Knoxville

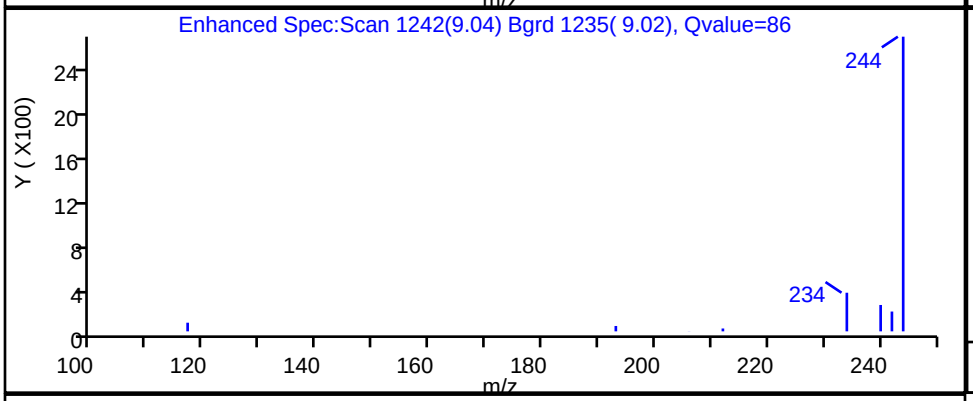
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-17-a.D				
Injection Date:	30-Aug-2019 14:53:30	Instrument ID:	MP		
Lims ID:	580-87761-B-17-A	Lab Sample ID:	140-87761-17		
Client ID:	22T-VB-03-11.2-12_20190717				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

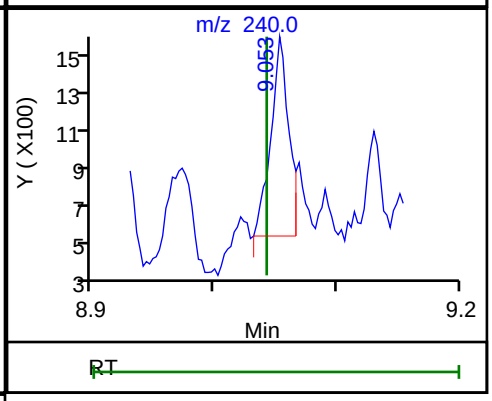
$ 24 Terphenyl-d14, CAS: 1718-51-0

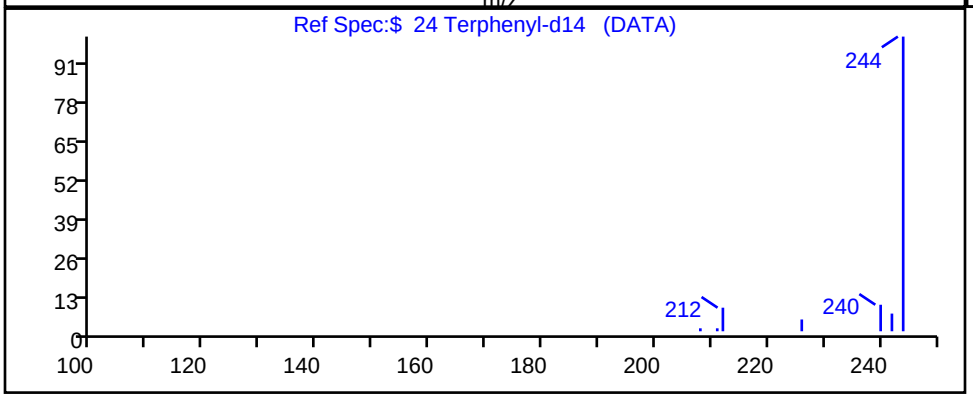
Processing Results











RT	Mass	Response	Amount
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9.05	240.00	980	

Reviewer: cochranj, 31-Aug-2019 13:15:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 Lab Sample ID: 580-87761-18

Matrix: Solid Lab File ID: 580-87761-b-18-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:05

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.02(g) Date Analyzed: 08/29/2019 19:15

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 41.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	290		150	21
91-57-6	2-Methylnaphthalene	720		300	30
83-32-9	Acenaphthene	4300		30	14
208-96-8	Acenaphthylene	290		30	7.5
120-12-7	Anthracene	3100		30	24
56-55-3	Benzo[a]anthracene	3800		30	12
50-32-8	Benzo[a]pyrene	4400		30	11
205-99-2	Benzo[b]fluoranthene	3700		30	15
192-97-2	Benzo[e]pyrene	2400		30	10
191-24-2	Benzo[g,h,i]perylene	3000		30	18
207-08-9	Benzo[k]fluoranthene	1600		30	14
STL00905	C1-Chrysenes	1100		30	7.8
STL00909	C1-Dibenzothiophenes	980		30	19
STL00912	C1-Fluoranthenes/pyrene	3400		30	16
STL00913	C1-Fluorenes	980		30	17
STL00916	C1-Naphthalenes	650		300	24
STL00901	C1-Phenanthrenes/Anthracenes	4200		60	34
STL00906	C2-Chrysenes	470		30	9.3
STL00910	C2-Dibenzothiophenes	760		30	28
STL00968	C2-Fluoranthenes/Pyrene	930		30	13
STL00914	C2-Fluorenes	970		60	36
STL00917	C2-Naphthalenes	2600		60	23
STL00902	C2-Phenanthrenes/Anthracenes	2200		120	73
STL00907	C3-Chrysenes	260		30	9.0
STL00911	C3-Dibenzothiophenes	480		60	34
STL00969	C3-Fluoranthenes/Pyrene	470		30	16
STL00915	C3-Fluorenes	660		60	32
STL00918	C3-Naphthalenes	2600		60	29
STL00903	C3-Phenanthrenes/Anthracenes	1000		60	47
STL00908	C4-Chrysenes	150		30	10
STL00967	C4-Dibenzothiophenes	230		30	28
STL01791	C4-Fluoranthenes/Pyrene	240		30	11
STL00919	C4-Naphthalenes	1400		120	62

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 Lab Sample ID: 580-87761-18

Matrix: Solid Lab File ID: 580-87761-b-18-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:05

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.02(g) Date Analyzed: 08/29/2019 19:15

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 41.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00904	C4-Phenanthrenes/Anthracenes	650	AP	60	56
218-01-9	Chrysene	4100		30	11
53-70-3	Dibenz(a,h)anthracene	430		30	17
132-65-0	Dibenzothiophene	2600		30	10
86-73-7	Fluorene	3000		30	14
193-39-5	Indeno[1,2,3-cd]pyrene	2300		30	21
91-20-3	Naphthalene	1600		600	55
198-55-0	Perylene	1100		30	6.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D
Lims ID: 580-87761-B-18-A
Client ID: 22T-VB-03-4.0-6.0-D_20190717
Sample Type: Client
Inject. Date: 29-Aug-2019 19:15:30 ALS Bottle#: 11 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-019
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 11:08:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	214410	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	495283	1.05	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	148318	0.4797	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	97	57647	0.1957	
11 Acenaphthylene	152	6.216	6.216	0.000	98	74507	0.1931	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	112129	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	858515	2.88	
16 Fluorene	166	6.796	6.793	0.003	100	665148	2.02	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	847477	1.75	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	70	203099	0.5000	
19 Phenanthrene	178	7.609	7.603	0.006	99	5978492	11.4	E
20 Anthracene	178	7.648	7.648	0.000	100	896377	2.05	
22 Fluoranthene	202	8.692	8.687	0.005	99	4643824	9.13	E
23 Pyrene	202	8.917	8.906	0.011	99	5650974	9.77	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	1166882	2.57	
* 27 Chrysene-d12	240	10.137	10.129	0.008	76	191082	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	1493960	2.75	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	1374127	2.46	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	660662	1.04	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	856519	1.63	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	1407824	2.93	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	204372	0.5000	
34 Perylene	252	11.767	11.760	0.007	100	389014	0.7175	
35 Indeno[1,2,3-cd]pyrene	276	13.156	13.150	0.006	85	914661	1.55	
36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	41	143366	0.2861	M
37 Benzo[g,h,i]perylene	276	13.514	13.508	0.006	98	1105125	2.00	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	204998	0.4344	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	809662	1.72	
A 40 C3-Naphthalenes	170	6.557	(6.323-6.820)		0	823913	1.75	
A 41 C4-Naphthalenes	184	6.952	(6.483-7.421)		0	454625	0.9633	
A 42 C1-Fluorenes	180	7.304	(7.219-7.413)		0	217013	0.6576	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.565-7.939)		0	213099	0.6457	
A 44 C3-Fluorenes	208	8.112	(7.989-8.454)		0	144733	0.4386	
A 45 C1-Dibenzothiophenes	198	7.878	(7.827-8.065)		0	317854	0.6557	
A 46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	245810	0.5071	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	155209	0.3202	
A 48 C4-Dibenzothiophenes	240	9.055	(8.814-9.591)		0	73429	0.1515	
A 49 C1-Phenanthrenes/Anthracen	192	8.105	(8.020-8.193)		0	1475554	2.82	
A 50 C2-Phenanthrenes/Anthracen	206	8.555	(8.358-8.785)		0	768749	1.47	
A 51 C3-Phenanthrenes/Anthracen	220	8.999	(8.747-9.260)		0	365330	0.6984	
A 52 C4-Phenanthrenes/Anthracen	234	9.321	(8.966-9.686)		0	227172	0.4343	
A 53 C1-Fluoranthenes/pyrene	216	9.317	(9.112-9.500)		0	1314583	2.27	
A 54 C2-Fluoranthenes/Pyrene	230	9.808	(9.587-10.039)		0	357697	0.6186	
A 55 C3-Fluoranthenes/Pyrene	244	10.232	(10.043-10.519)		0	181976	0.3147	
A 56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	94468	0.1634	
A 57 C1-Chrysenes	242	10.560	(10.512-10.741)		0	407378	0.7498	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	170150	0.3131	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	92775	0.1707	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	55647	0.1024	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

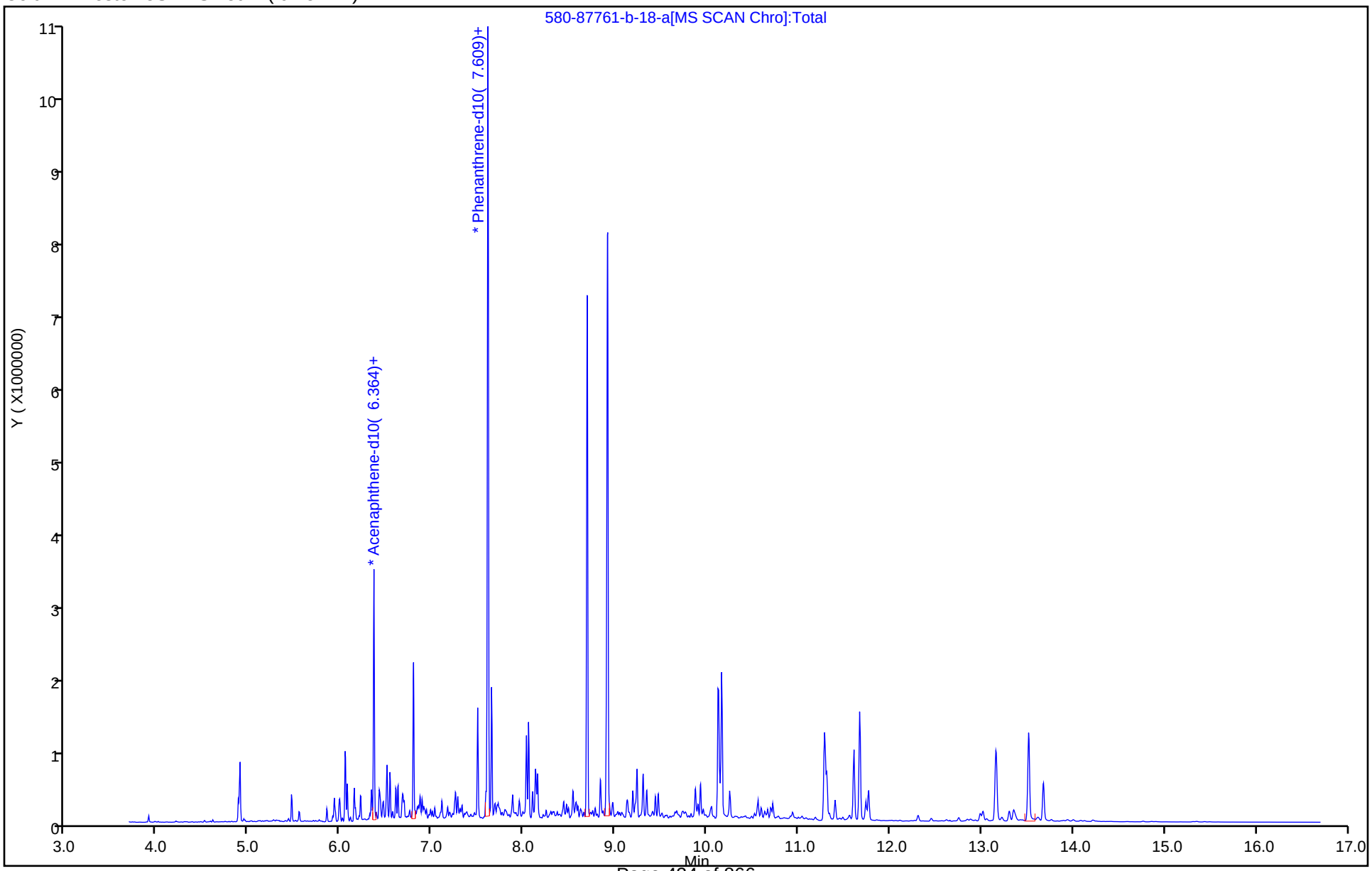
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18	Worklist Smp#:	19
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	11
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

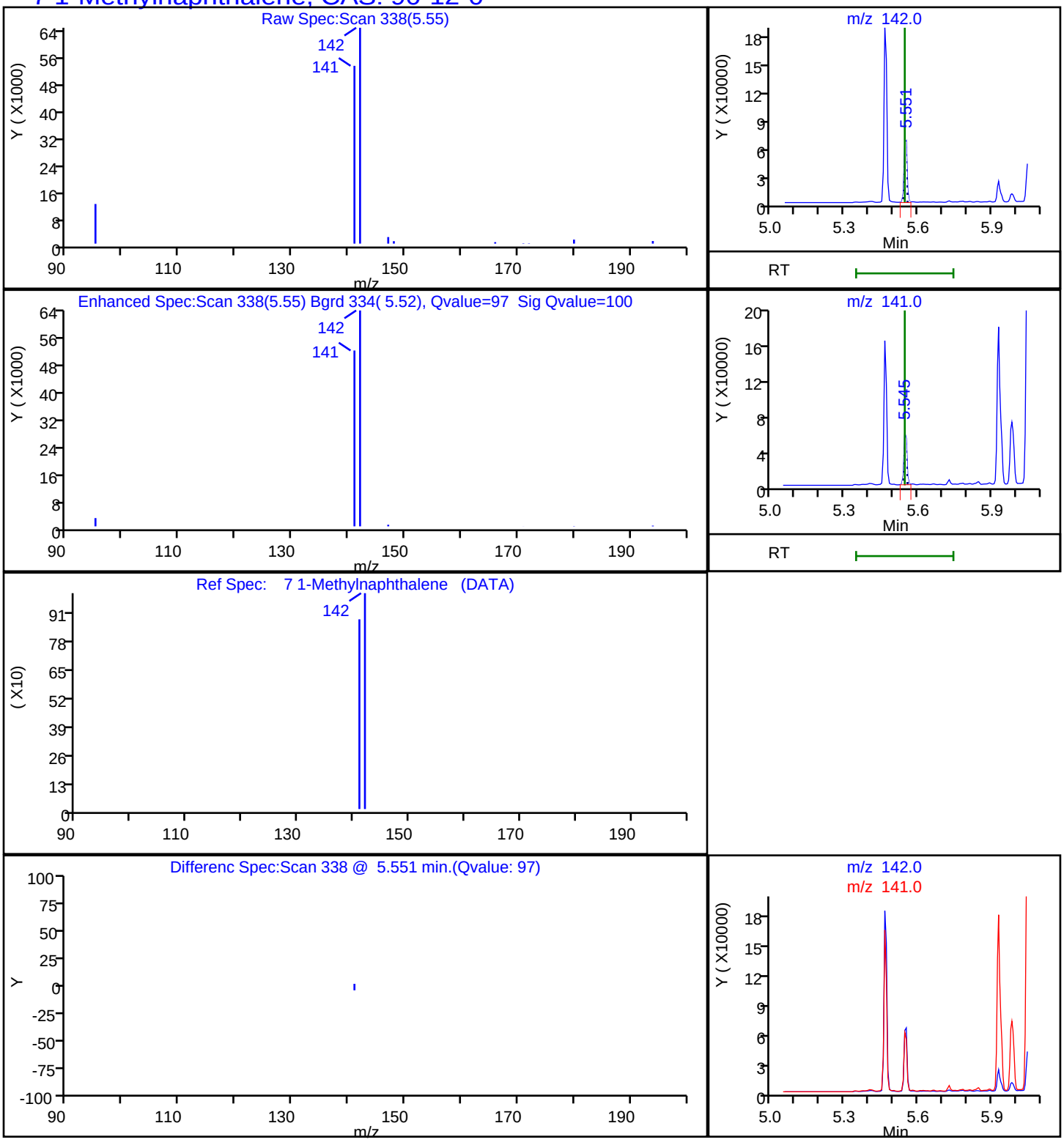


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

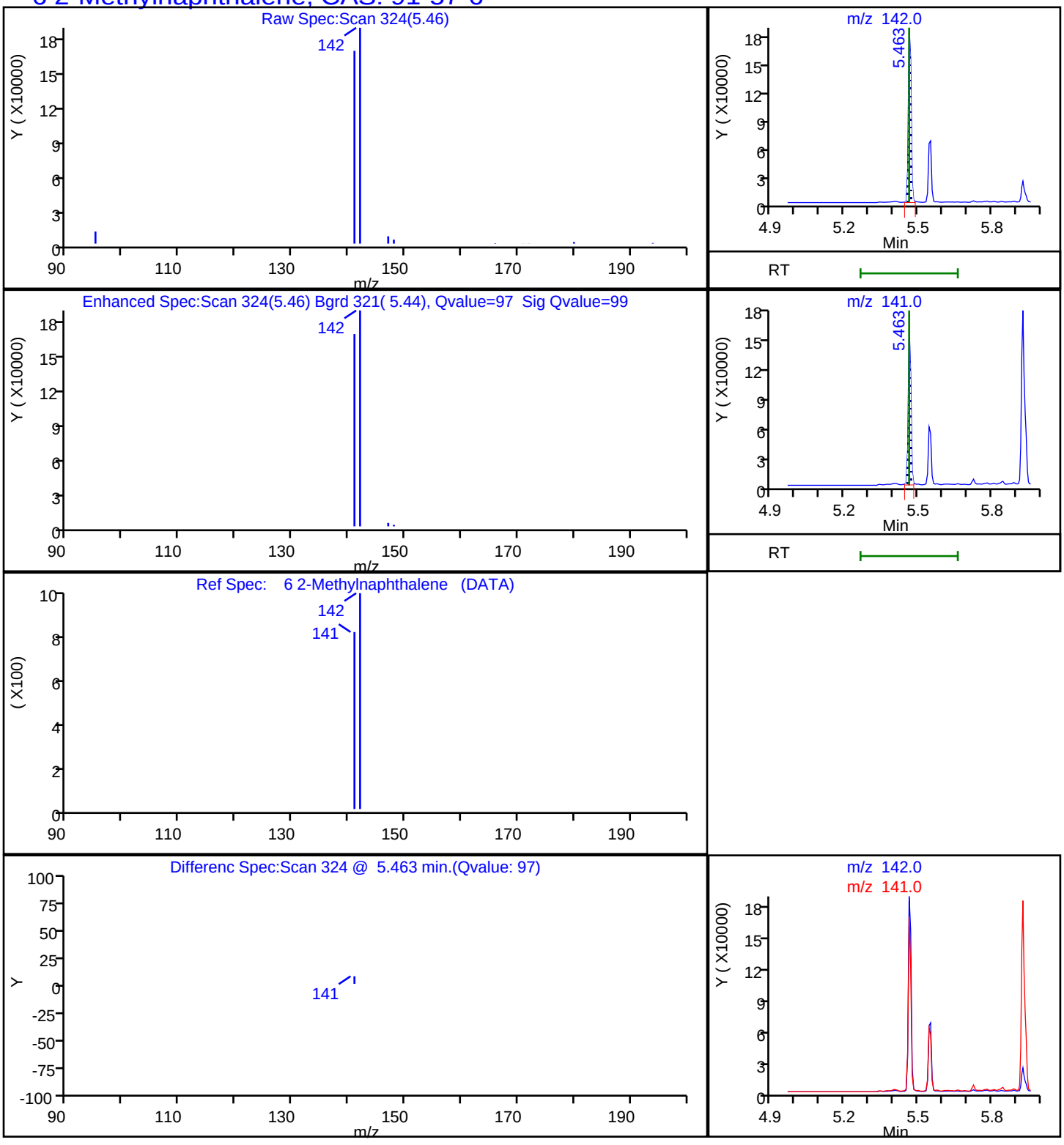


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

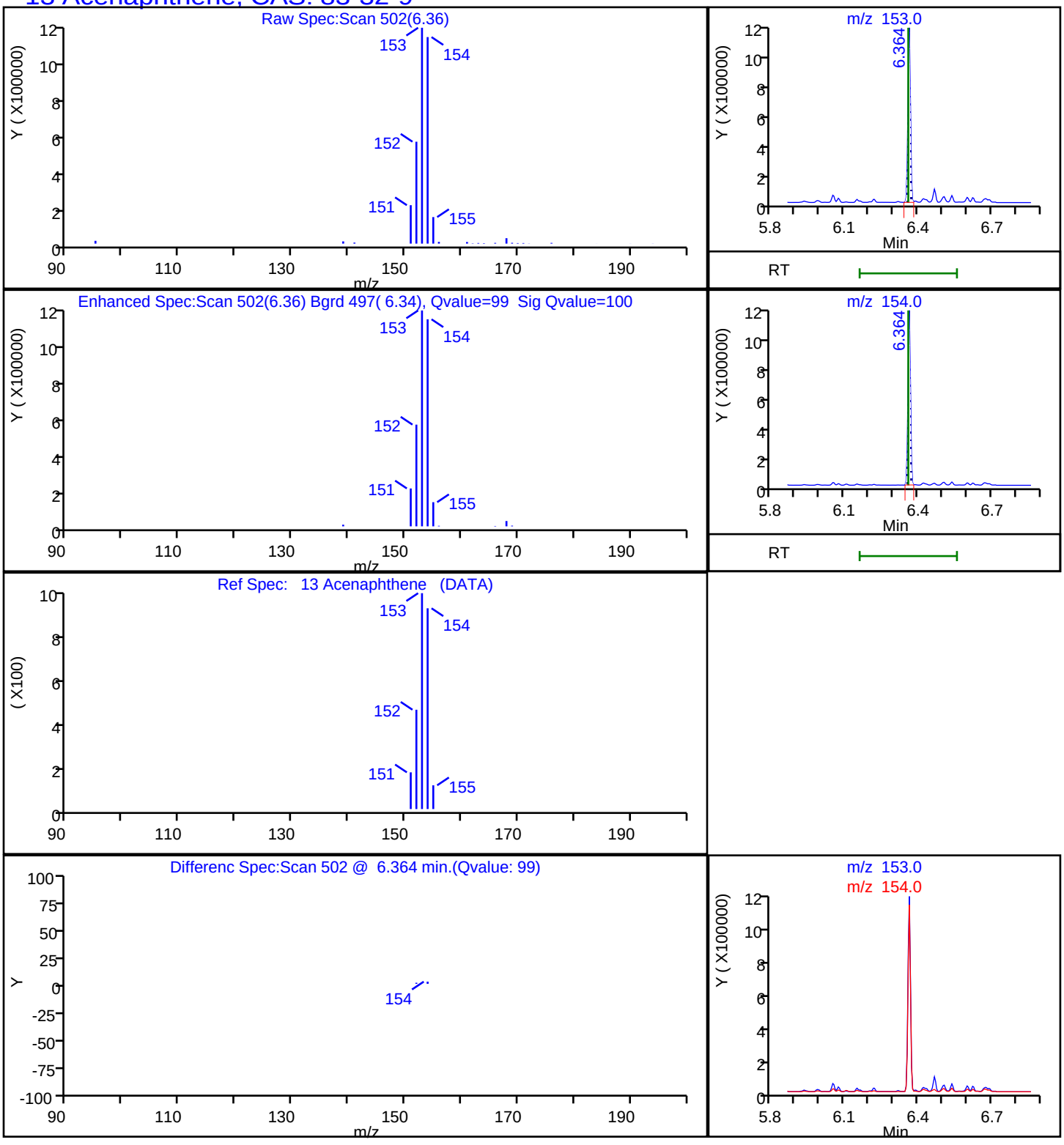


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9

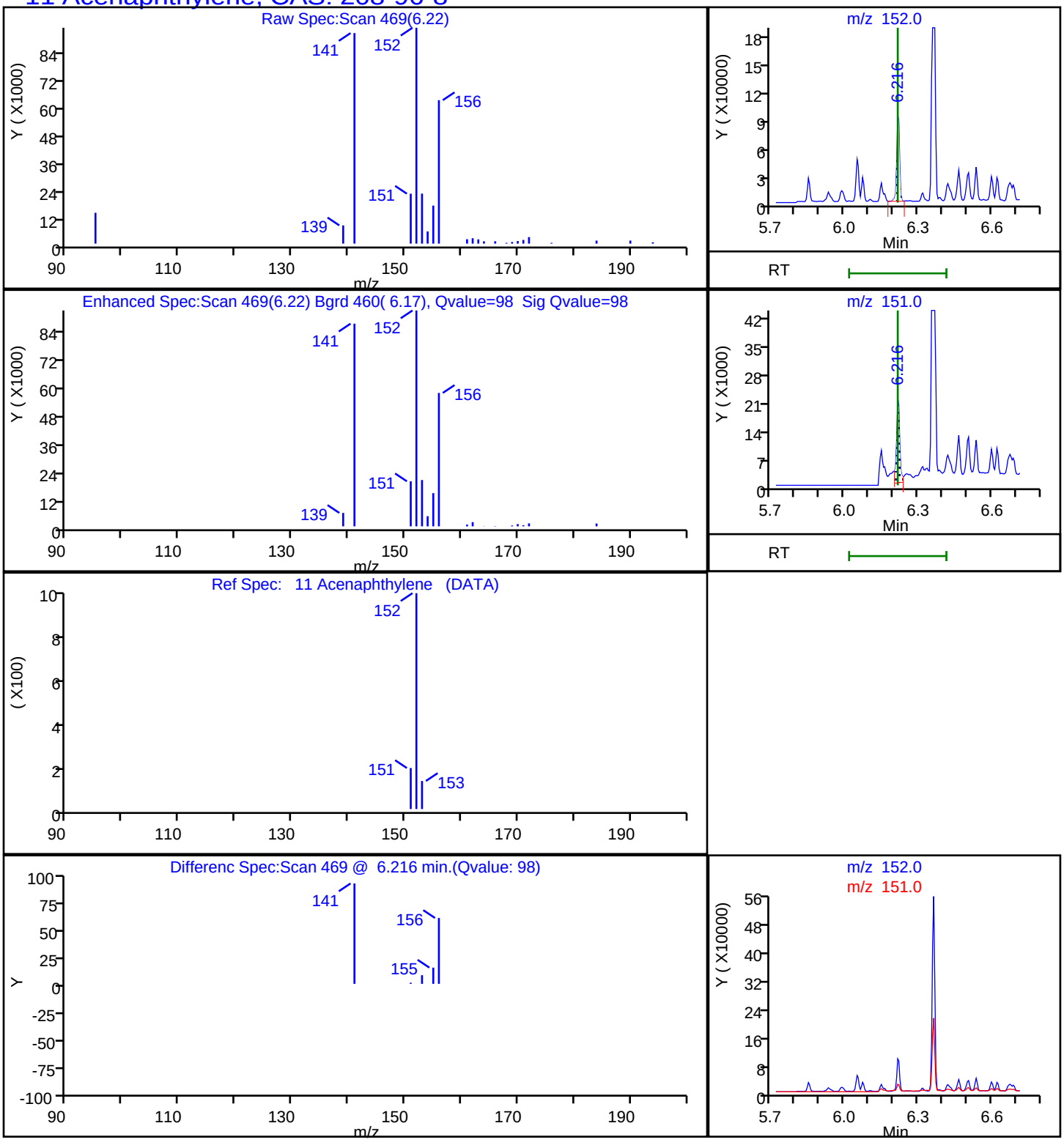


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8

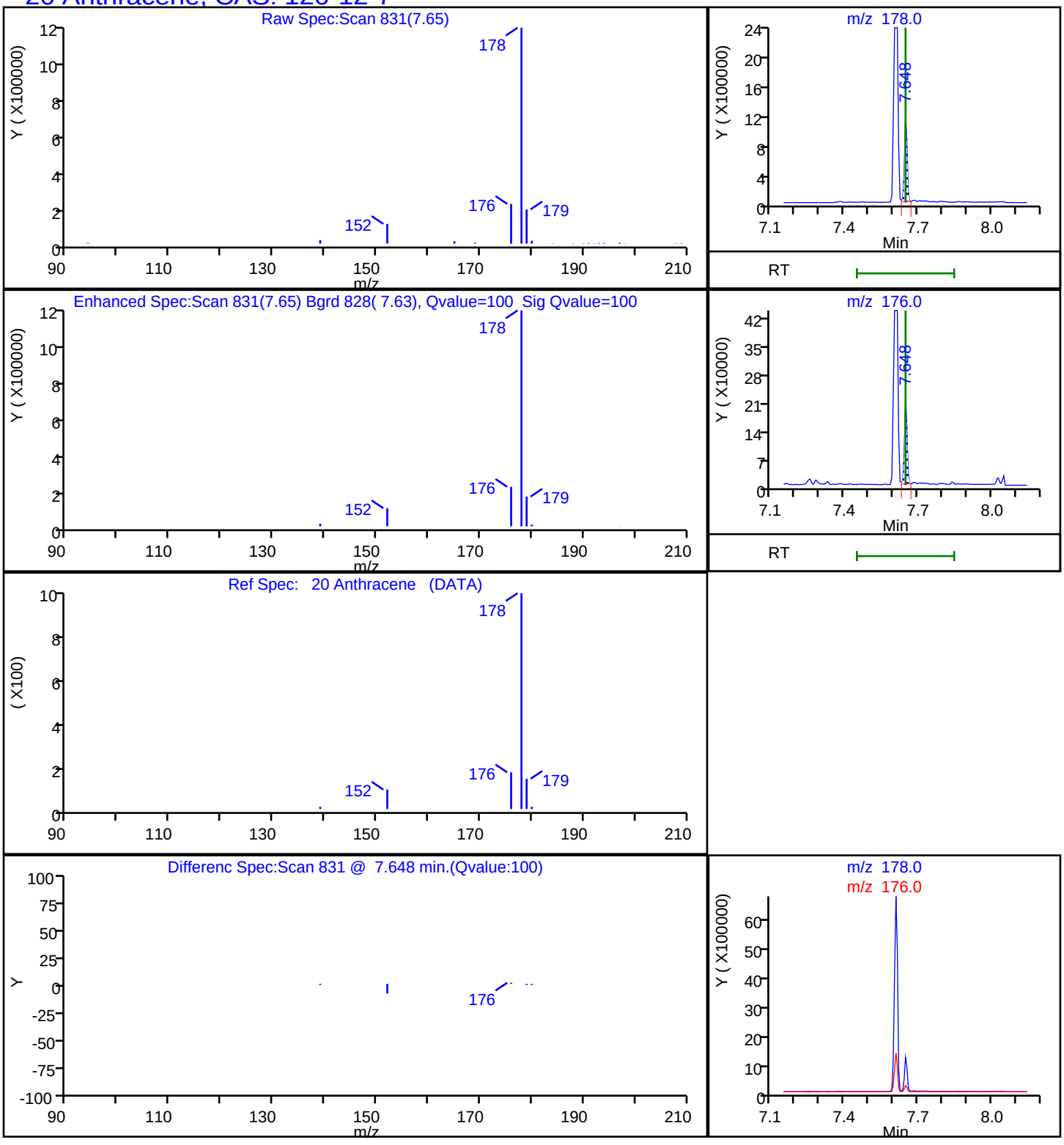


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7

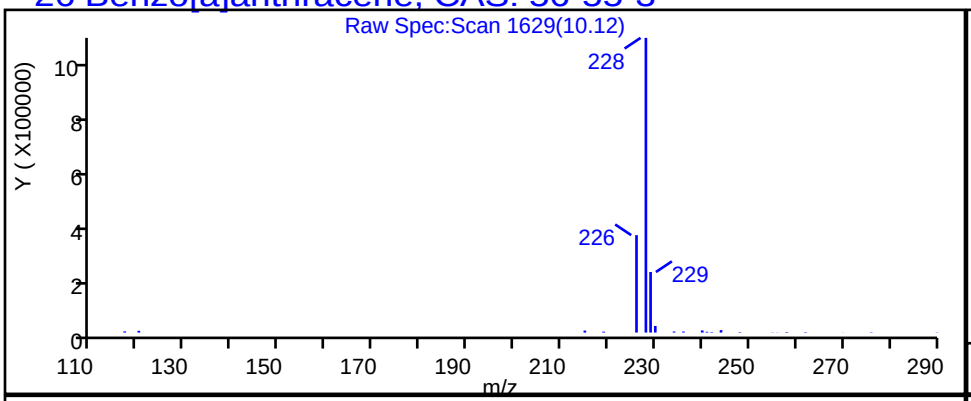


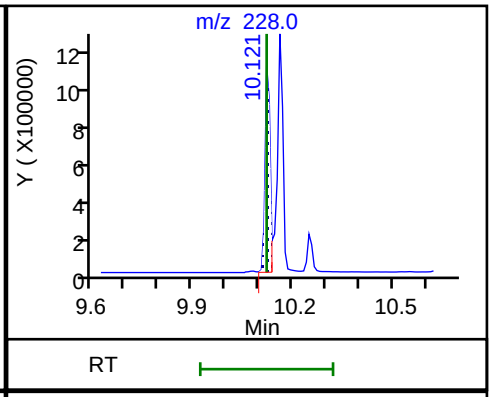
Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

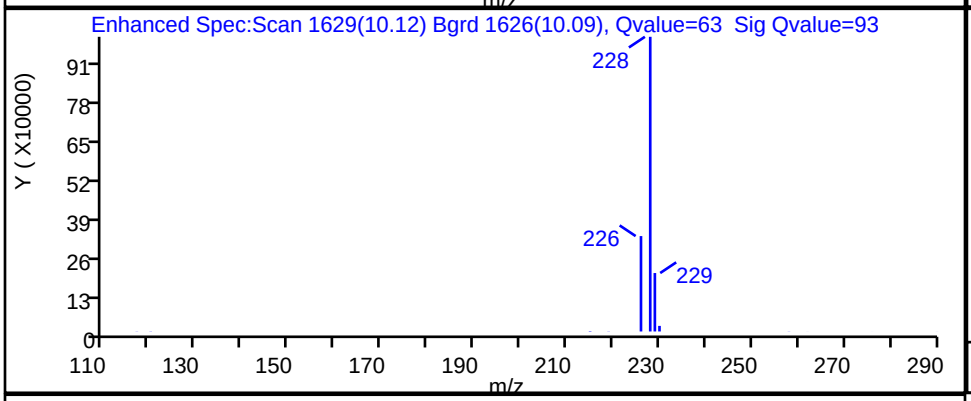
Eurofins TestAmerica, Knoxville

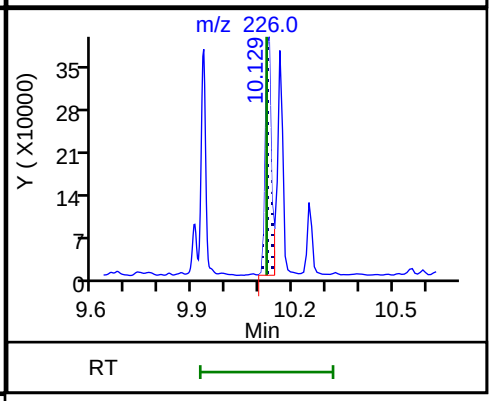
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

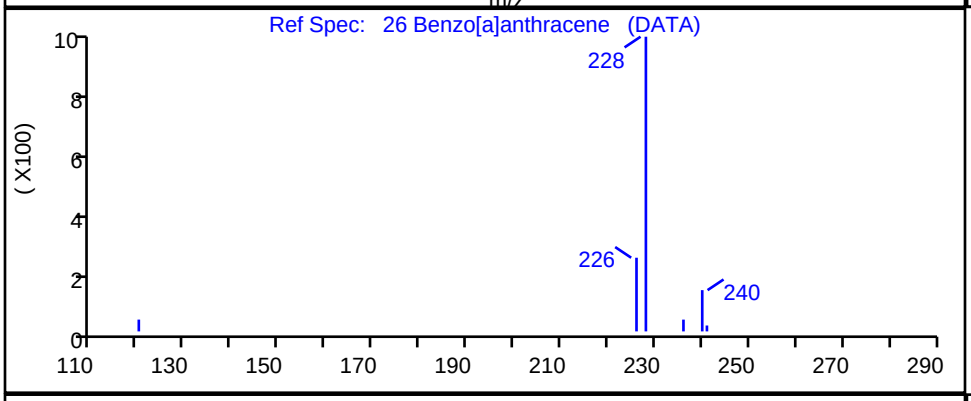
26 Benzo[a]anthracene, CAS: 56-55-3

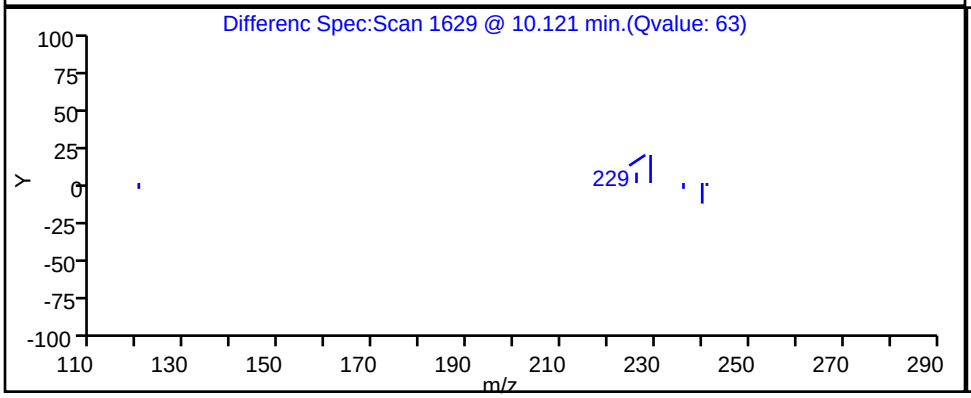


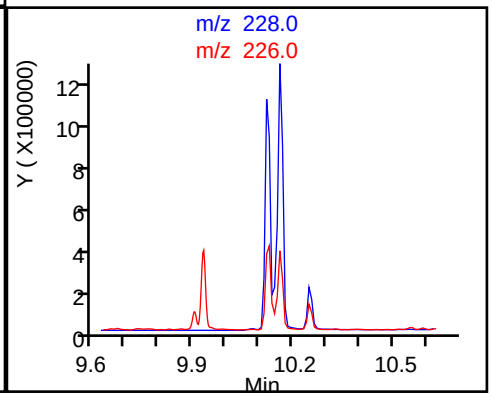












Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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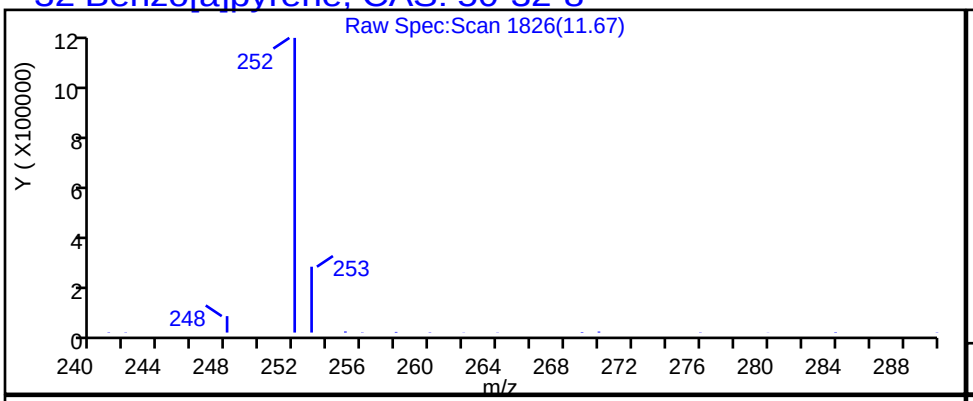
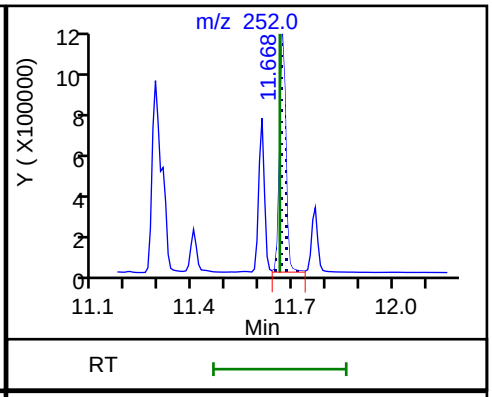
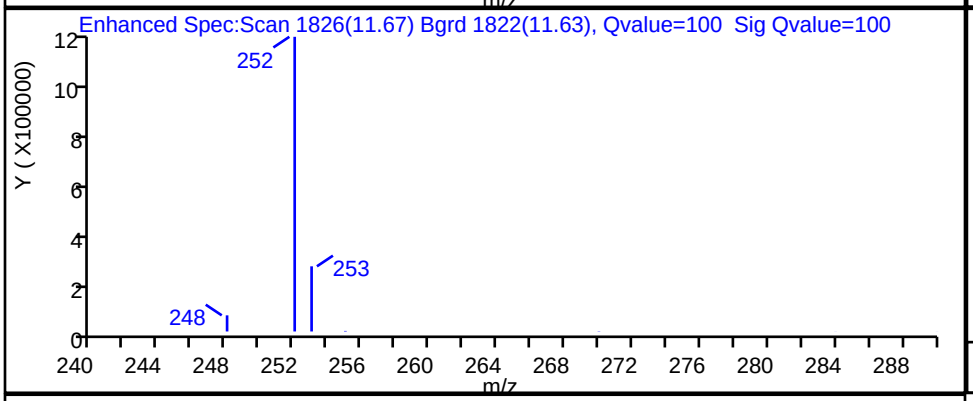
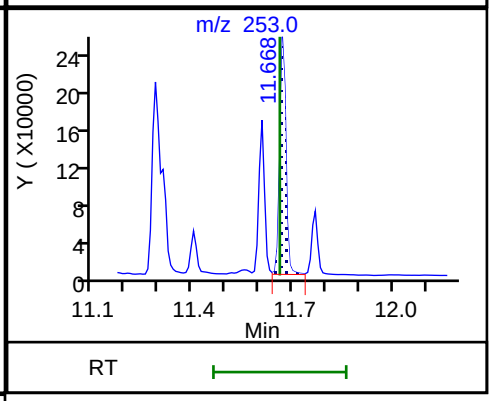
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

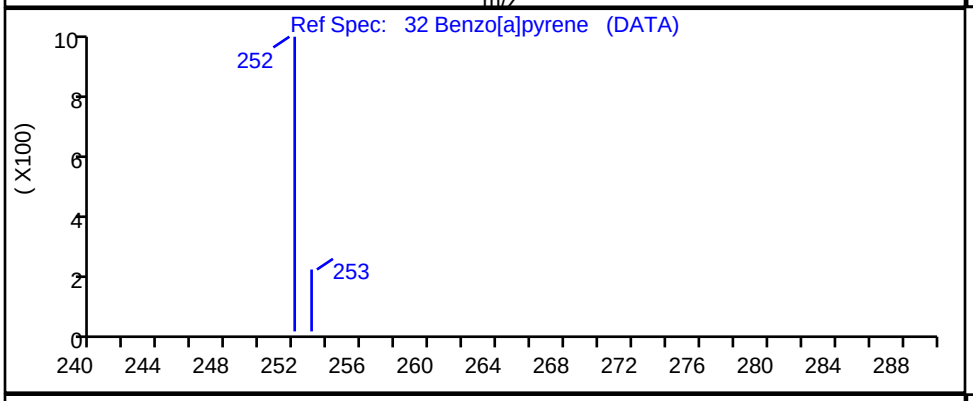
32 Benzo[a]pyrene, CAS: 50-32-8

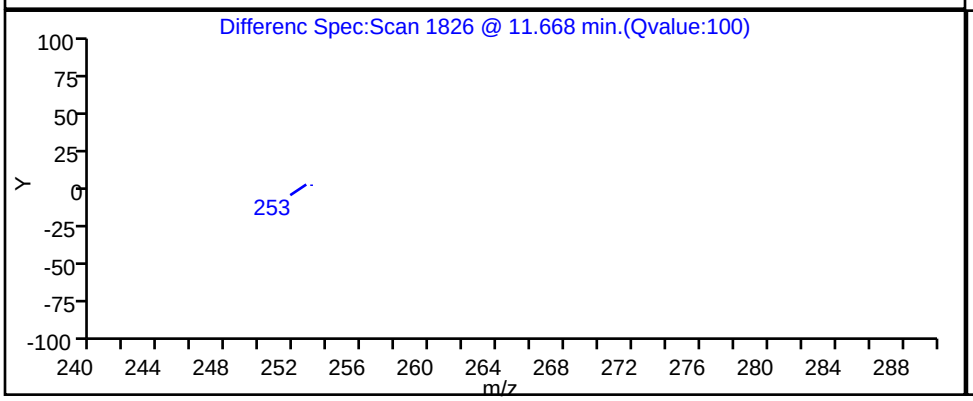


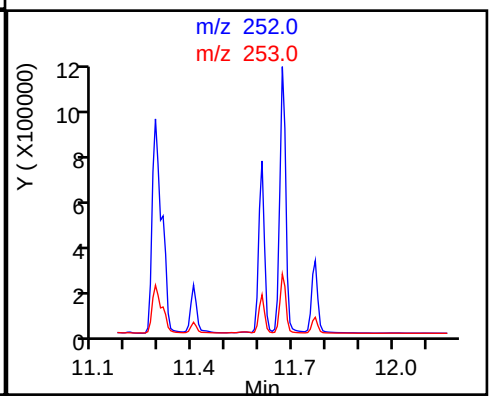












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Eurofins TestAmerica, Knoxville

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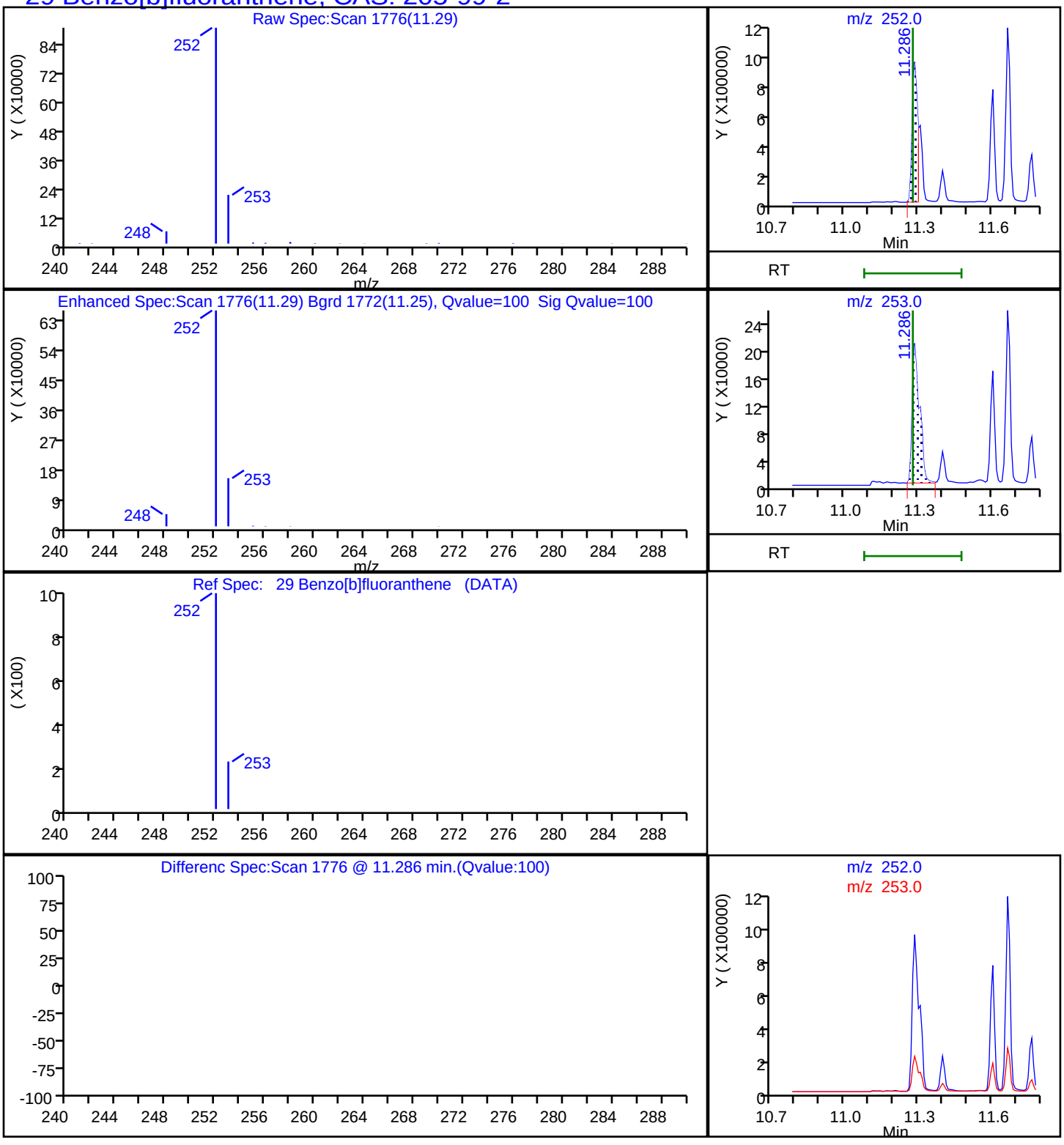
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



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Eurofins TestAmerica, Knoxville

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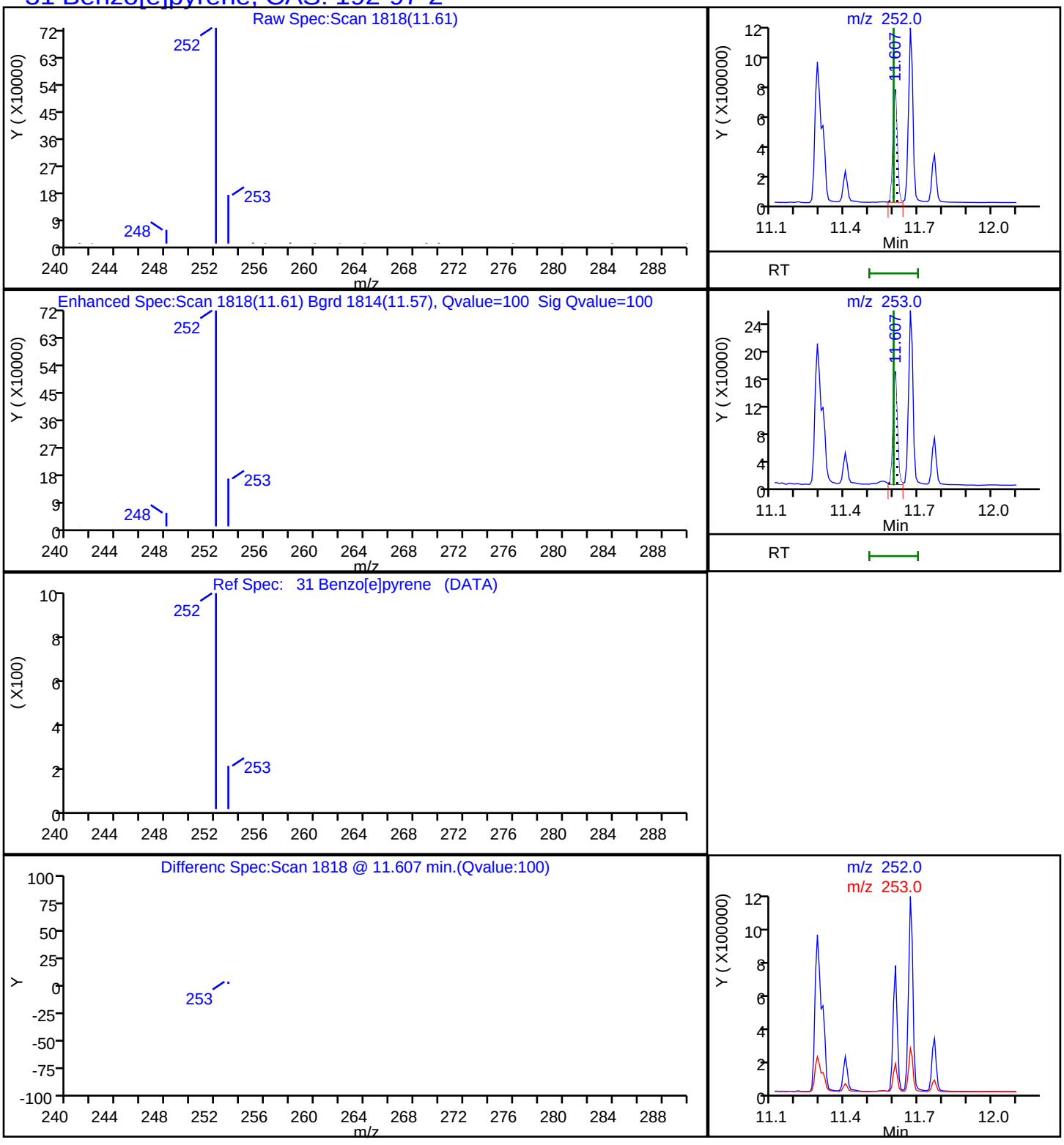
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



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Eurofins TestAmerica, Knoxville

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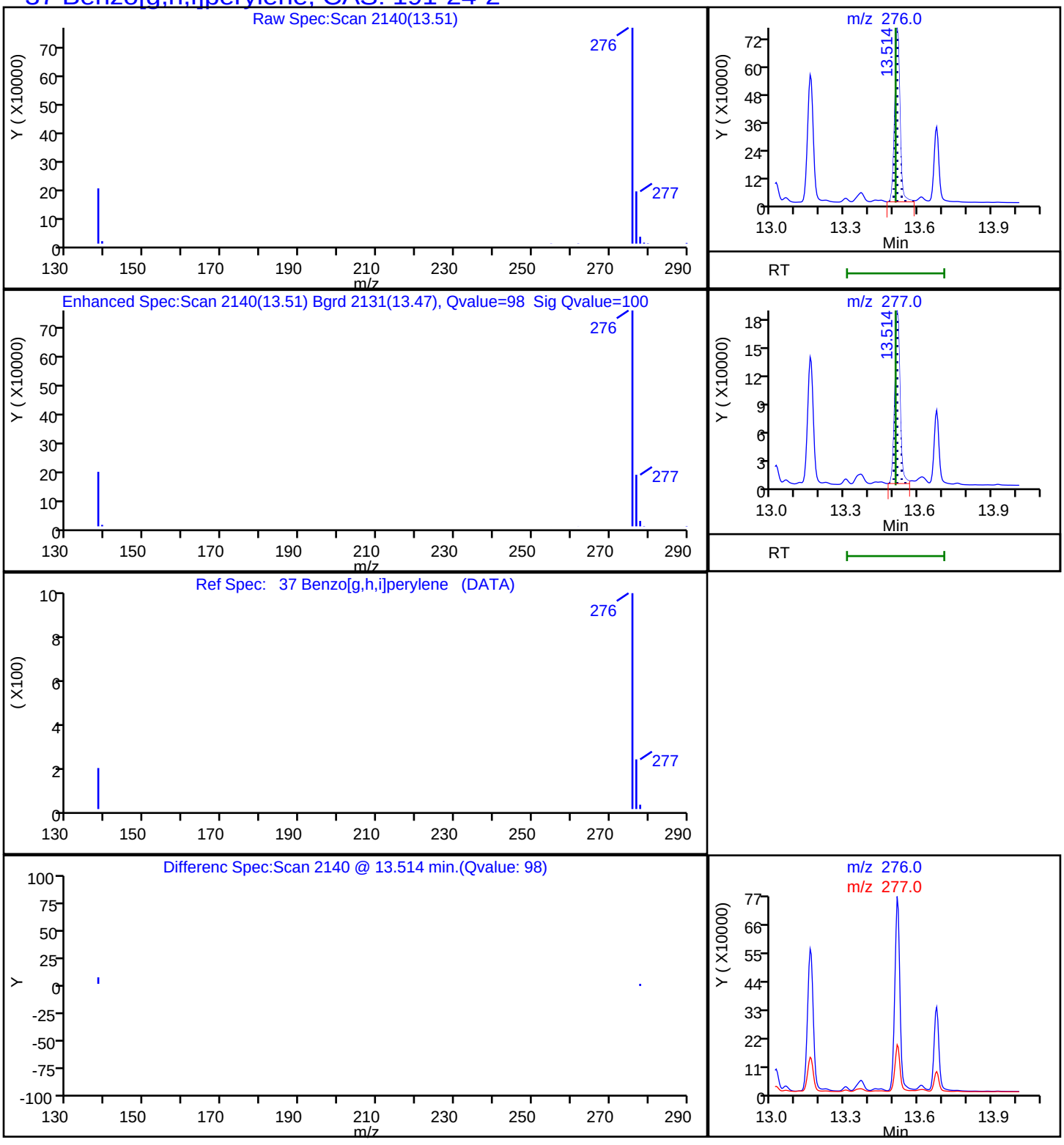
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



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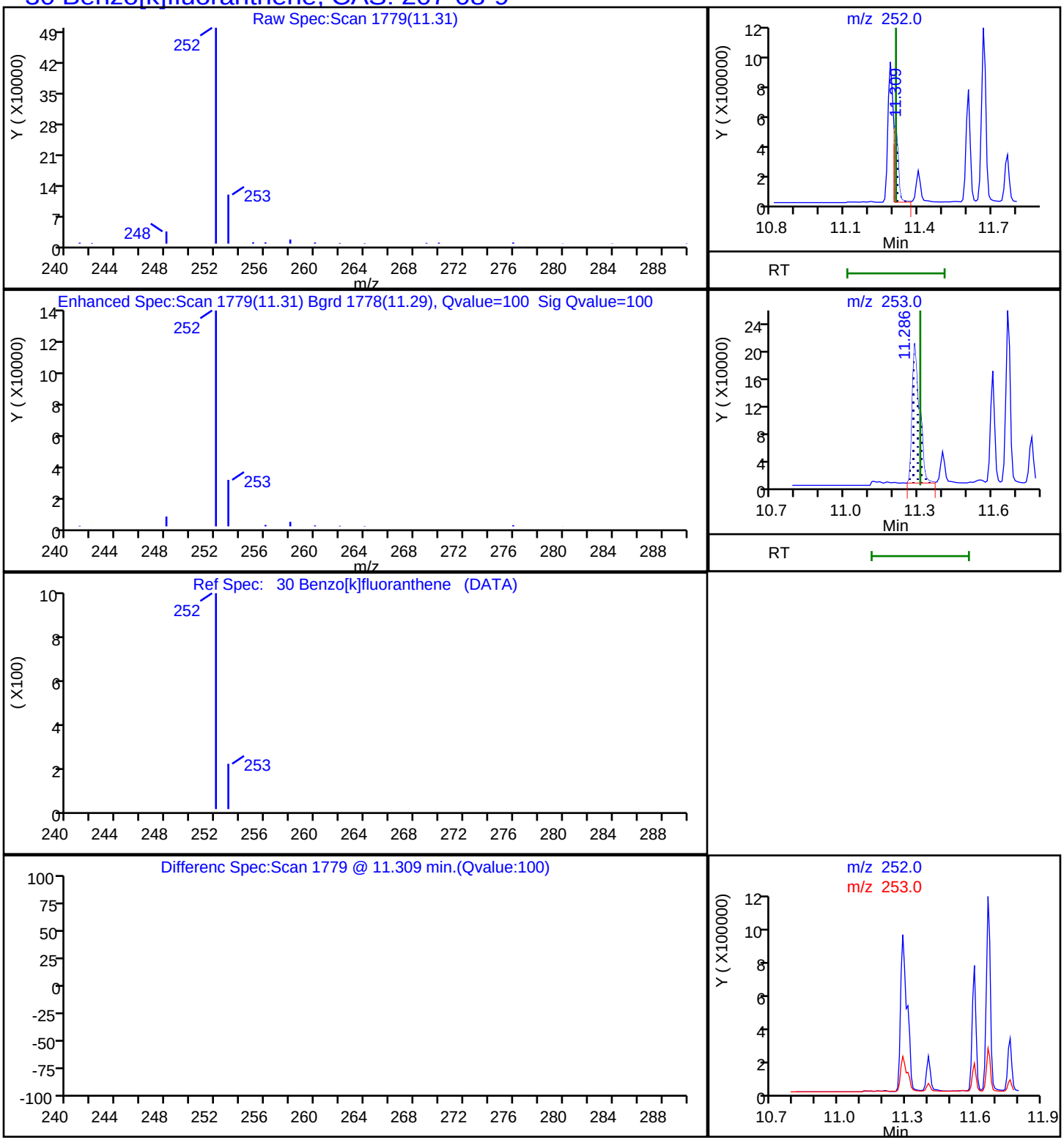
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



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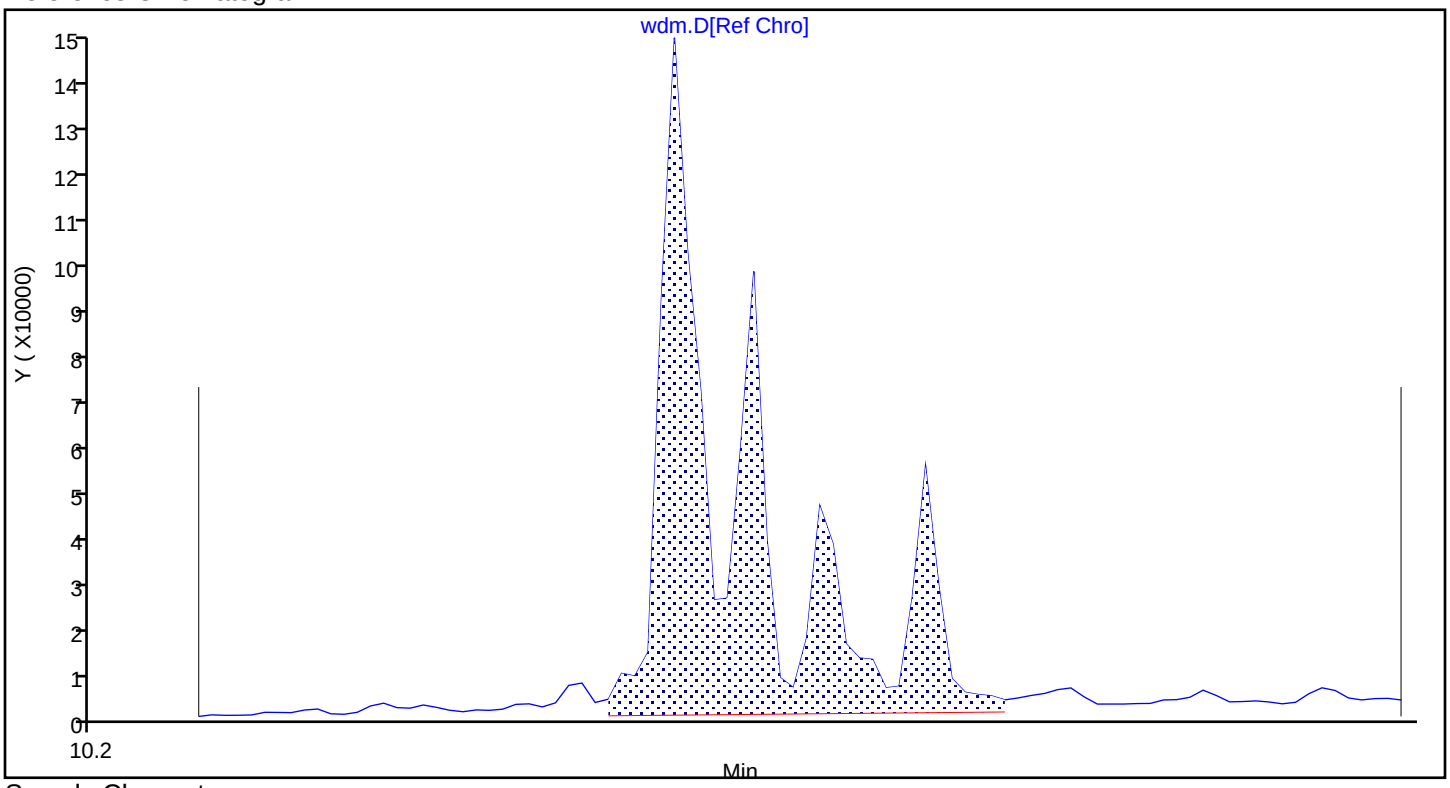
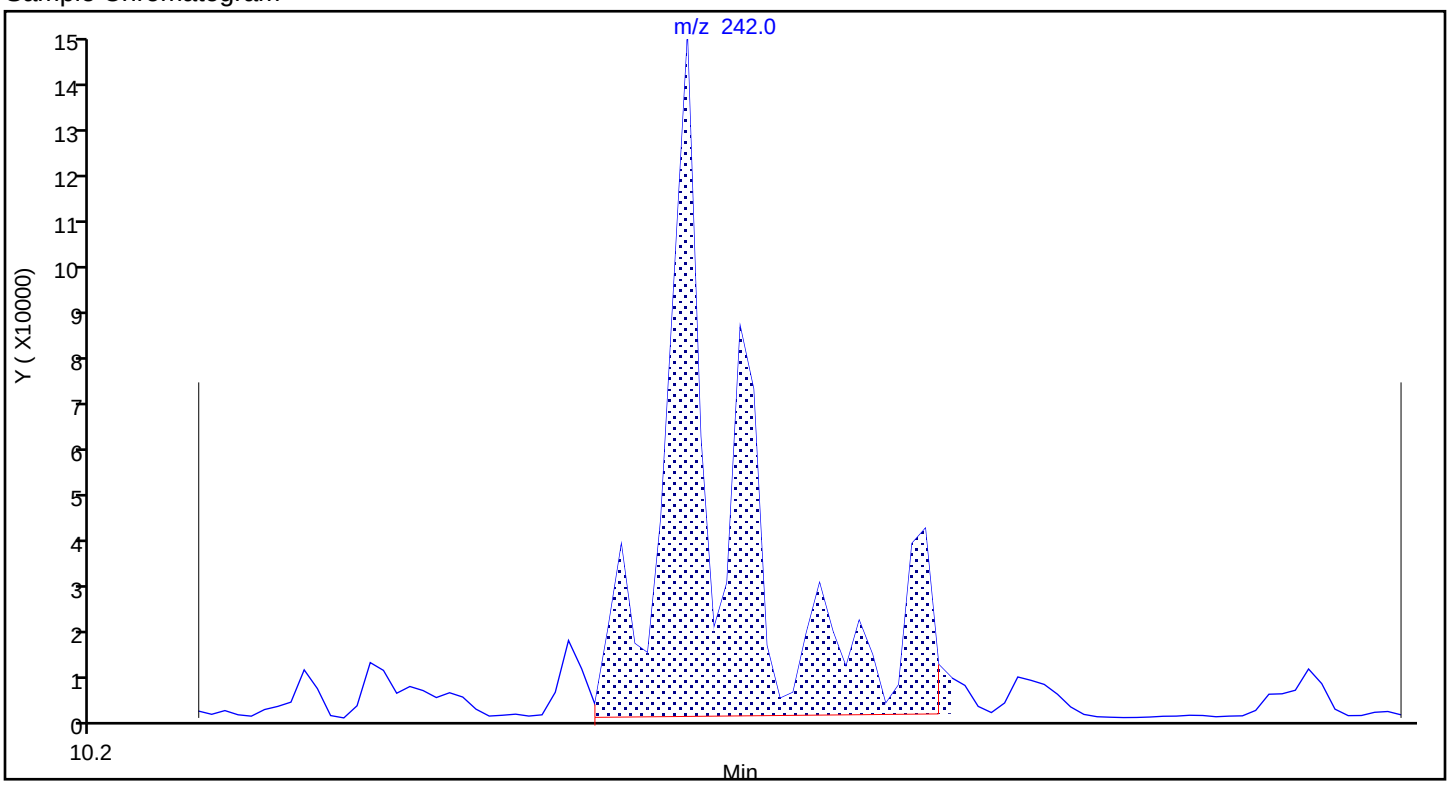
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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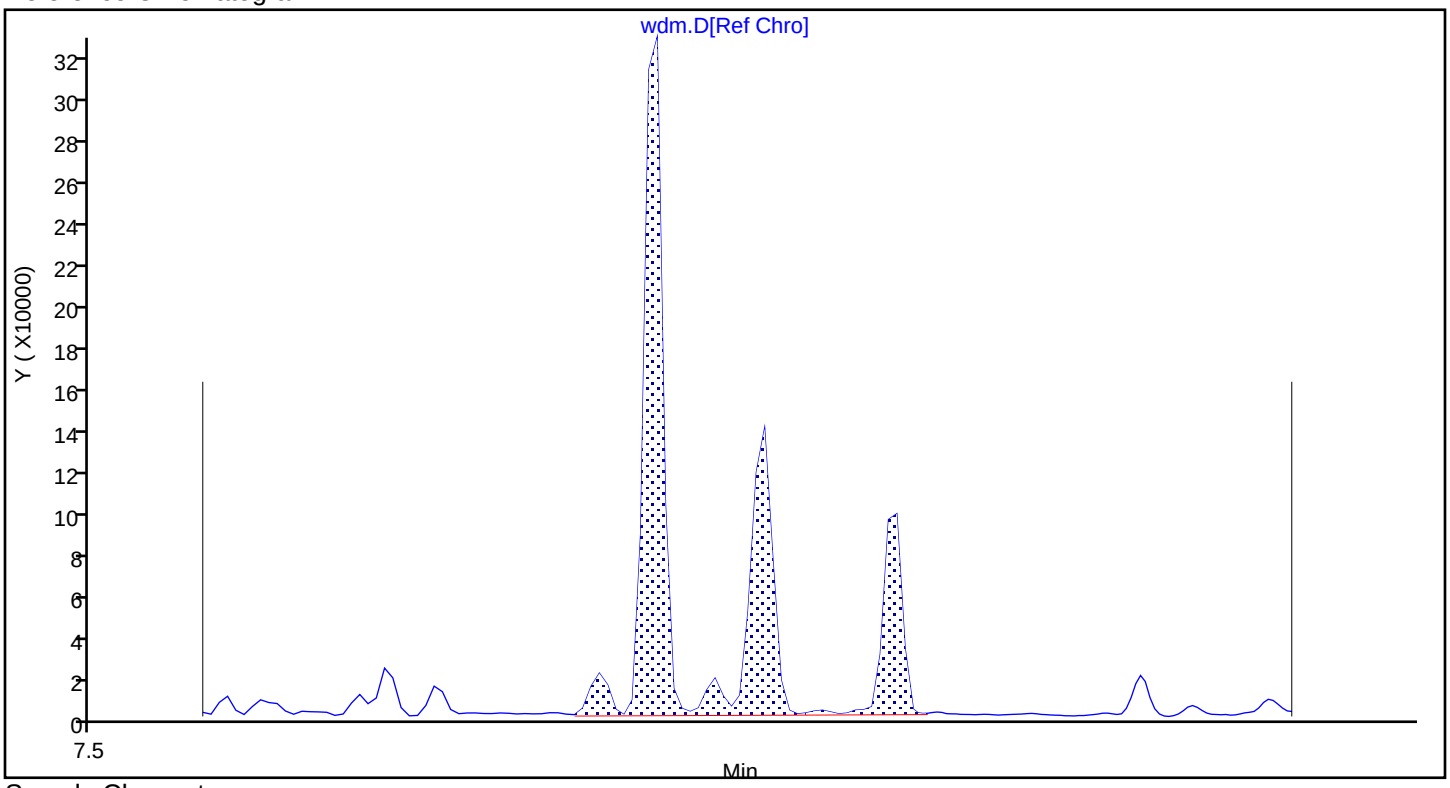
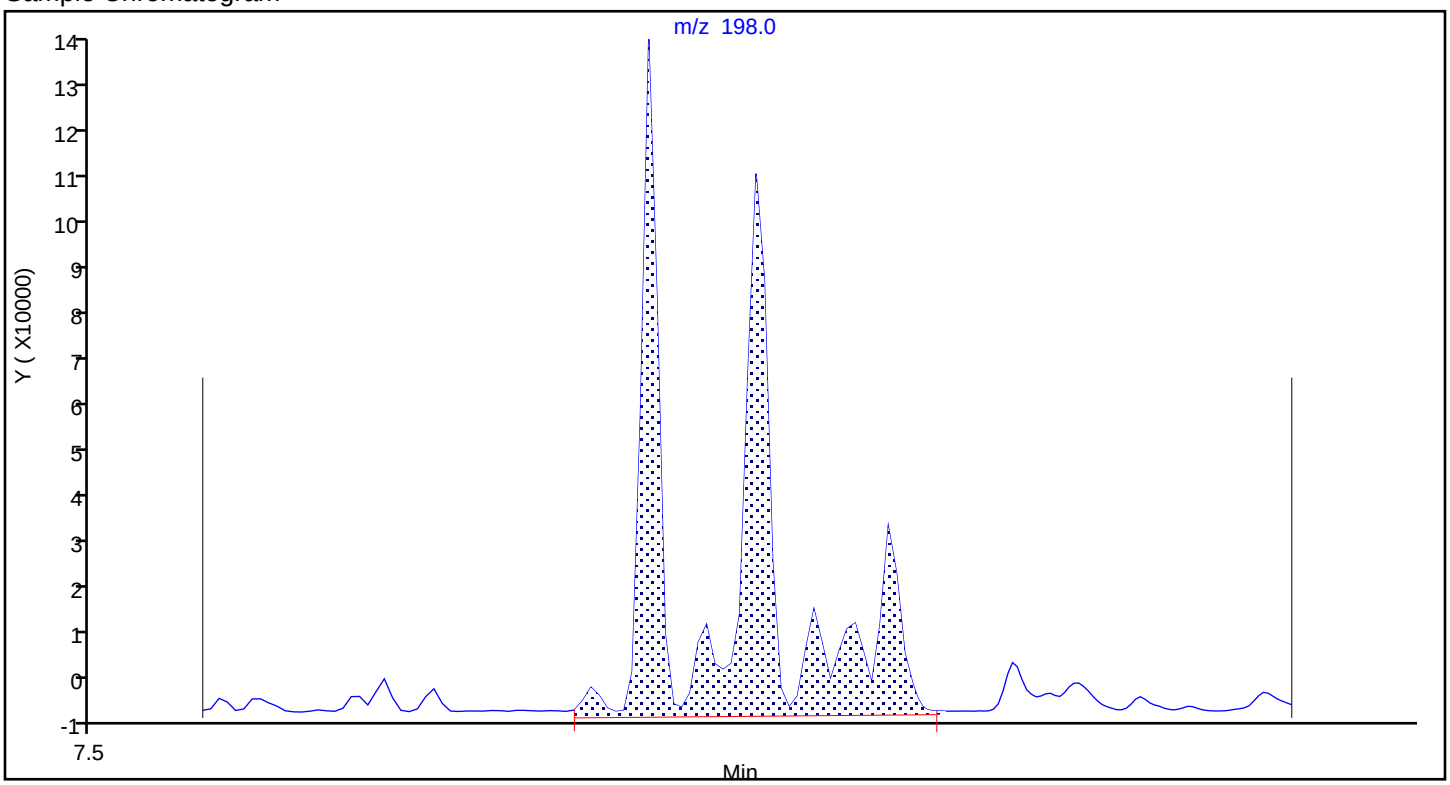
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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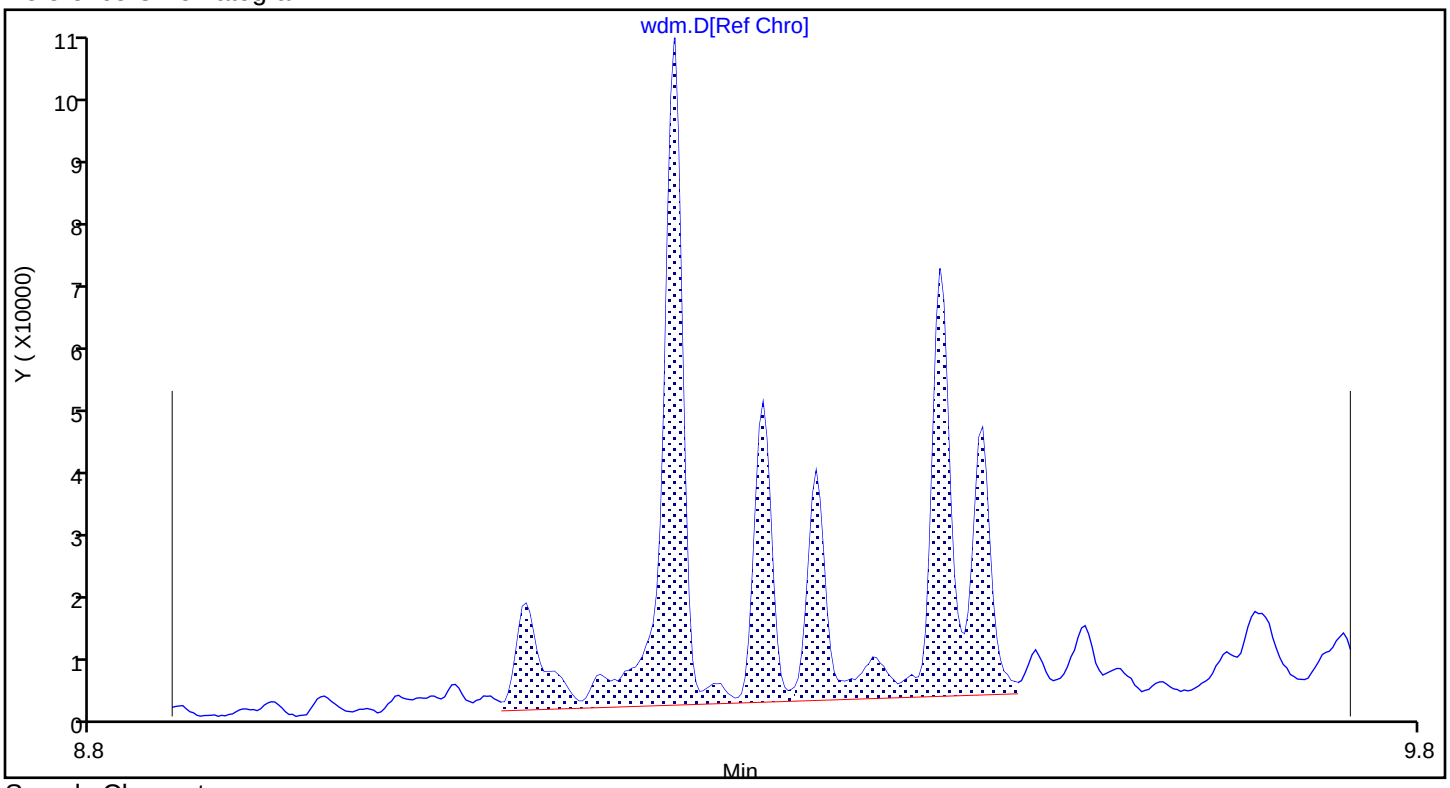
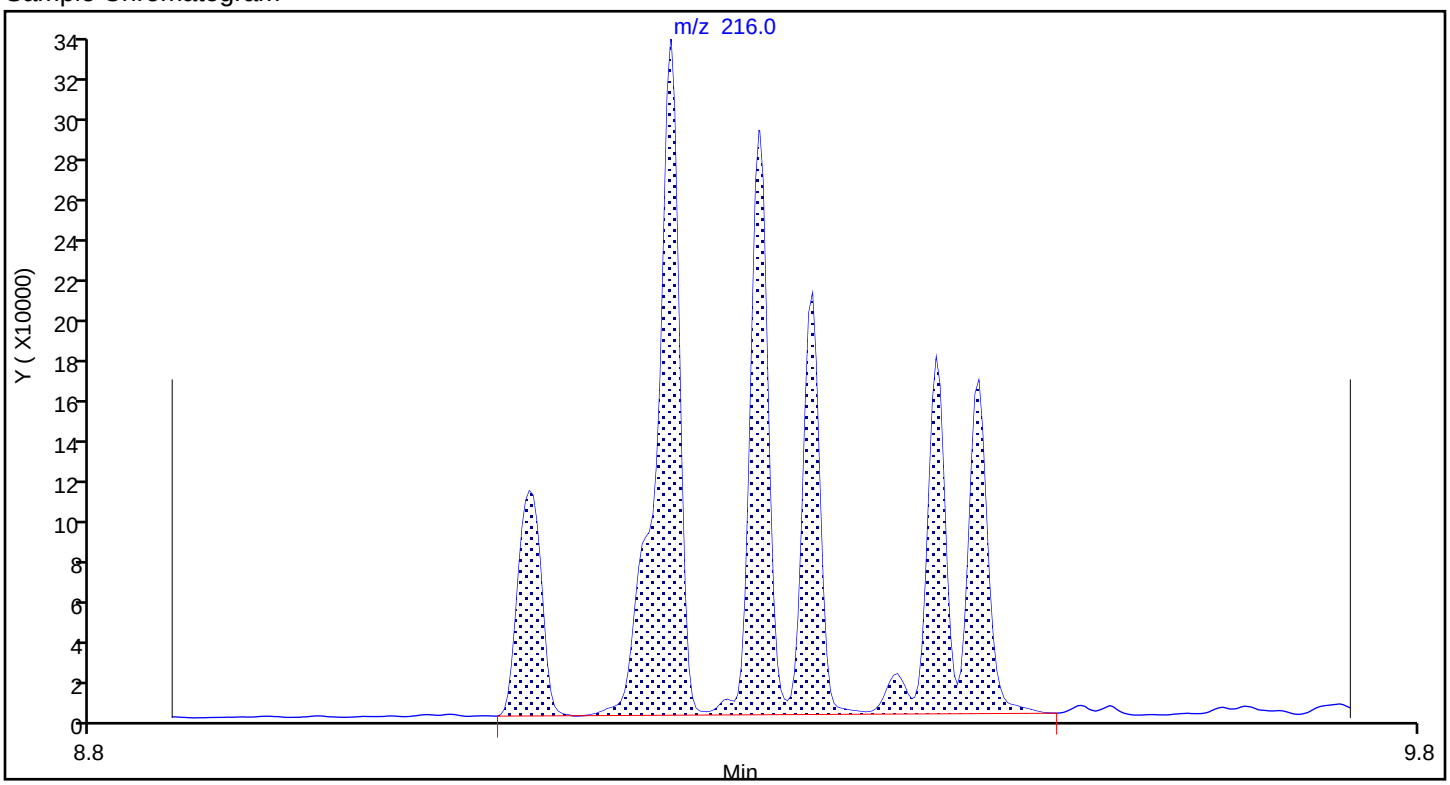
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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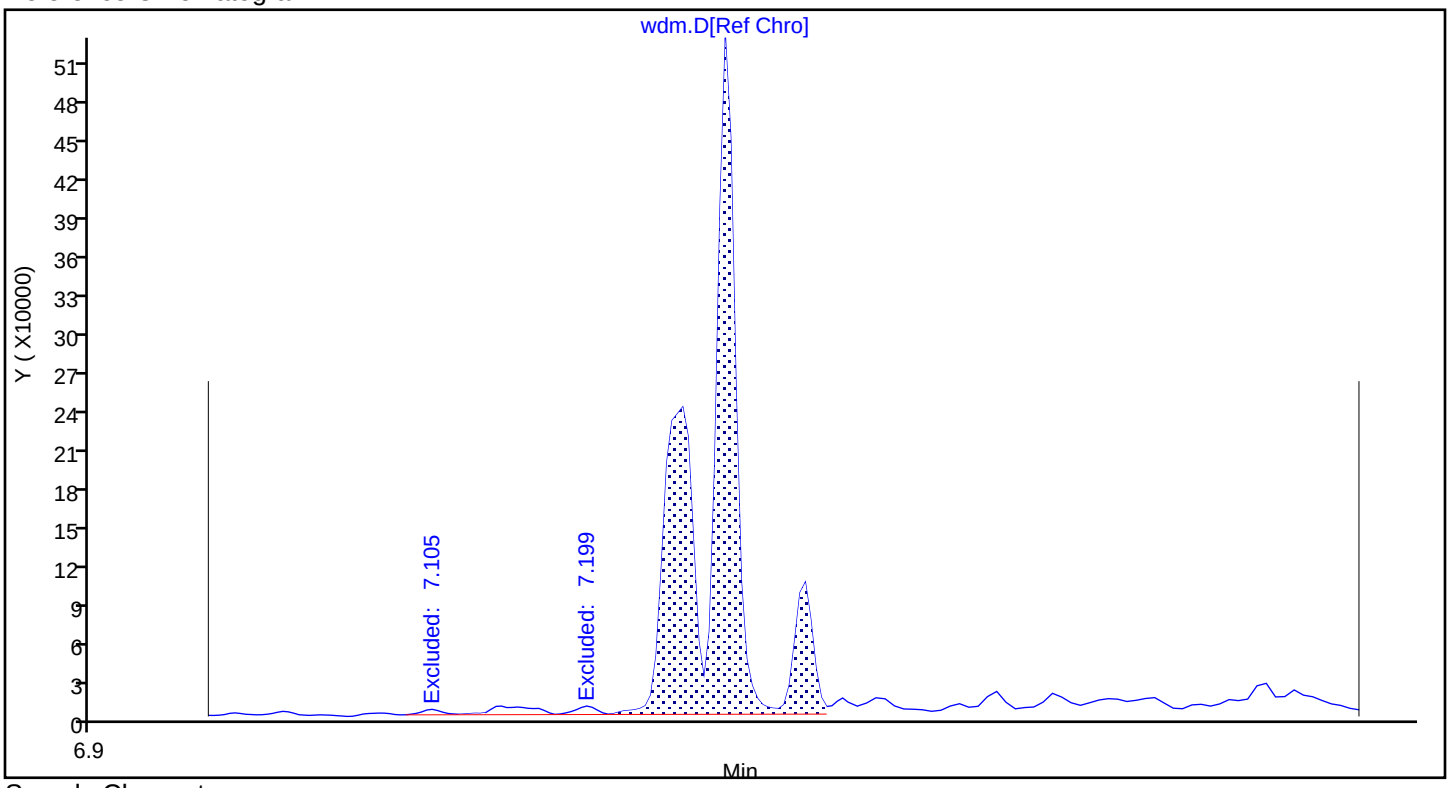
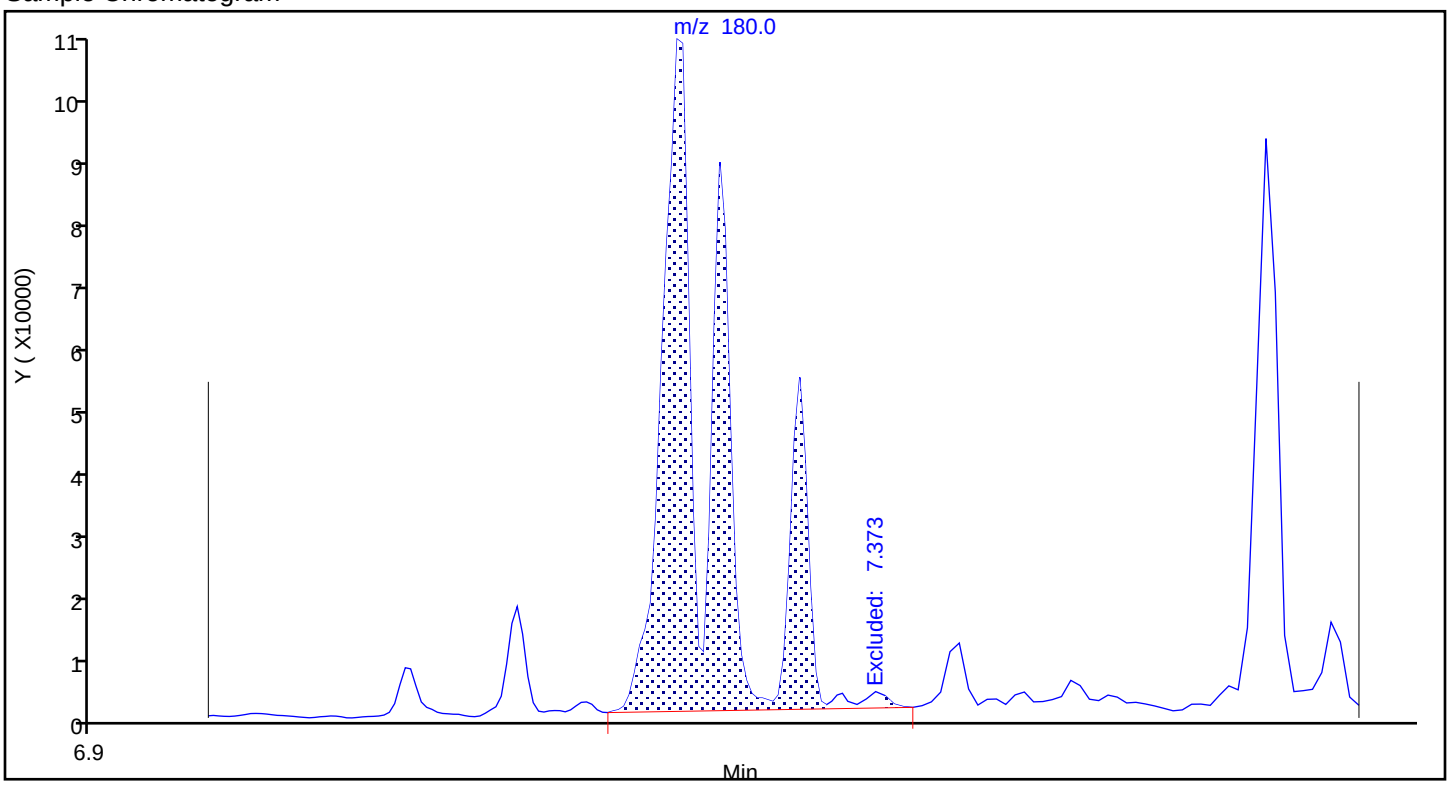
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Client ID:	22T-VB-03-4.0-6.0-D_20190717				
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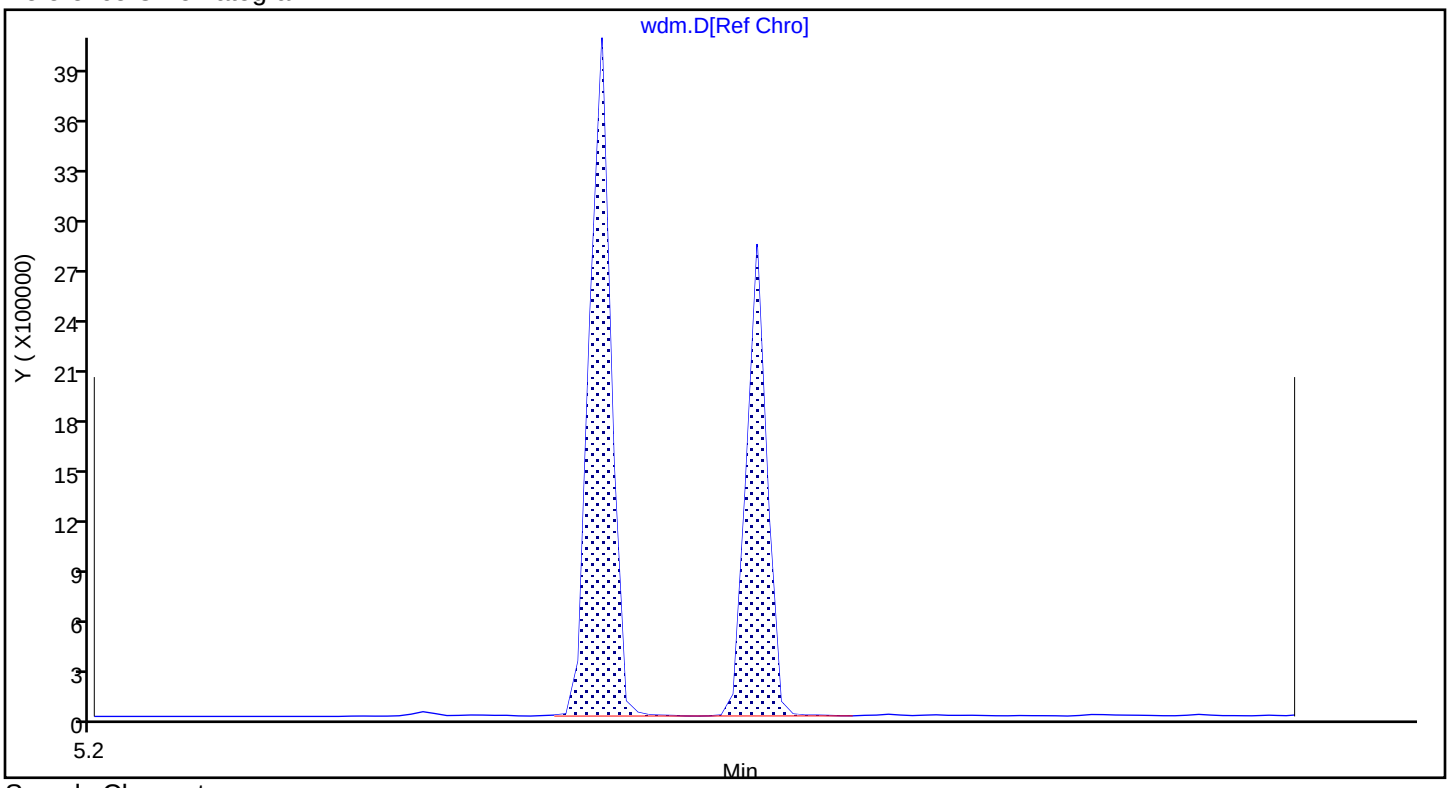
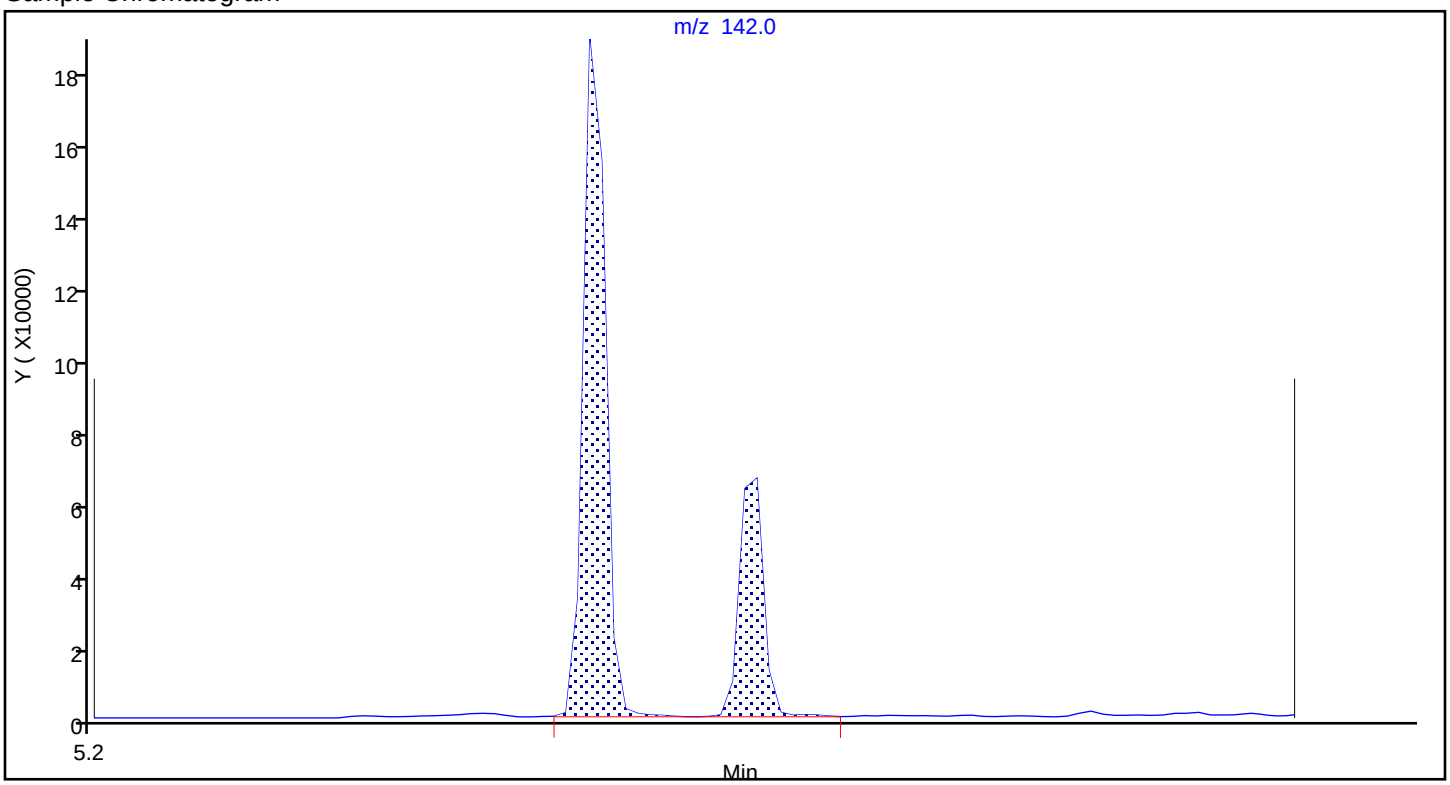
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Client ID:	22T-VB-03-4.0-6.0-D_20190717				
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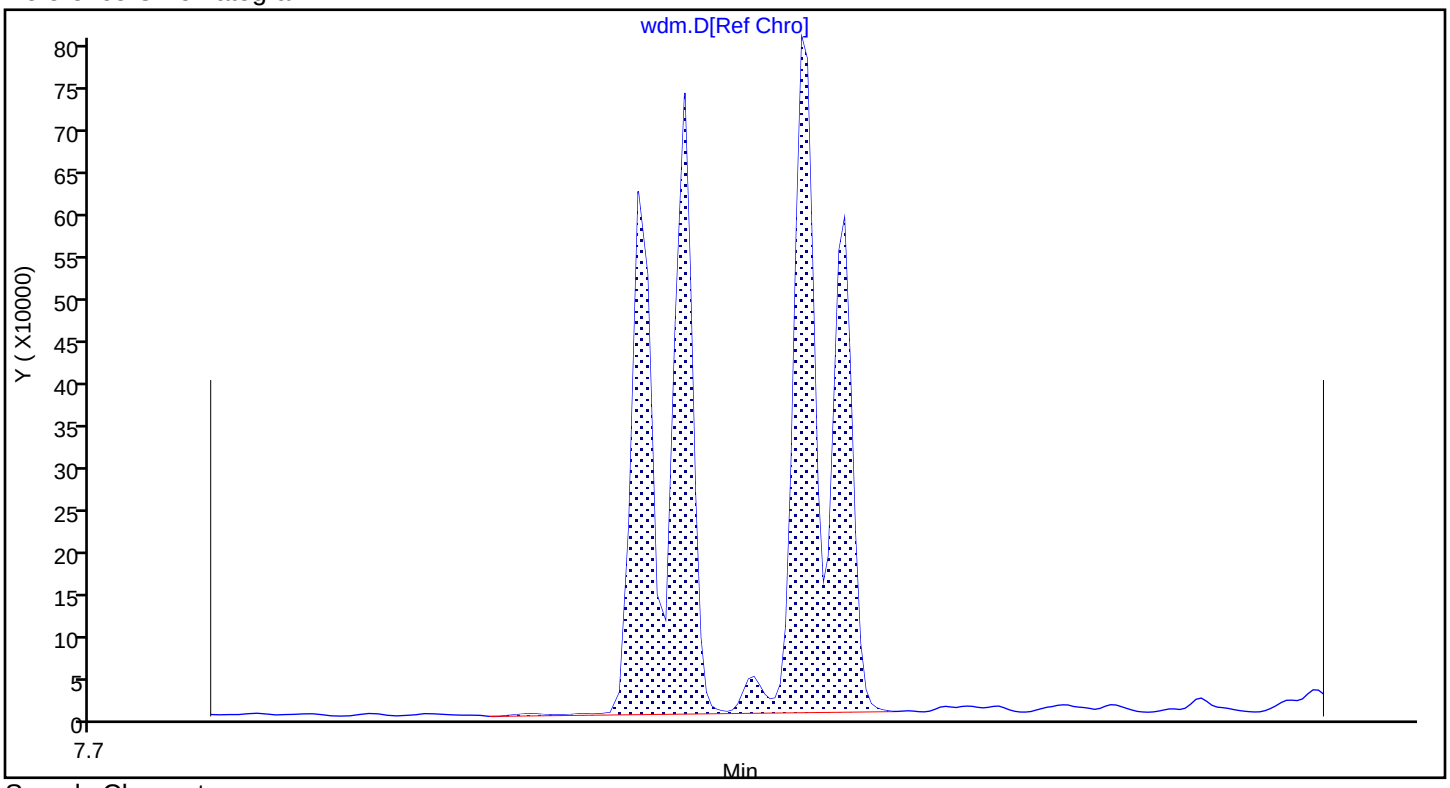
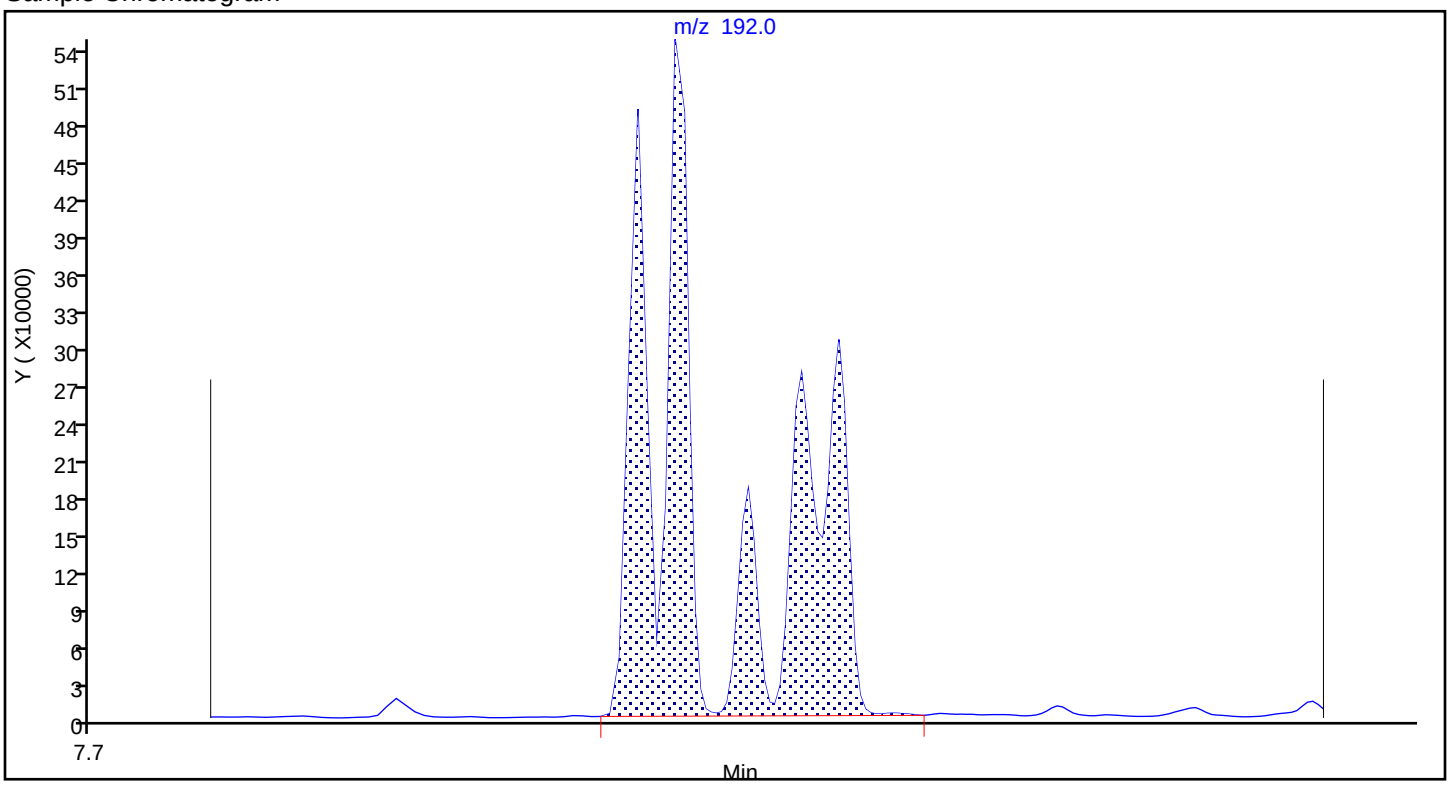
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



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Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
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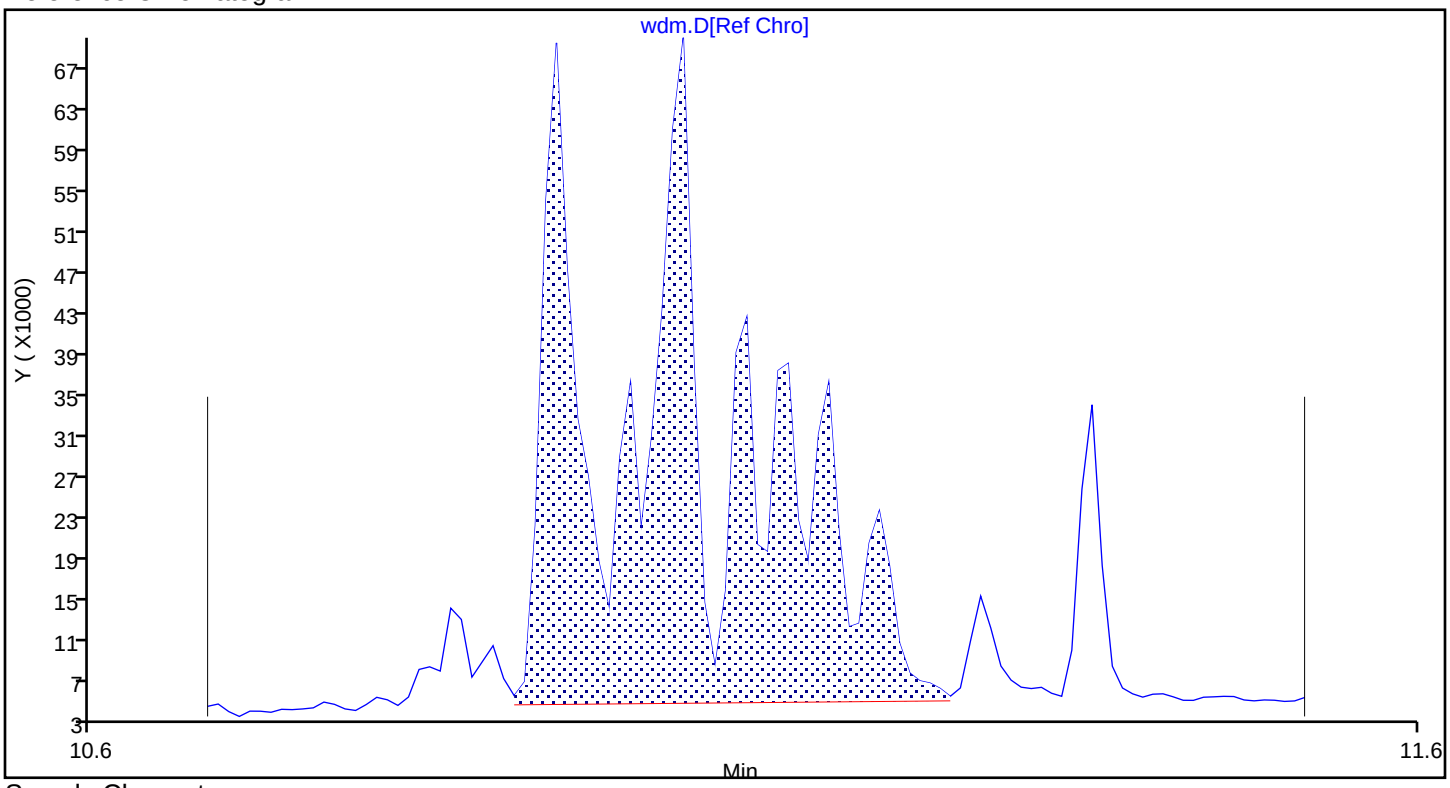
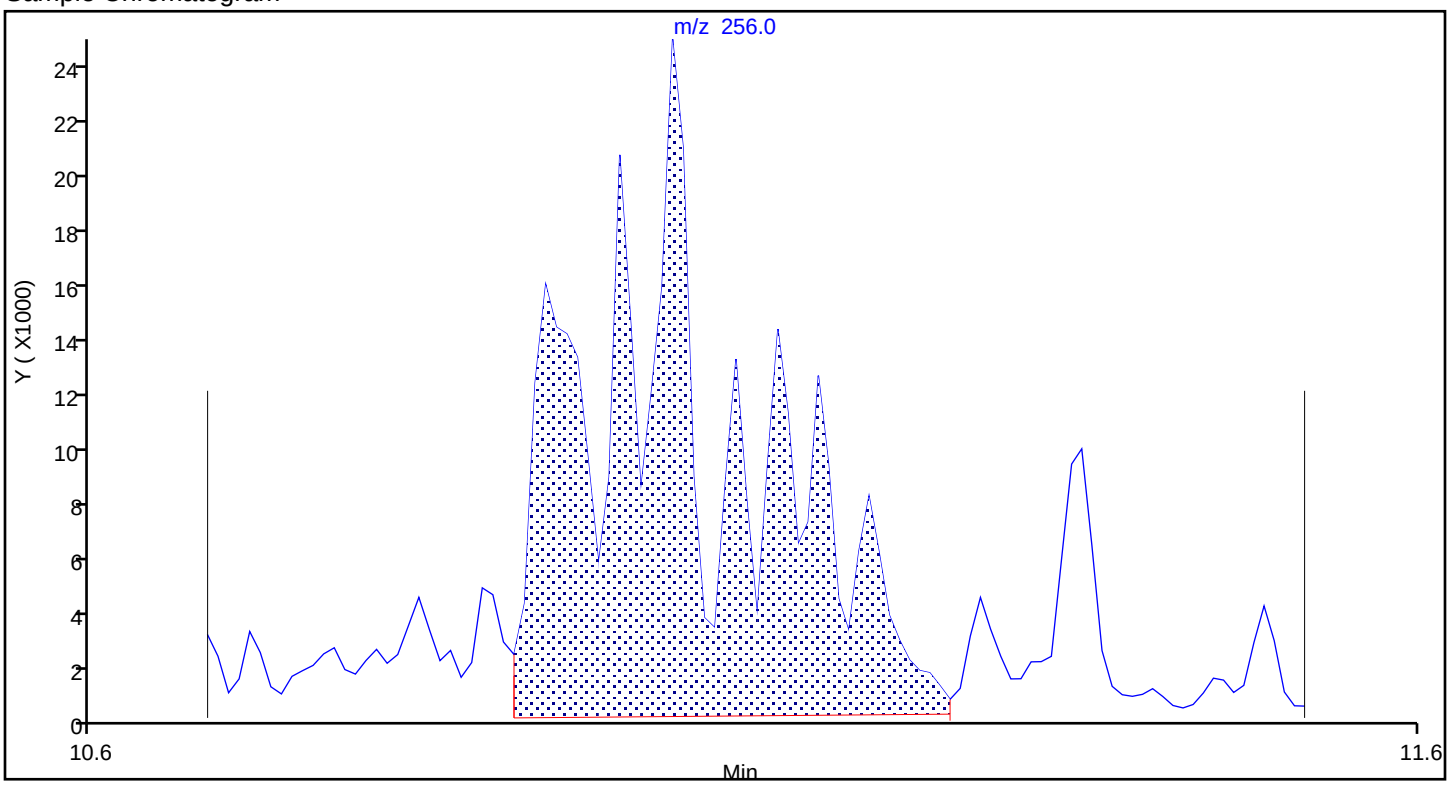
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



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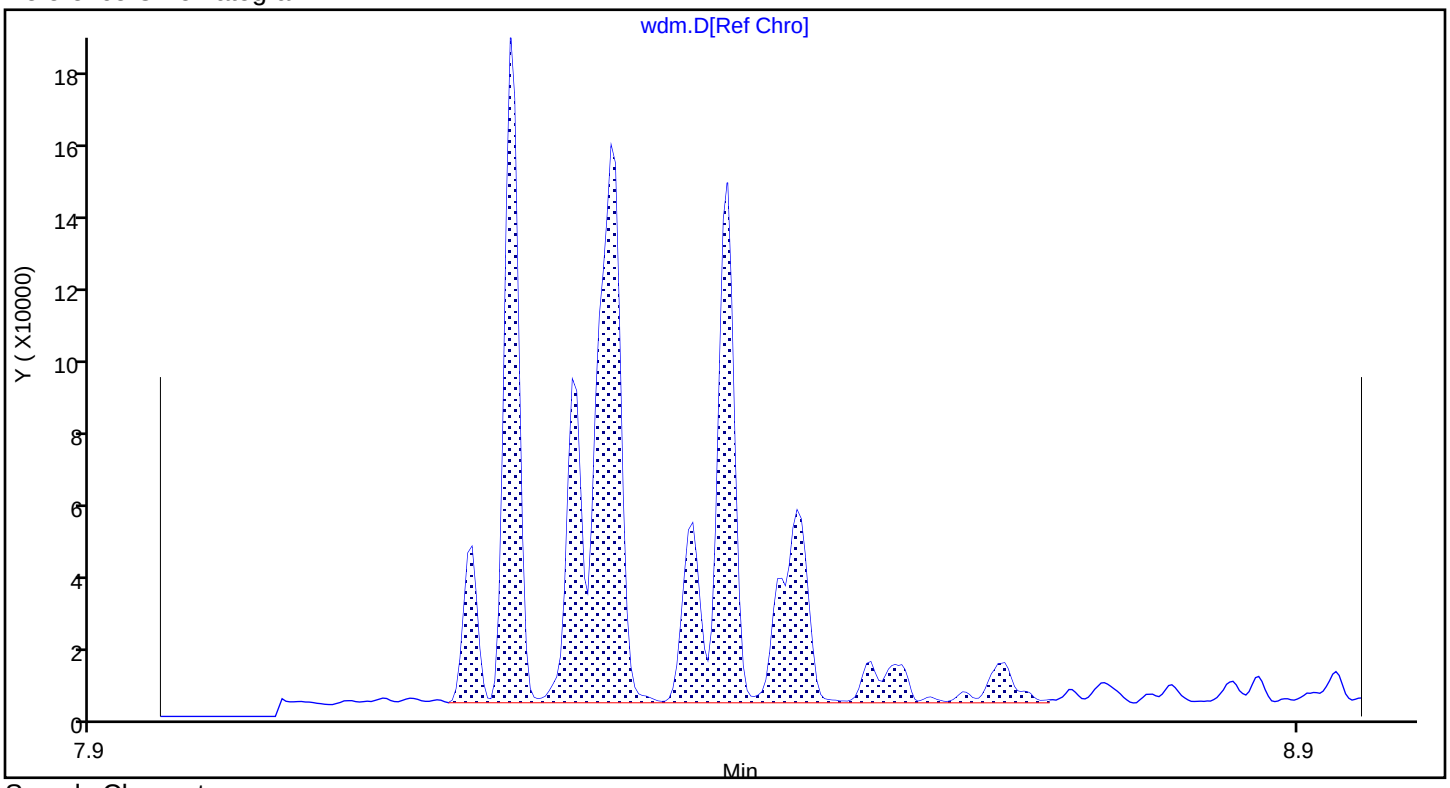
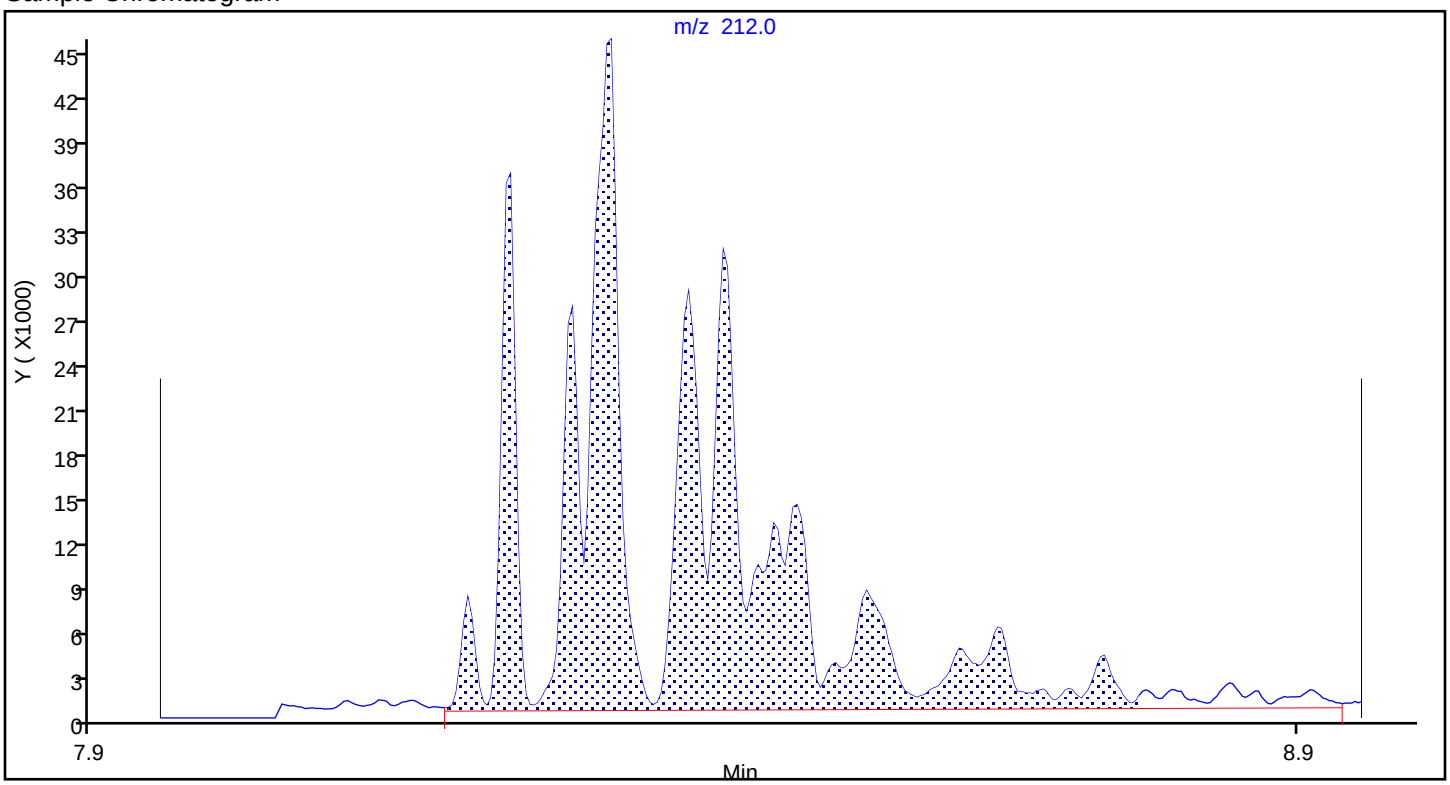
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



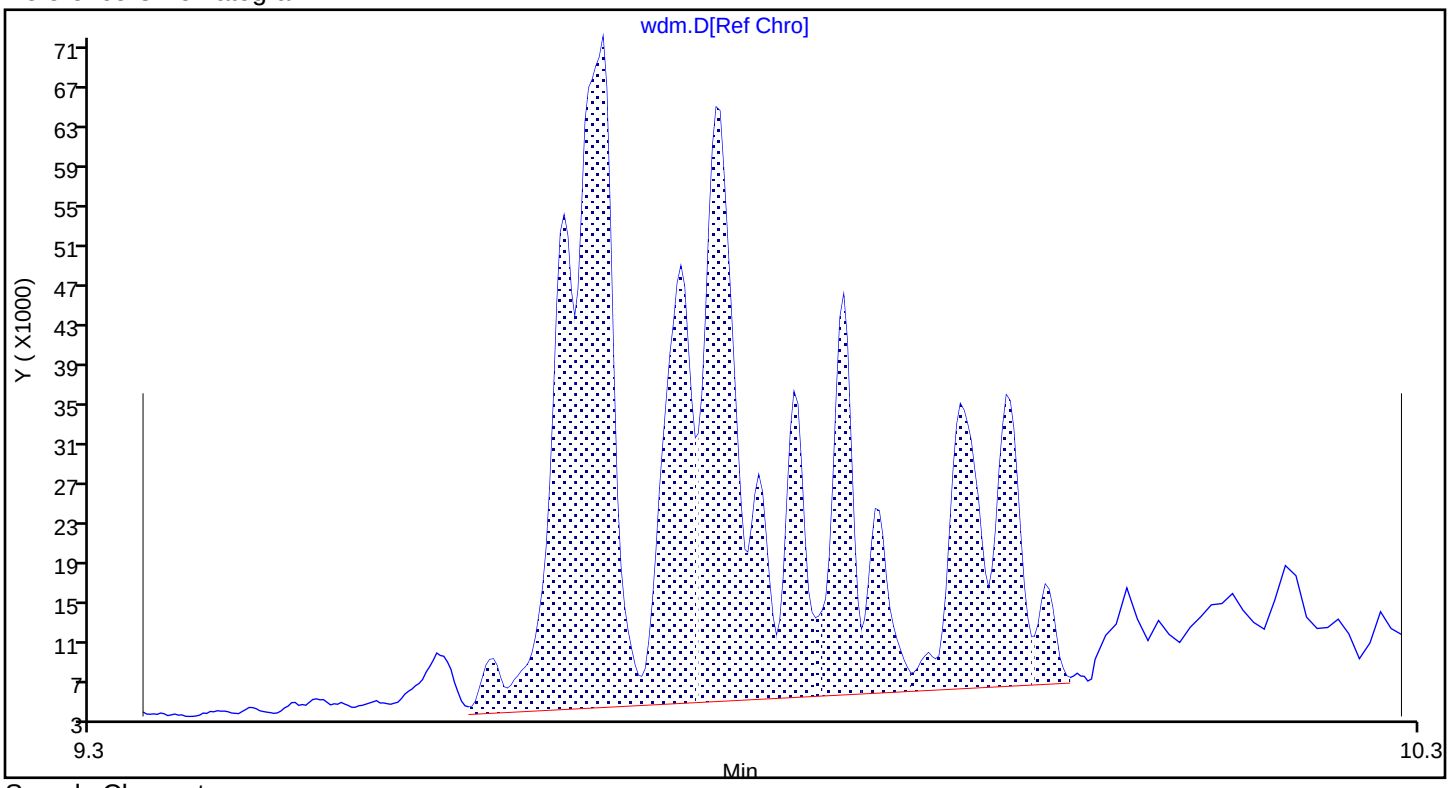
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

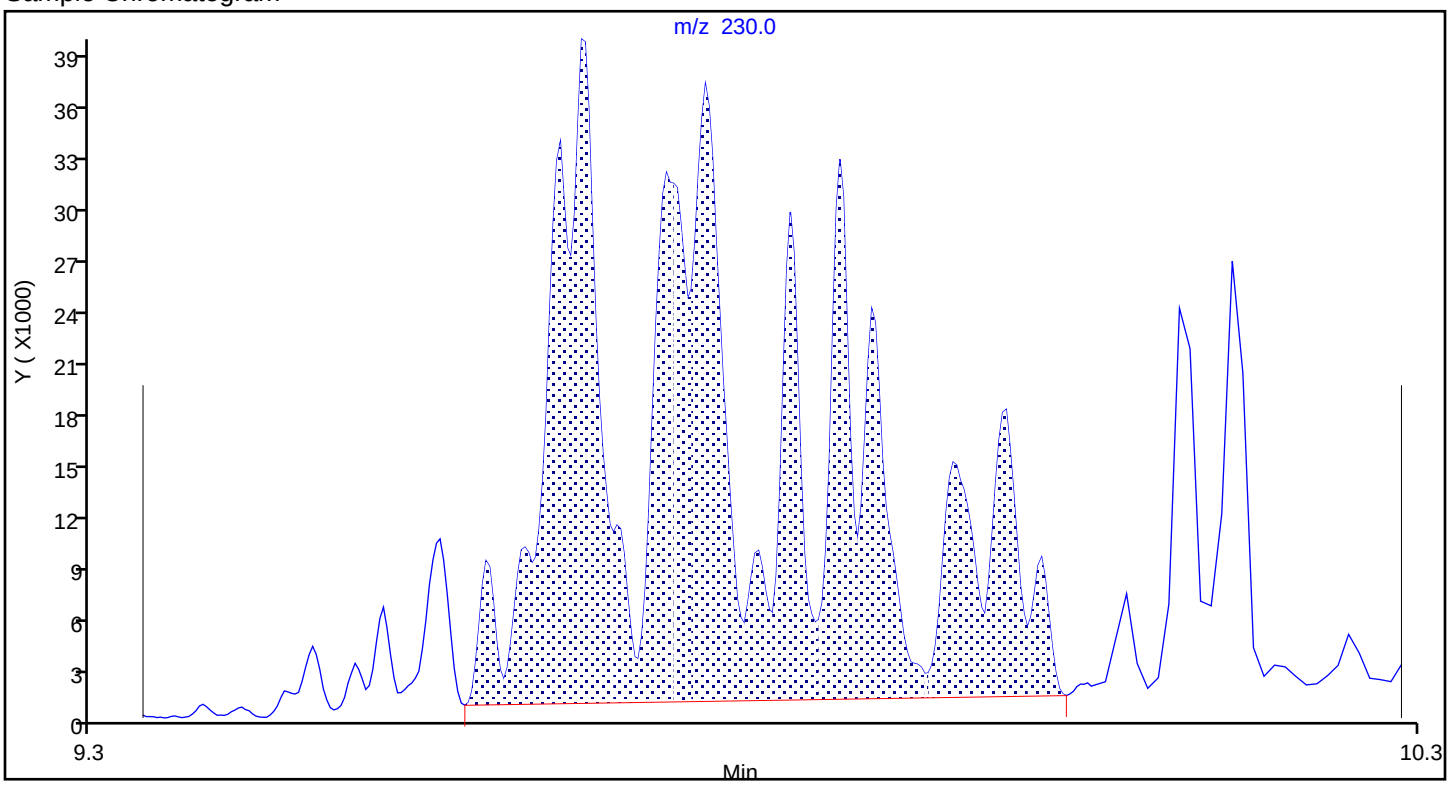
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



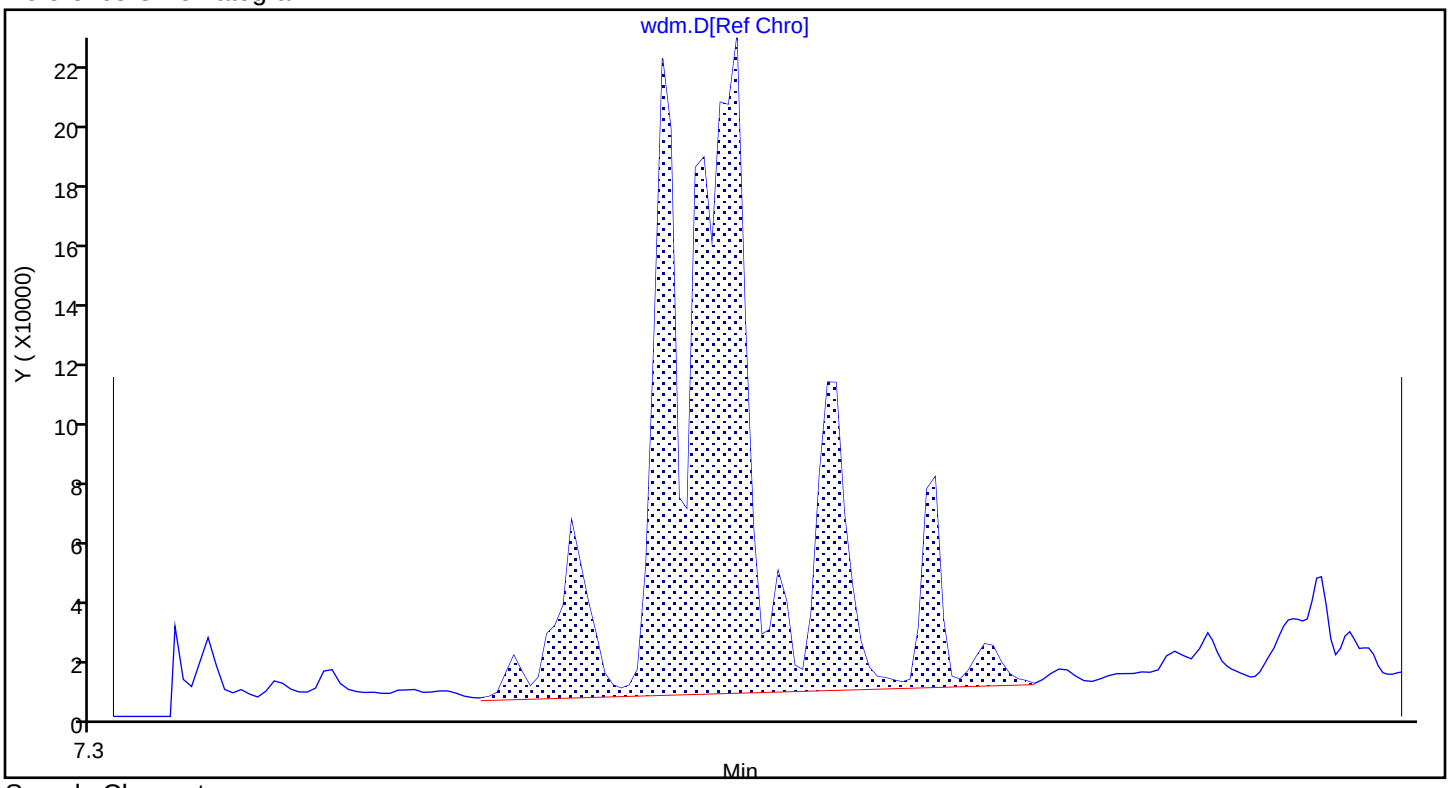
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

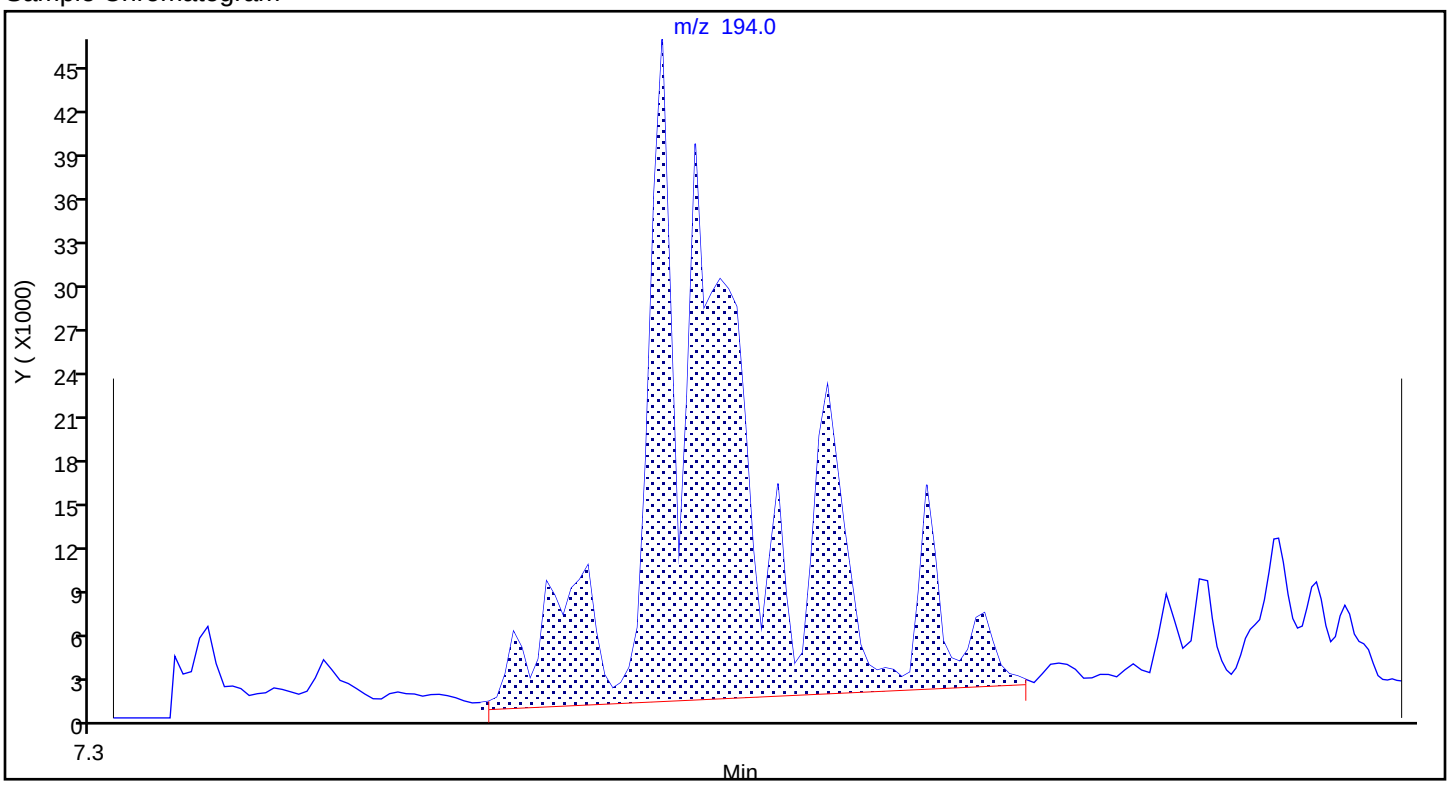
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



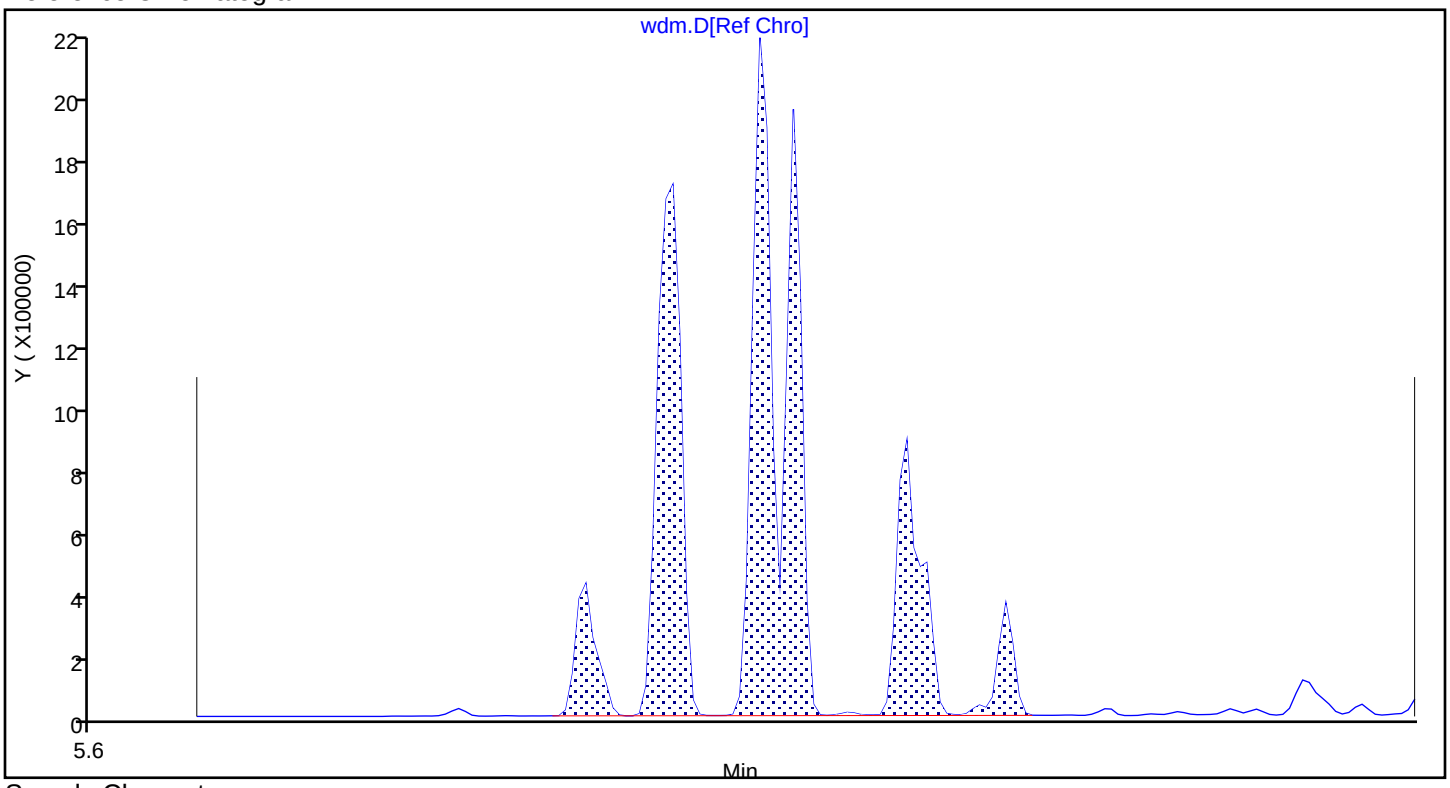
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

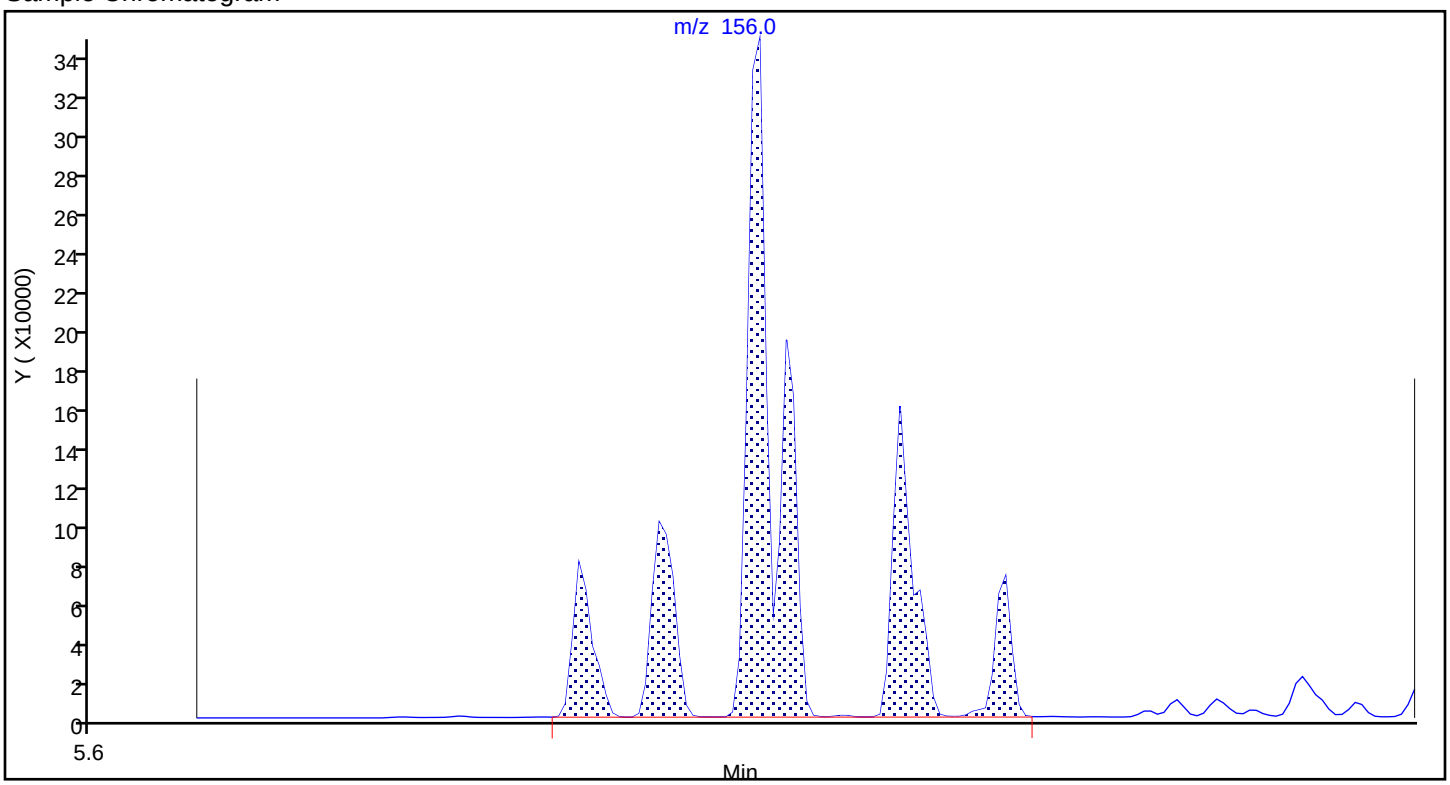
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



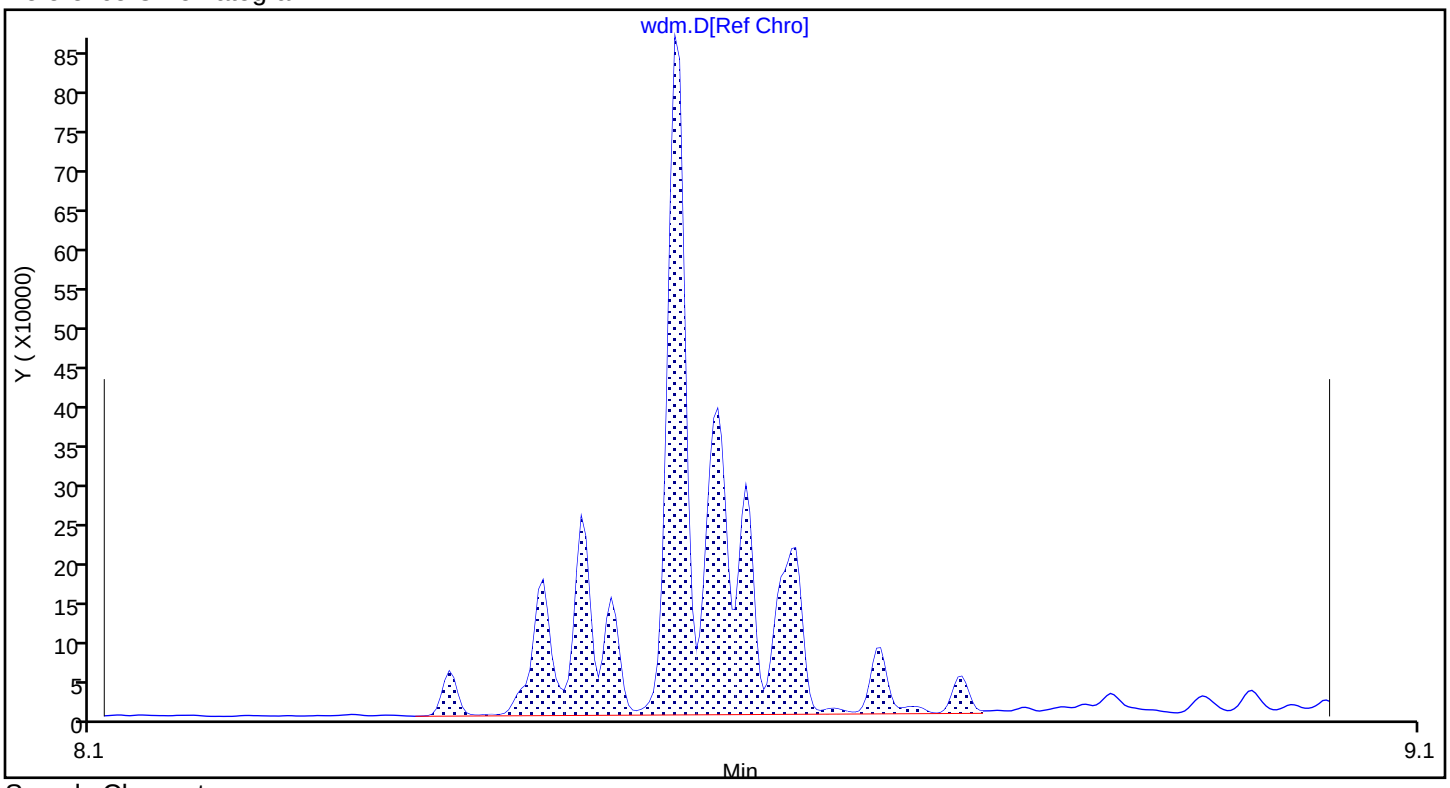
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

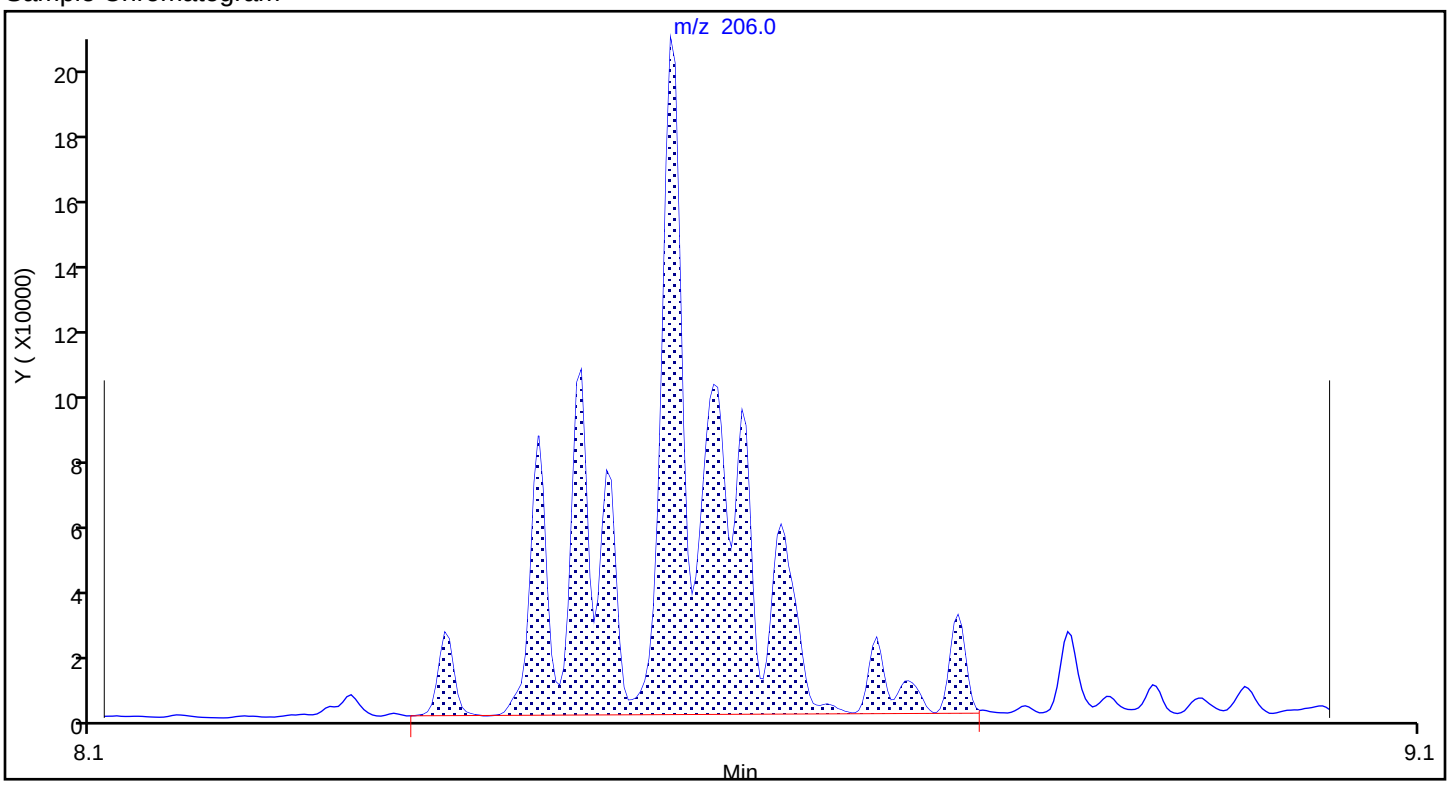
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



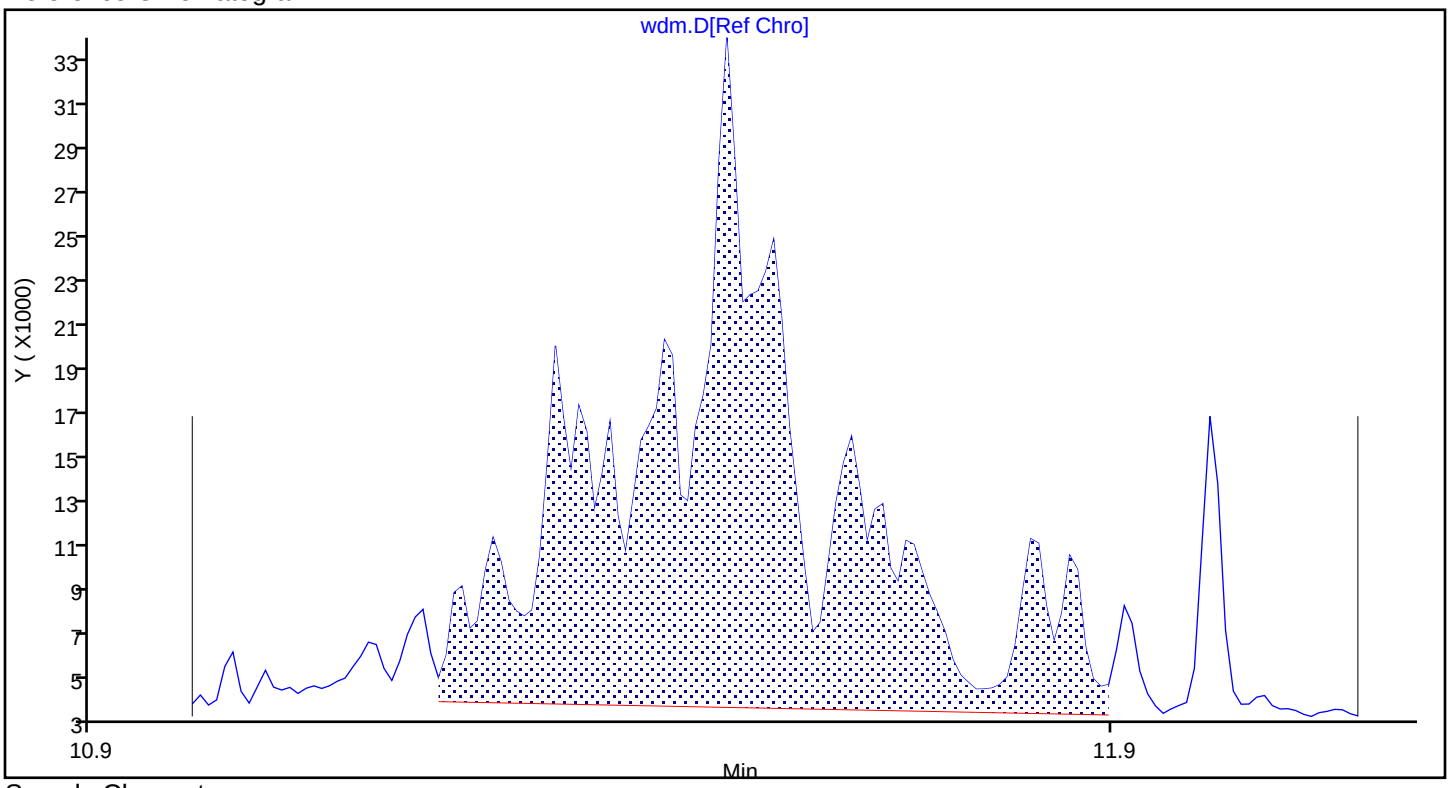
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

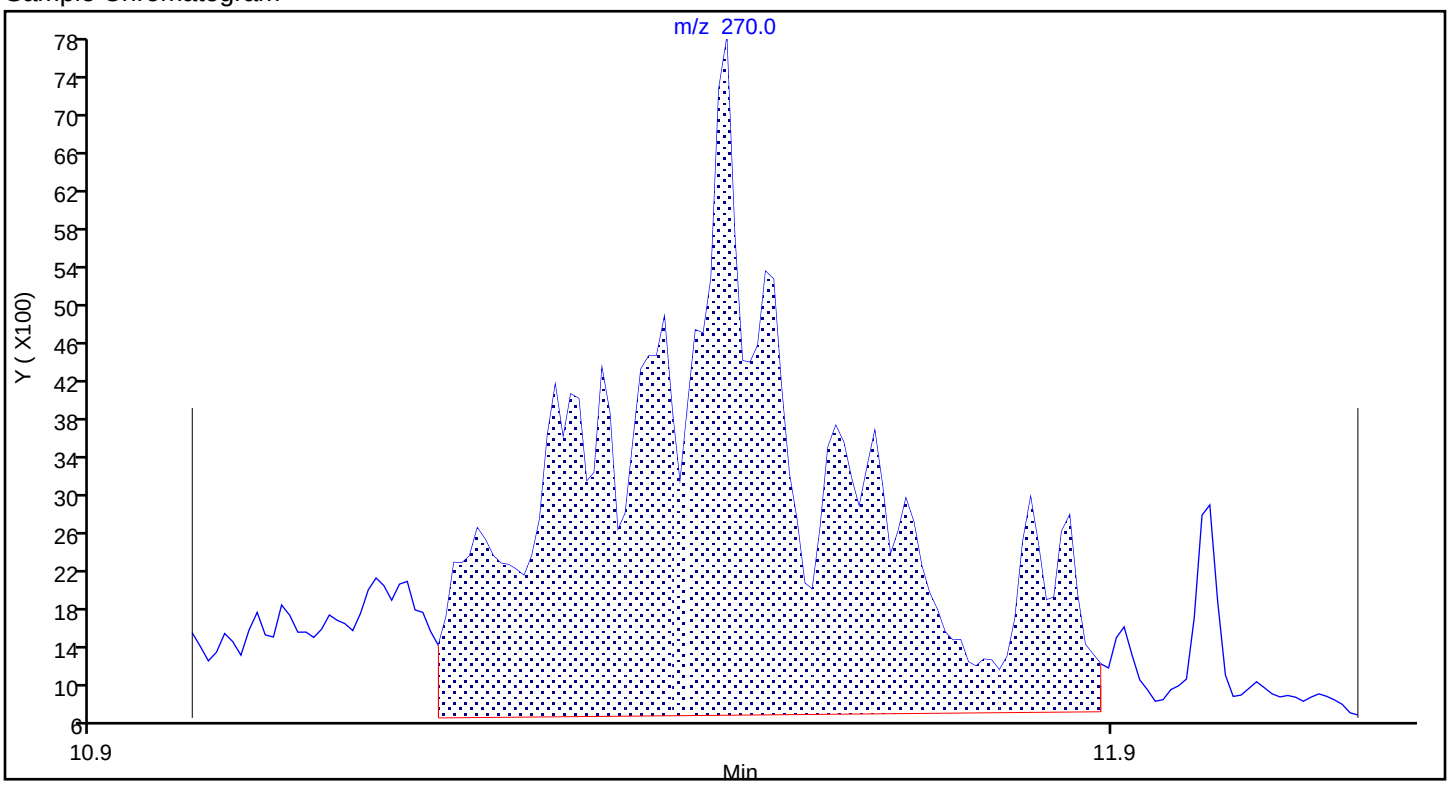
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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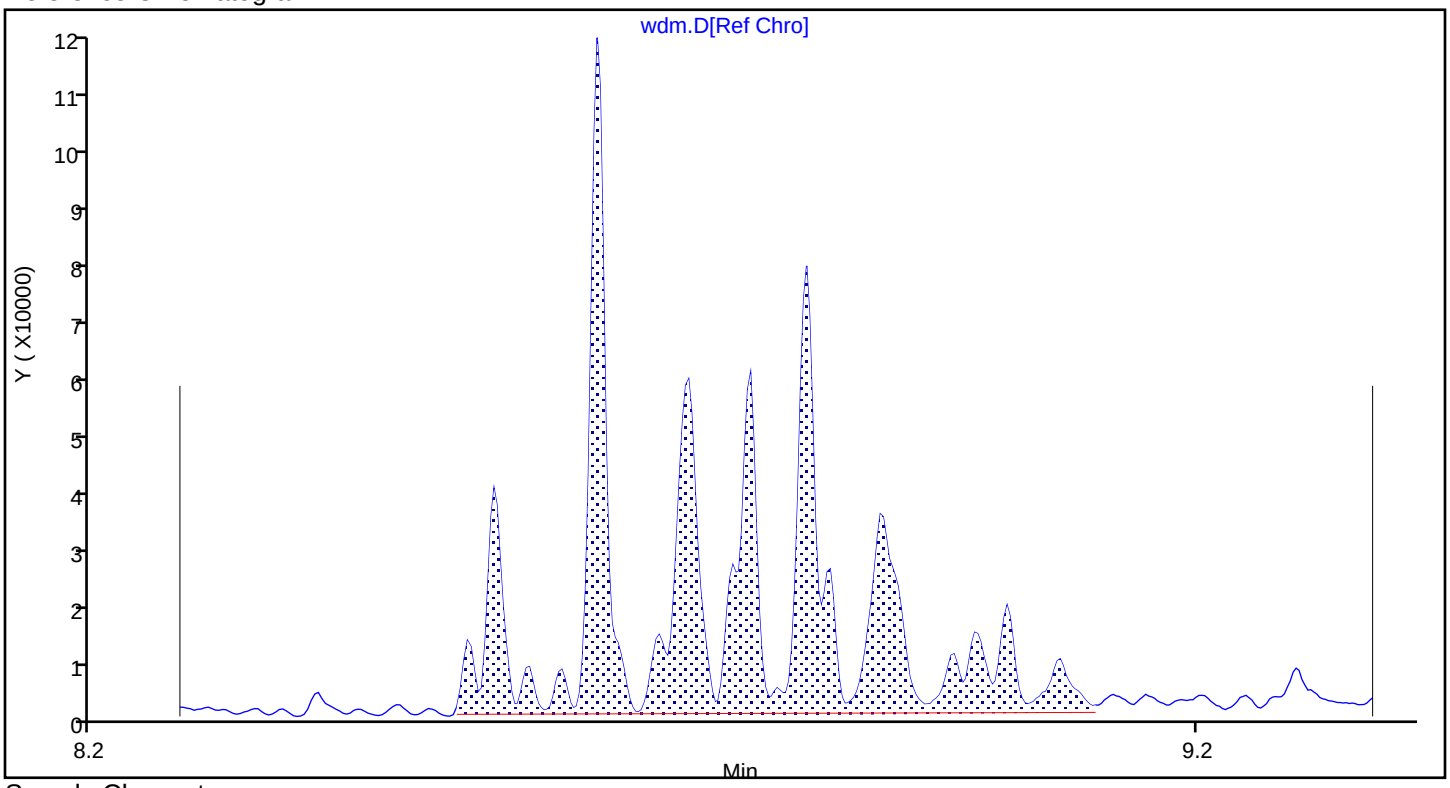
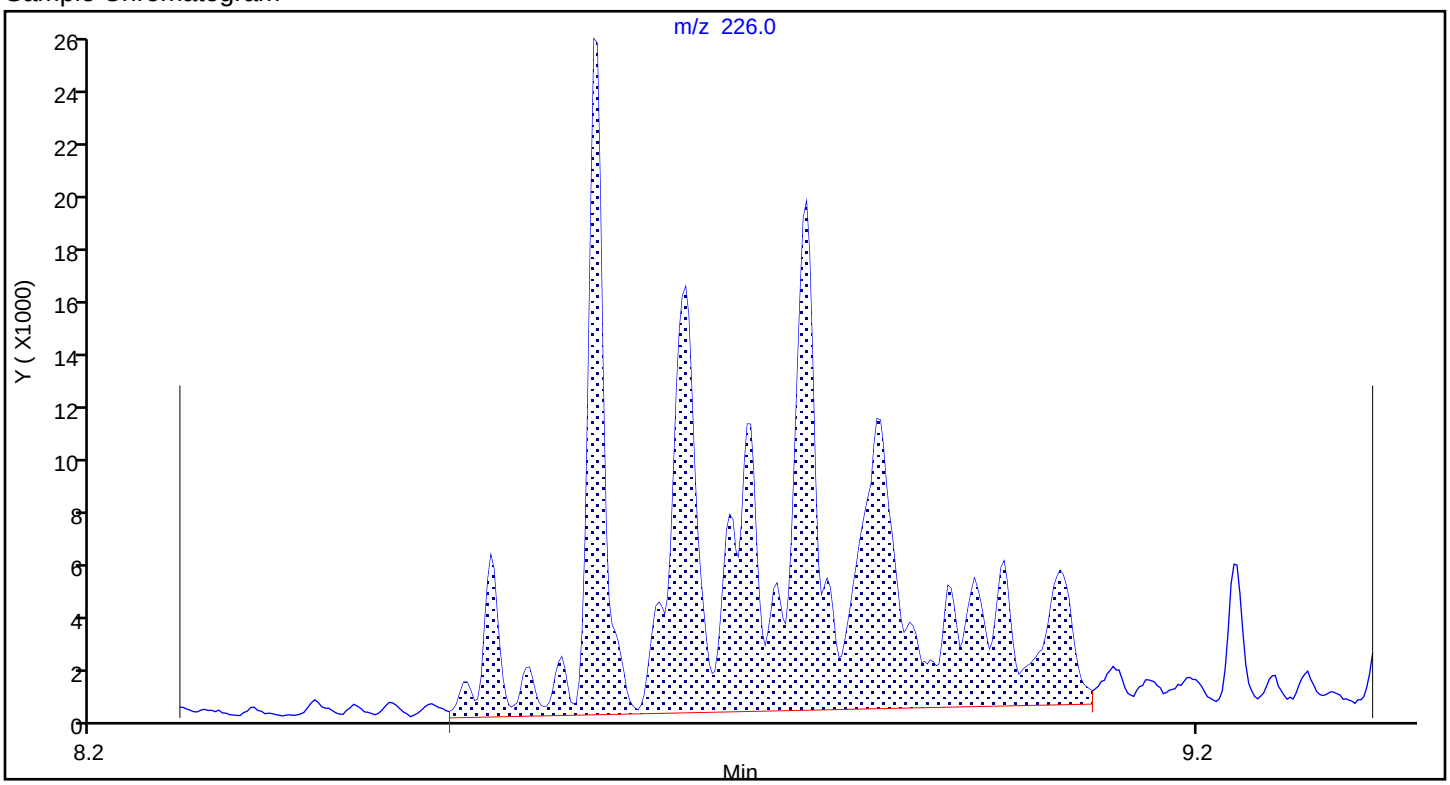
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



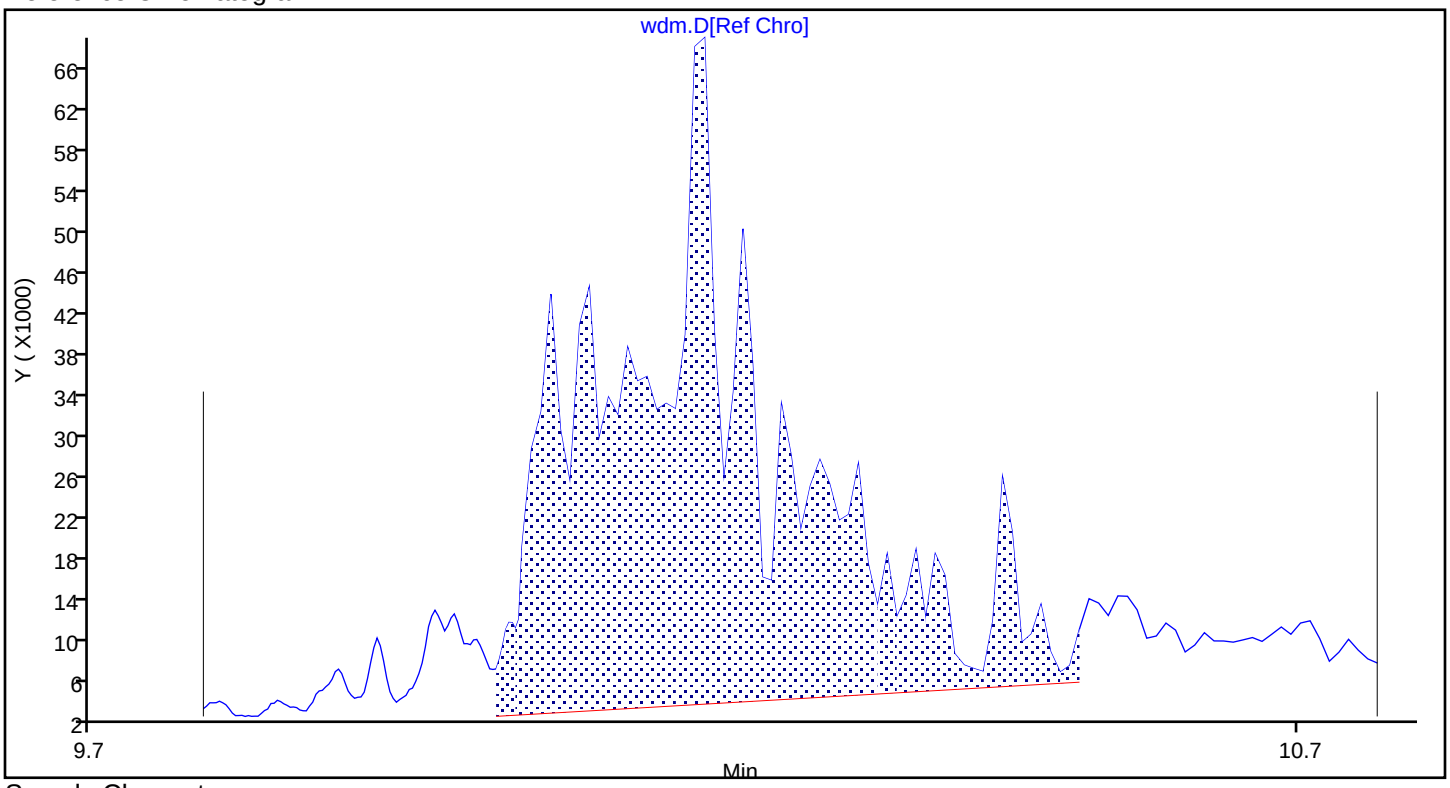
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

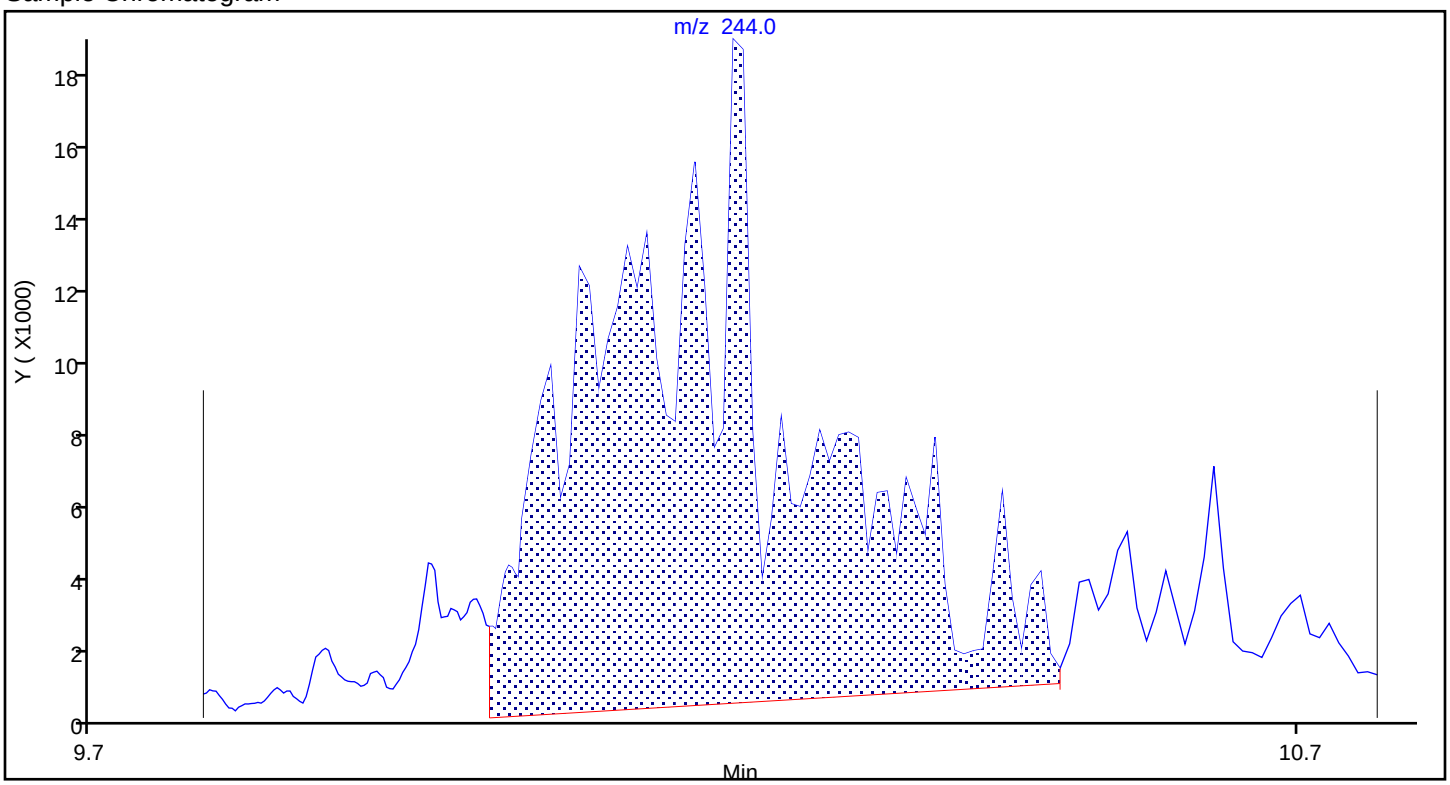
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
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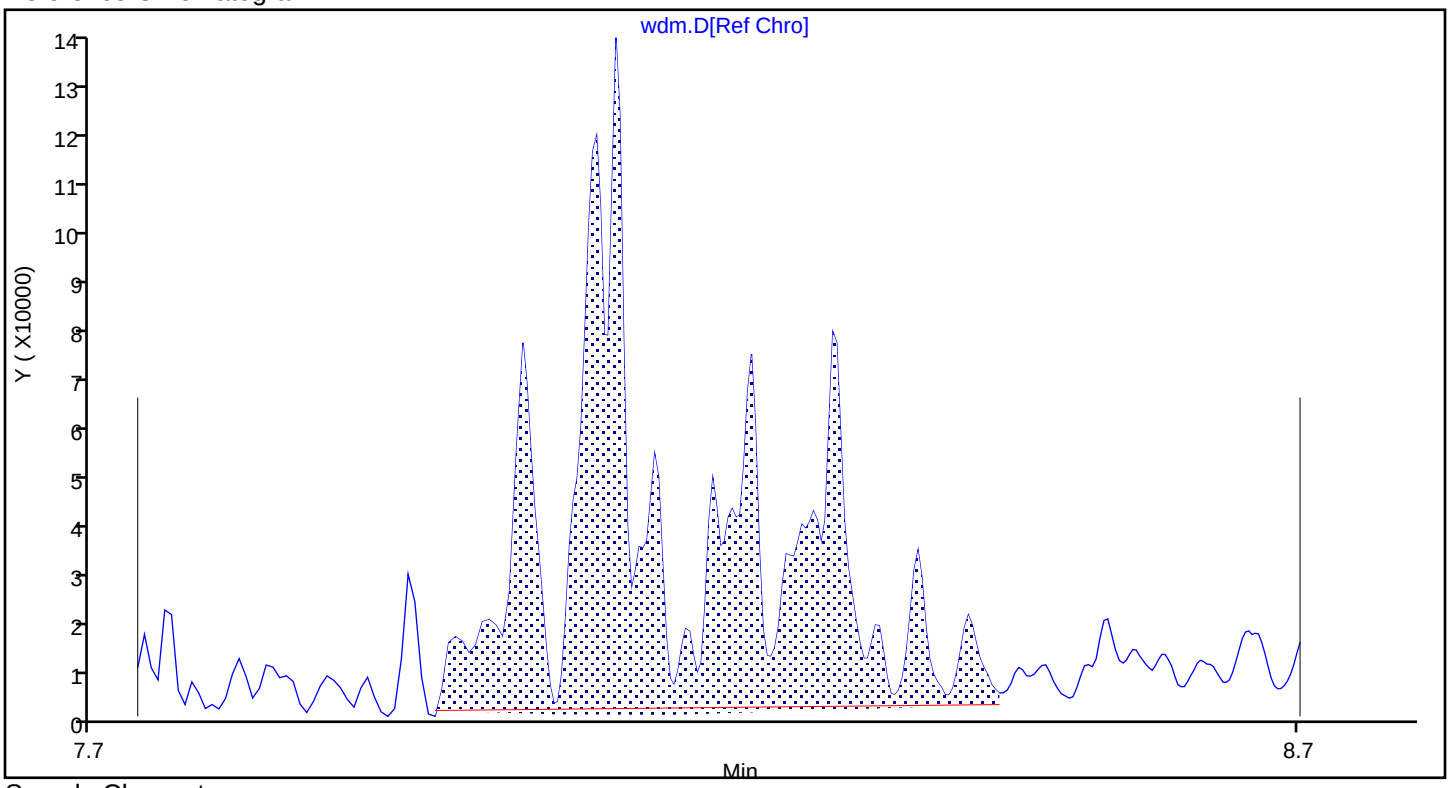
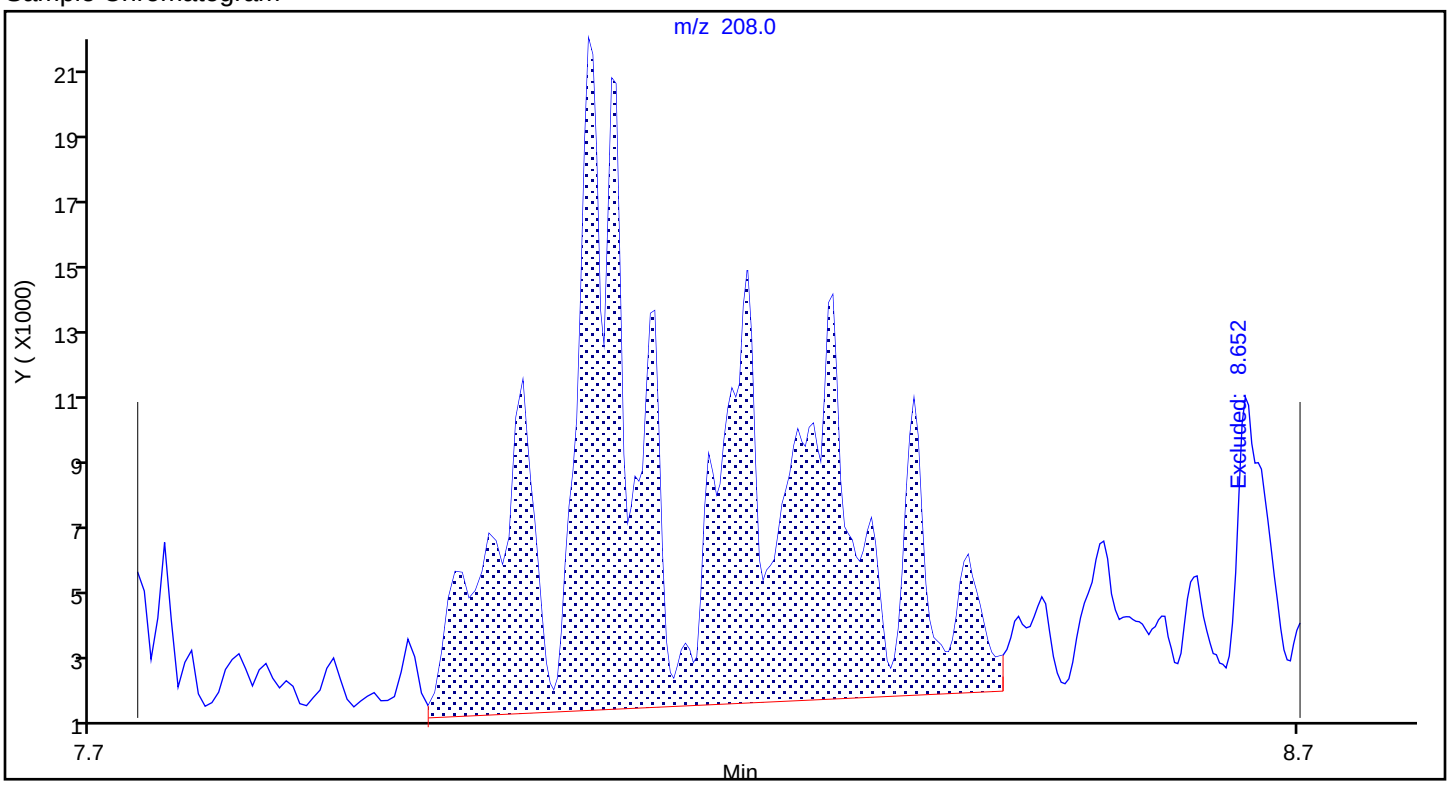
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
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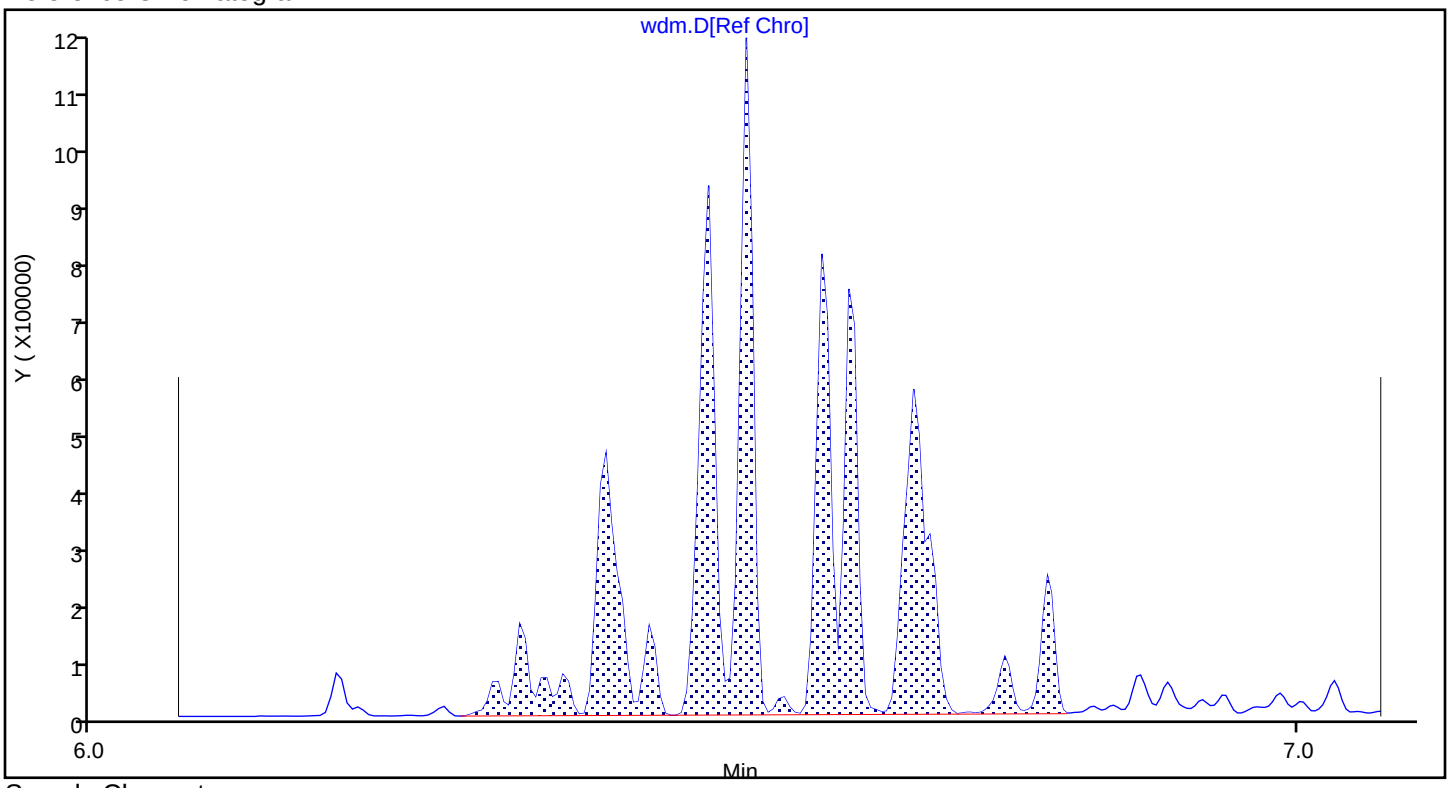
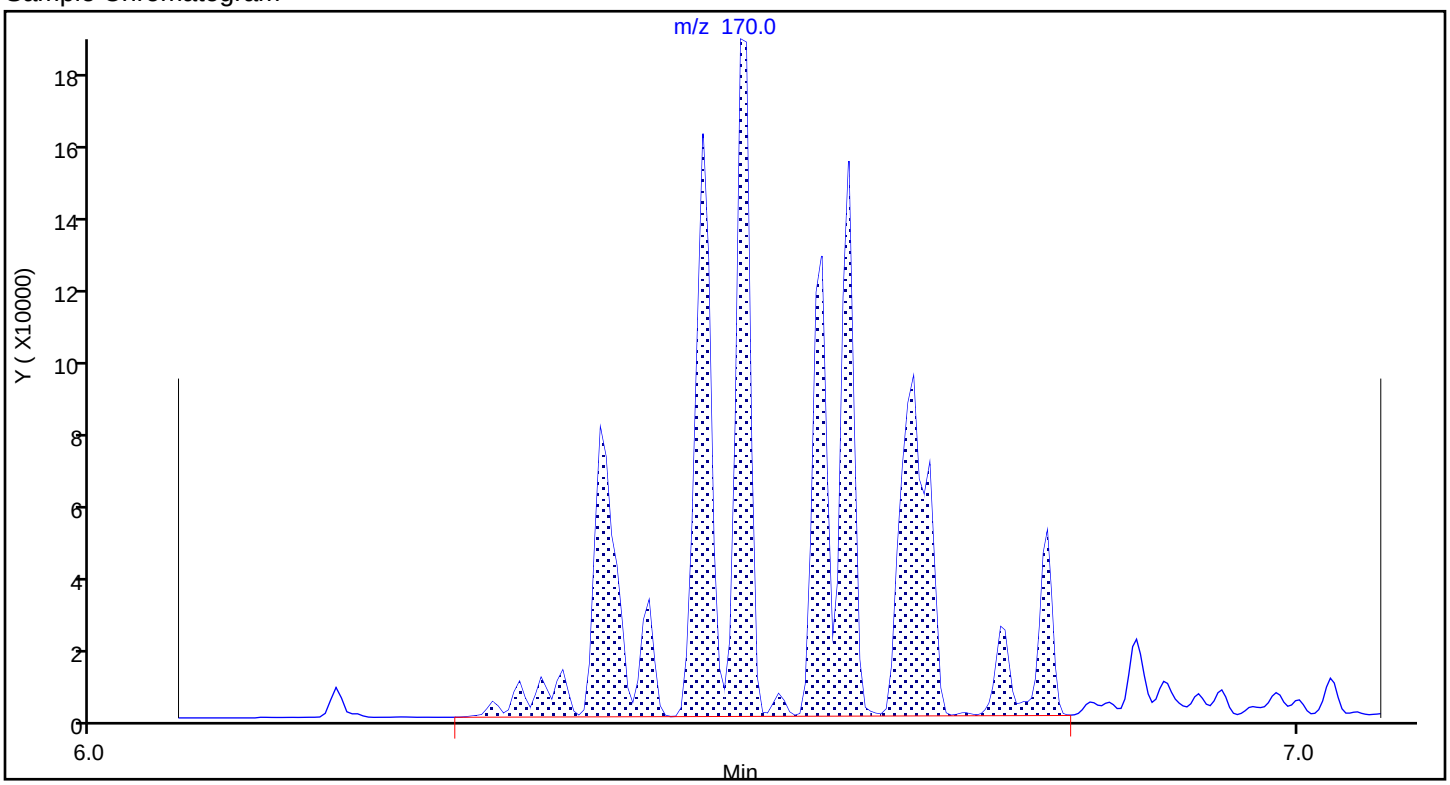
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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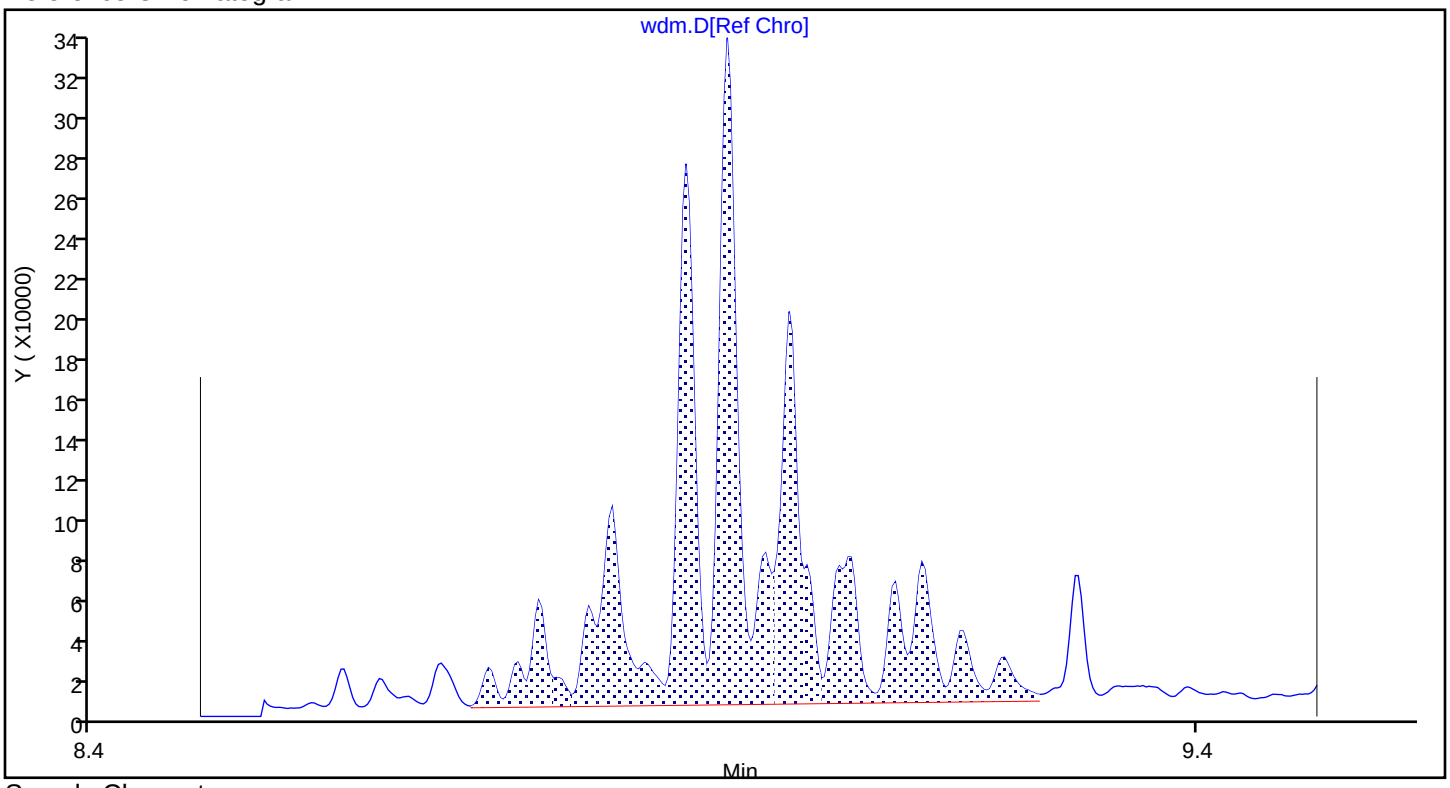
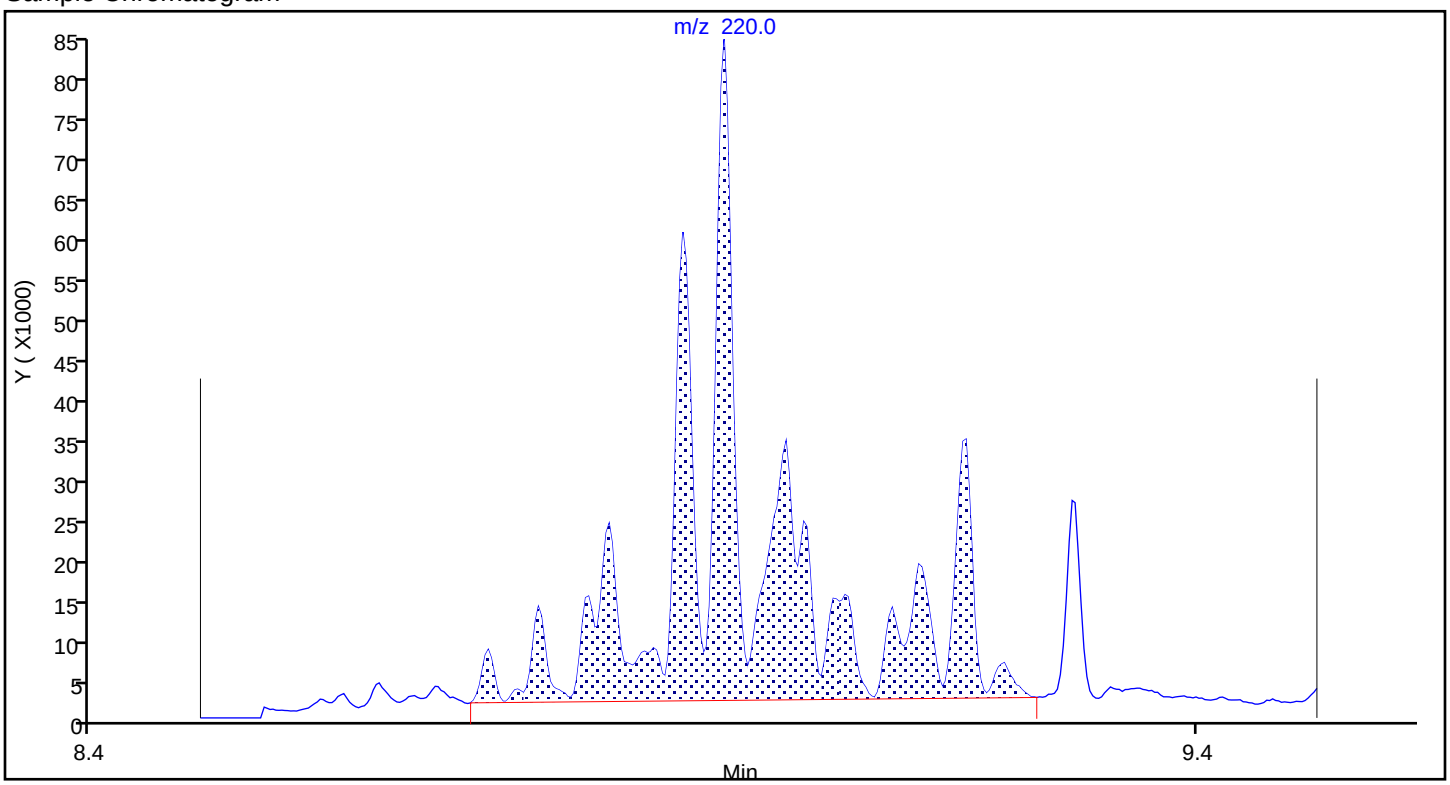
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



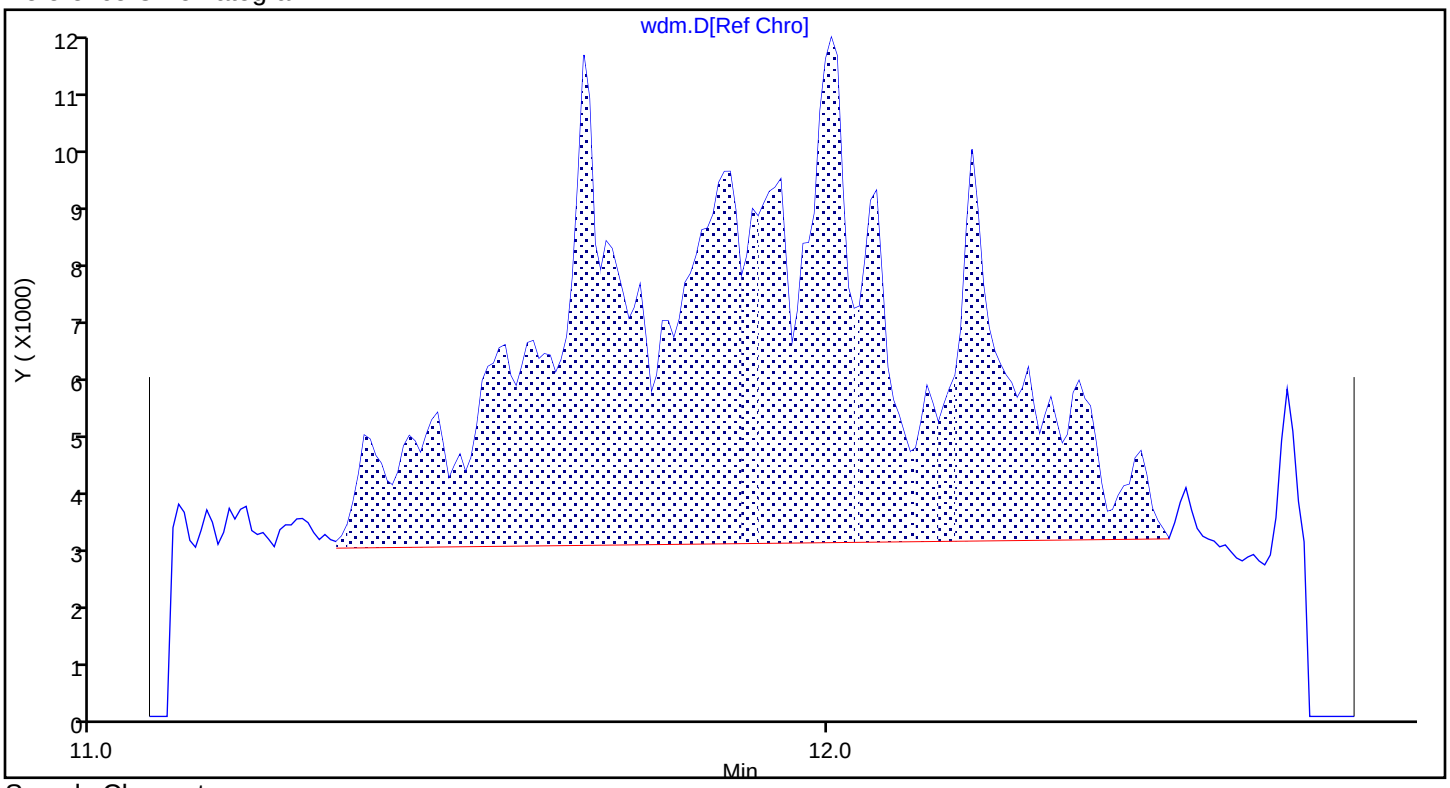
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

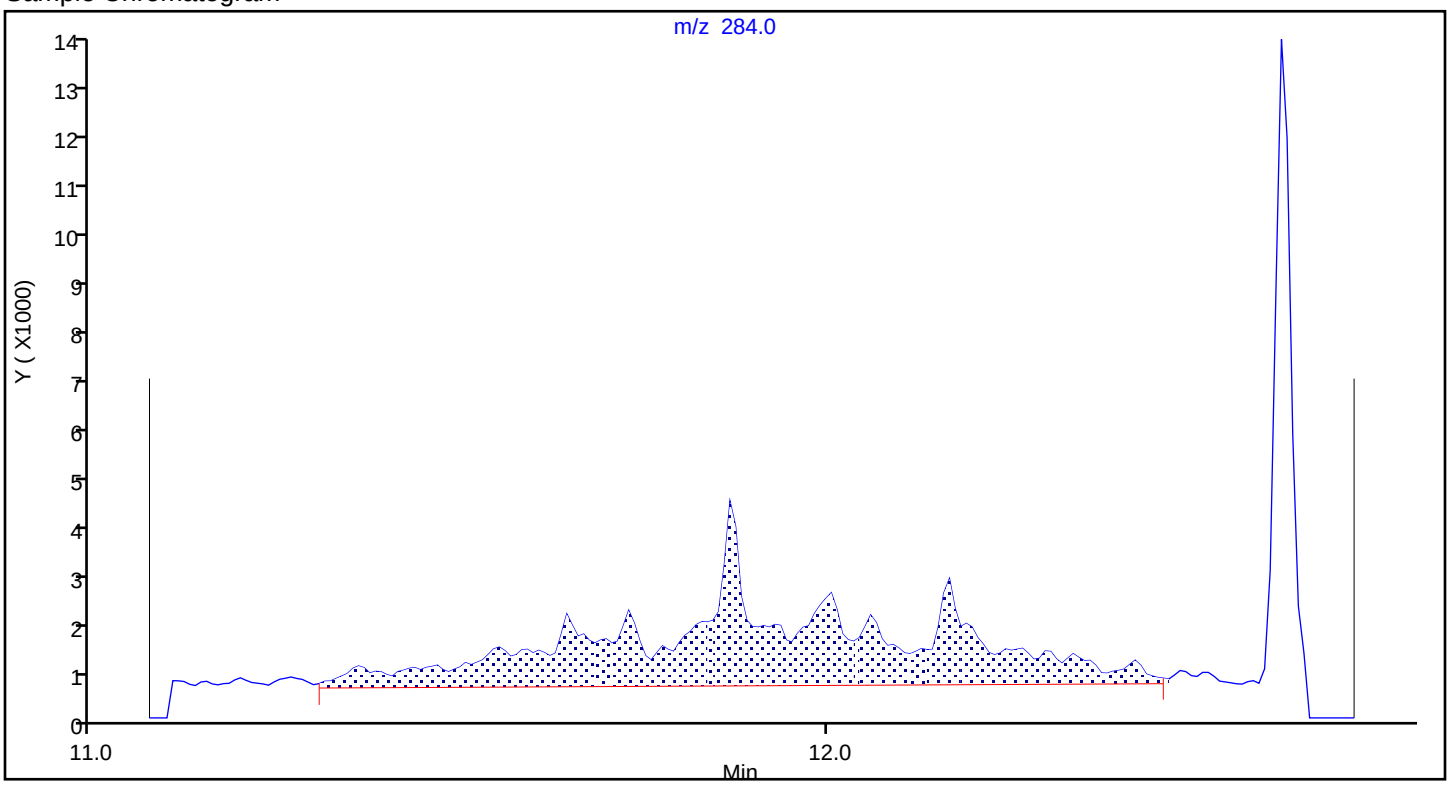
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



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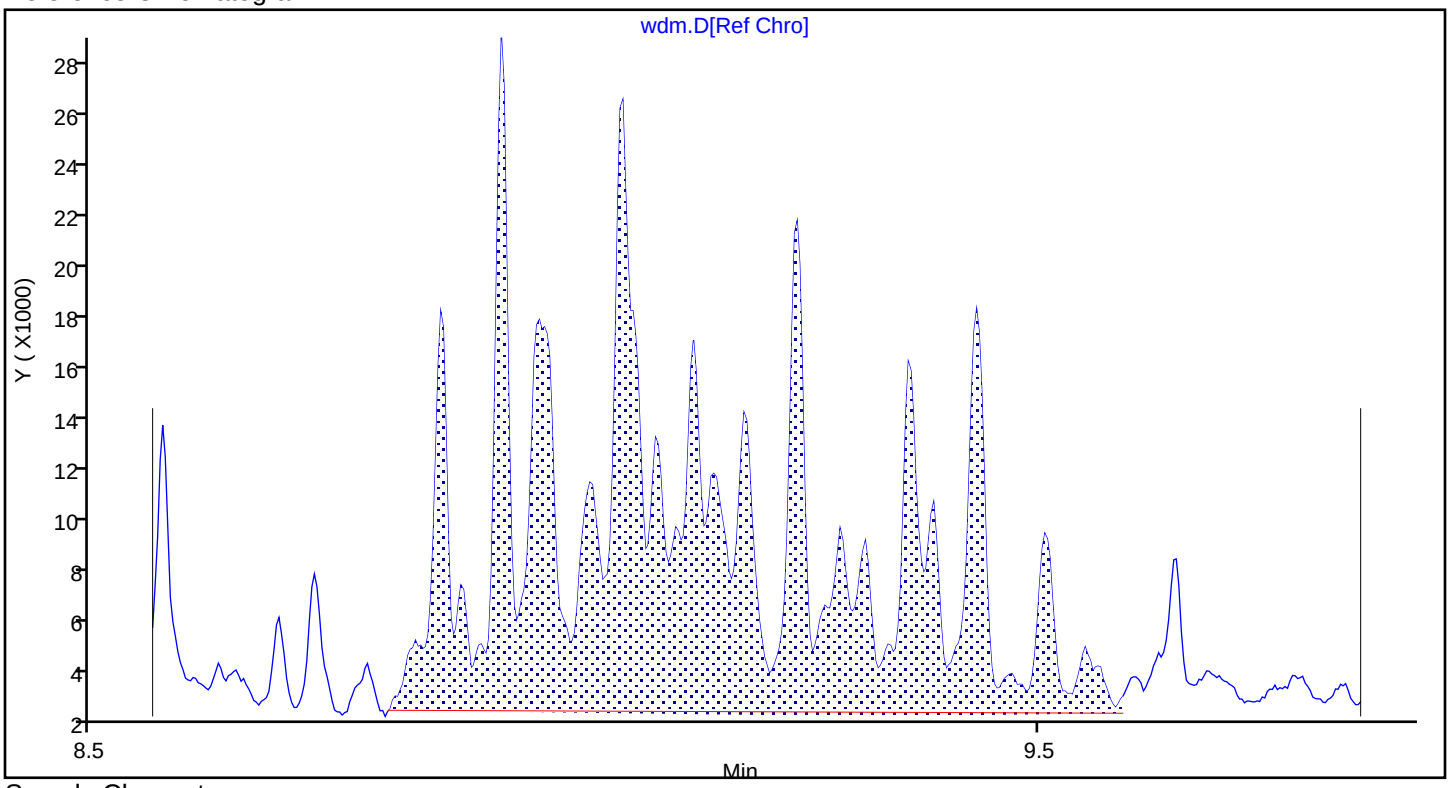
Eurofins TestAmerica, Knoxville

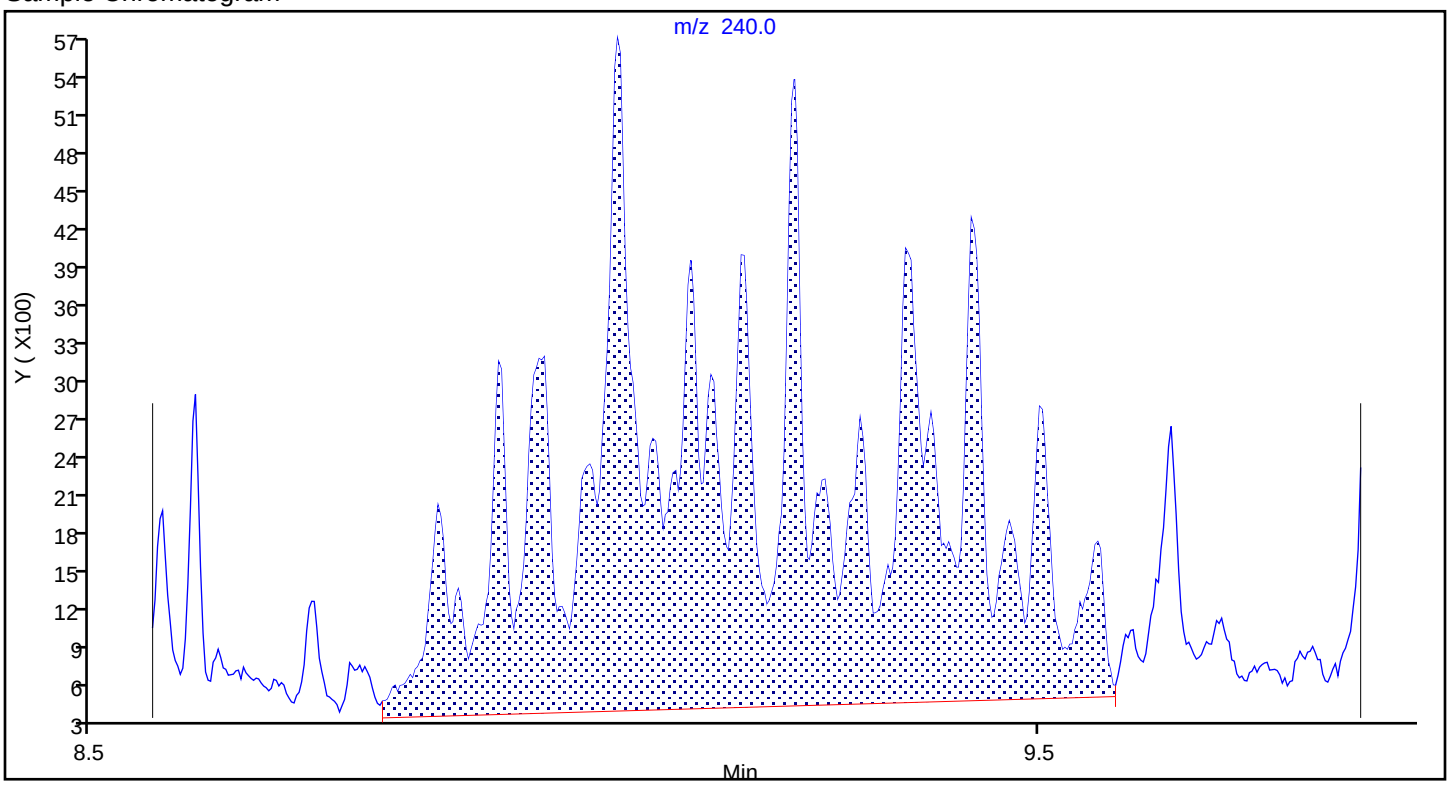
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



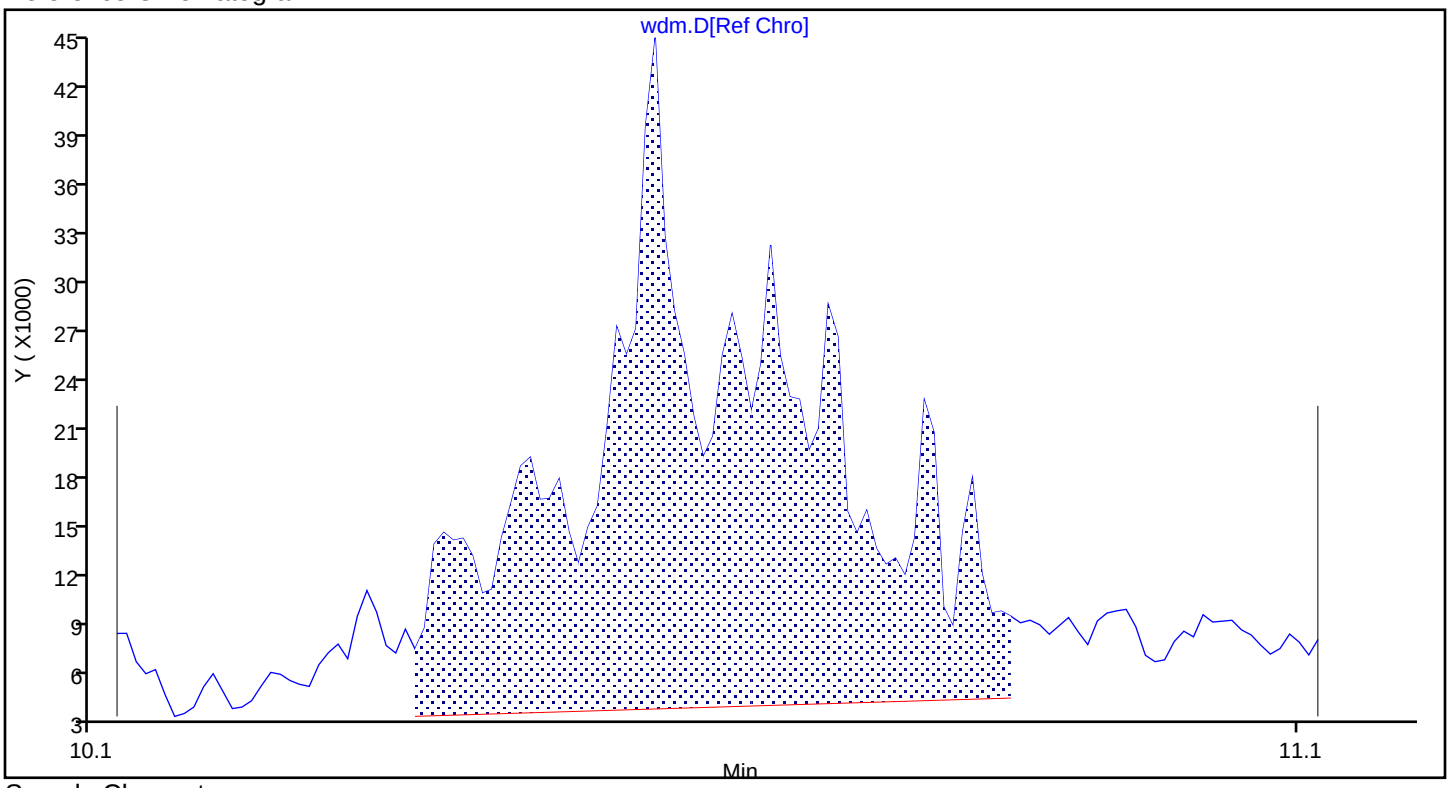
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

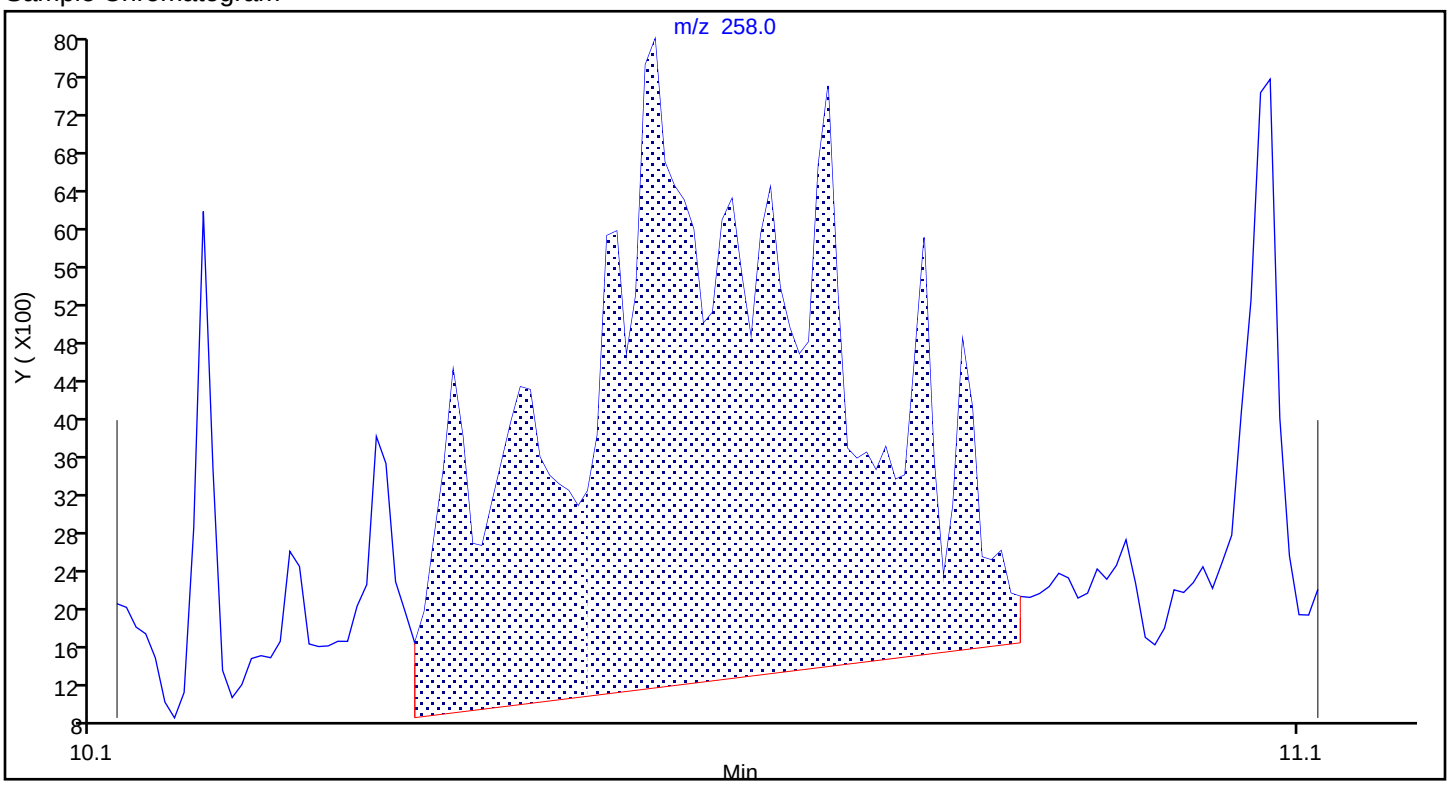
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



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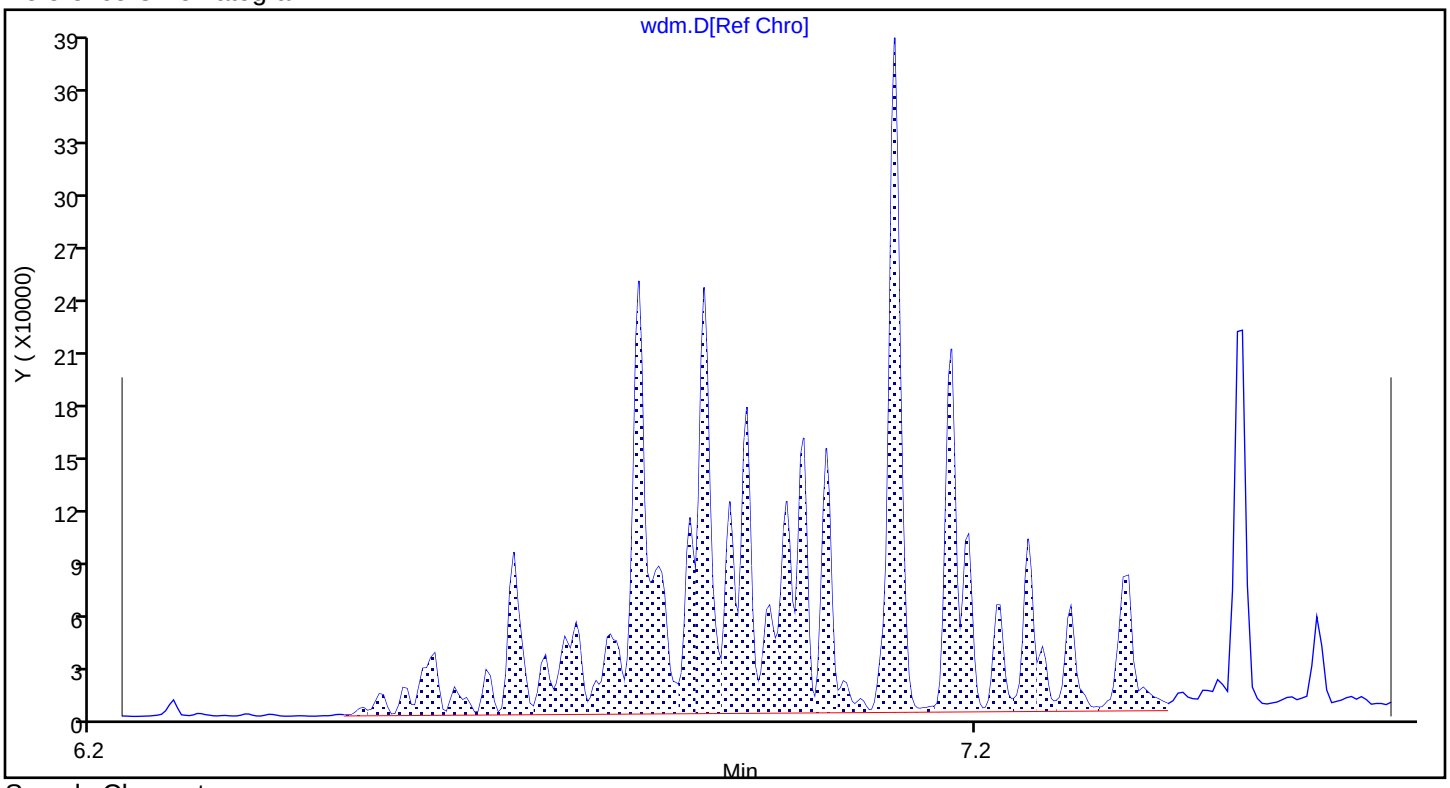
Eurofins TestAmerica, Knoxville

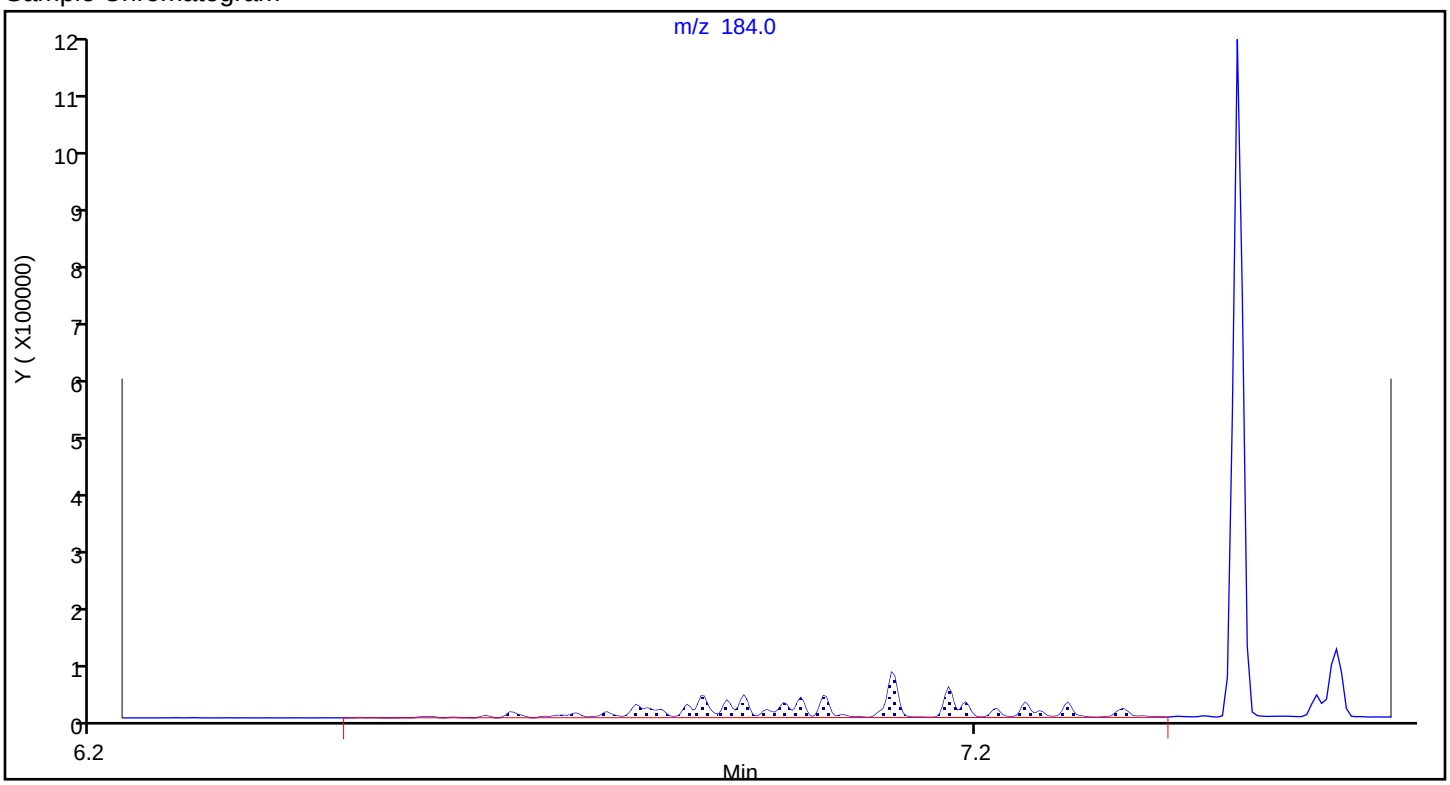
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



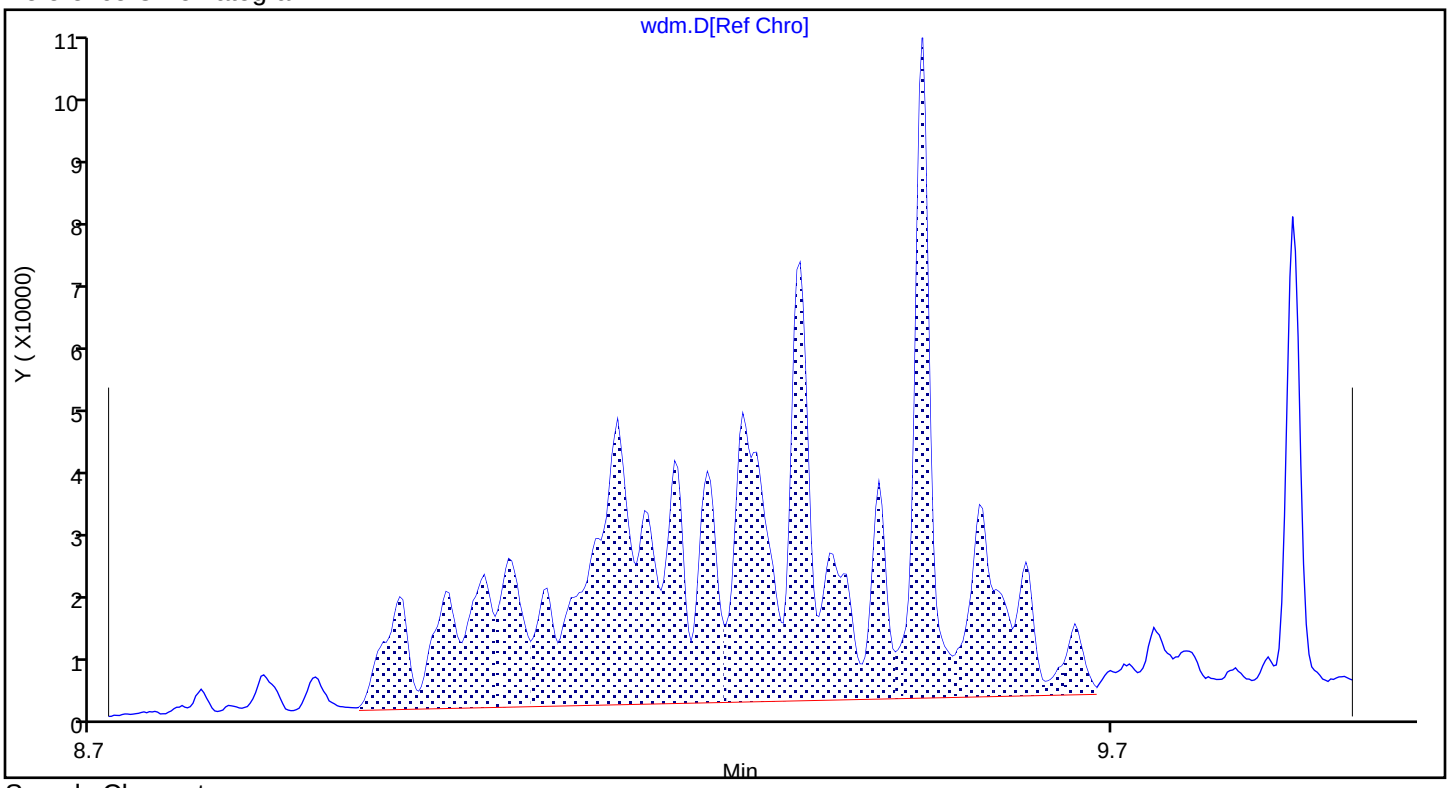
Report Date: 31-Aug-2019 11:49:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

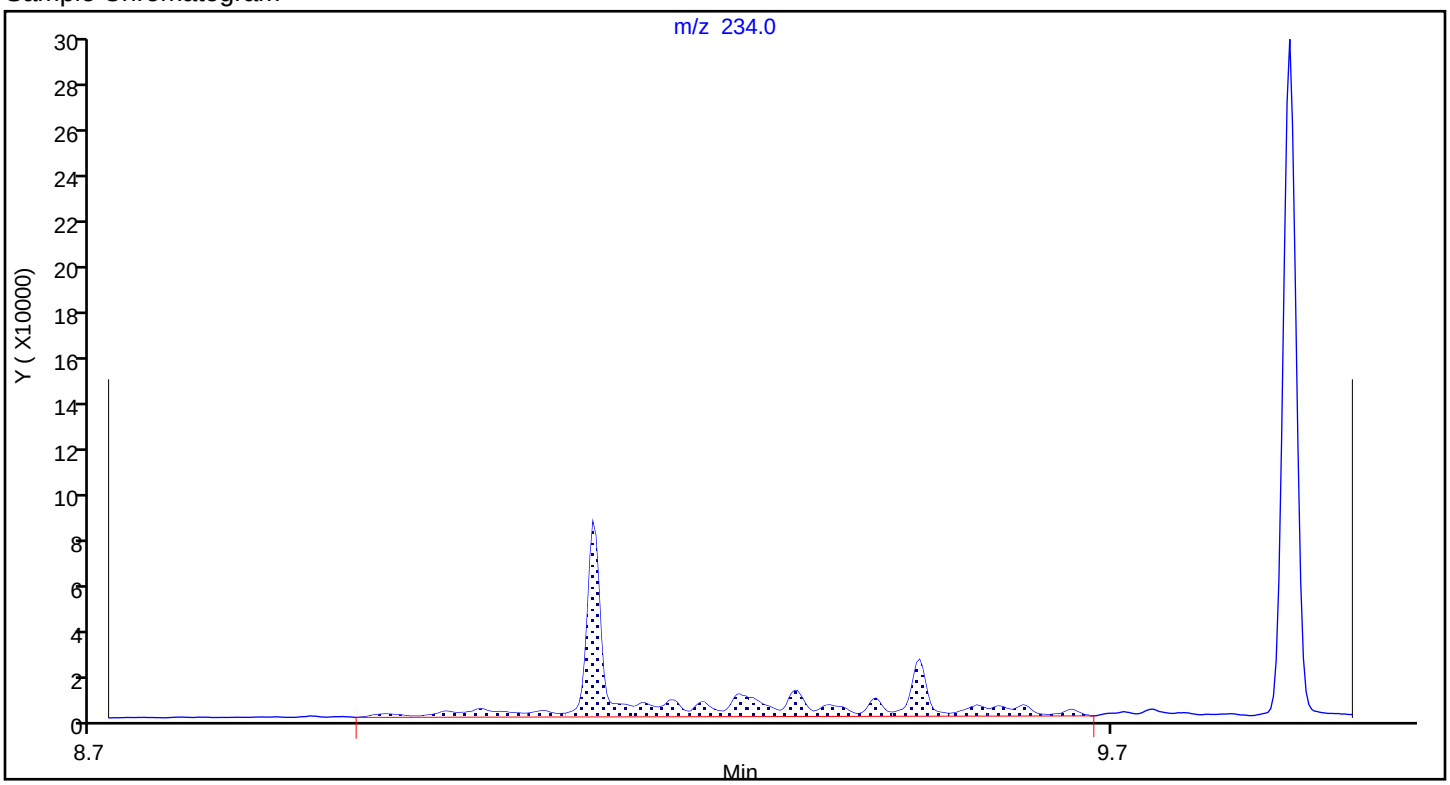
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

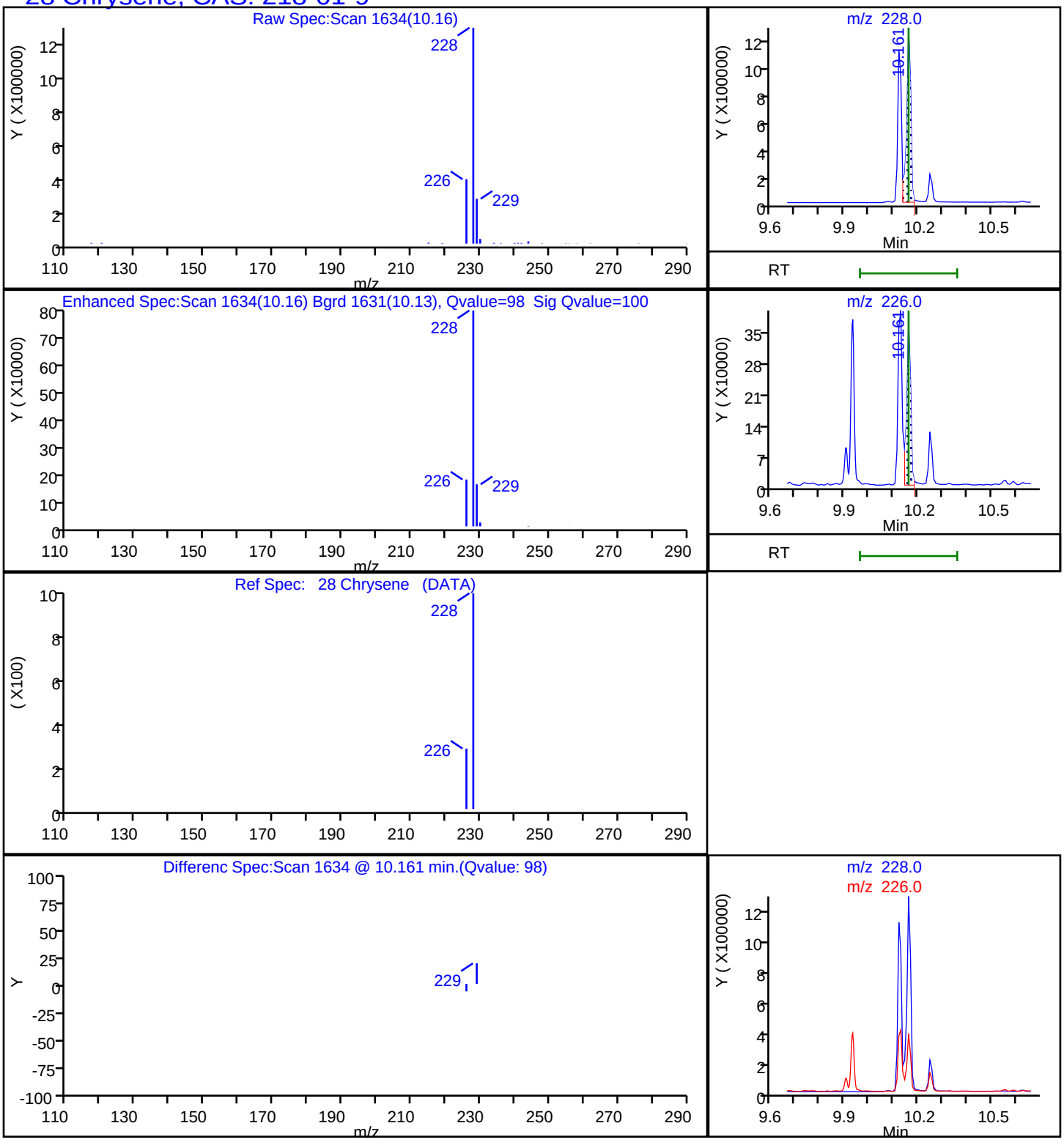


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

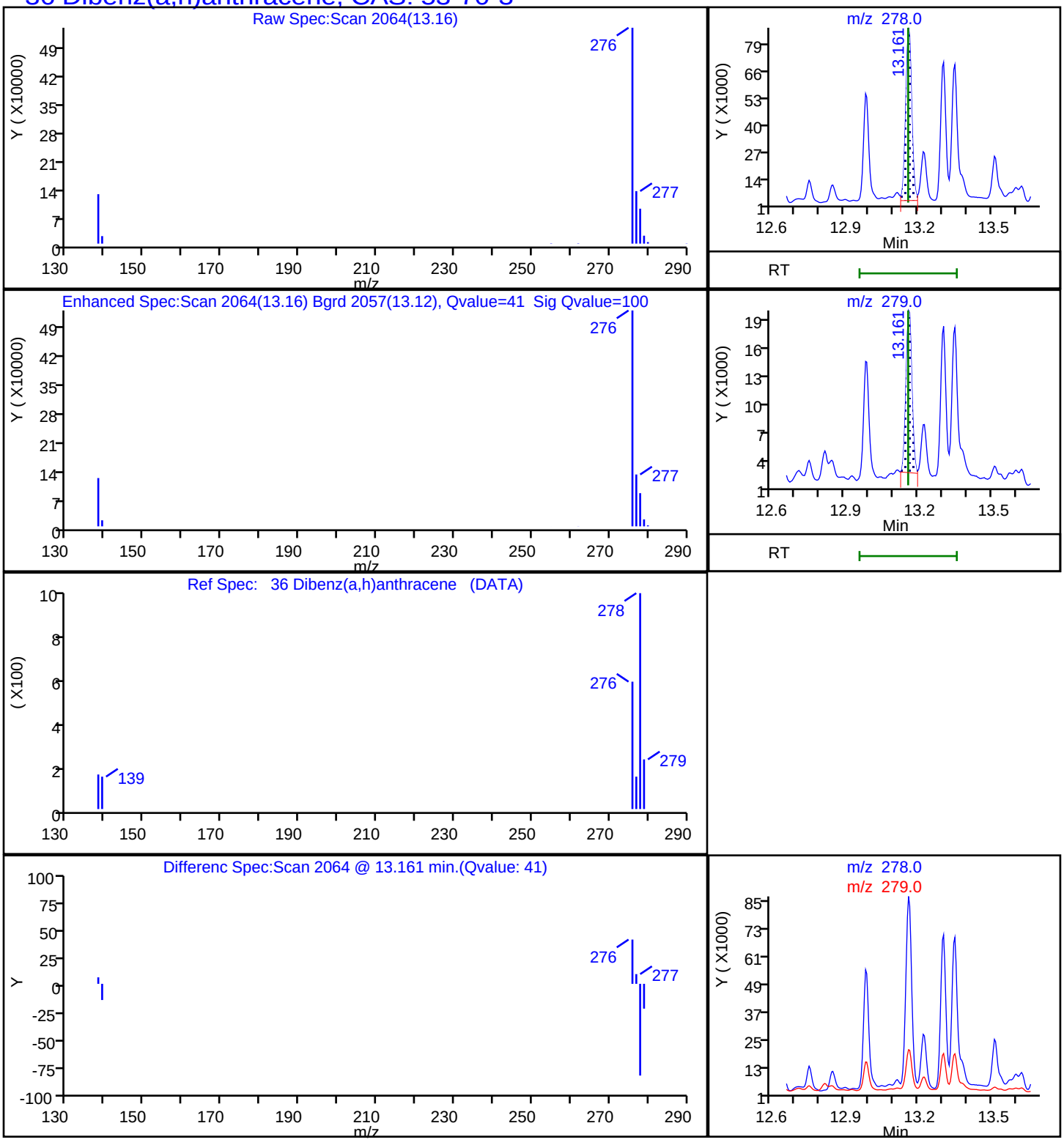


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3



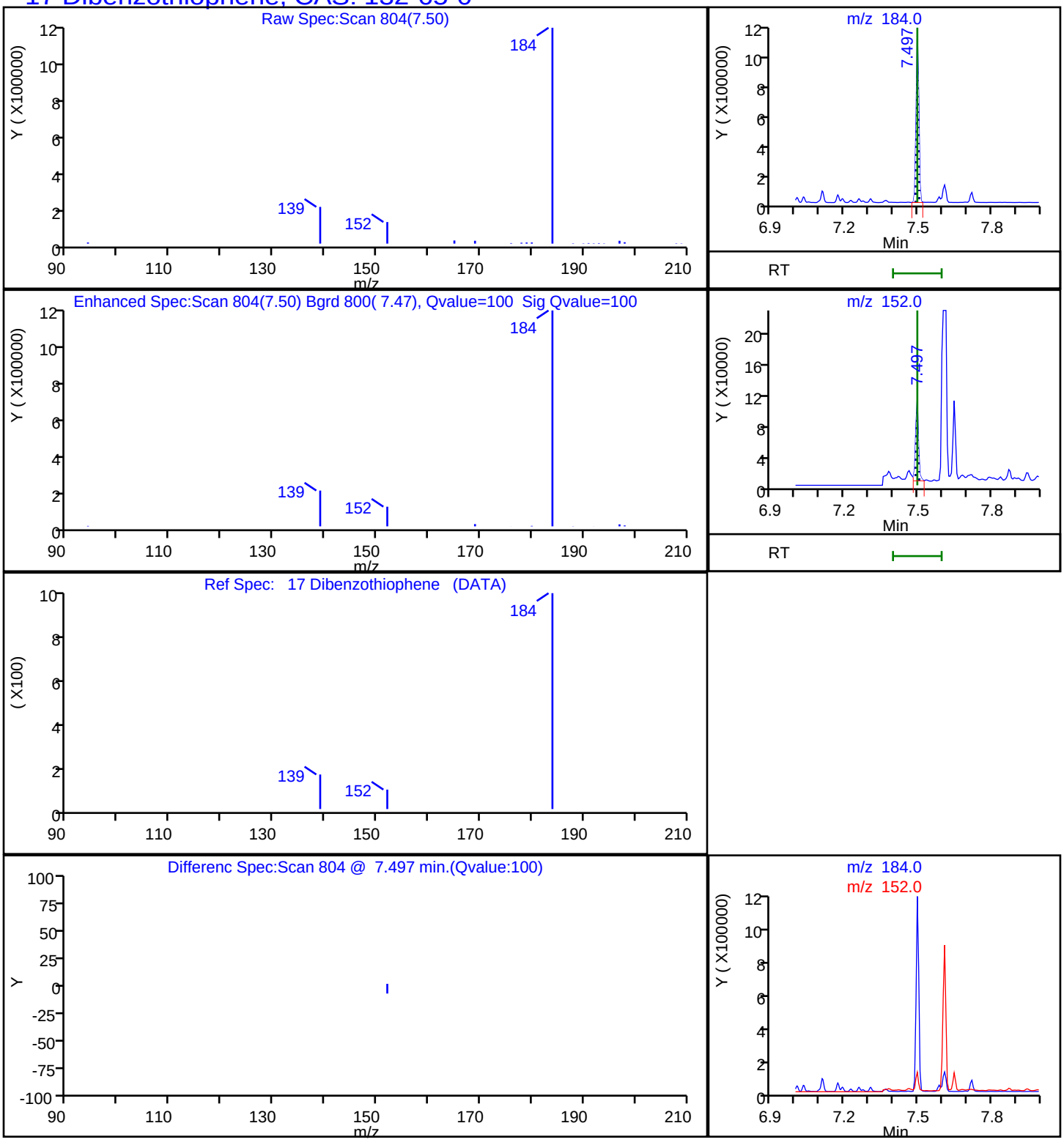
Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D

Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

17 Dibenzothiophene, CAS: 132-65-0

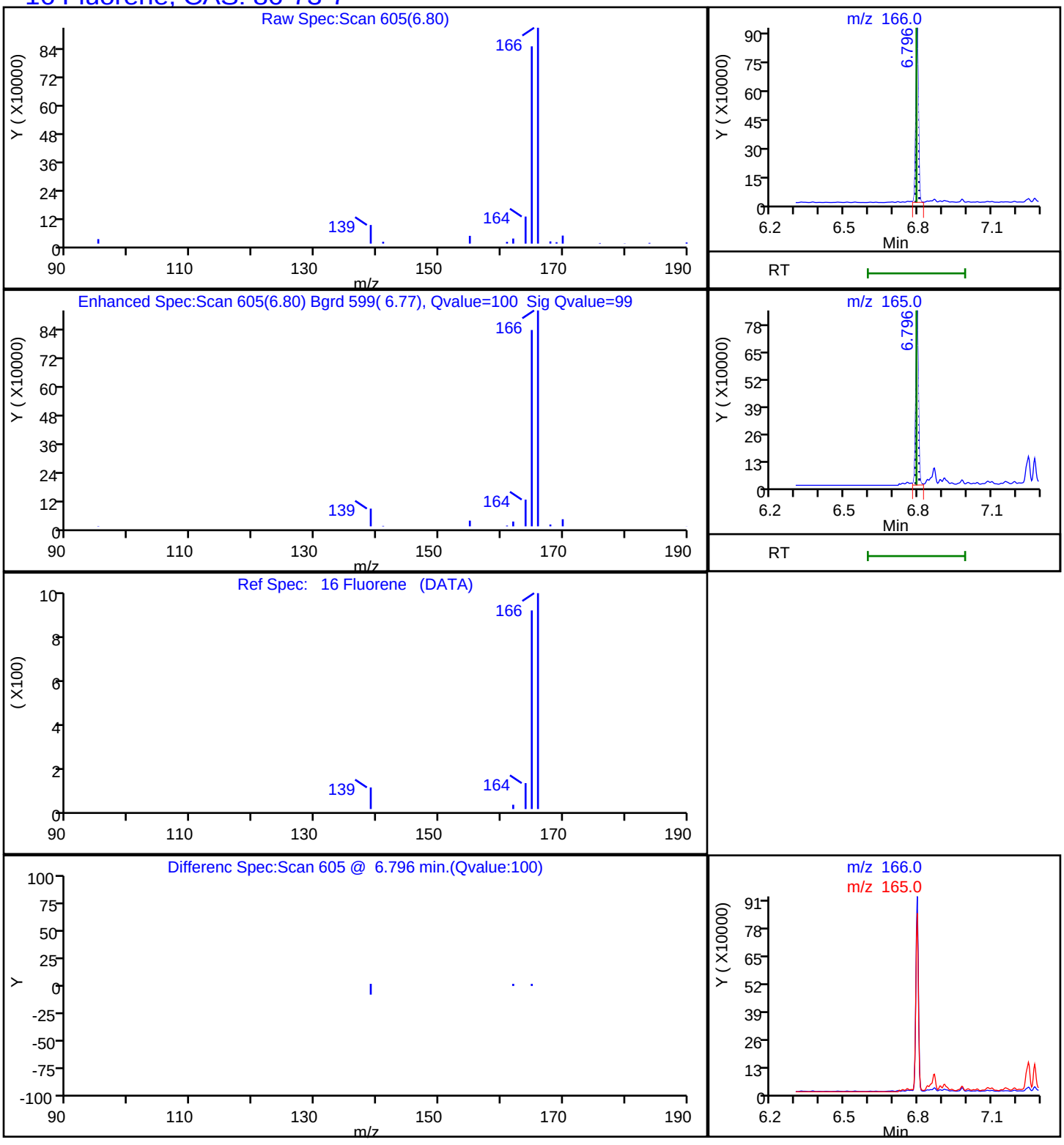


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

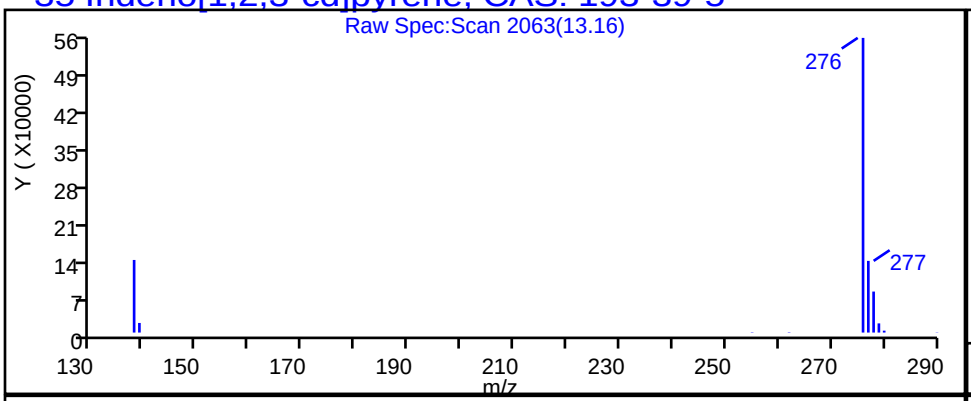


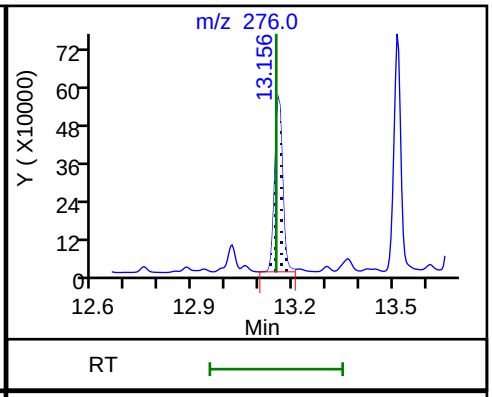
Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

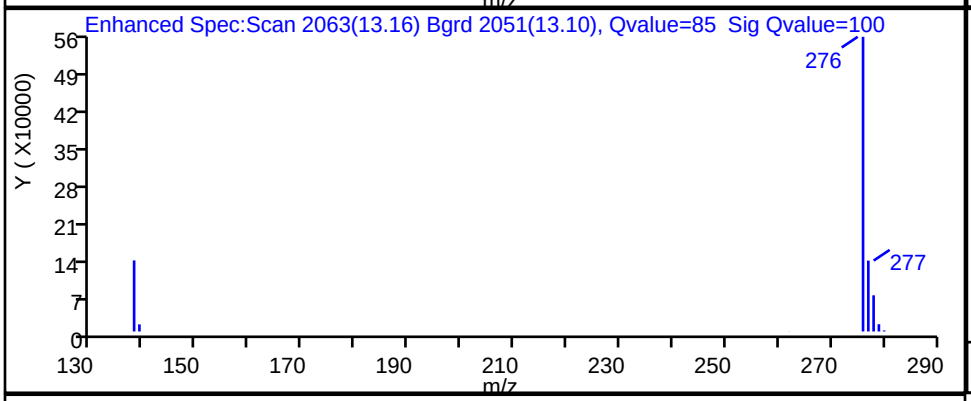
Eurofins TestAmerica, Knoxville

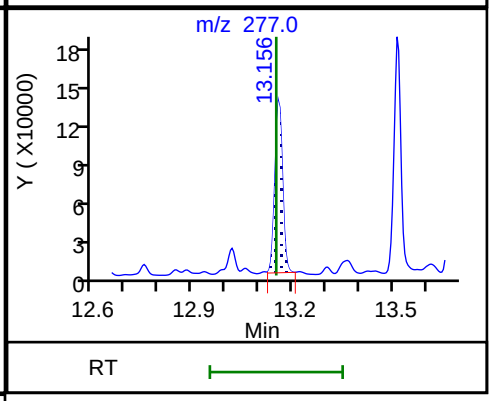
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

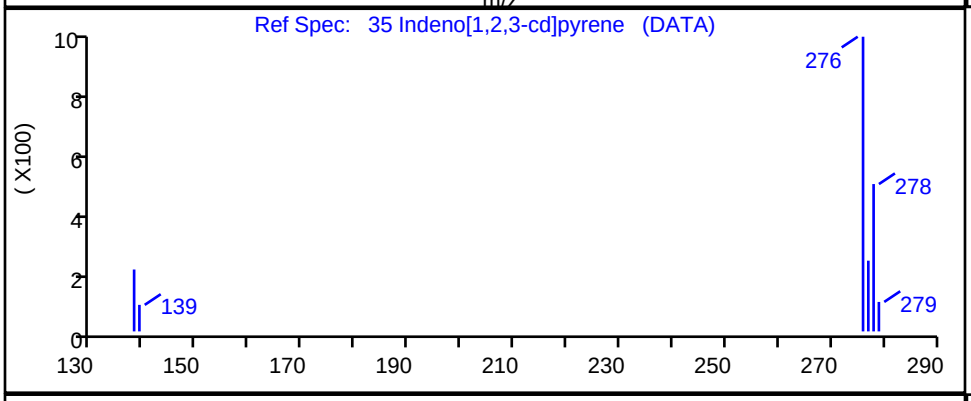
35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

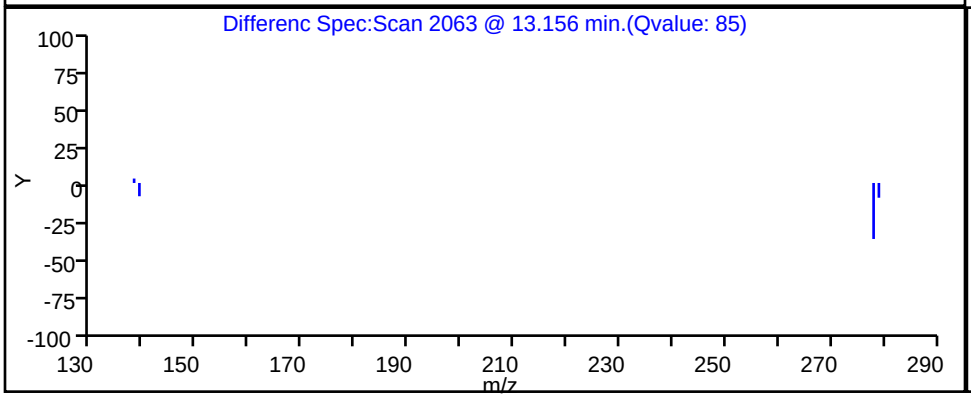


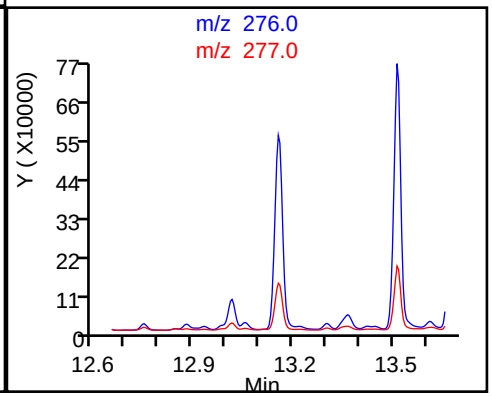










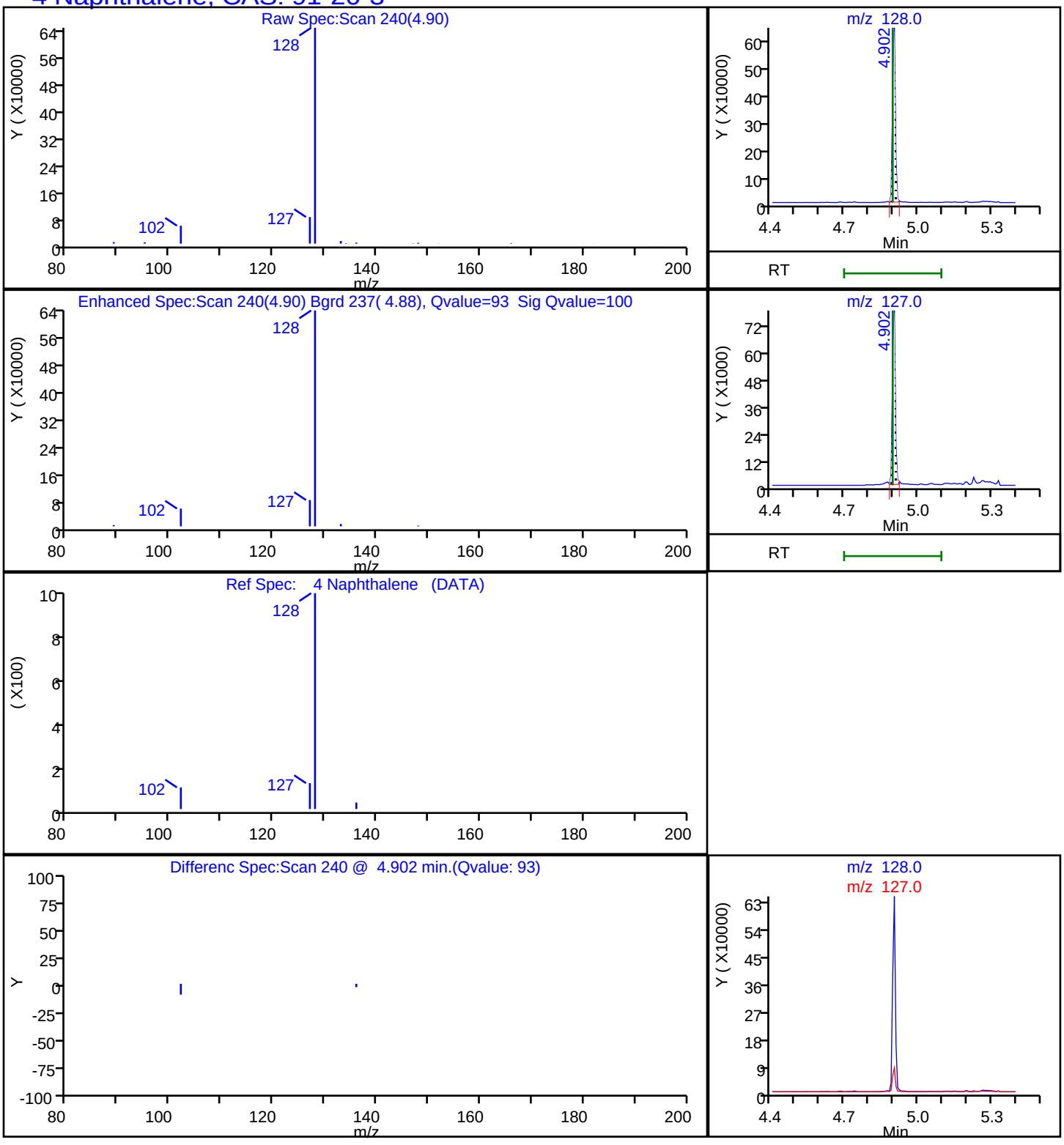


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

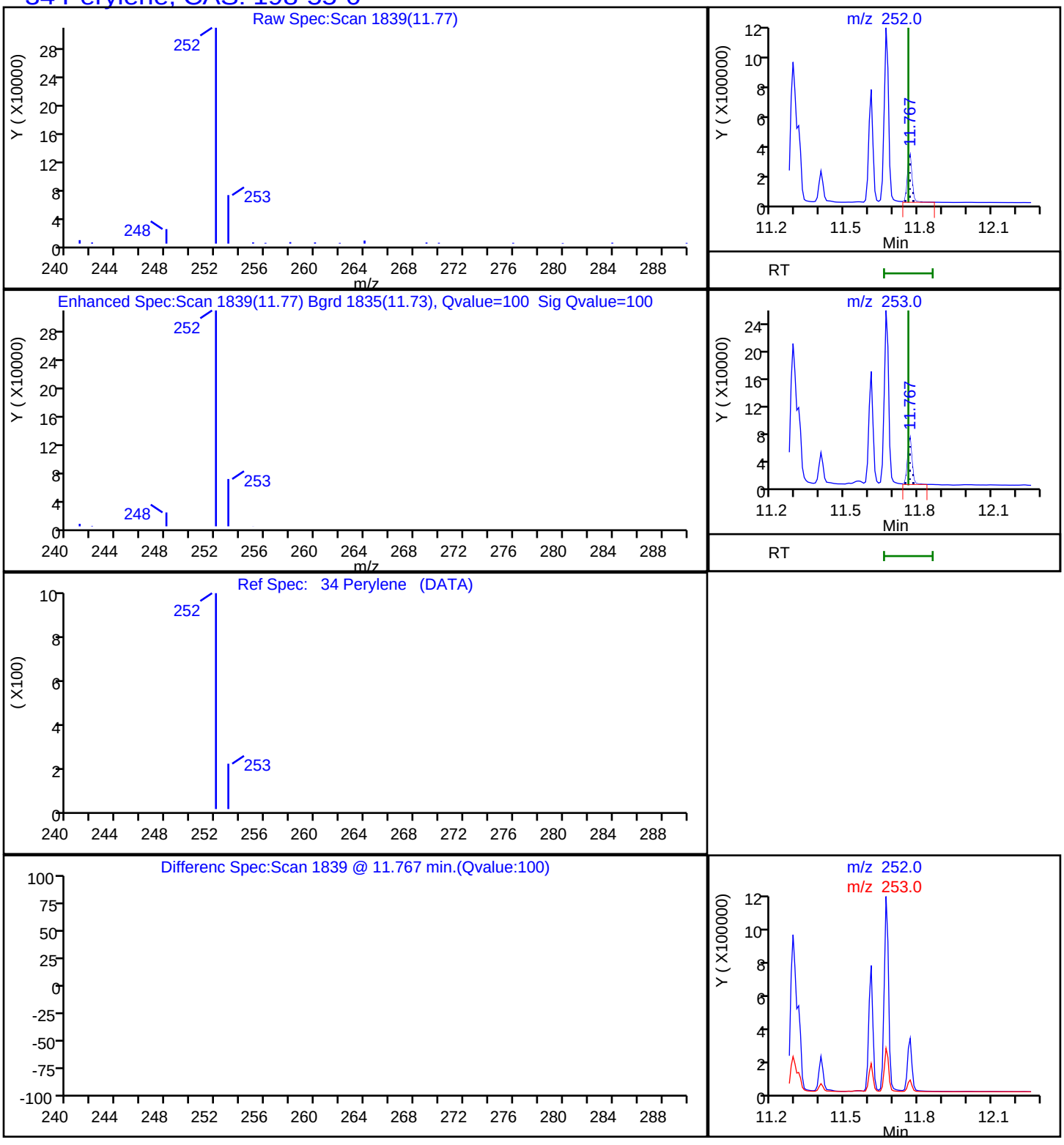


Report Date: 31-Aug-2019 11:49:08 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



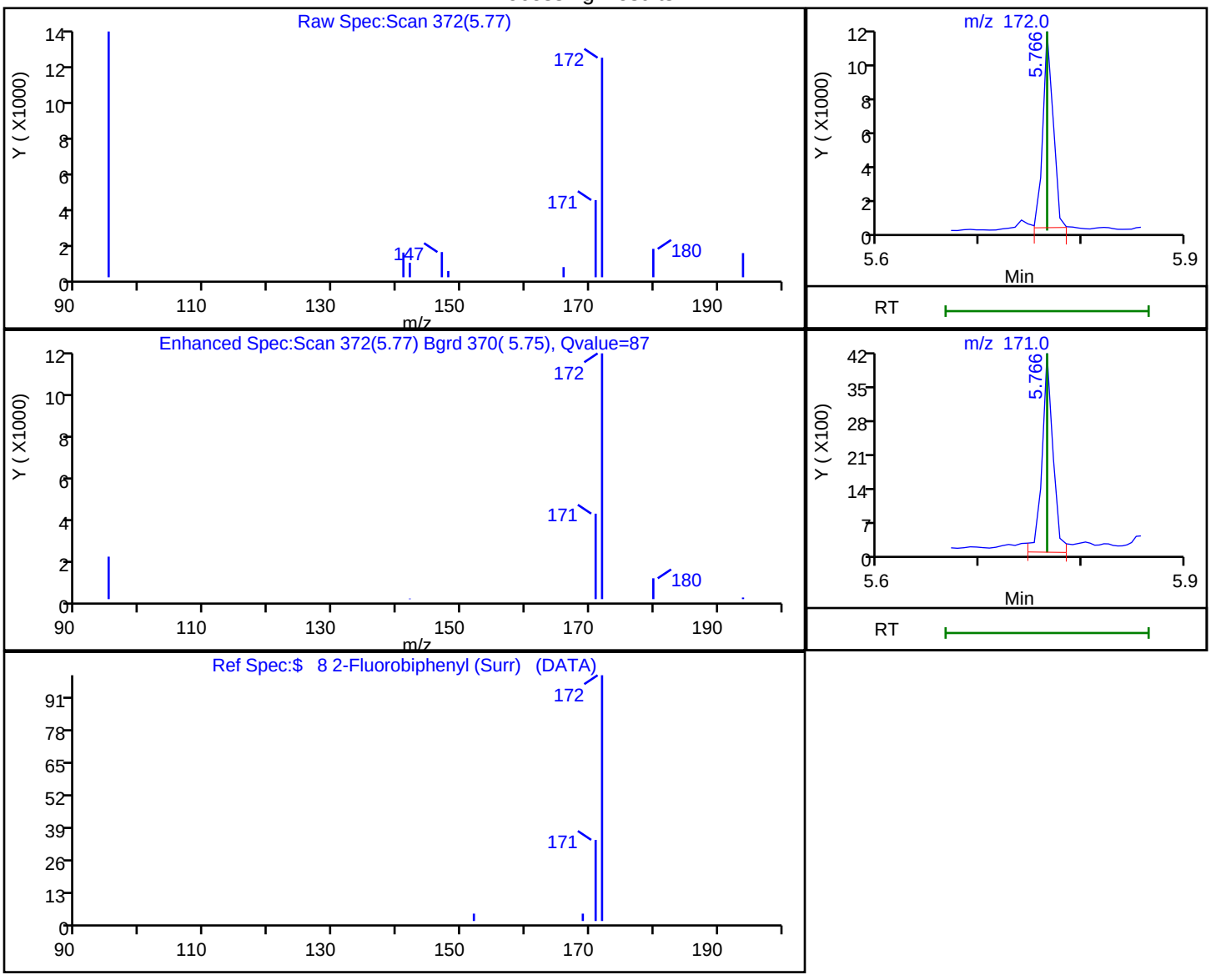
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	8079	0.022282
5.77	171.00	3130	

Reviewer: cochranj, 31-Aug-2019 10:58:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

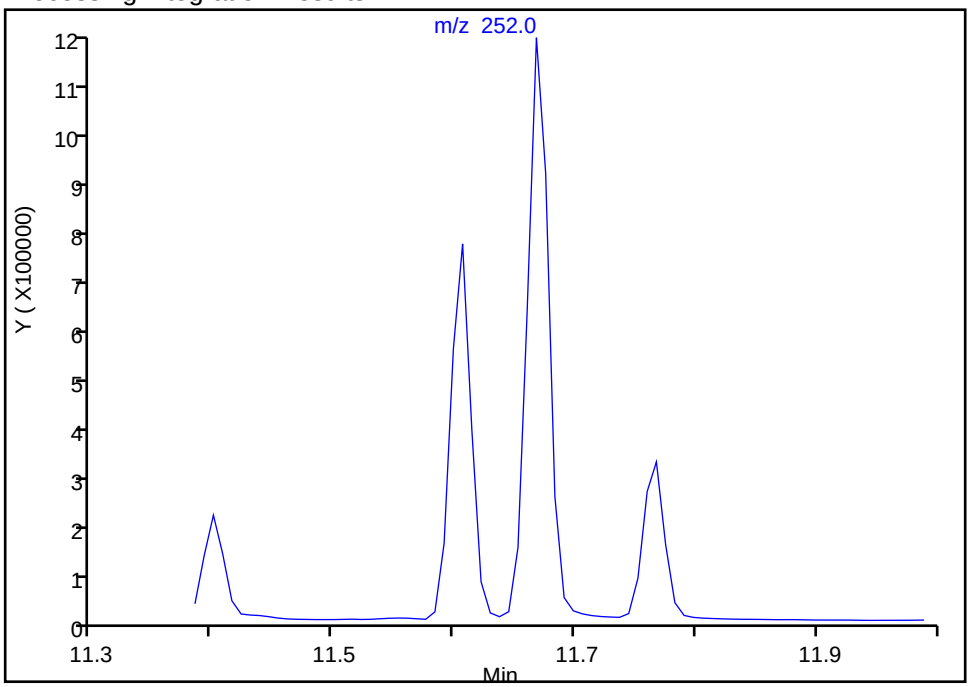
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

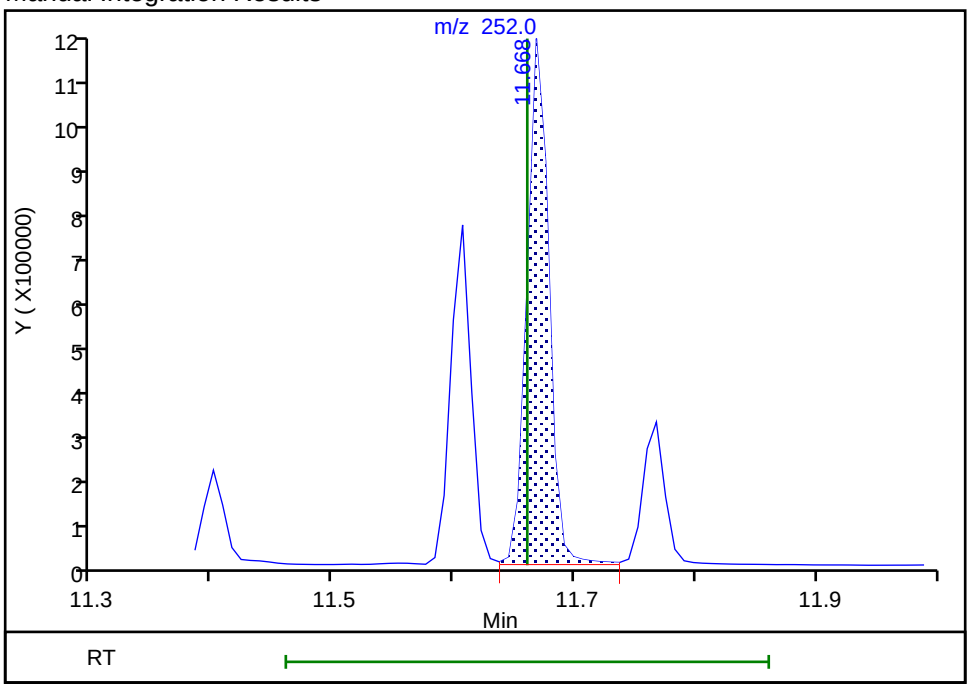
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 1407824
Amount: 2.932409
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:56:38
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

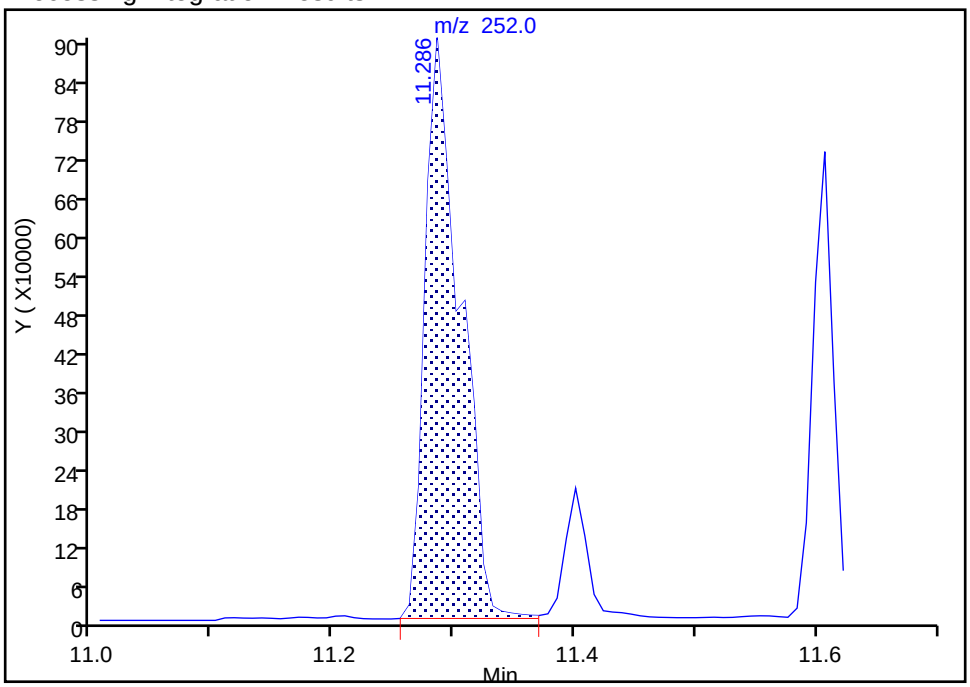
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

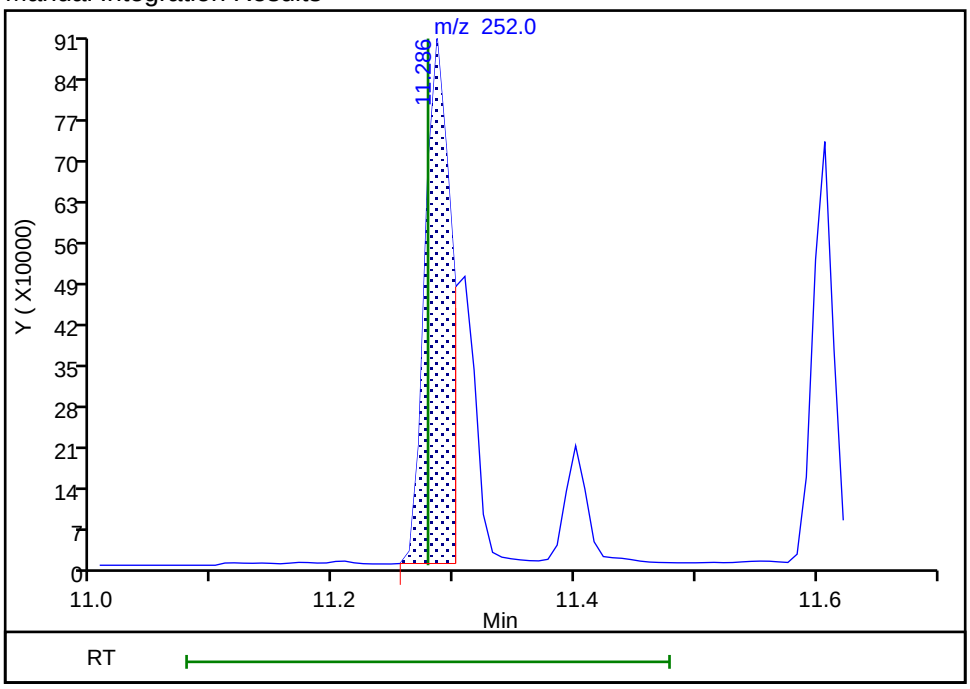
Processing Integration Results

RT: 11.29
Area: 1816525
Amount: 3.255273
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 1374127
Amount: 2.462481
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:56:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

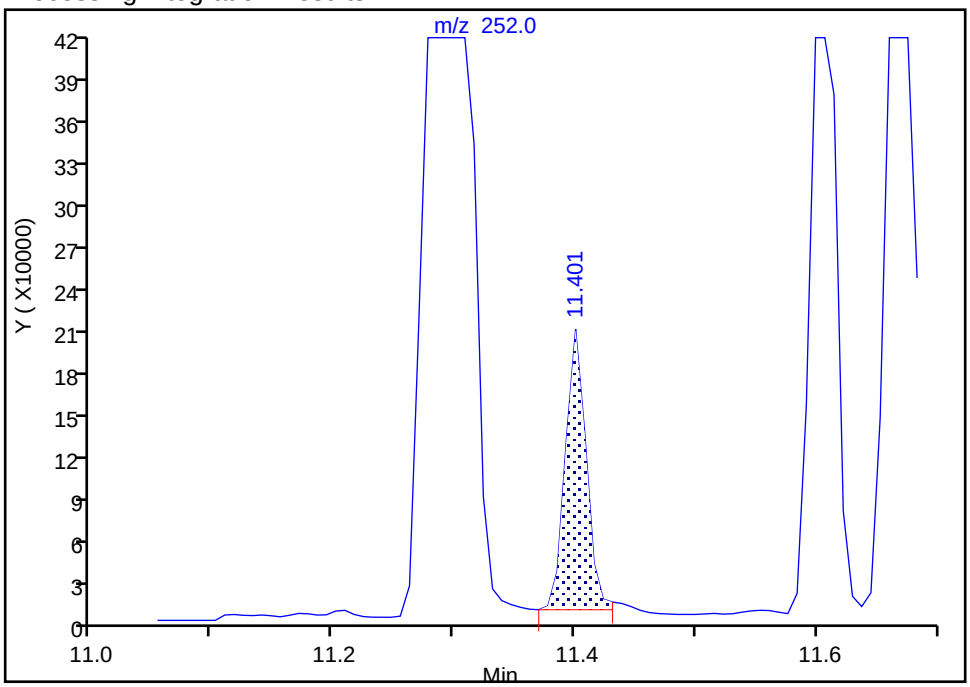
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

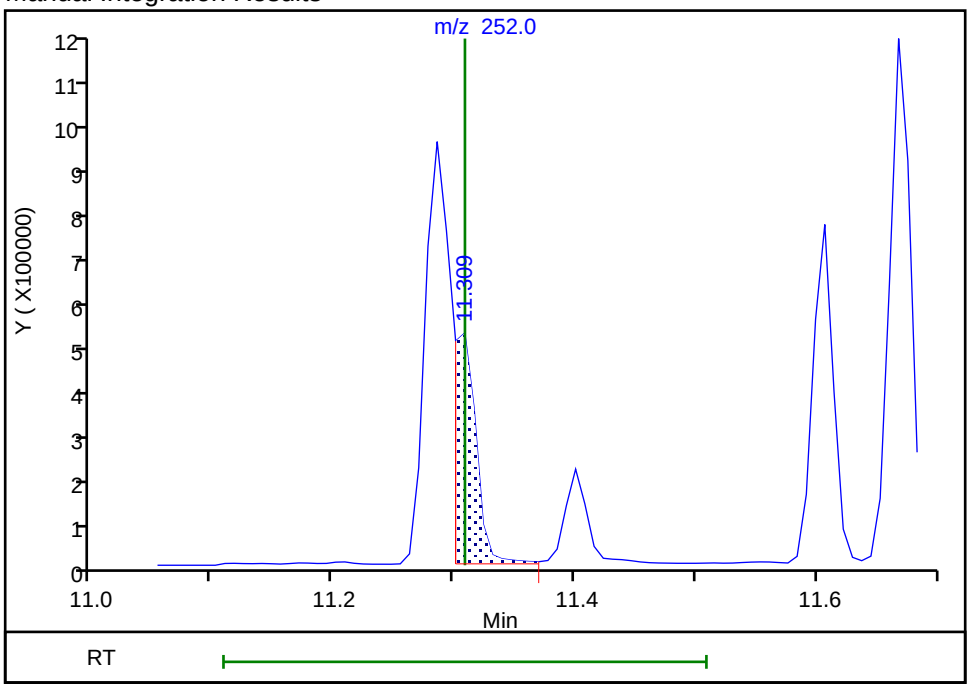
Processing Integration Results

RT: 11.40
Area: 237327
Amount: 0.375007
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 660662
Amount: 1.043929
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:56:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

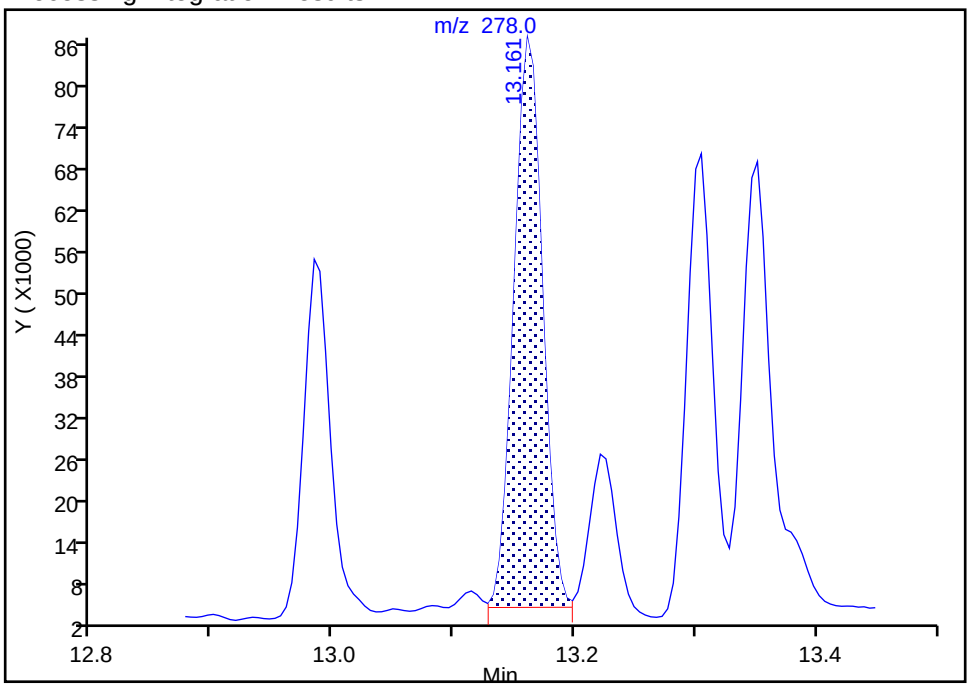
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

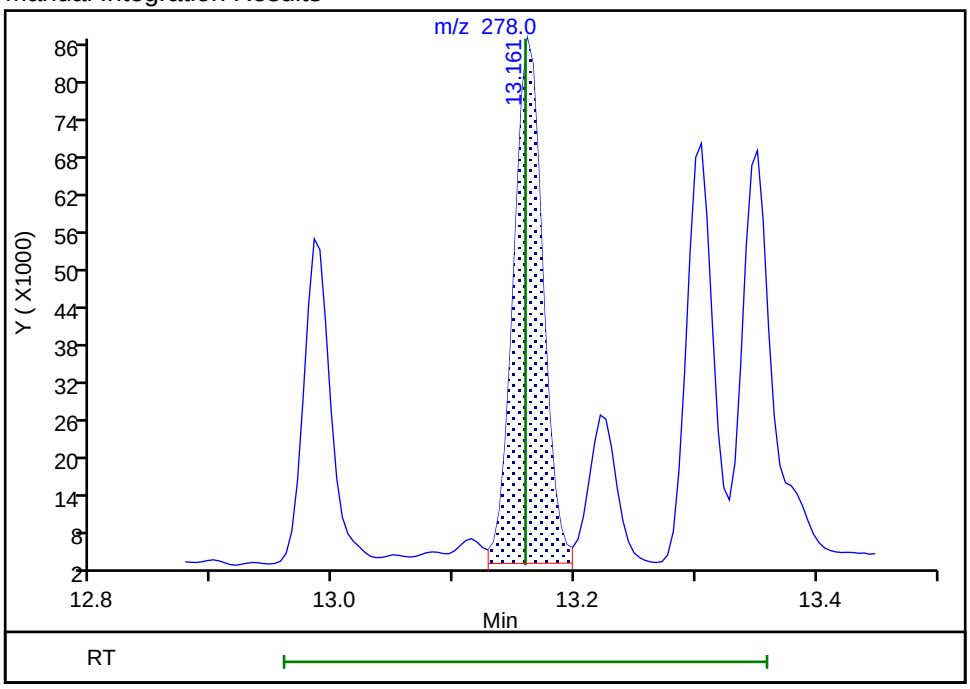
Processing Integration Results

RT: 13.16
Area: 136338
Amount: 0.272120
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 143366
Amount: 0.286147
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 10:57:02

Audit Action: Manually Integrated Audit Reason: Baseline

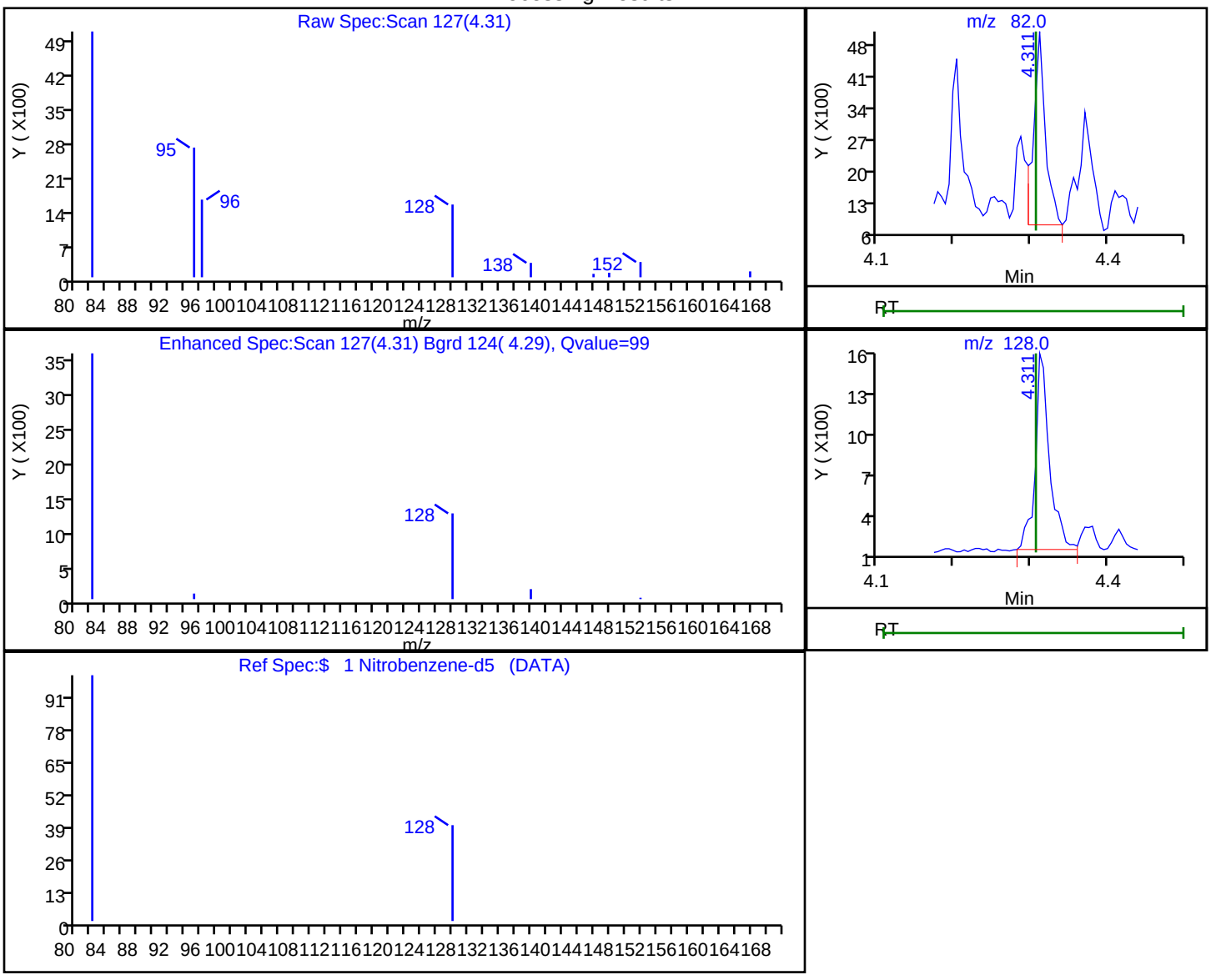
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	4637	0.037043
4.31	128.00	1731	

Reviewer: cochranj, 31-Aug-2019 10:58:06

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

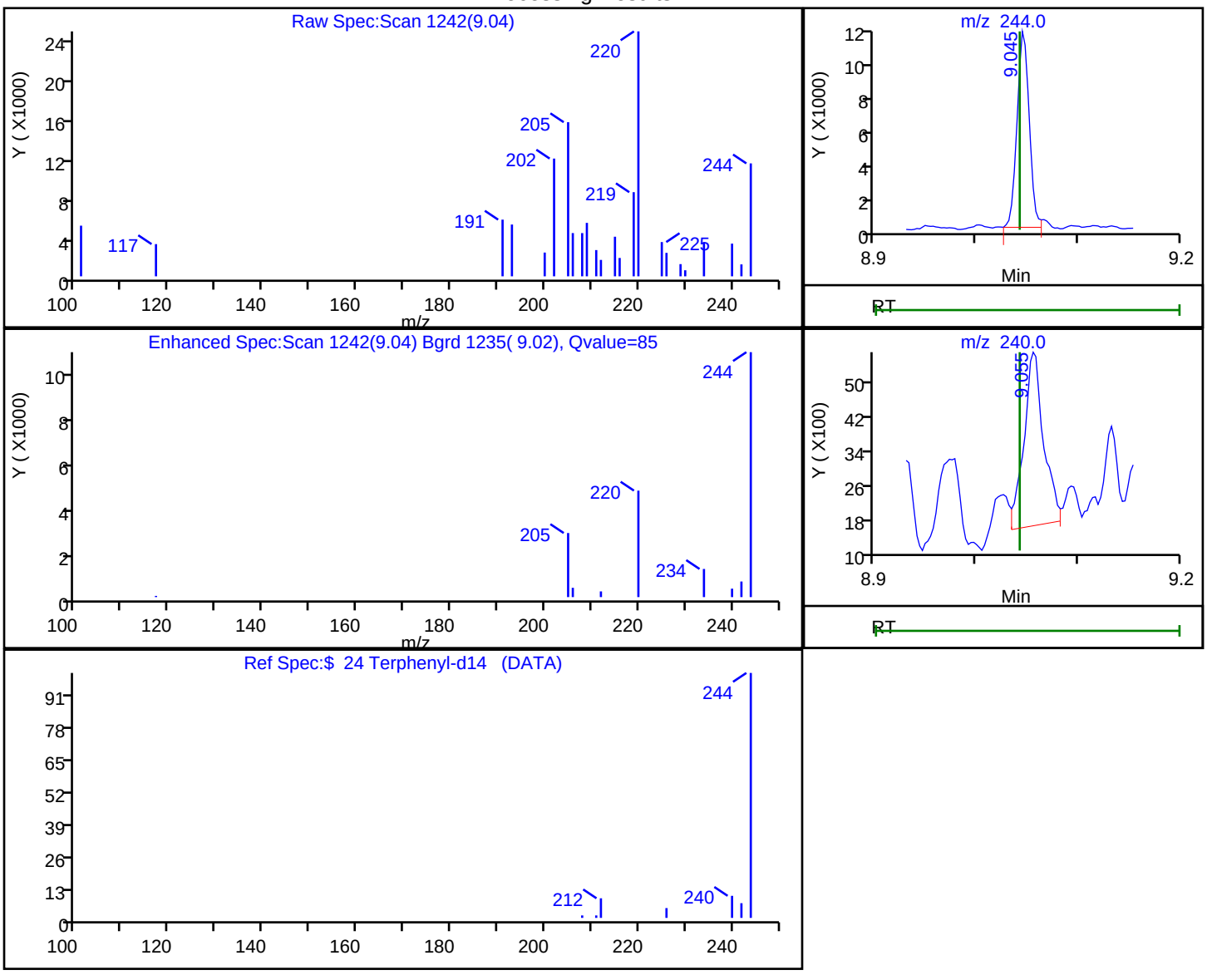
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-18-a.D				
Injection Date:	29-Aug-2019 19:15:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	11	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 24 Terphenyl-d14, CAS: 1718-51-0

Processing Results



RT	Mass	Response	Amount
9.04	244.00	8989	0.028764
9.06	240.00	5501	

Reviewer: cochranj, 31-Aug-2019 10:58:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-VB-03-4.0-6.0-D_20190717 DL Lab Sample ID: 580-87761-18 DL

Matrix: Solid Lab File ID: 580-87761-b-18-a.D

Analysis Method: 8270D SIM Date Collected: 07/17/2019 17:05

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 17.02(g) Date Analyzed: 08/30/2019 15:18

Con. Extract Vol.: 0.5(mL) Dilution Factor: 100

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 41.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
206-44-0	Fluoranthene	16000		100	91
85-01-8	Phenanthrene	22000		200	180
129-00-0	Pyrene	18000		200	60

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D
Lims ID: 580-87761-B-18-A
Client ID: 22T-VB-03-4.0-6.0-D_20190717
Sample Type: Client
Inject. Date: 30-Aug-2019 15:18:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 100.0000
Sample Info: 140-0012910-013
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 16:04:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	191961	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	149177	0.3531	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	98	43880	0.1585	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	96	16844	0.0639	
11 Acenaphthylene	152	6.216	6.216	0.000	95	20826	0.0603	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	99	100417	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	259634	0.9717	
16 Fluorene	166	6.793	6.793	0.000	100	192559	0.6516	
17 Dibenzothiophene	184	7.497	7.491	0.006	100	241707	0.5901	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	97	171598	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1953094	4.42	
20 Anthracene	178	7.648	7.648	0.000	100	252054	0.6838	
22 Fluoranthene	202	8.687	8.684	0.003	99	1397755	3.25	
23 Pyrene	202	8.909	8.906	0.003	99	1720848	3.61	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	94	334144	0.8923	
* 27 Chrysene-d12	240	10.137	10.129	0.008	99	157489	0.5000	M
28 Chrysene	228	10.161	10.161	0.000	98	407127	0.9091	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	411056	0.8960	M
30 Benzo[k]fluoranthene	252	11.309	11.301	0.008	100	152584	0.2933	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	241568	0.5607	
32 Benzo[a]pyrene	252	11.661	11.660	0.001	100	397978	1.01	a
* 33 Perylene-d12	264	11.729	11.729	0.000	100	168015	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	112358	0.2521	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	85	257124	0.5298	
36 Dibenz(a,h)anthracene	278	13.154	13.159	-0.005	40	39495	0.0959	M
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	99	320874	0.7065	
A 38 C1-Naphthalenes	142	5.507	(5.444-5.596)		0	59977	0.1420	
A 39 C2-Naphthalenes	156	6.076	(5.913-6.239)		0	236502	0.5598	
A 40 C3-Naphthalenes	170	6.558	(6.306-6.809)		0	236301	0.5593	
A 41 C4-Naphthalenes	184	6.932	(6.489-7.384)		0	127754	0.3024	
A 42 C1-Fluorenes	180	7.221	(7.134-7.311)		0	53702	0.1817	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.564-7.934)		0	57275	0.1938	
A 44 C3-Fluorenes	208	8.113	(7.985-8.453)		0	37715	0.1276	
A 45 C1-Dibenzothiophenes	198	7.949	(7.822-8.064)		0	83728	0.2044	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	68776	0.1679	
A 47 C3-Dibenzothiophenes	226	8.652	(8.524-9.104)		0	42742	0.1044	
A 48 C4-Dibenzothiophenes	240	9.053	(8.810-9.579)		0	19921	0.0486	
A 49 C1-Phenanthrenes/Anthracen	192	8.091	(8.002-8.183)		0	408089	0.9233	
A 50 C2-Phenanthrenes/Anthracen	206	8.563	(8.341-8.770)		0	209282	0.4735	
A 51 C3-Phenanthrenes/Anthracen	220	8.998	(8.743-9.258)		0	98739	0.2234	
A 52 C4-Phenanthrenes/Anthracen	234	9.321	(8.959-9.683)		0	61713	0.1396	
A 53 C1-Fluoranthenes/pyrene	216	9.313	(9.109-9.496)		0	354374	0.7435	
A 54 C2-Fluoranthenes/Pyrene	230	9.806	(9.584-10.051)		0	94305	0.1979	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.030-10.504)		0	51092	0.1072	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	24774	0.0520	
A 57 C1-Chrysenes	242	10.624	(10.504-10.751)		0	110306	0.2463	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	42055	0.0939	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	24819	0.0554	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	13868	0.0310	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

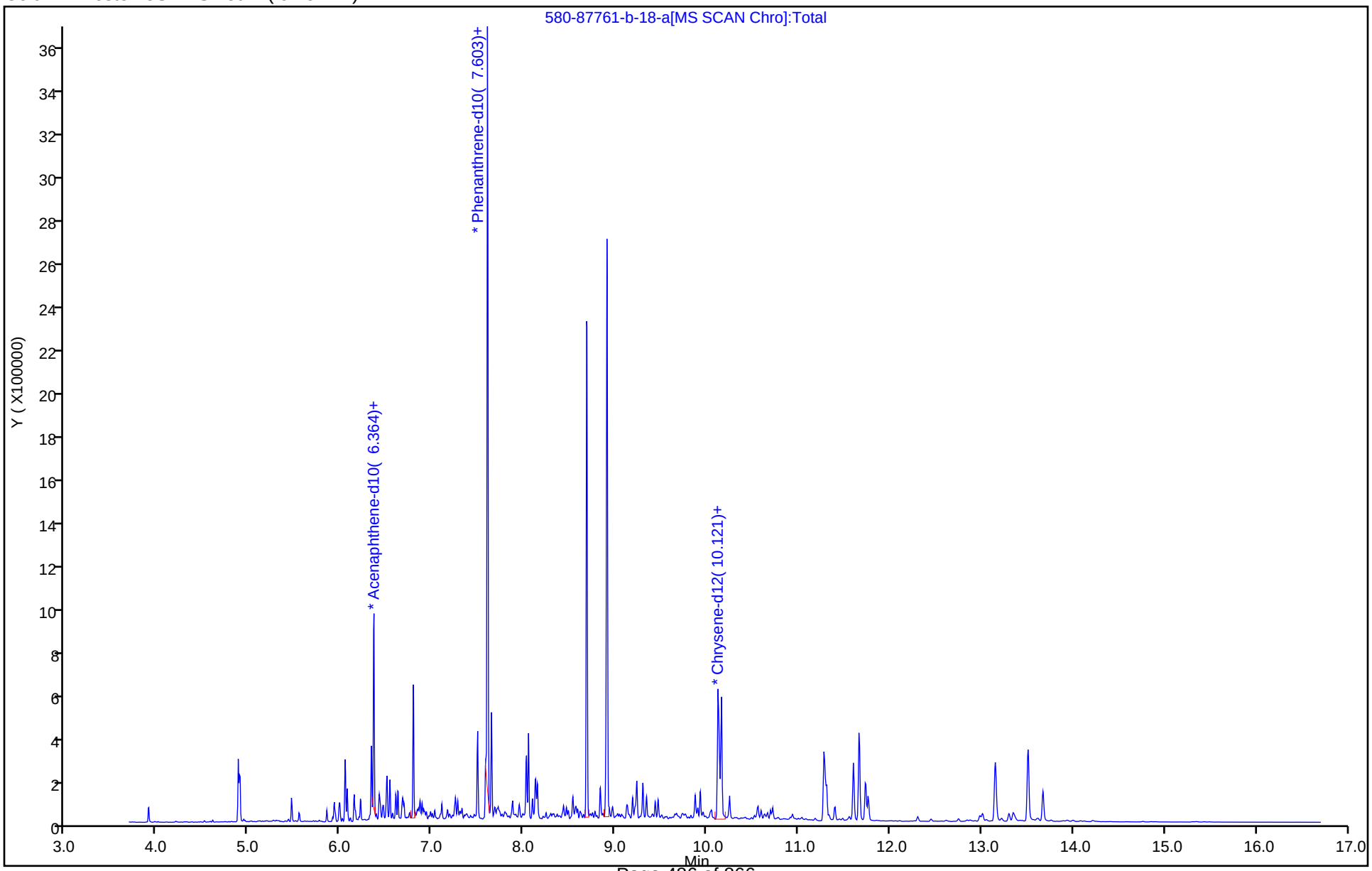
Report Date: 31-Aug-2019 13:17:52 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D

Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18	Worklist Smp#:	13
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	13
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

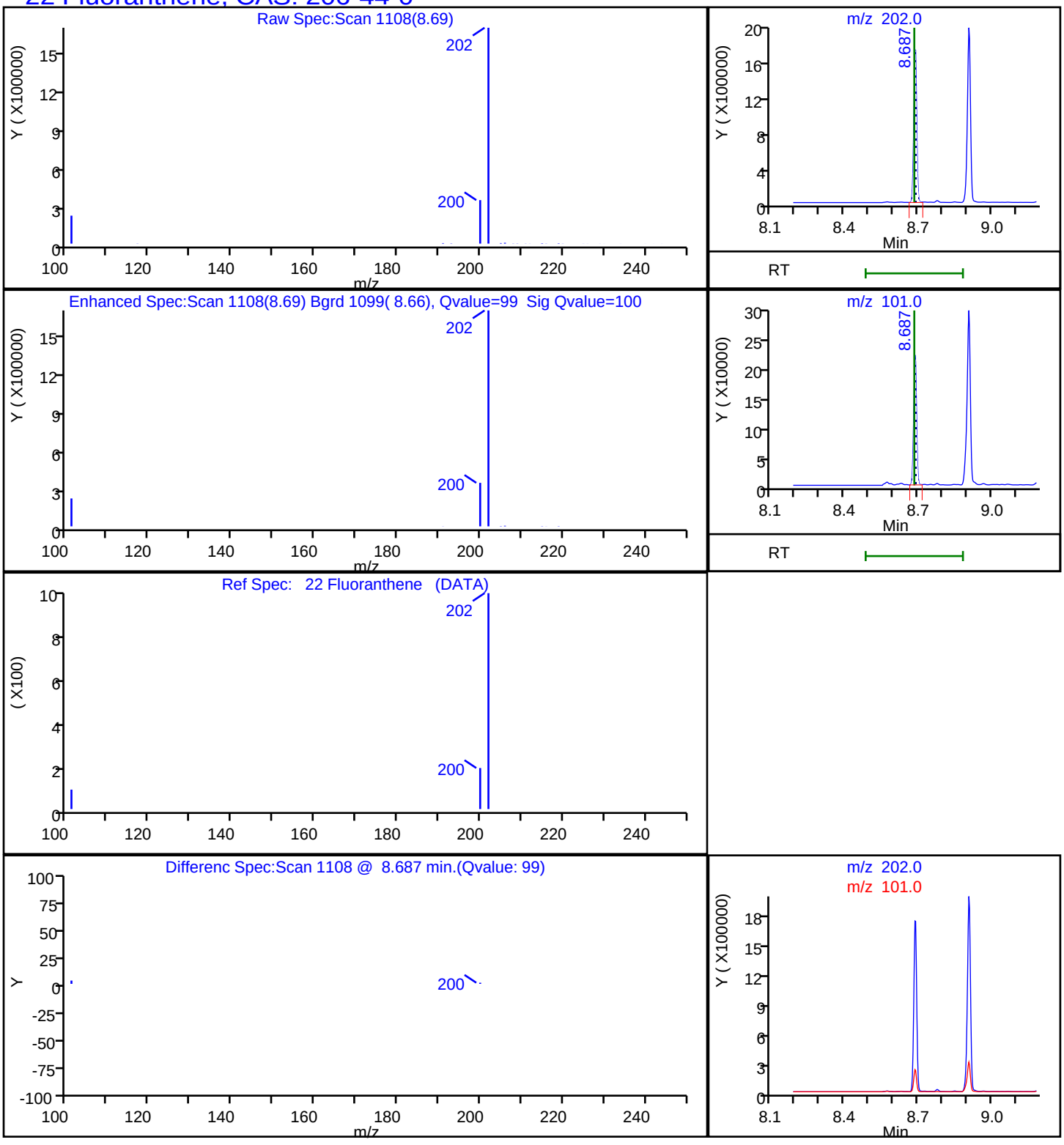


Report Date: 31-Aug-2019 13:17:52 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D				
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0



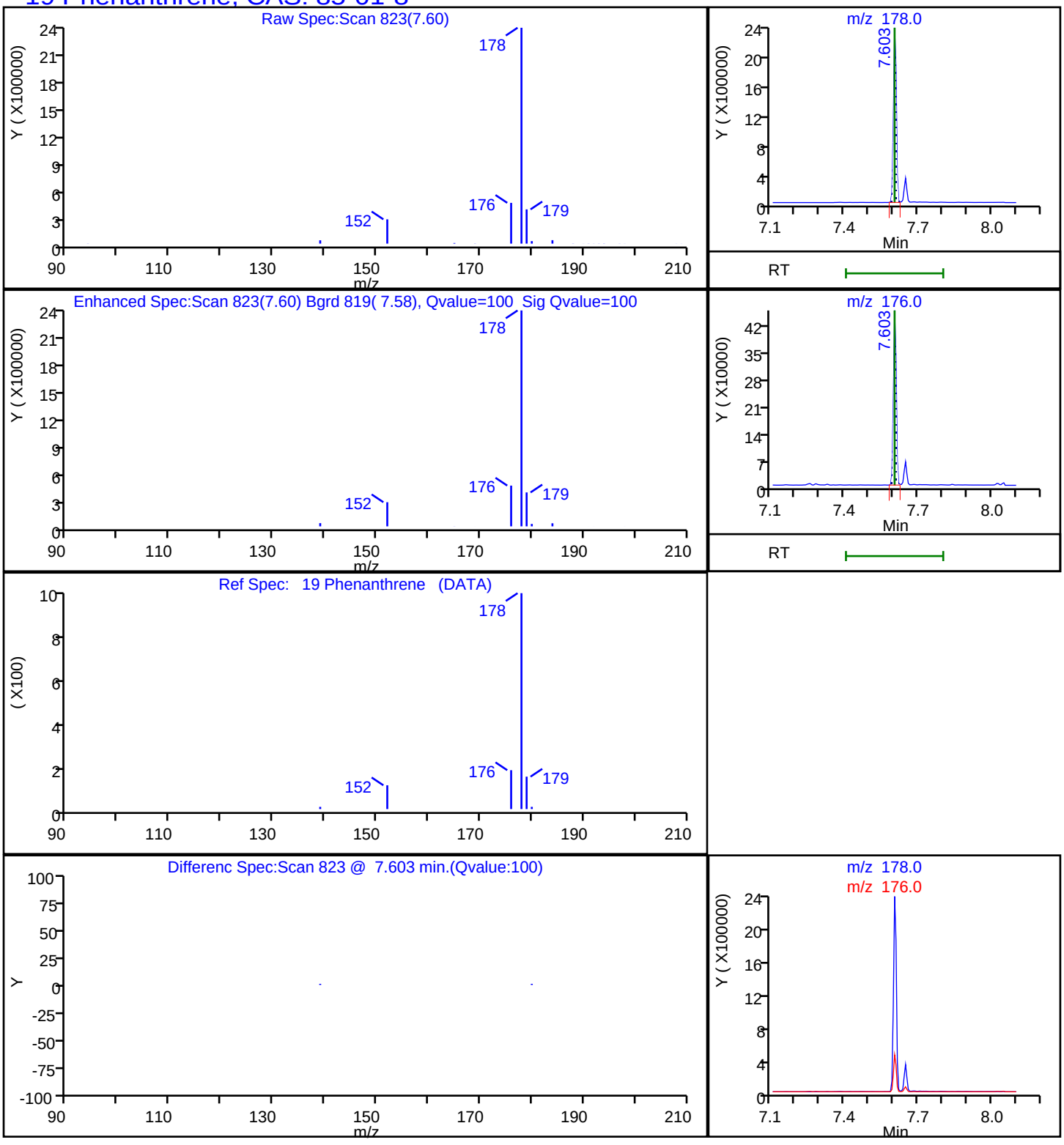
Report Date: 31-Aug-2019 13:17:52 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D

Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

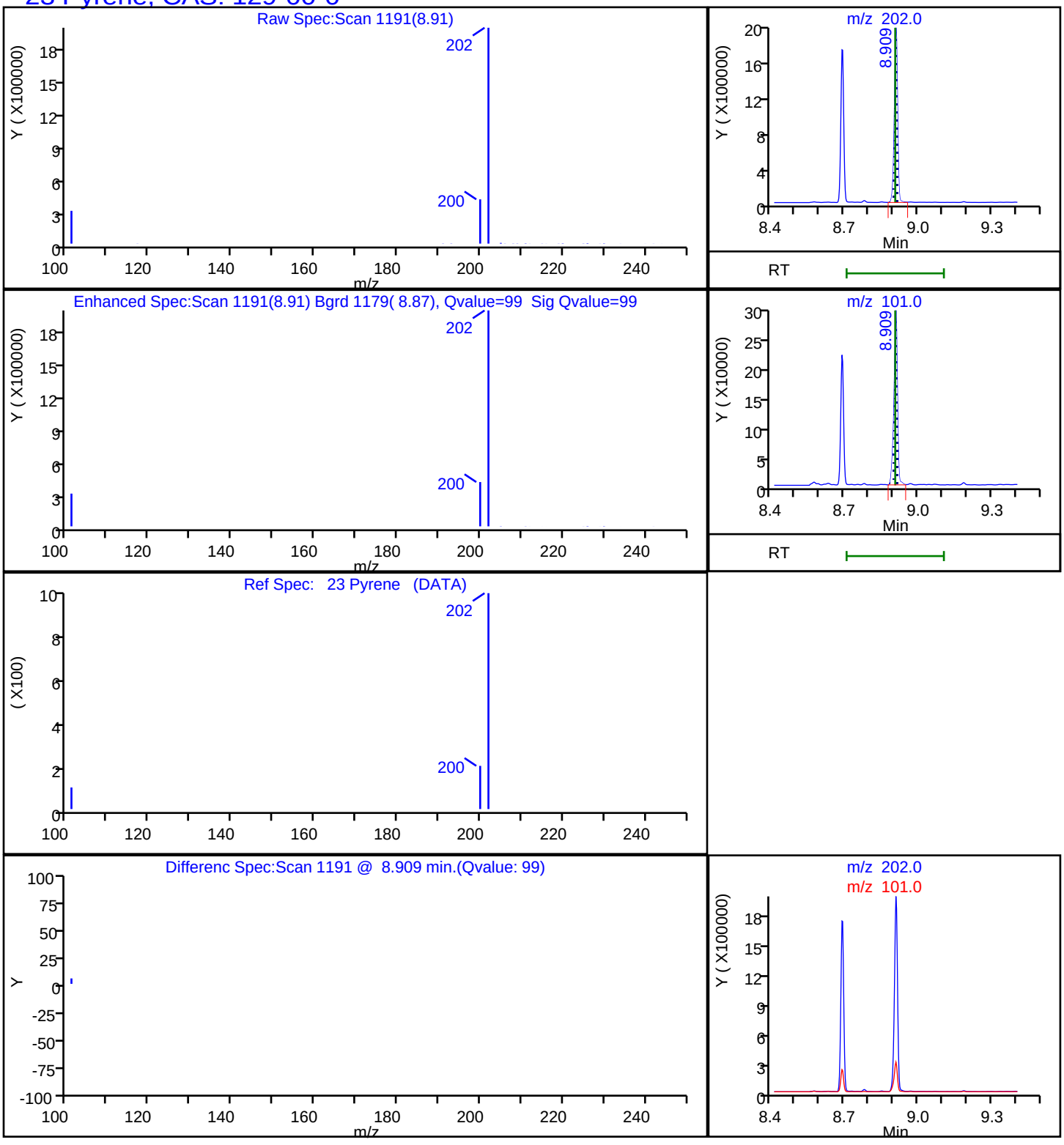


Report Date: 31-Aug-2019 13:17:52 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D				
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



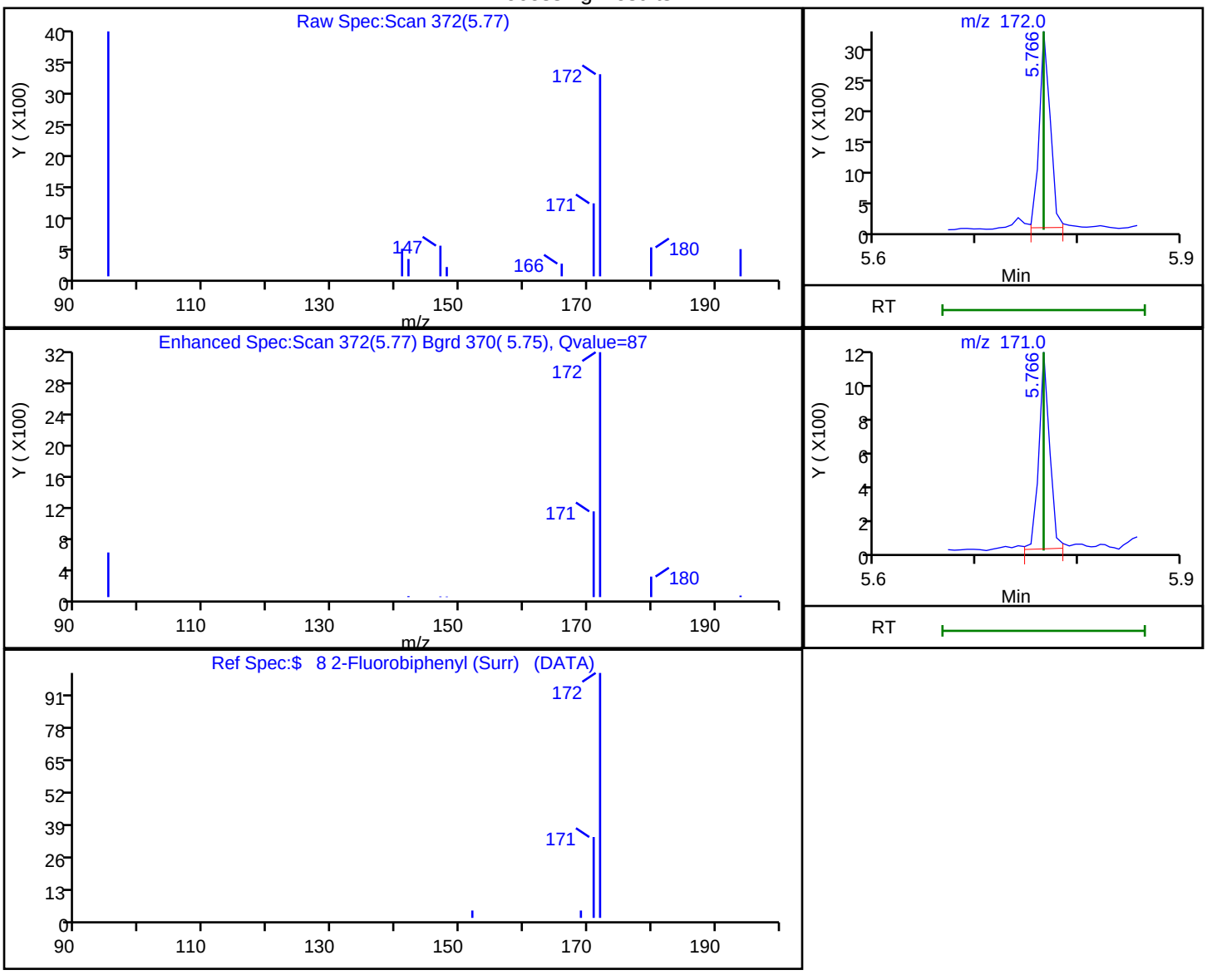
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D				
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	2363	0.007277
5.77	171.00	811	

Reviewer: cochranj, 31-Aug-2019 13:15:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

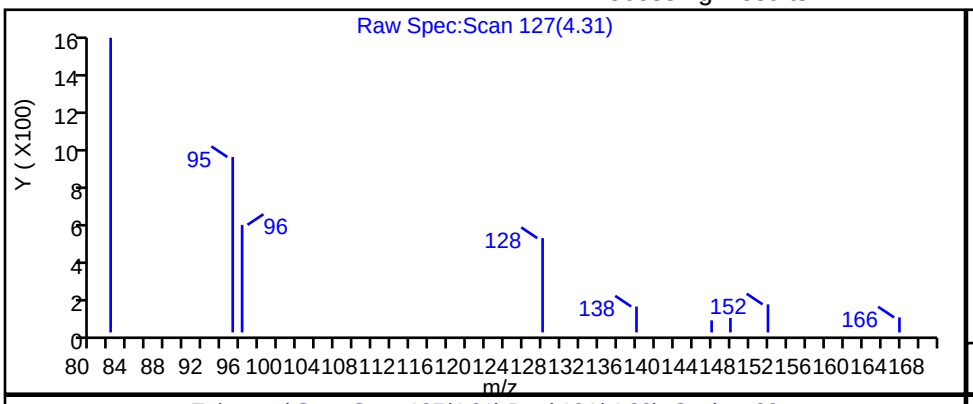
User Disabled Compound Report

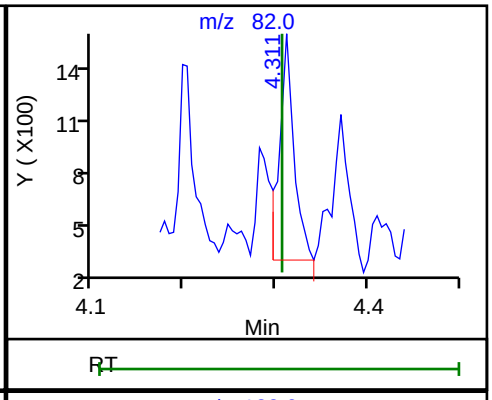
Eurofins TestAmerica, Knoxville

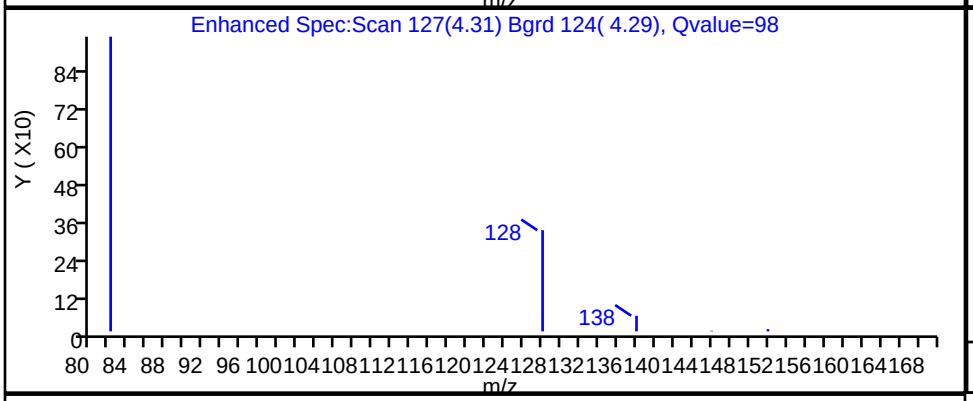
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D				
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

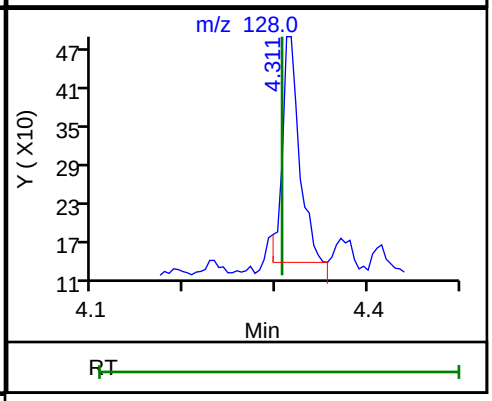
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

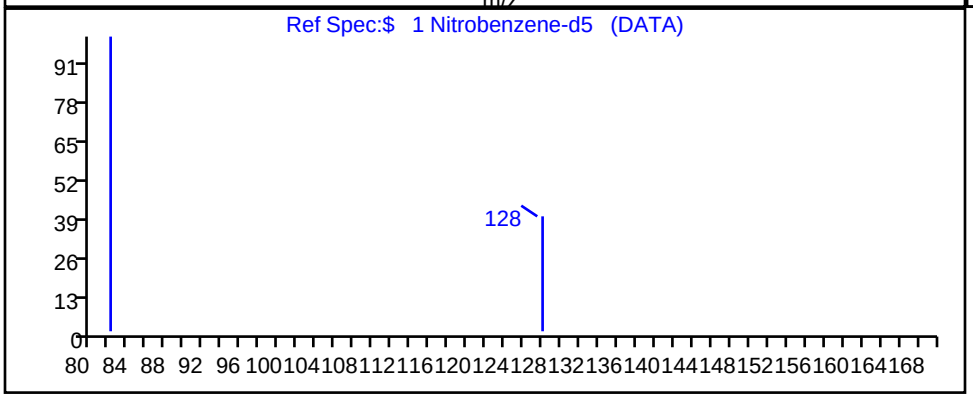
Processing Results











RT	Mass	Response	Amount
4.31	82.00	1312	0.011707
4.31	128.00	451	

Reviewer: cochranj, 31-Aug-2019 13:15:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

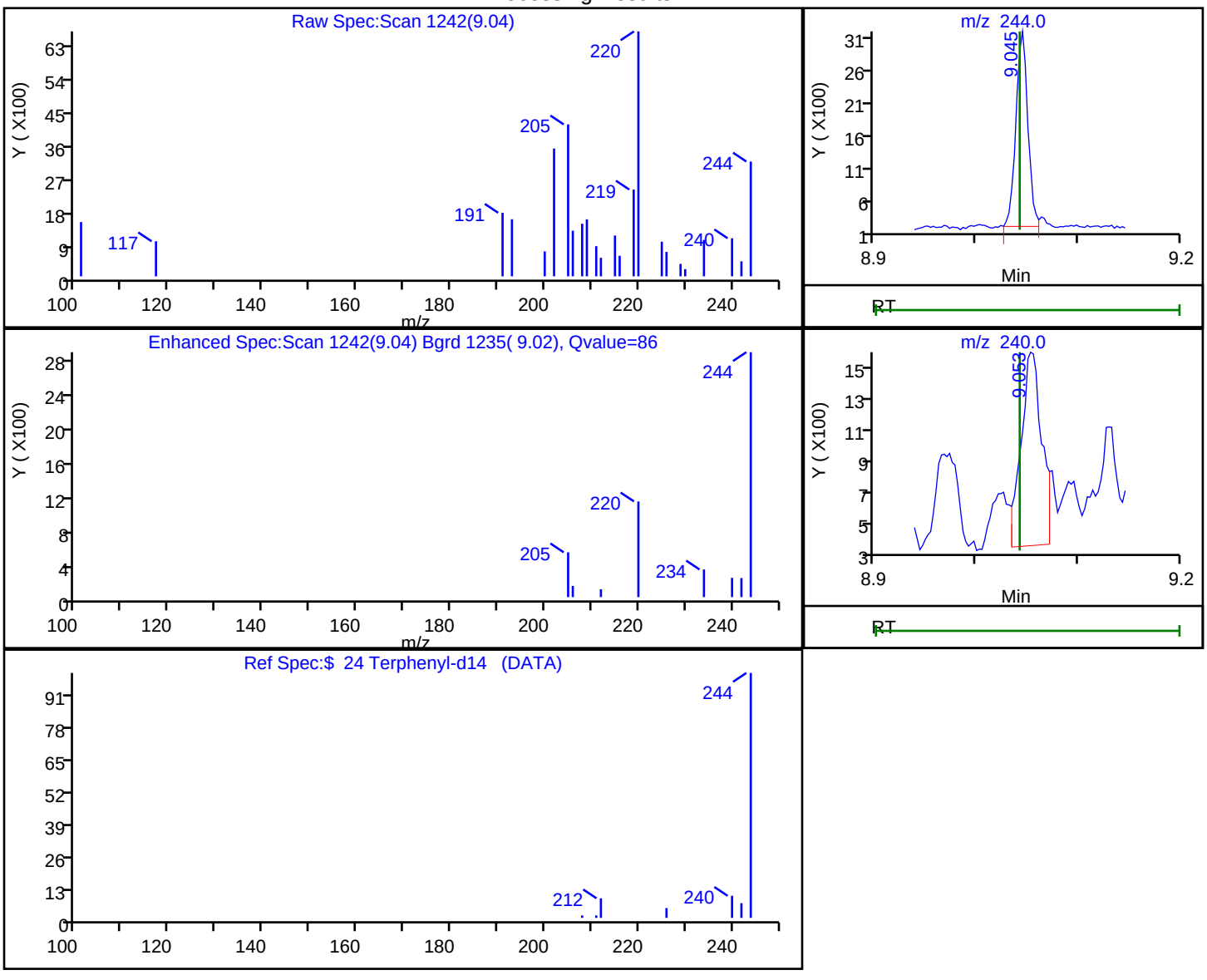
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D		
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18
Client ID:	22T-VB-03-4.0-6.0-D_20190717		
Operator ID:	11211	ALS Bottle#:	13 Worklist Smp#: 13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

$ 24 Terphenyl-d14, CAS: 1718-51-0

Processing Results



RT	Mass	Response	Amount
9.04	244.00	2401	0.009322
9.05	240.00	1701	

Reviewer: cochranj, 31-Aug-2019 13:15:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Knoxville

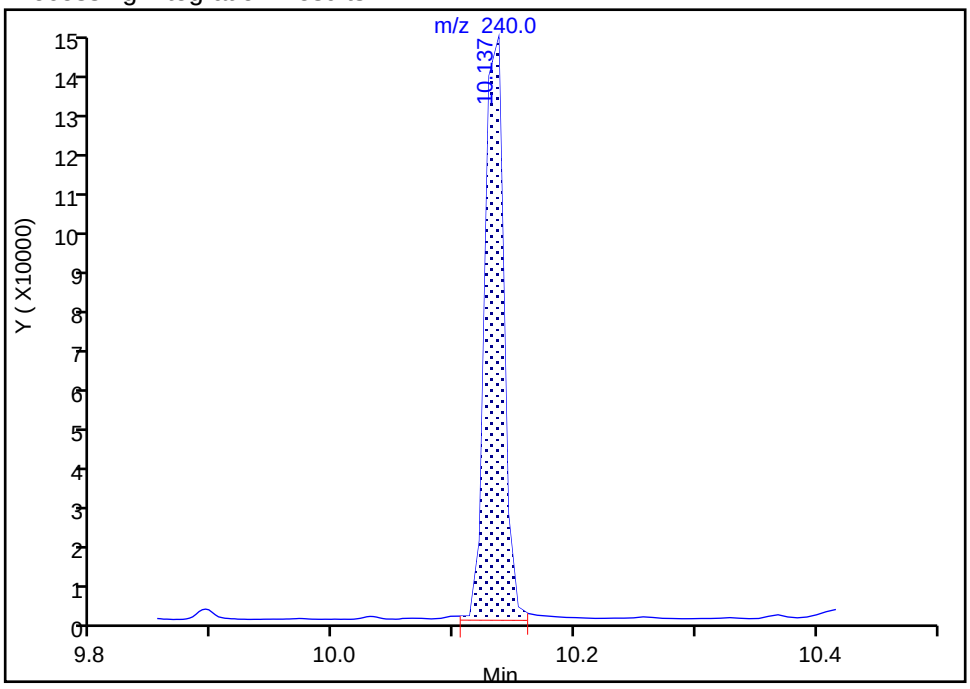
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-18-a.D				
Injection Date:	30-Aug-2019 15:18:30	Instrument ID:	MP		
Lims ID:	580-87761-B-18-A	Lab Sample ID:	140-87761-18		
Client ID:	22T-VB-03-4.0-6.0-D_20190717				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

* 27 Chrysene-d12, CAS: 1719-03-5

Signal: 1

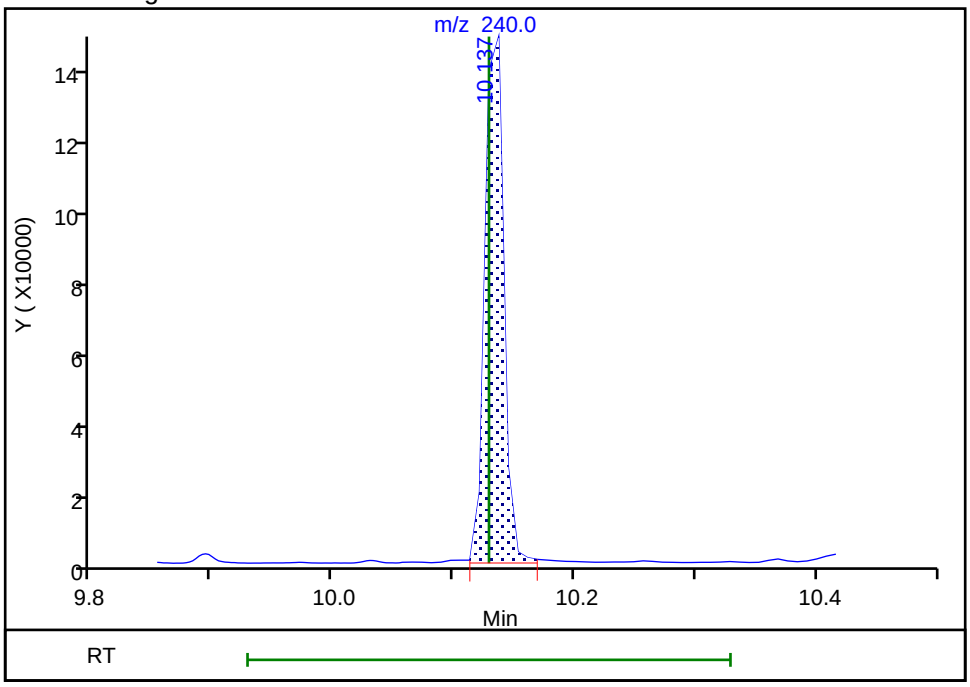
Processing Integration Results

RT: 10.14
Area: 158295
Amount: 0.500000
Amount Units: ug/ml



Manual Integration Results

RT: 10.14
Area: 157489
Amount: 0.500000
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 16:01:40
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 Lab Sample ID: 580-87761-21

Matrix: Solid Lab File ID: 580-87761-b-21-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.03(g) Date Analyzed: 08/29/2019 19:40

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	200	F1	150	21
91-57-6	2-Methylnaphthalene	380		310	31
83-32-9	Acenaphthene	1800		31	14
208-96-8	Acenaphthylene	120	F1	31	7.6
120-12-7	Anthracene	590		31	25
56-55-3	Benzo[a]anthracene	1300		31	12
50-32-8	Benzo[a]pyrene	1400		31	11
205-99-2	Benzo[b]fluoranthene	1300		31	16
192-97-2	Benzo[e]pyrene	830		31	10
191-24-2	Benzo[g,h,i]perylene	1000		31	18
207-08-9	Benzo[k]fluoranthene	470		31	14
STL00905	C1-Chrysenes	560		31	8.0
STL00909	C1-Dibenzothiophenes	400		31	20
STL00912	C1-Fluoranthenes/pyrene	1400		31	16
STL00913	C1-Fluorenes	490		31	17
STL00916	C1-Naphthalenes	380		310	24
STL00901	C1-Phenanthrenes/Anthracenes	1700		61	34
STL00906	C2-Chrysenes	300		31	9.5
STL00910	C2-Dibenzothiophenes	530		31	28
STL00968	C2-Fluoranthenes/Pyrene	570		31	14
STL00914	C2-Fluorenes	800		61	37
STL00917	C2-Naphthalenes	910		61	23
STL00902	C2-Phenanthrenes/Anthracenes	1500		120	75
STL00907	C3-Chrysenes	200		31	9.2
STL00911	C3-Dibenzothiophenes	420		61	34
STL00969	C3-Fluoranthenes/Pyrene	350		31	17
STL00915	C3-Fluorenes	610		61	33
STL00918	C3-Naphthalenes	1600		61	30
STL00903	C3-Phenanthrenes/Anthracenes	890		61	48
STL00908	C4-Chrysenes	120		31	10
STL00967	C4-Dibenzothiophenes	230		31	29
STL01791	C4-Fluoranthenes/Pyrene	200		31	12
STL00919	C4-Naphthalenes	1400		120	63
STL00904	C4-Phenanthrenes/Anthracenes	500	AP	61	58

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 Lab Sample ID: 580-87761-21

Matrix: Solid Lab File ID: 580-87761-b-21-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.03(g) Date Analyzed: 08/29/2019 19:40

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	1400		31	12
53-70-3	Dibenz(a,h)anthracene	150	F1	31	17
132-65-0	Dibenzothiophene	670		31	10
206-44-0	Fluoranthene	4300		31	28
86-73-7	Fluorene	1200		31	15
193-39-5	Indeno[1,2,3-cd]pyrene	740		31	21
91-20-3	Naphthalene	670		610	56
198-55-0	Perylene	380		31	6.1
85-01-8	Phenanthrene	4800		61	54
129-00-0	Pyrene	4500		61	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D
Lims ID: 580-87761-B-21-A
Client ID: 22T-SG-04_20190718
Sample Type: Client
Inject. Date: 29-Aug-2019 19:40:30 ALS Bottle#: 12 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-020
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 08:16:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	206955	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	200285	0.4397	
5 Benzo(b)thiophene	134	4.943	4.936	0.007	100	10669	0.0279	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	74145	0.2484	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	97	37610	0.1323	
9 1,1'-Biphenyl	154	5.849	5.849	0.000	99	27986	0.0709	
10 2,6-Dimethylnaphthalene	156	5.986	5.981	0.005	98	41710	0.1587	
11 Acenaphthylene	152	6.216	6.216	0.000	79	29464	0.0781	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	109669	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	350024	1.20	
14 Dibenzofuran	168	6.507	6.507	0.000	77	39541	0.0899	
15 2,3,5-Trimethylnaphthalene	170	6.682	6.678	0.004	83	72391	0.3106	
16 Fluorene	166	6.797	6.793	0.004	100	251517	0.7793	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	208600	0.4395	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	100	198837	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1616606	3.16	
20 Anthracene	178	7.648	7.648	0.000	99	164385	0.3849	
21 1-Methylphenanthrene	192	8.151	8.148	0.003	97	106922	0.3188	
22 Fluoranthene	202	8.690	8.687	0.003	99	1389321	2.79	
23 Pyrene	202	8.911	8.906	0.005	99	1626899	2.95	
25 Naphthobenzothiophene	234	9.875	9.873	0.002	100	89822	0.2782	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	370429	0.8537	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	182472	0.5000	
28 Chrysene	228	10.161	10.161	0.000	99	483828	0.9325	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	459876	0.8576	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	99	187232	0.3079	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	274245	0.5446	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	414728	0.8989	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	196398	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	131126	0.2517	
35 Indeno[1,2,3-cd]pyrene	276	13.156	13.150	0.006	86	275931	0.4864	

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
	36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	42	46388	0.0963	M
	37 Benzo[g,h,i]perylene	276	13.509	13.508	0.001	99	356437	0.6714	
A	38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	112409	0.2468	
A	39 C2-Naphthalenes	156	6.054	(5.923-6.247)		0	272219	0.5976	
A	40 C3-Naphthalenes	170	6.558	(6.323-6.820)		0	479164	1.05	
A	41 C4-Naphthalenes	184	6.949	(6.483-7.421)		0	427138	0.9377	
A	42 C1-Fluorenes	180	7.307	(7.219-7.413)		0	103480	0.3206	
A	43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	168801	0.5230	
A	44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	129016	0.3997	
A	45 C1-Dibenzothiophenes	198	7.959	(7.827-8.065)		0	124224	0.2618	
A	46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	165792	0.3493	
A	47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	131008	0.2760	
A	48 C4-Dibenzothiophenes	240	9.056	(8.814-9.591)		0	70036	0.1476	
A	49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	571906	1.12	
A	50 C2-Phenanthrenes/Anthracen	206	8.557	(8.358-8.785)		0	496946	0.9703	
A	51 C3-Phenanthrenes/Anthracen	220	8.998	(8.747-9.260)		0	299152	0.5841	
A	52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	166149	0.3244	
A	53 C1-Fluoranthenes/pyrene	216	9.300	(9.112-9.500)		0	507591	0.9192	
A	54 C2-Fluoranthenes/Pyrene	230	9.809	(9.587-10.039)		0	207094	0.3750	
A	55 C3-Fluoranthenes/Pyrene	244	10.233	(10.043-10.519)		0	124986	0.2263	
A	56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	72957	0.1321	
A	57 C1-Chrysenes	242	10.612	(10.512-10.741)		0	190717	0.3676	
A	58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	100969	0.1946	
A	59 C3-Chrysenes	270	11.515	(11.245-11.890)		0	66605	0.1284	
A	60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	40914	0.0789	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

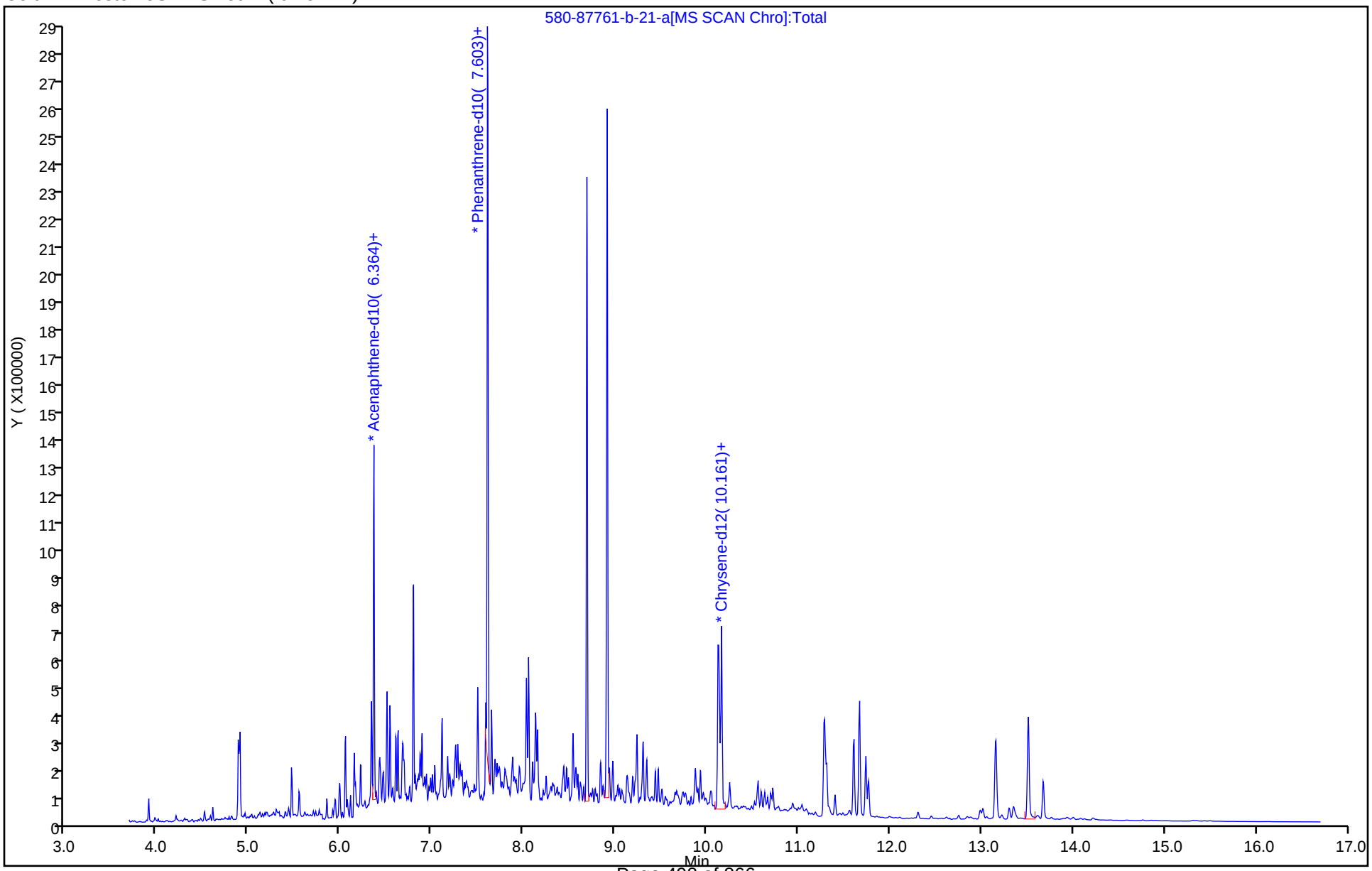
Report Date: 31-Aug-2019 11:49:13 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D

Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21	Worklist Smp#:	20
Client ID:	22T-SG-04_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	12
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

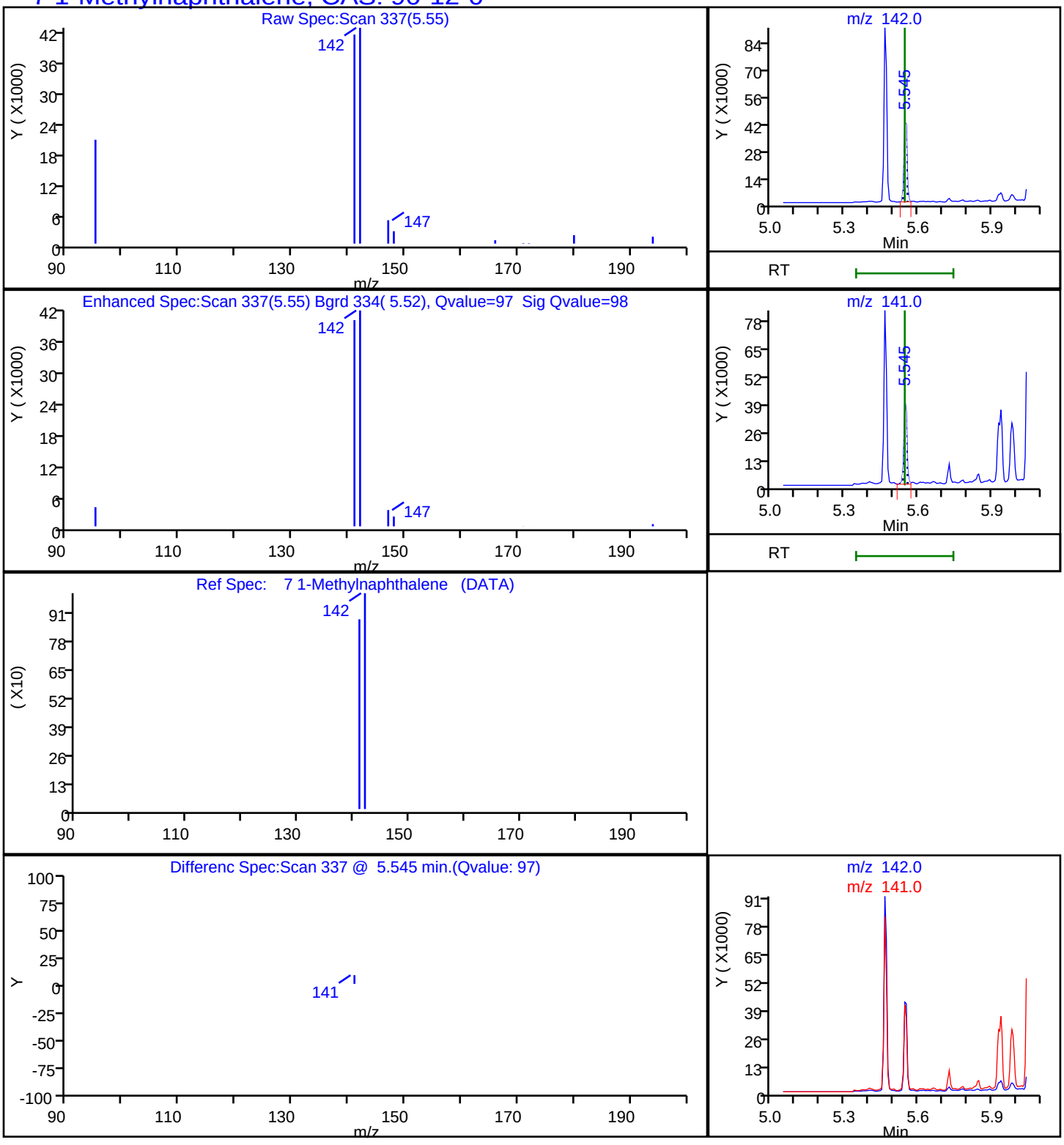


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

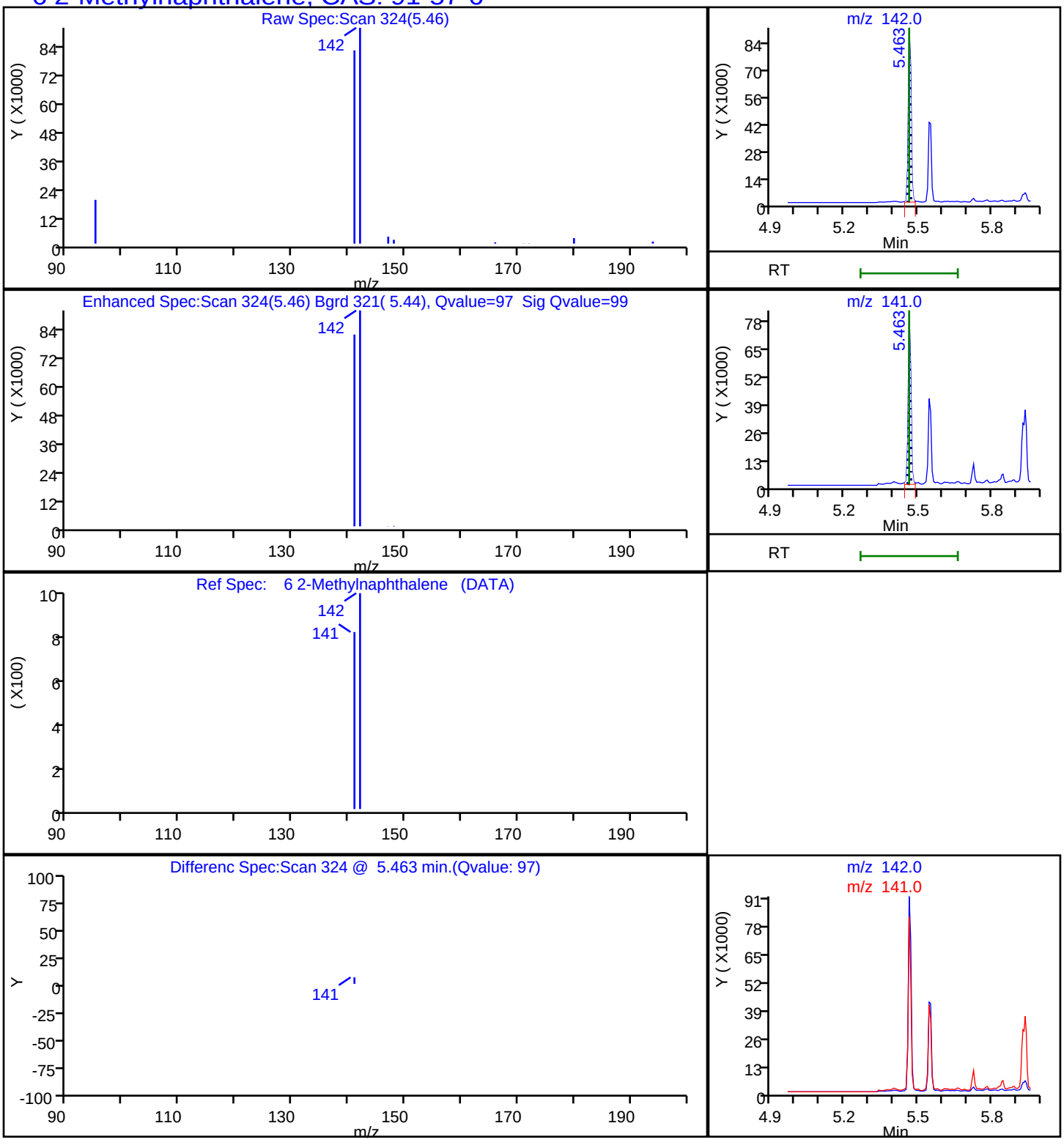


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

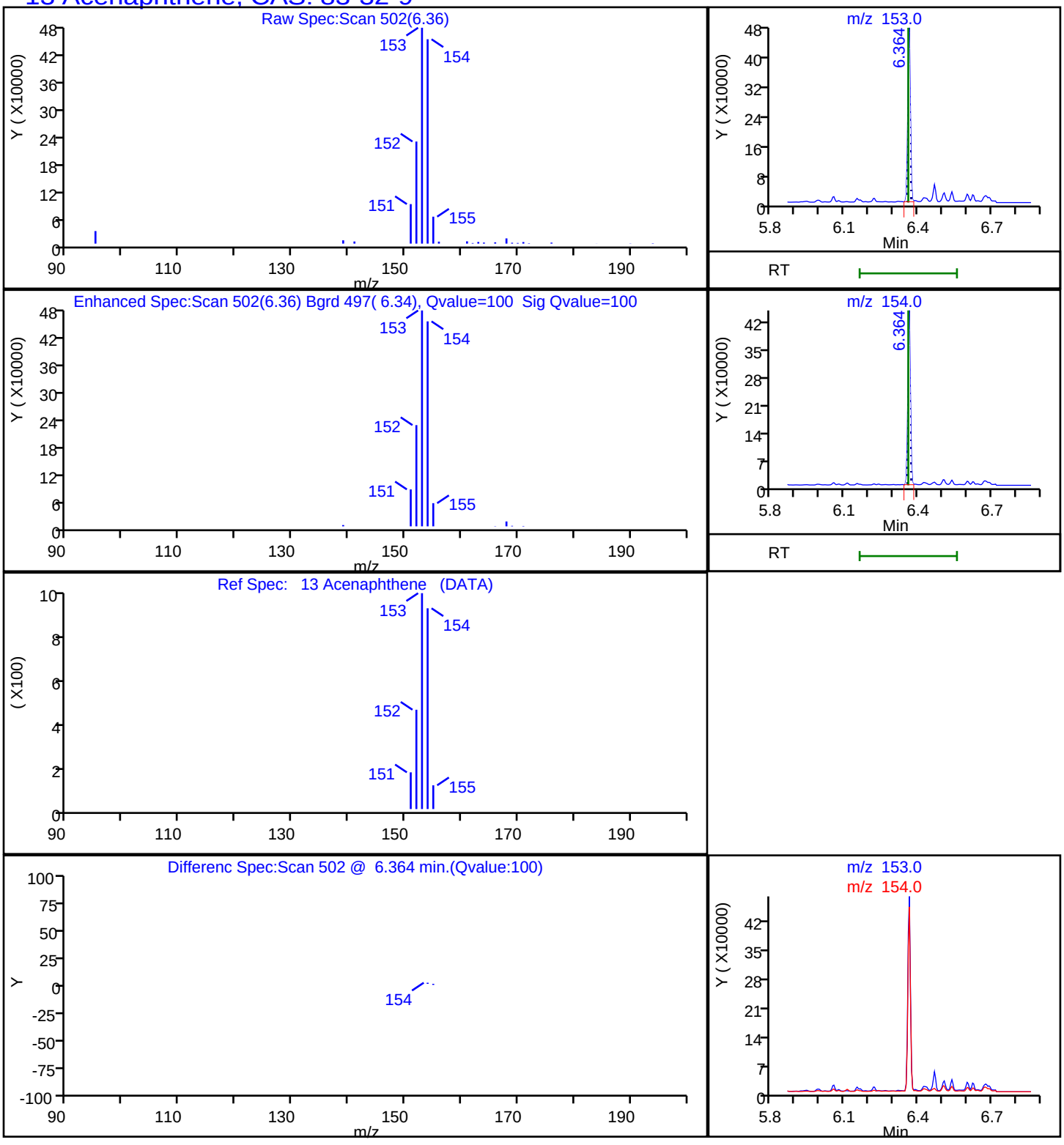


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9

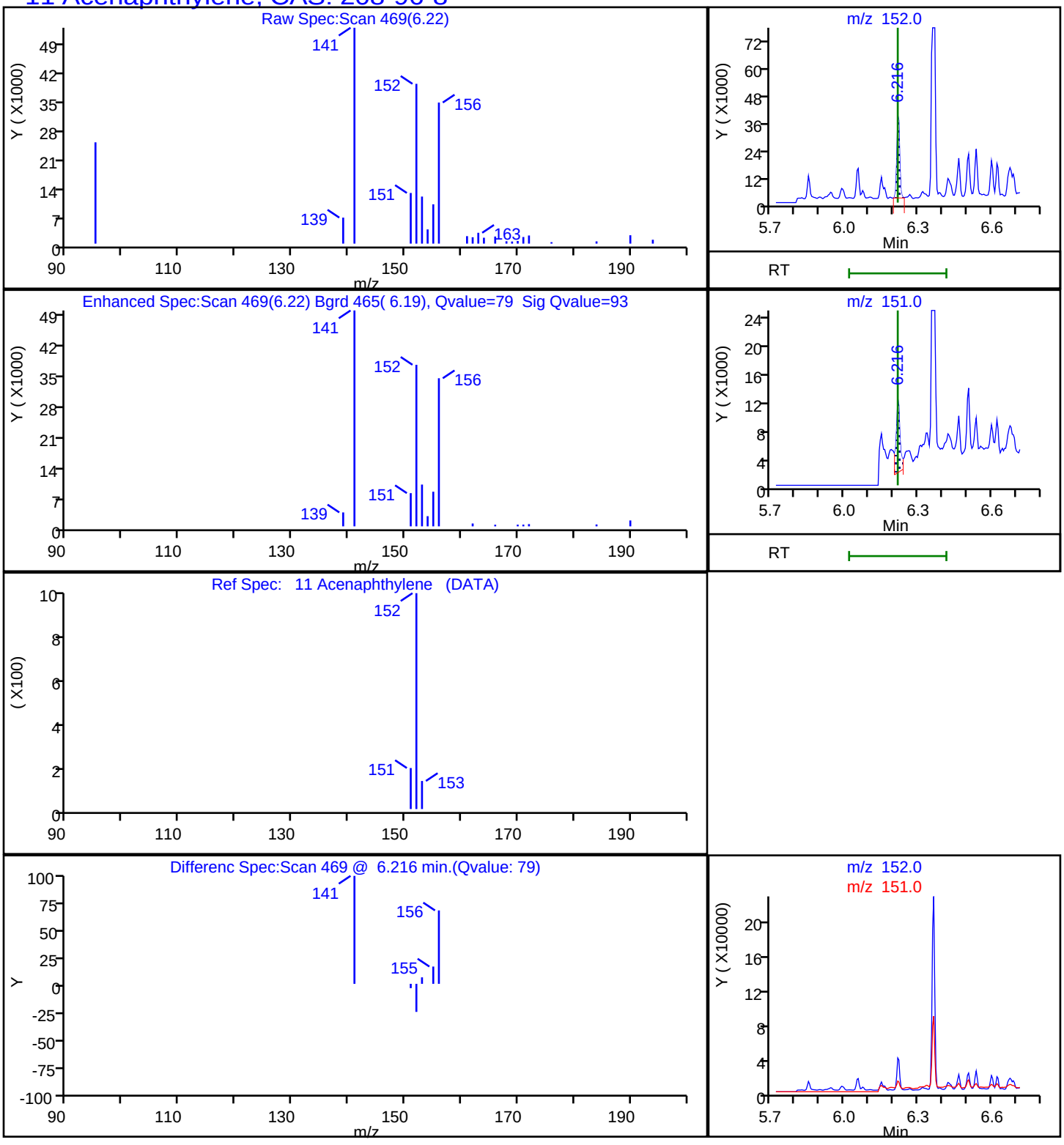


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8

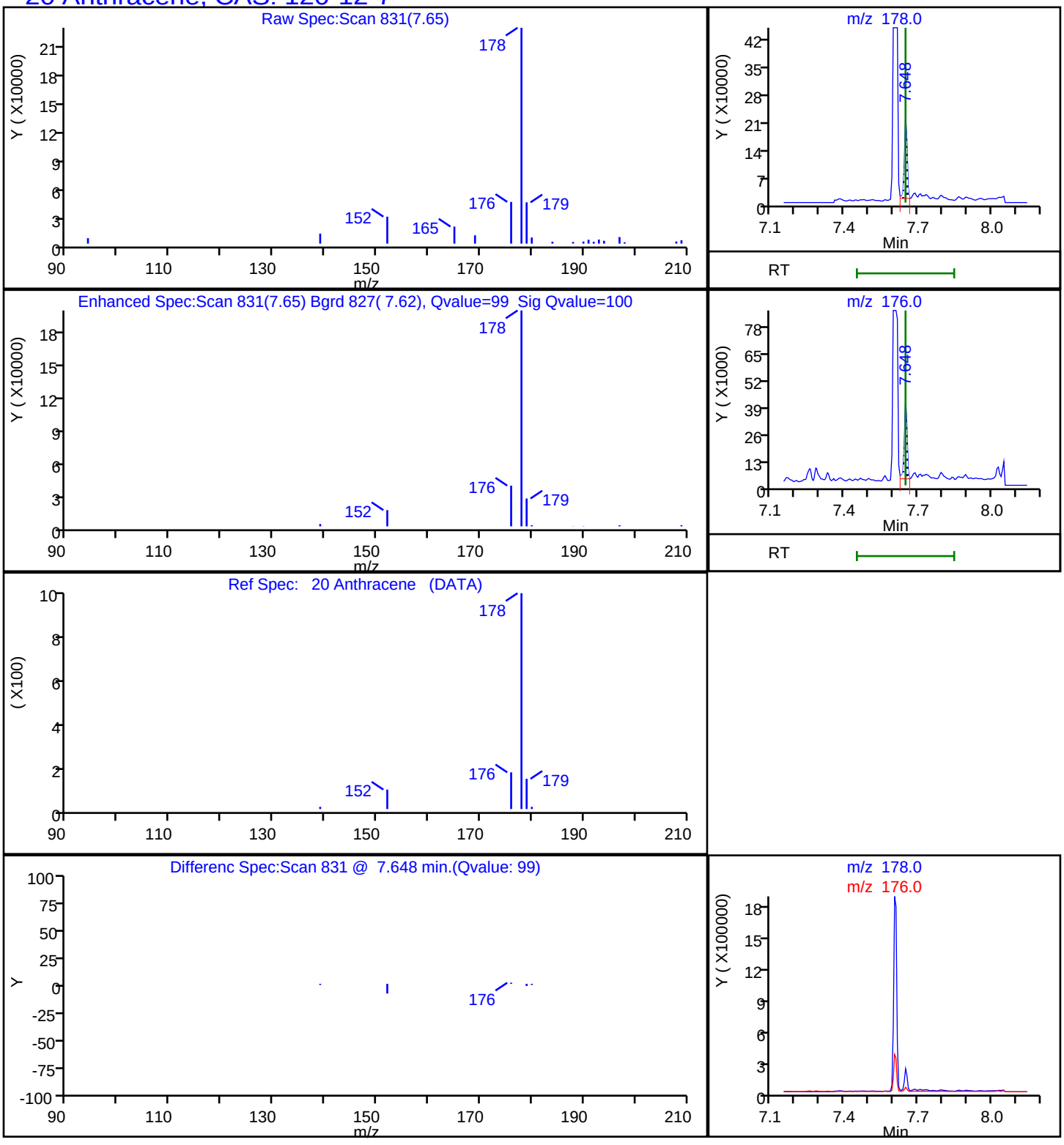


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7

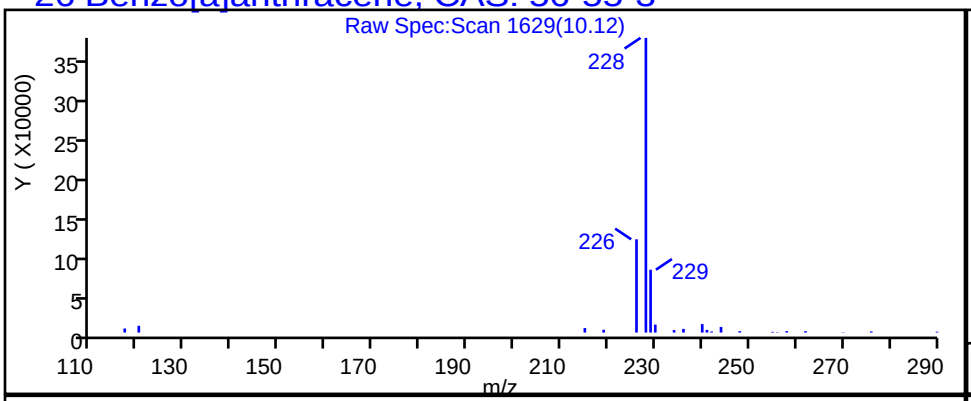


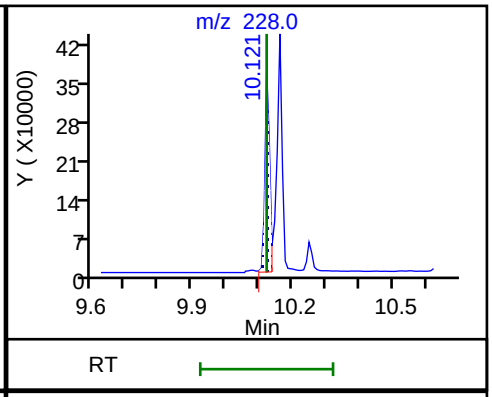
Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

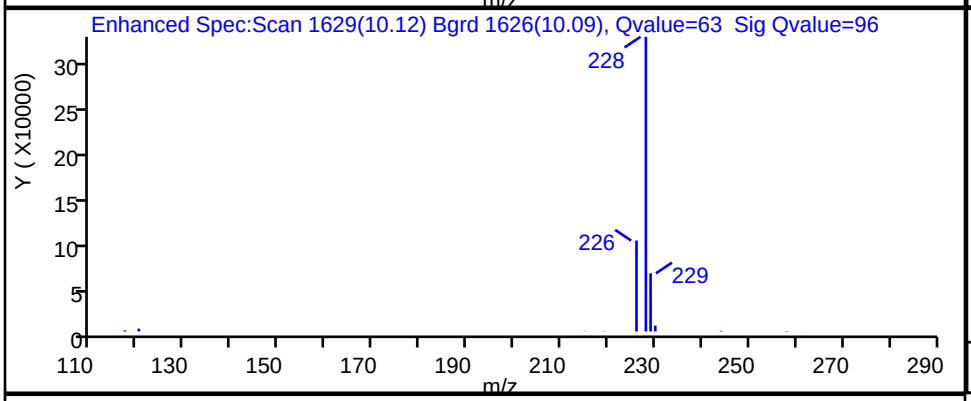
Eurofins TestAmerica, Knoxville

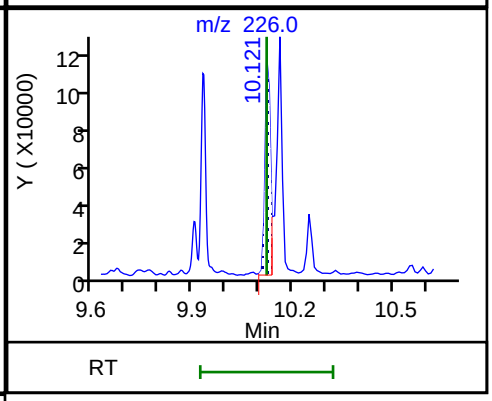
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

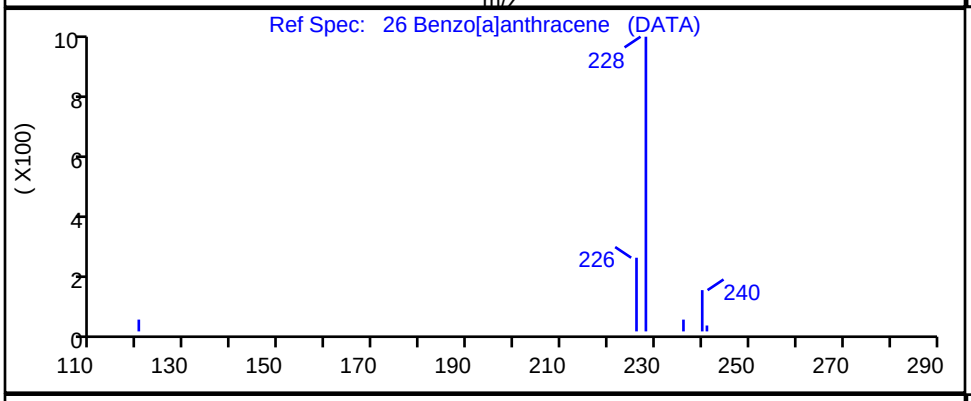
26 Benzo[a]anthracene, CAS: 56-55-3

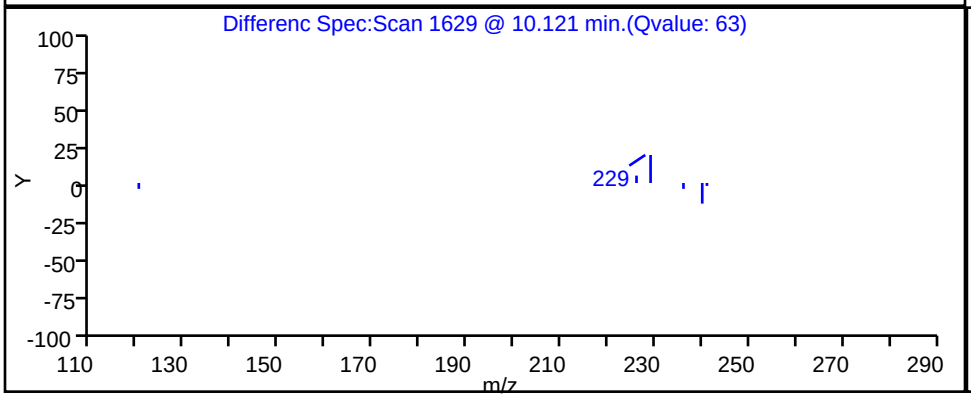


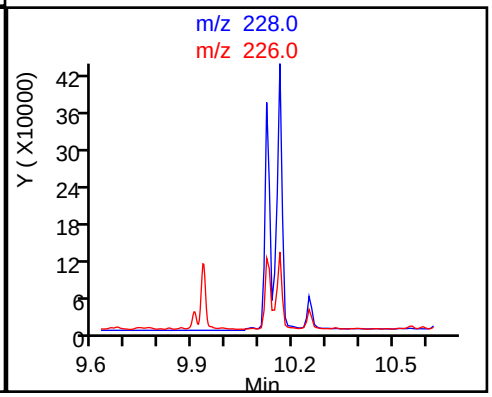












Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
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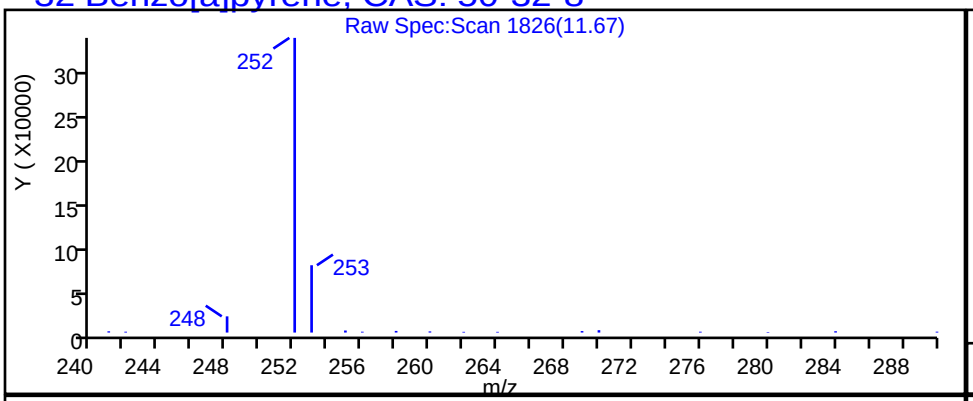
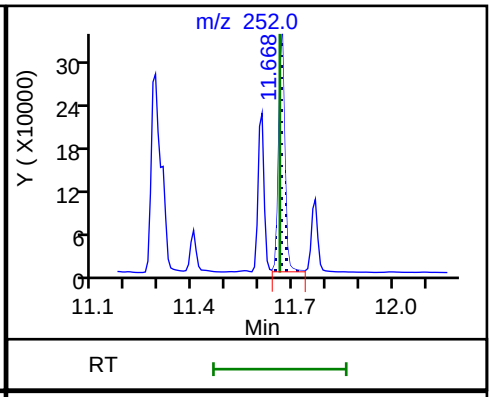
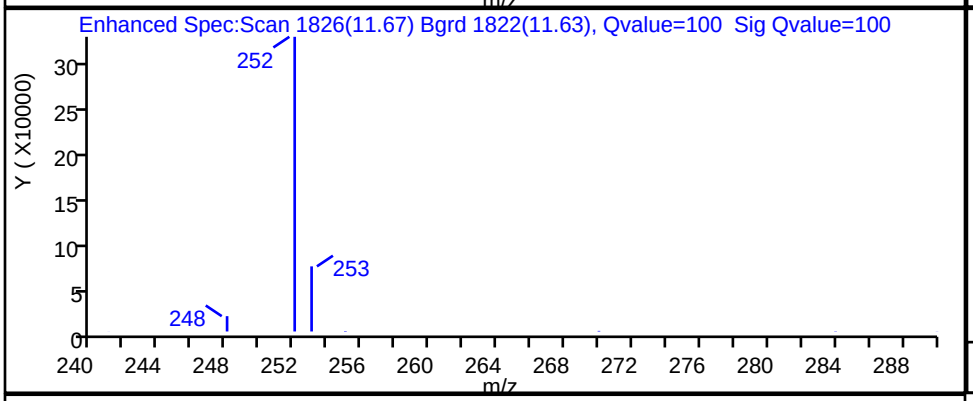
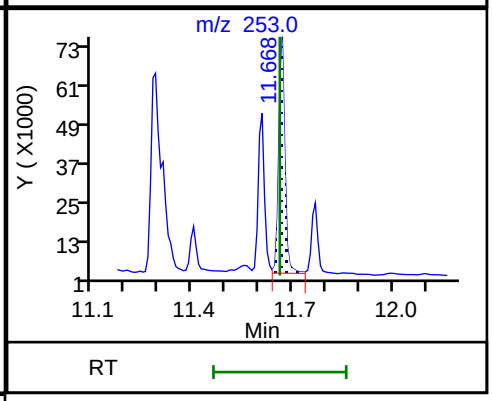
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

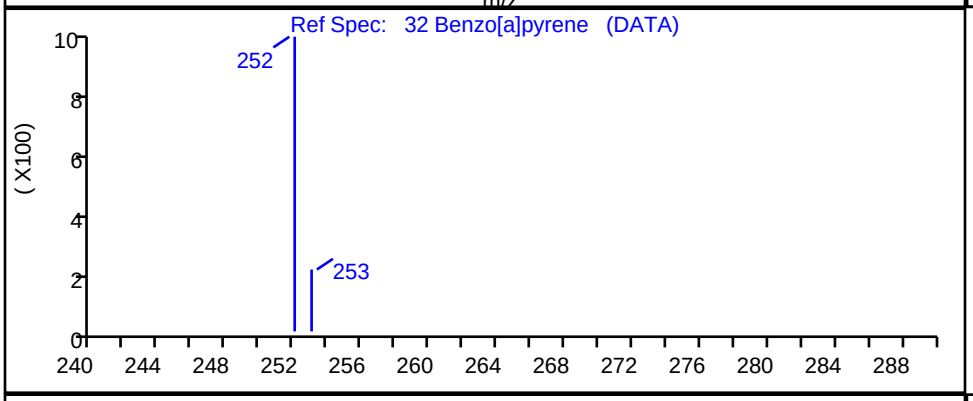
32 Benzo[a]pyrene, CAS: 50-32-8

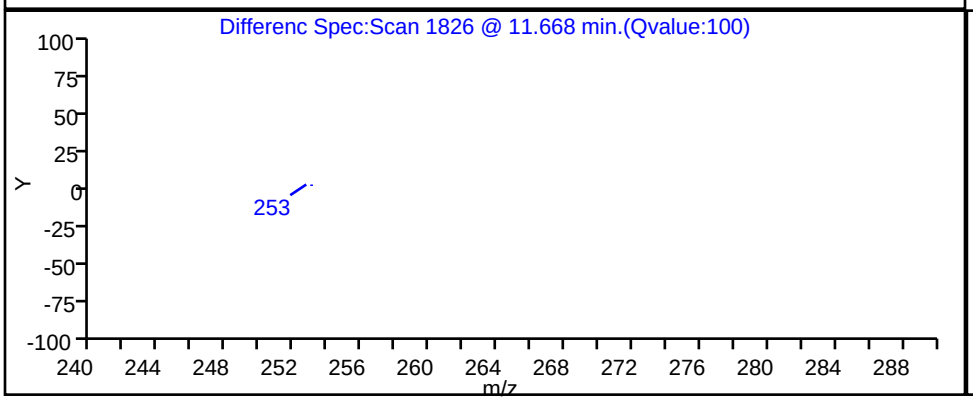


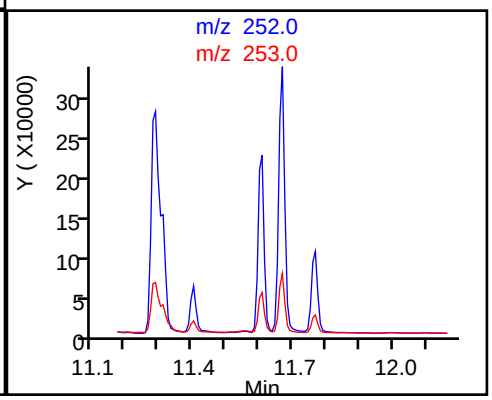












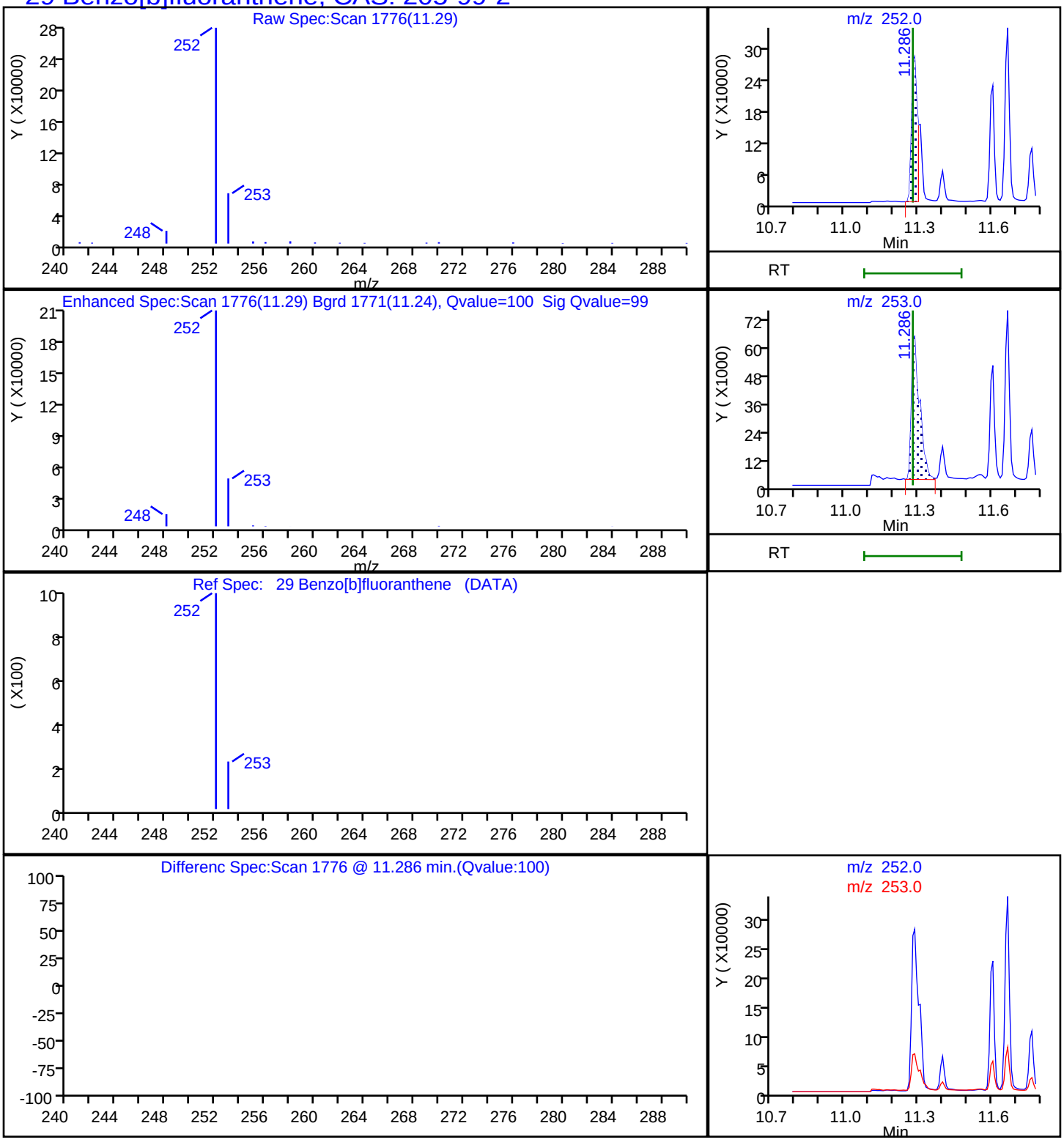
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D

Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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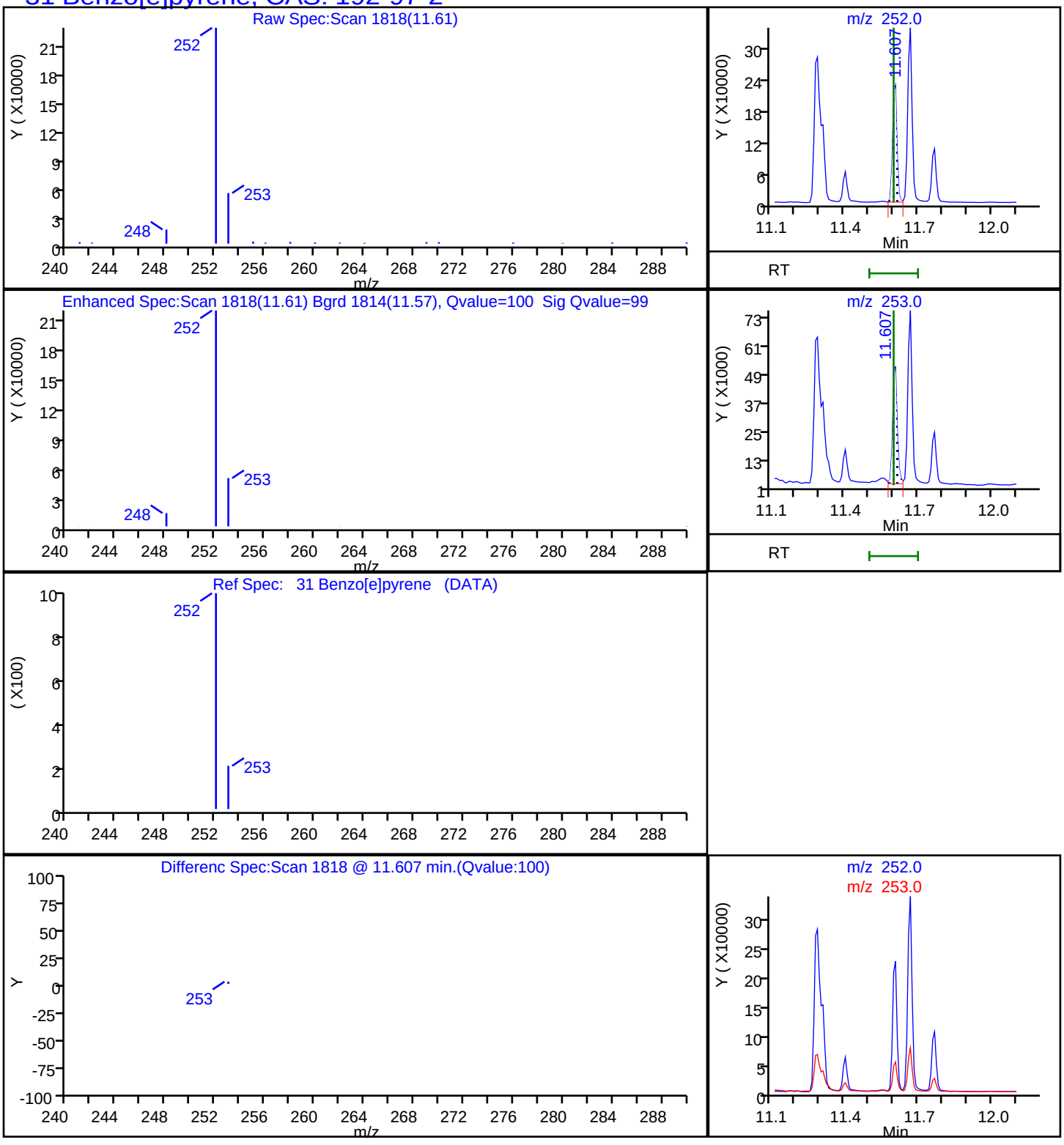
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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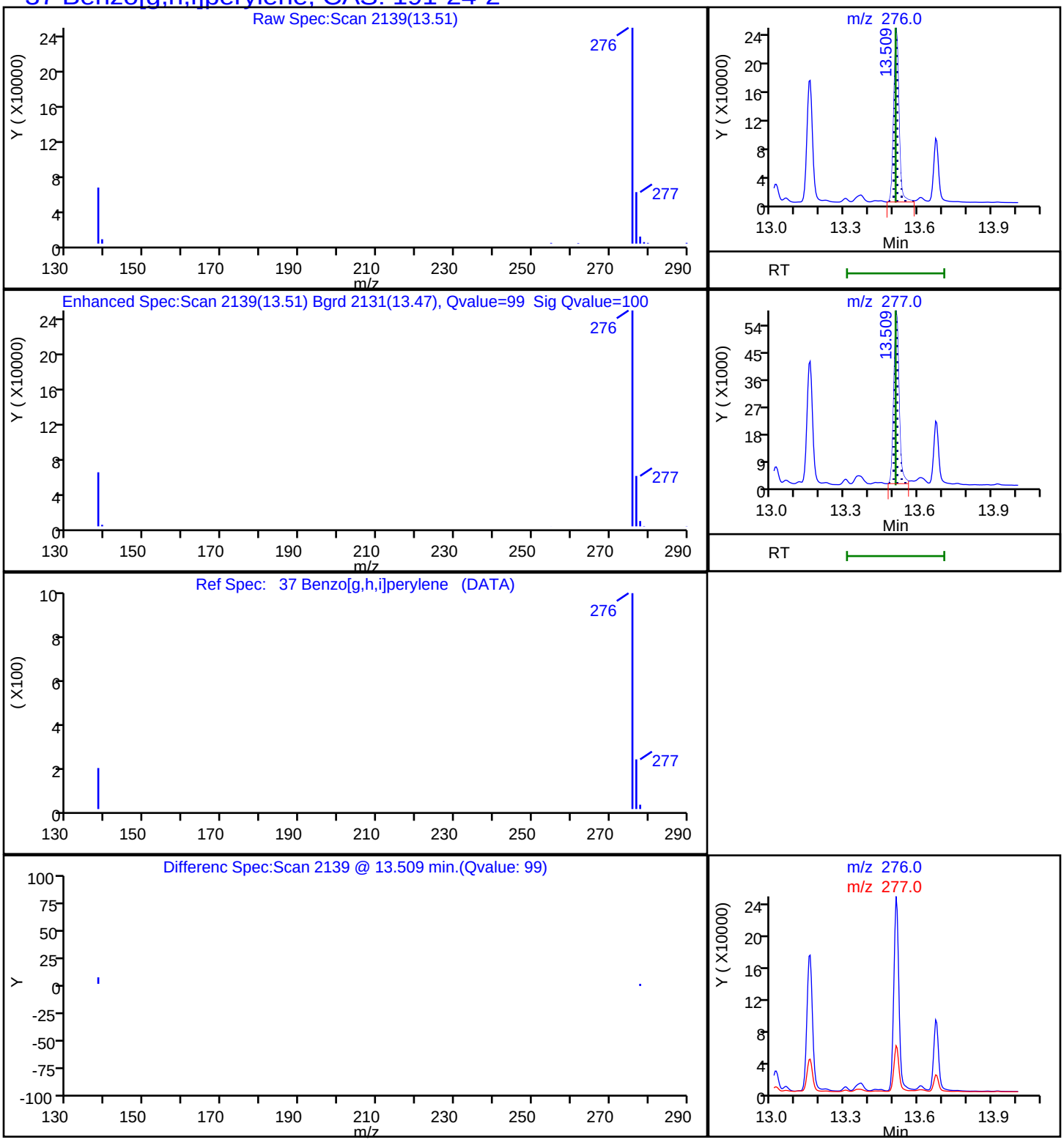
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2

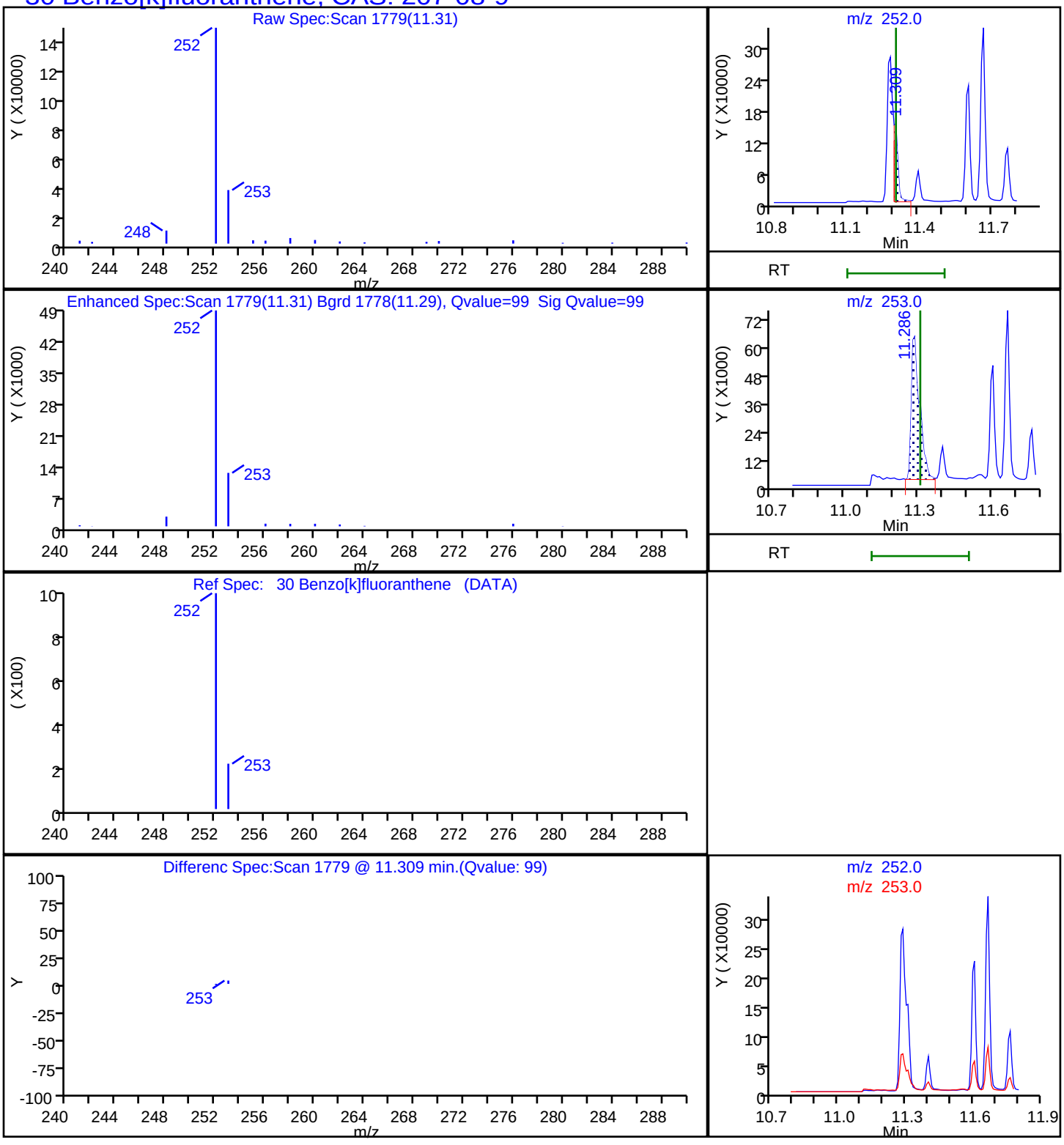


Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
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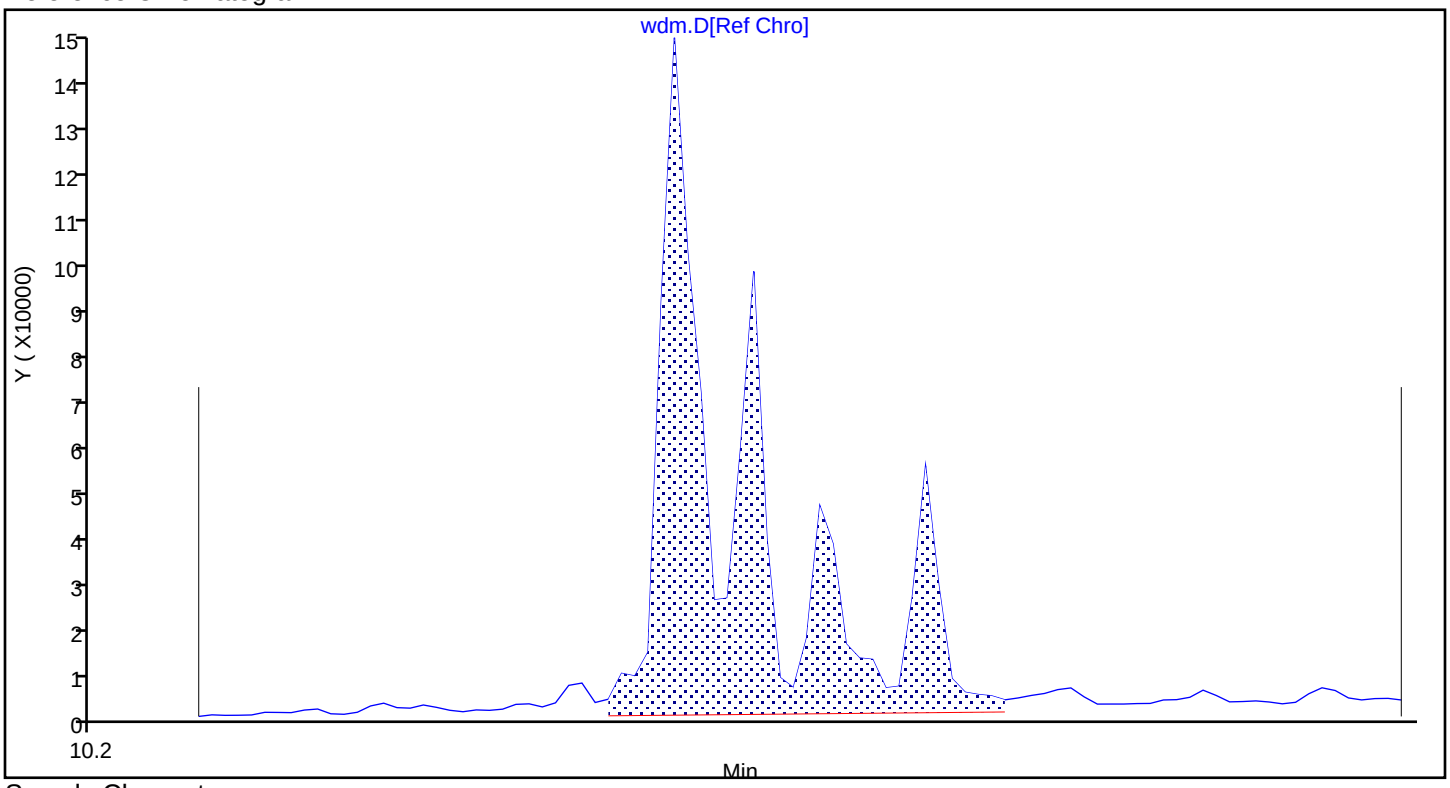
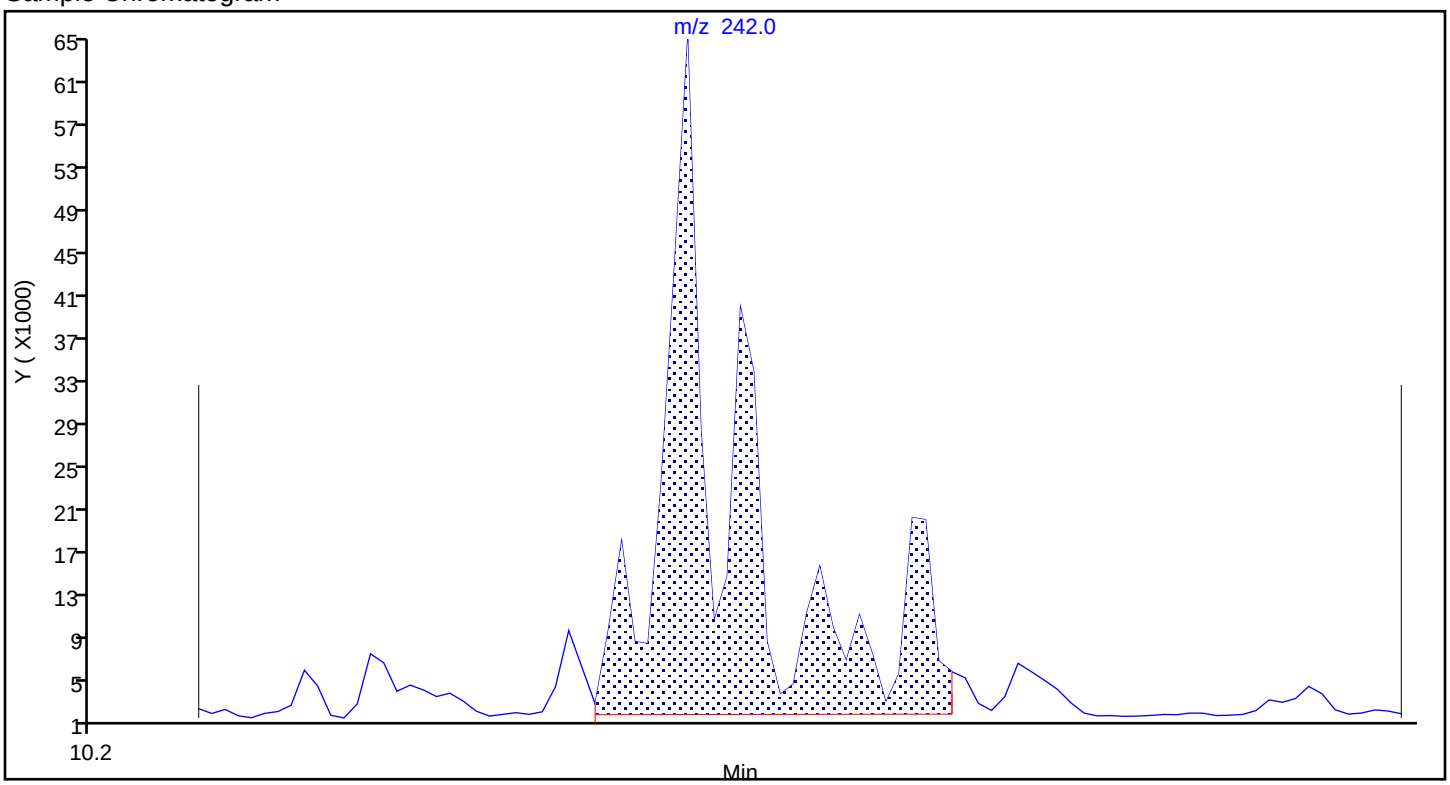
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
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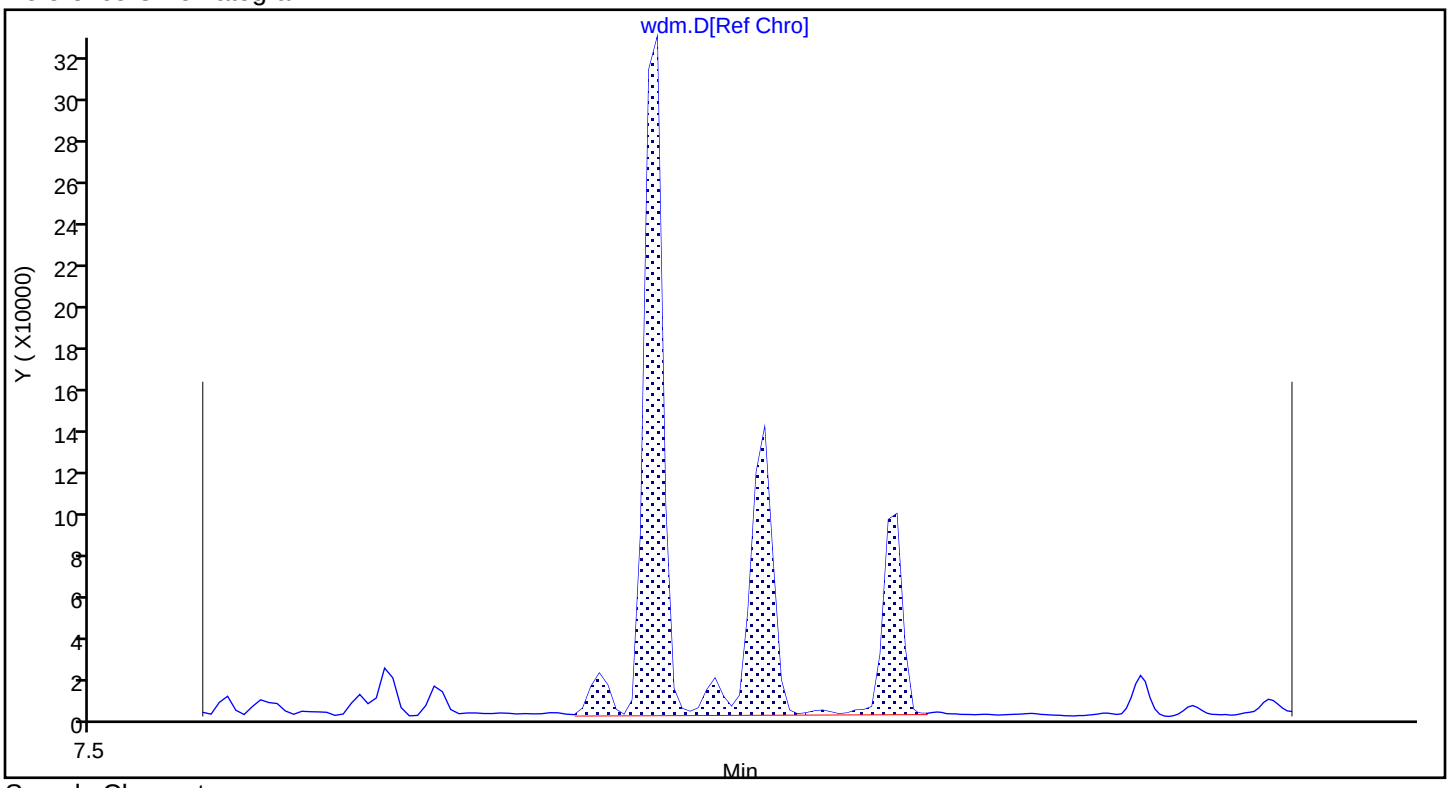
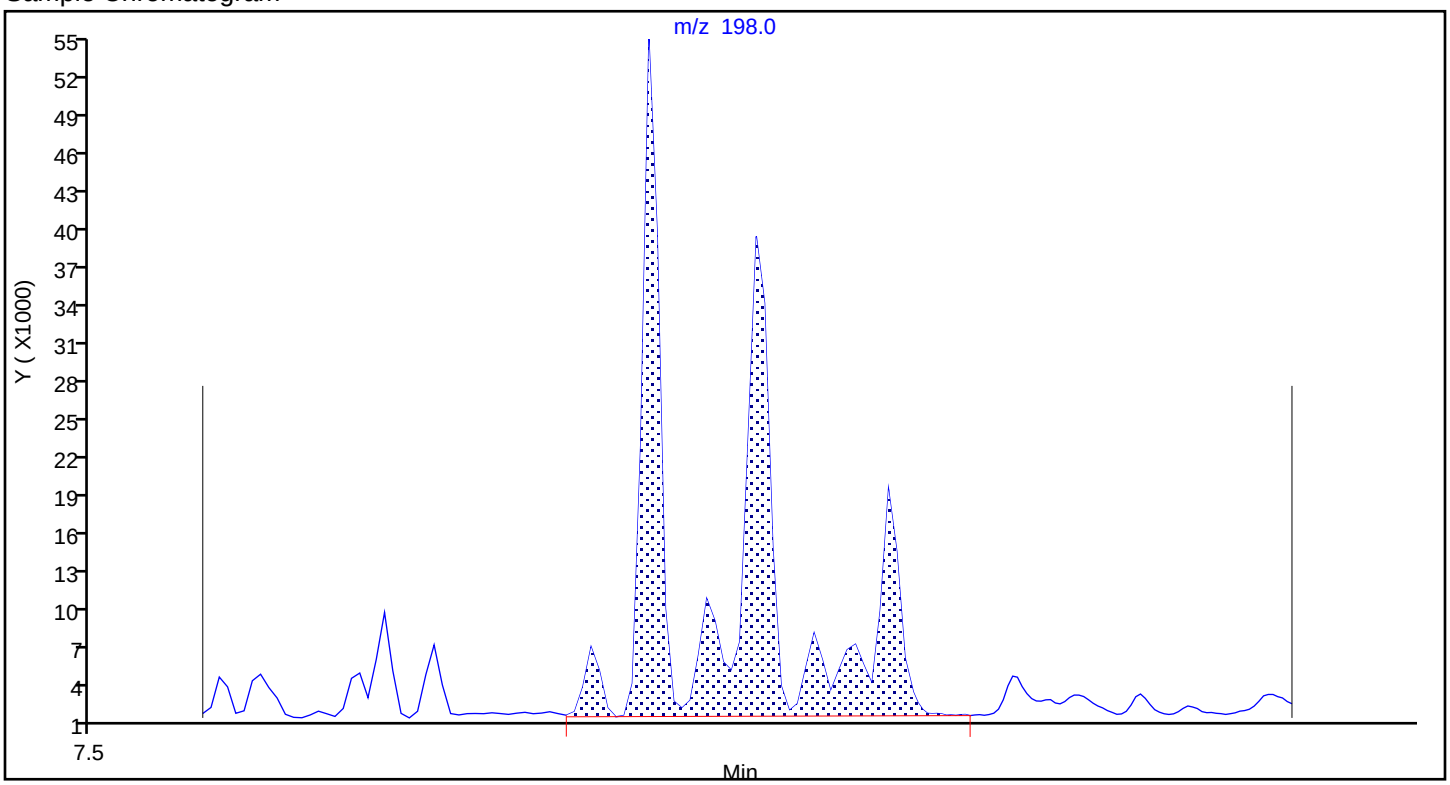
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
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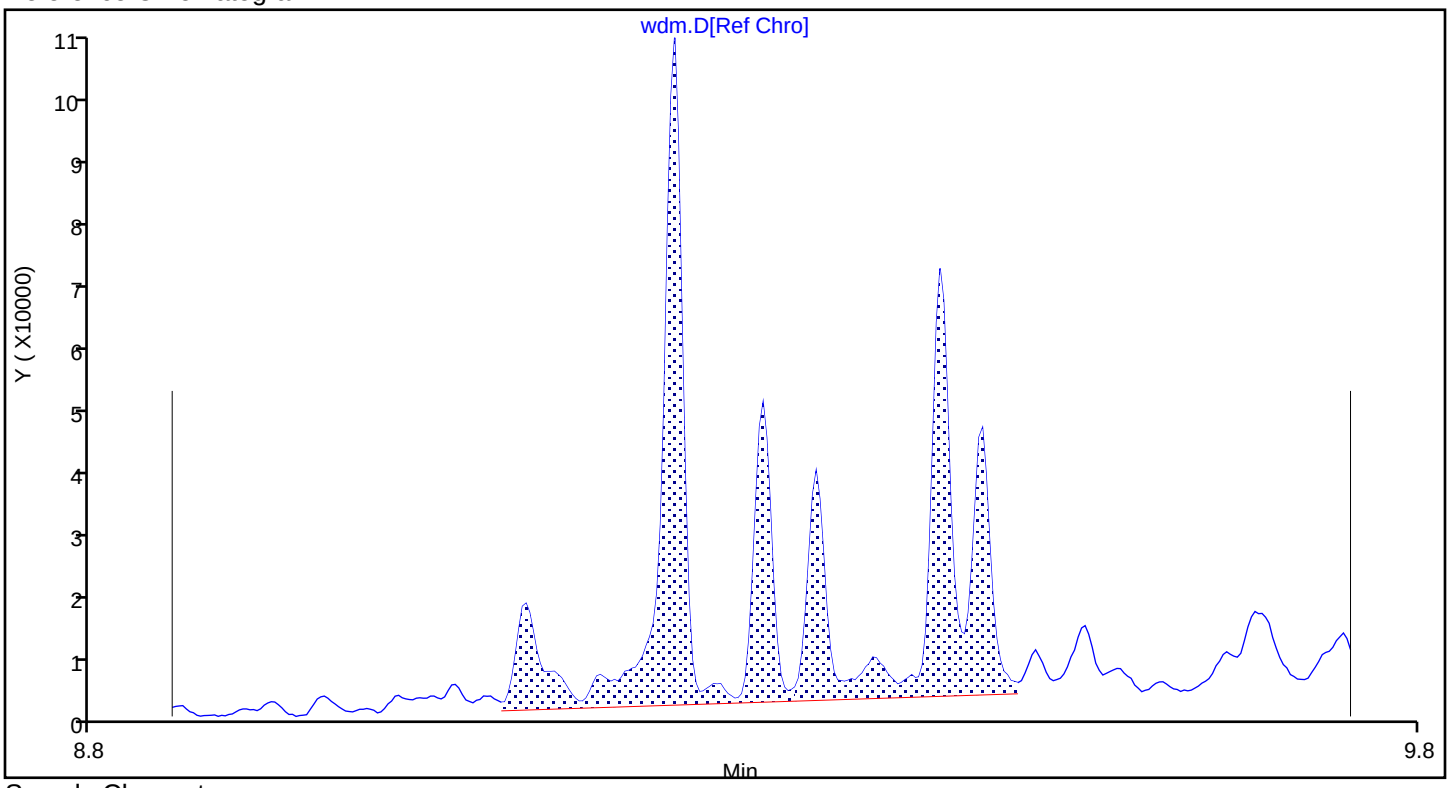
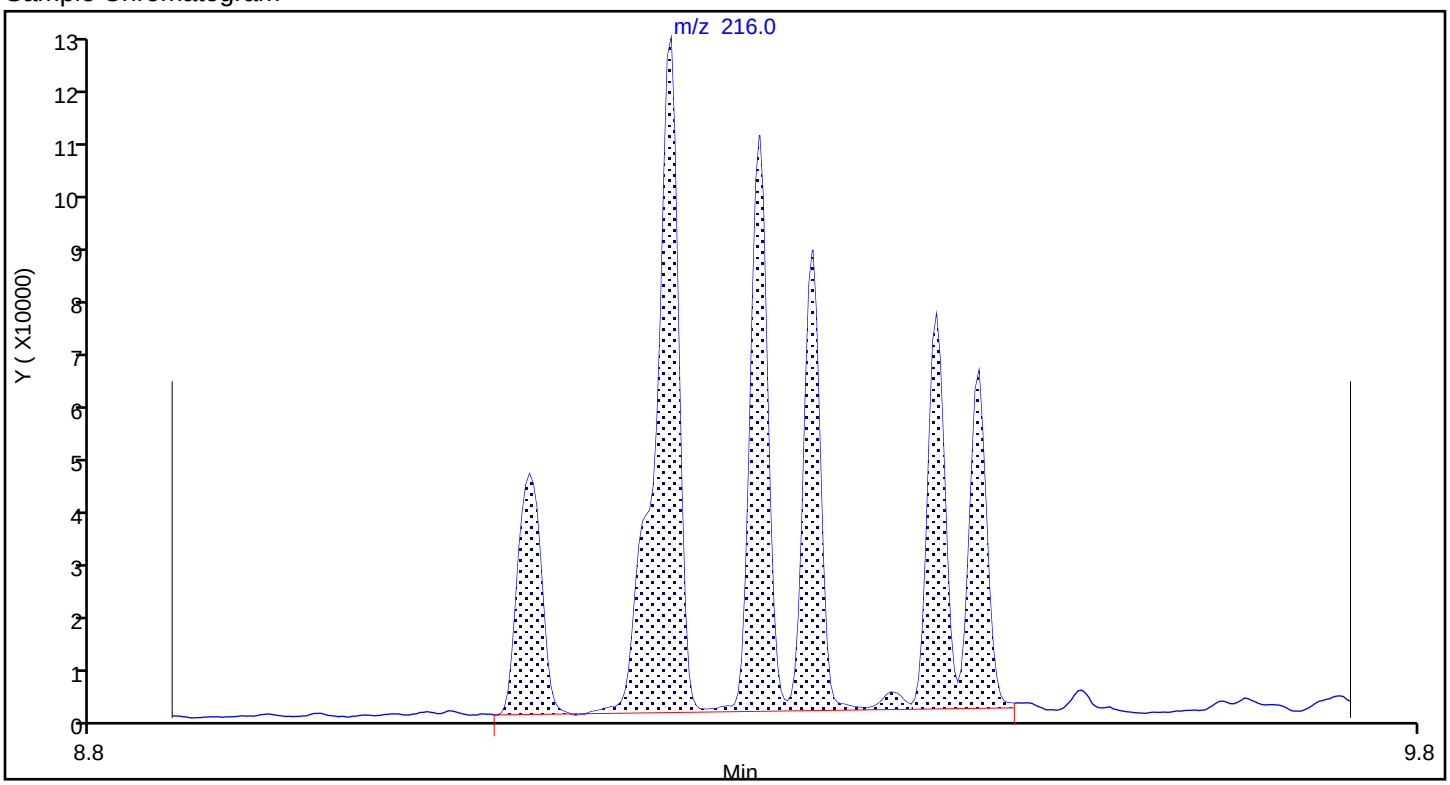
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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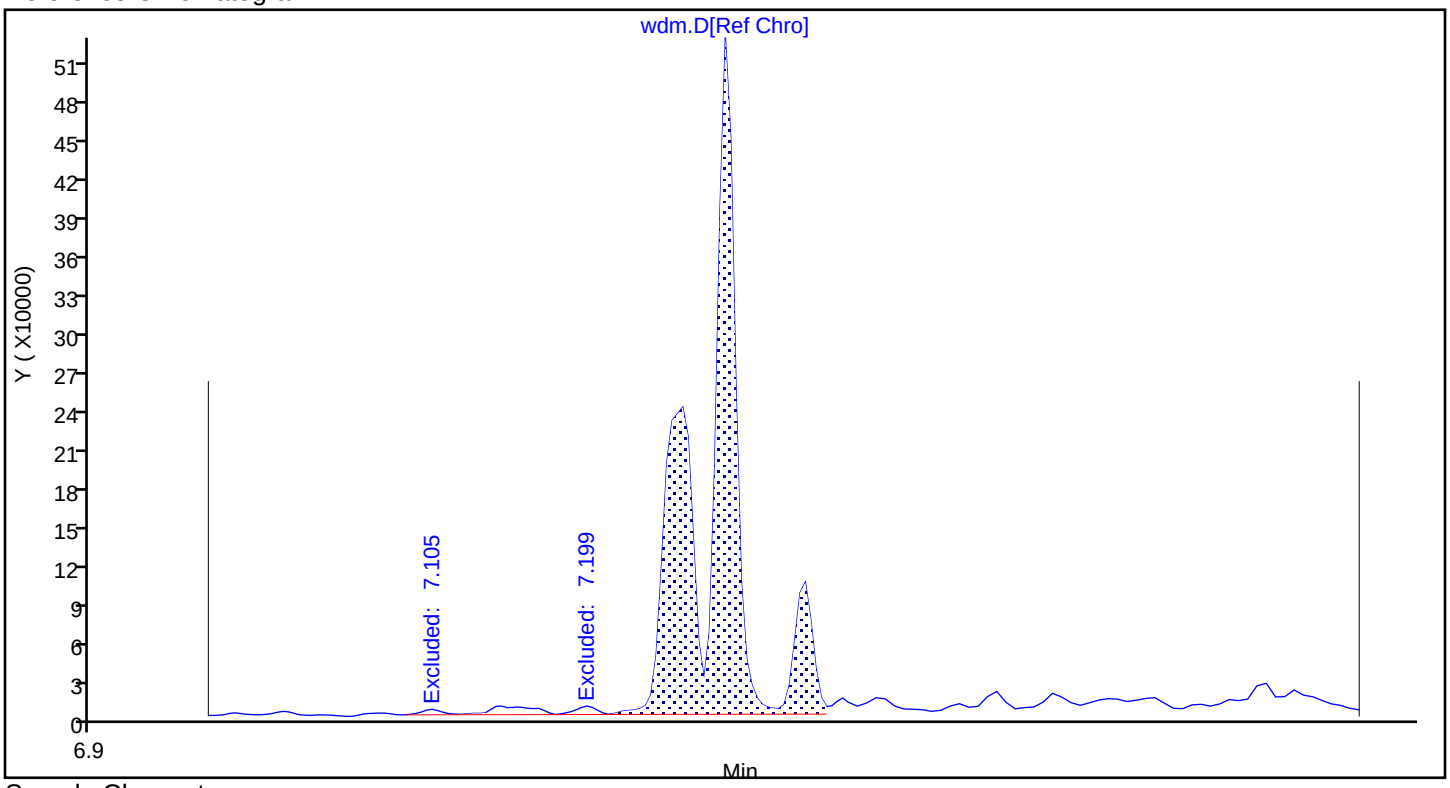
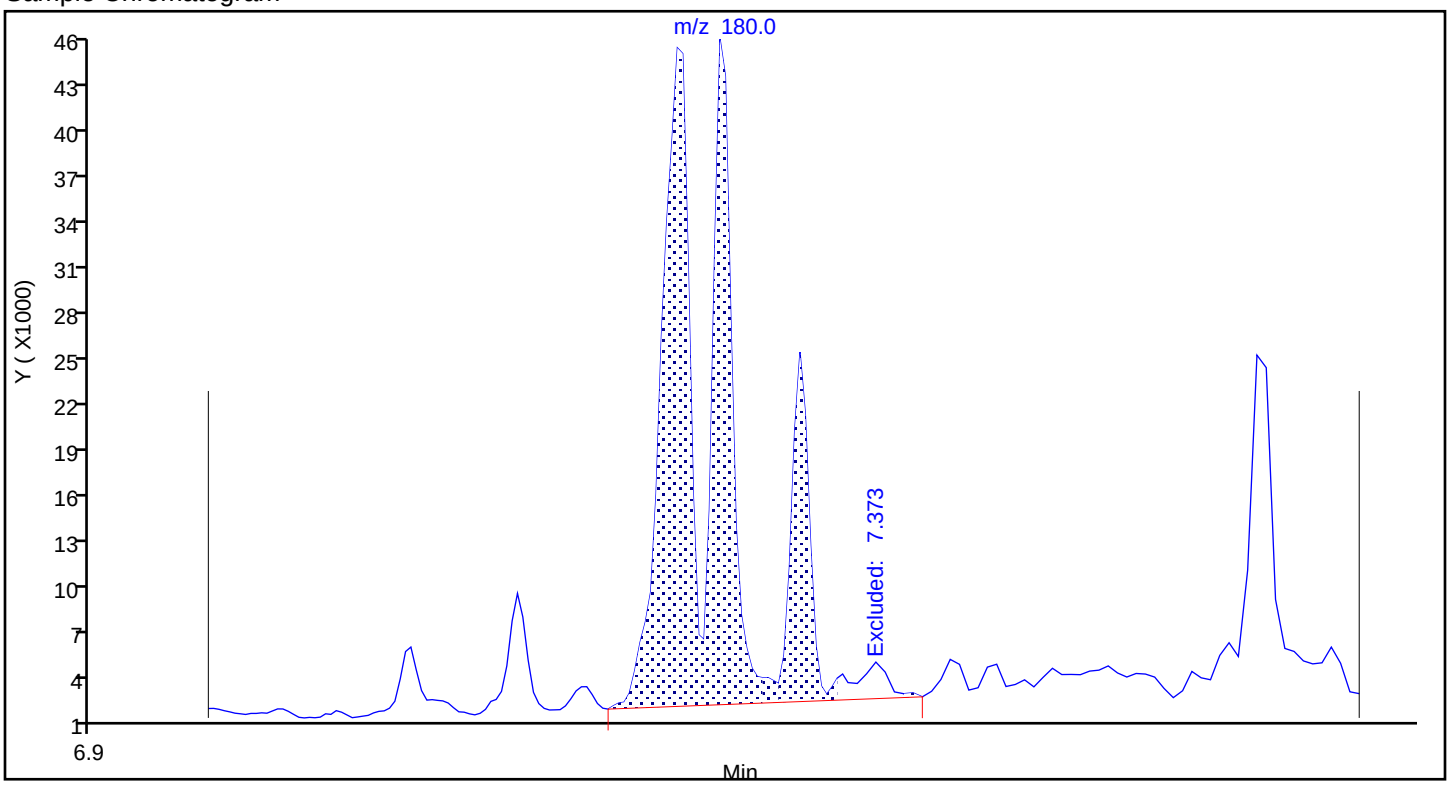
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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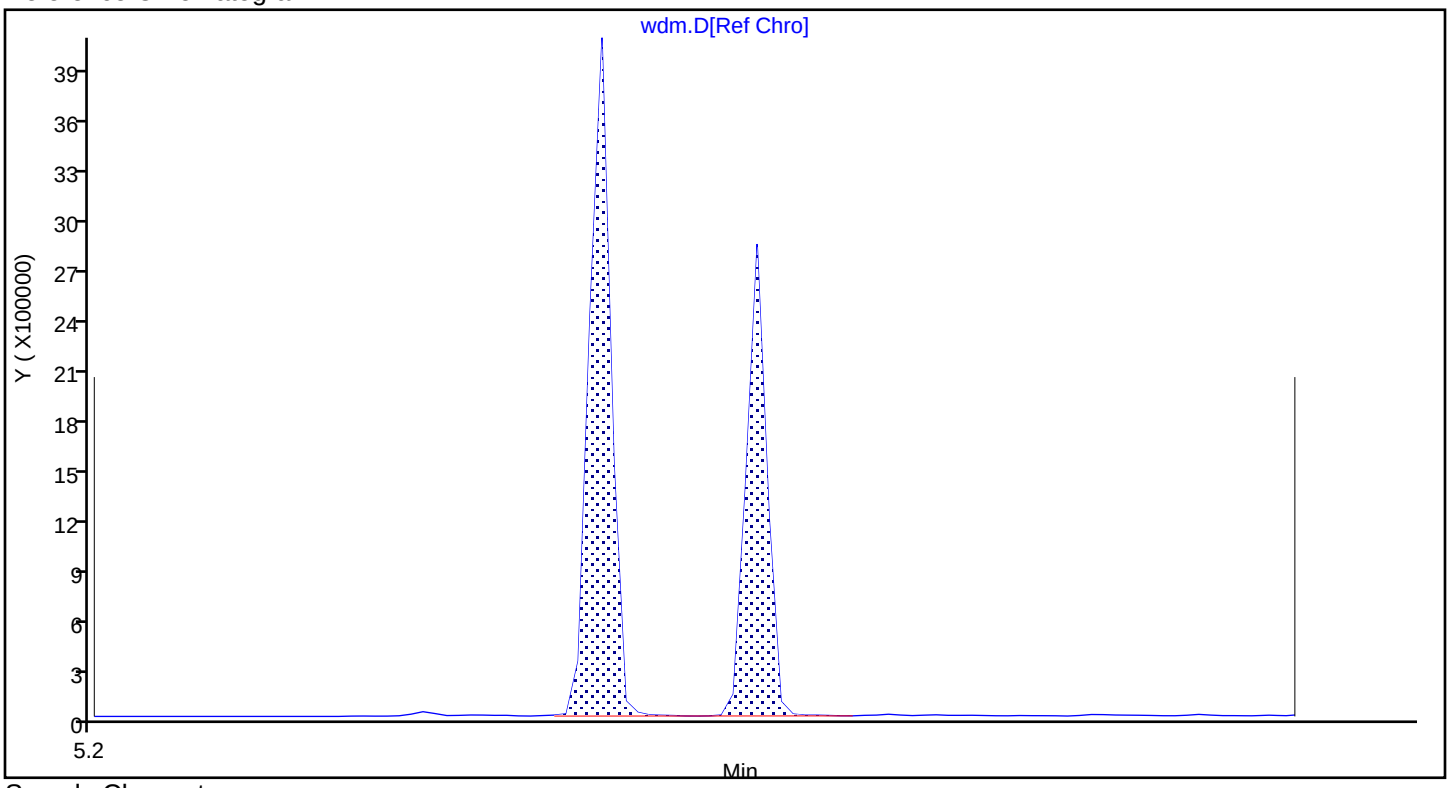
Eurofins TestAmerica, Knoxville

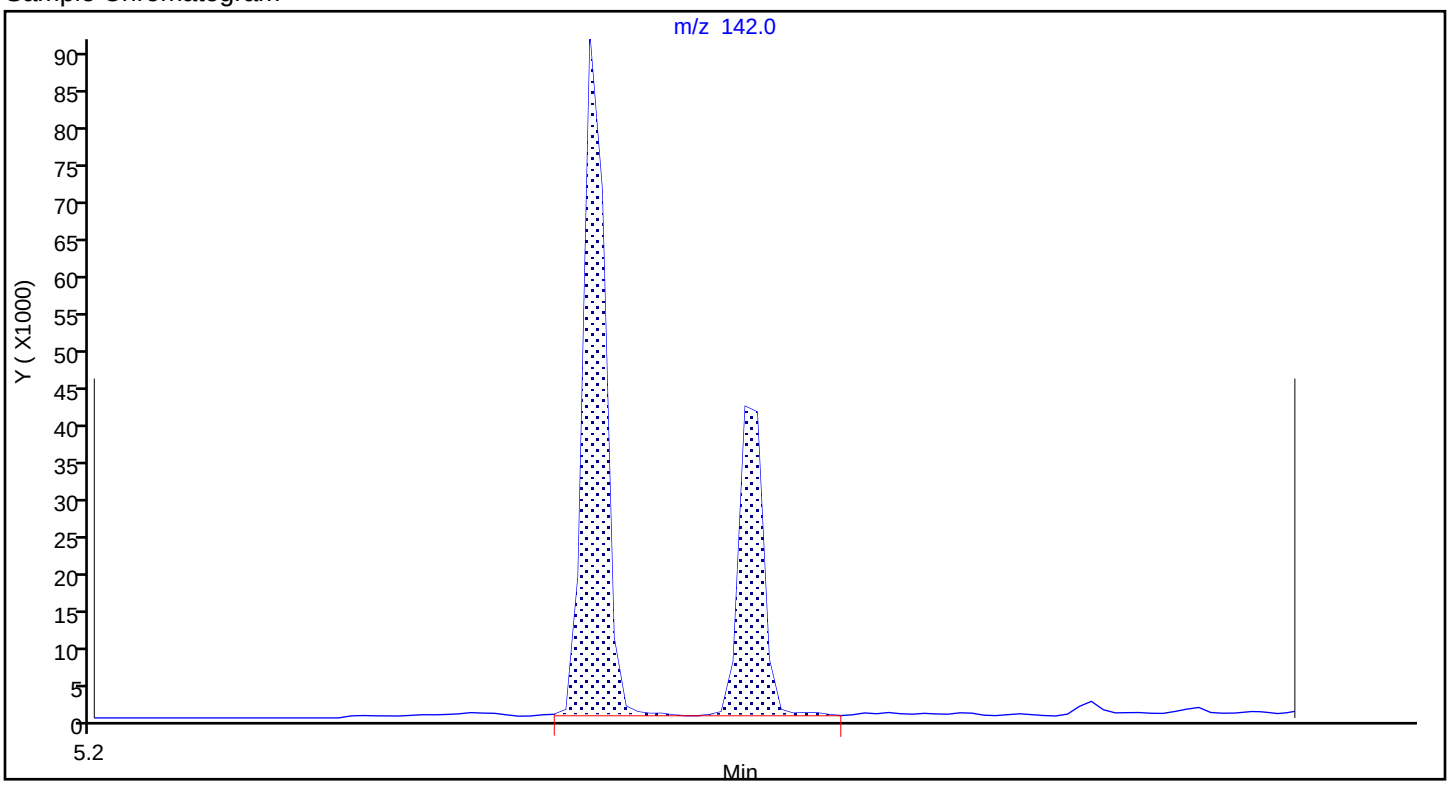
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



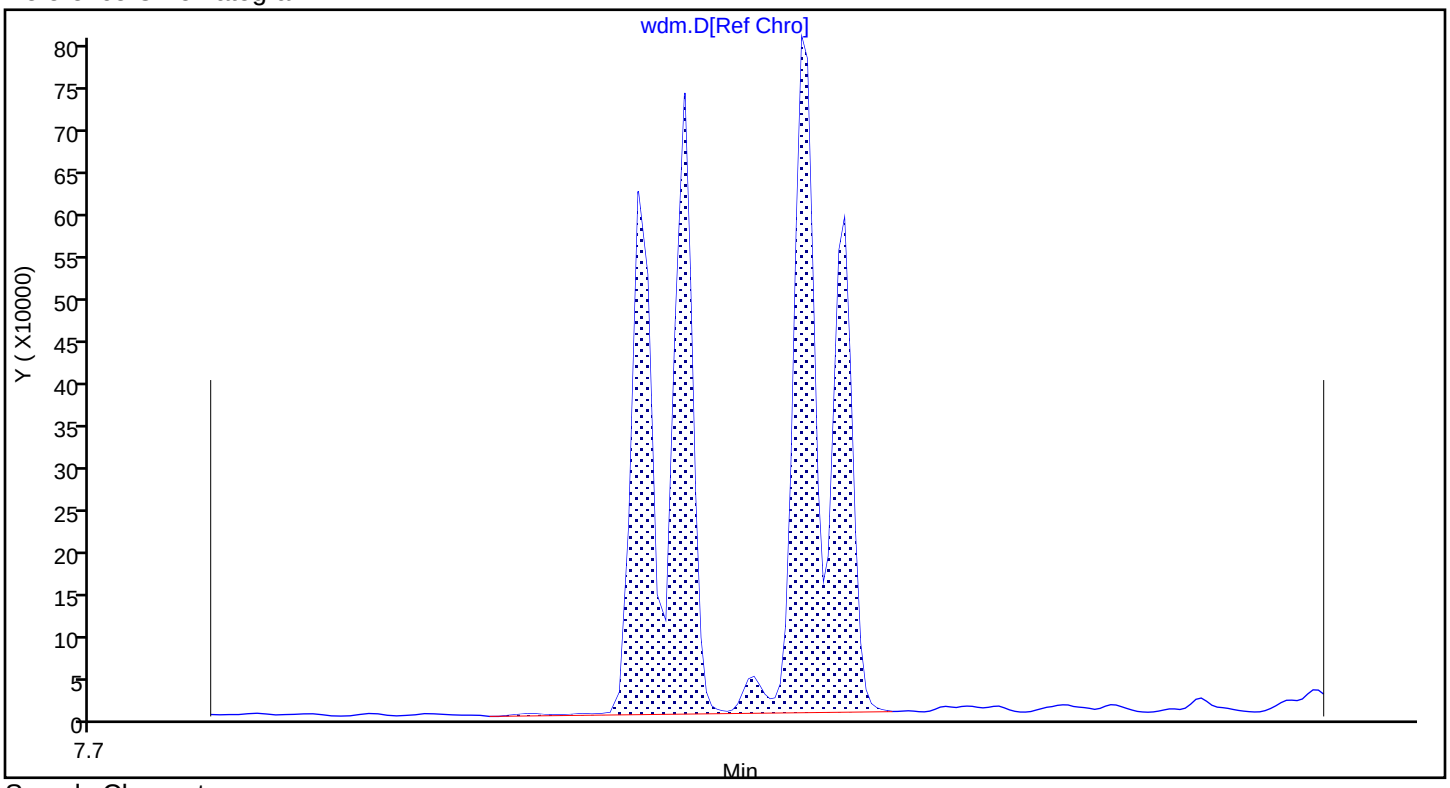
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

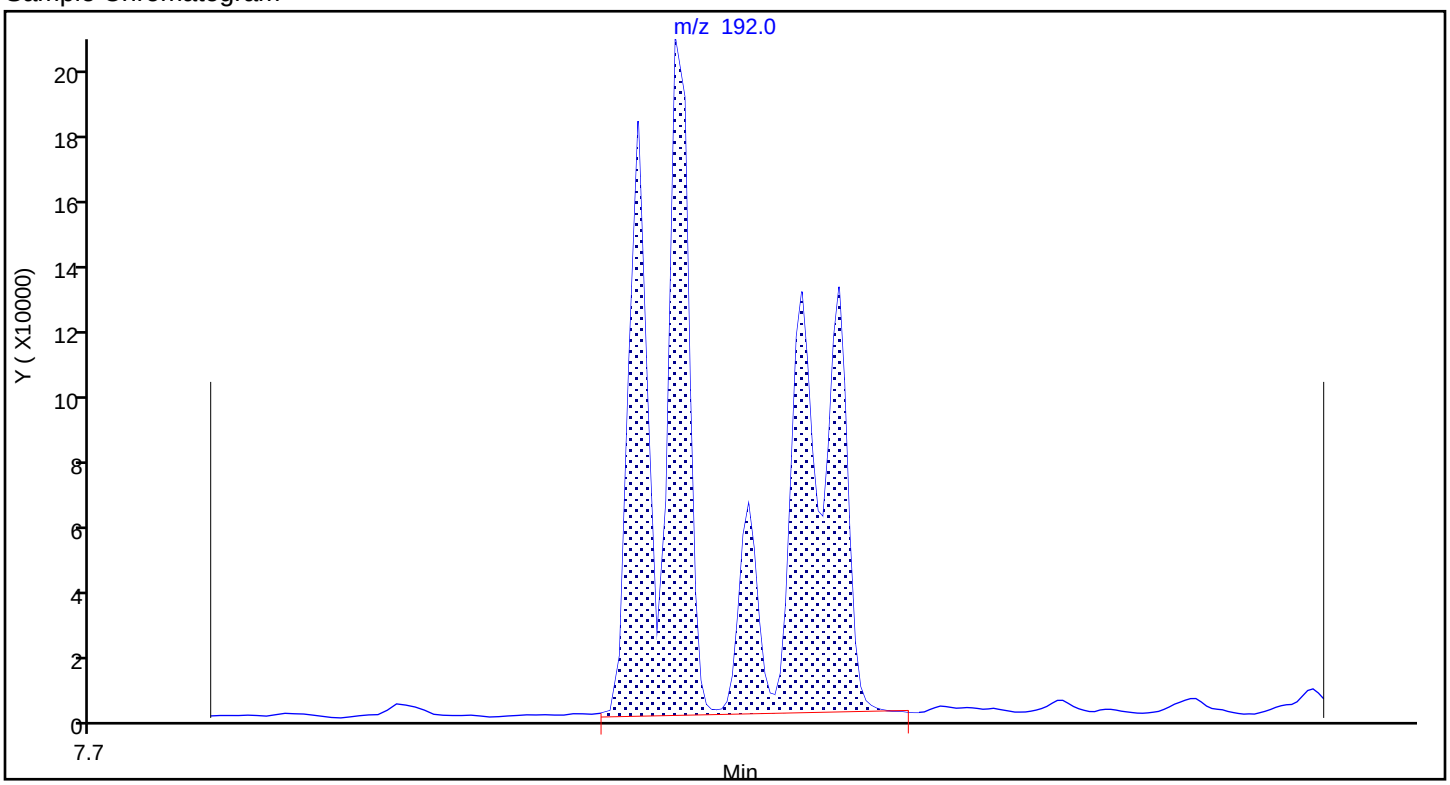
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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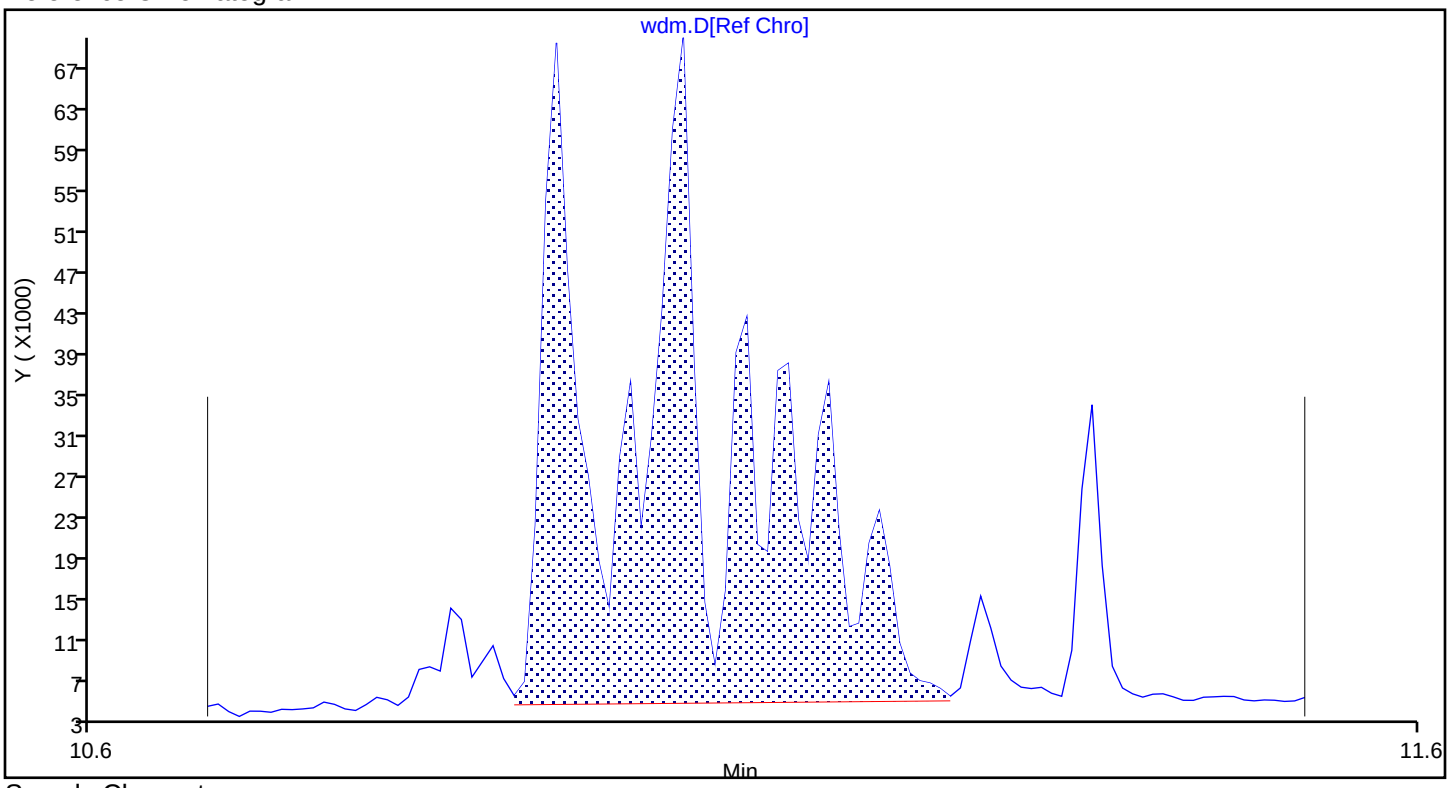
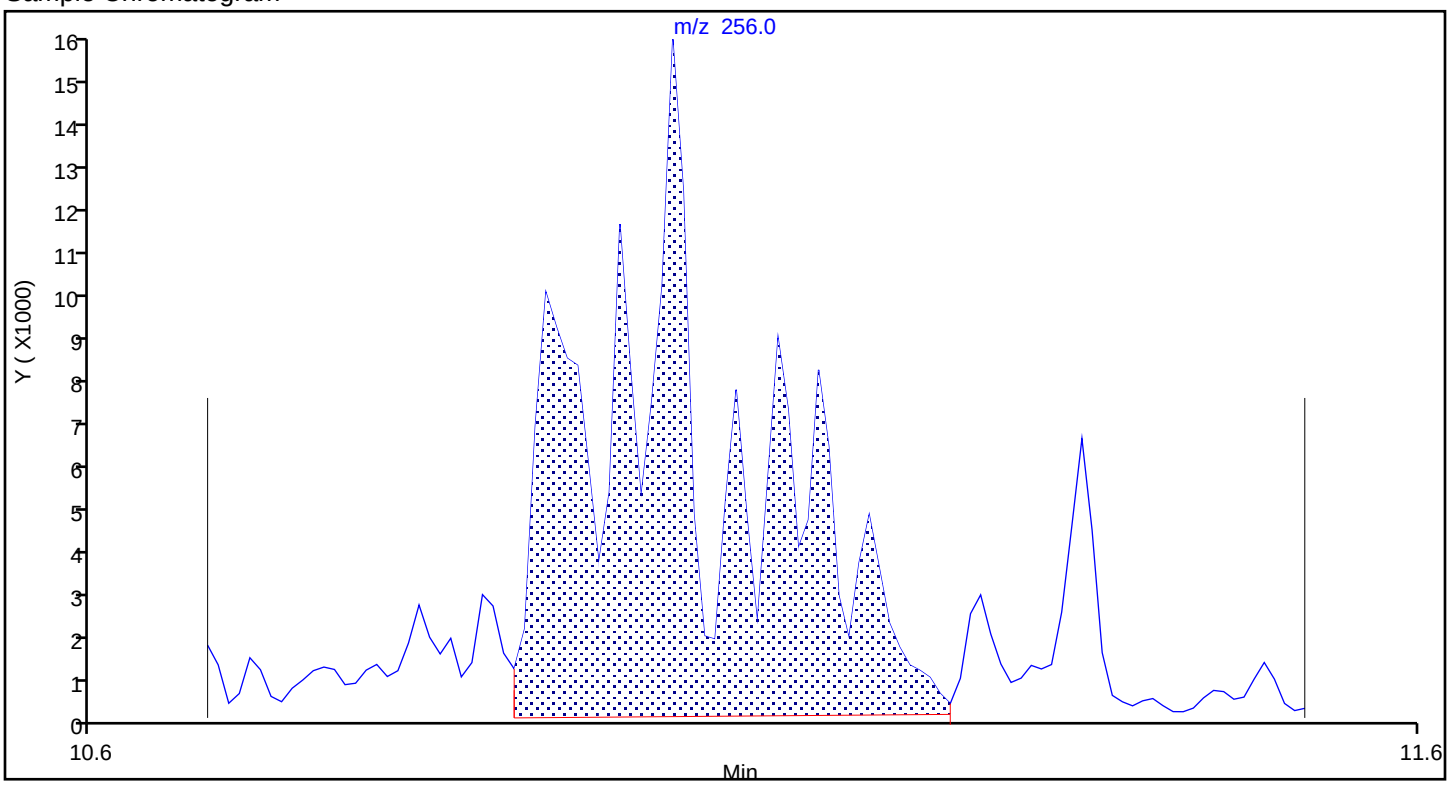
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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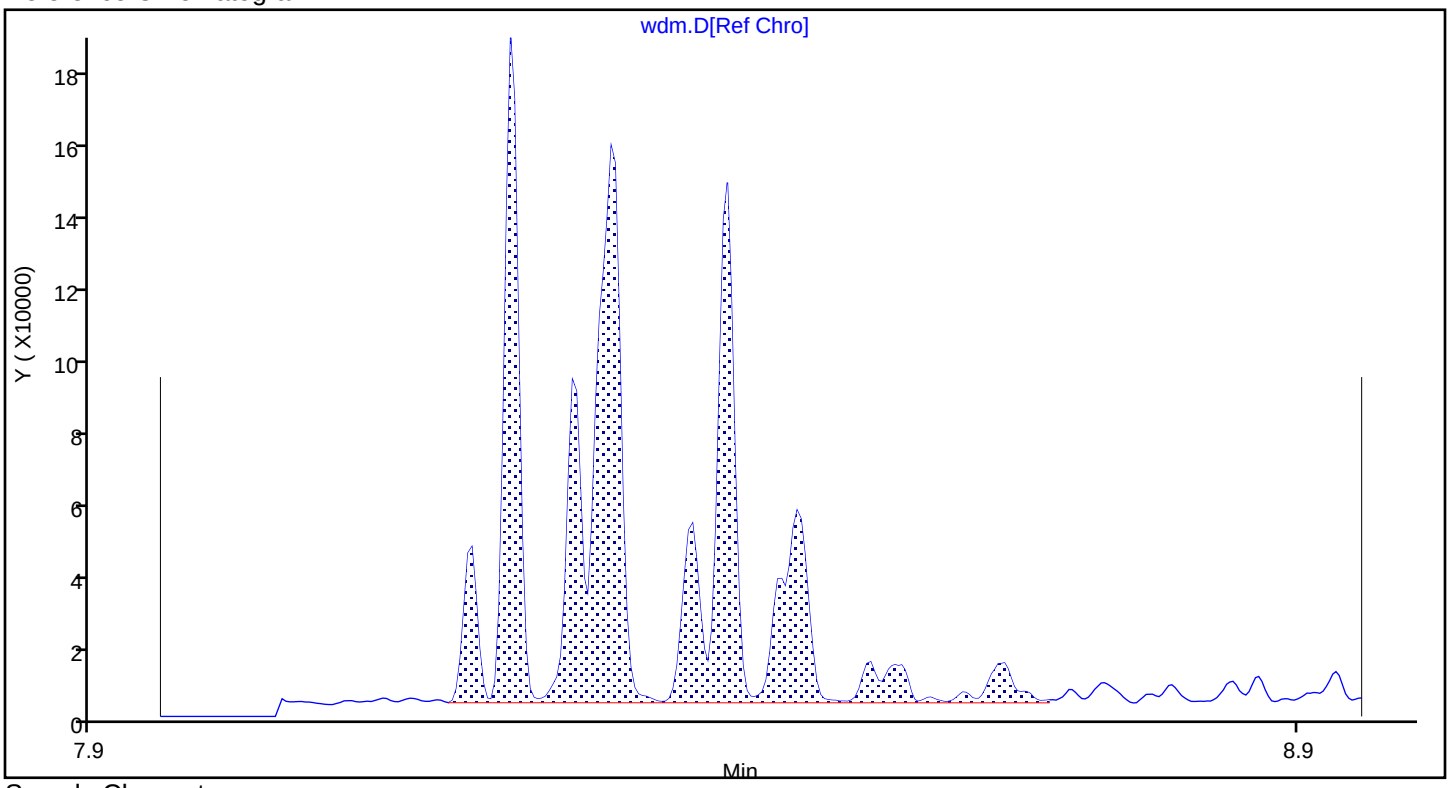
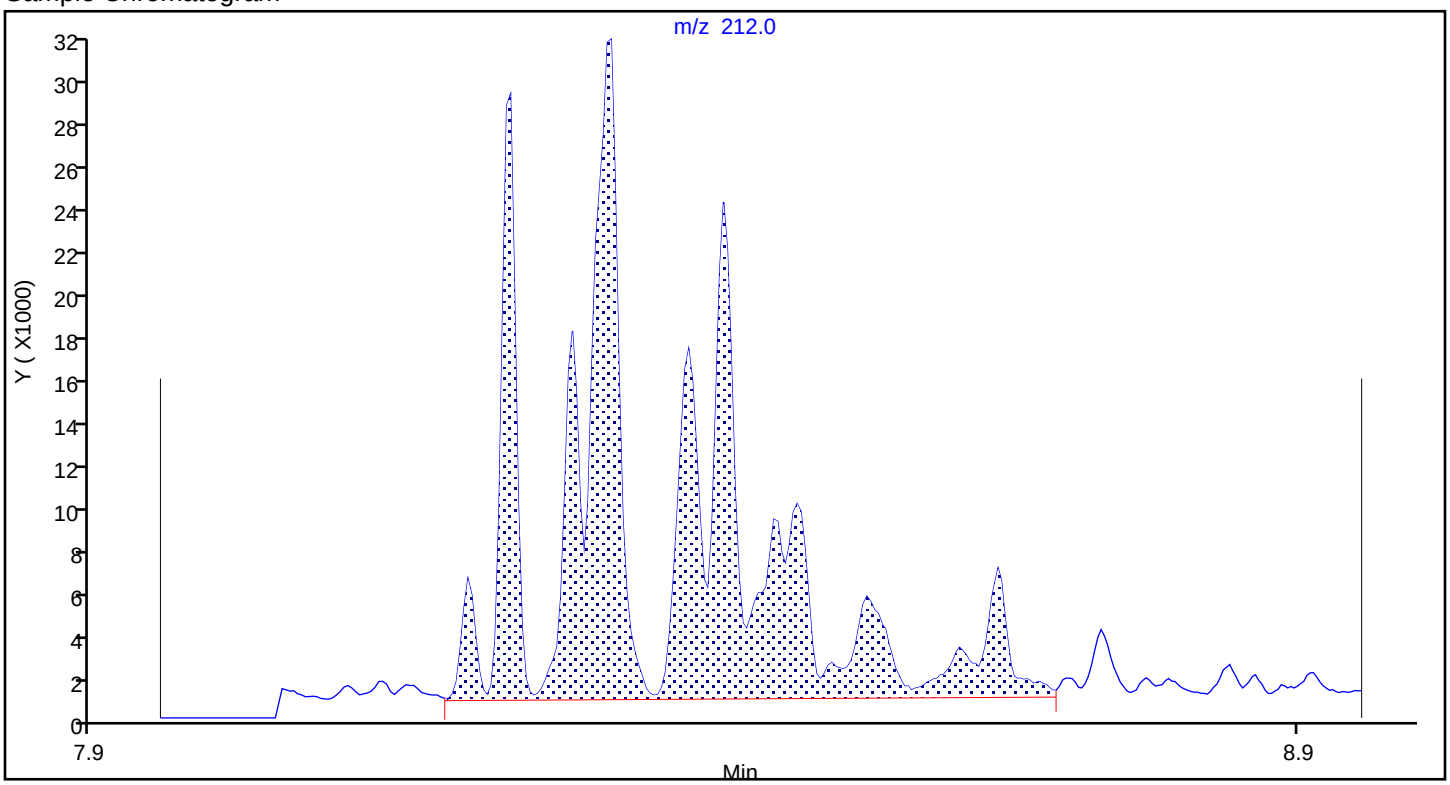
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



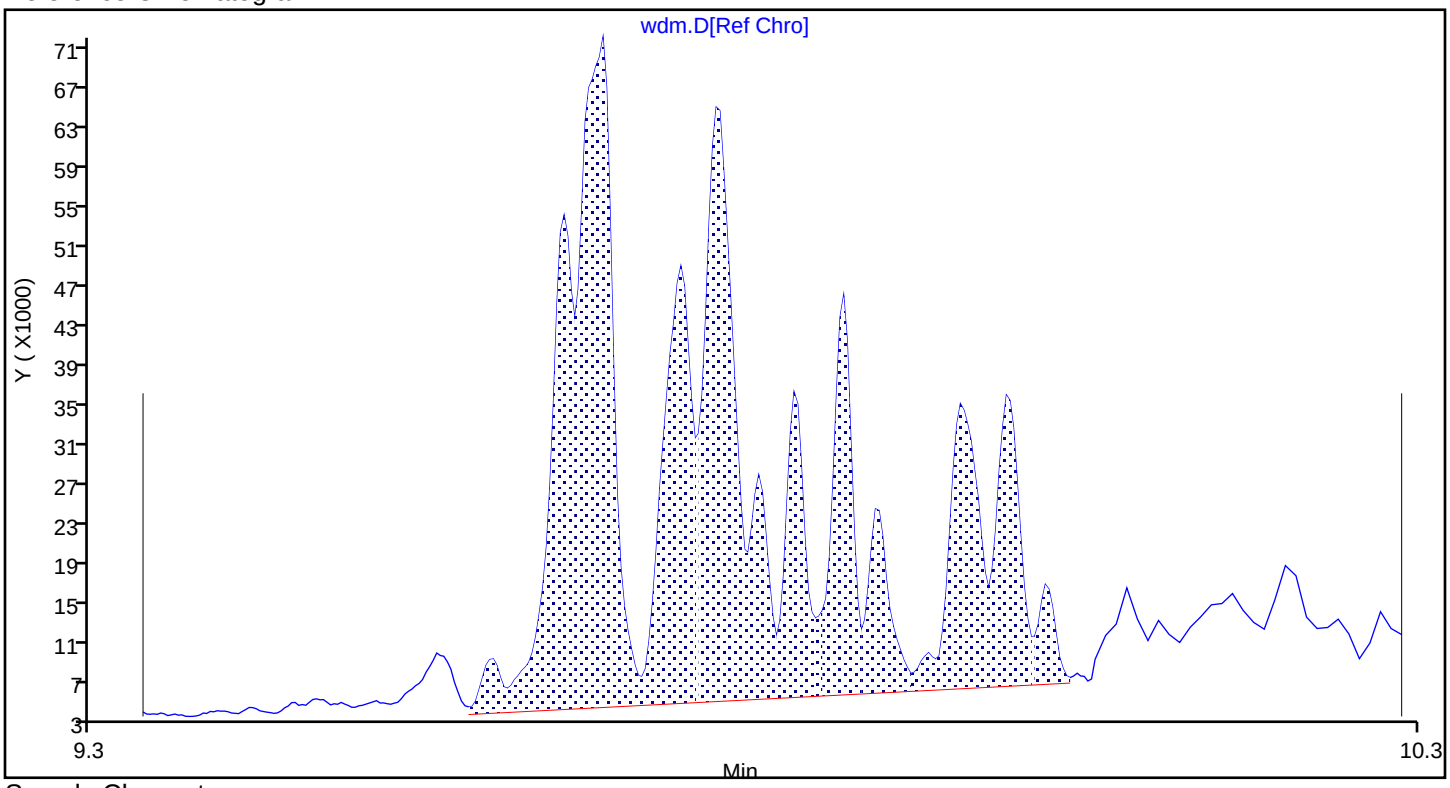
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

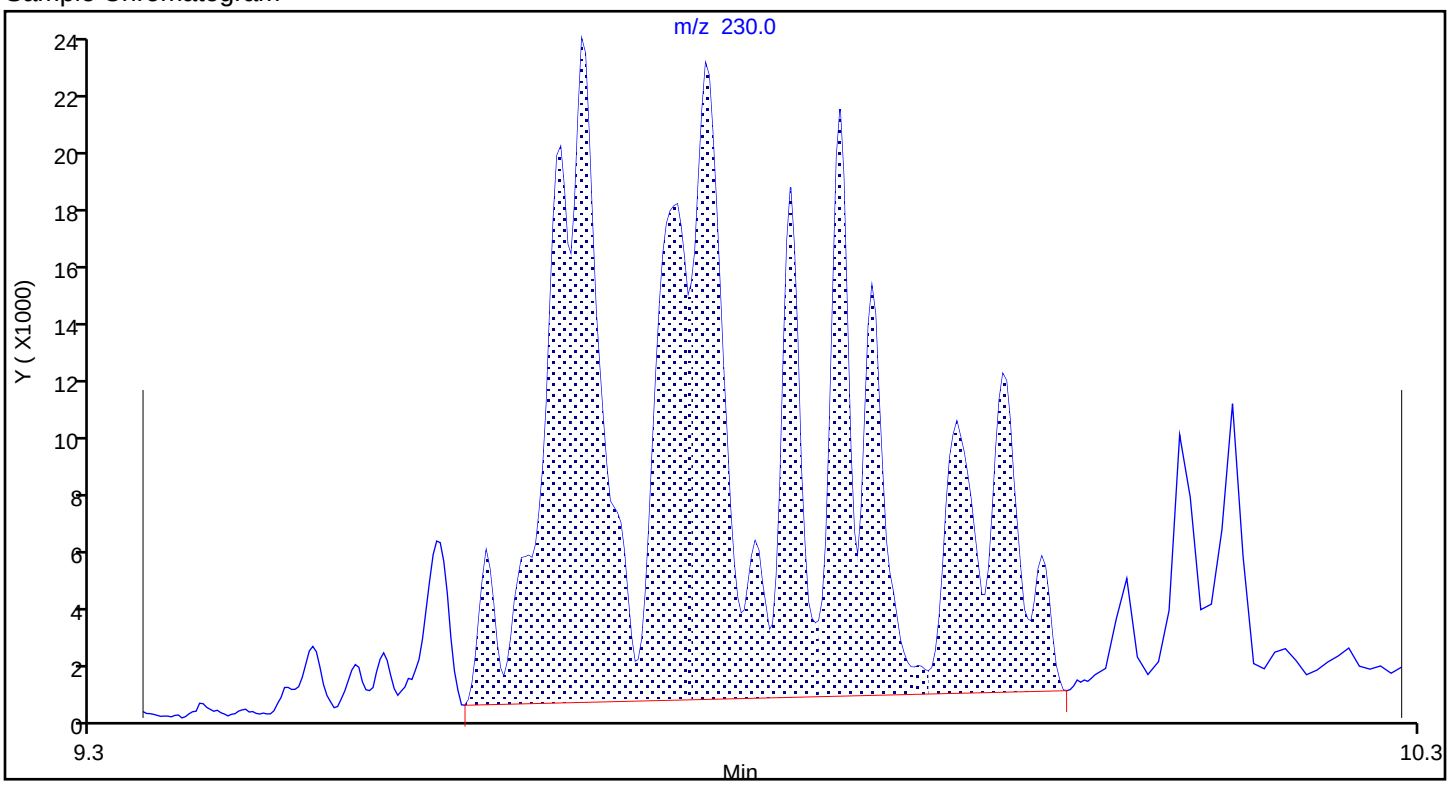
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



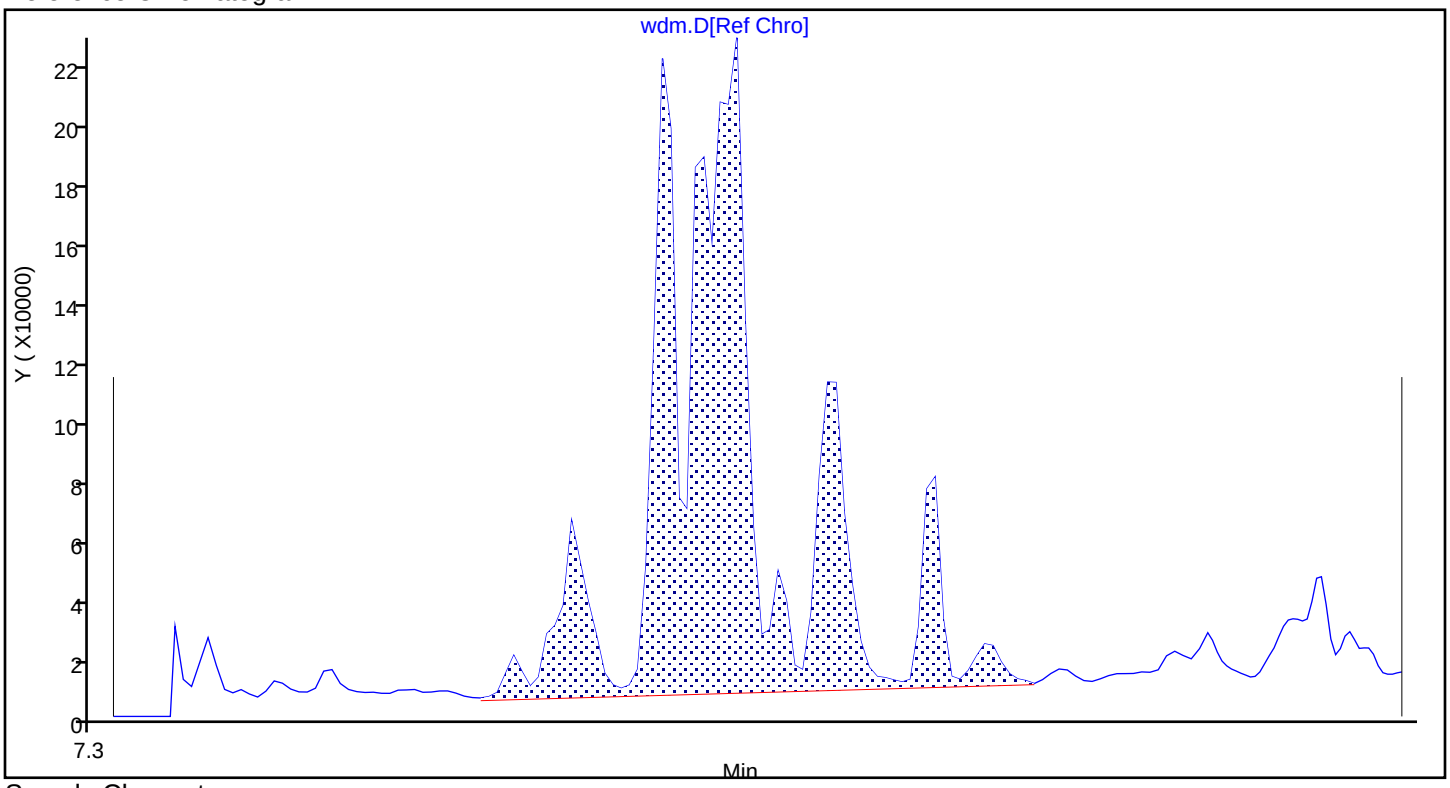
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

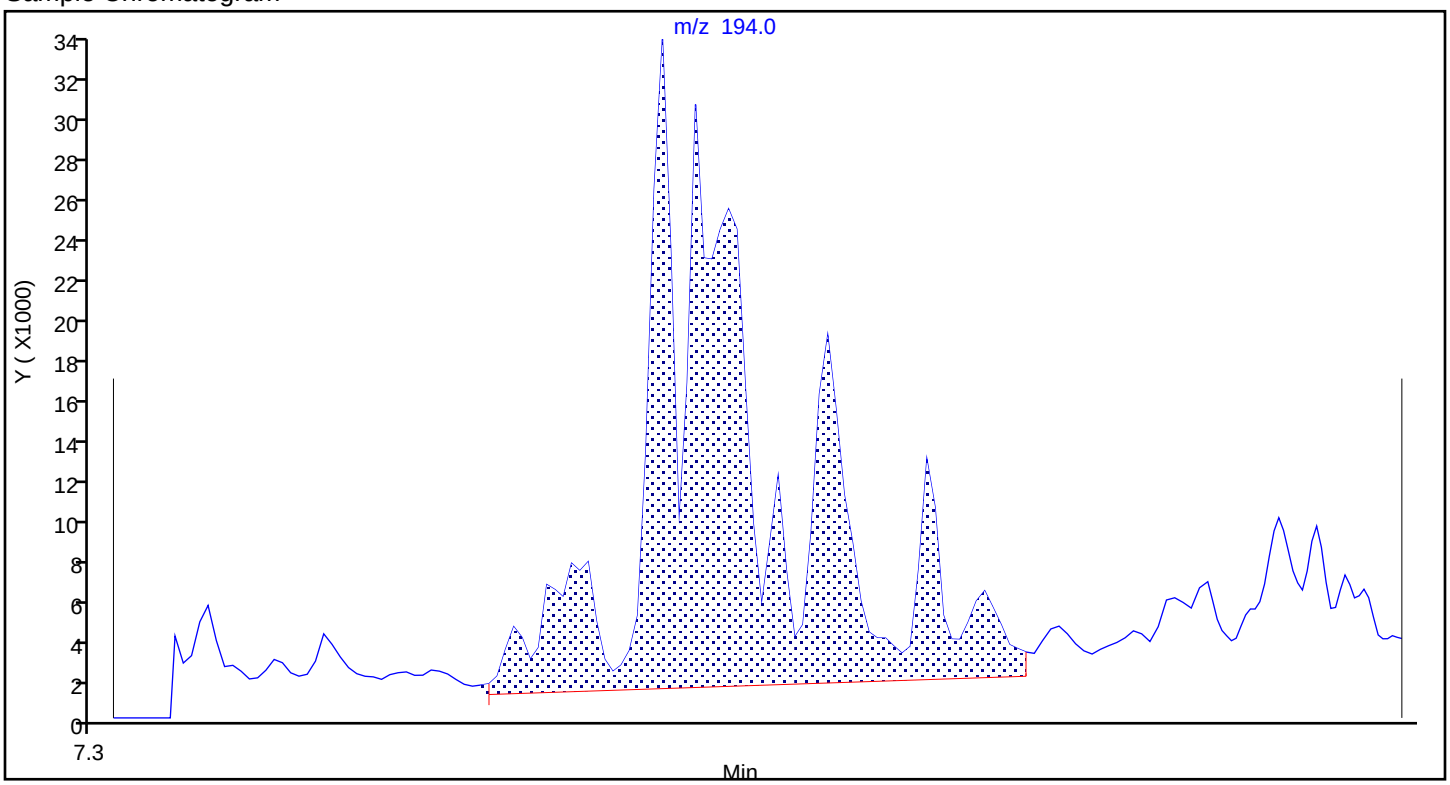
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



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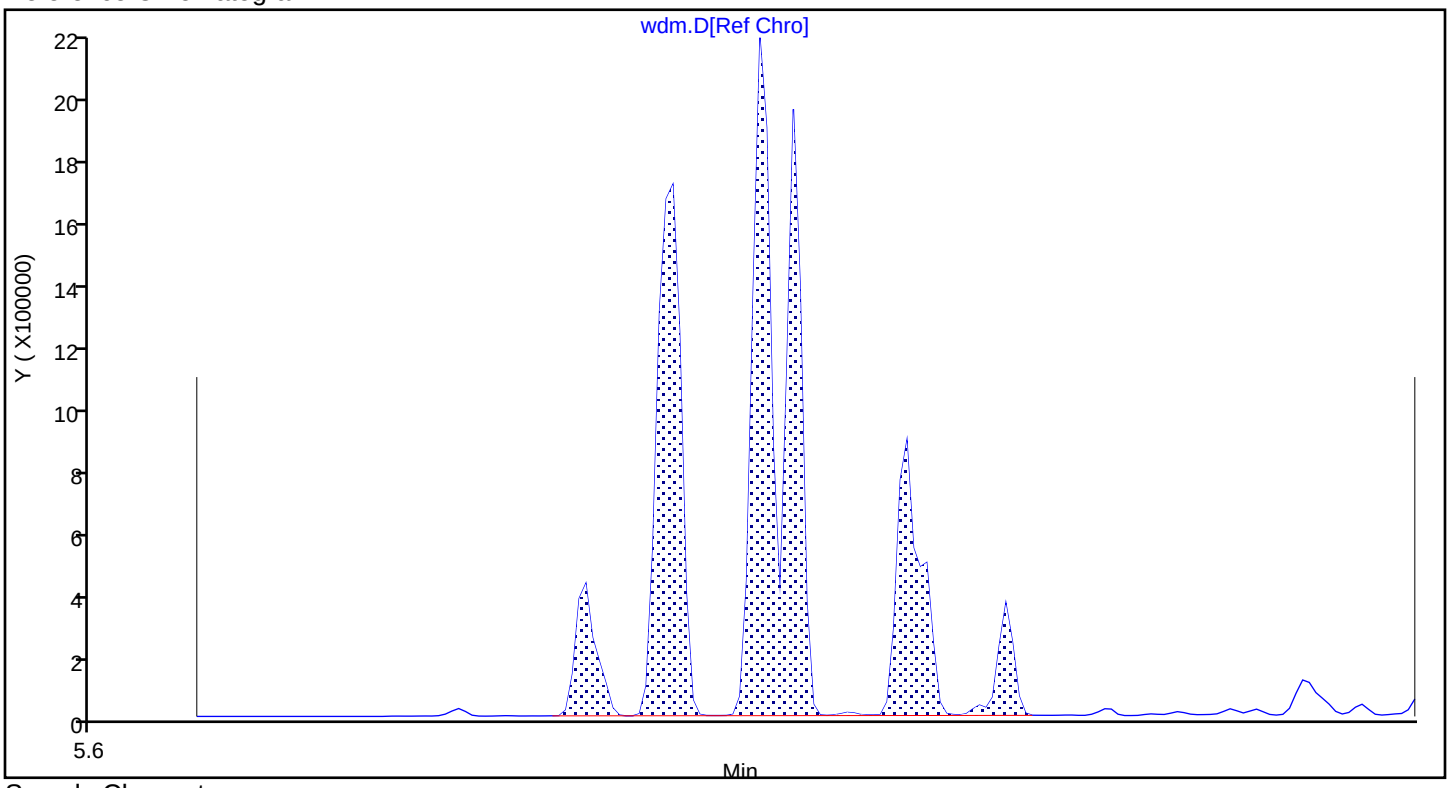
Eurofins TestAmerica, Knoxville

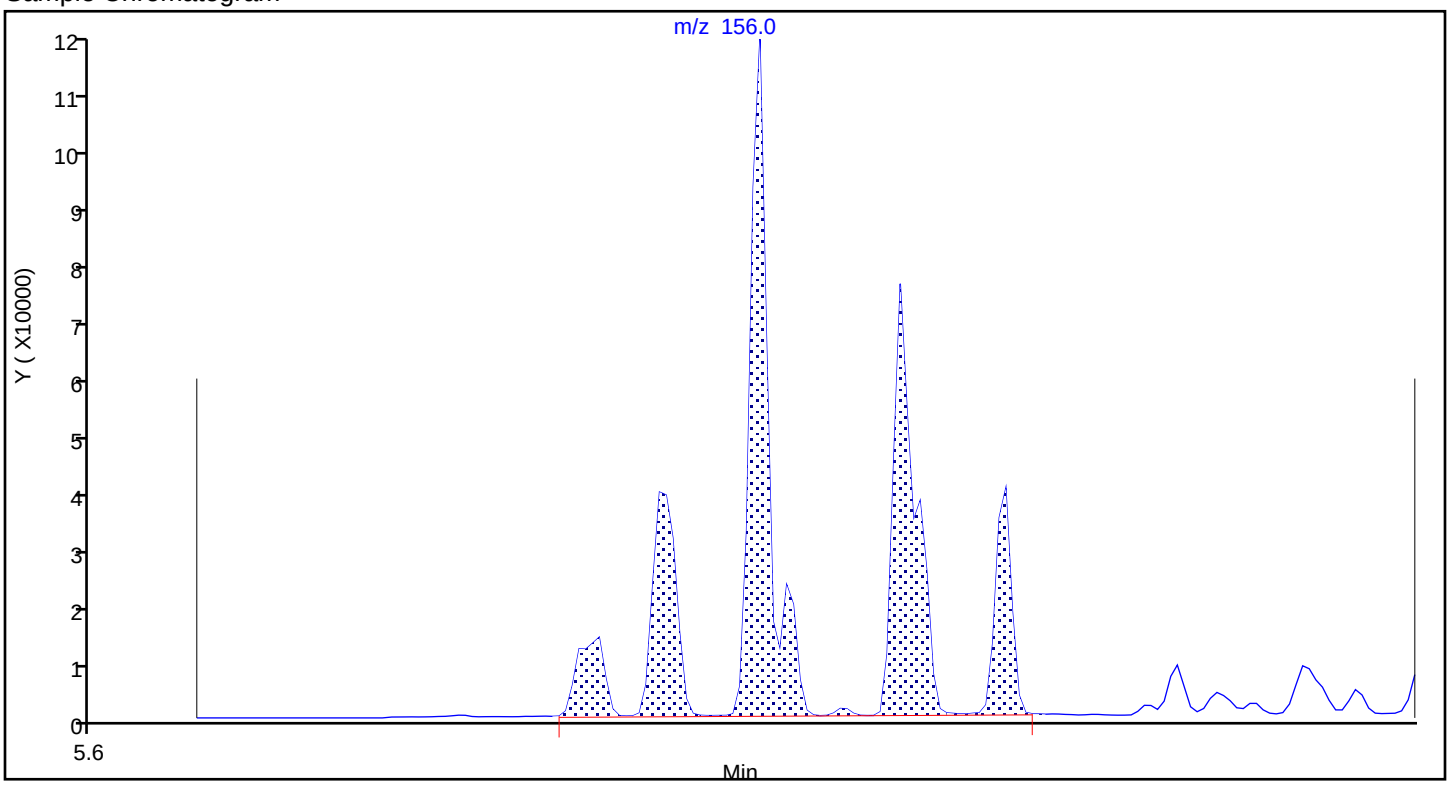
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



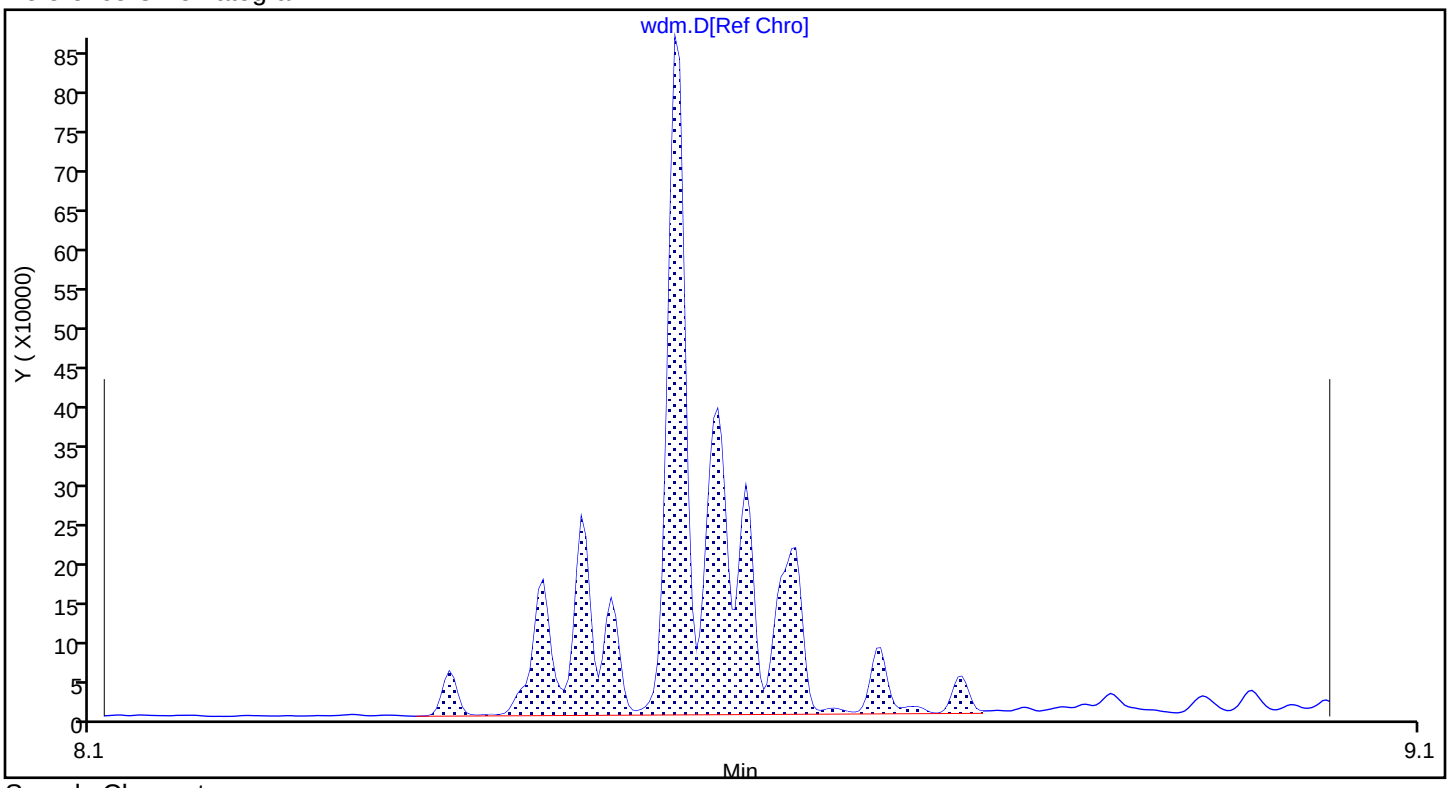
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

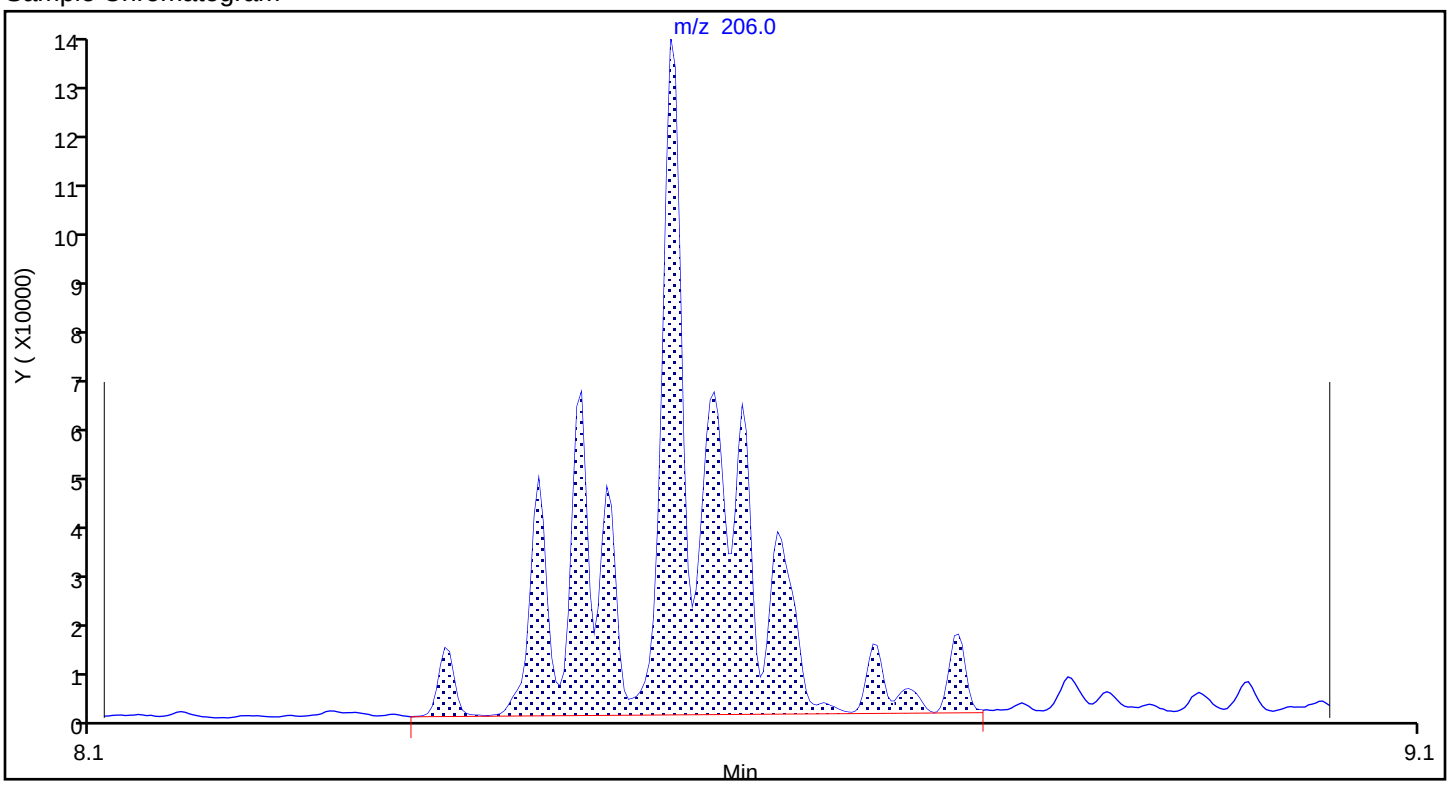
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



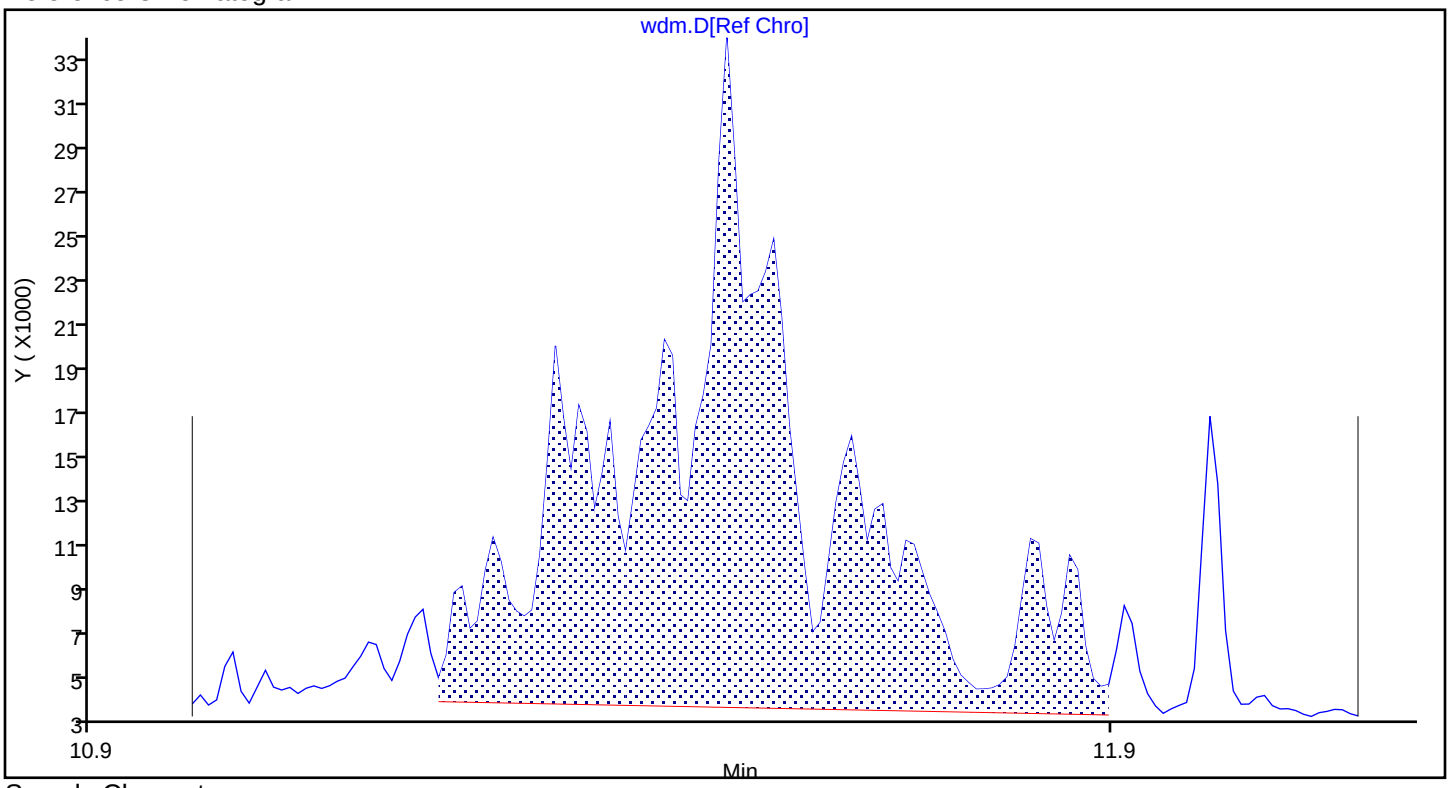
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

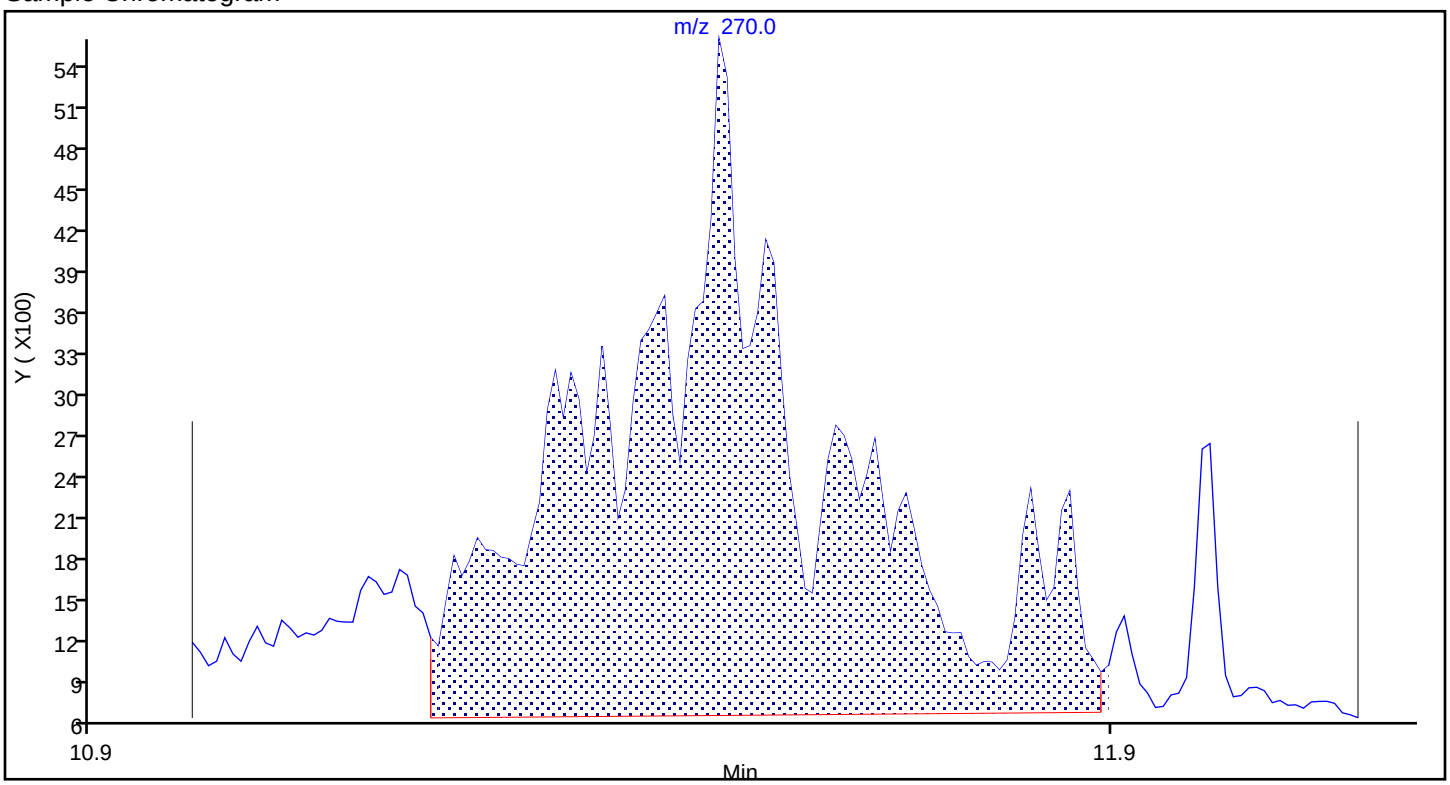
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



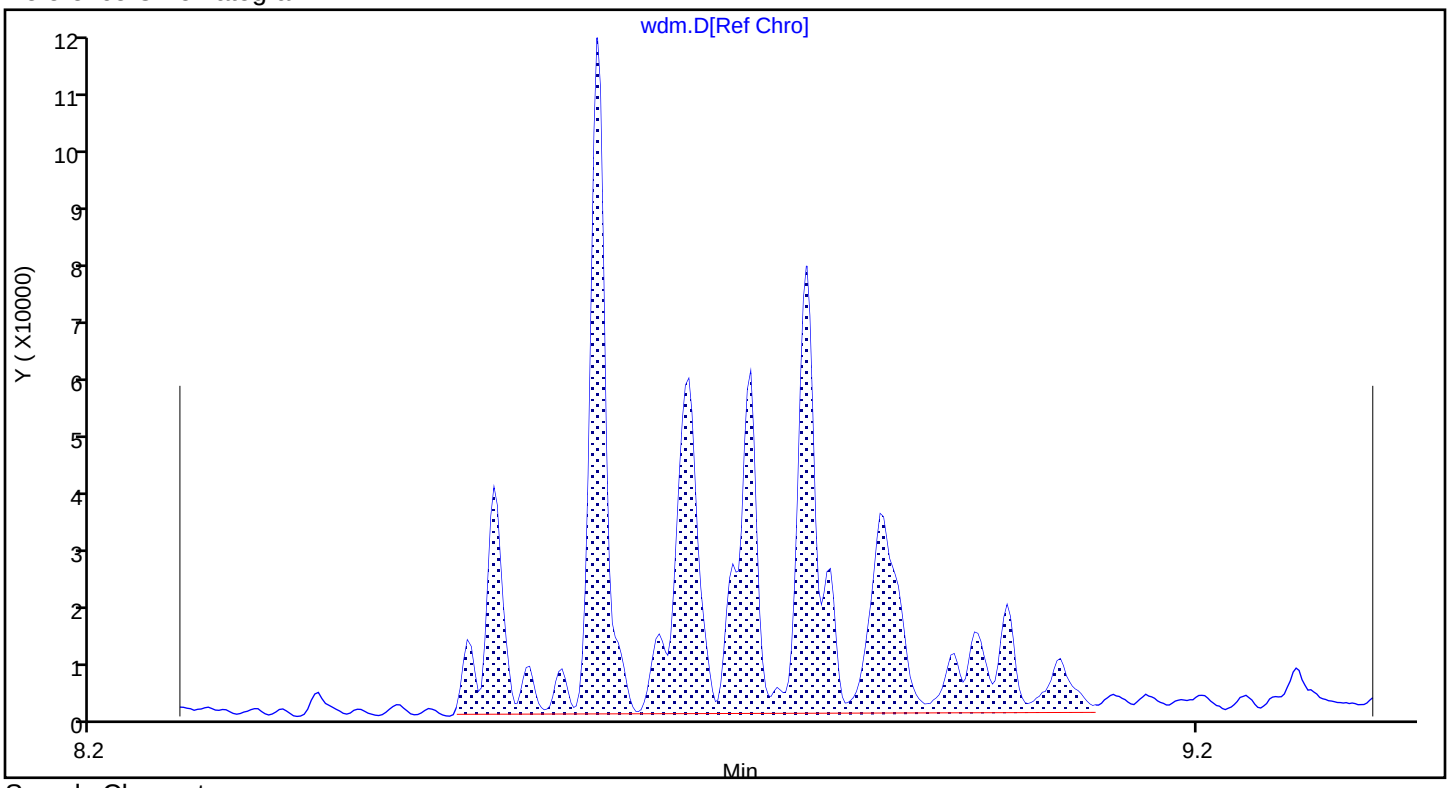
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

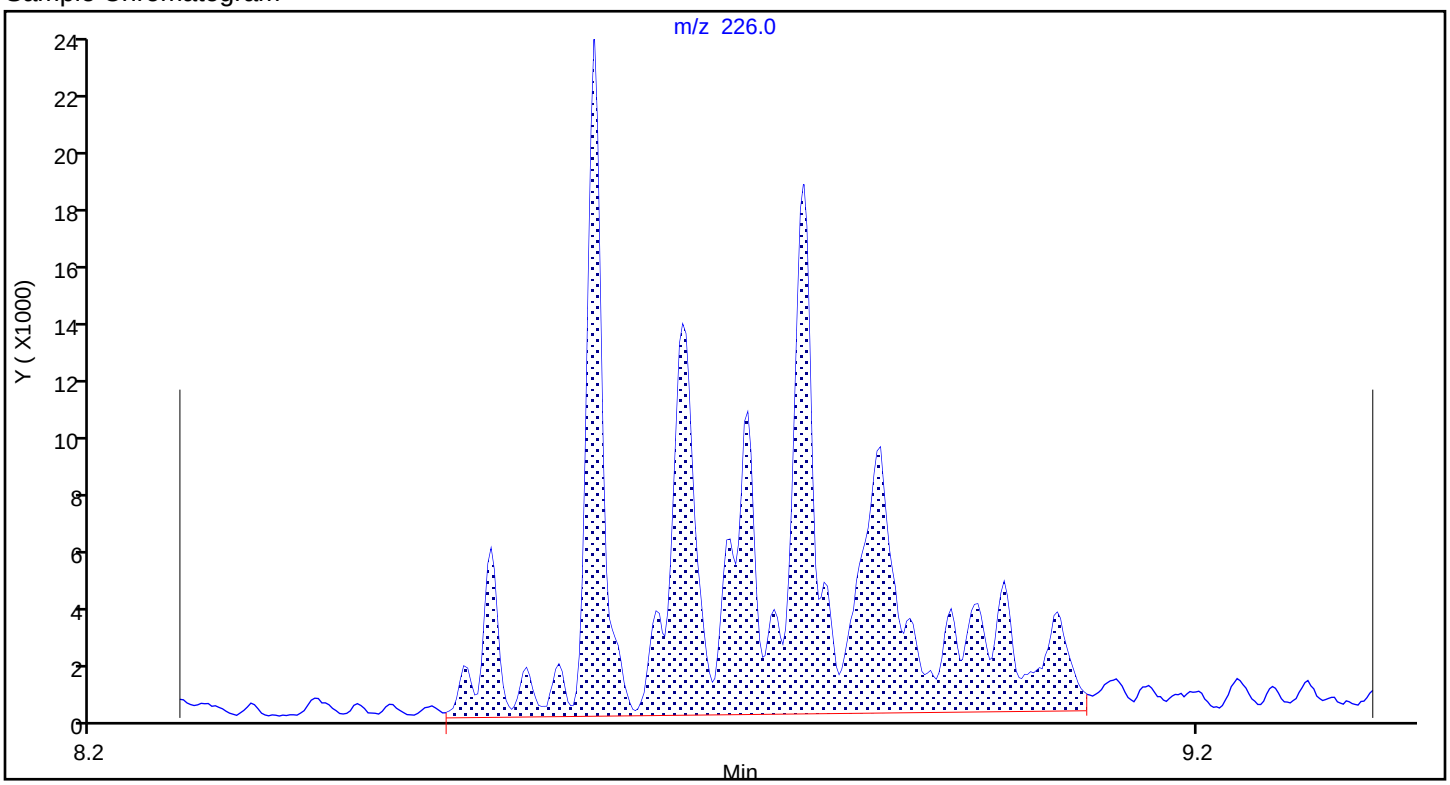
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



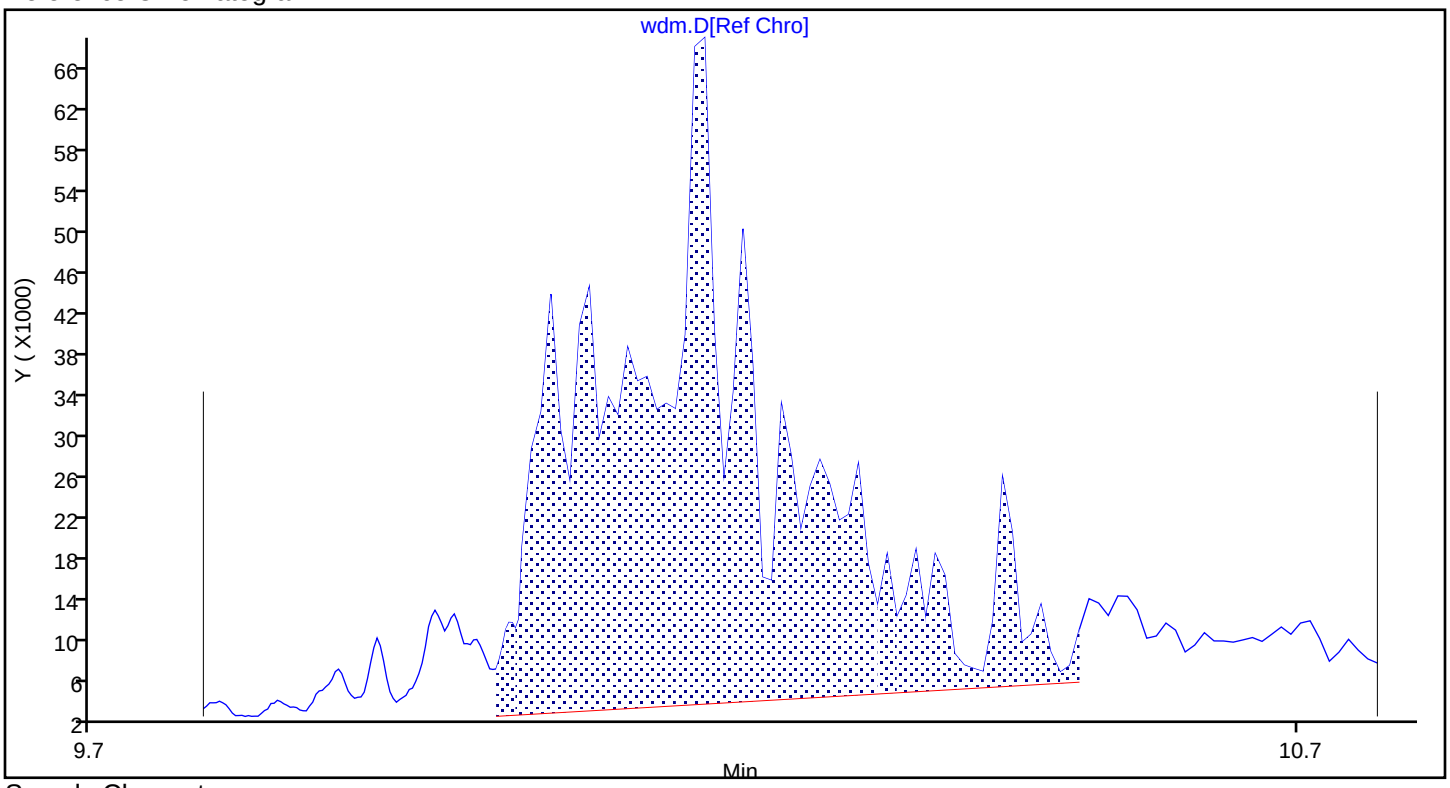
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

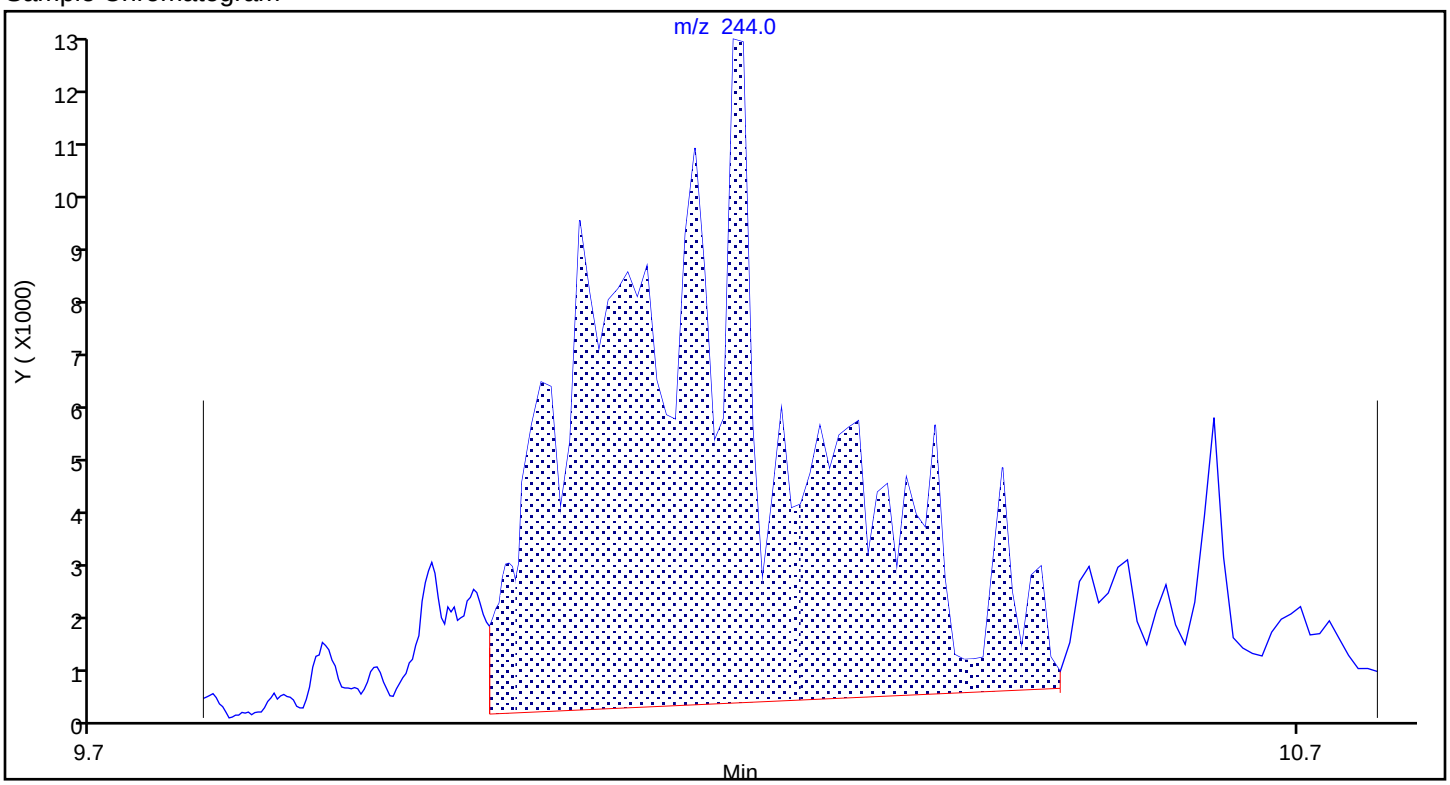
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



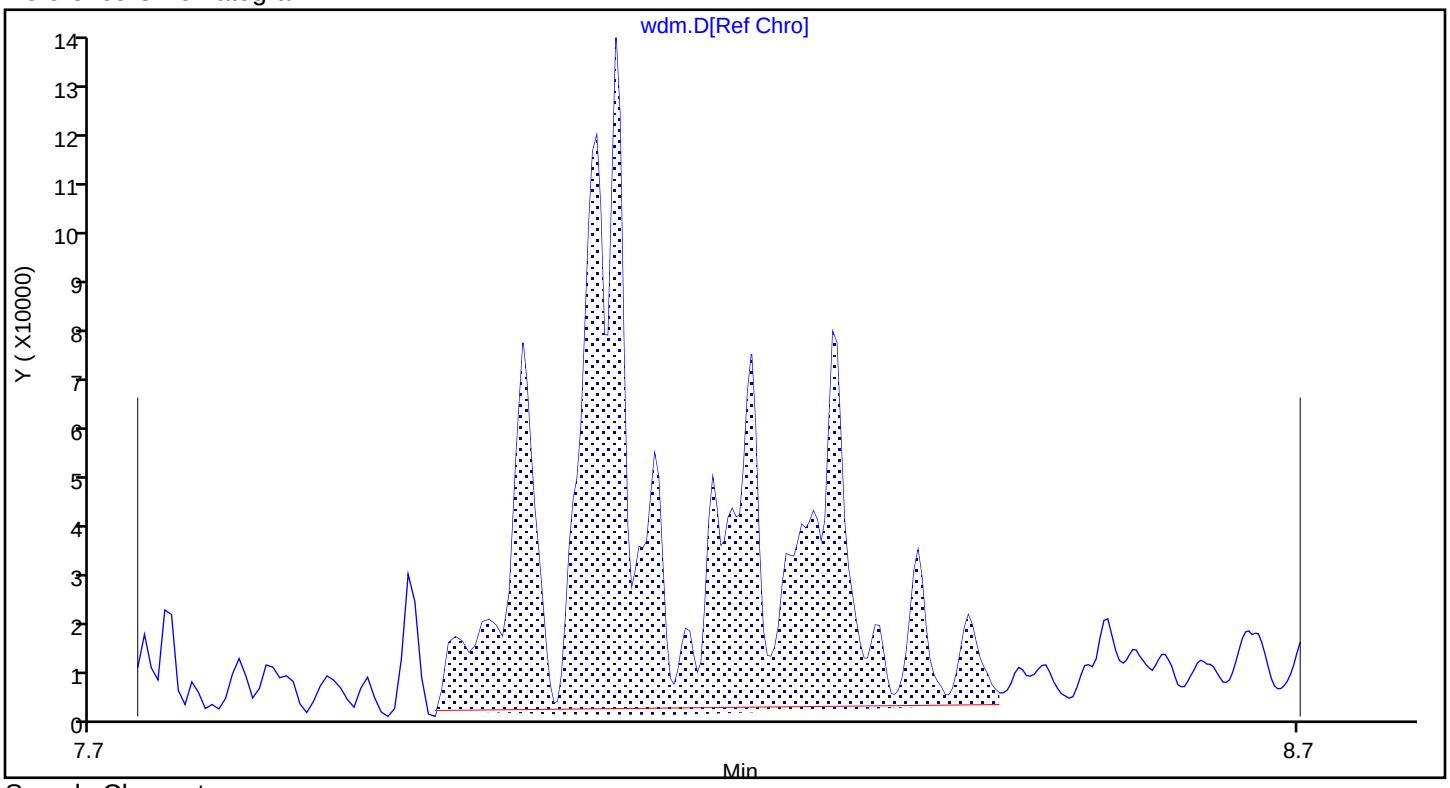
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

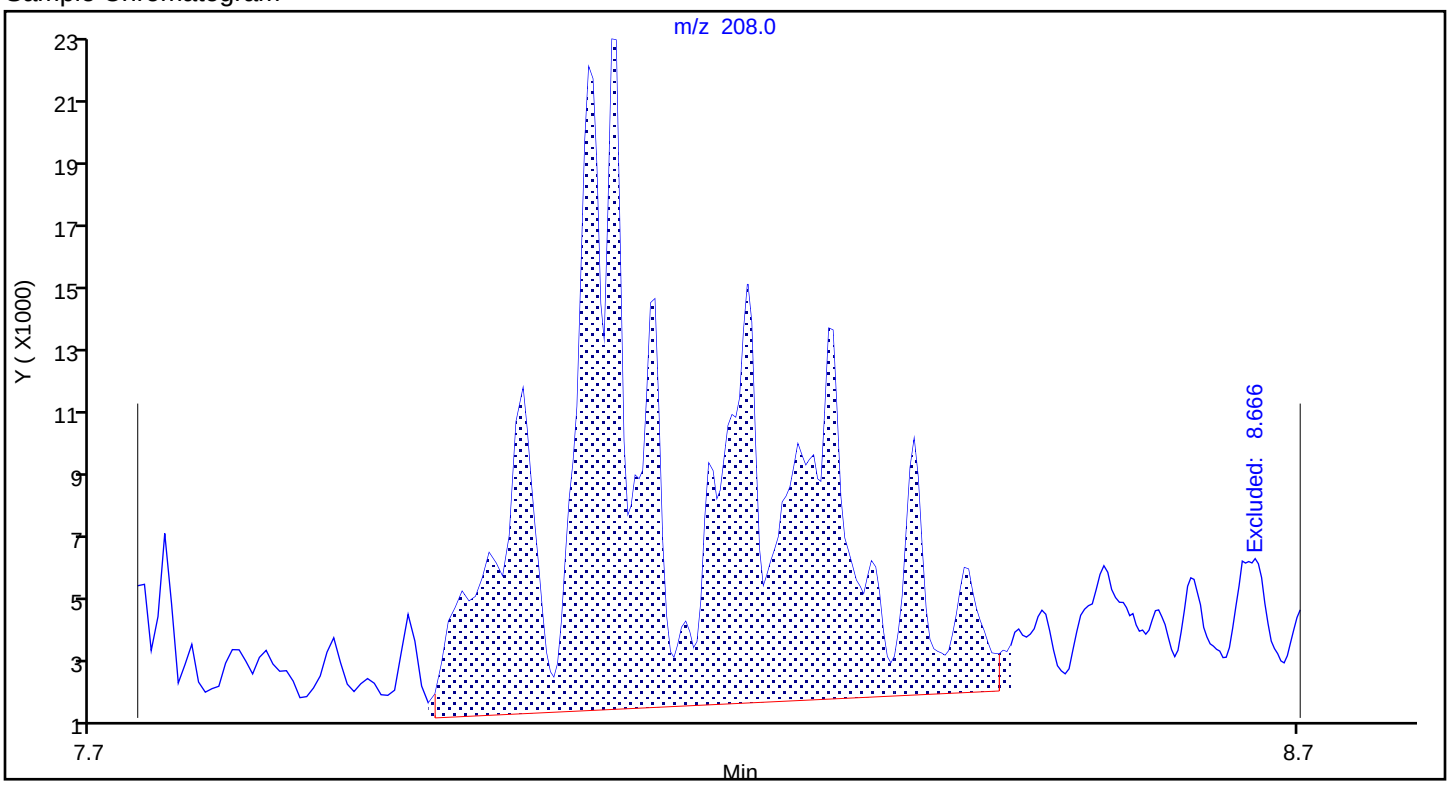
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



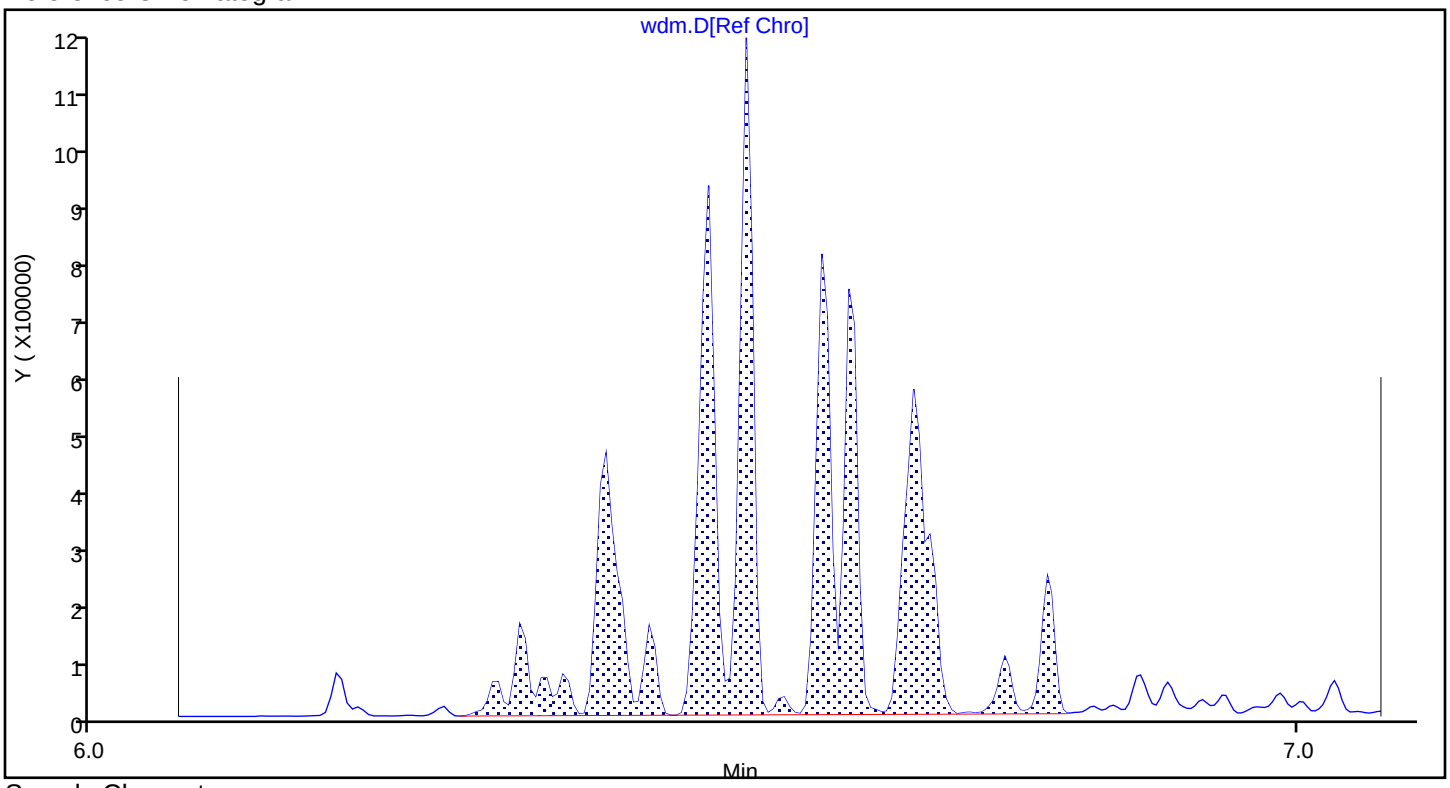
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

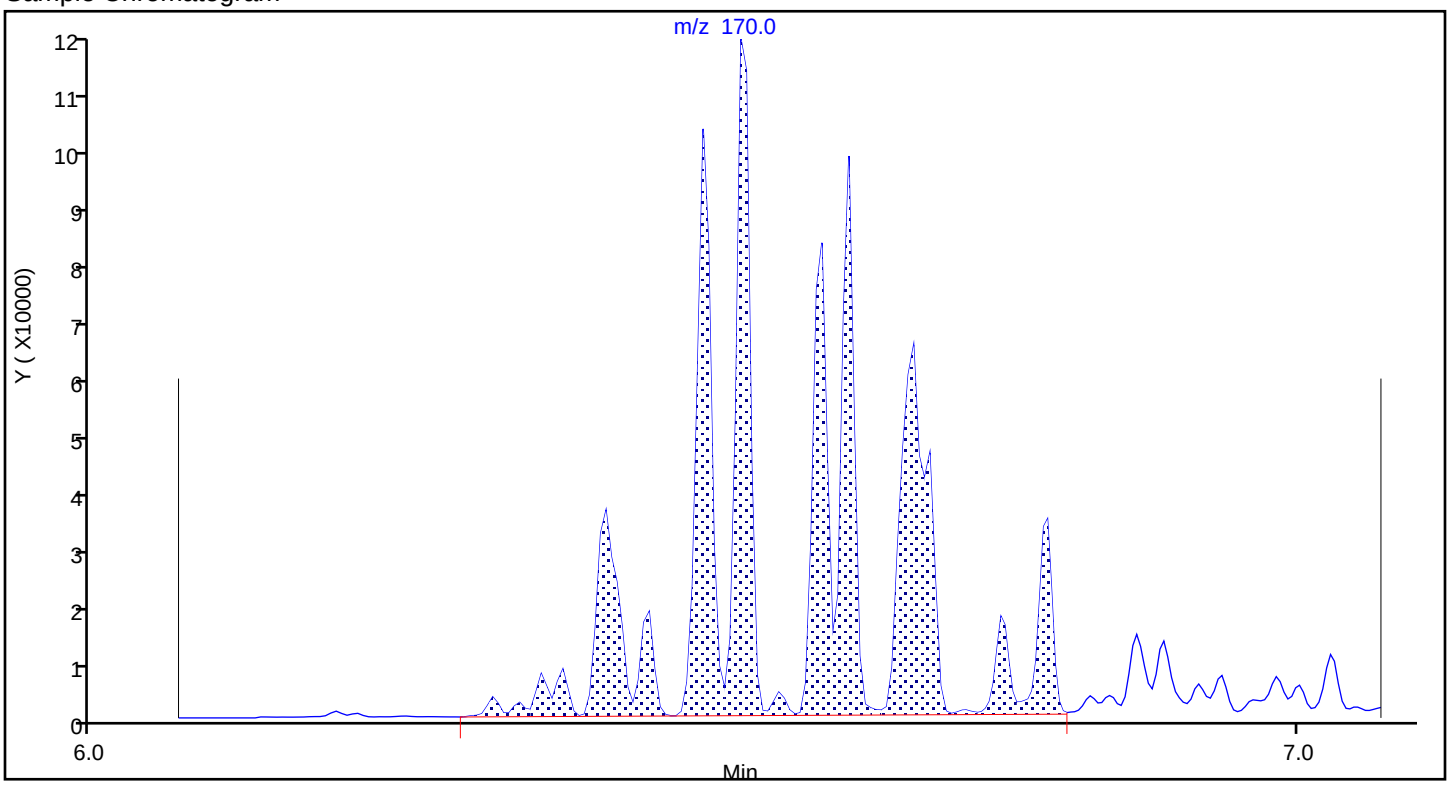
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



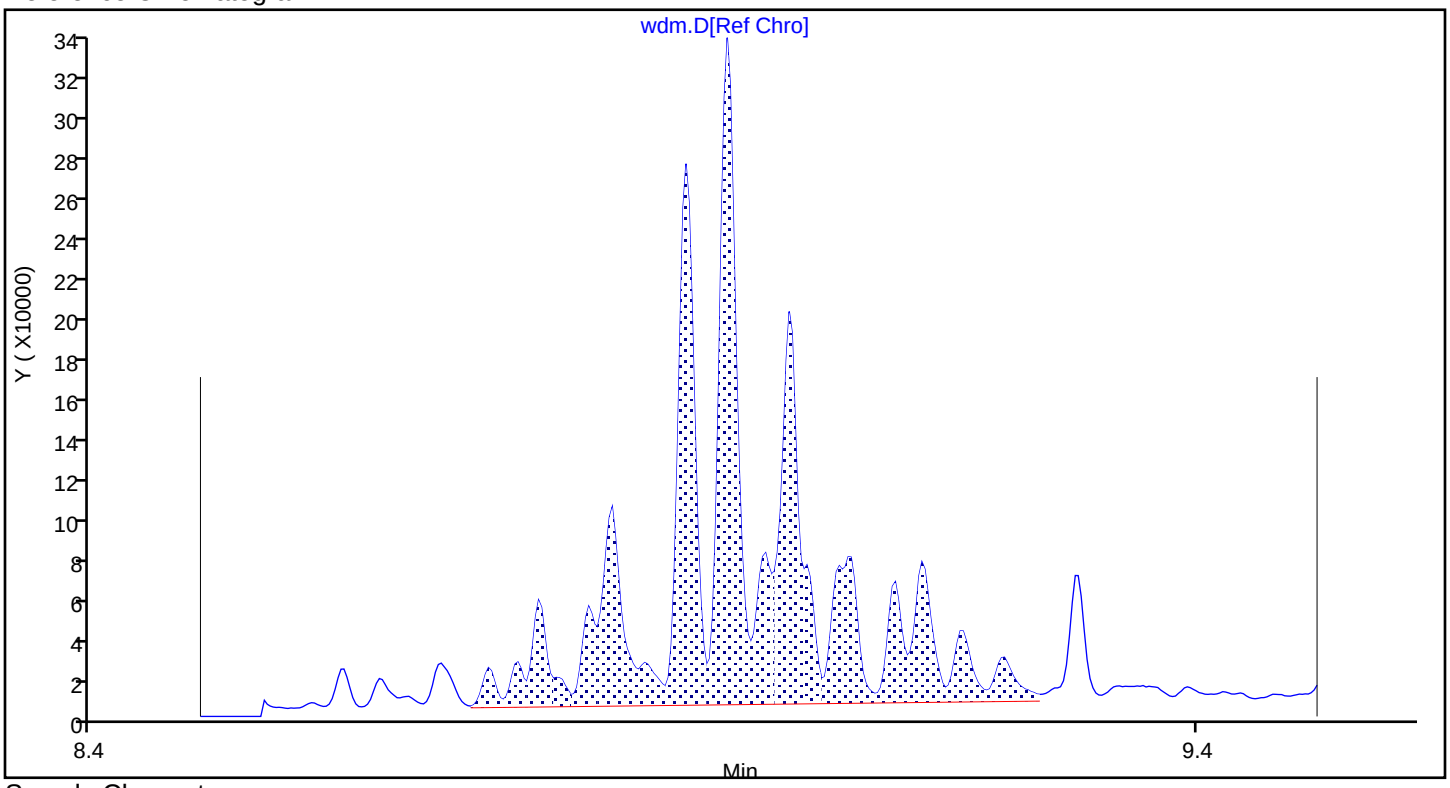
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

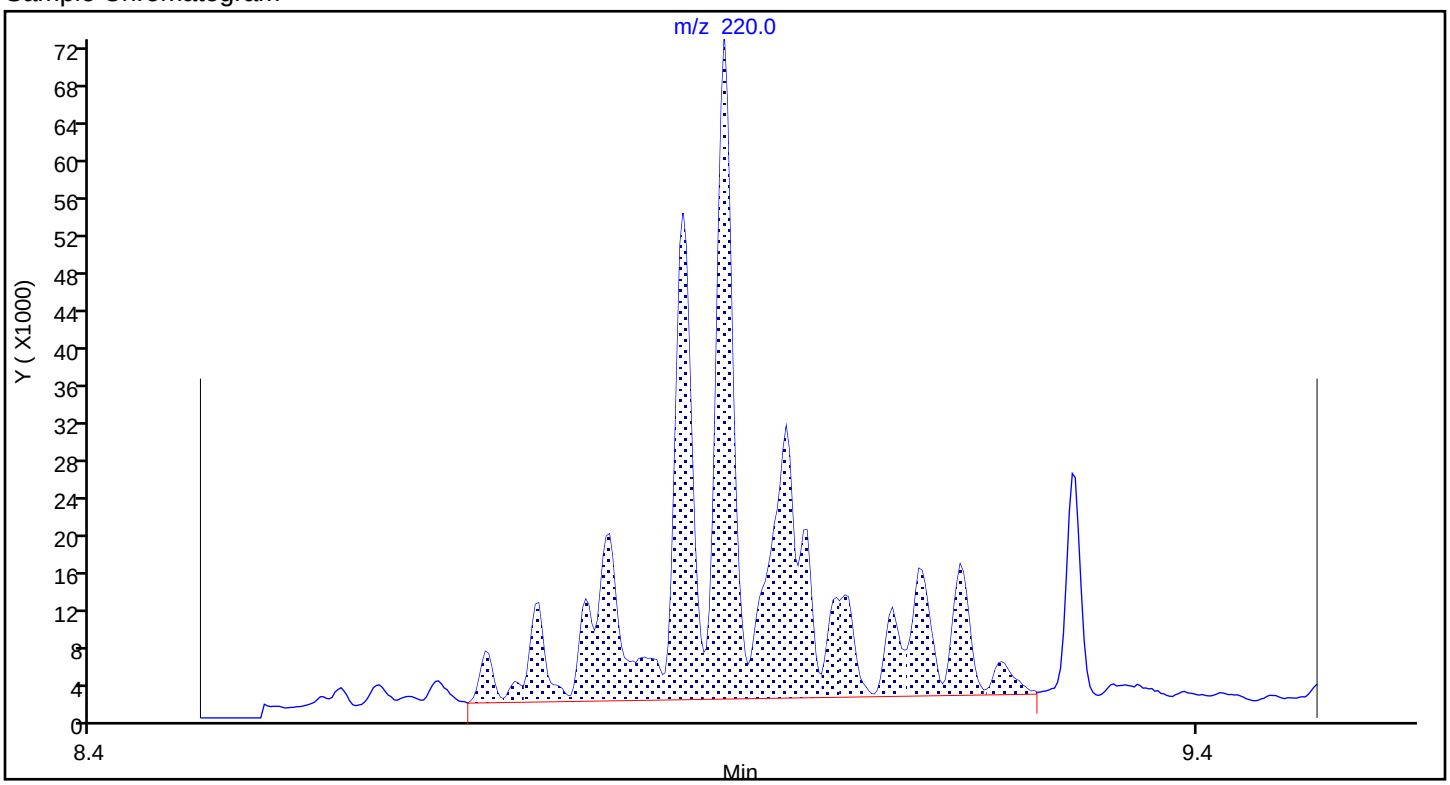
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



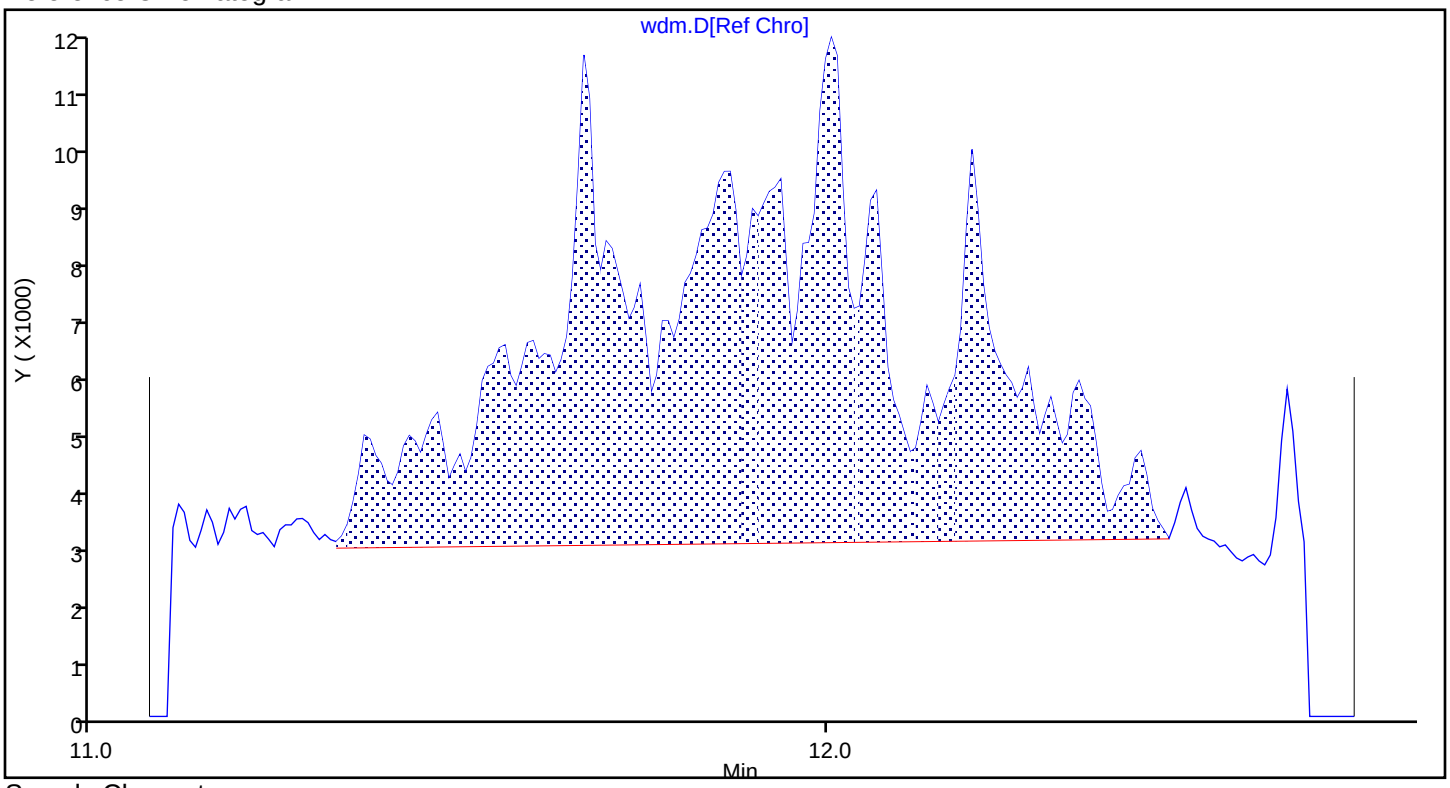
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

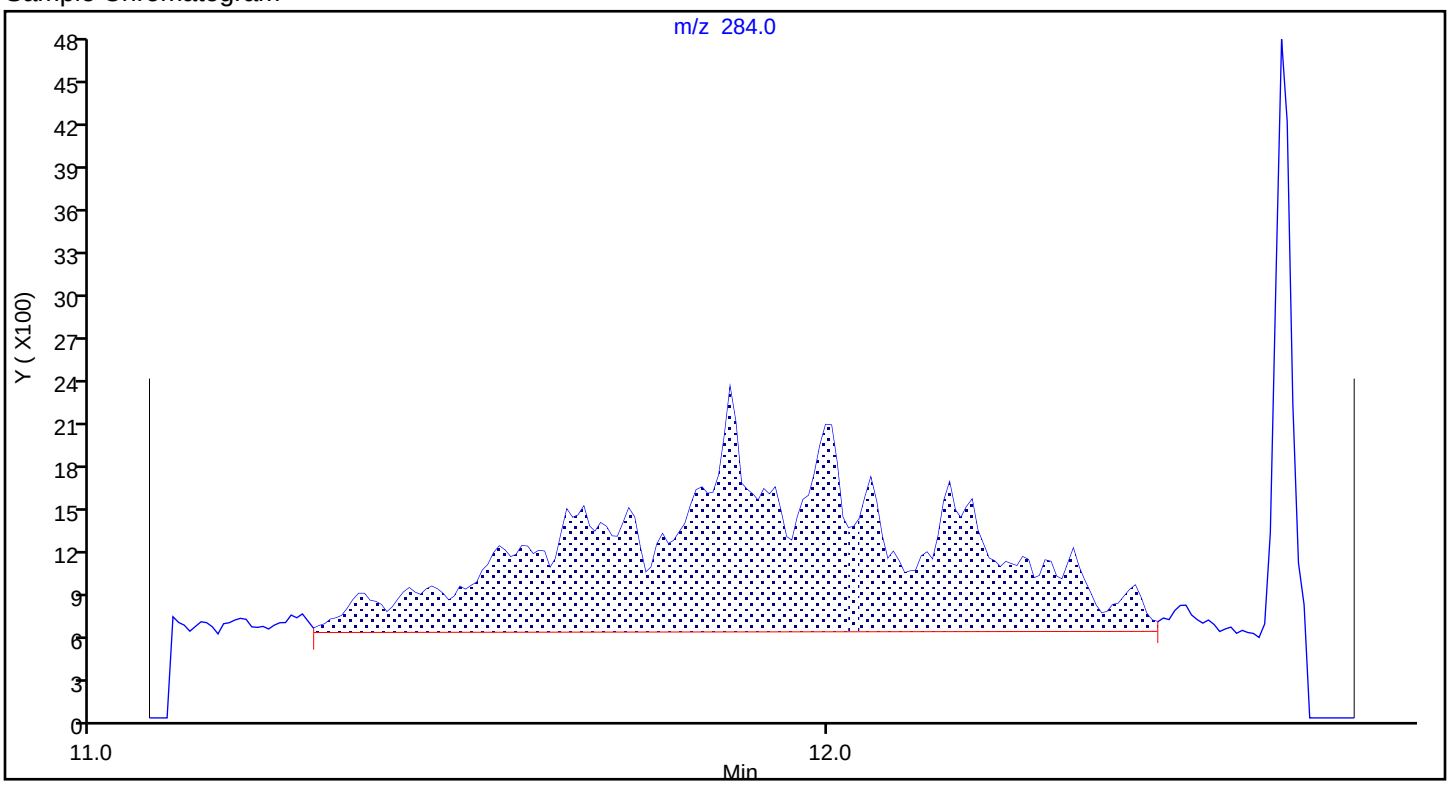
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



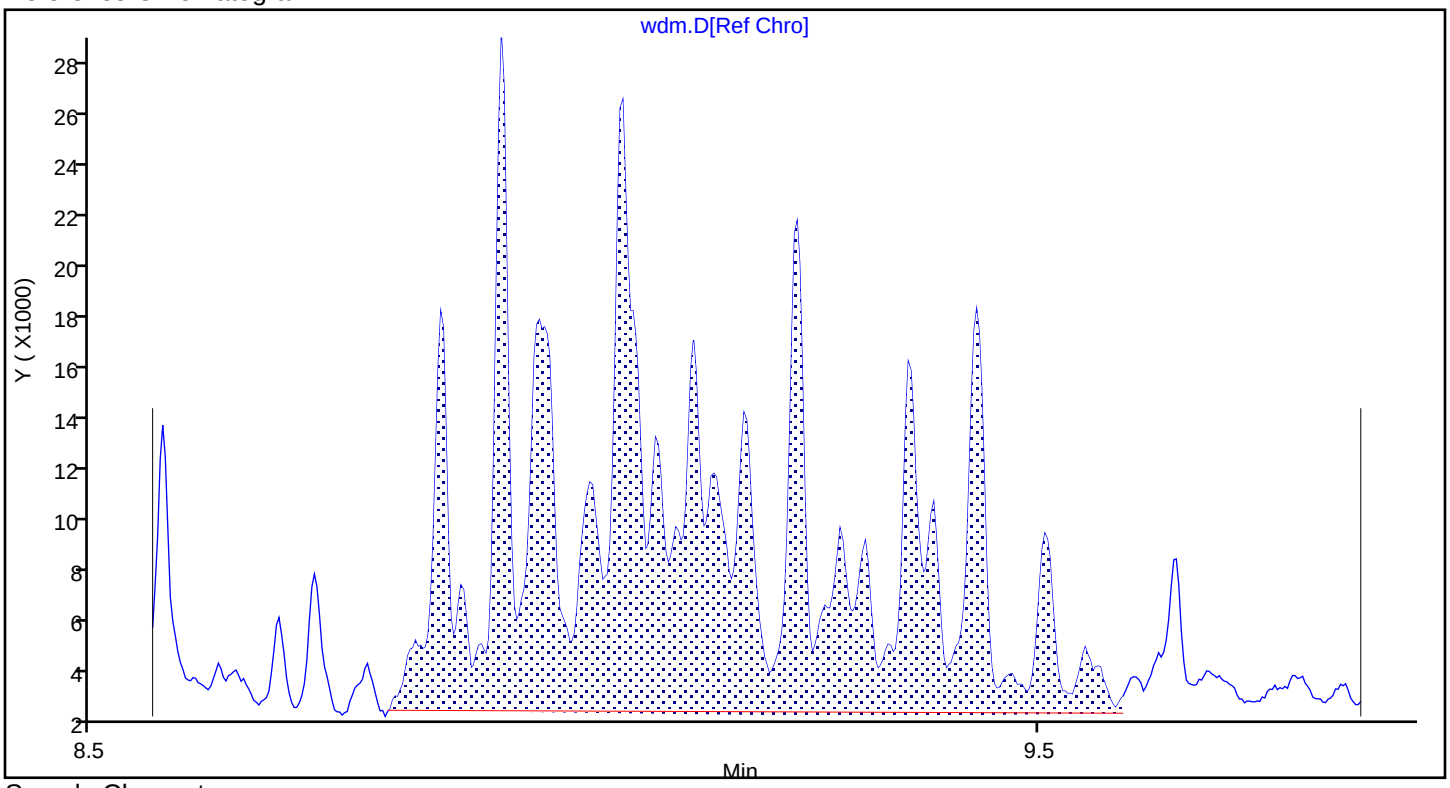
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

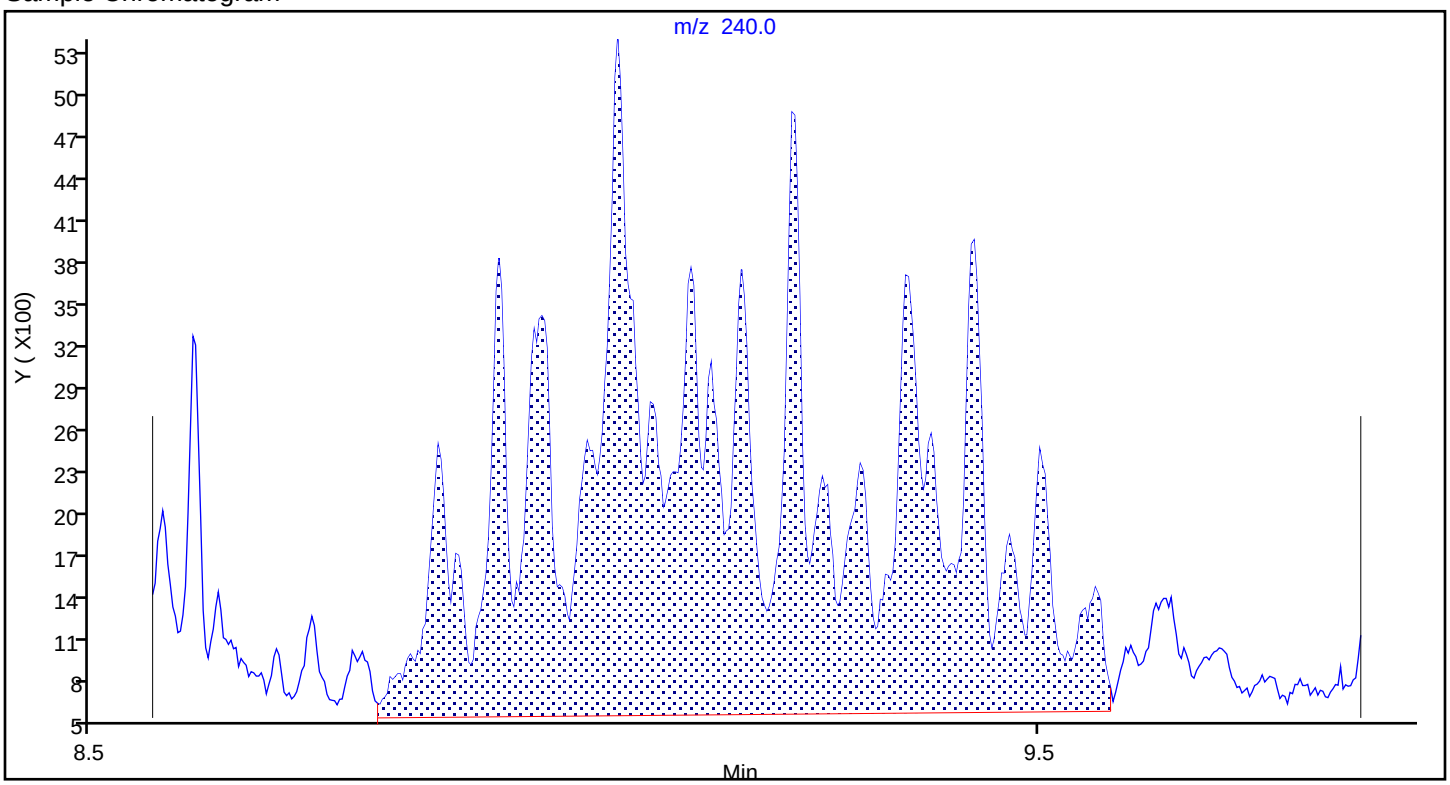
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



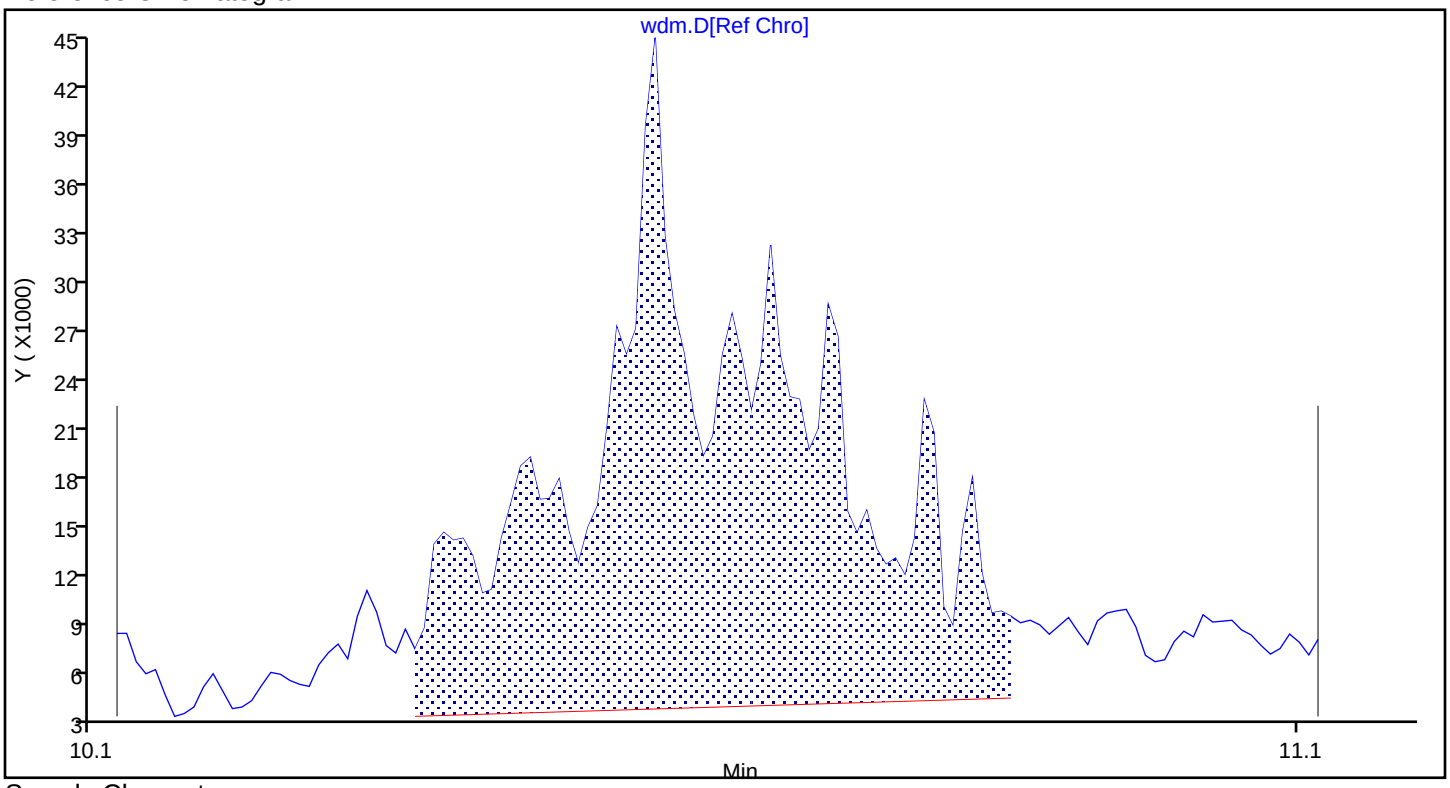
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

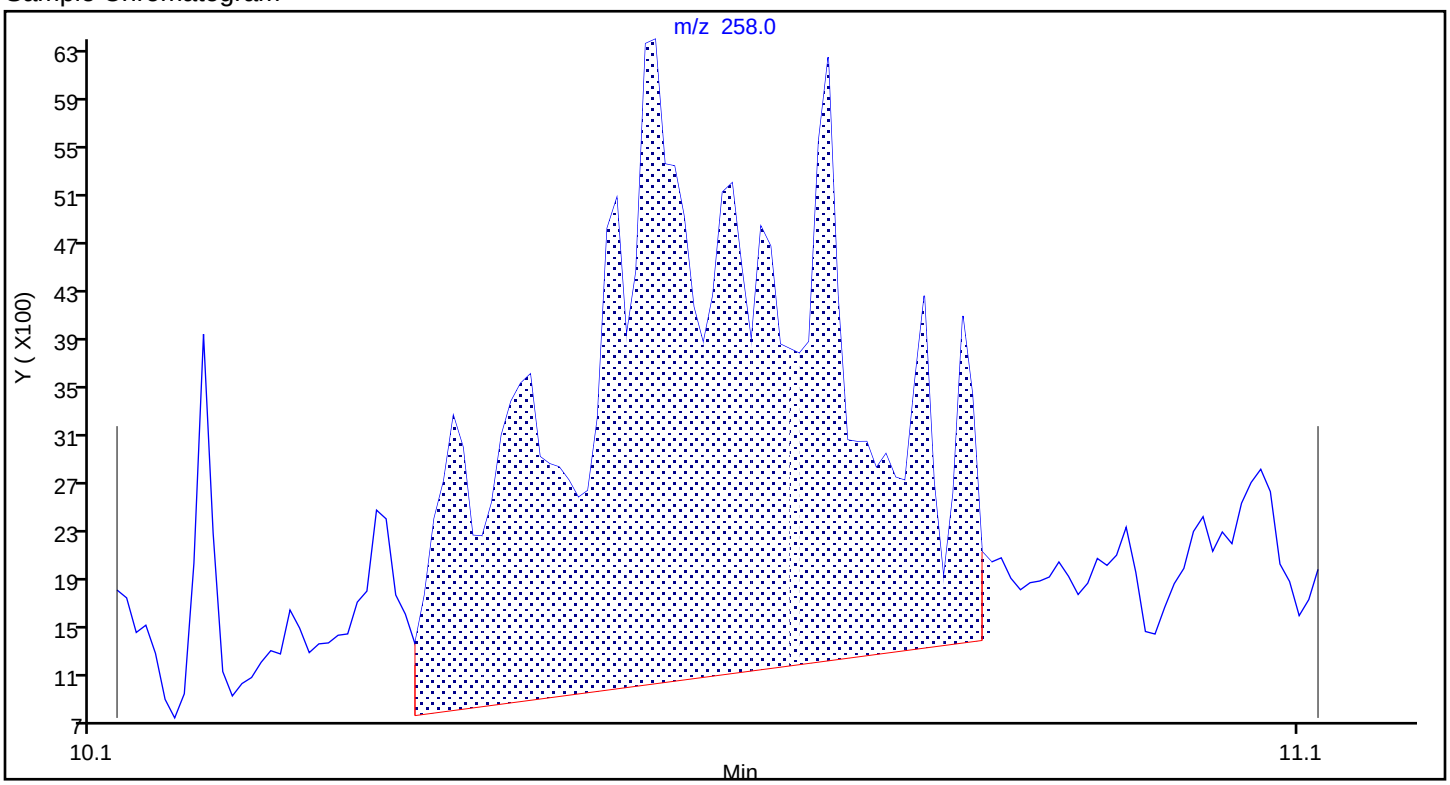
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



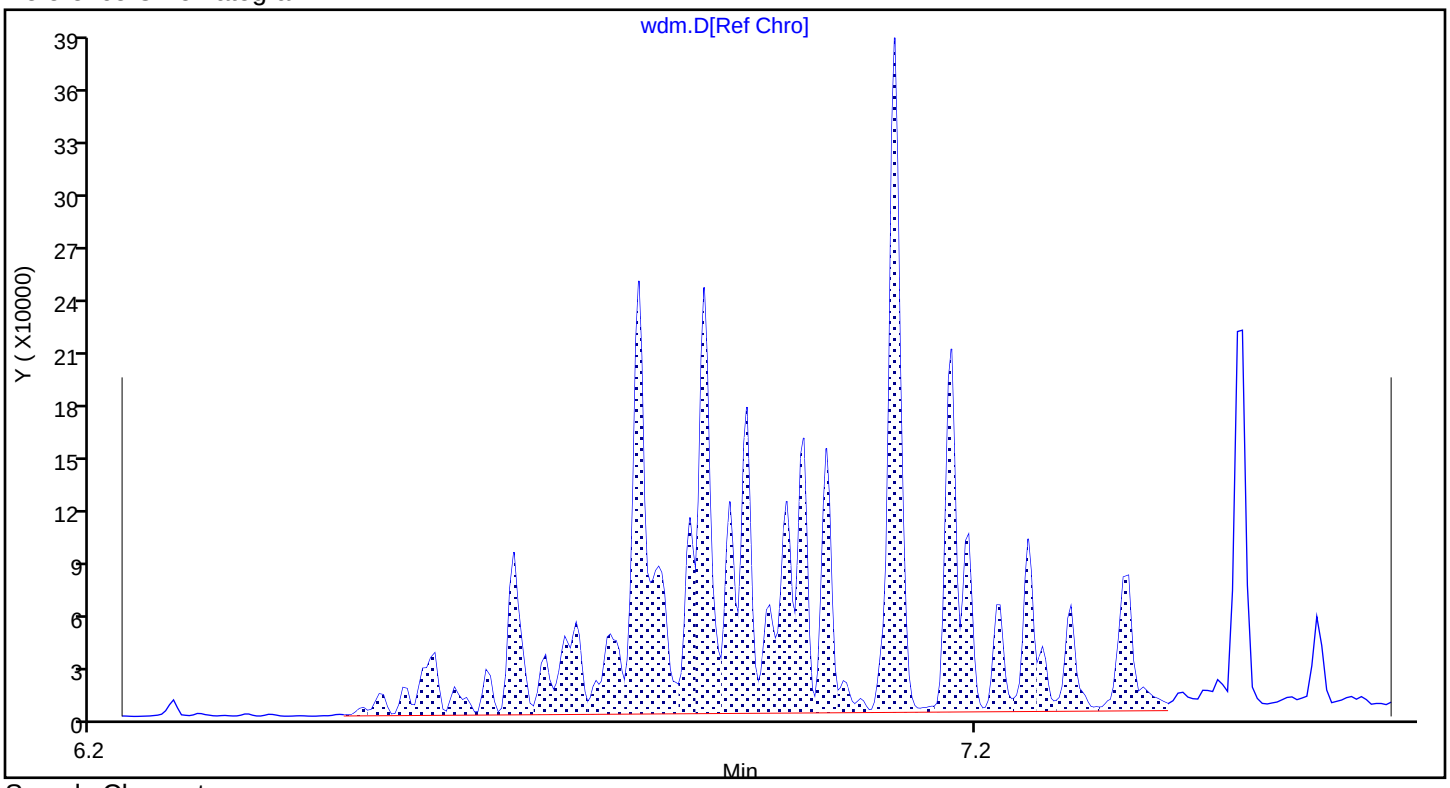
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

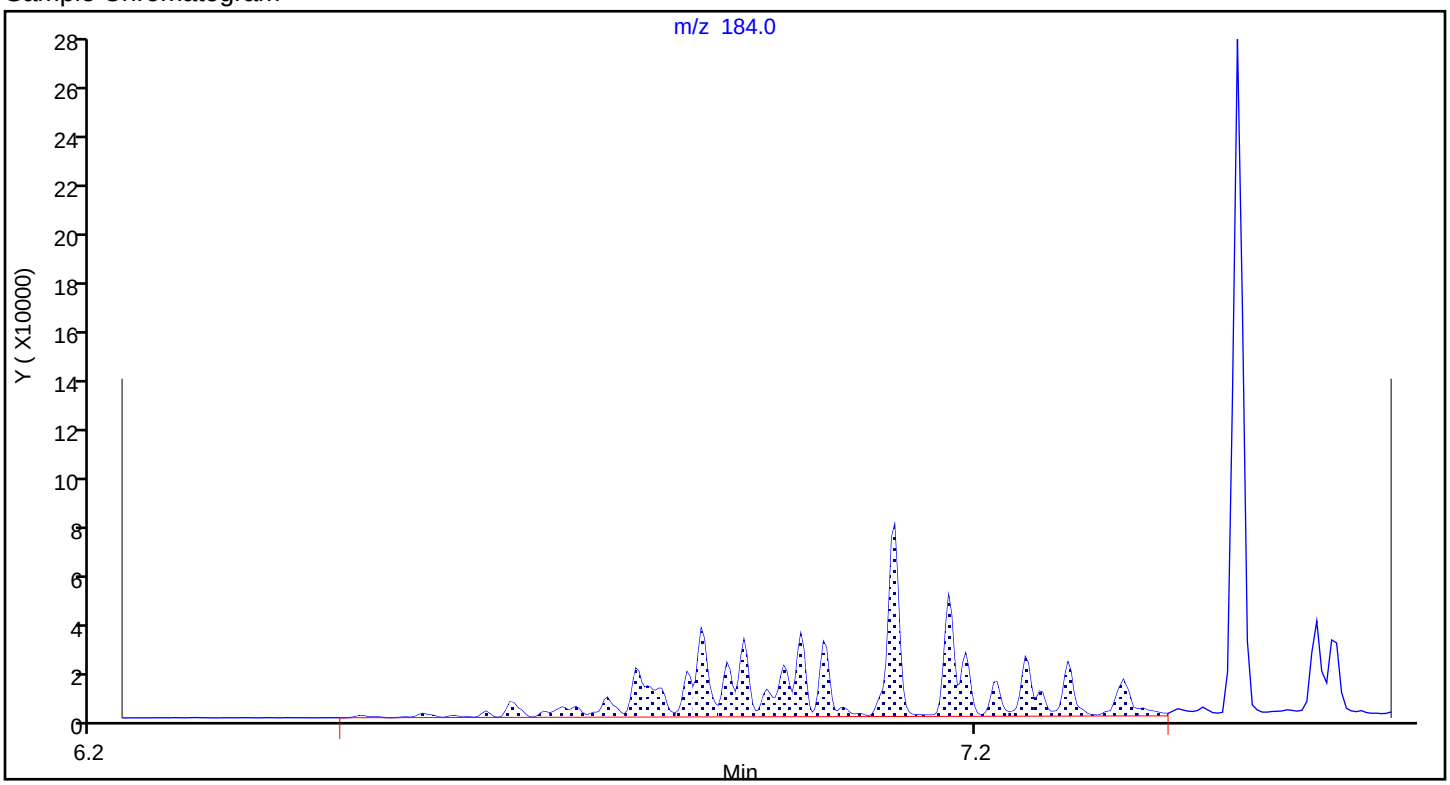
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



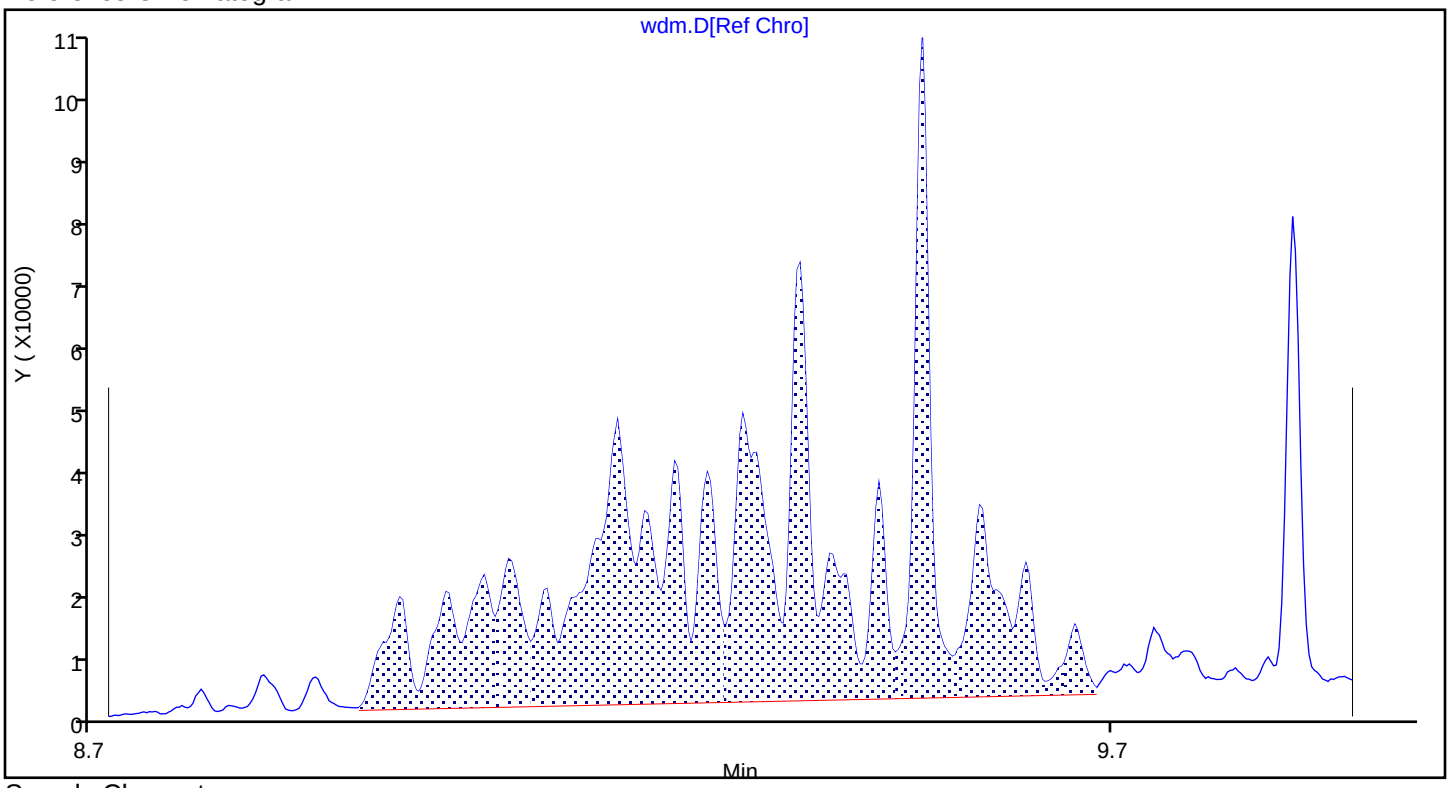
Report Date: 31-Aug-2019 11:49:16 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

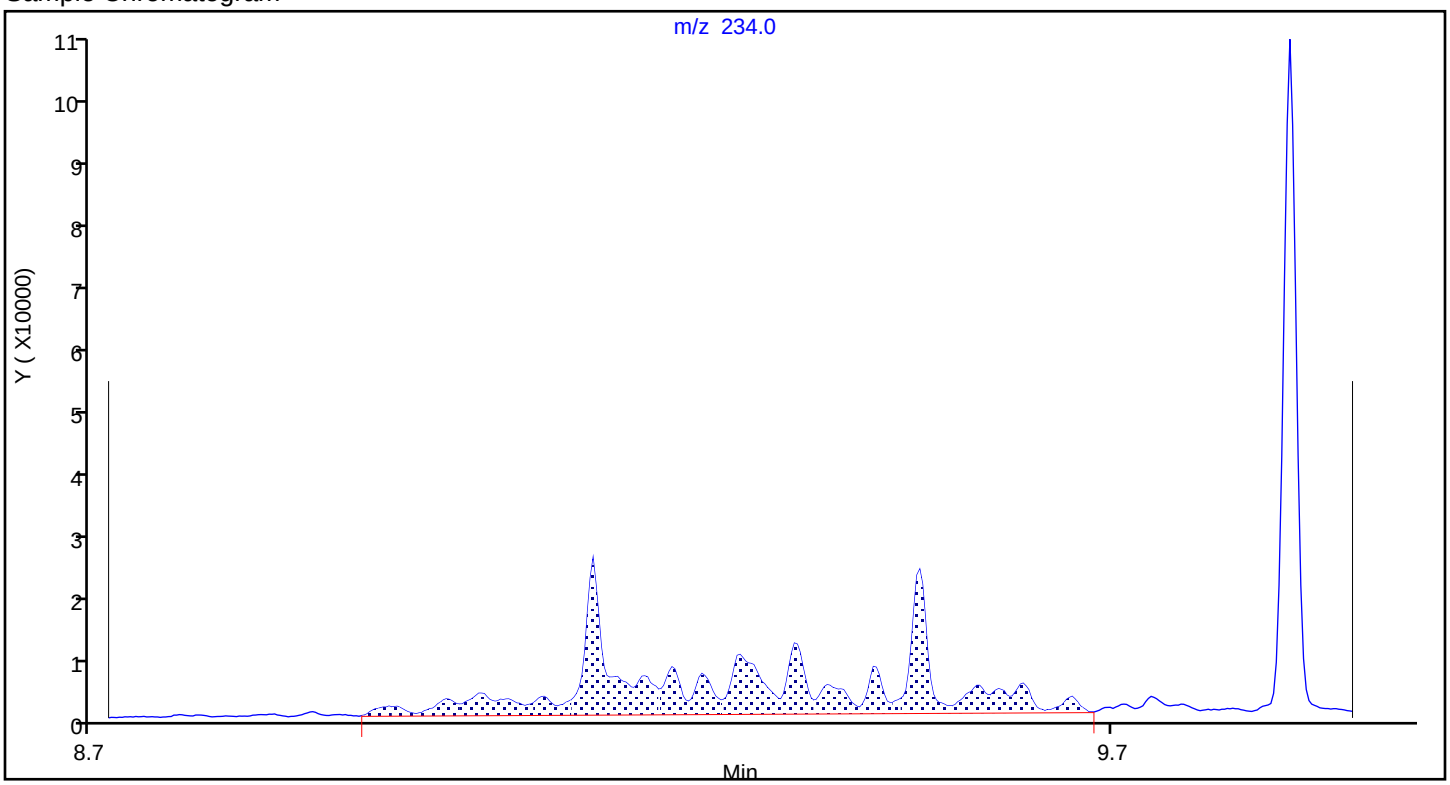
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram



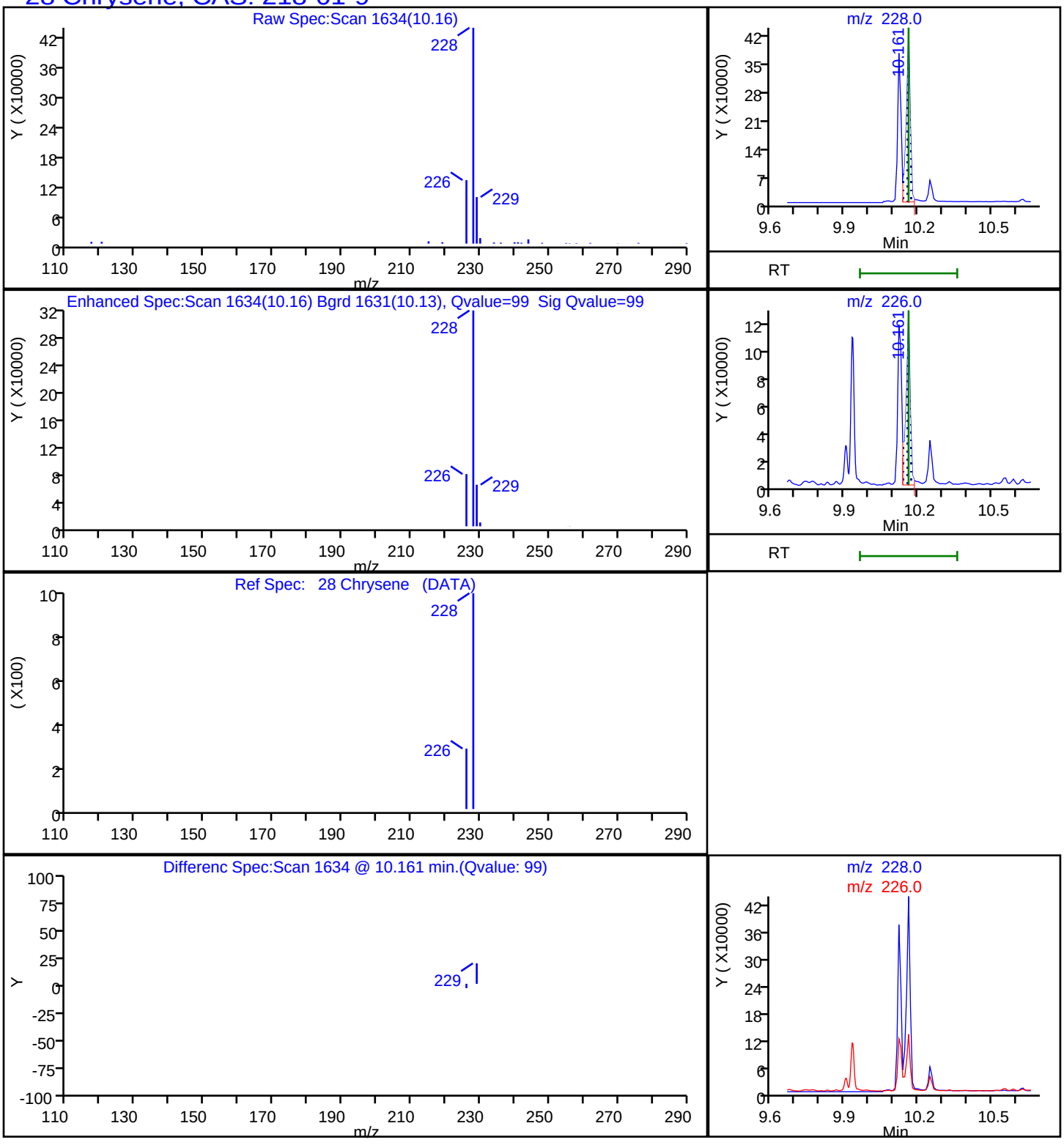
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D

Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

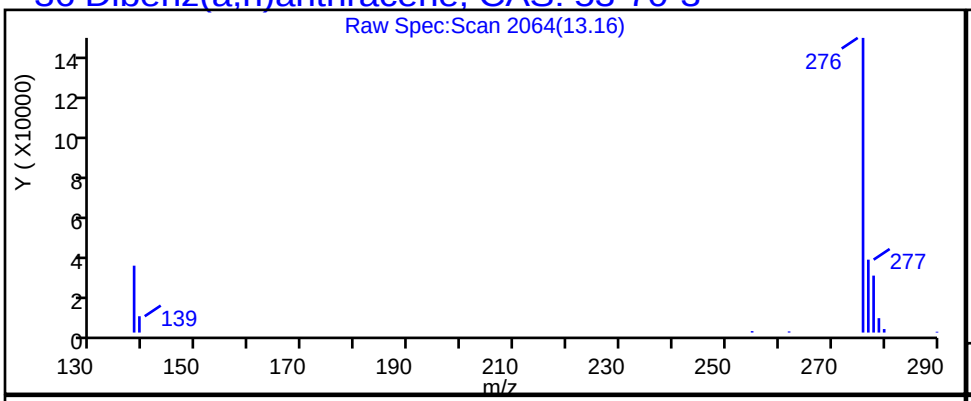


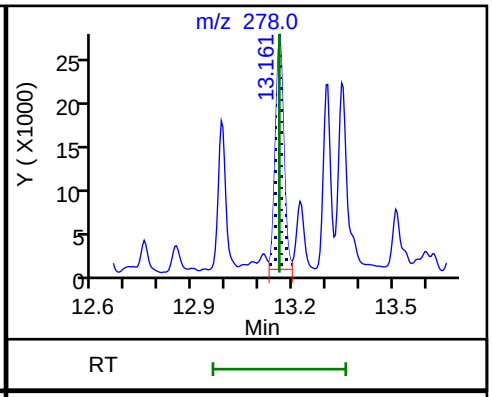
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

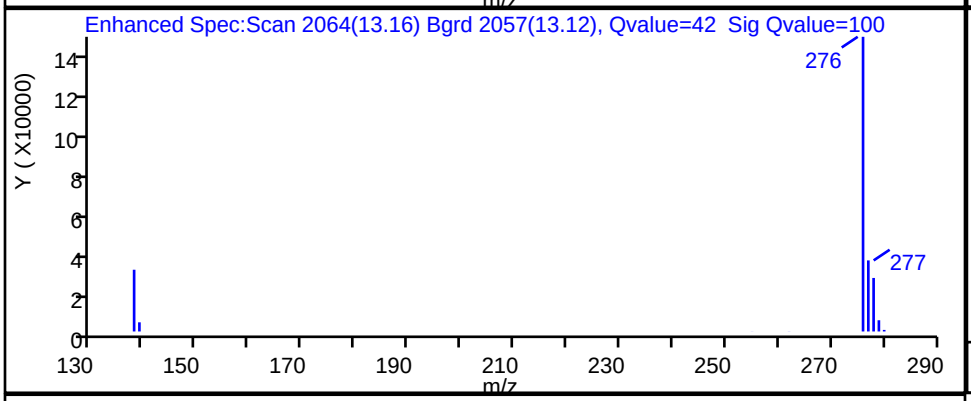
Eurofins TestAmerica, Knoxville

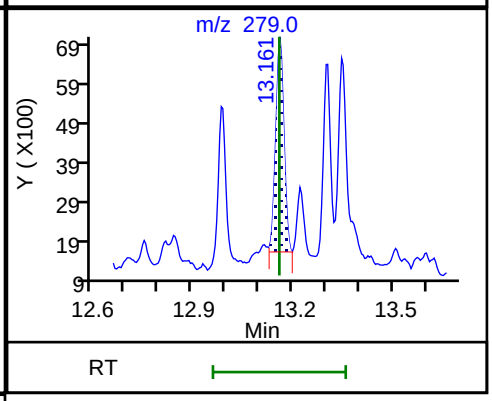
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

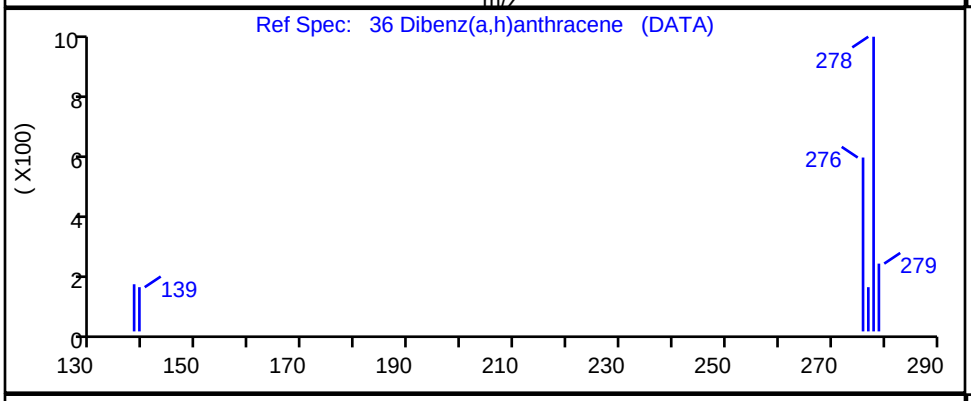
36 Dibenz(a,h)anthracene, CAS: 53-70-3

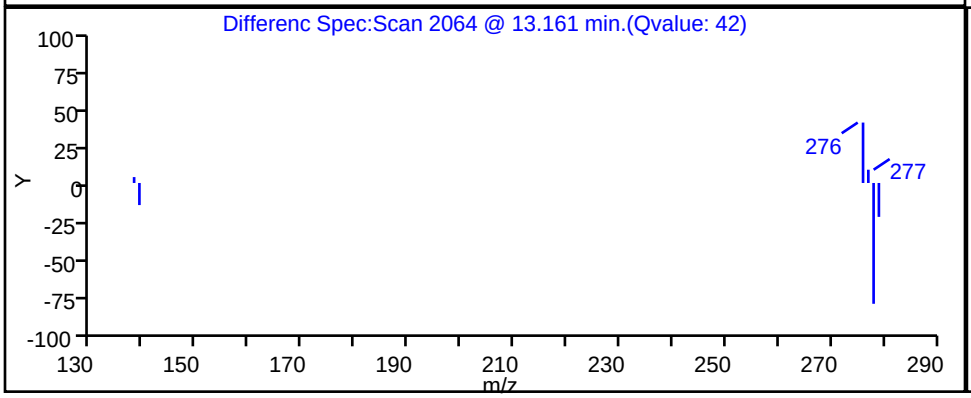


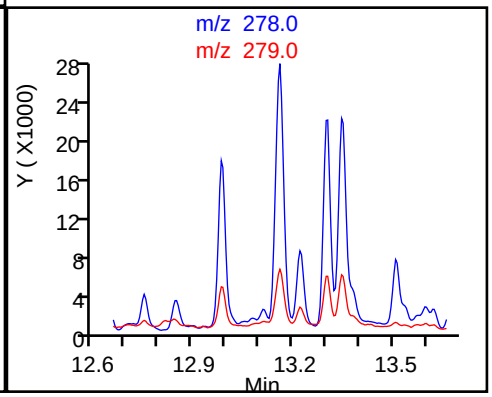










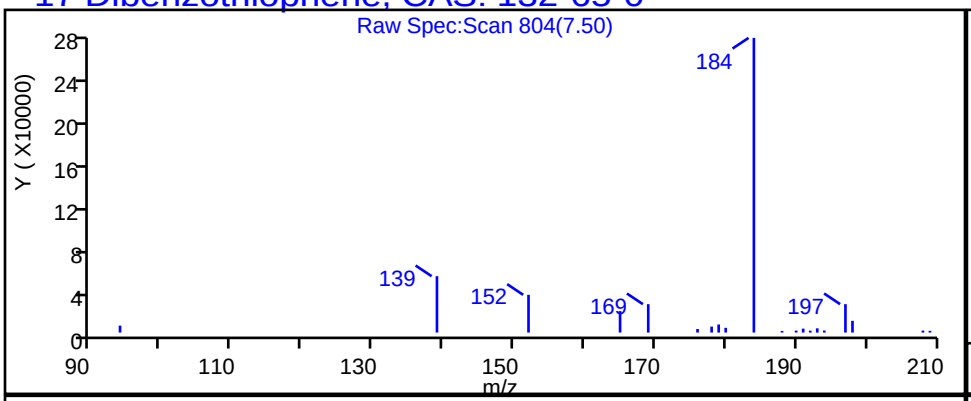


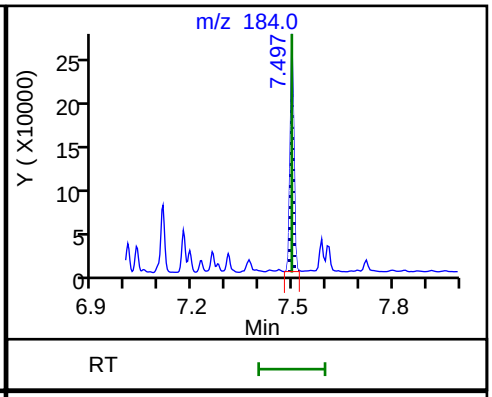
Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

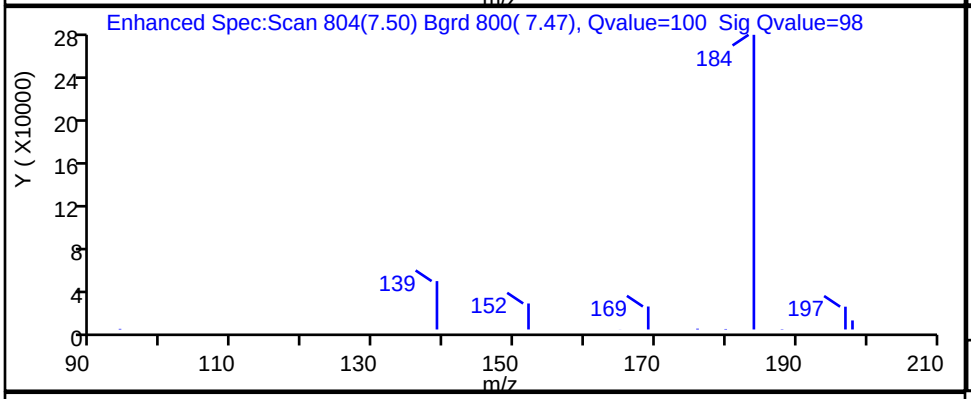
Eurofins TestAmerica, Knoxville

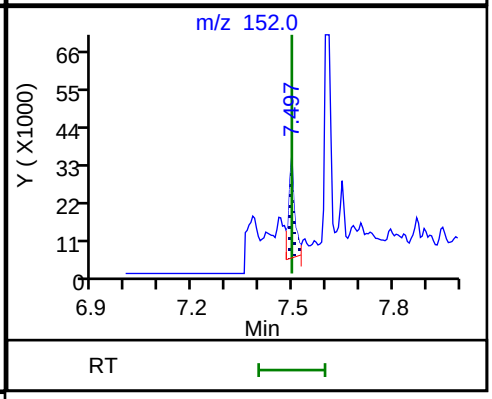
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

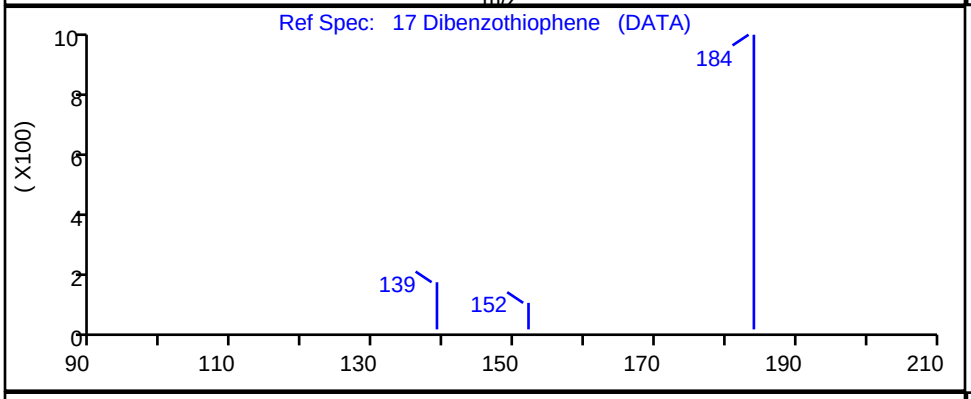
17 Dibenzothiophene, CAS: 132-65-0

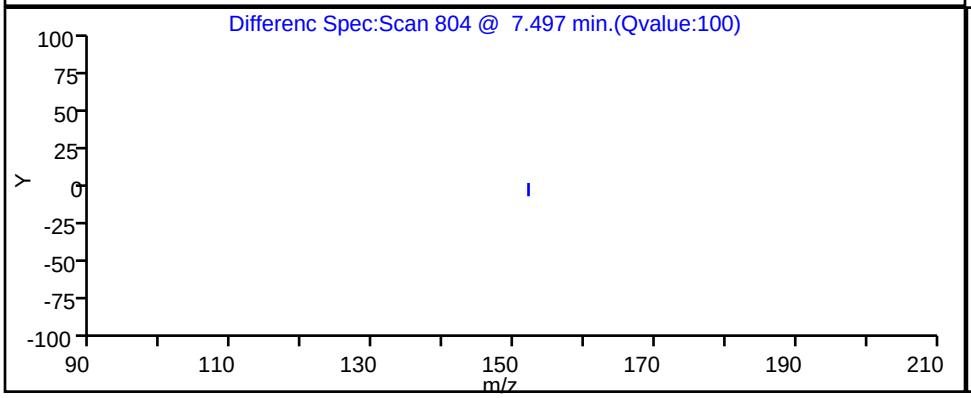


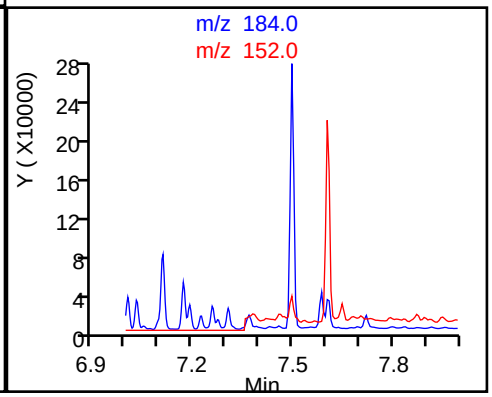












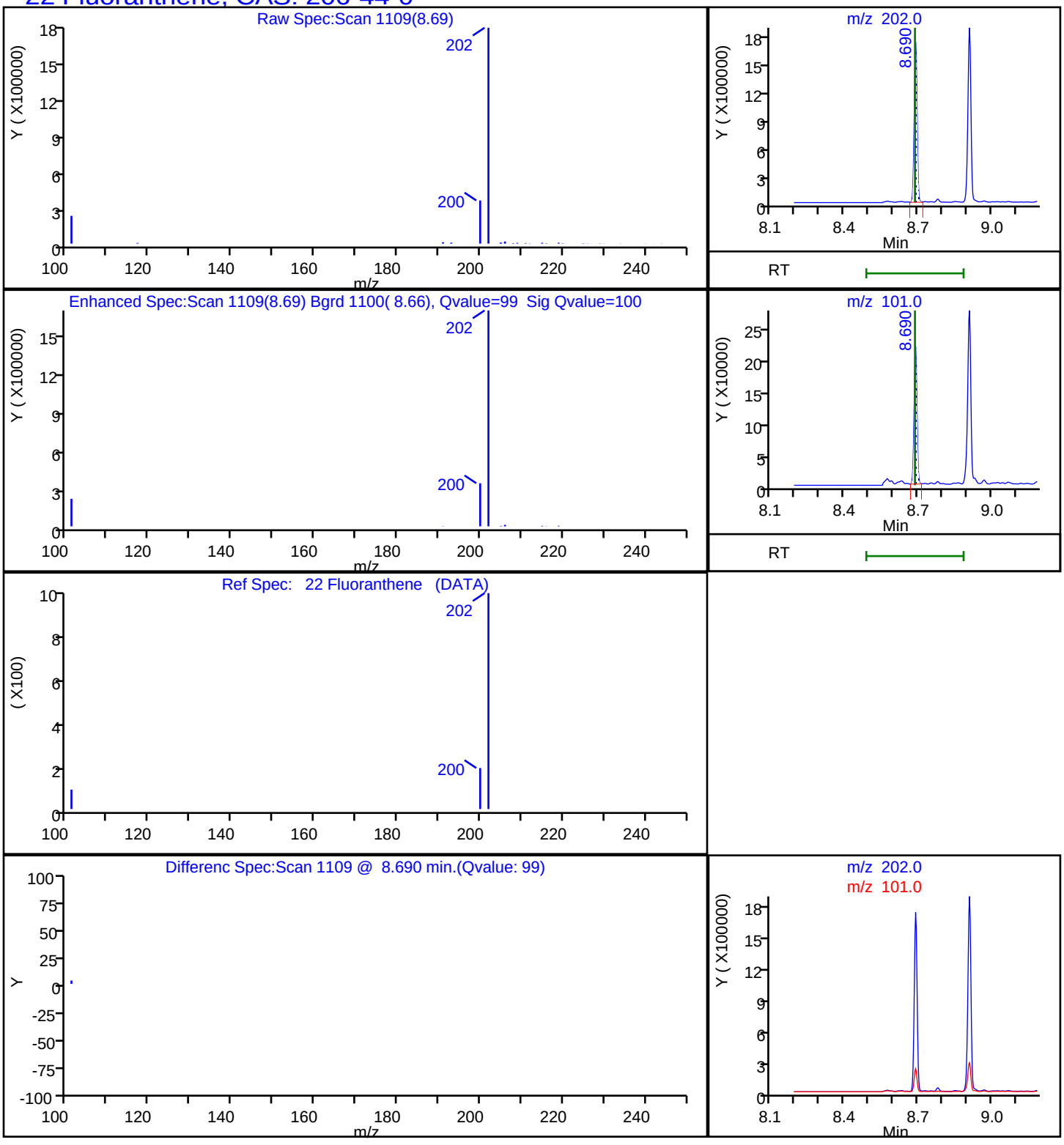
Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D

Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

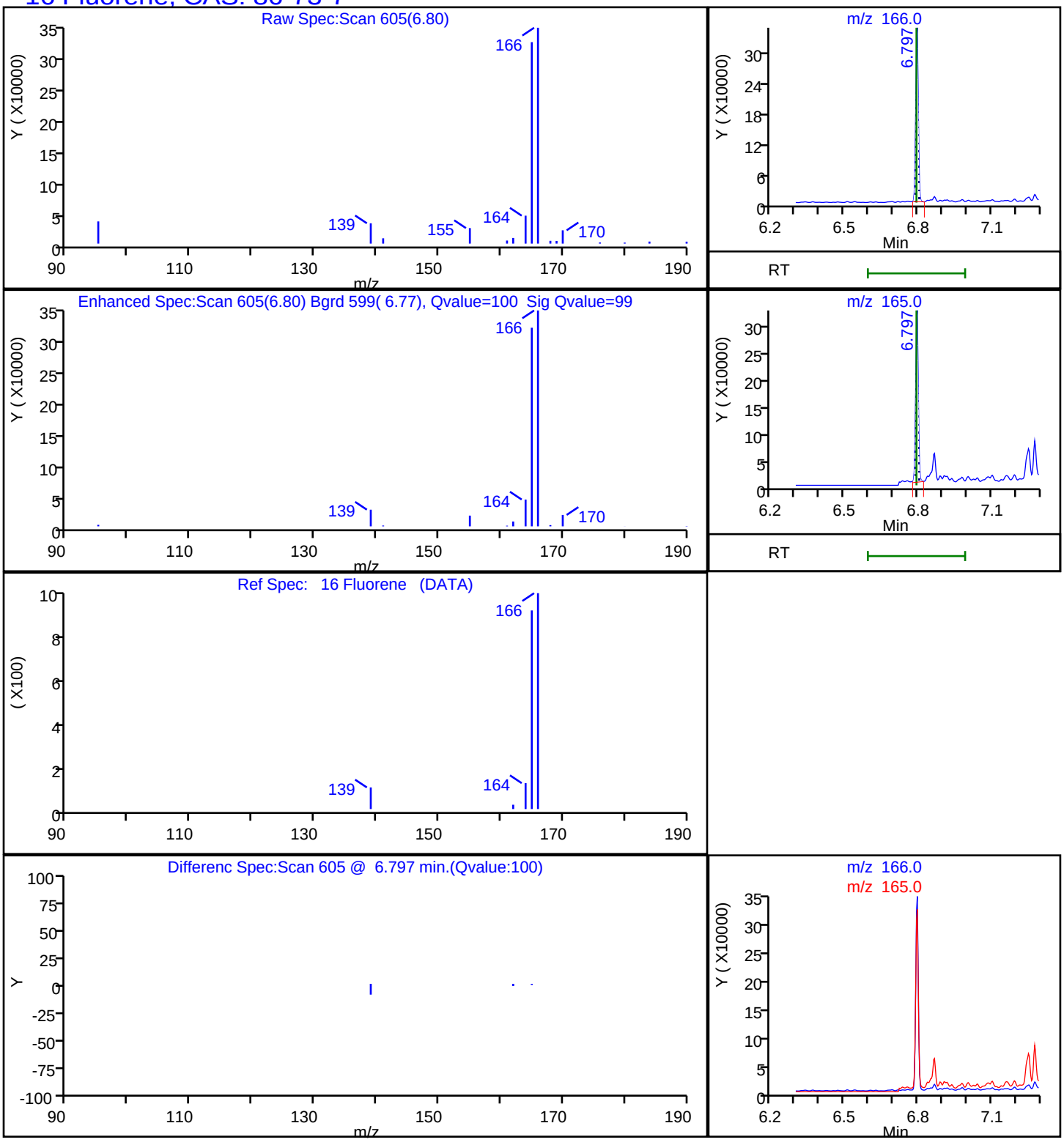


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

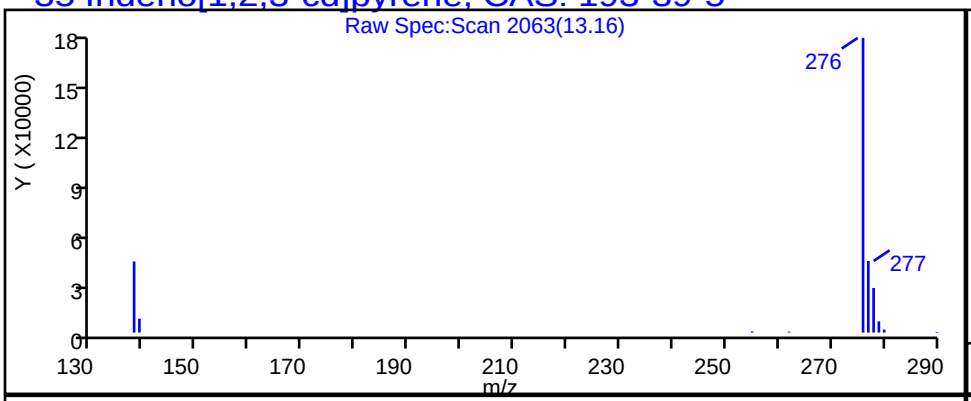


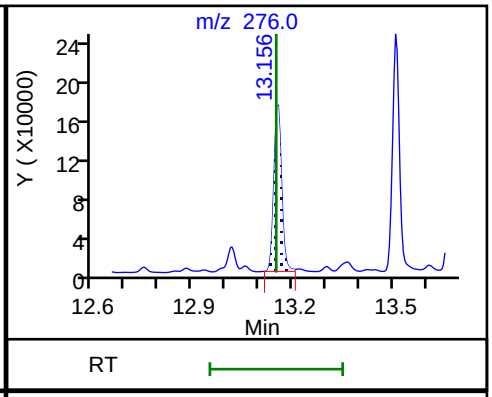
Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

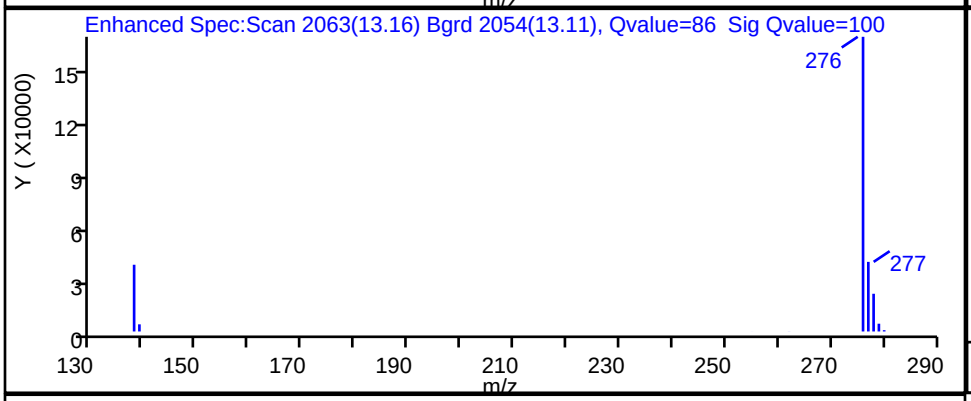
Eurofins TestAmerica, Knoxville

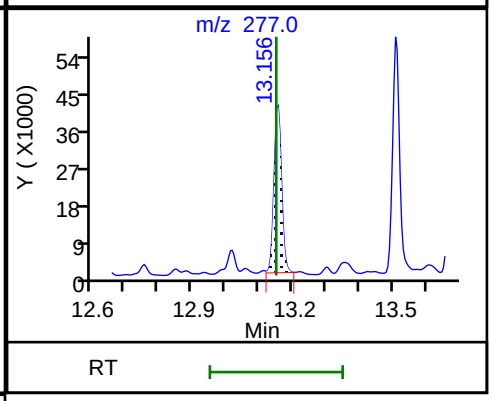
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

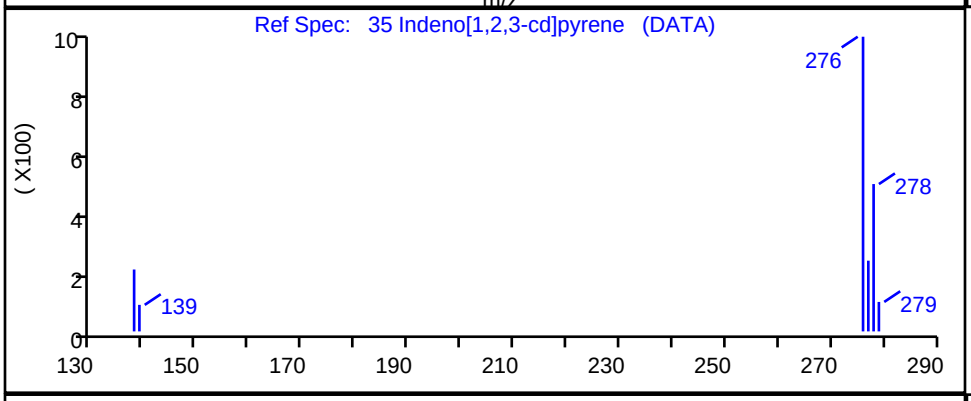
35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

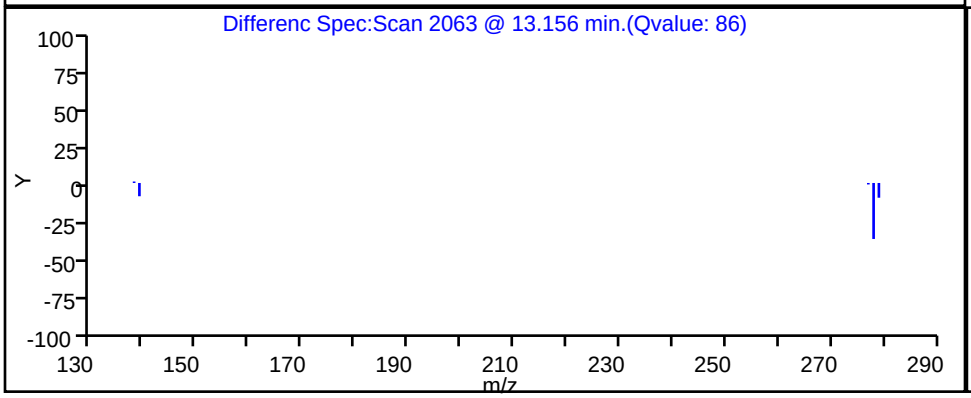


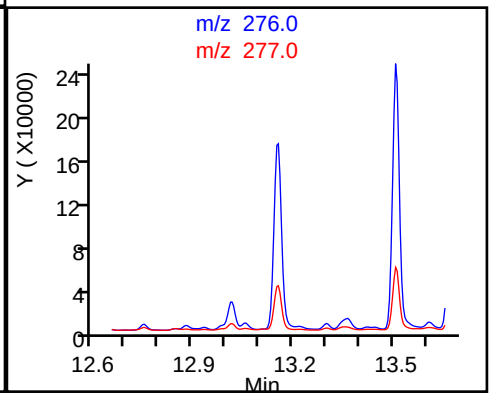












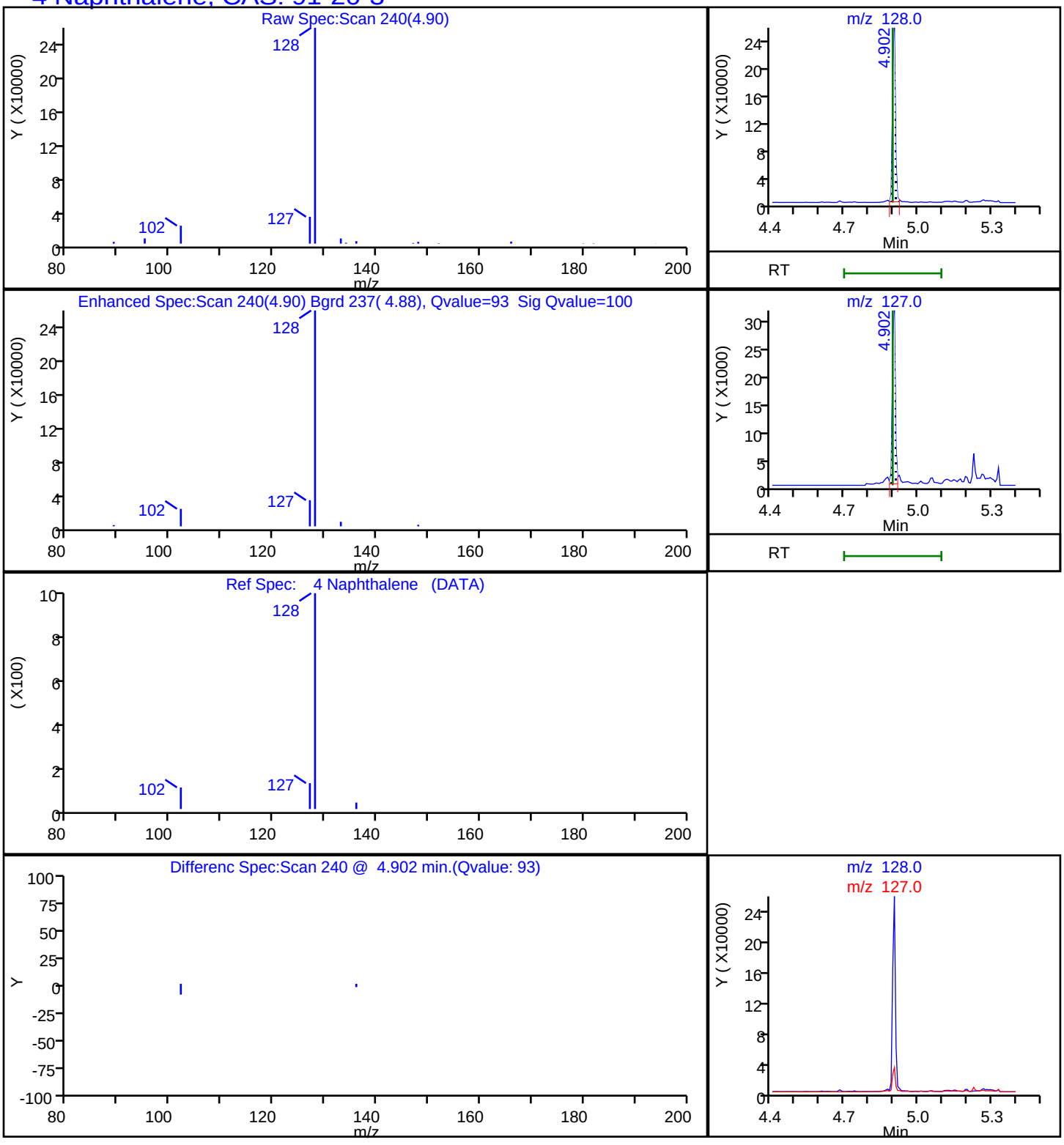
Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D

Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

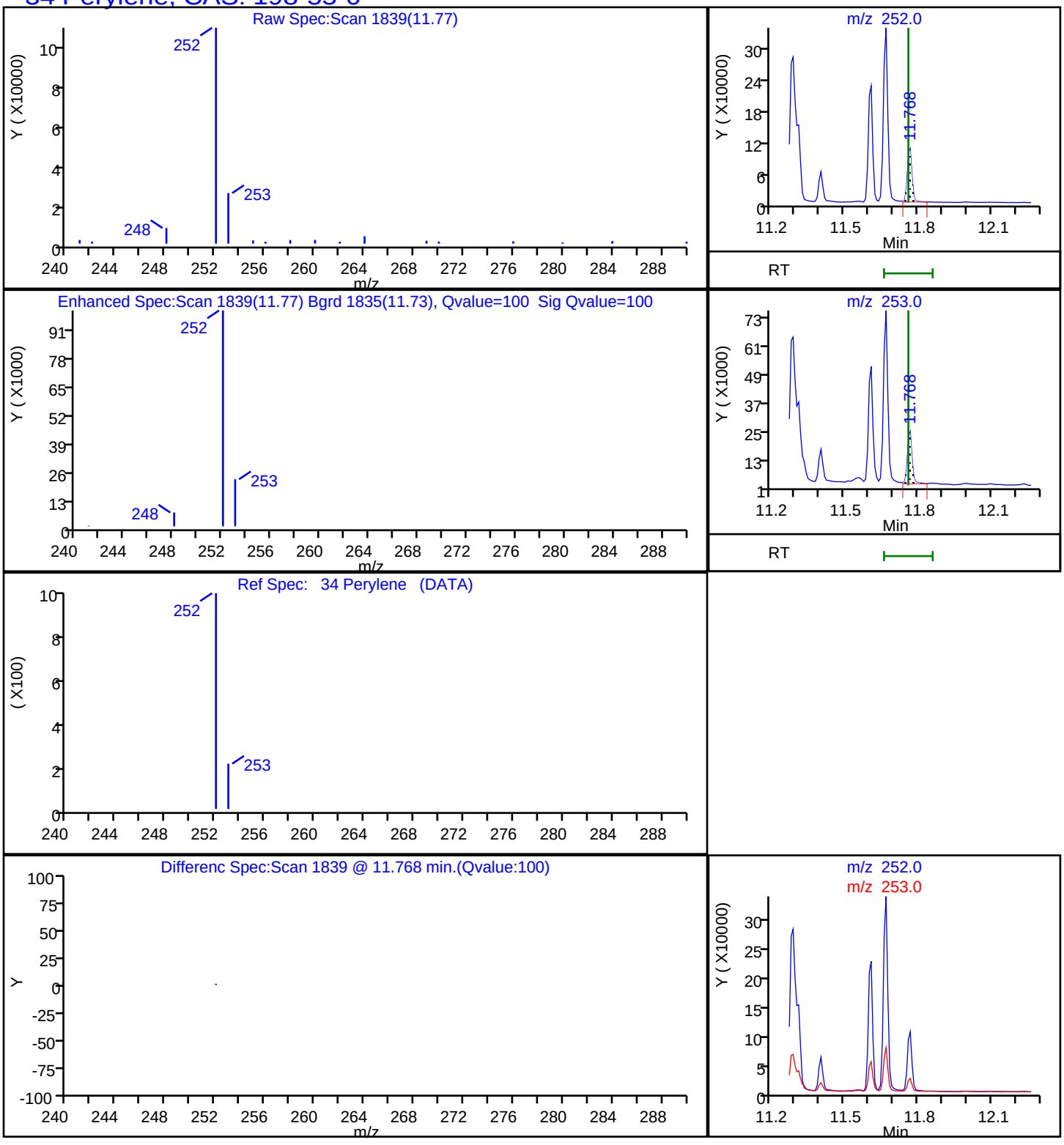


Report Date: 31-Aug-2019 11:49:15 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0

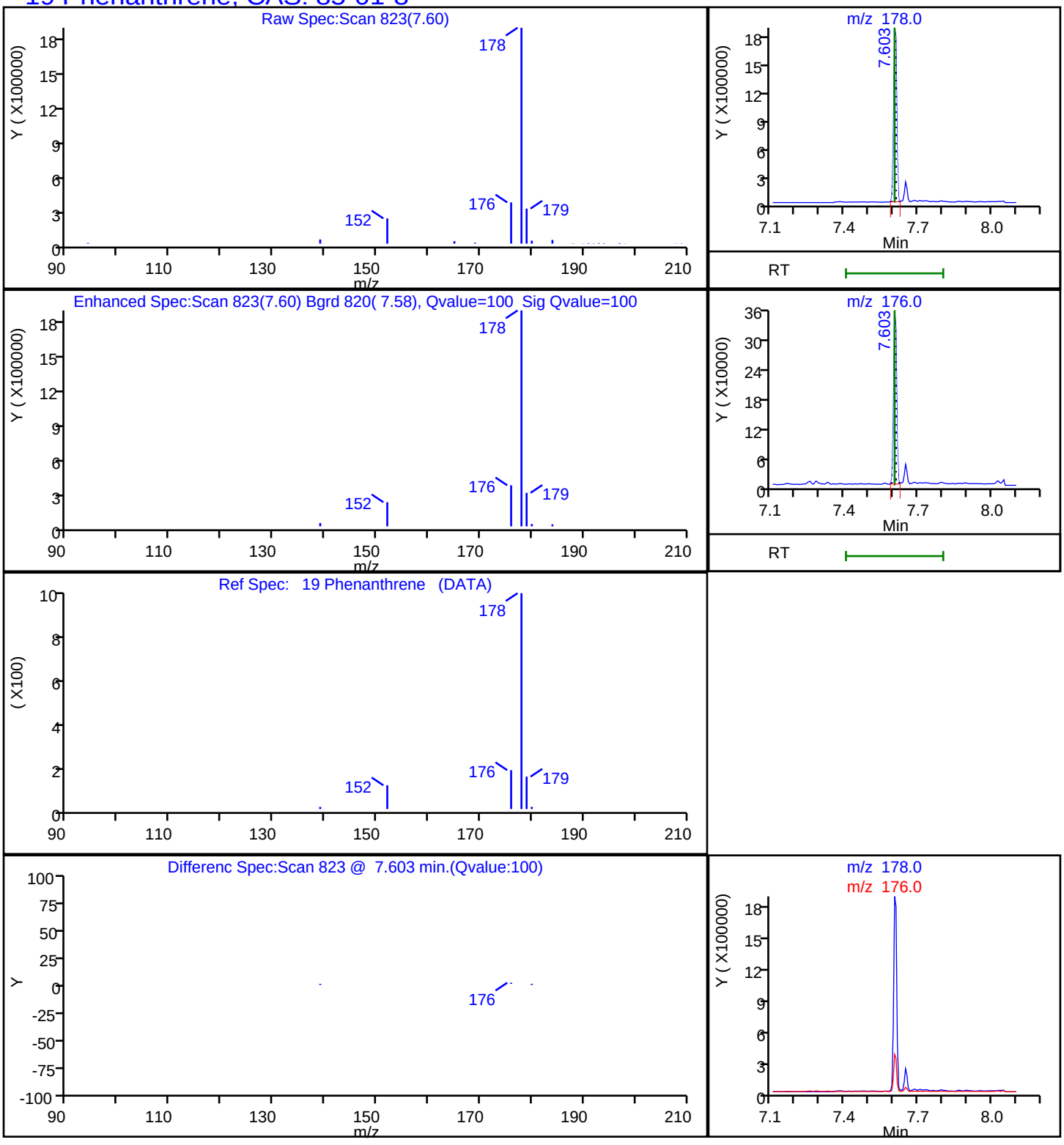


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

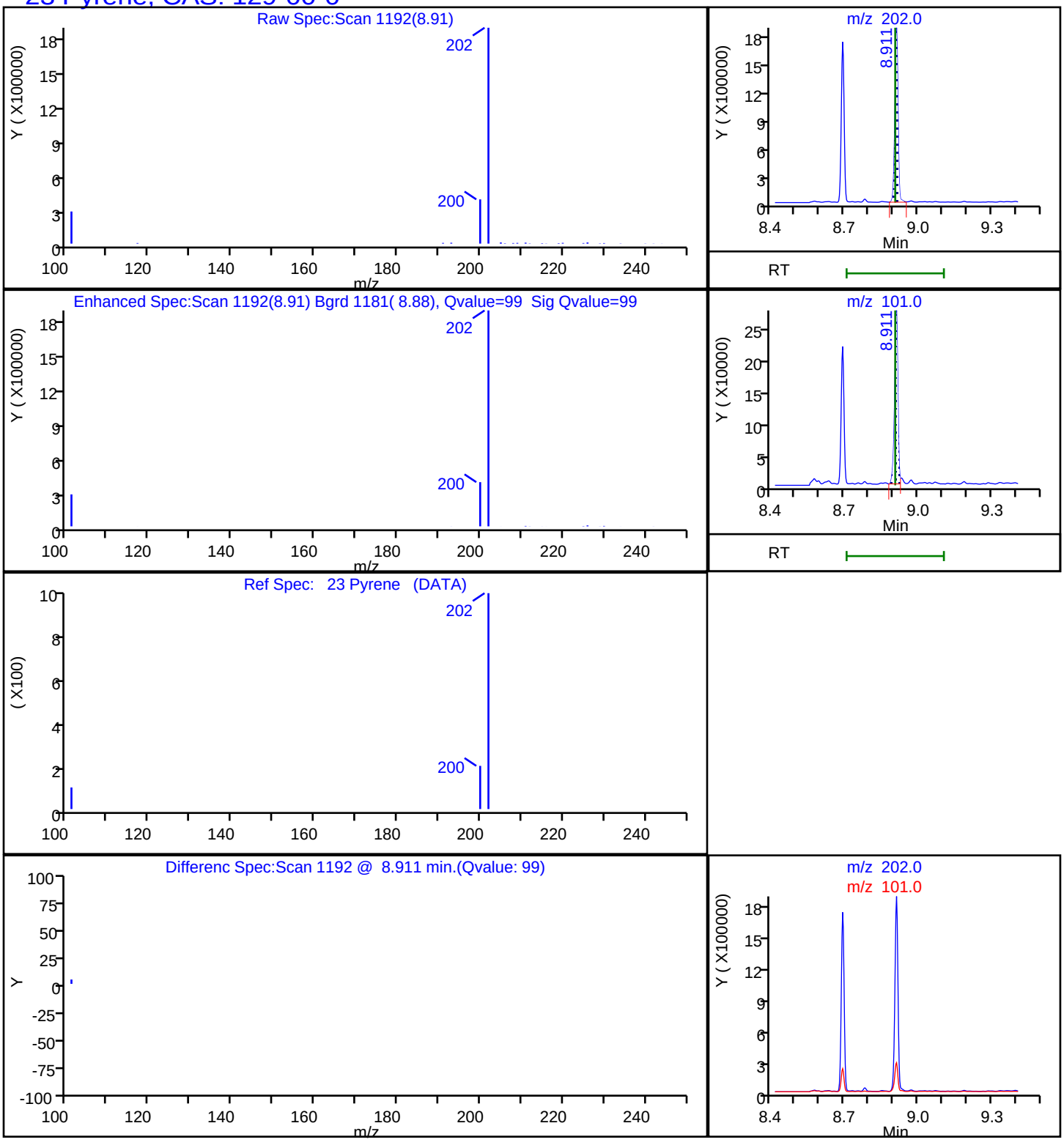


Report Date: 31-Aug-2019 11:49:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



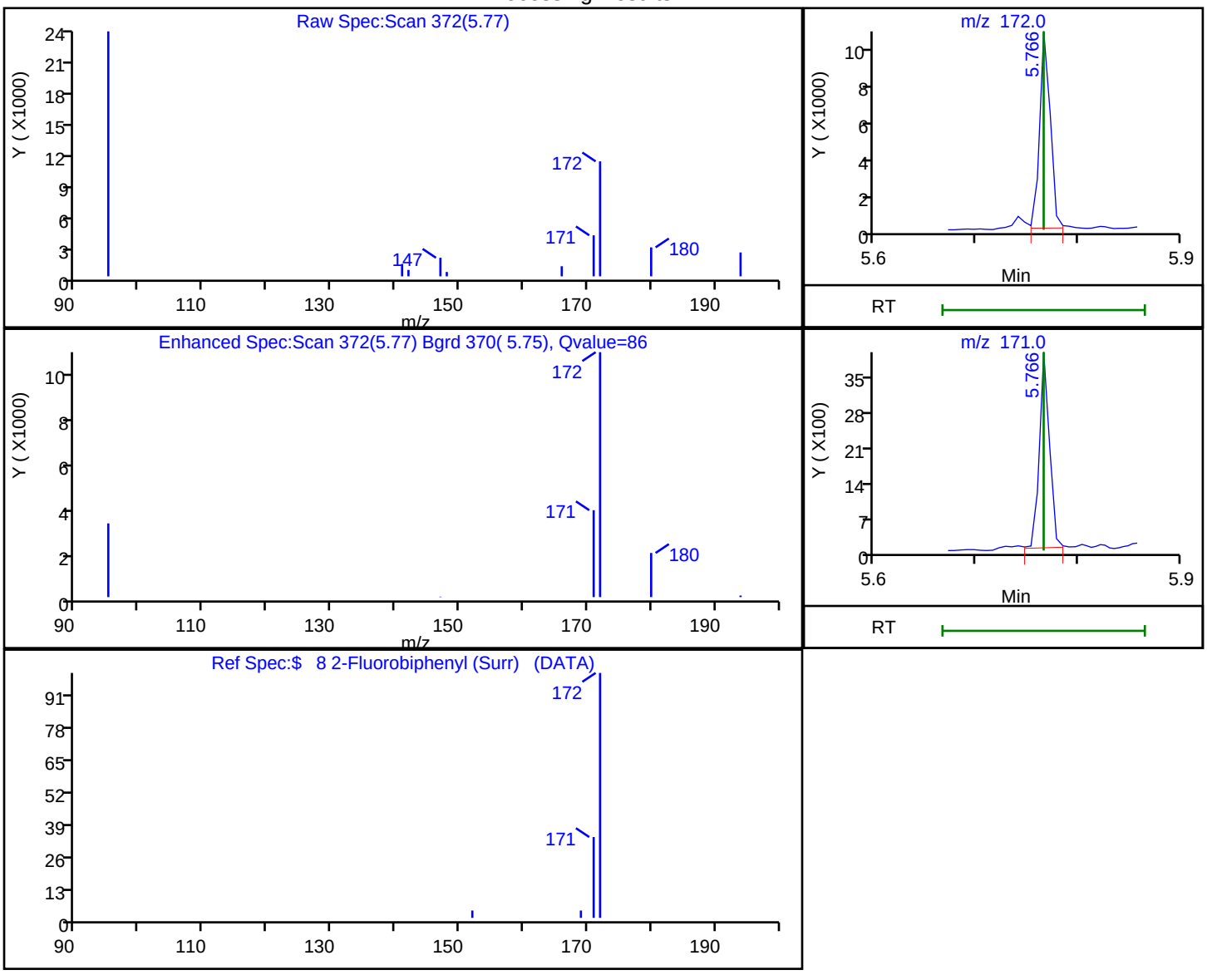
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	7866	0.022181
5.77	171.00	2624	

Reviewer: cochranj, 31-Aug-2019 10:58:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

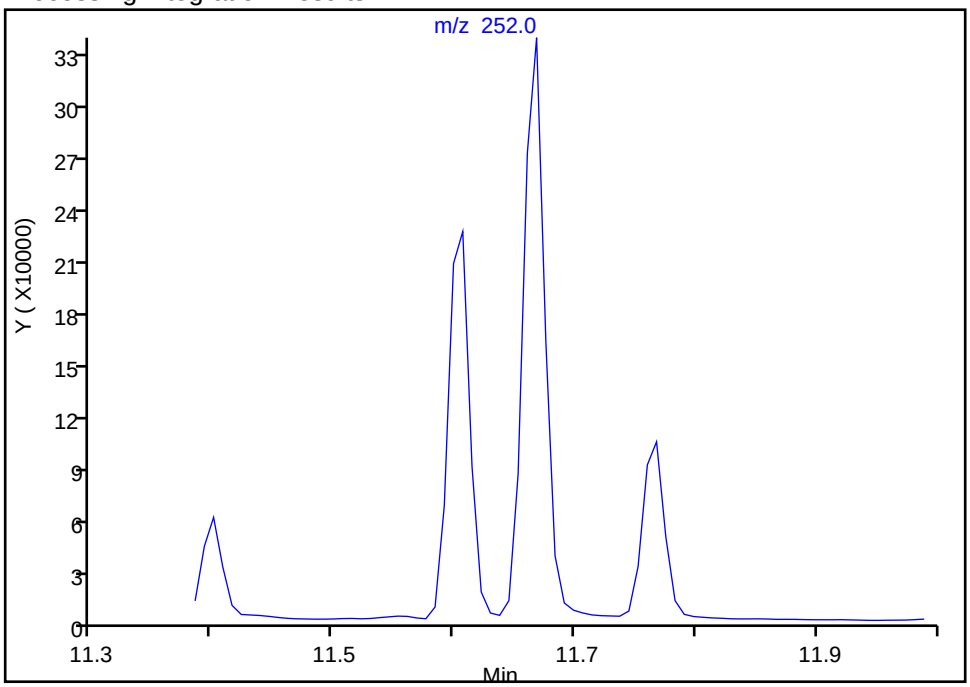
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

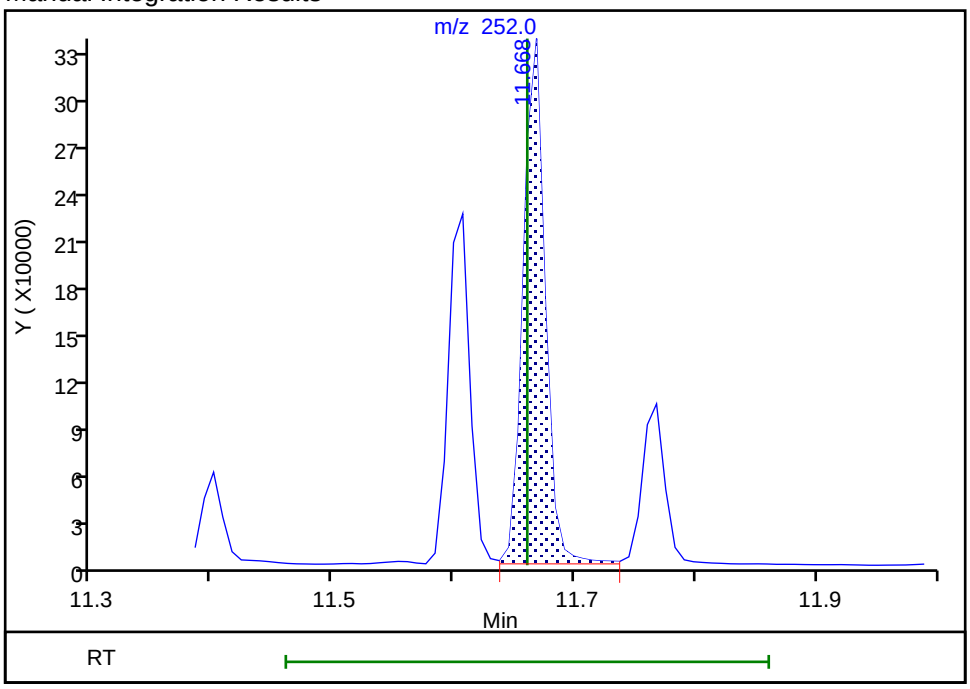
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 414728
Amount: 0.898926
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:11:38
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

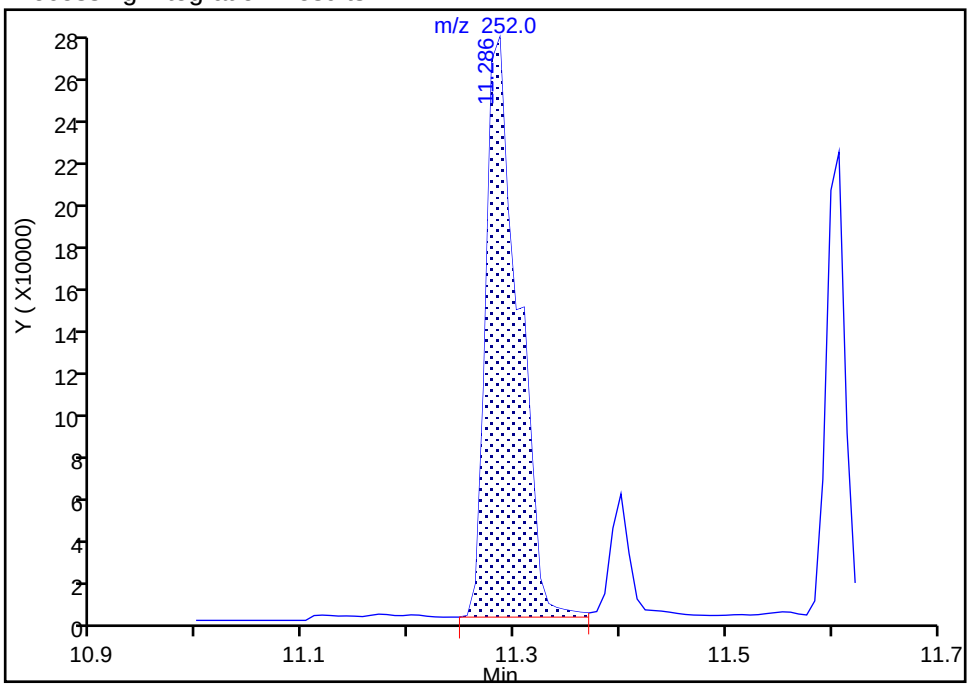
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

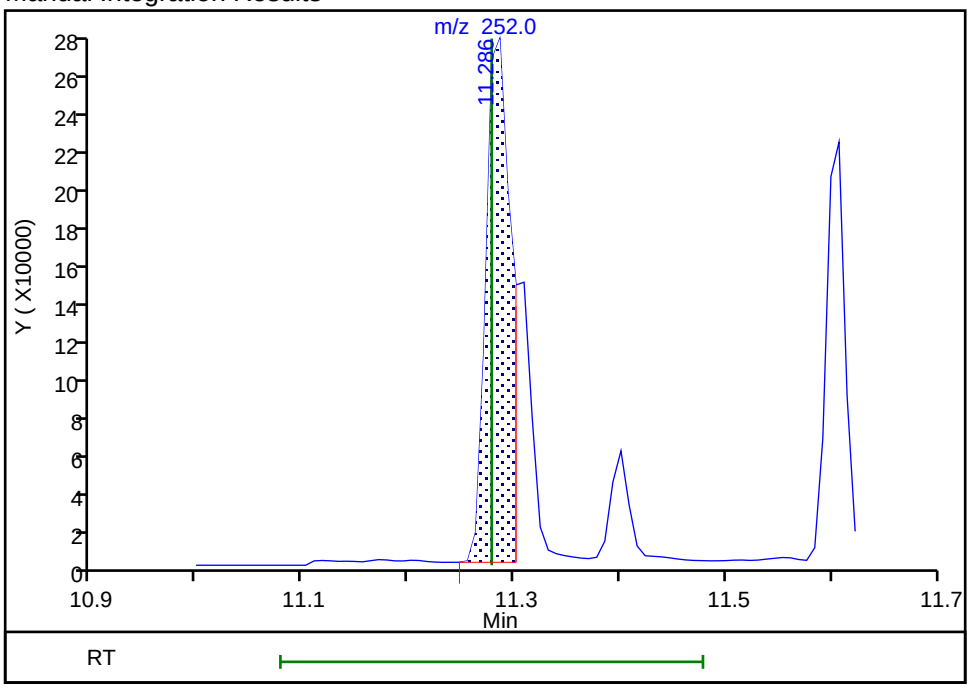
Processing Integration Results

RT: 11.29
Area: 580521
Amount: 1.082551
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 459876
Amount: 0.857573
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:11:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

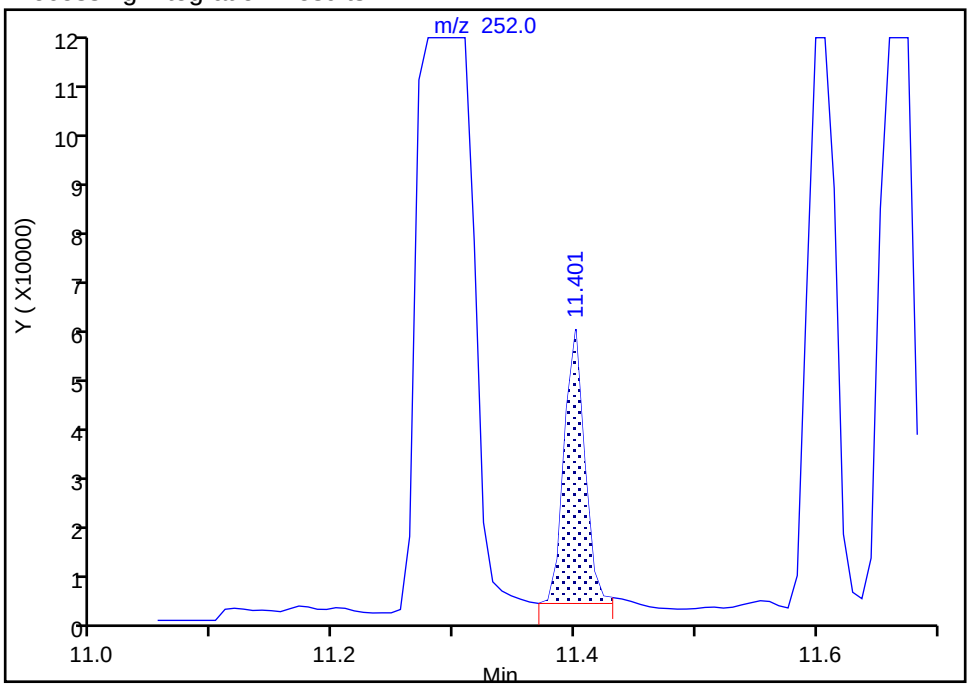
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

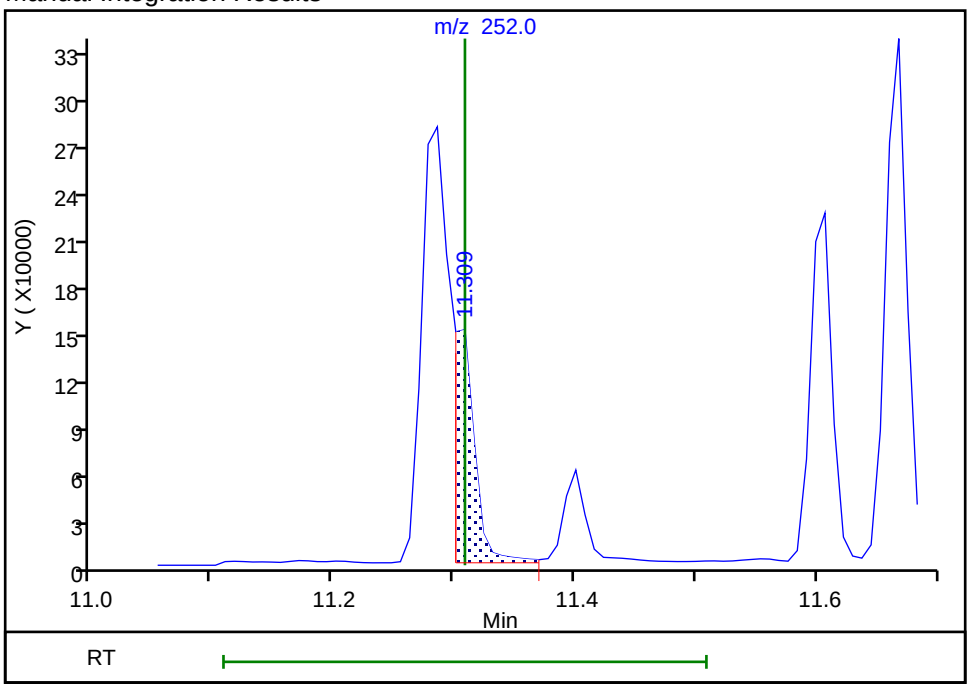
Processing Integration Results

RT: 11.40
Area: 66093
Amount: 0.108675
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 187232
Amount: 0.307862
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:11:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

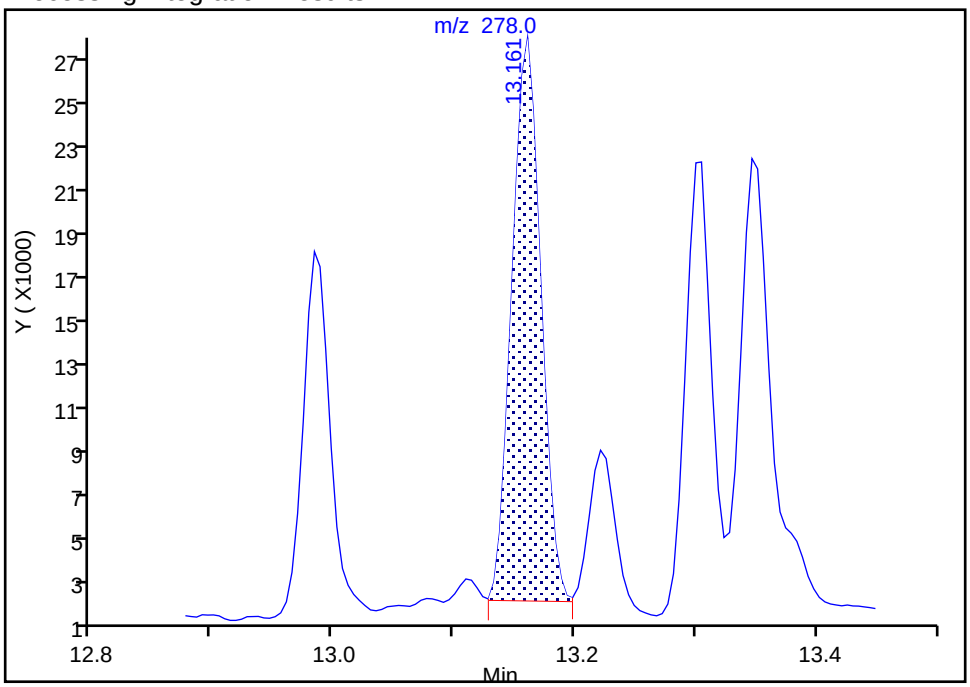
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

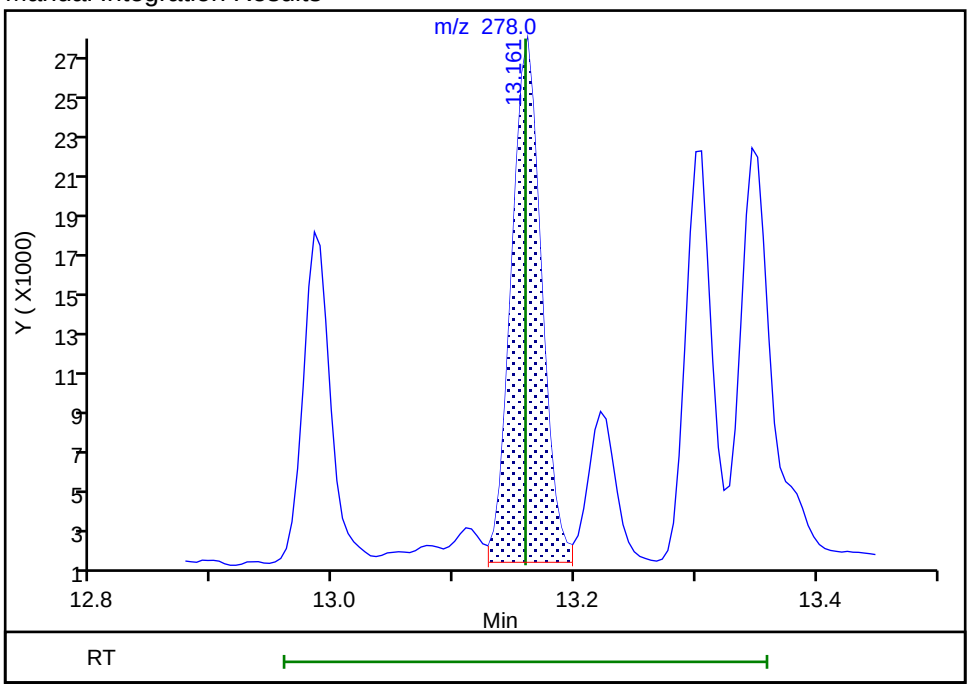
Processing Integration Results

RT: 13.16
Area: 43087
Amount: 0.089490
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 46388
Amount: 0.096346
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:12:17

Audit Action: Manually Integrated Audit Reason: Baseline

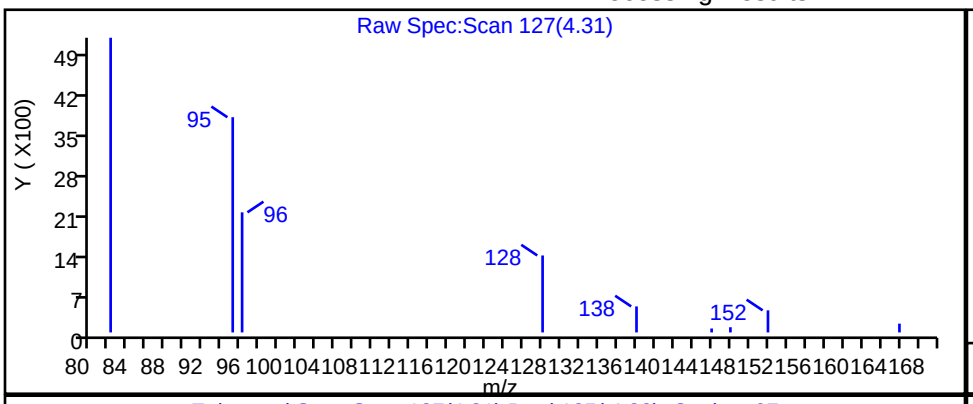
User Disabled Compound Report

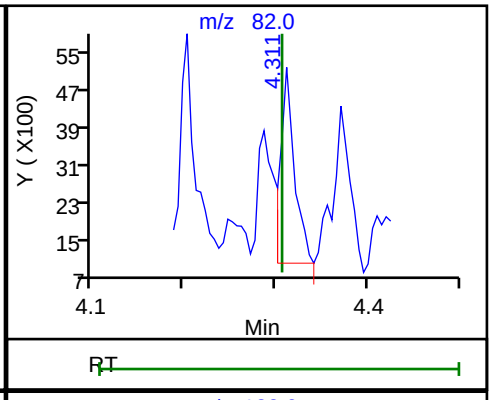
Eurofins TestAmerica, Knoxville

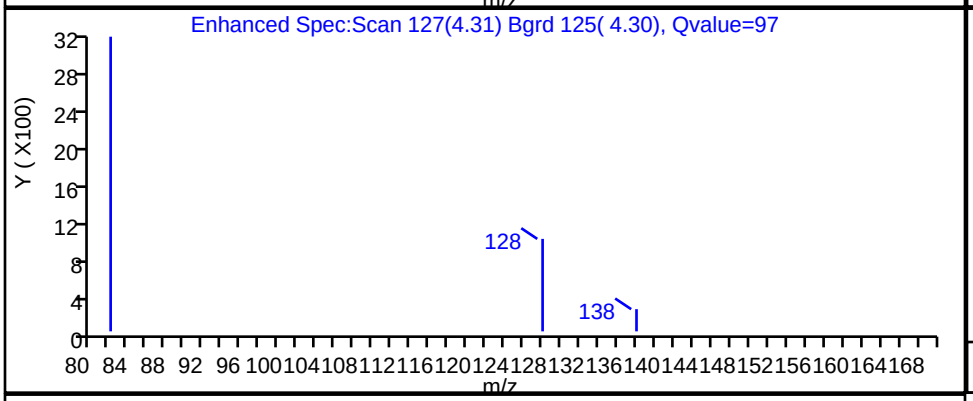
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

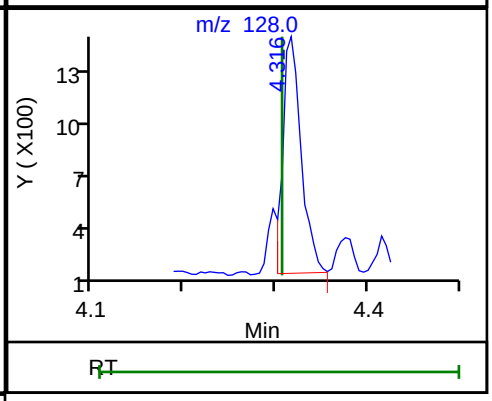
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

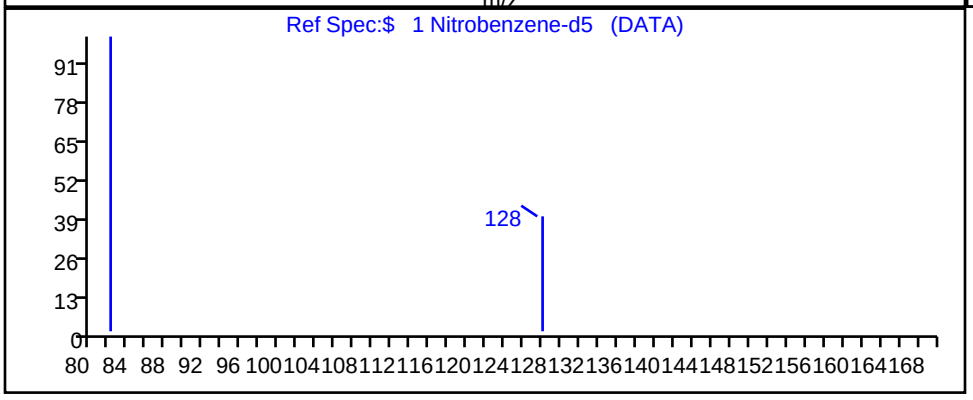
Processing Results











RT	Mass	Response	Amount
4.31	82.00	4411	0.036507
4.32	128.00	1762	

Reviewer: cochranj, 31-Aug-2019 10:58:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

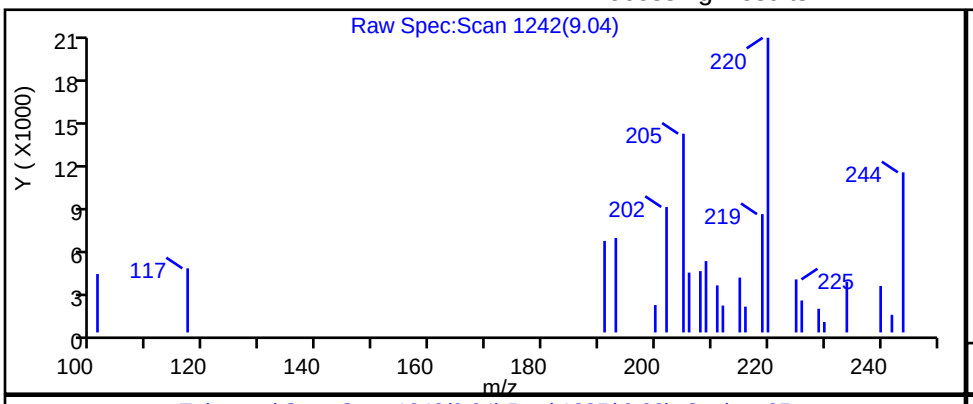
User Disabled Compound Report

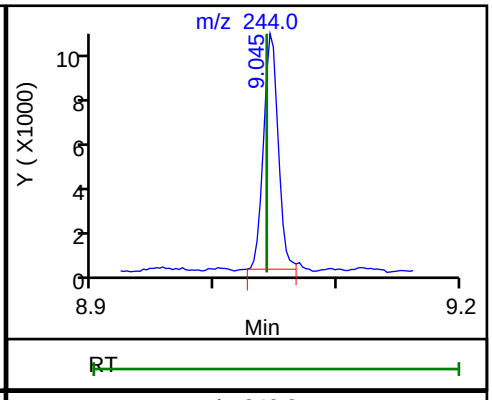
Eurofins TestAmerica, Knoxville

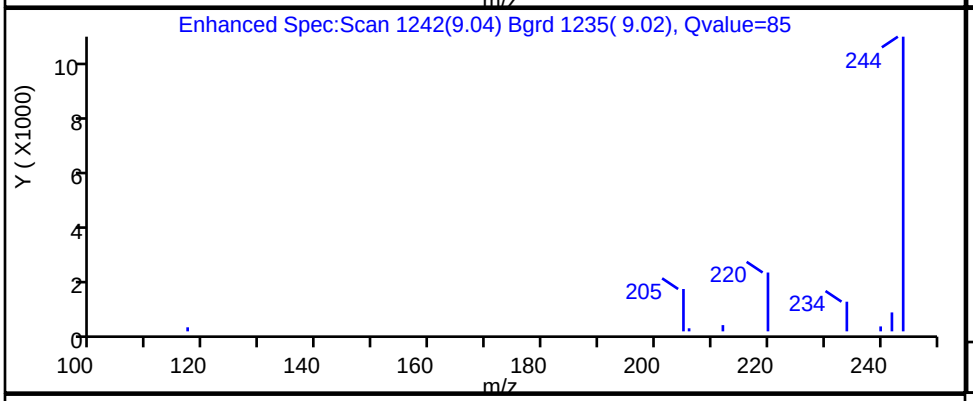
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-a.D				
Injection Date:	29-Aug-2019 19:40:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-A	Lab Sample ID:	140-87761-21		
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	12	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

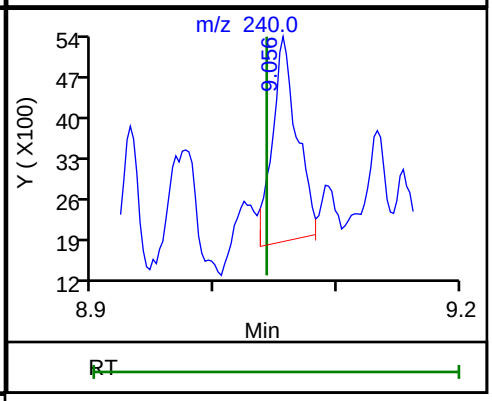
$ 24 Terphenyl-d14, CAS: 1718-51-0

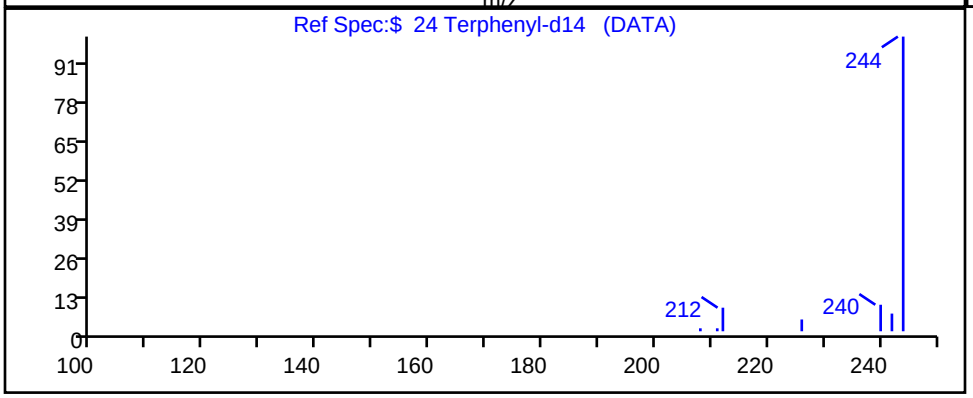
Processing Results











RT	Mass	Response	Amount
9.04	244.00	8624	0.028898
9.06	240.00	4977	

Reviewer: cochranj, 31-Aug-2019 10:58:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-05_20190718 Lab Sample ID: 580-87761-22

Matrix: Solid Lab File ID: 580-87761-b-22-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:55

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.31(g) Date Analyzed: 08/29/2019 20:55

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 60.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	170	J	190	26
91-57-6	2-Methylnaphthalene	270	J	370	38
83-32-9	Acenaphthene	700		37	17
208-96-8	Acenaphthylene	230		37	9.3
120-12-7	Anthracene	690		37	30
56-55-3	Benzo[a]anthracene	1500		37	15
50-32-8	Benzo[a]pyrene	2100		37	13
205-99-2	Benzo[b]fluoranthene	2000		37	19
192-97-2	Benzo[e]pyrene	1300		37	13
191-24-2	Benzo[g,h,i]perylene	1800		37	22
207-08-9	Benzo[k]fluoranthene	650		37	17
STL00905	C1-Chrysenes	460		37	9.7
STL00909	C1-Dibenzothiophenes	210		37	24
STL00912	C1-Fluoranthenes/pyrene	1200		37	19
STL00913	C1-Fluorenes	190		37	21
STL00916	C1-Naphthalenes	280	J	370	29
STL00901	C1-Phenanthrenes/Anthracenes	970		74	42
STL00906	C2-Chrysenes	230		37	12
STL00910	C2-Dibenzothiophenes	250		37	35
STL00968	C2-Fluoranthenes/Pyrene	390		37	17
STL00914	C2-Fluorenes	300		74	45
STL00917	C2-Naphthalenes	420		74	28
STL00902	C2-Phenanthrenes/Anthracenes	700		150	91
STL00907	C3-Chrysenes	170		37	11
STL00911	C3-Dibenzothiophenes	220		74	42
STL00969	C3-Fluoranthenes/Pyrene	240		37	20
STL00915	C3-Fluorenes	220		74	40
STL00918	C3-Naphthalenes	550		74	36
STL00903	C3-Phenanthrenes/Anthracenes	440		74	59
STL00908	C4-Chrysenes	120		37	13
STL00967	C4-Dibenzothiophenes	150		37	35
STL01791	C4-Fluoranthenes/Pyrene	160		37	14
STL00919	C4-Naphthalenes	490		150	77
STL00904	C4-Phenanthrenes/Anthracenes	320	AP	74	70

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-05_20190718 Lab Sample ID: 580-87761-22

Matrix: Solid Lab File ID: 580-87761-b-22-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:55

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.31(g) Date Analyzed: 08/29/2019 20:55

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 60.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	1700		37	14
53-70-3	Dibenz(a,h)anthracene	210		37	21
132-65-0	Dibenzothiophene	500		37	13
206-44-0	Fluoranthene	5000		37	34
86-73-7	Fluorene	440		37	18
193-39-5	Indeno[1,2,3-cd]pyrene	1300		37	26
91-20-3	Naphthalene	1100		740	68
198-55-0	Perylene	690		37	7.4
85-01-8	Phenanthrene	4000		74	66
129-00-0	Pyrene	5500		74	22

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D
Lims ID: 580-87761-B-22-A
Client ID: 22T-SG-05_20190718
Sample Type: Client
Inject. Date: 29-Aug-2019 20:55:30 ALS Bottle#: 15 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-023
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 11:39:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	203395	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	262991	0.5875	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	43255	0.1475	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	97	25265	0.0904	
11 Acenaphthylene	152	6.216	6.216	0.000	100	44954	0.1227	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	100	106489	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	105995	0.3741	
16 Fluorene	166	6.797	6.793	0.004	100	74624	0.2381	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	120585	0.2710	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	98	186401	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1019142	2.12	
20 Anthracene	178	7.648	7.648	0.000	100	148940	0.3720	
22 Fluoranthene	202	8.690	8.687	0.003	99	1251269	2.68	
23 Pyrene	202	8.911	8.906	0.005	99	1557018	2.93	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	69	338659	0.8118	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	175444	0.5000	
28 Chrysene	228	10.161	10.161	0.000	96	447083	0.8962	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	533155	1.05	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	201889	0.3502	Ma
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	336550	0.7050	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	500236	1.14	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	186160	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	183145	0.3708	
35 Indeno[1,2,3-cd]pyrene	276	13.154	13.150	0.004	85	369831	0.6878	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	41	52521	0.1151	
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	98	486530	0.9669	
A 38 C1-Naphthalenes	142	5.507	(5.454-5.583)		0	68032	0.1520	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	101217	0.2261	
A 40 C3-Naphthalenes	170	6.555	(6.323-6.820)		0	132160	0.2952	
A 41 C4-Naphthalenes	184	6.947	(6.483-7.421)		0	117923	0.2634	
A 42 C1-Fluorenes	180	7.301	(7.219-7.413)		0	32458	0.1036	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	50280	0.1604	
A 44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	36777	0.1173	
A 45 C1-Dibenzothiophenes	198	7.943	(7.827-8.065)		0	51166	0.1150	
A 46 C2-Dibenzothiophenes	212	8.328	(8.209-8.703)		0	60667	0.1364	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	51796	0.1164	
A 48 C4-Dibenzothiophenes	240	9.053	(8.814-9.591)		0	35253	0.0792	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	249185	0.5190	
A 50 C2-Phenanthrenes/Anthracen	206	8.552	(8.358-8.785)		0	181014	0.3770	
A 51 C3-Phenanthrenes/Anthracen	220	8.995	(8.747-9.260)		0	114376	0.2382	
A 52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	81568	0.1699	
A 53 C1-Fluoranthenes/pyrene	216	9.300	(9.112-9.500)		0	332357	0.6260	
A 54 C2-Fluoranthenes/Pyrene	230	9.810	(9.587-10.039)		0	111921	0.2108	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.043-10.519)		0	69182	0.1303	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.371-10.864)		0	45752	0.0862	
A 57 C1-Chrysenes	242	10.612	(10.512-10.741)		0	123405	0.2474	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	61369	0.1230	
A 59 C3-Chrysenes	270	11.515	(11.245-11.890)		0	45263	0.0907	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	32215	0.0646	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

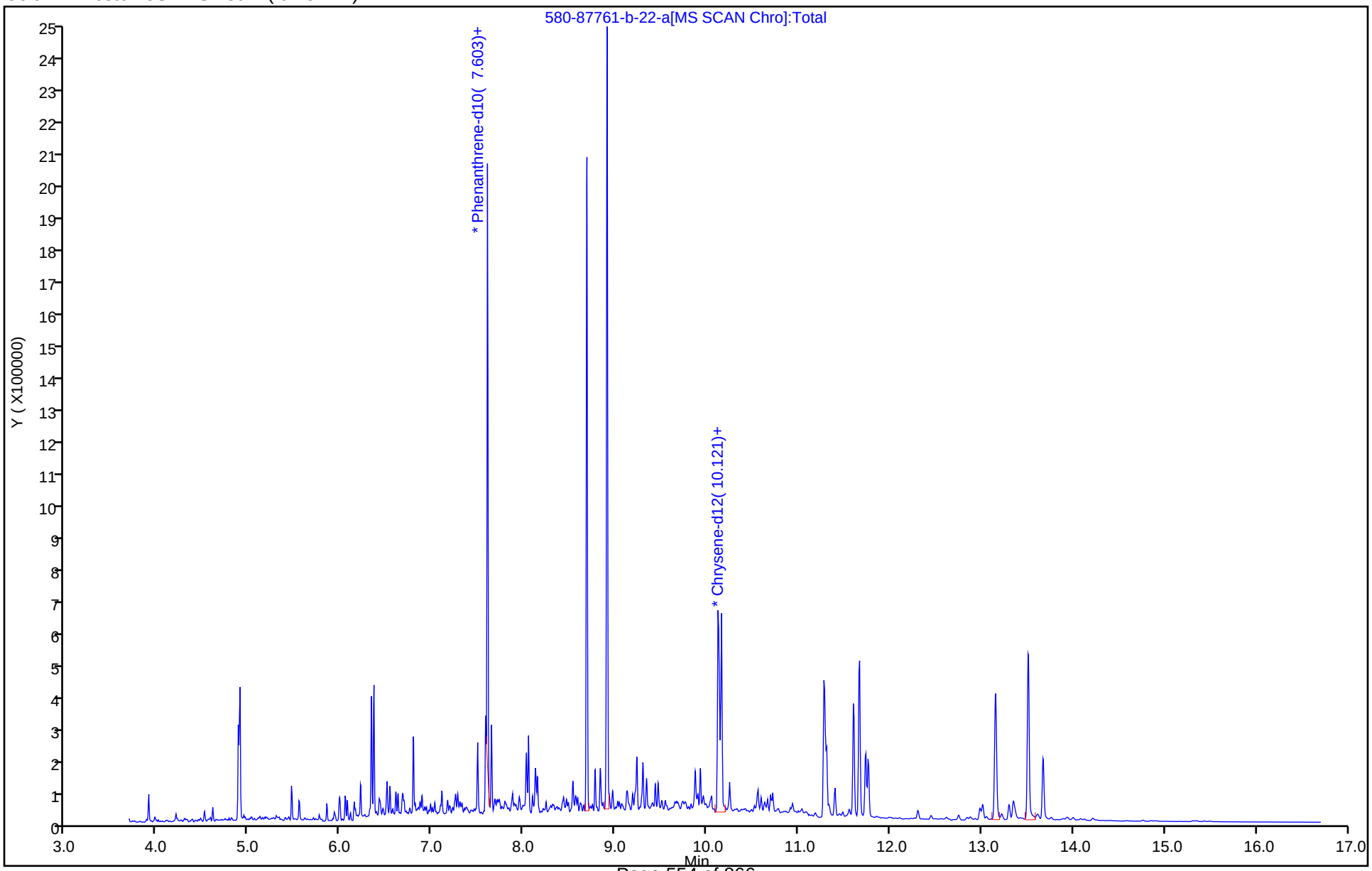
Report Date: 31-Aug-2019 11:49:32 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D

Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22	Worklist Smp#:	23
Client ID:	22T-SG-05_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	15
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

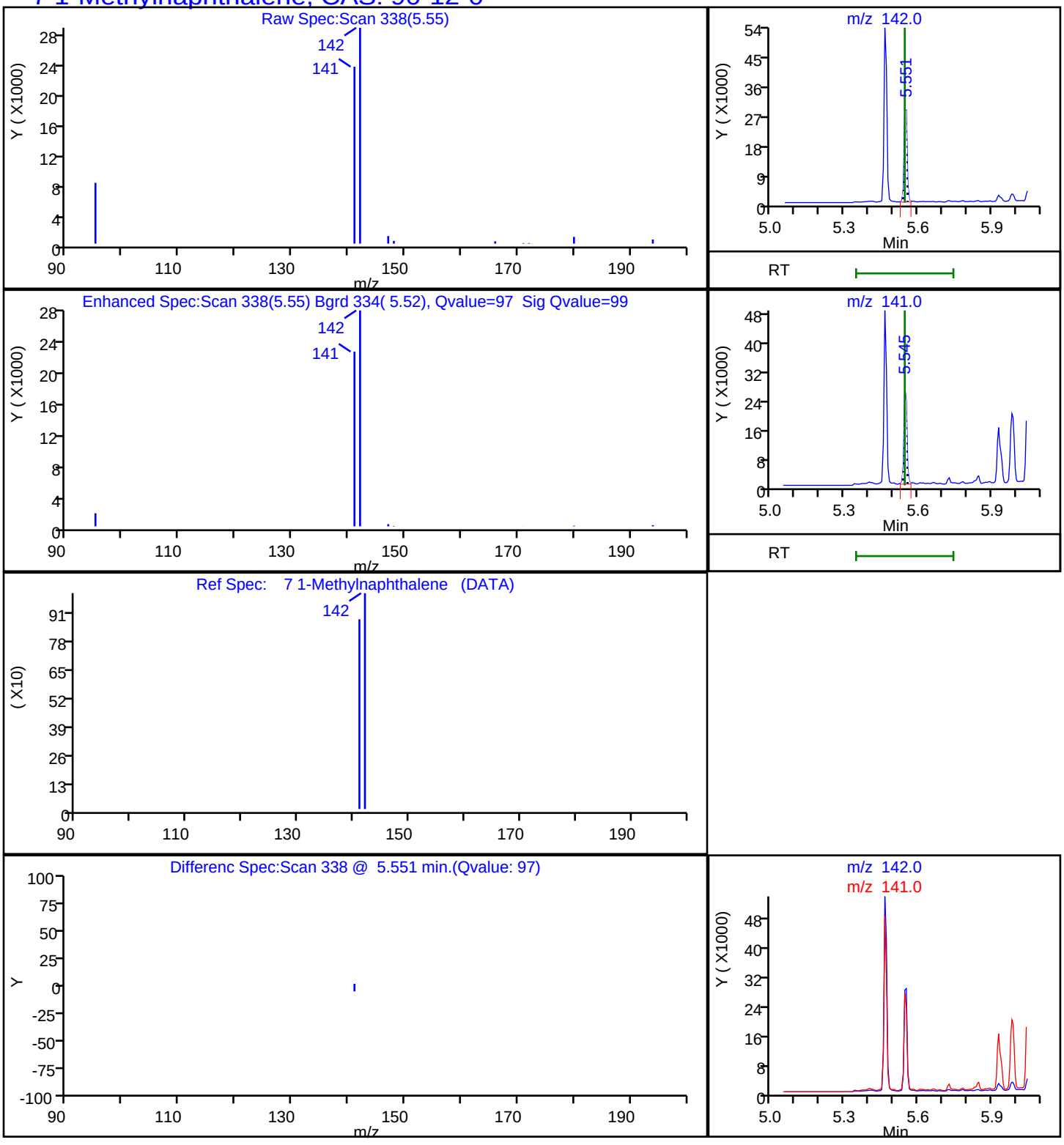


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

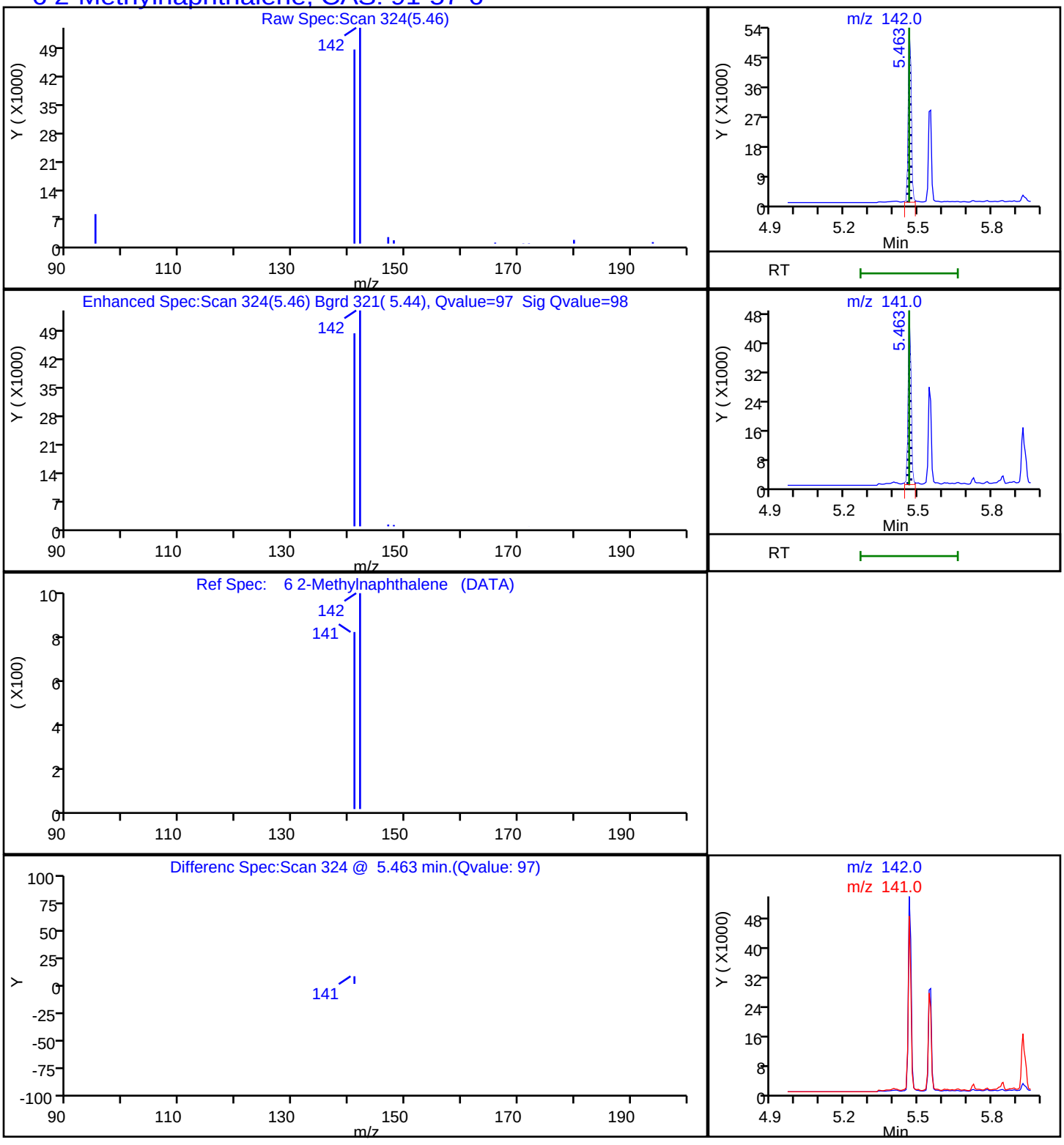


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

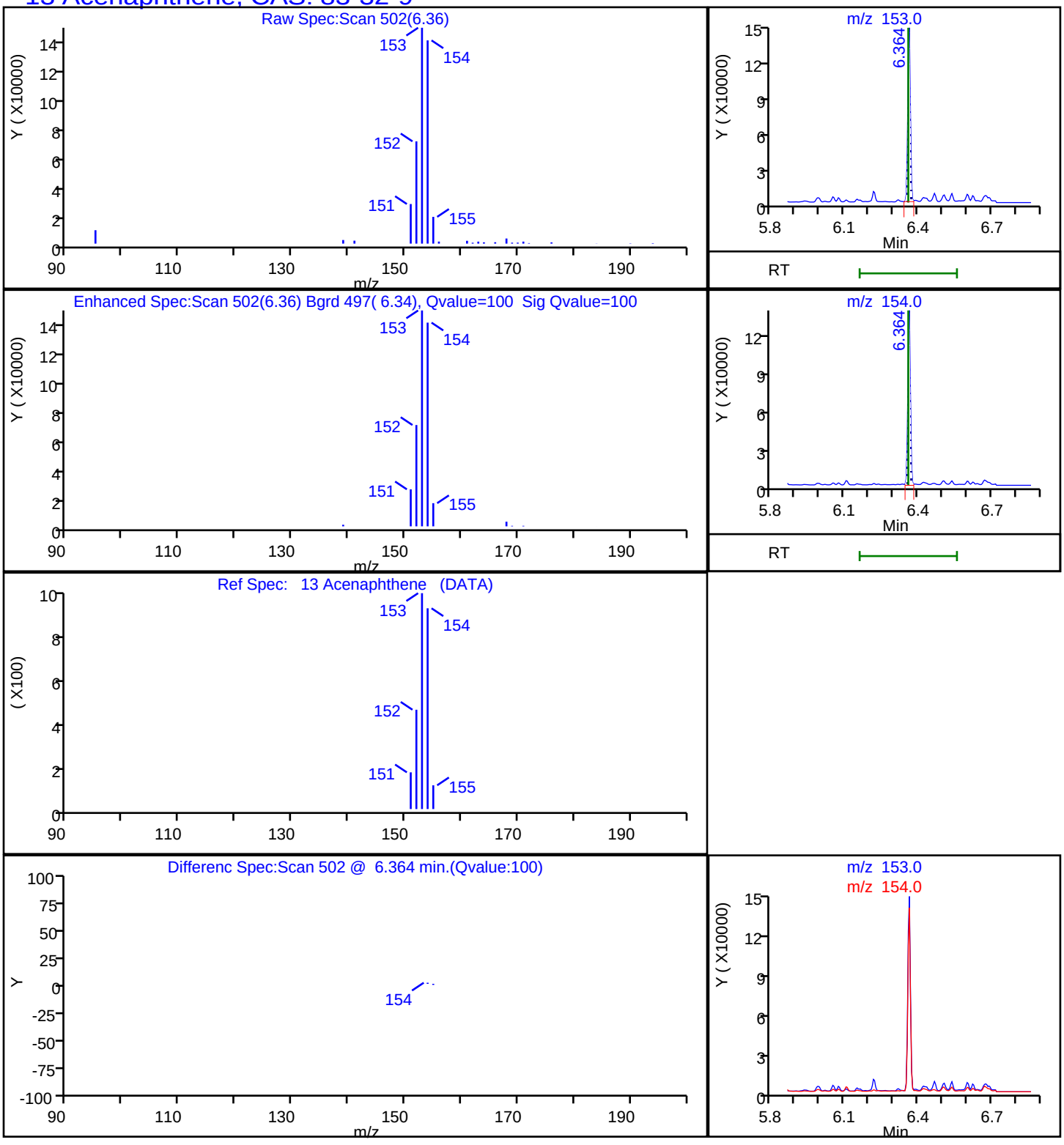


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9



Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
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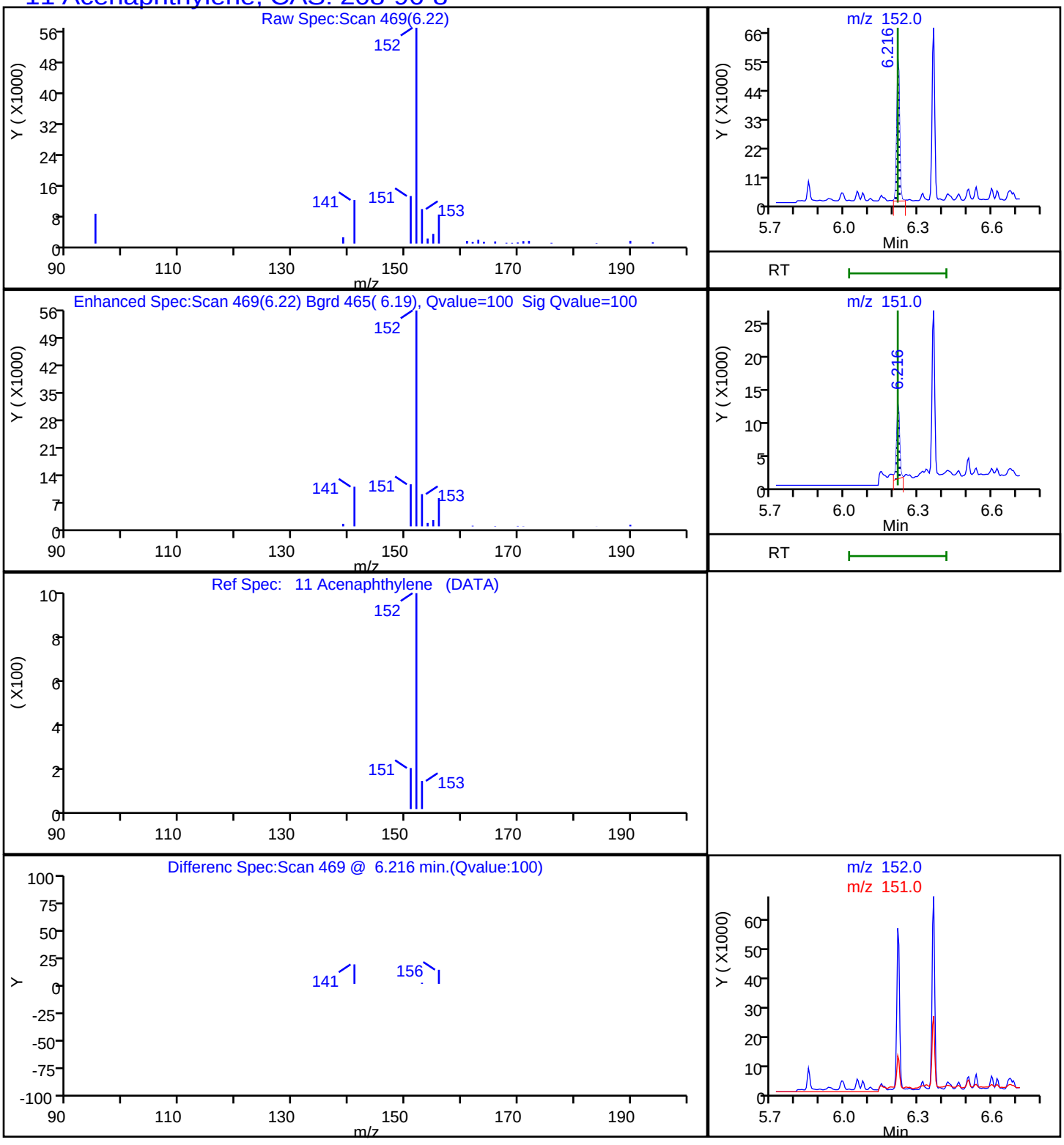
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8



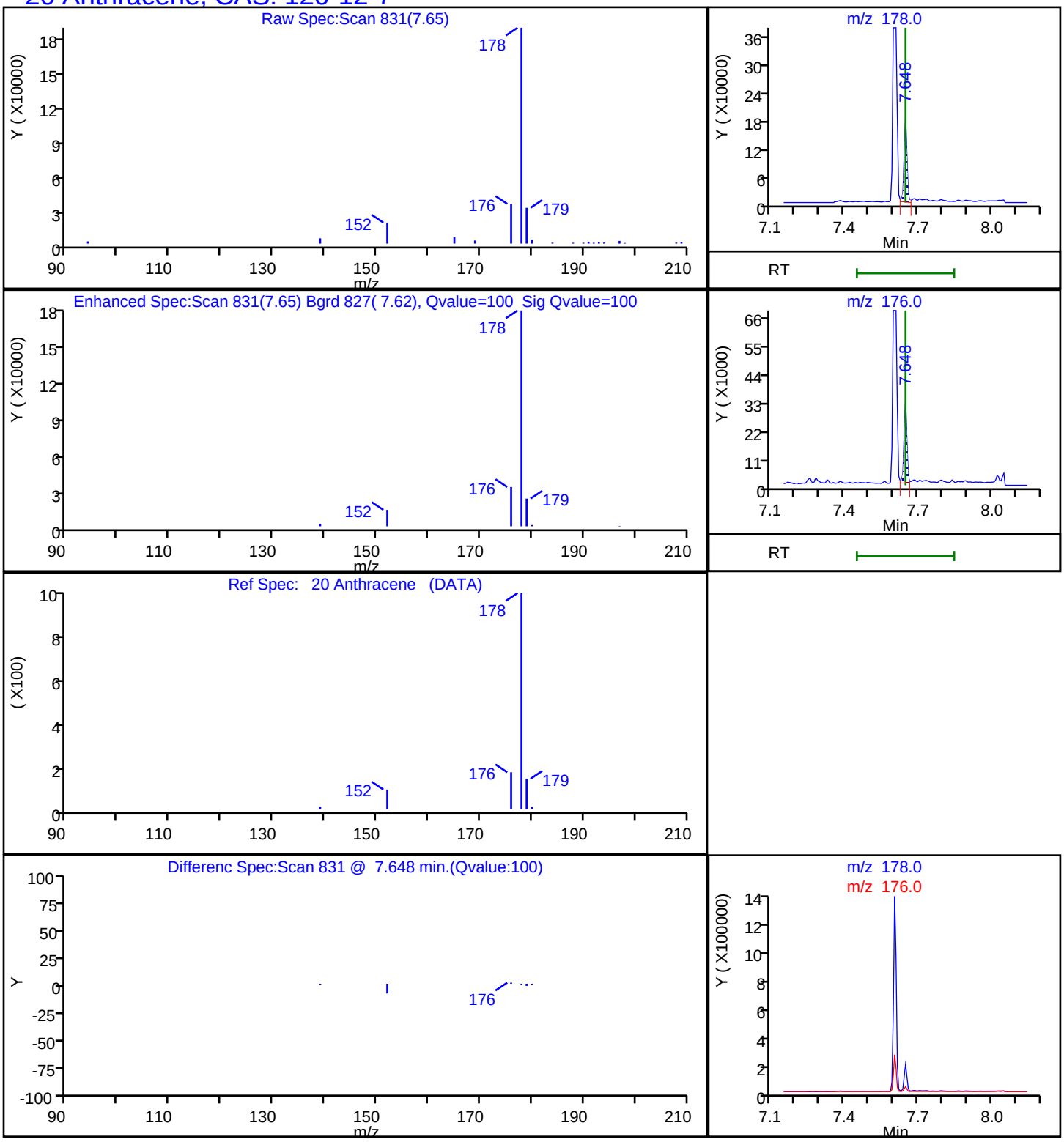
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D

Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7



Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
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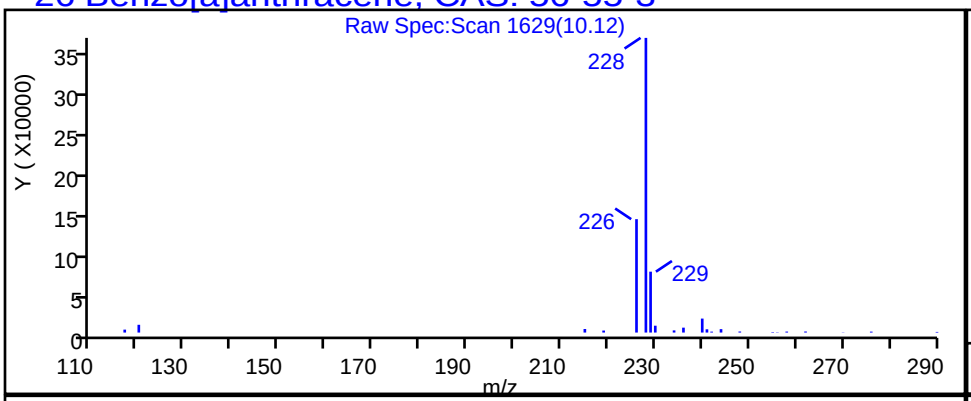
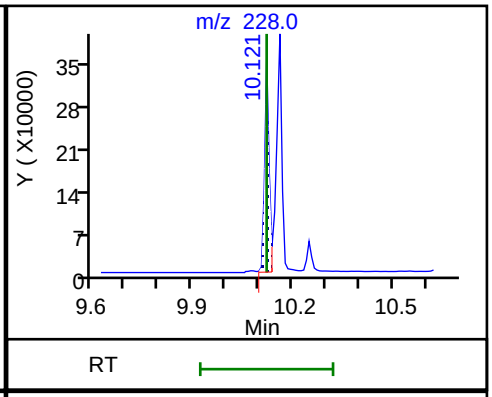
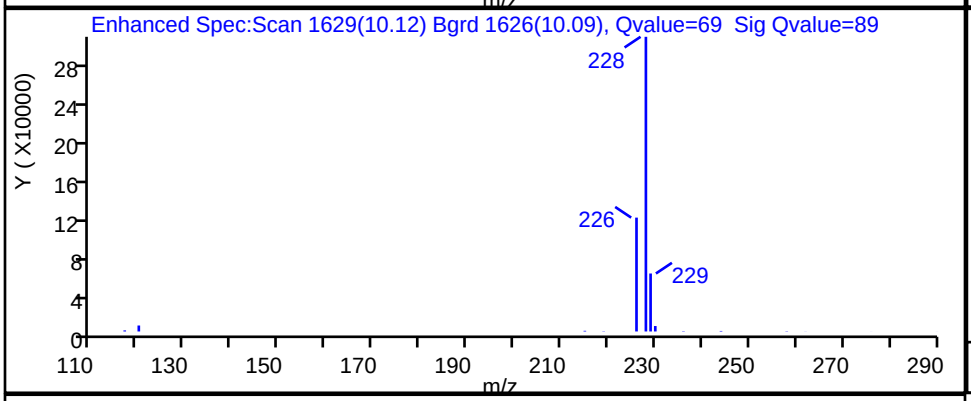
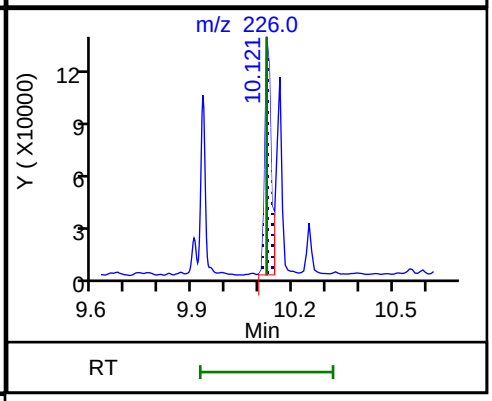
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

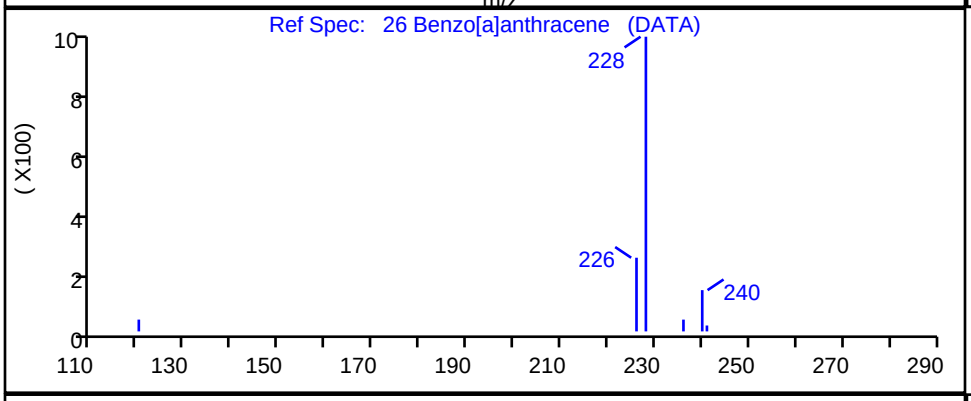
26 Benzo[a]anthracene, CAS: 56-55-3

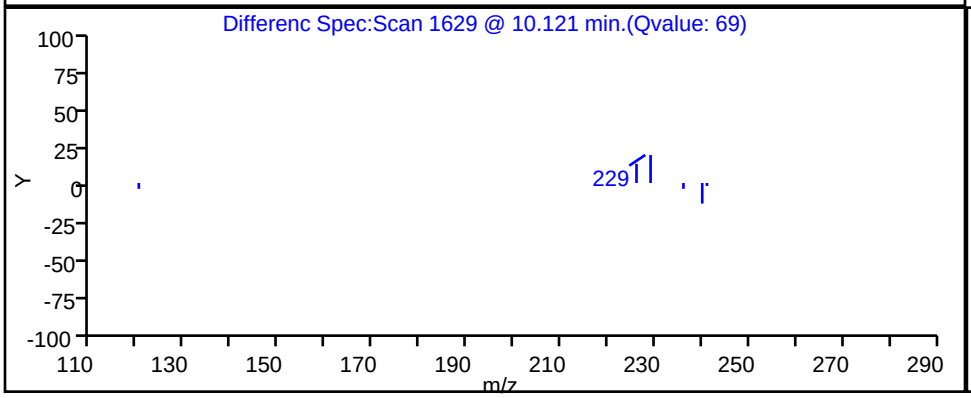


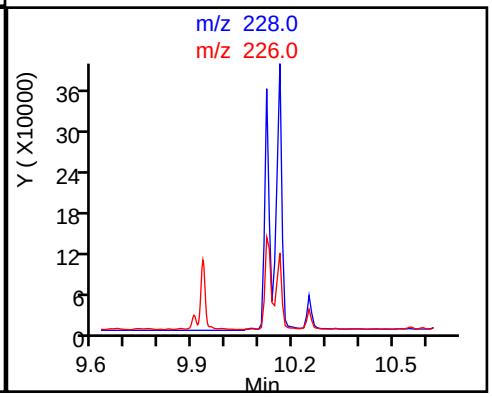












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Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
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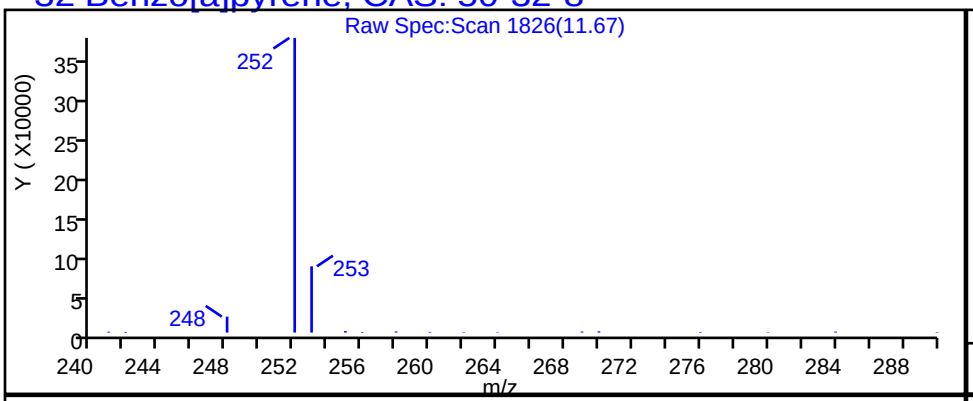
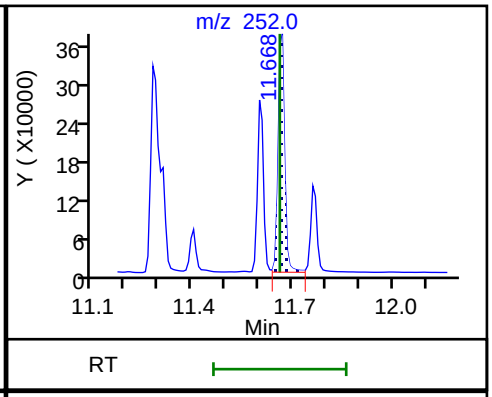
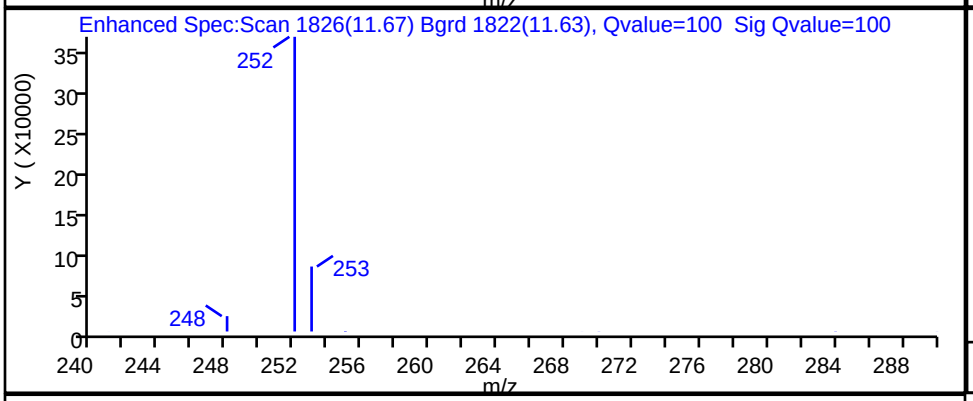
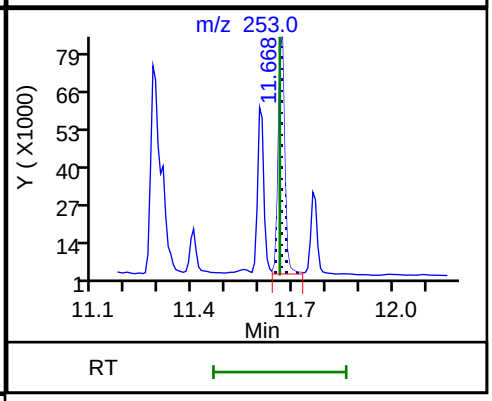
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

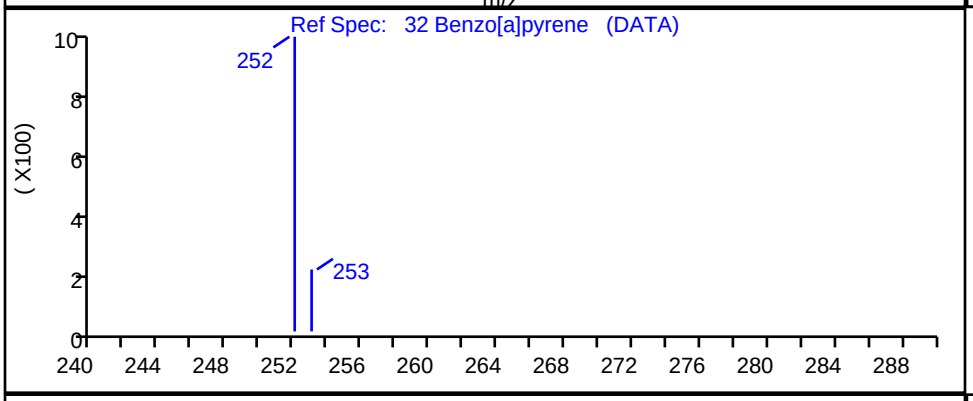
32 Benzo[a]pyrene, CAS: 50-32-8

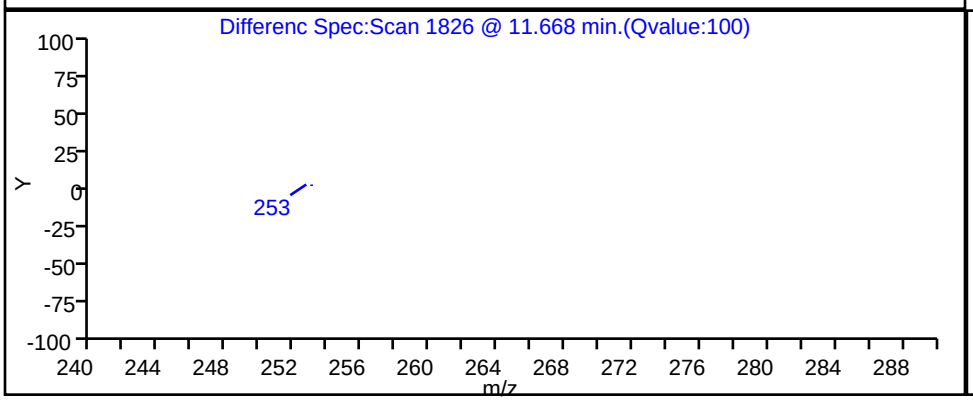


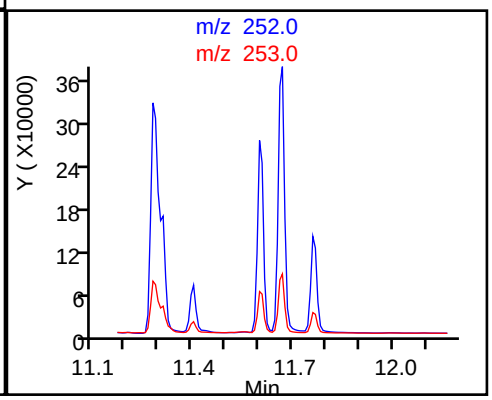












Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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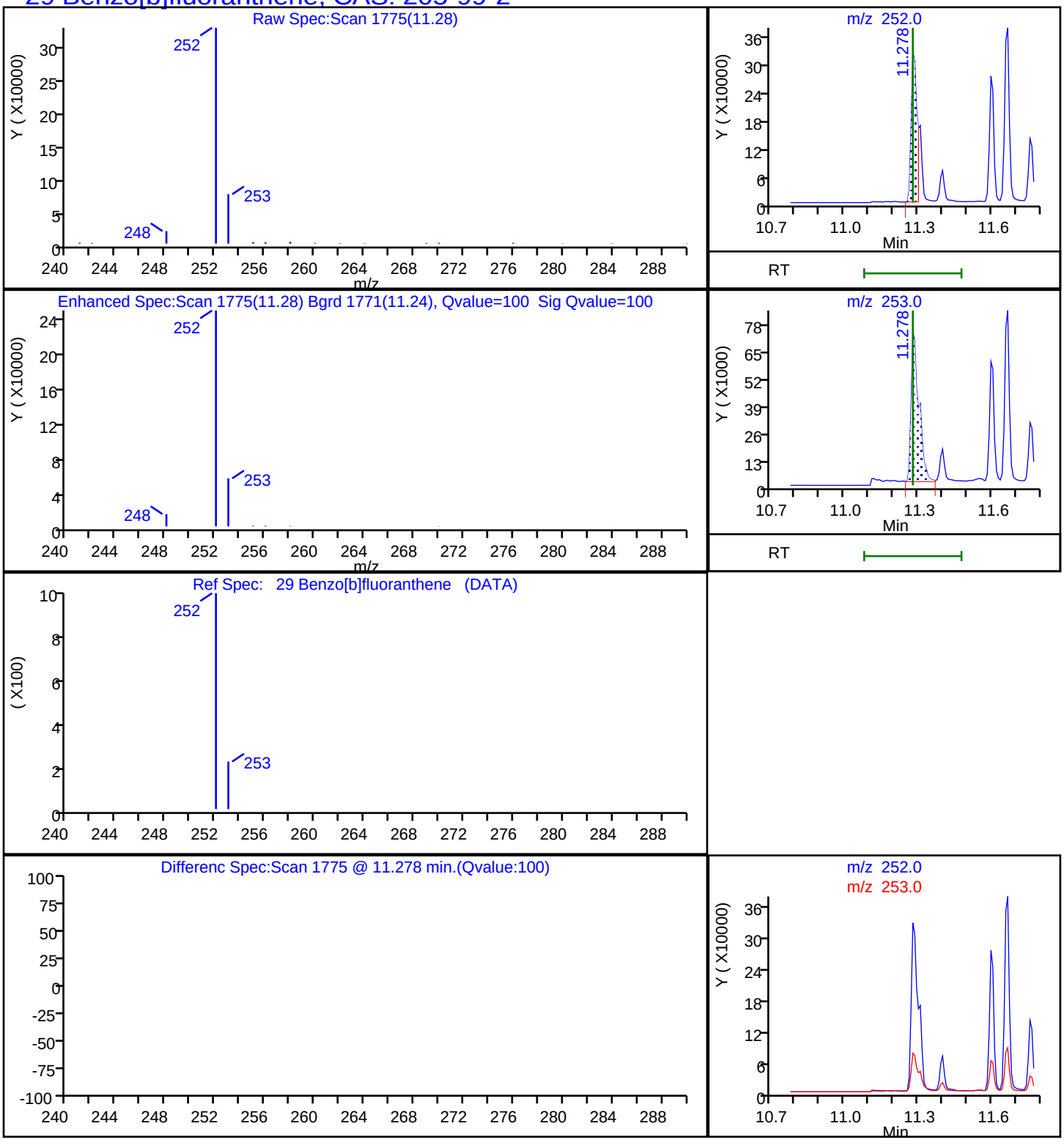
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

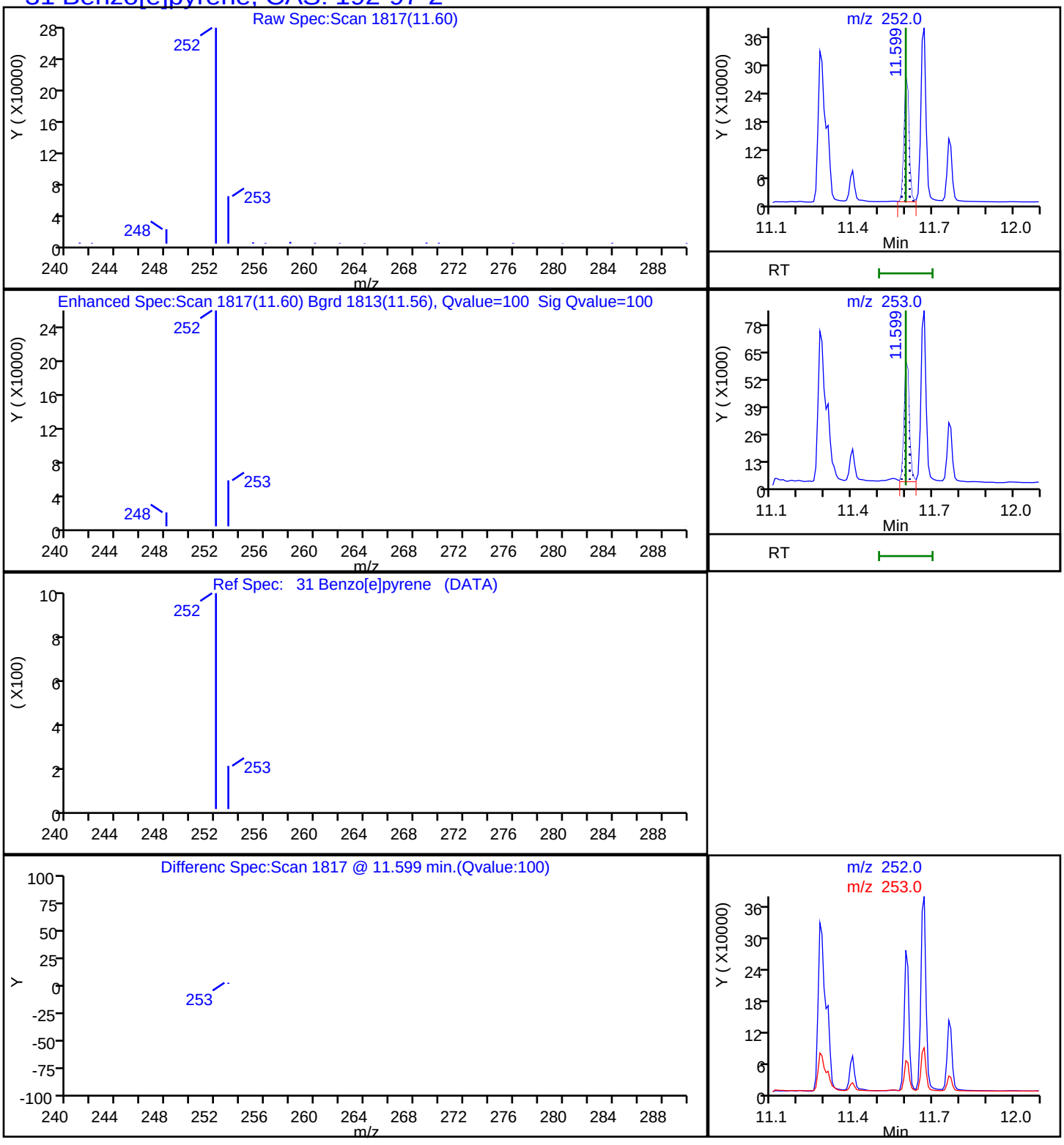


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2

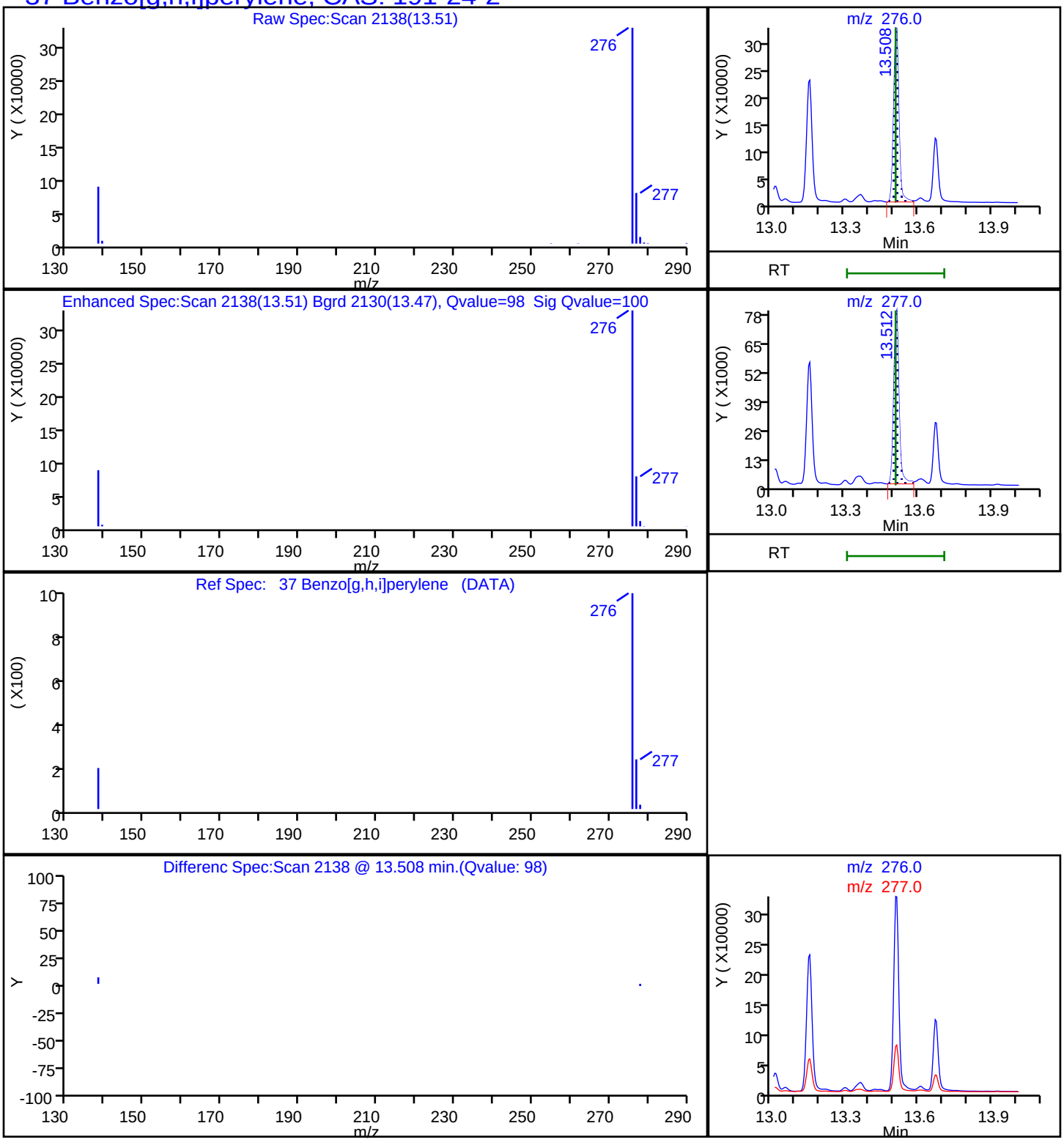


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
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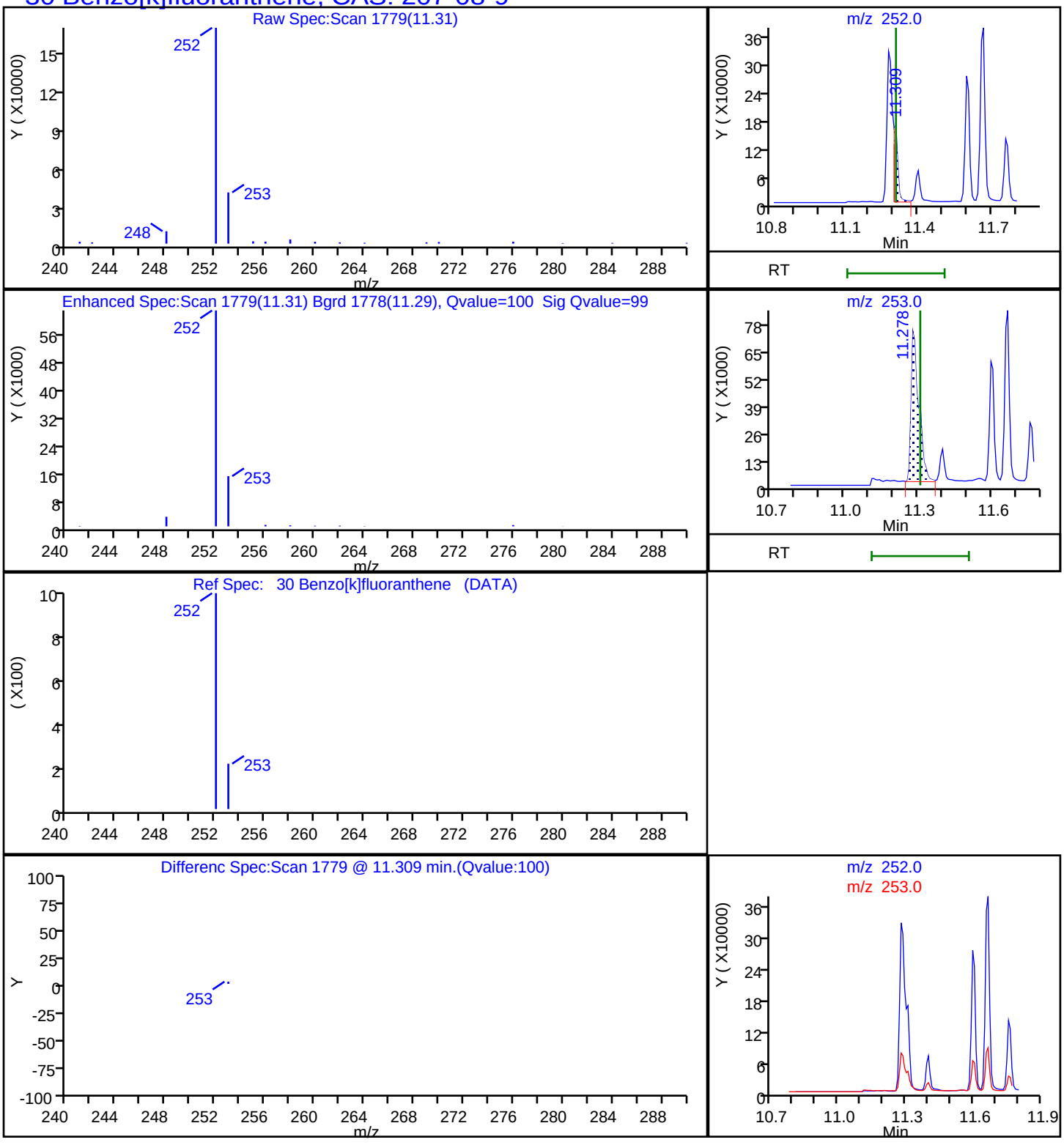
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



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Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
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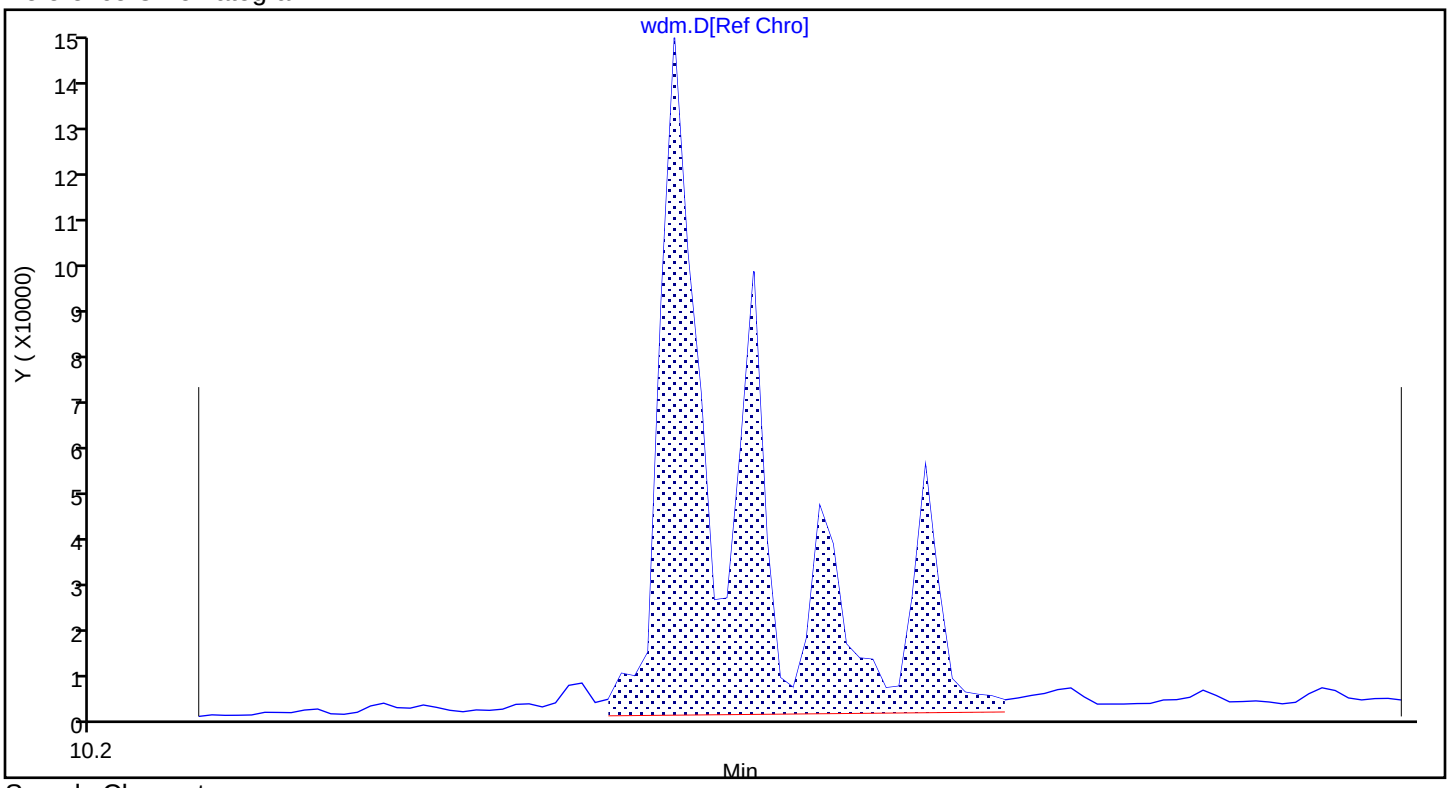
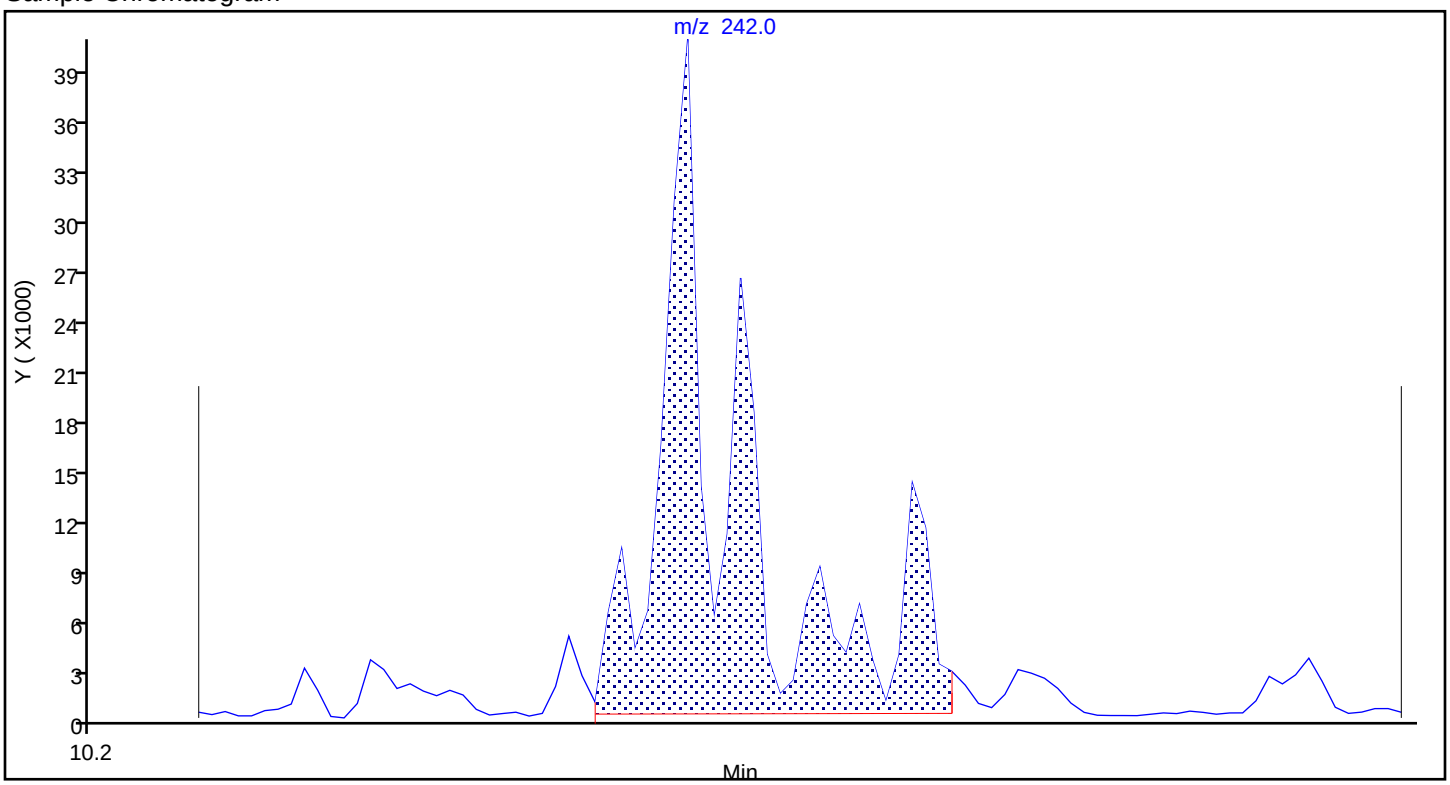
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
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Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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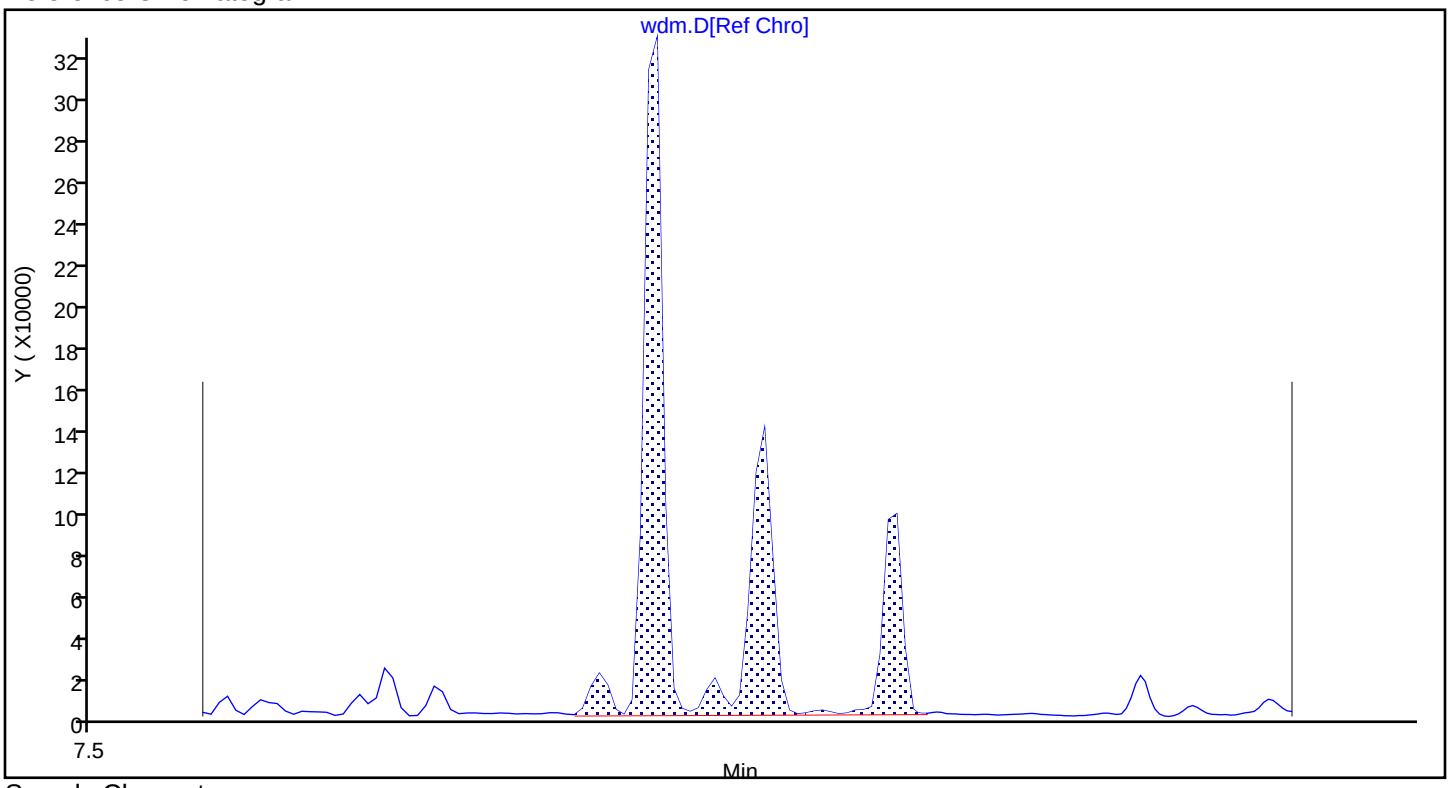
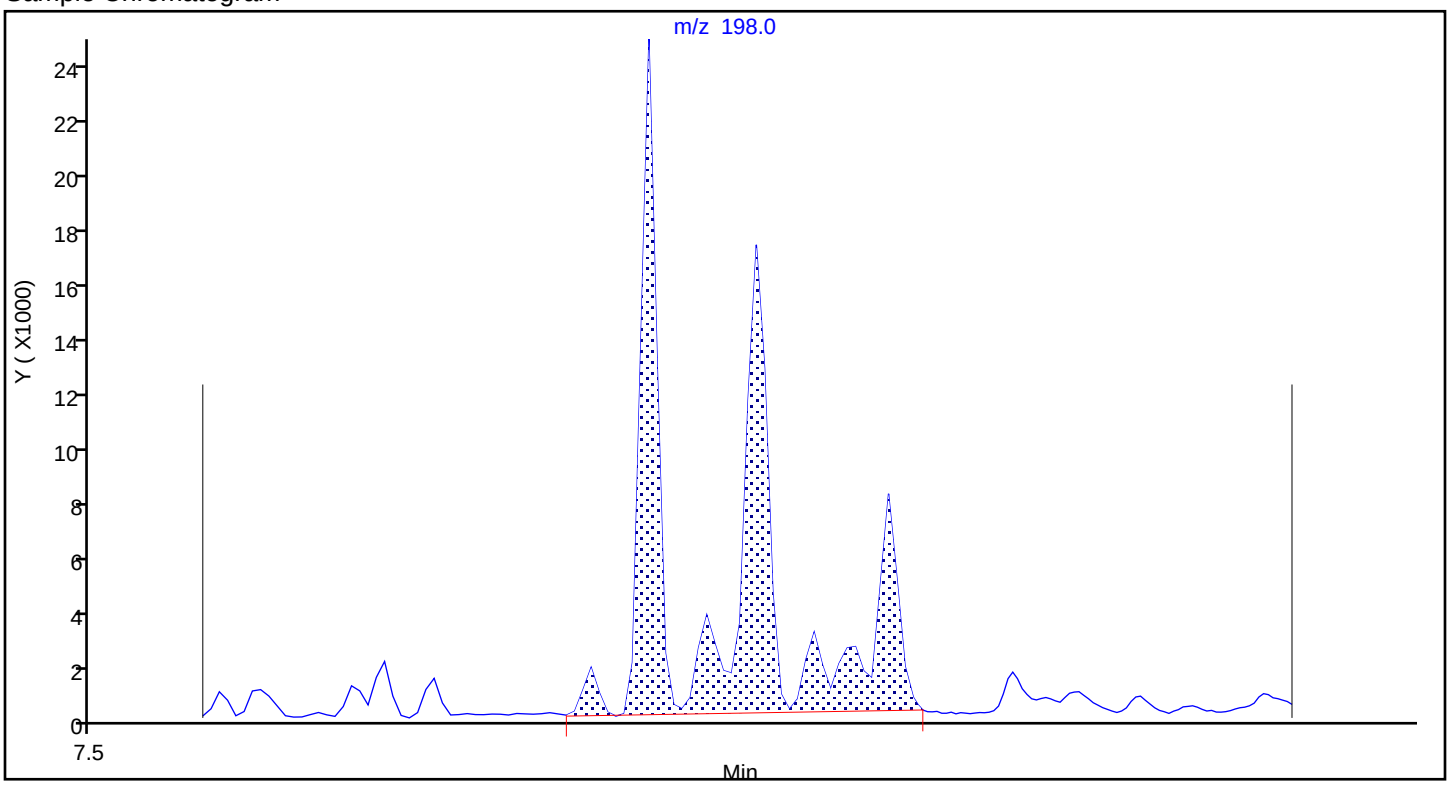
A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
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Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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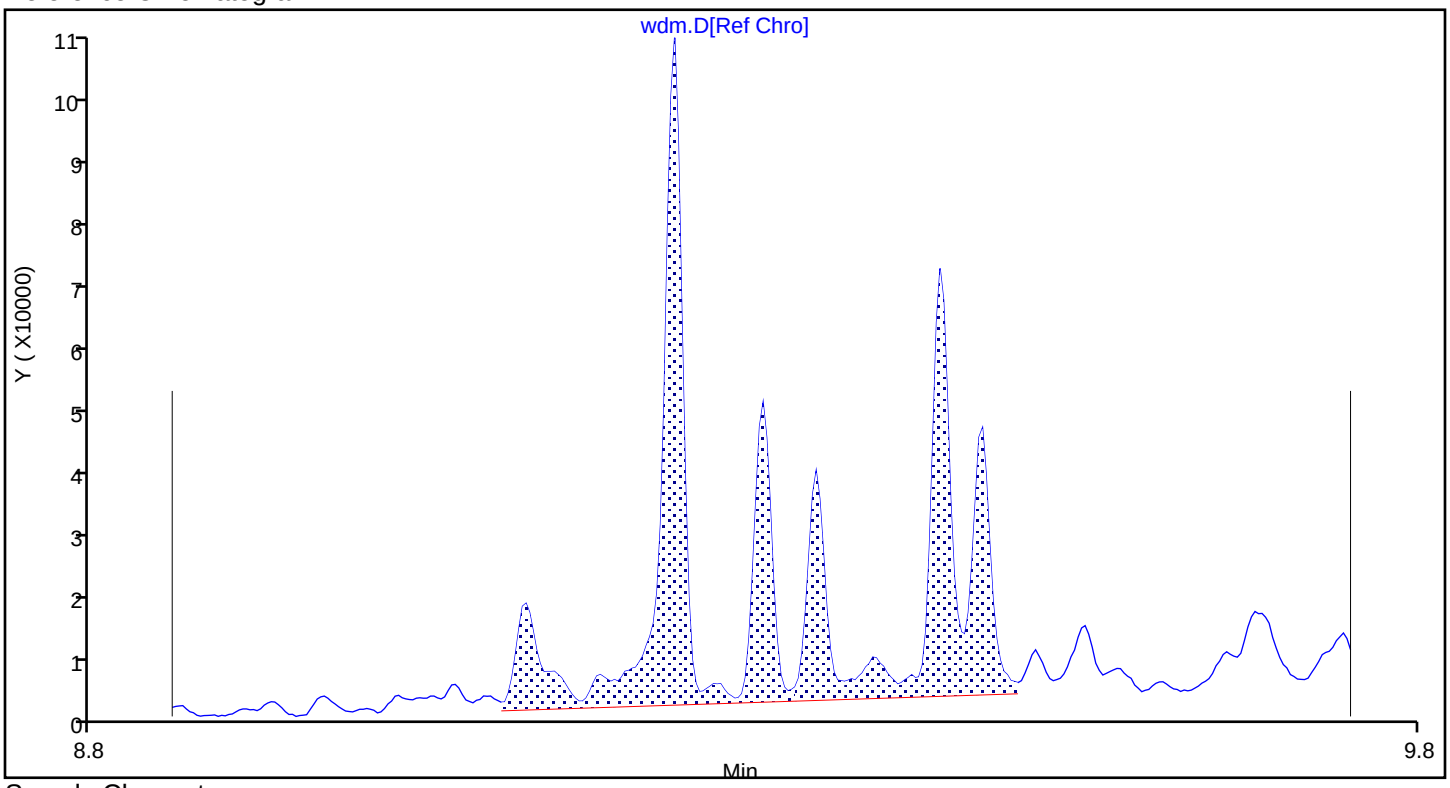
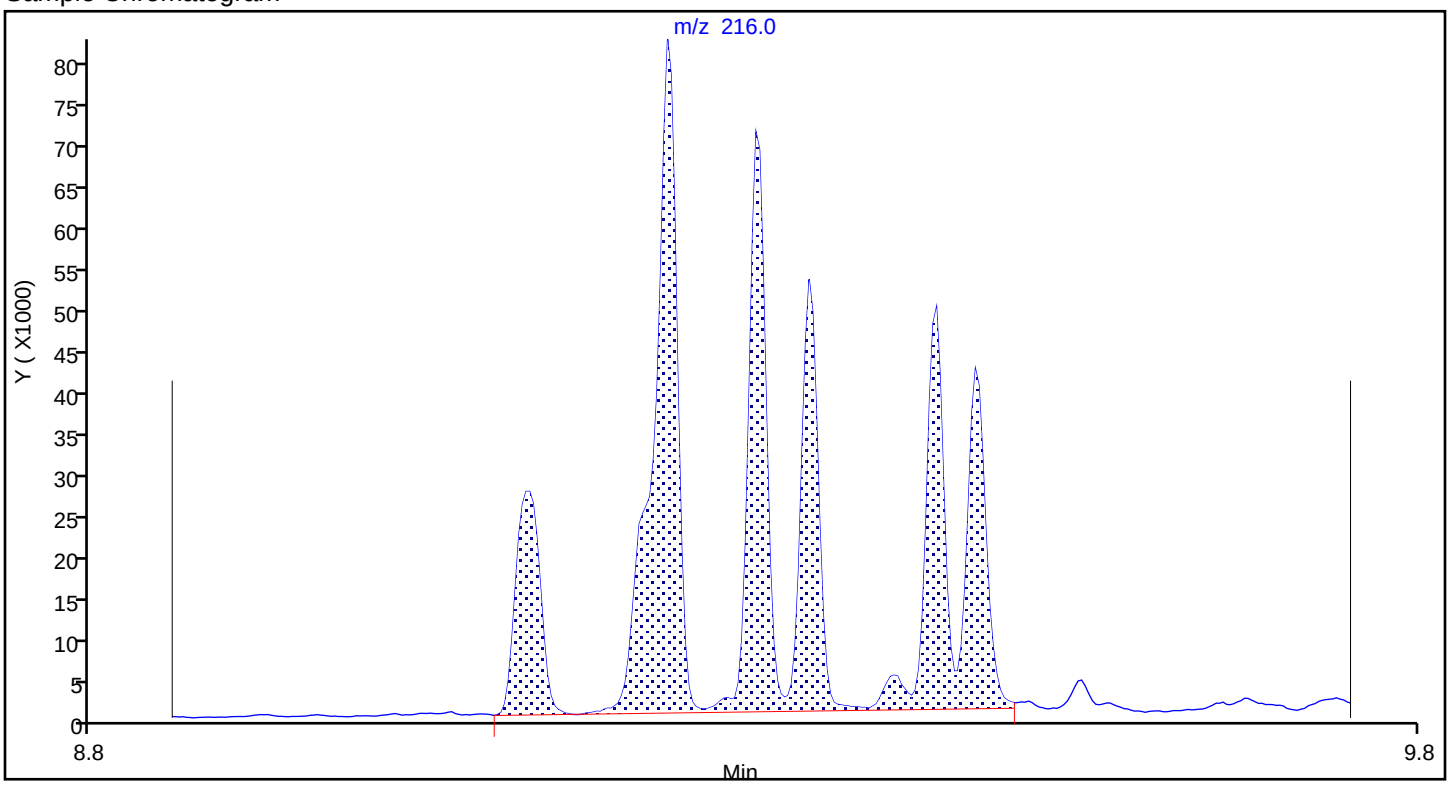
A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



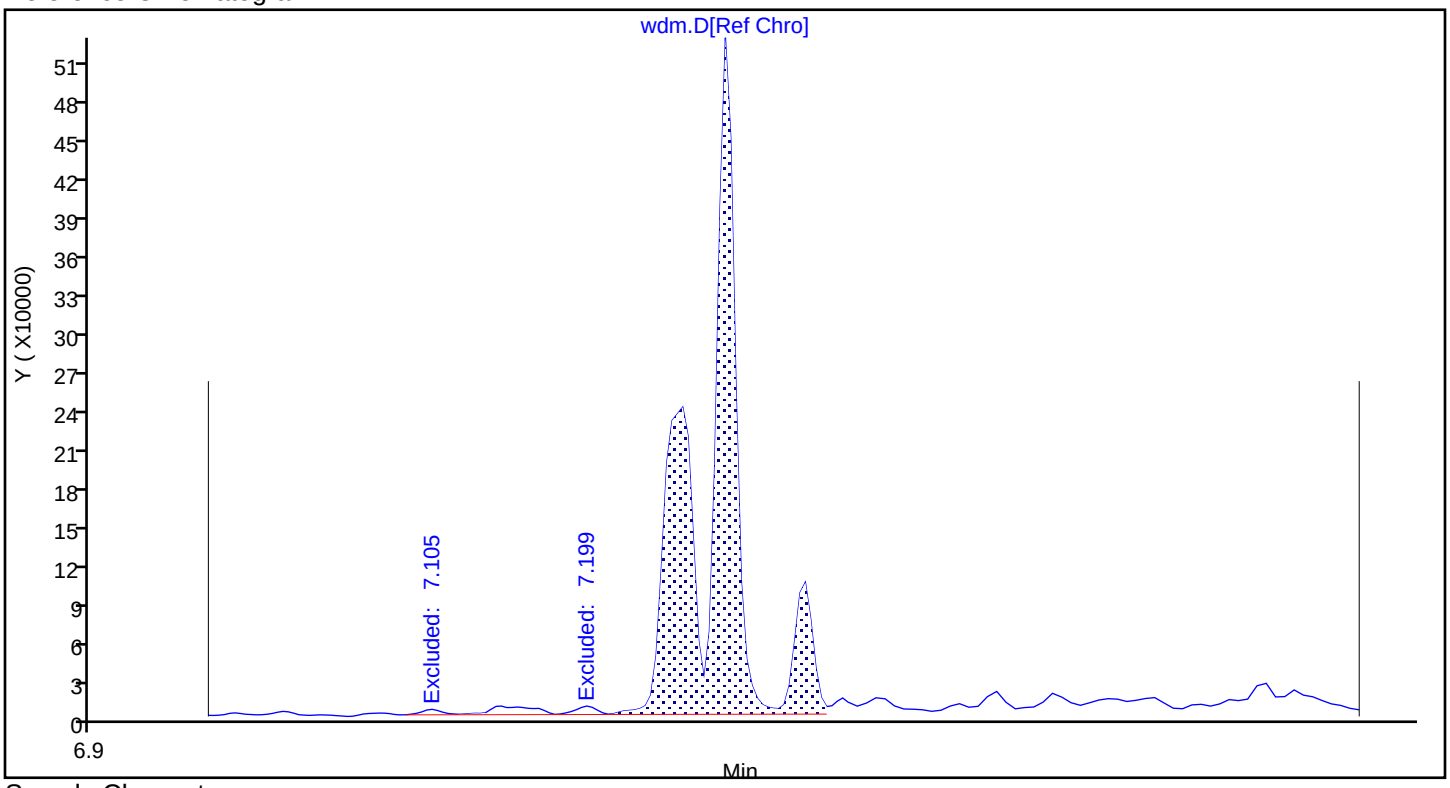
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

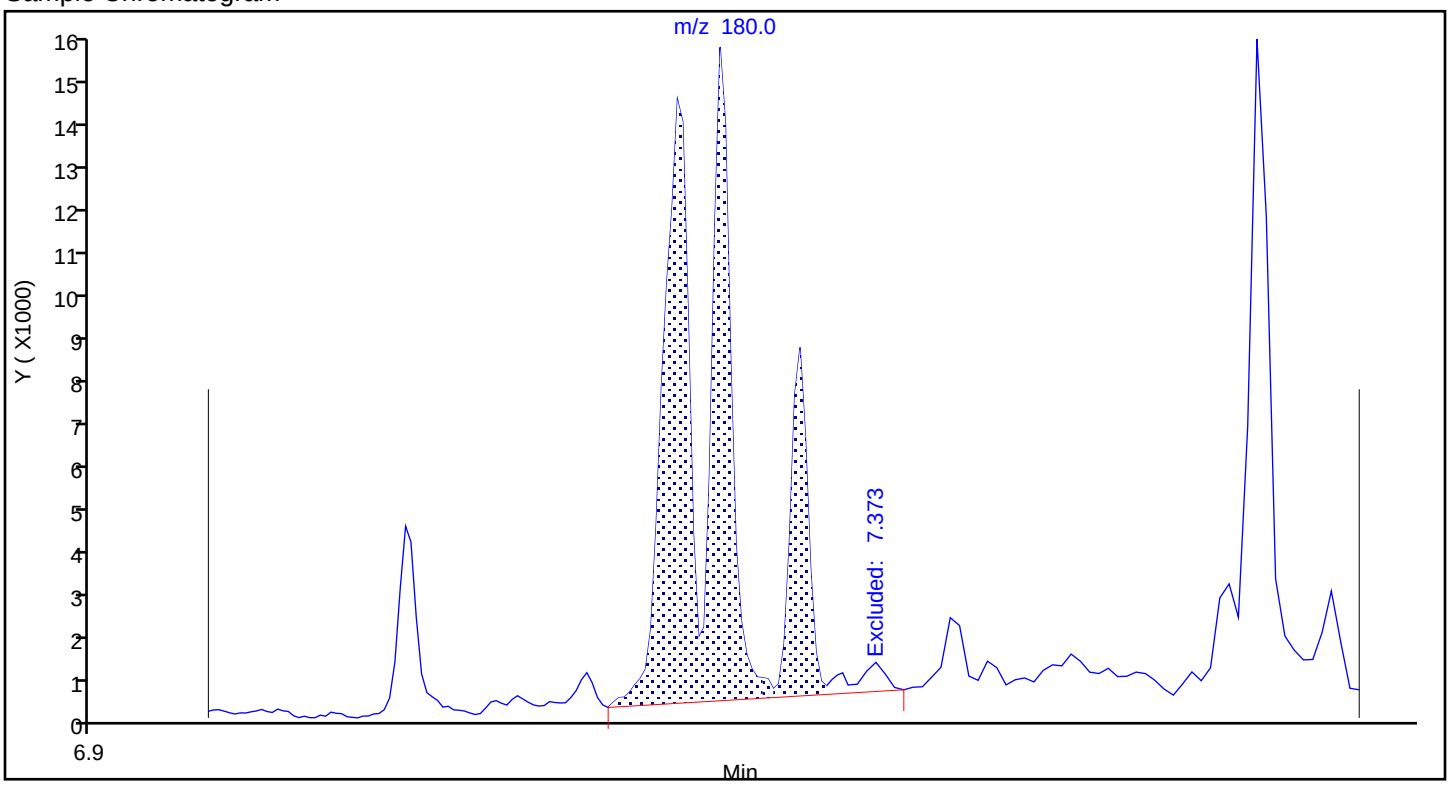
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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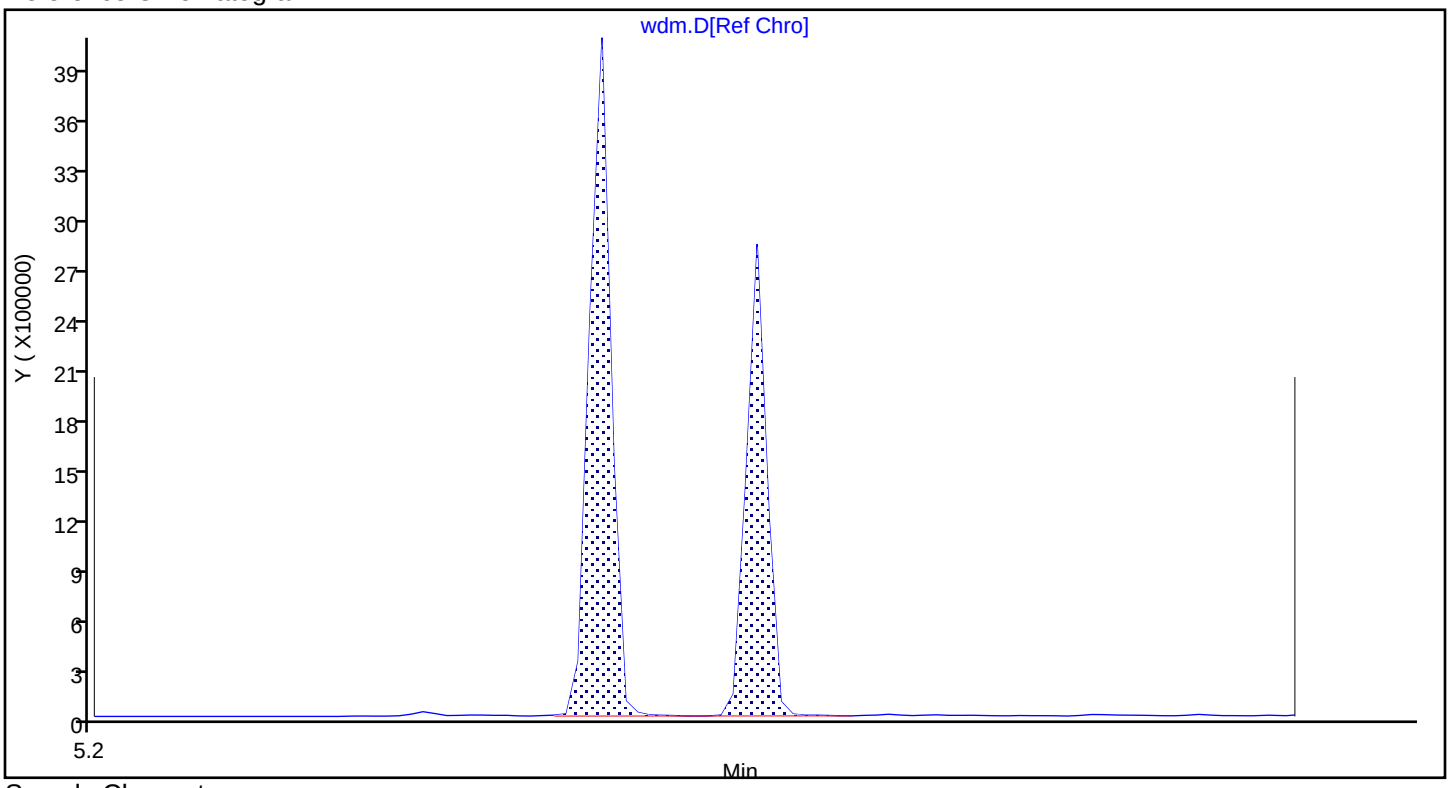
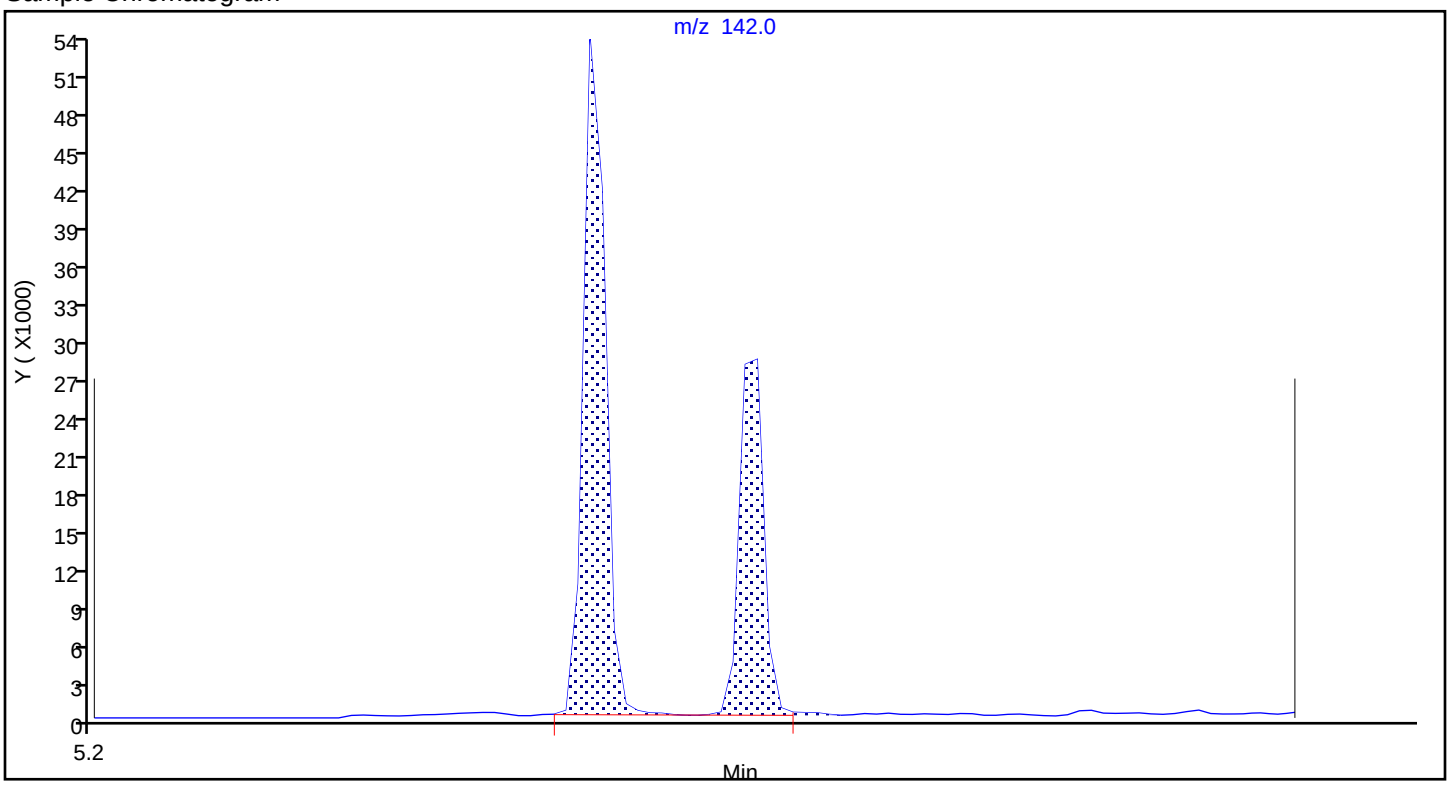
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



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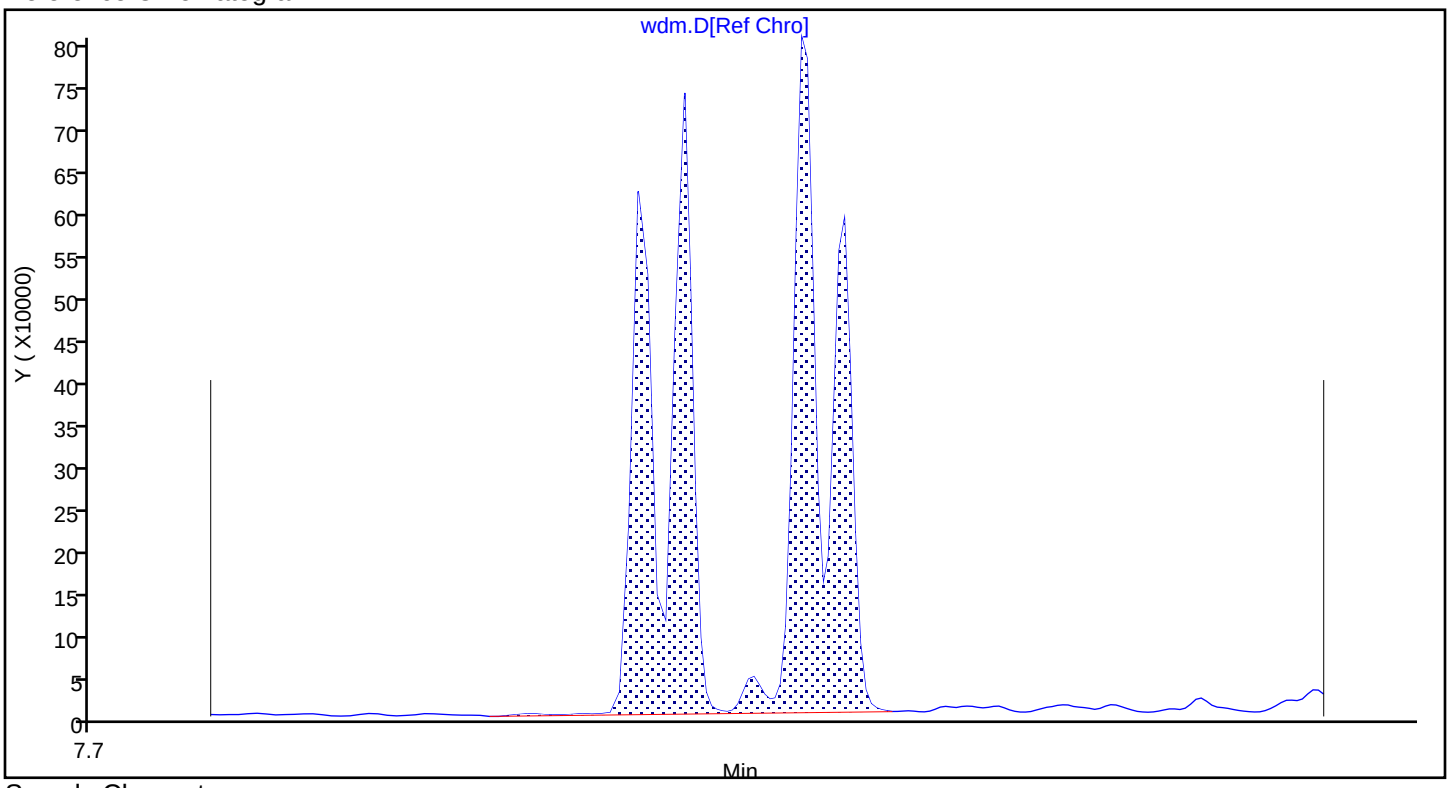
Eurofins TestAmerica, Knoxville

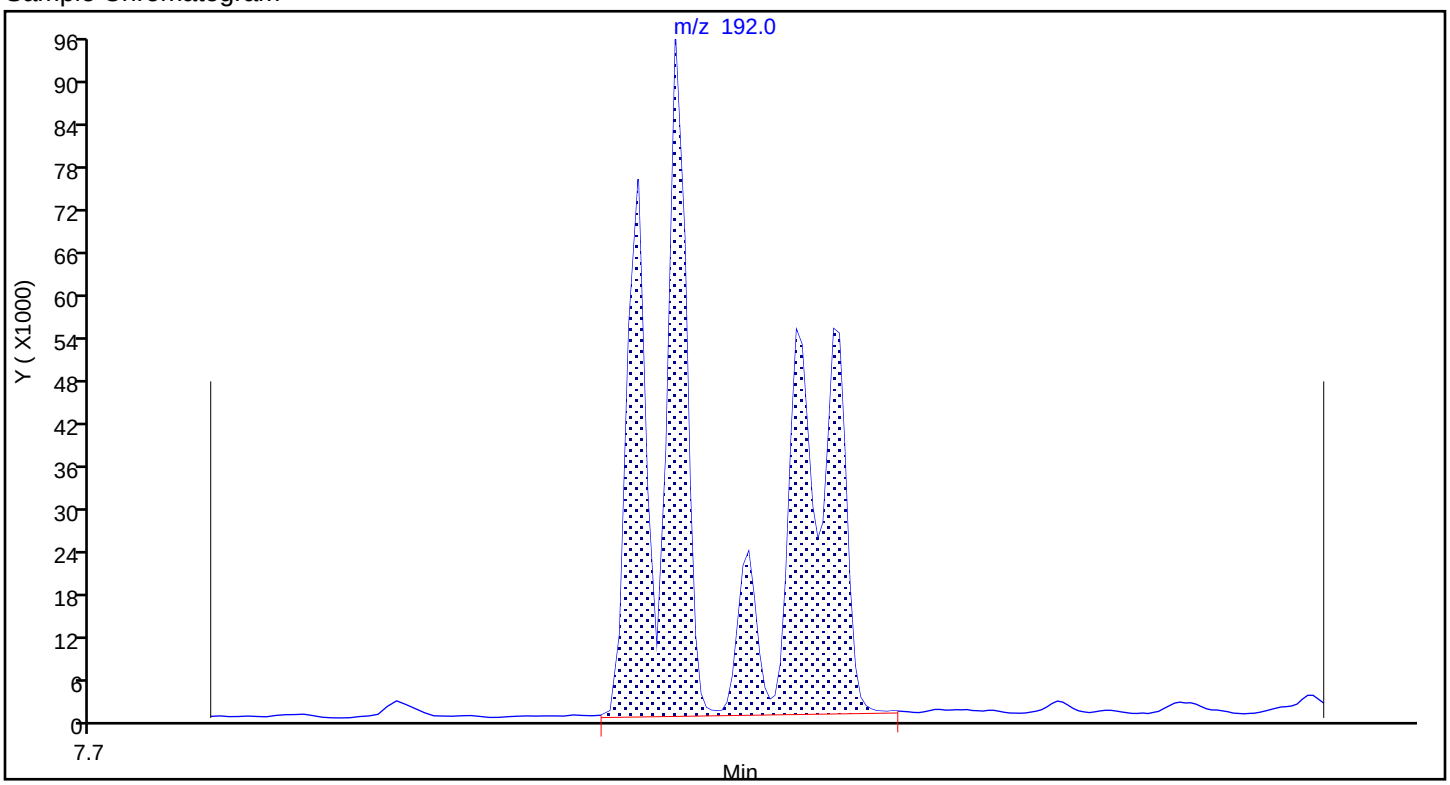
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



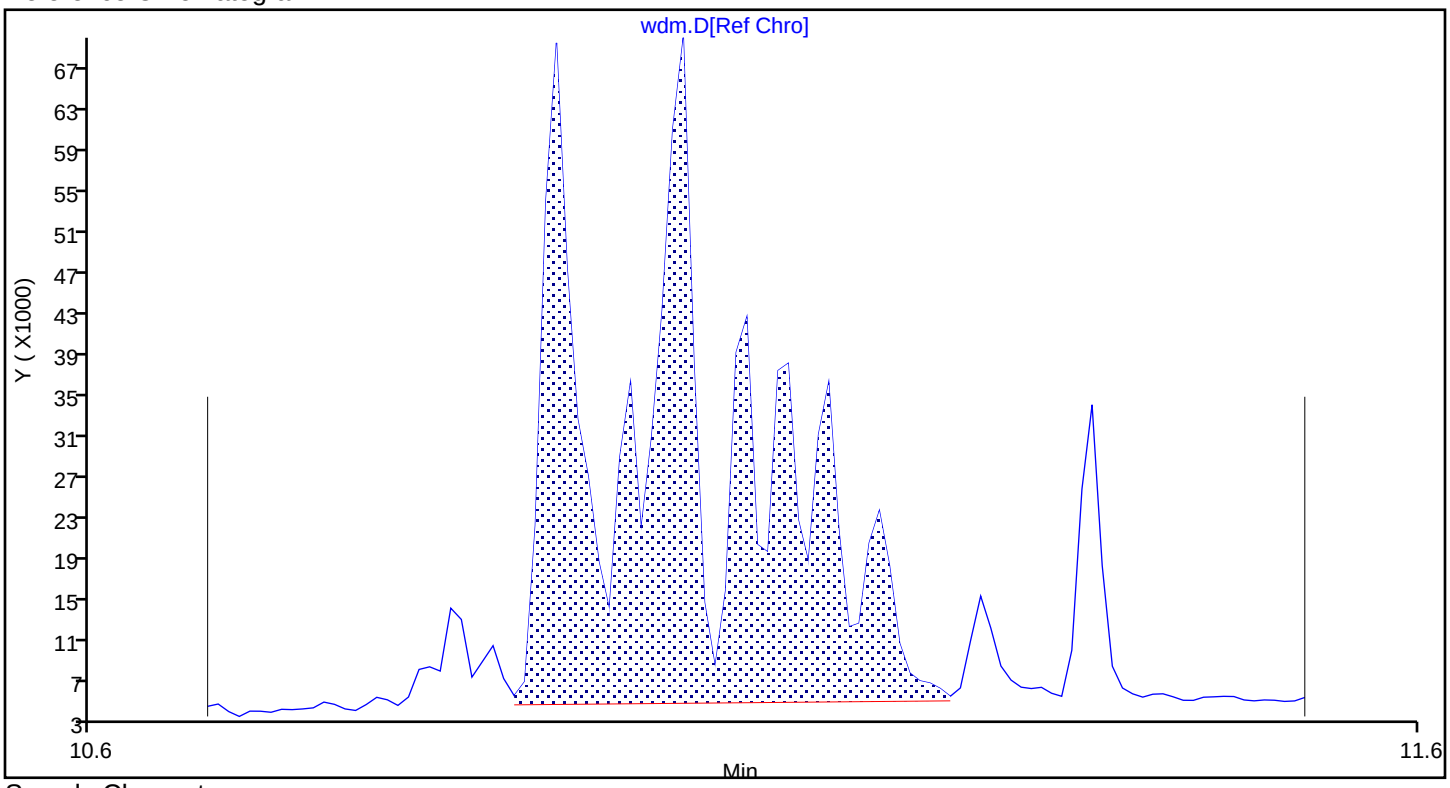
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

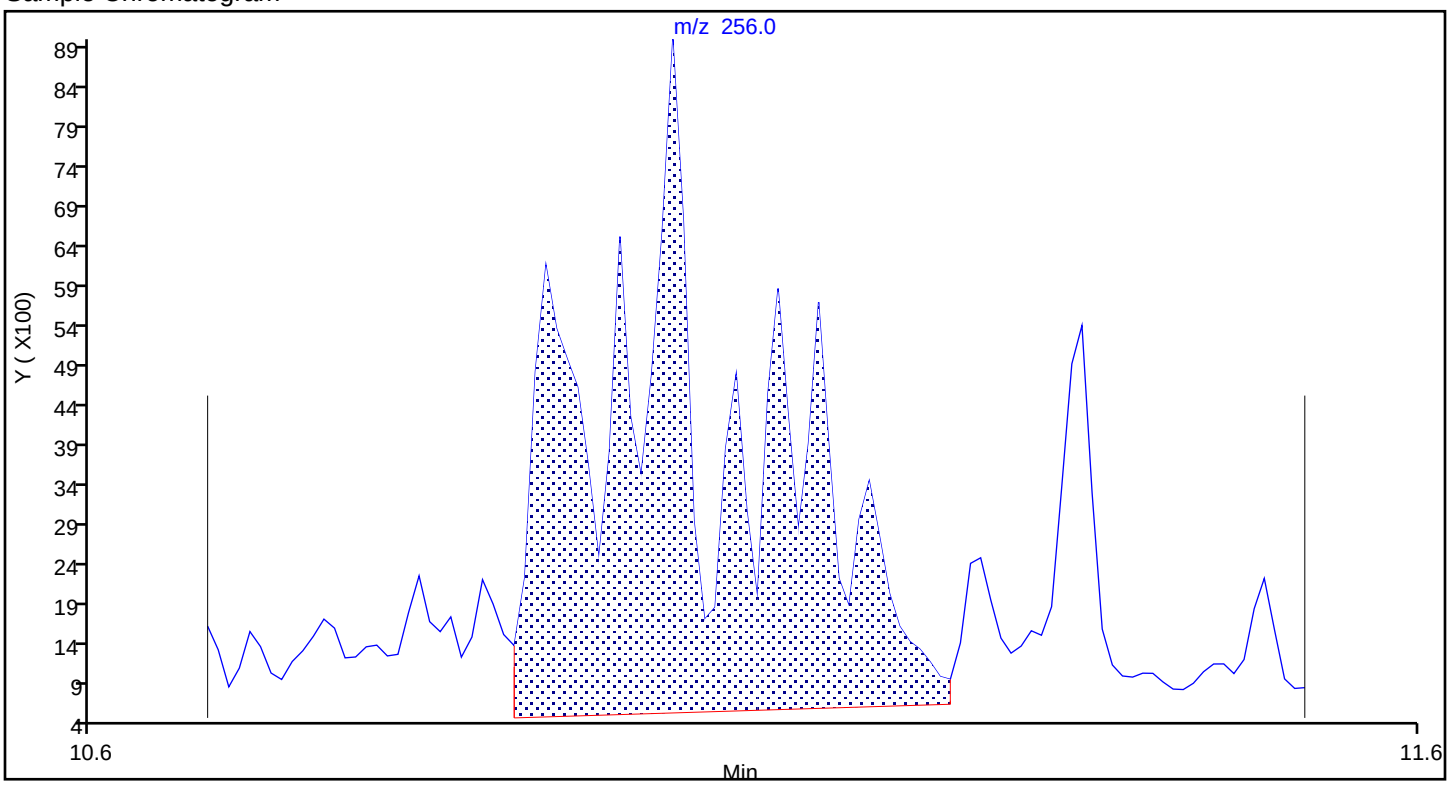
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



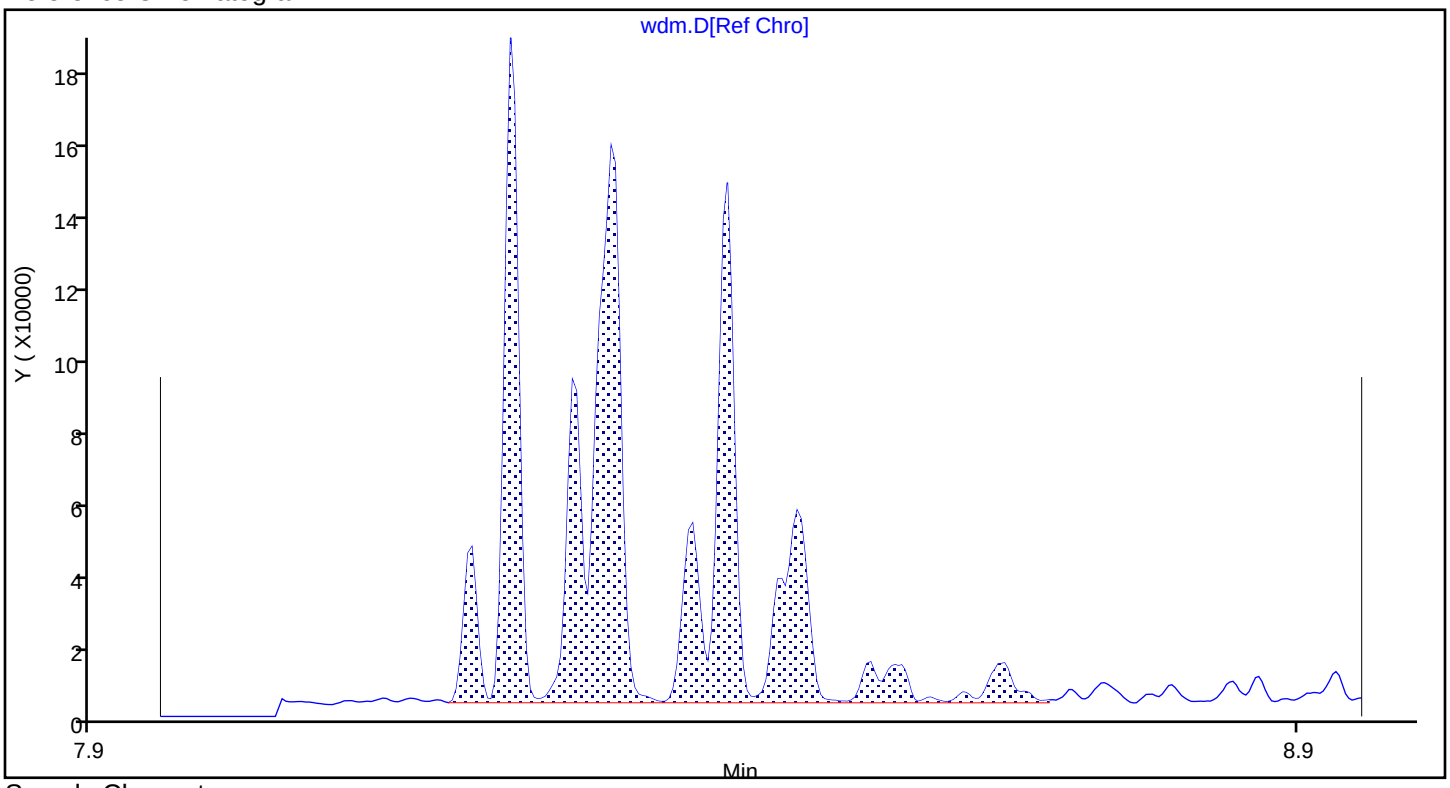
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

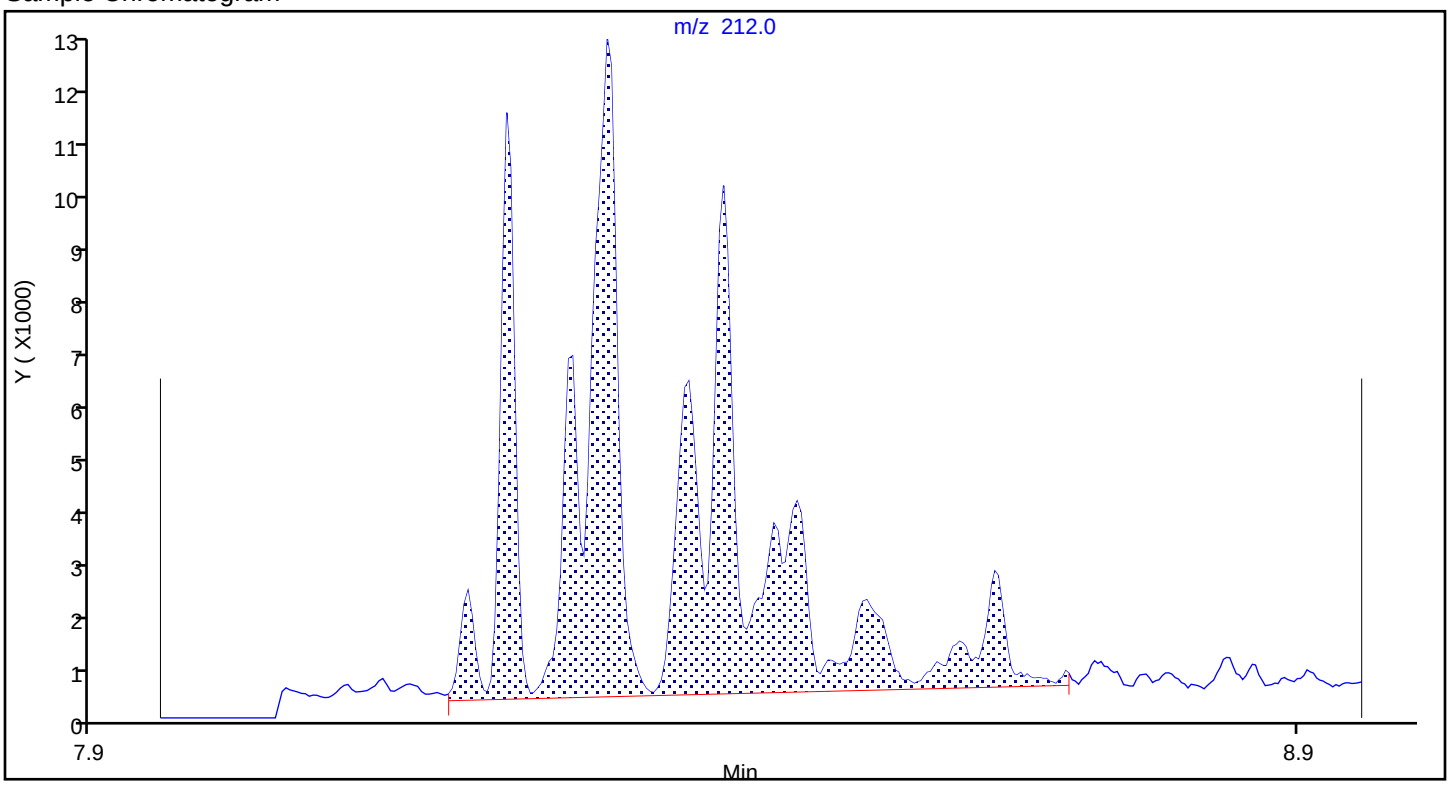
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



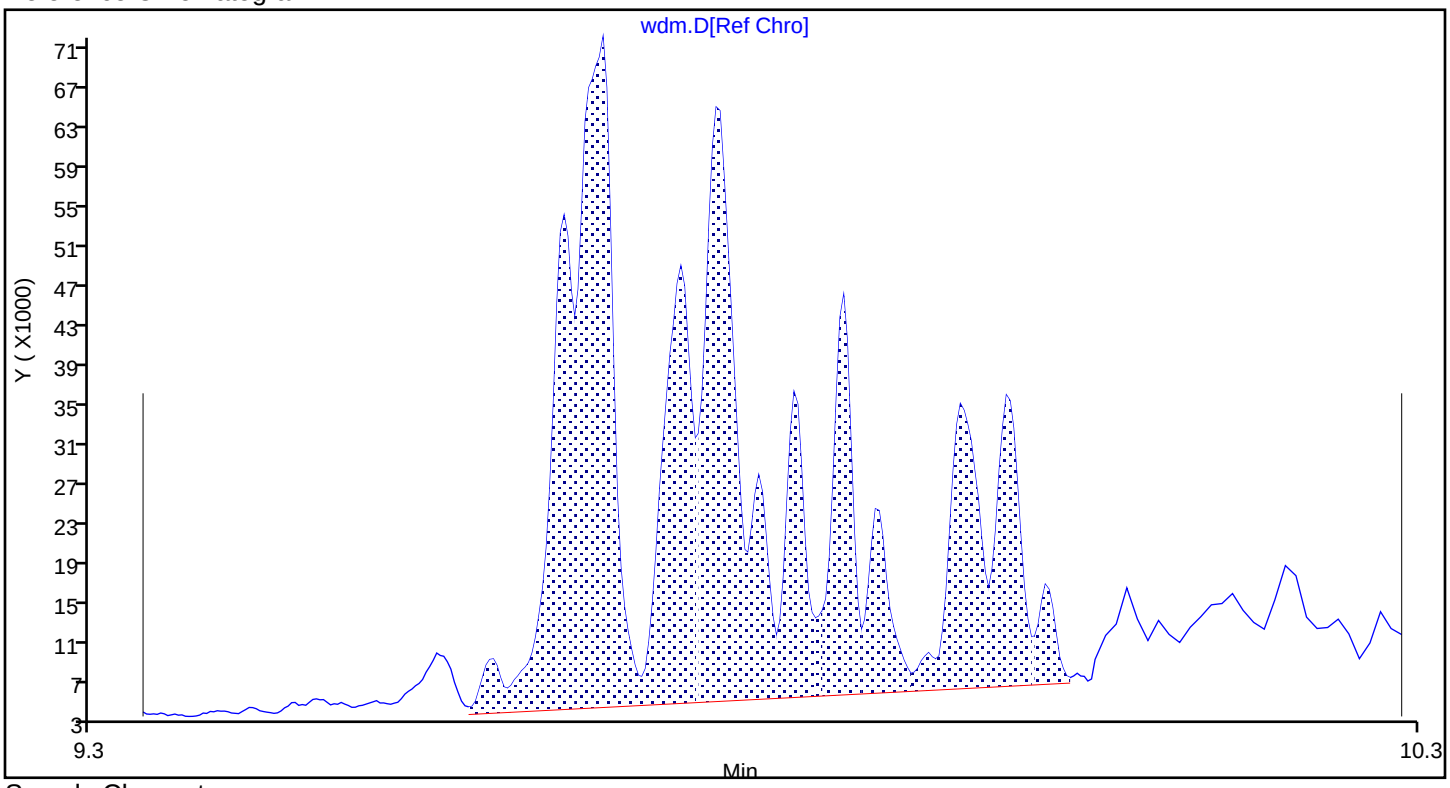
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

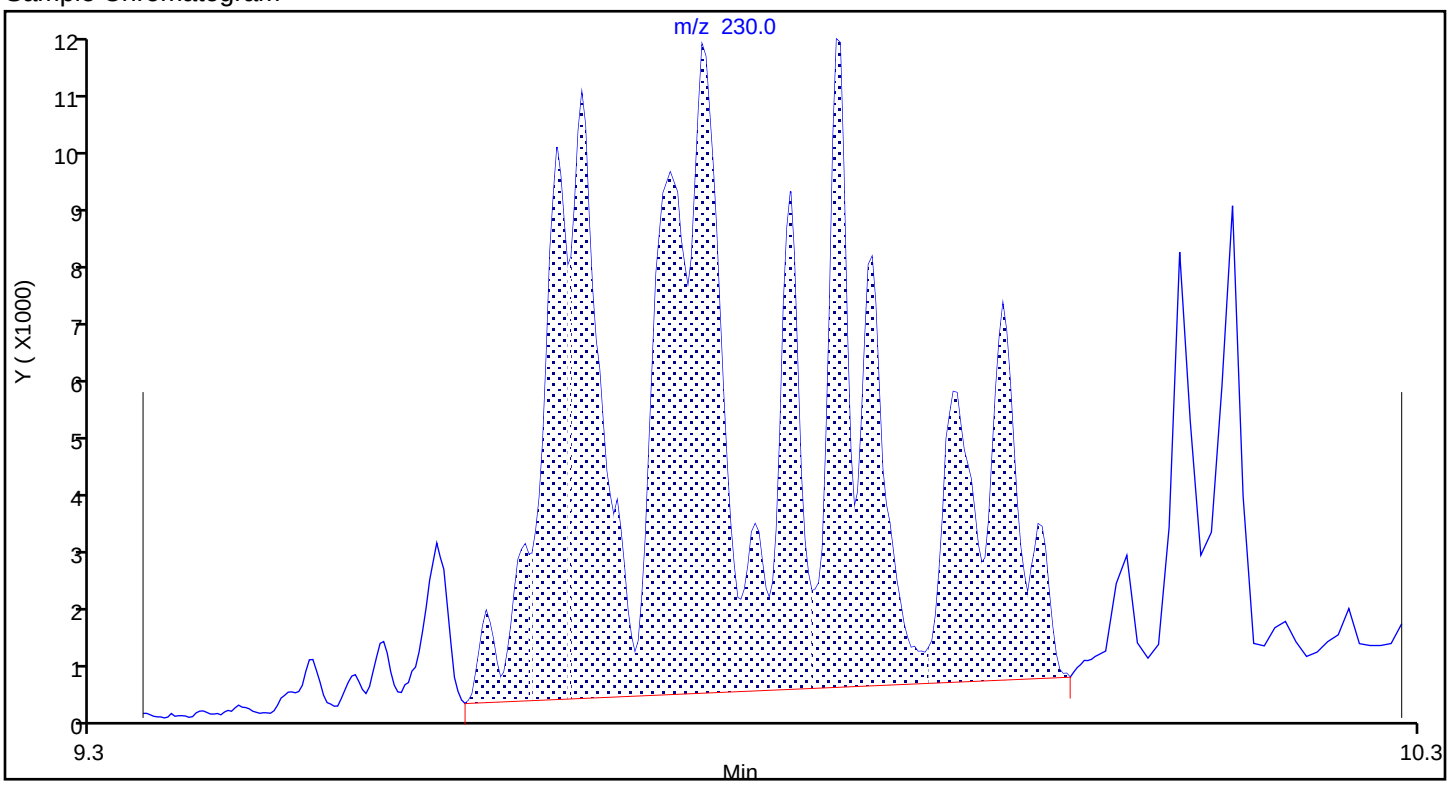
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



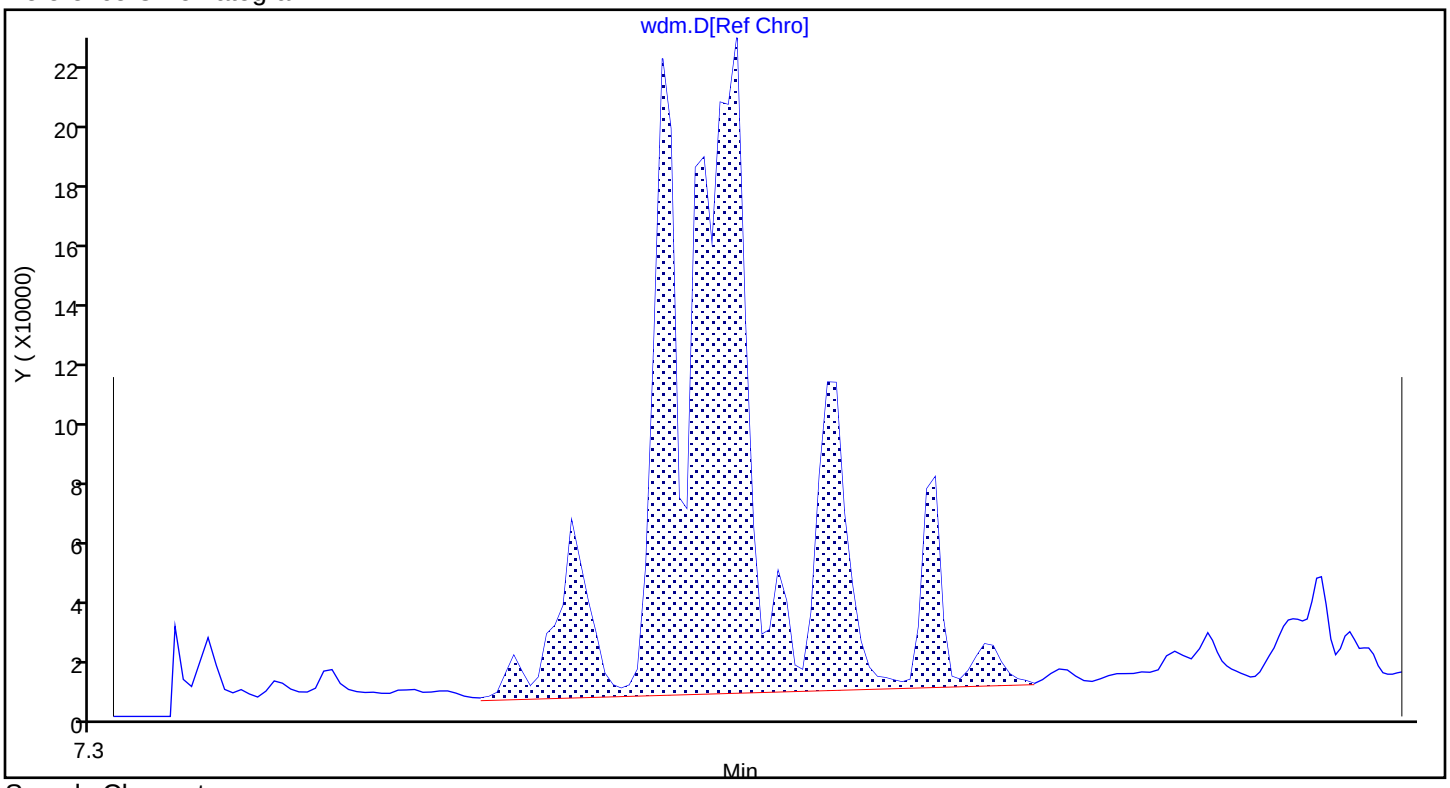
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

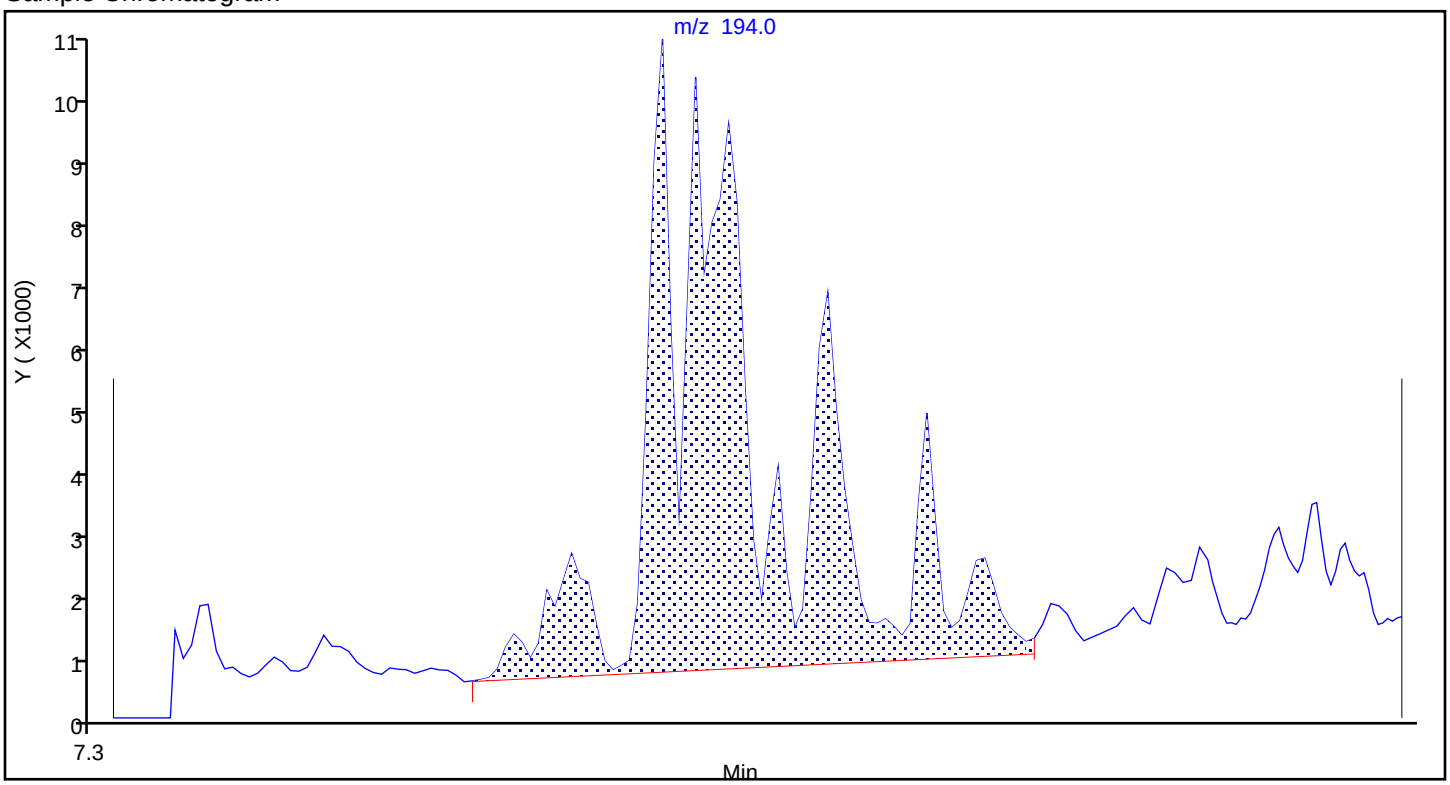
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



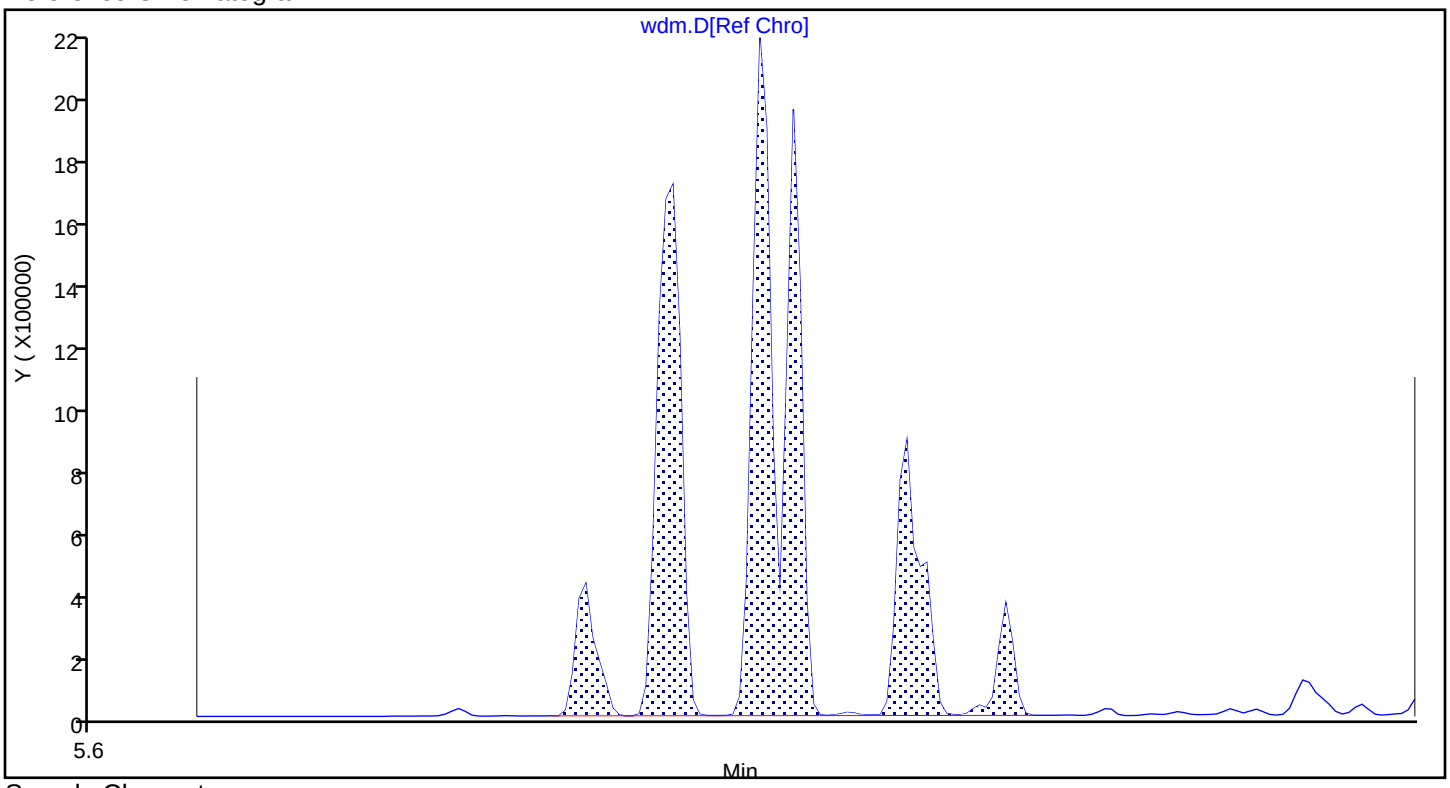
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

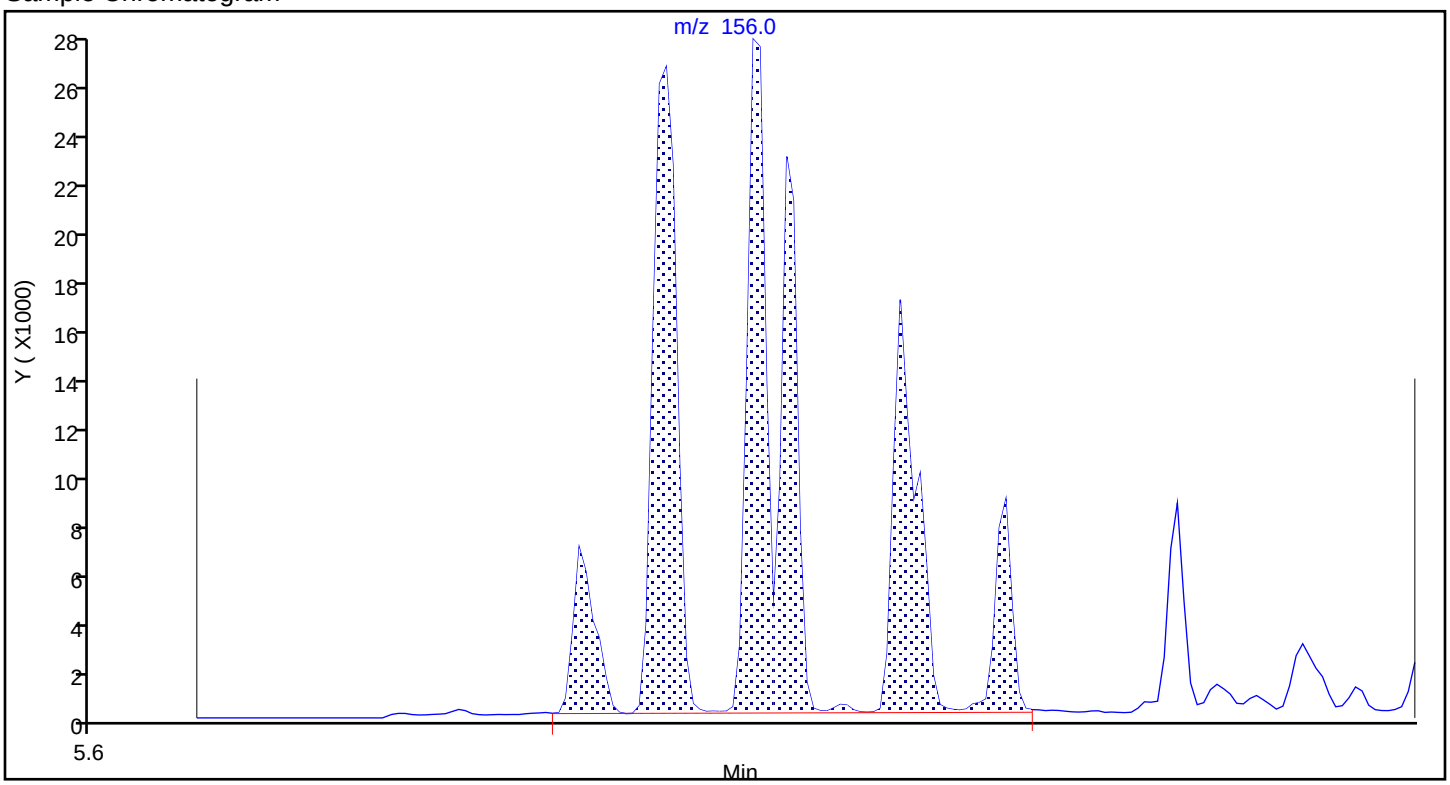
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



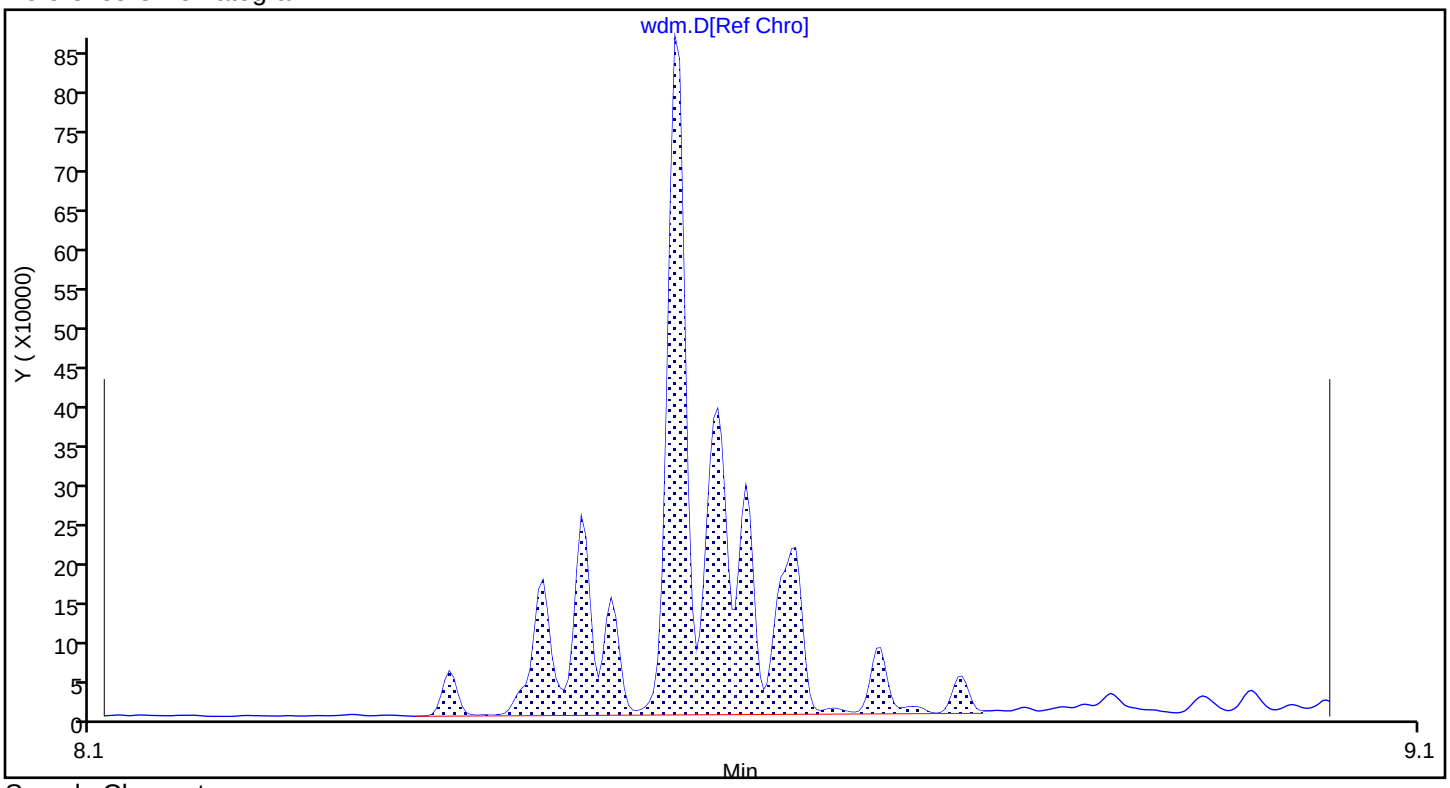
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

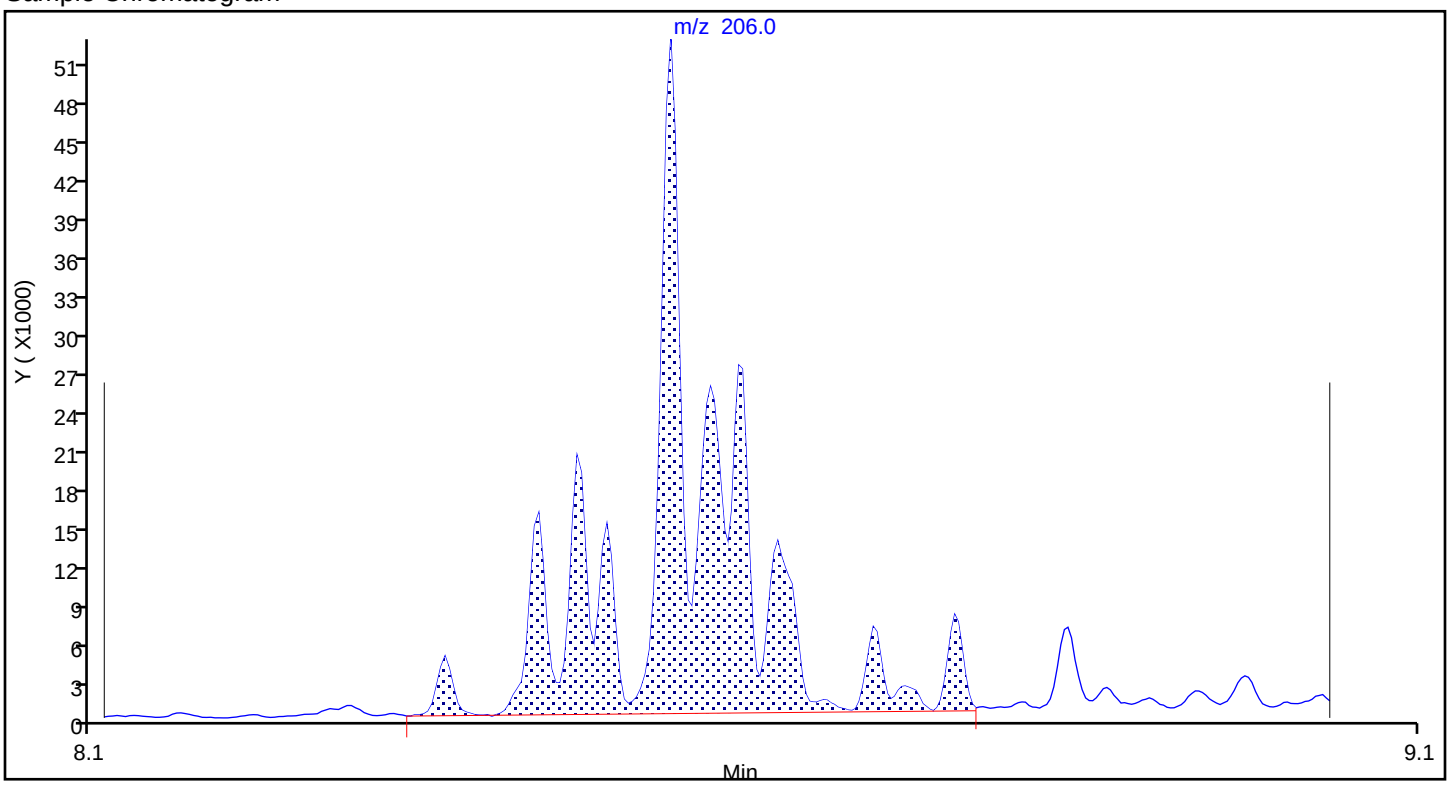
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



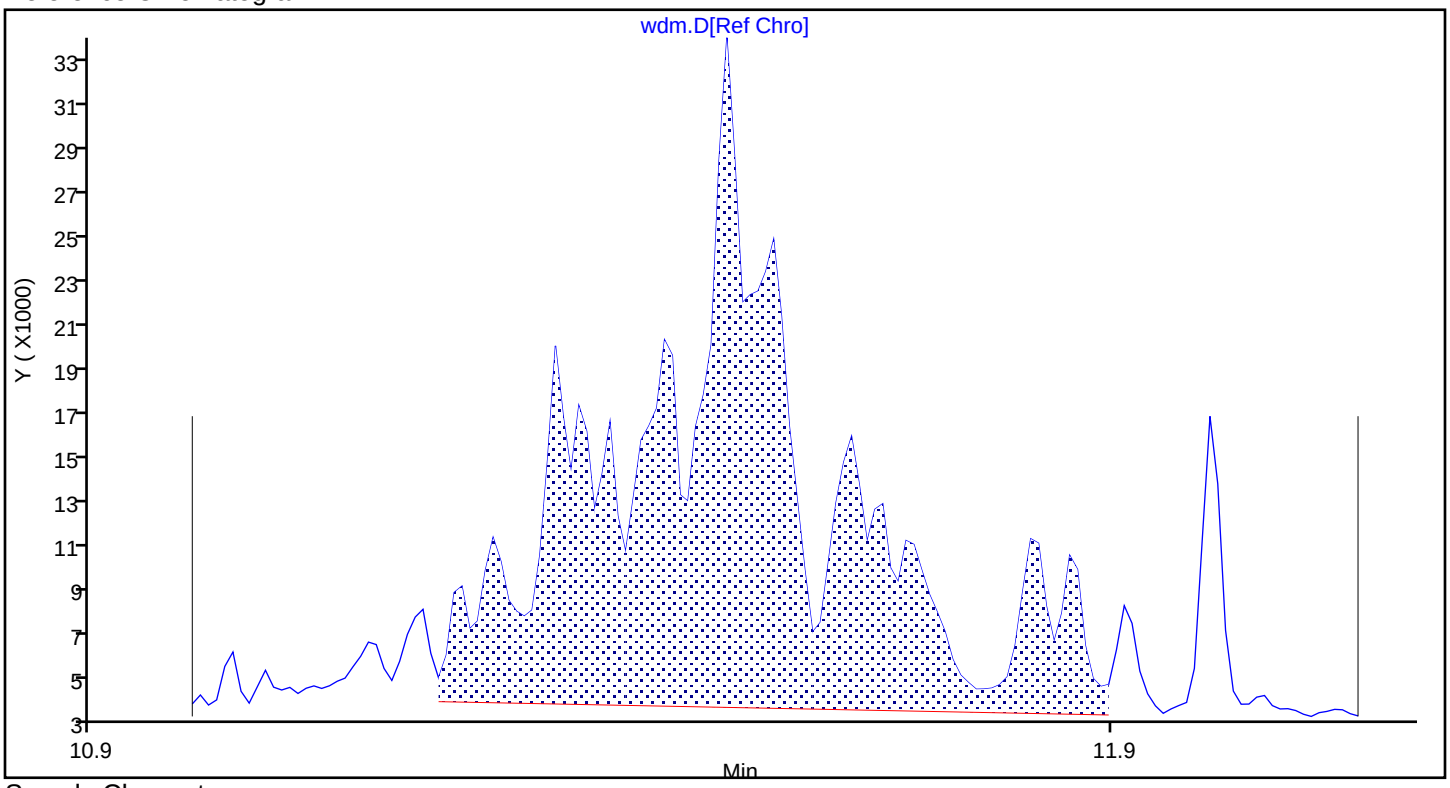
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

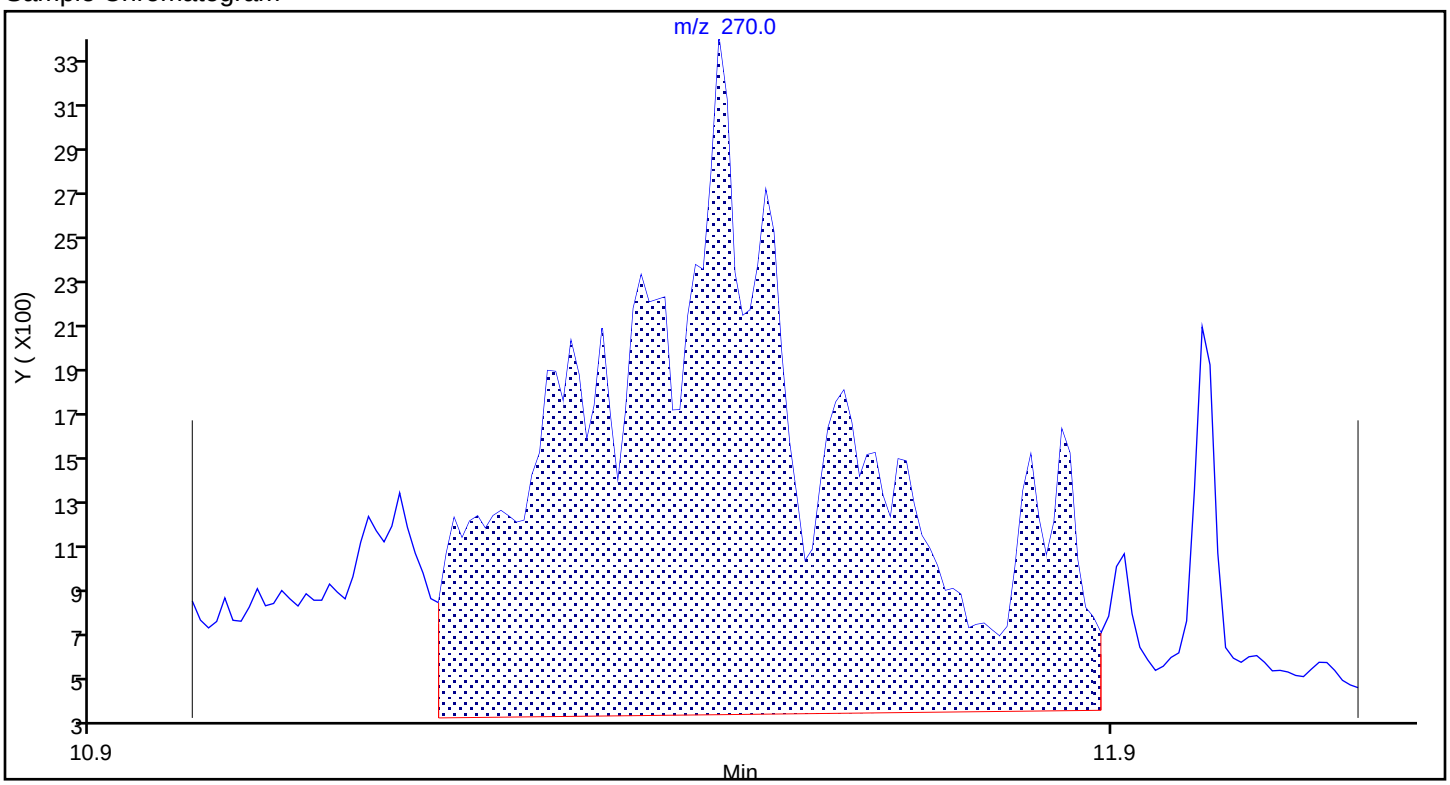
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



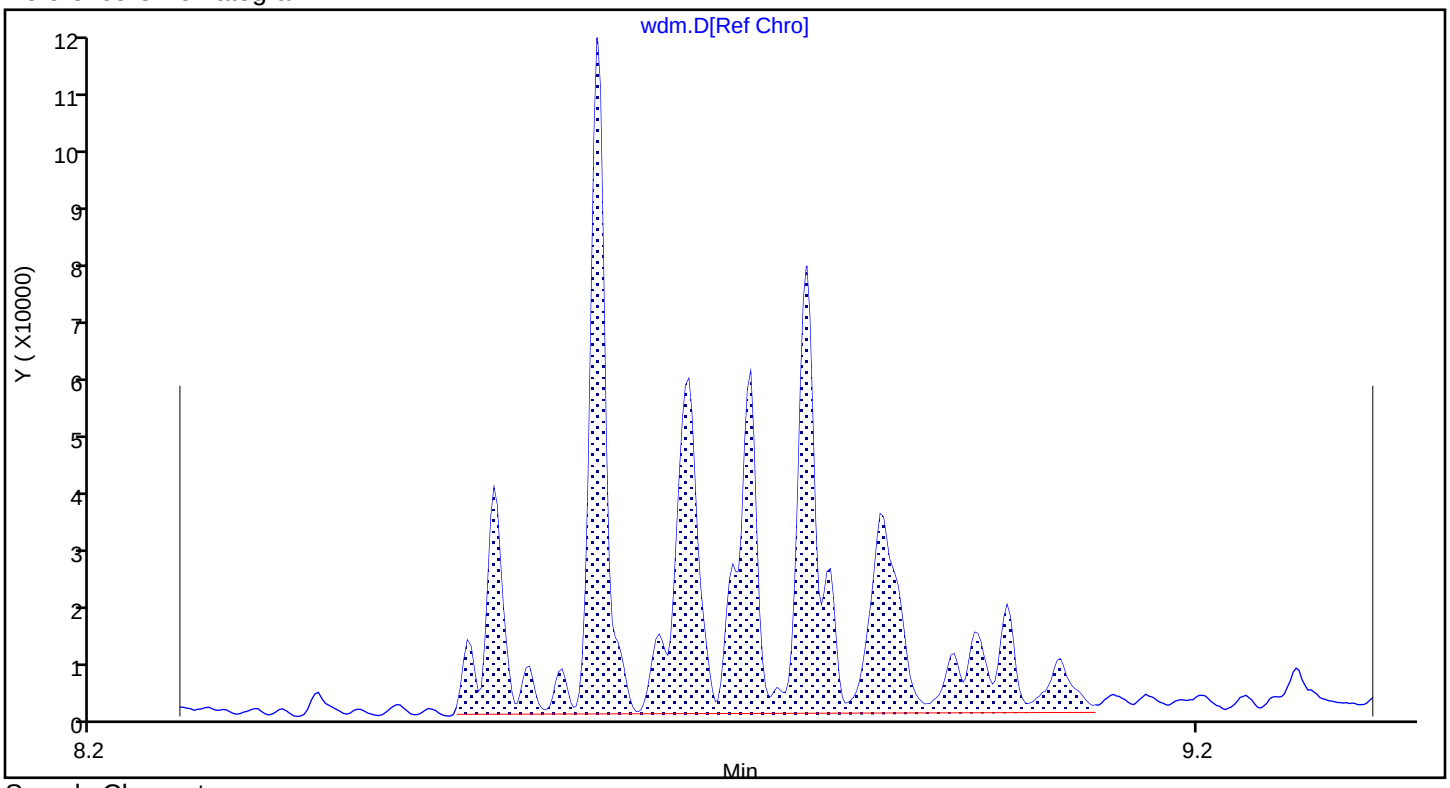
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

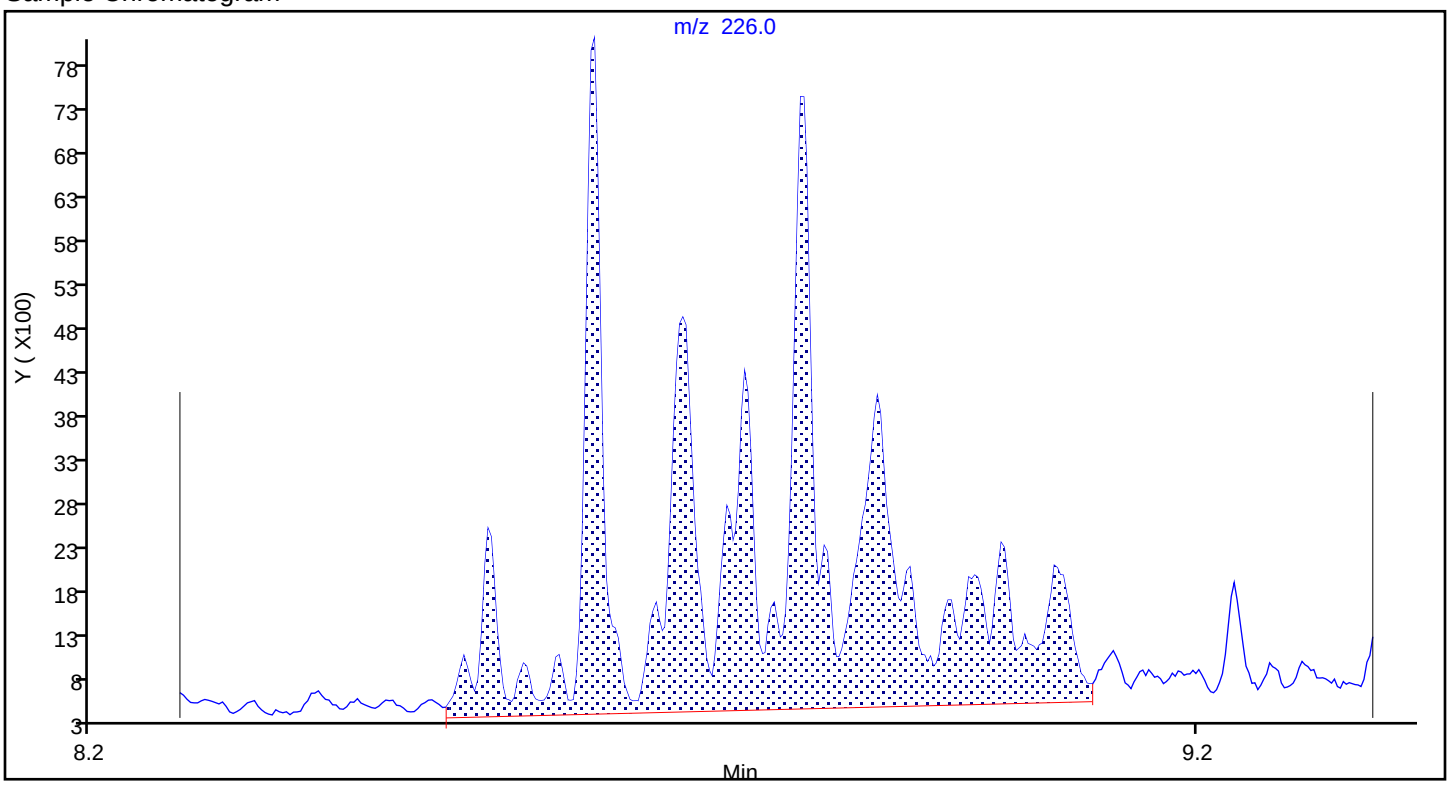
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



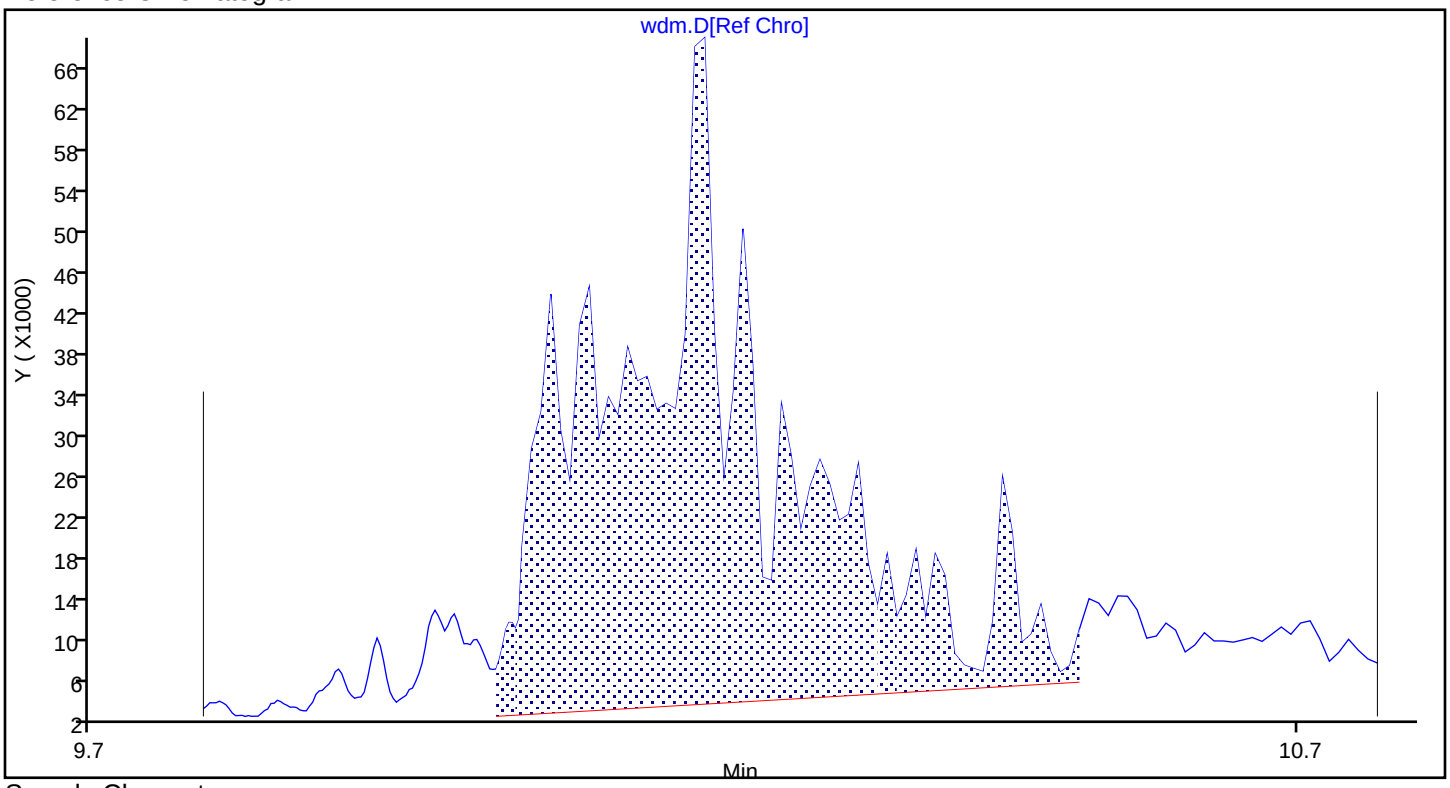
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

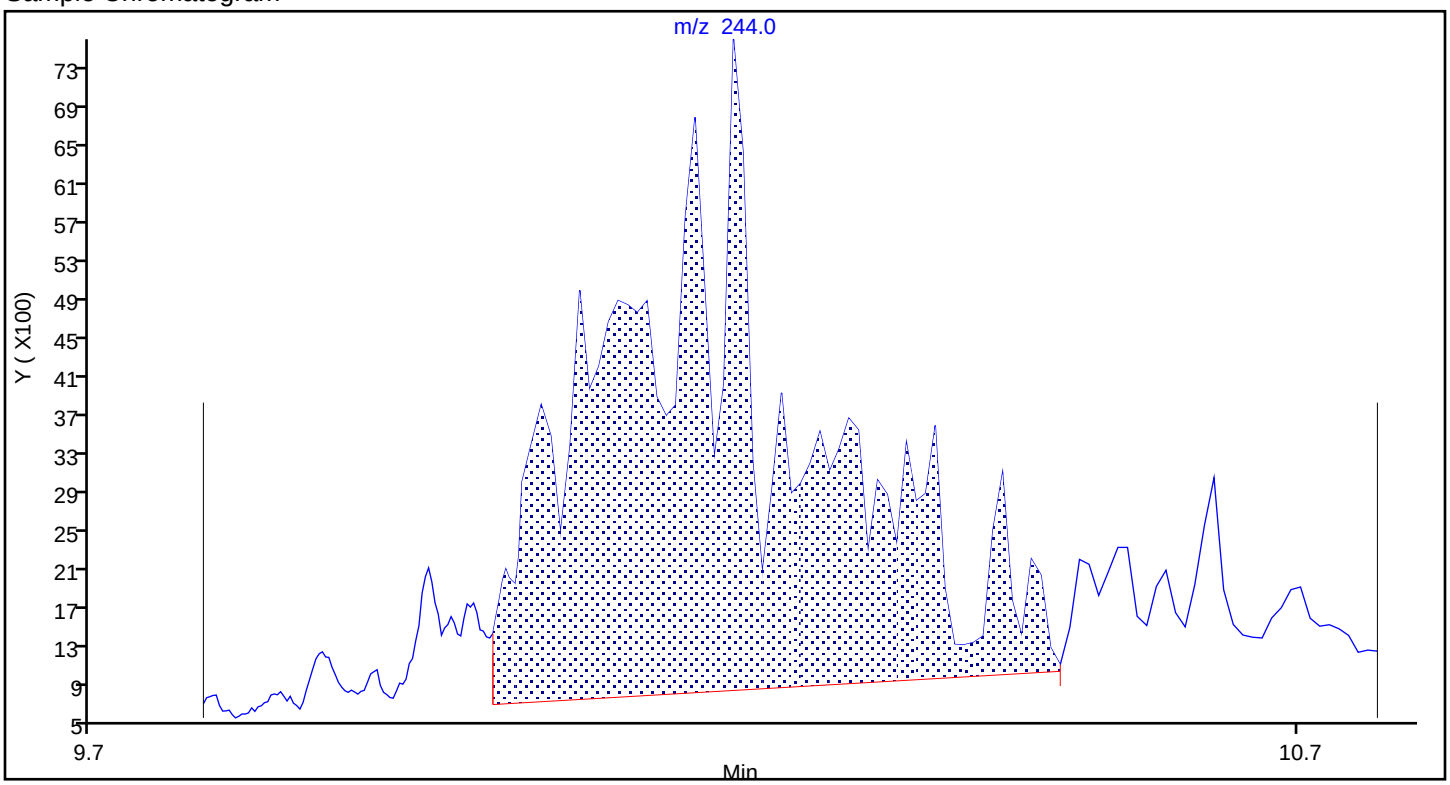
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



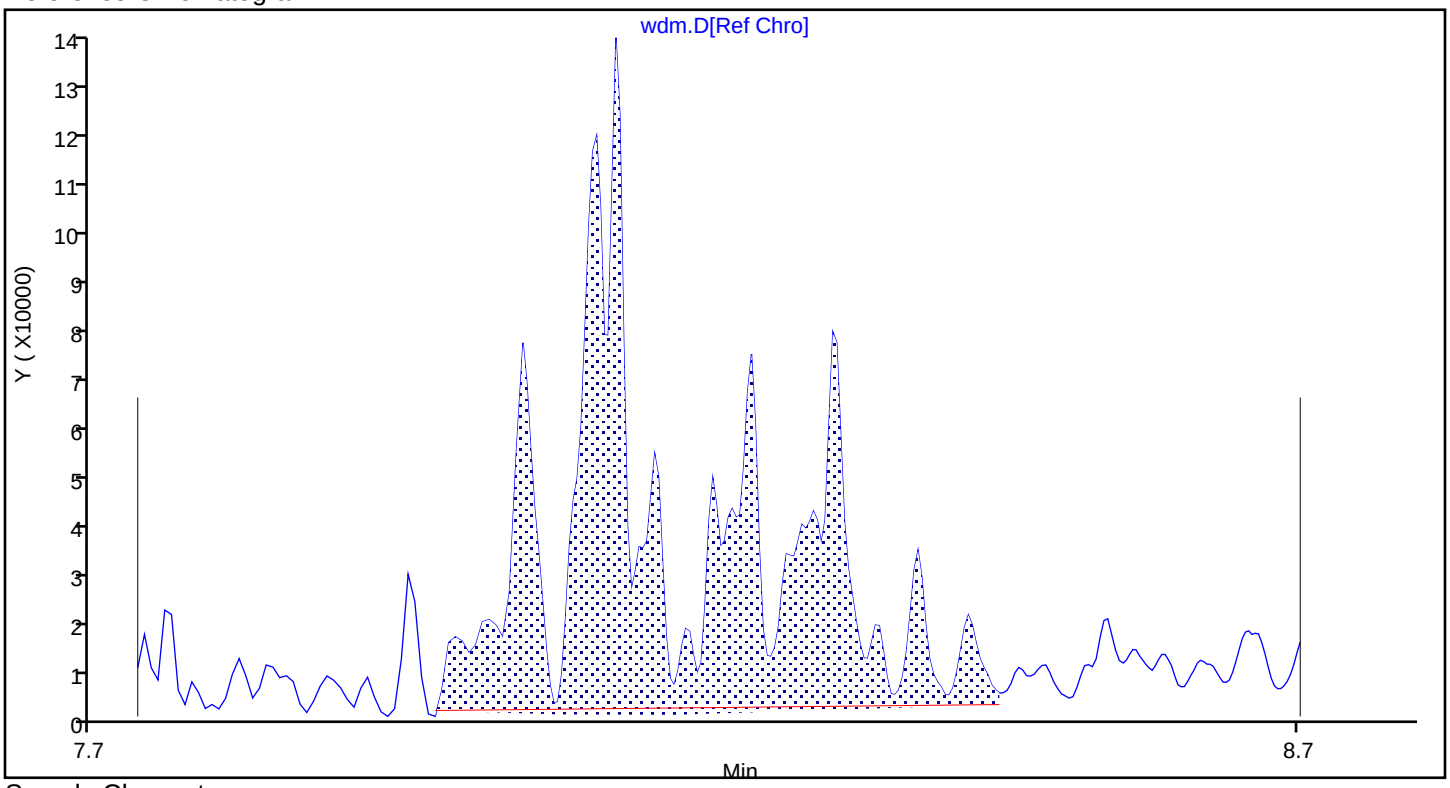
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

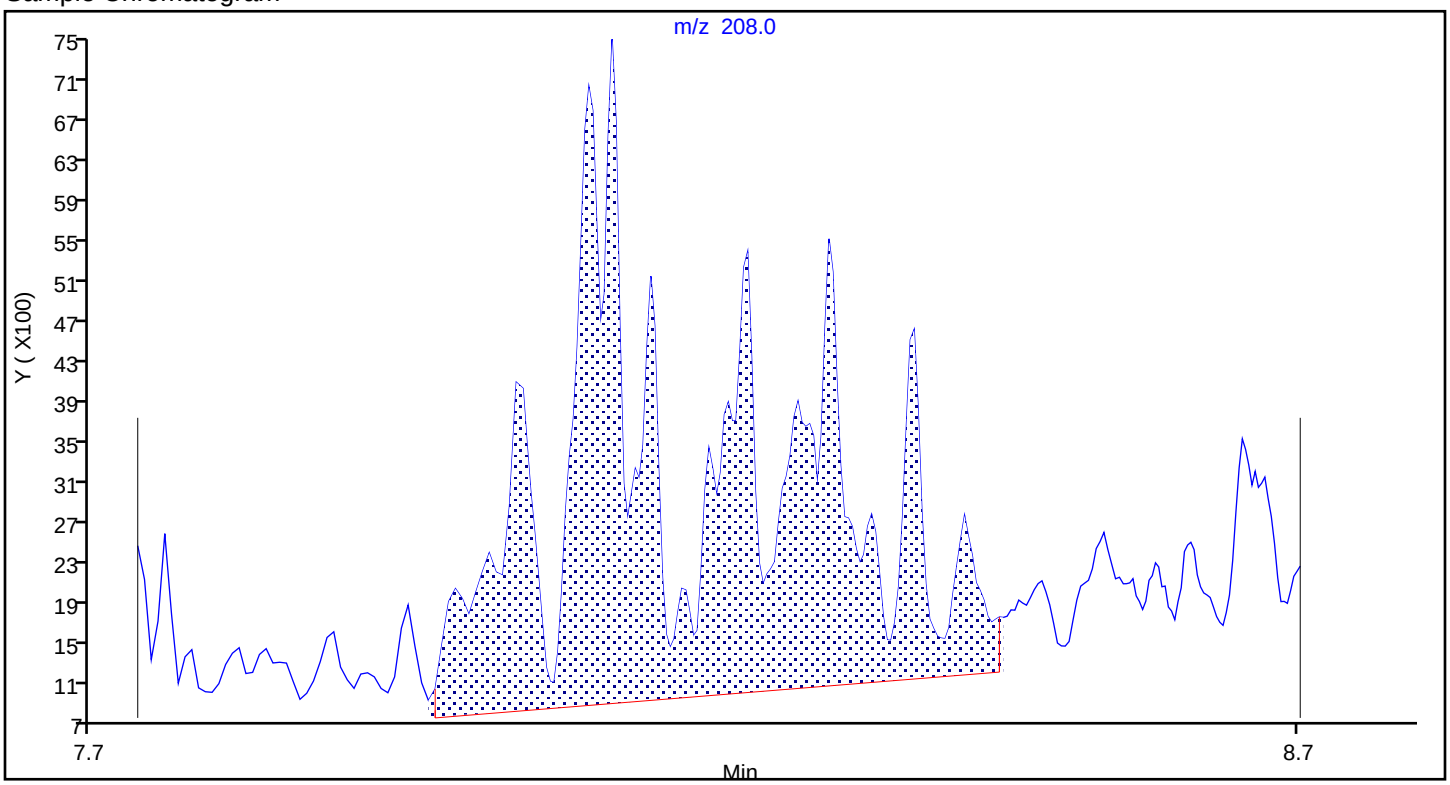
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



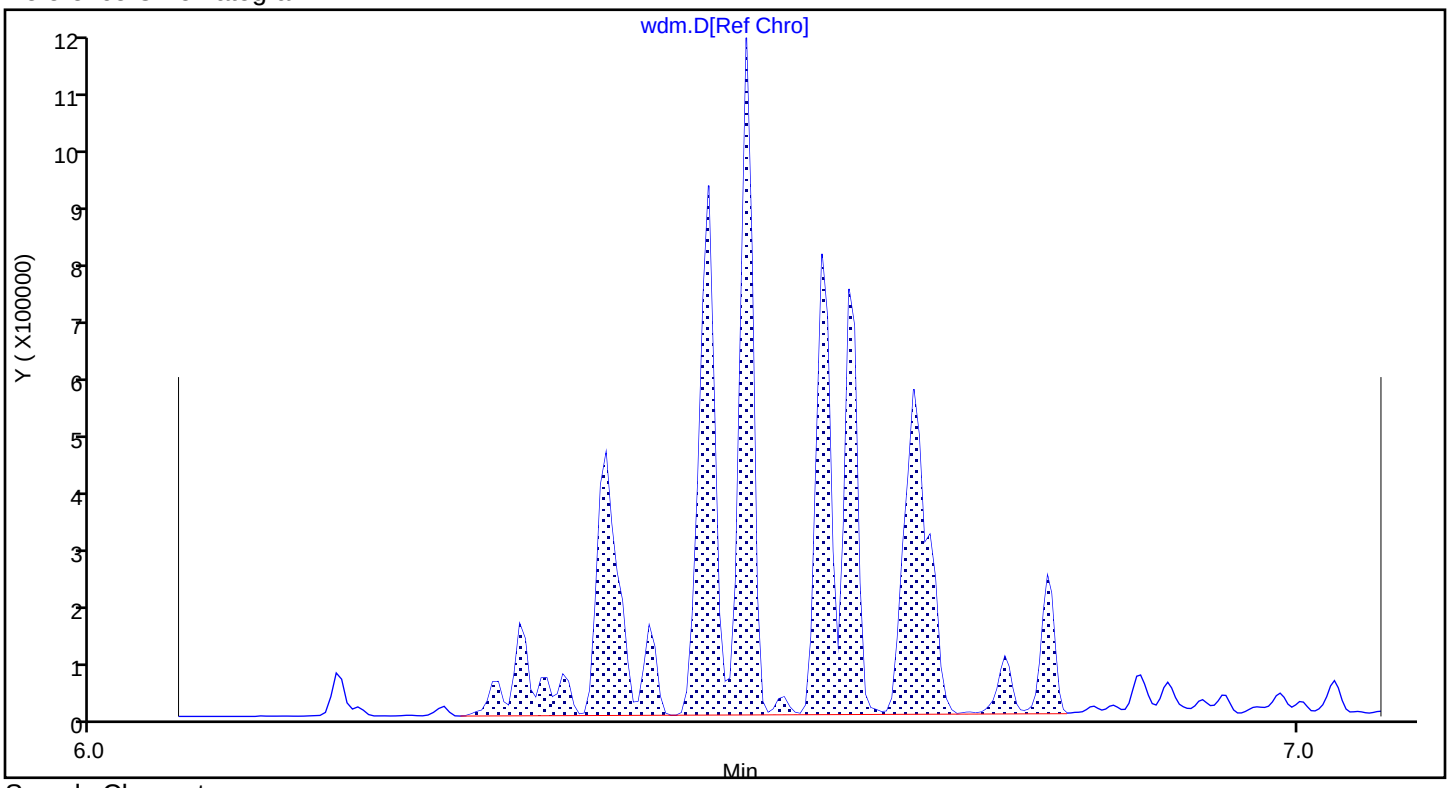
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

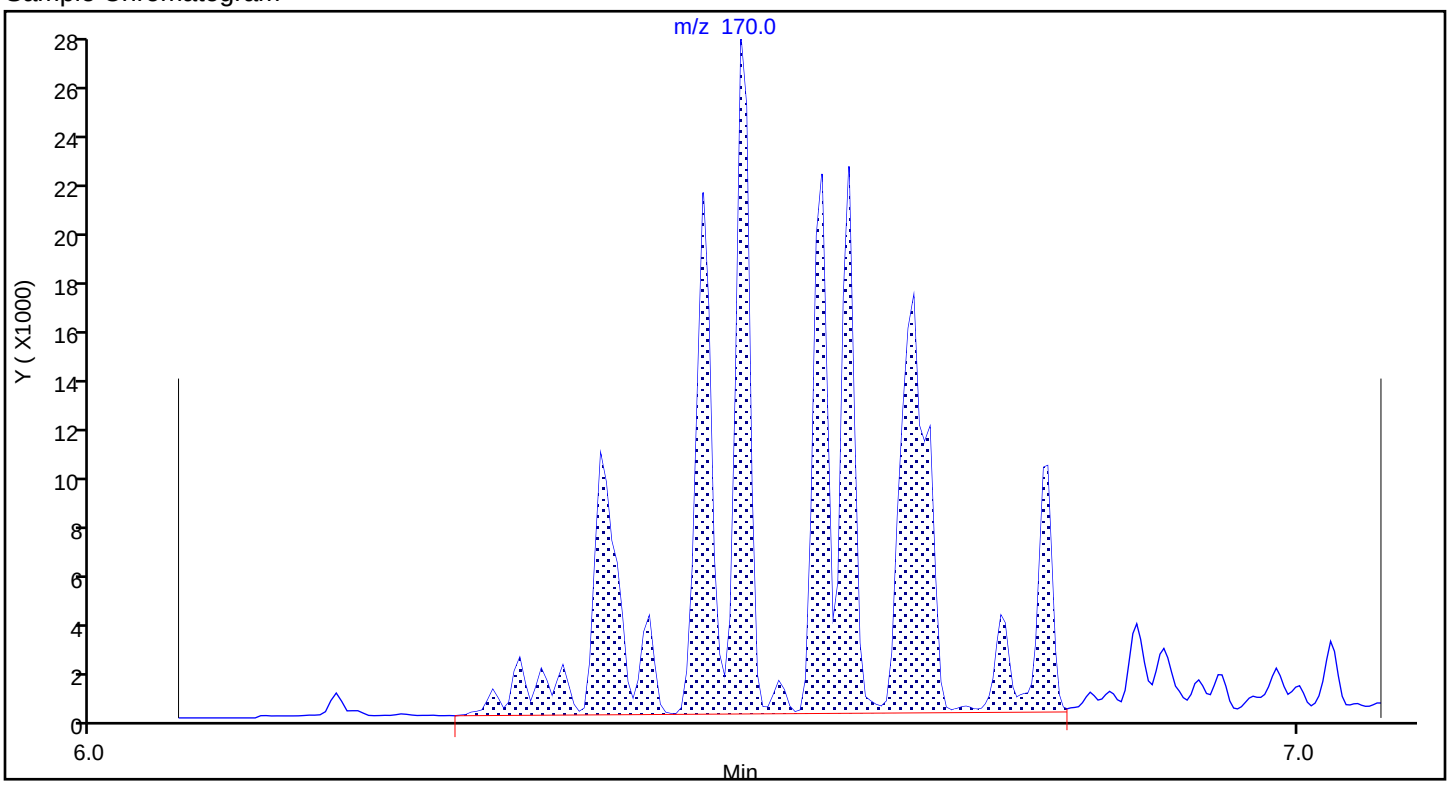
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



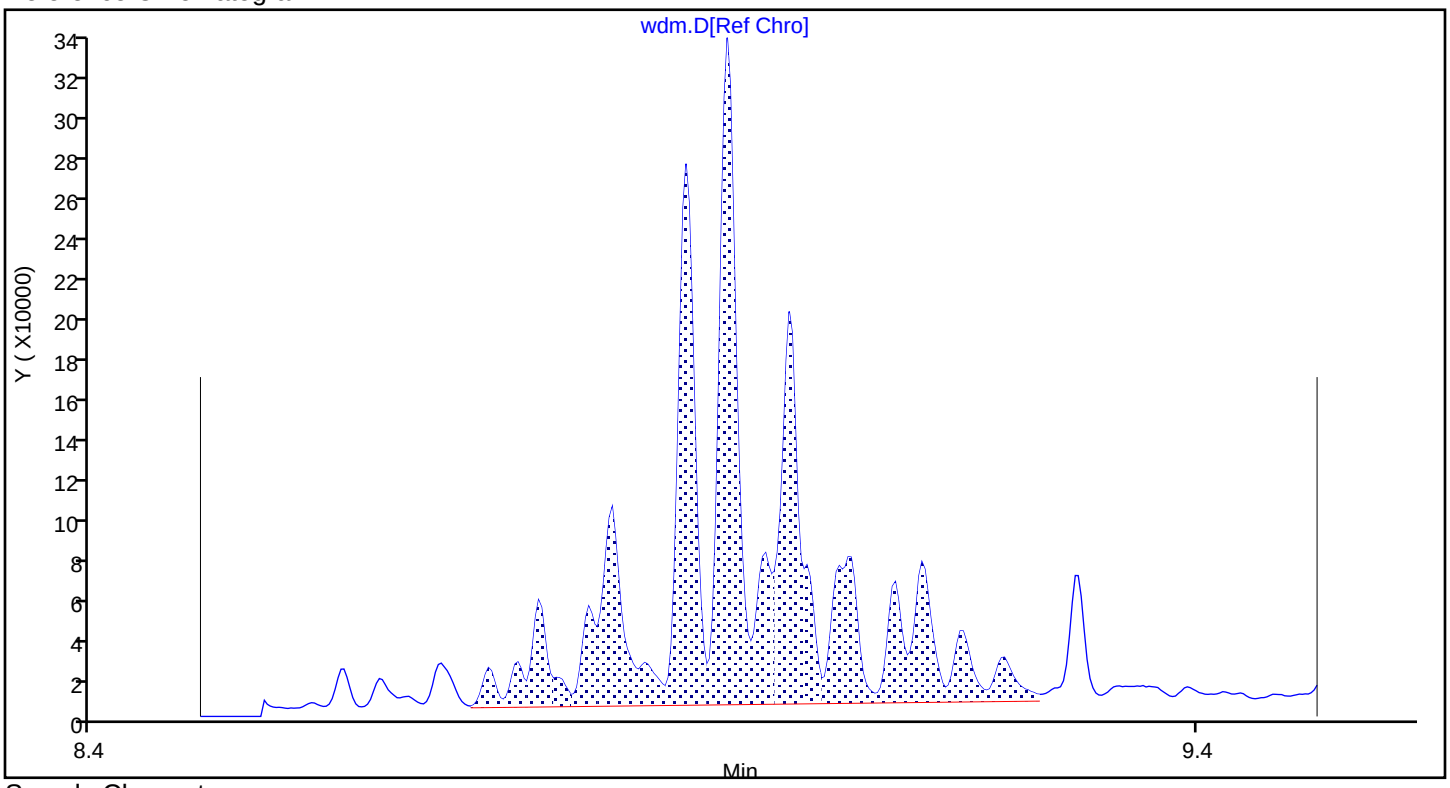
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

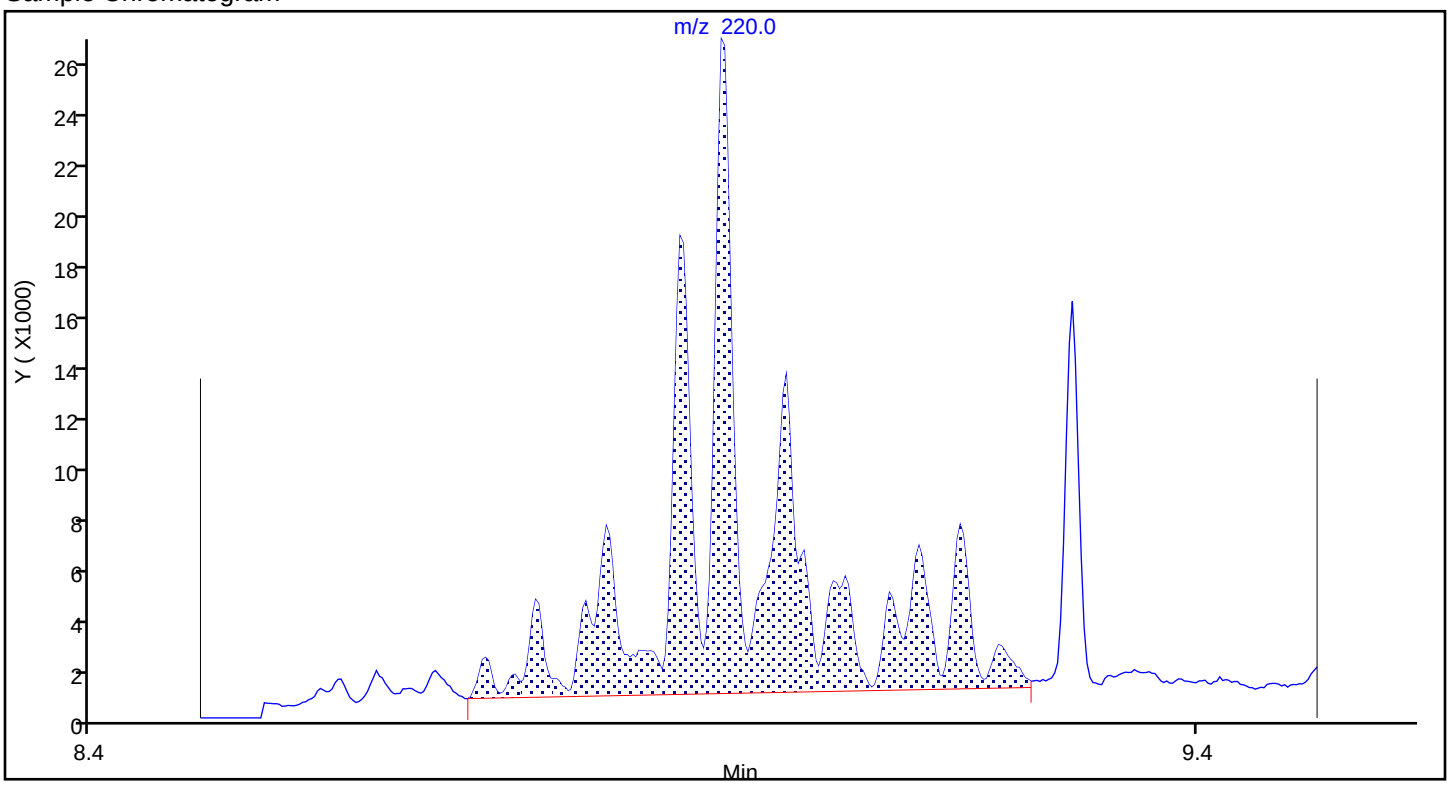
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



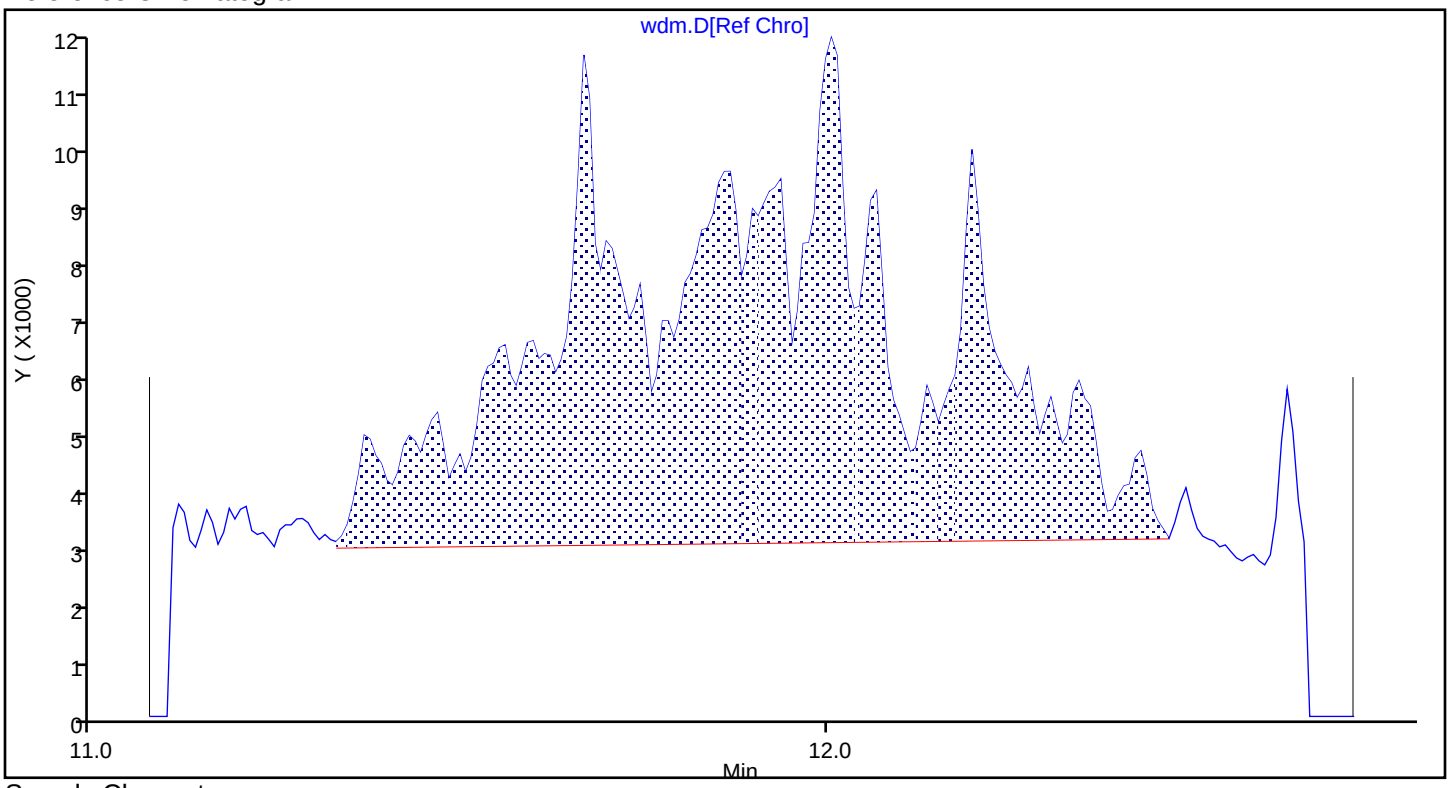
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

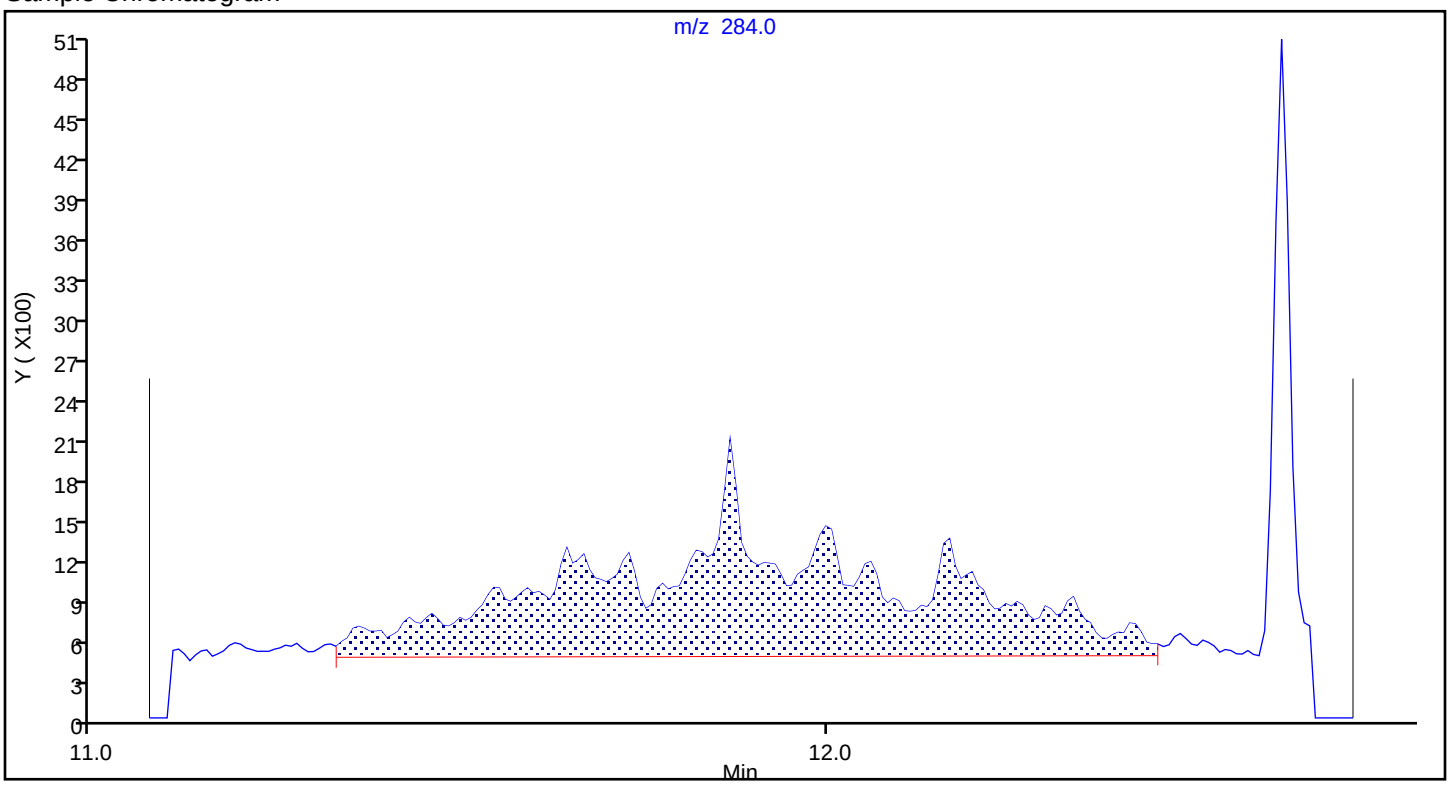
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



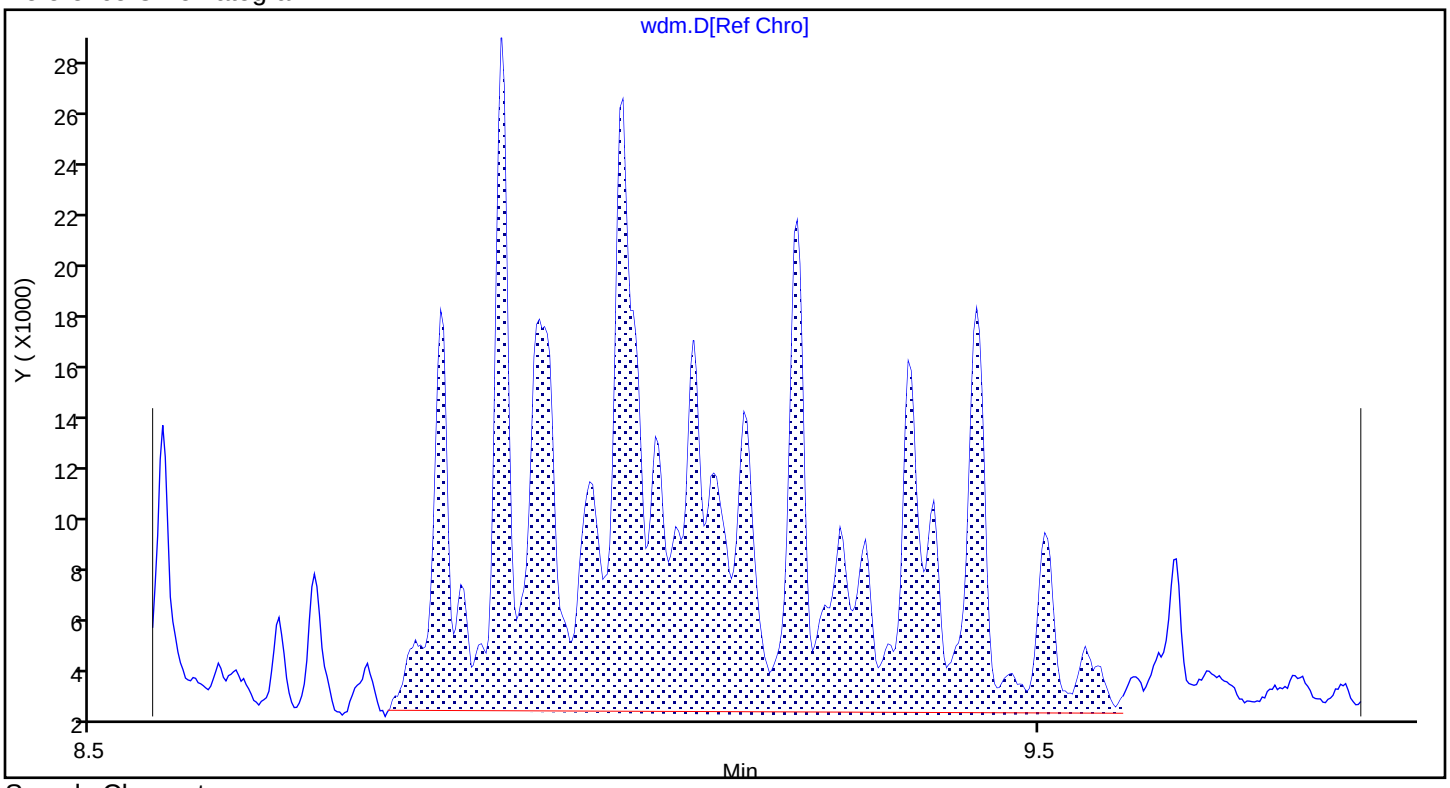
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

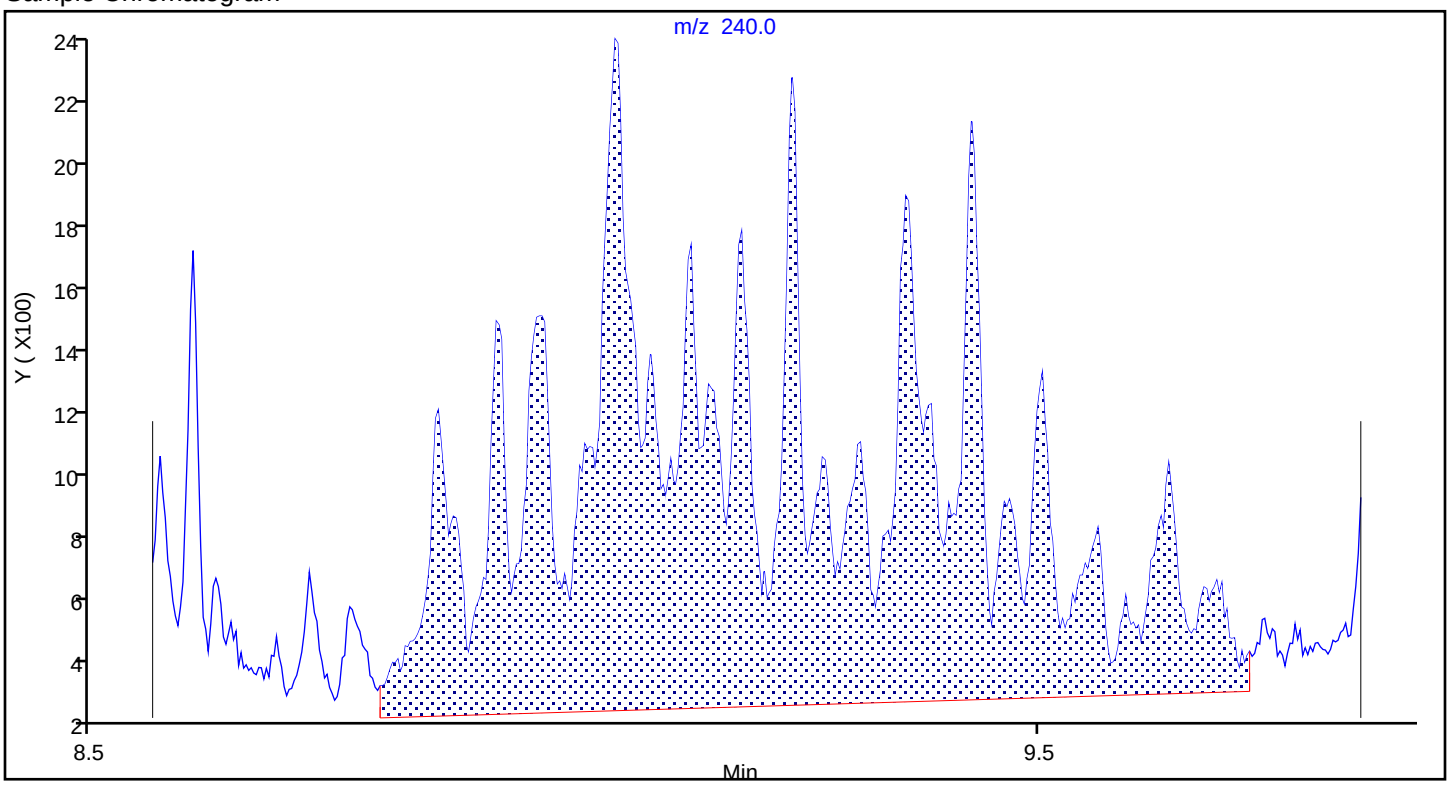
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



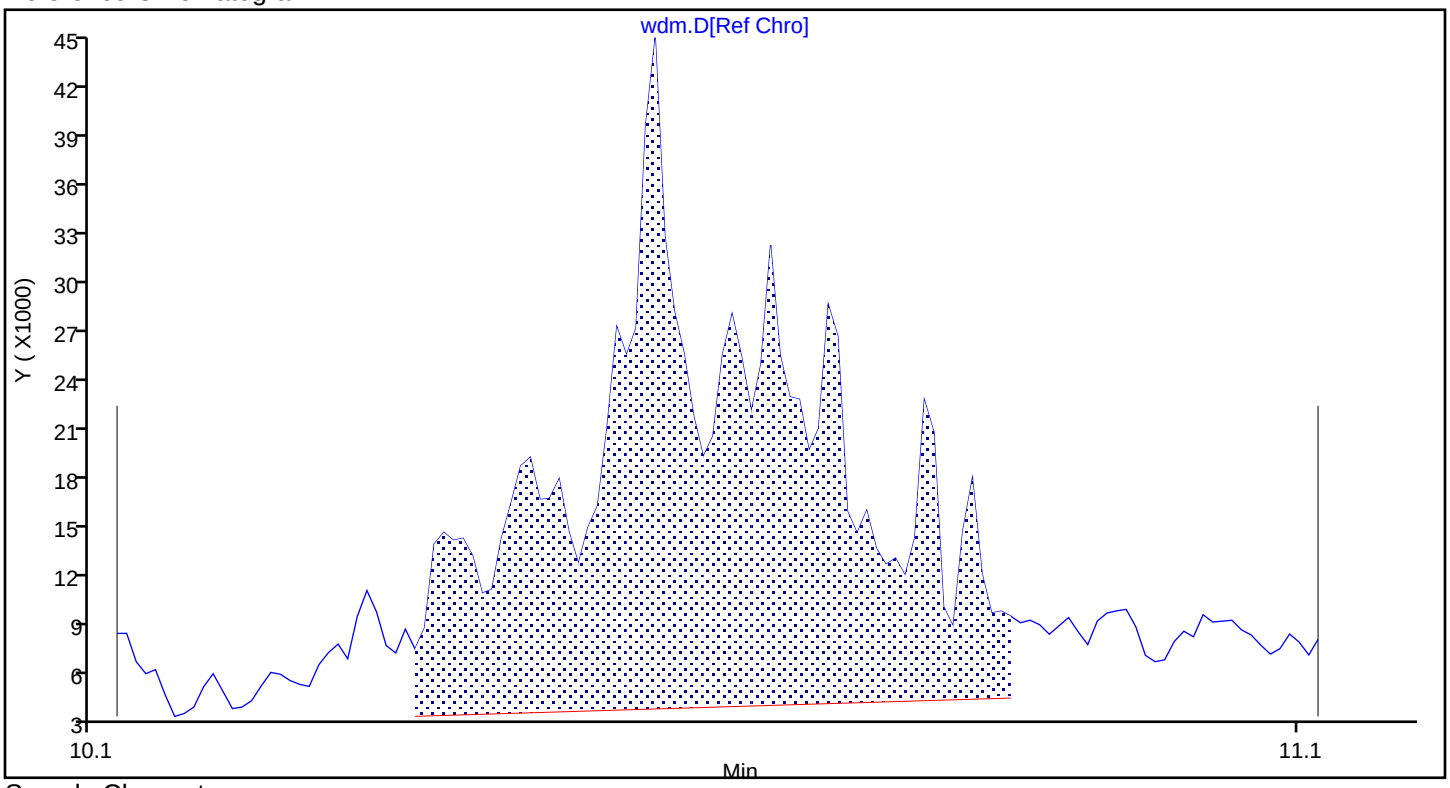
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

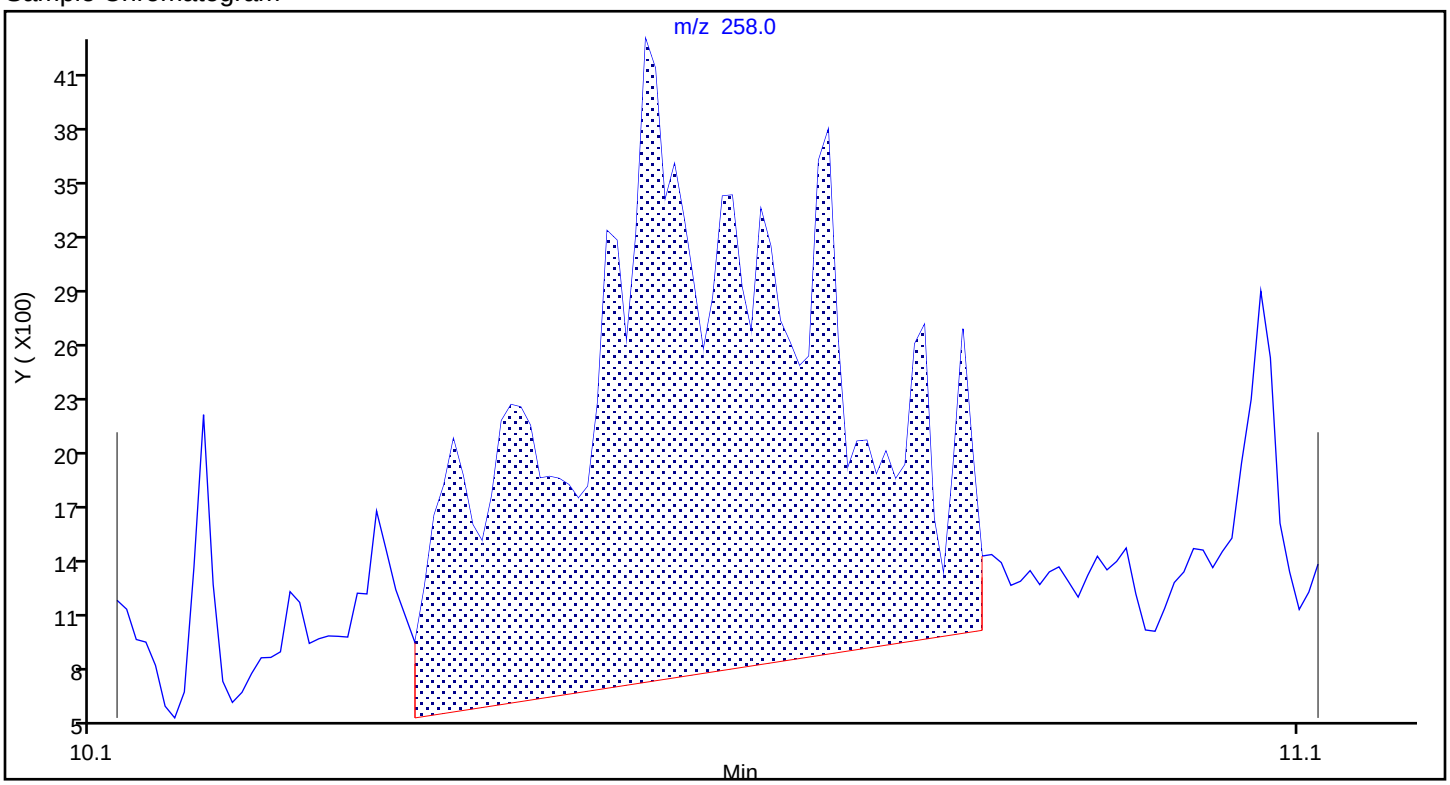
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



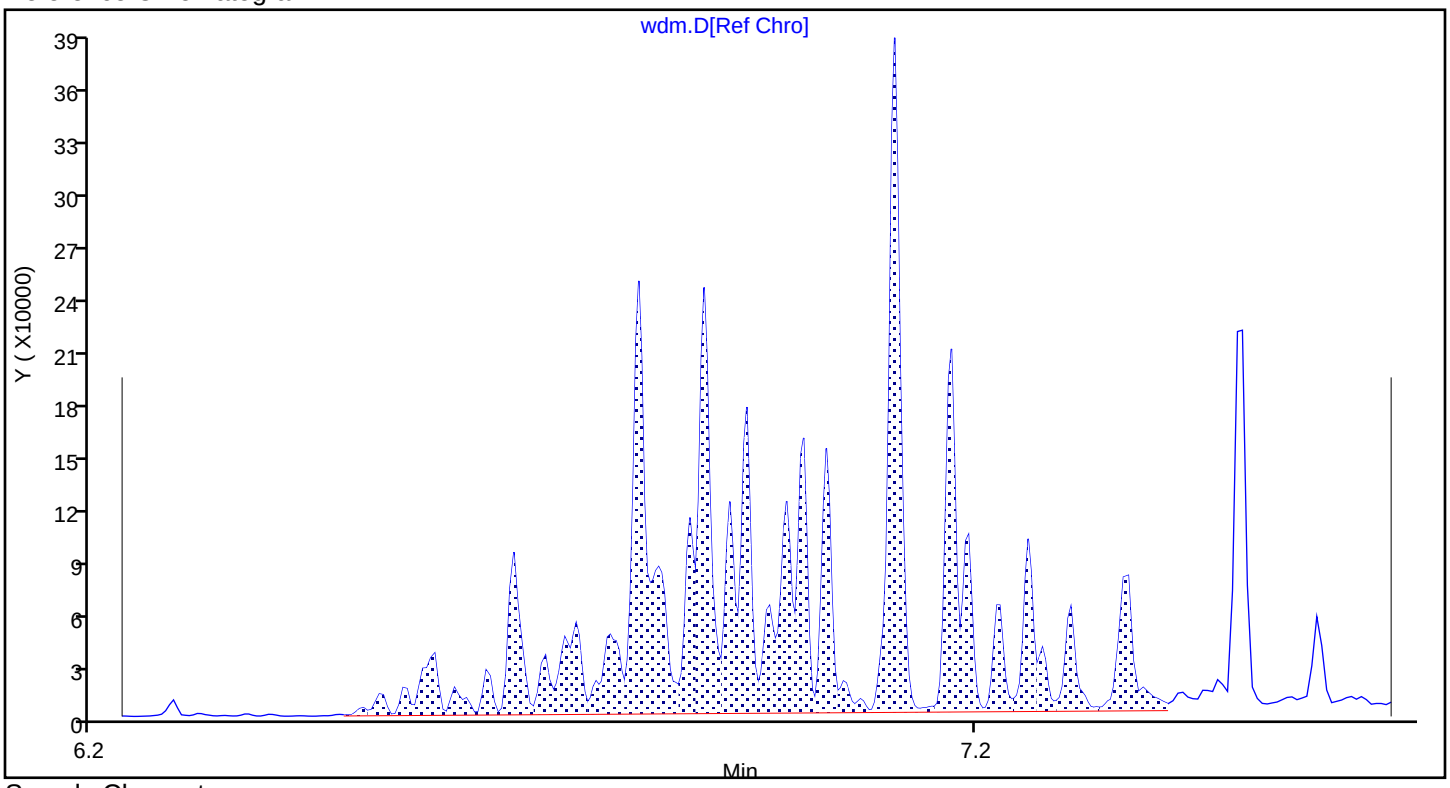
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

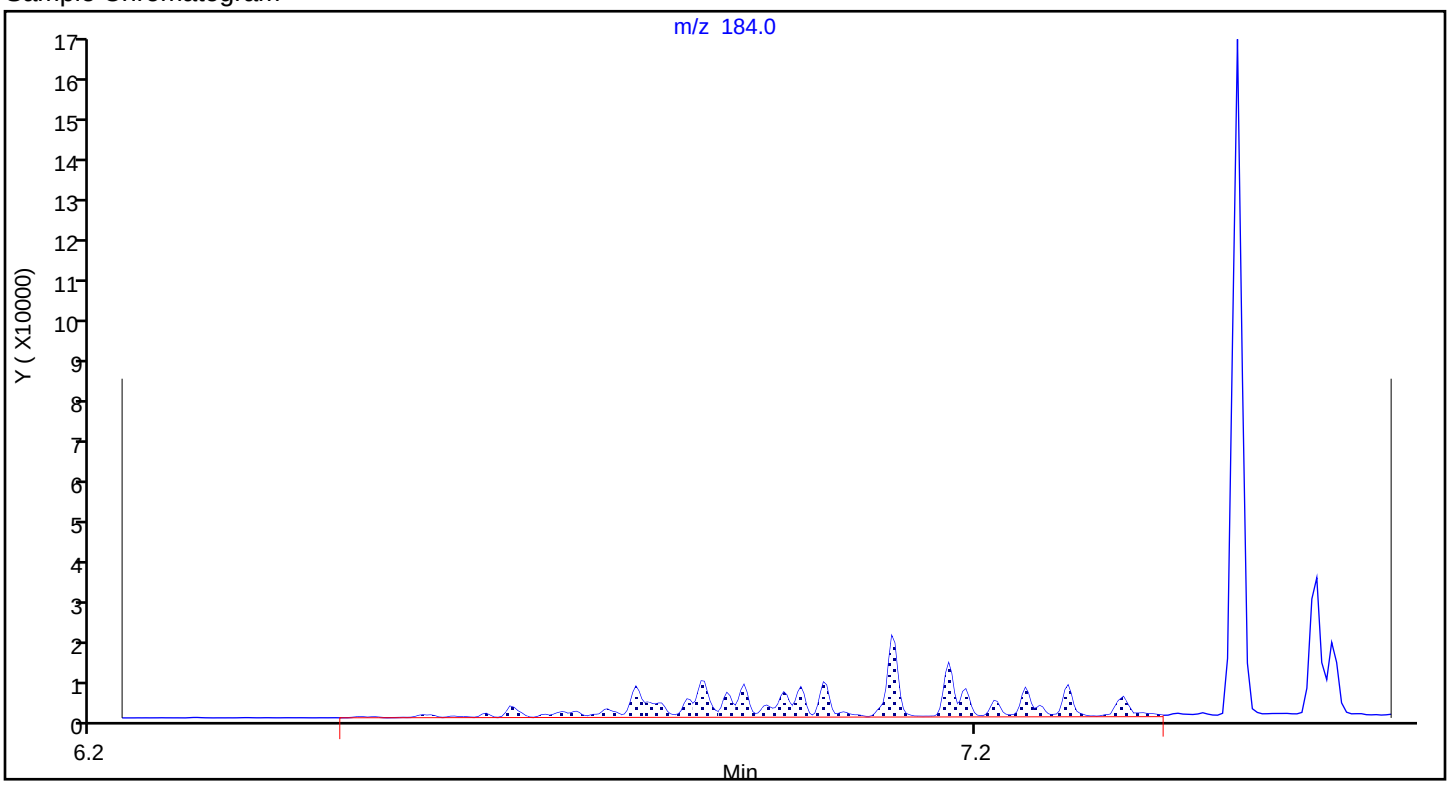
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



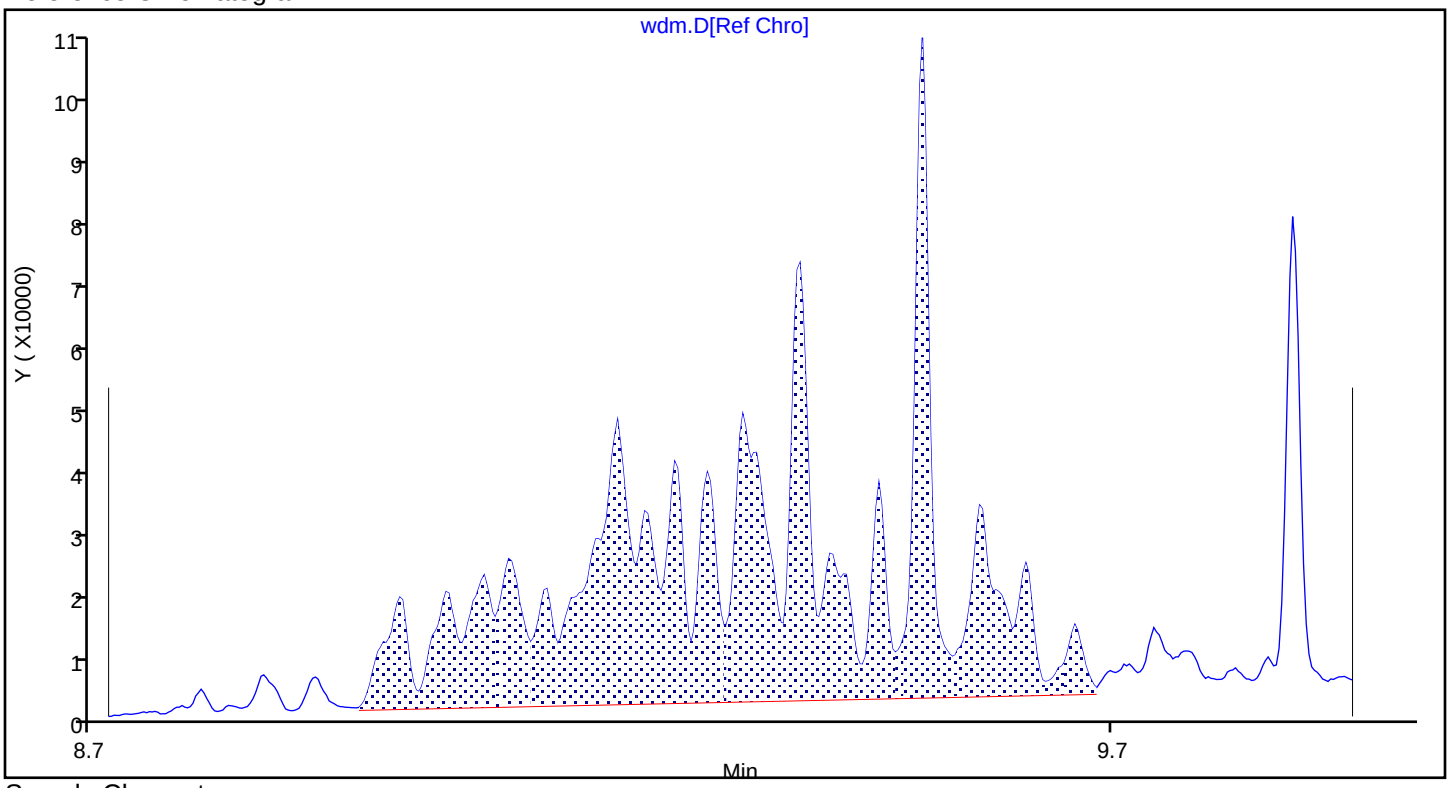
Report Date: 31-Aug-2019 11:49:34 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

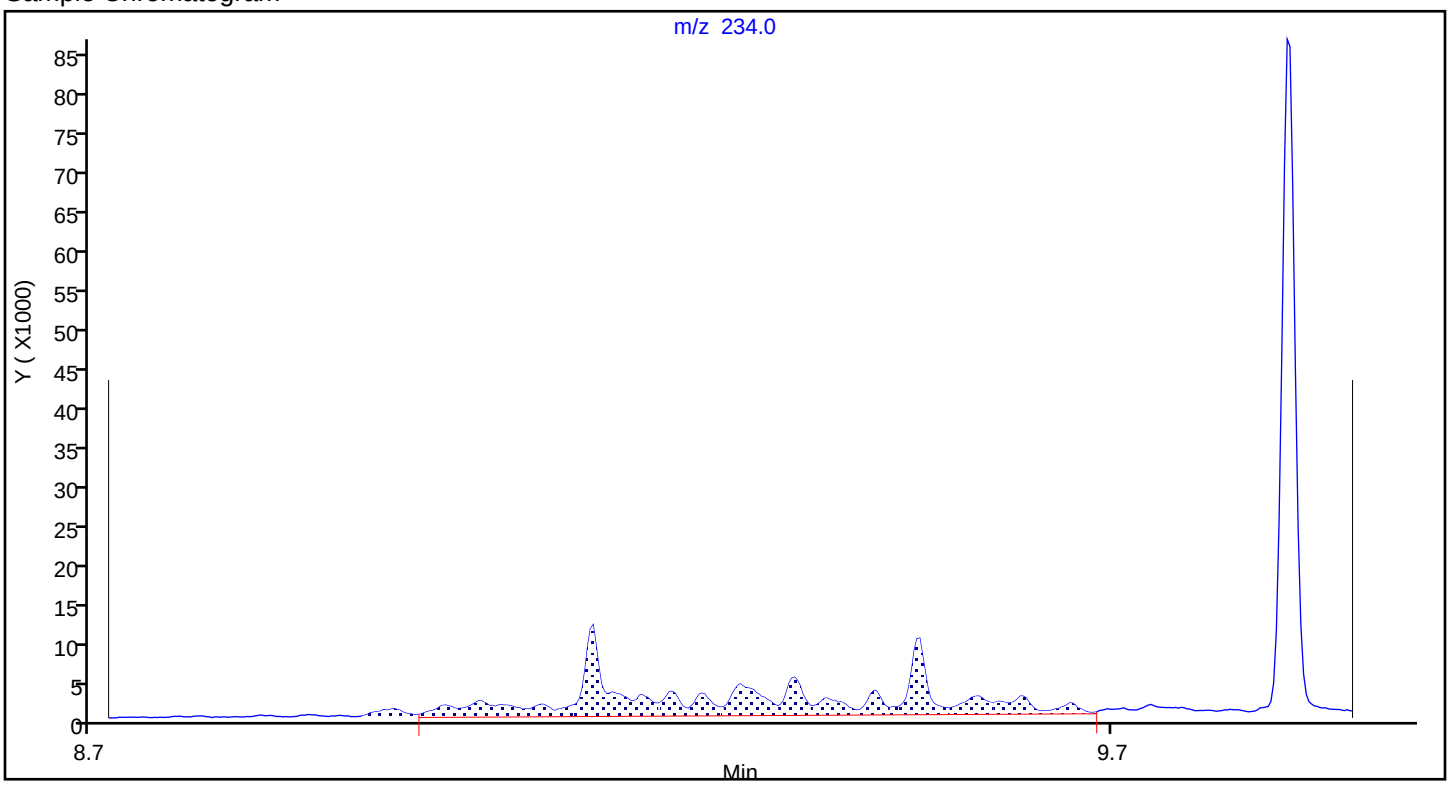
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

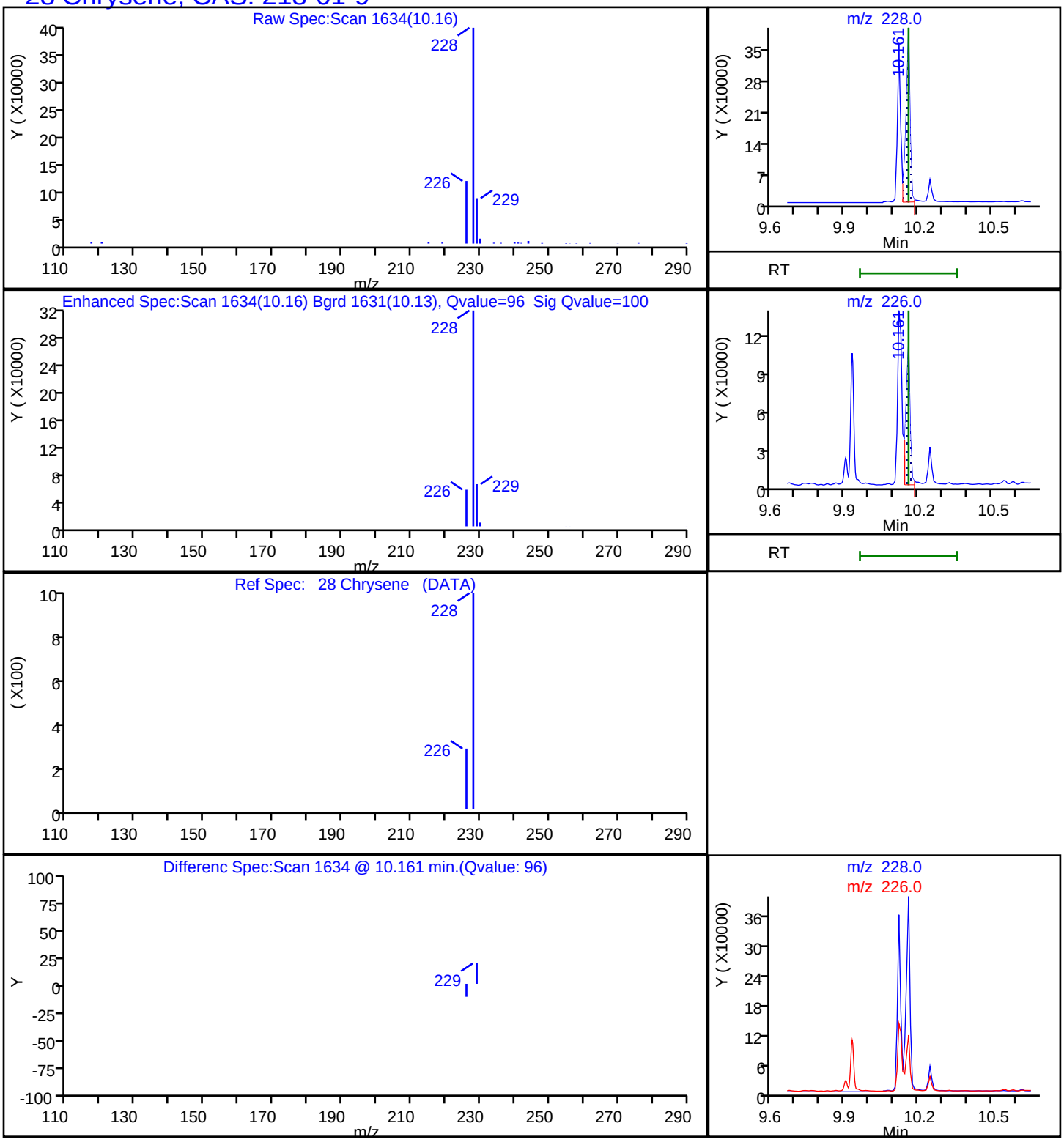


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

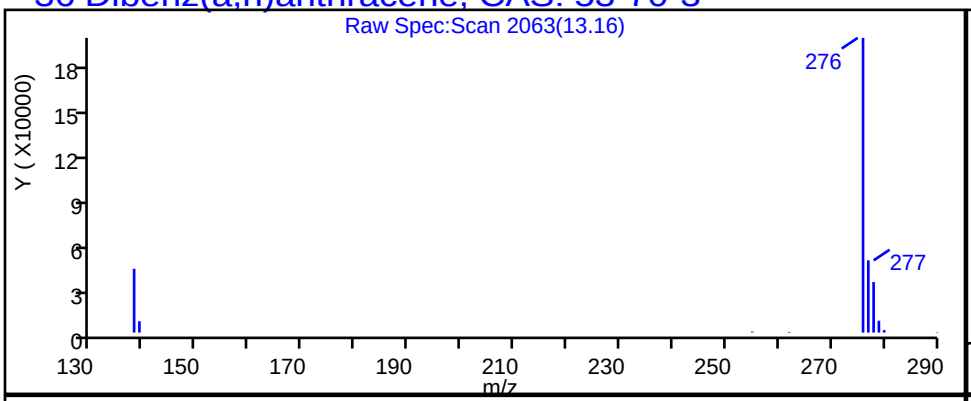


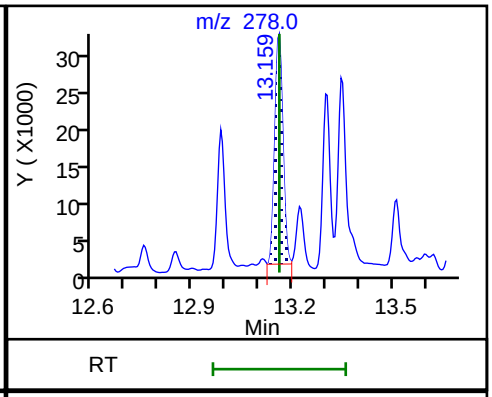
Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

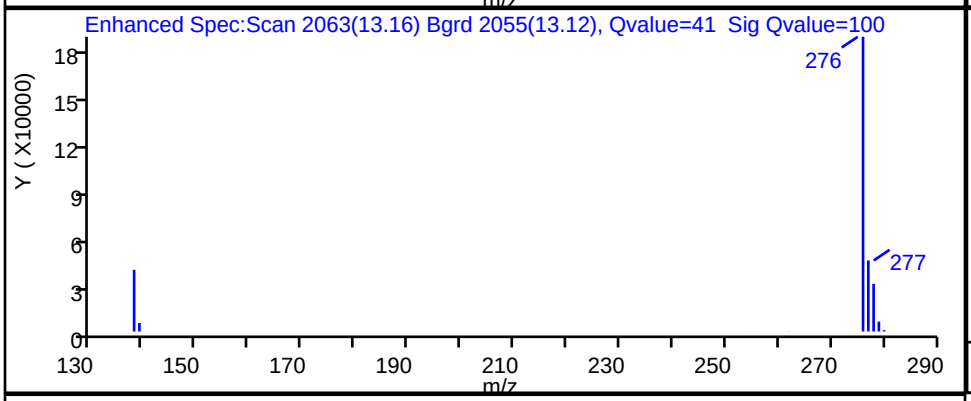
Eurofins TestAmerica, Knoxville

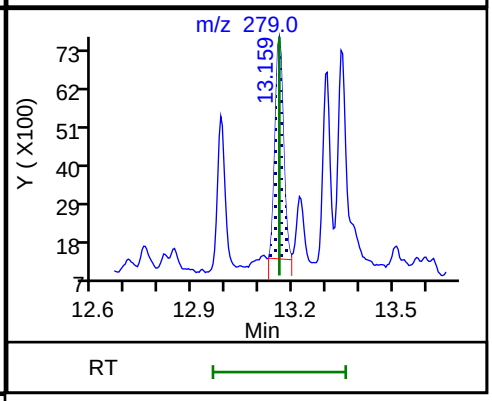
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

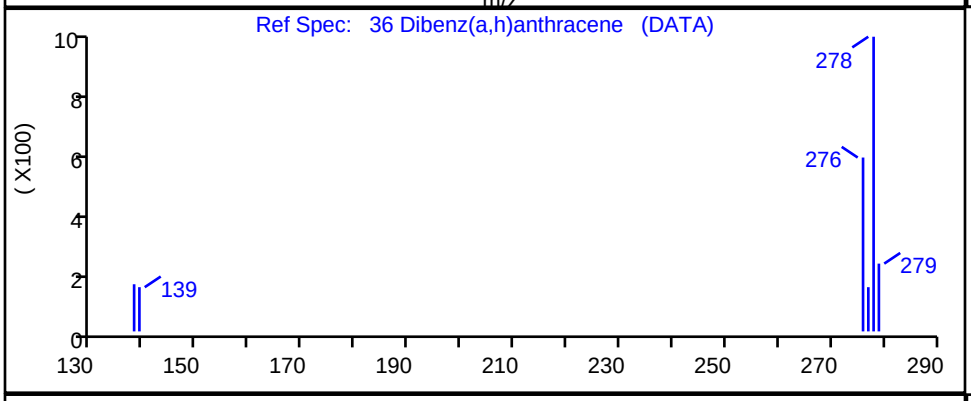
36 Dibenz(a,h)anthracene, CAS: 53-70-3

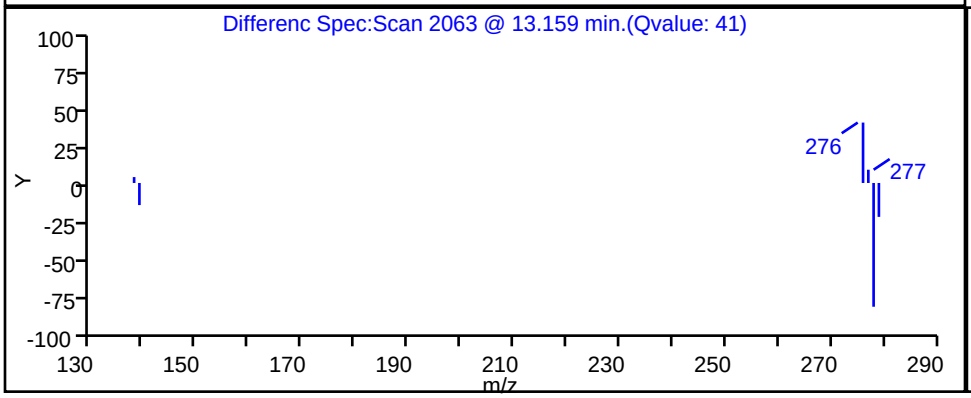


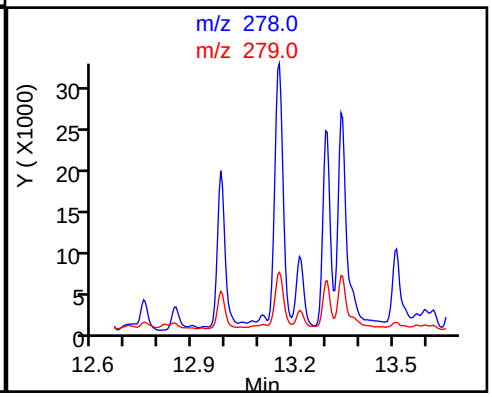










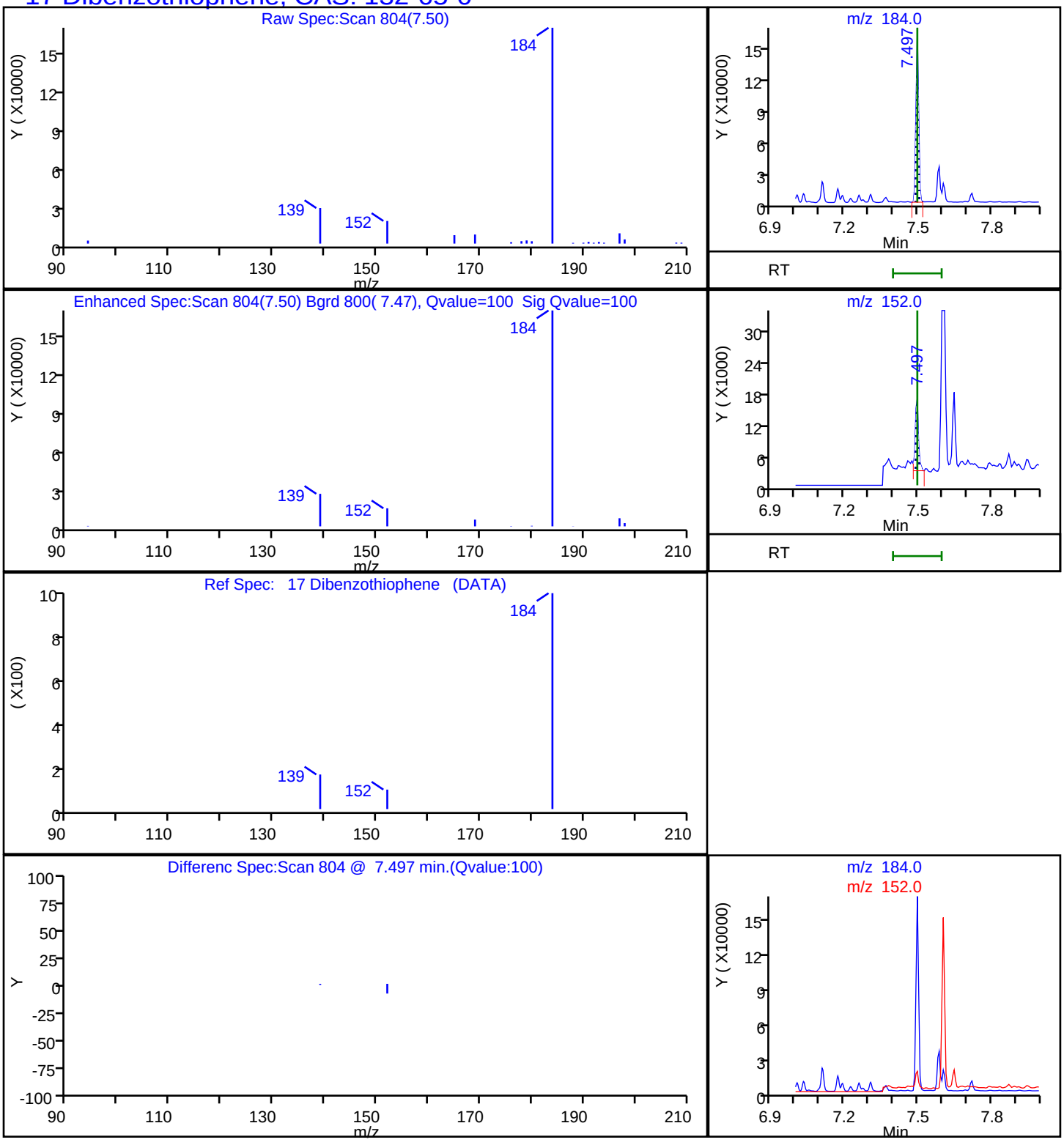


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

17 Dibenzothiophene, CAS: 132-65-0

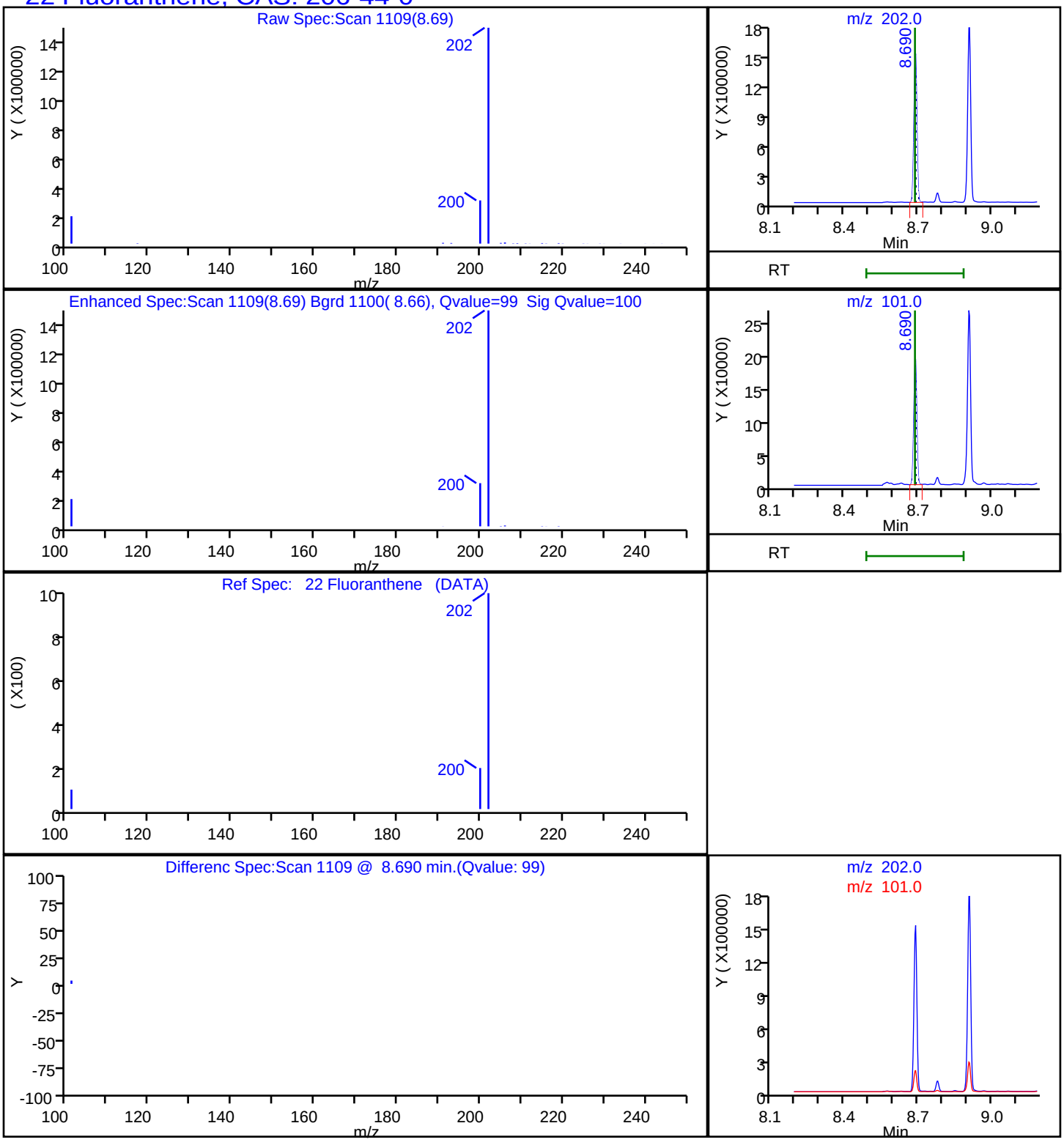


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

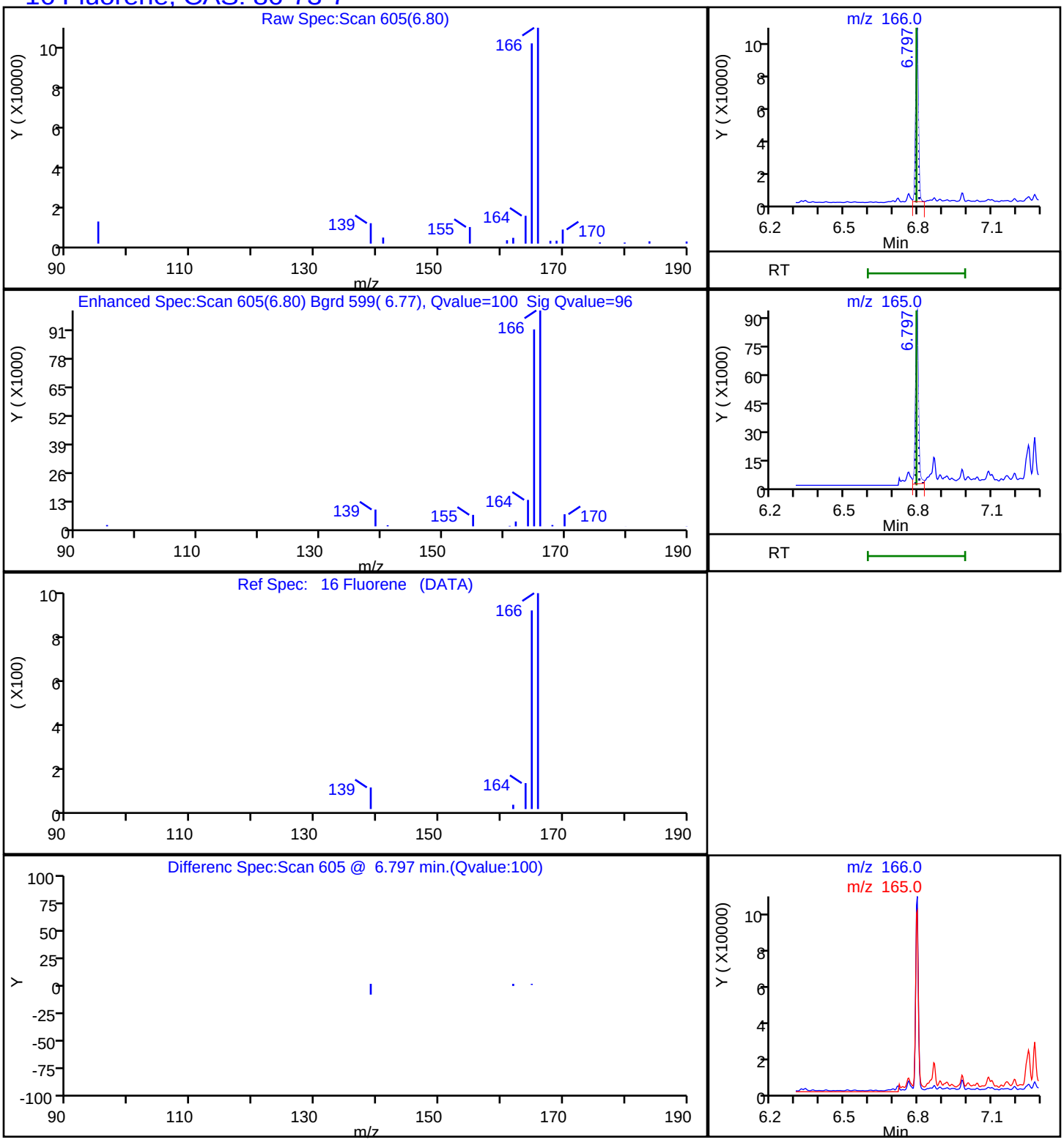


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

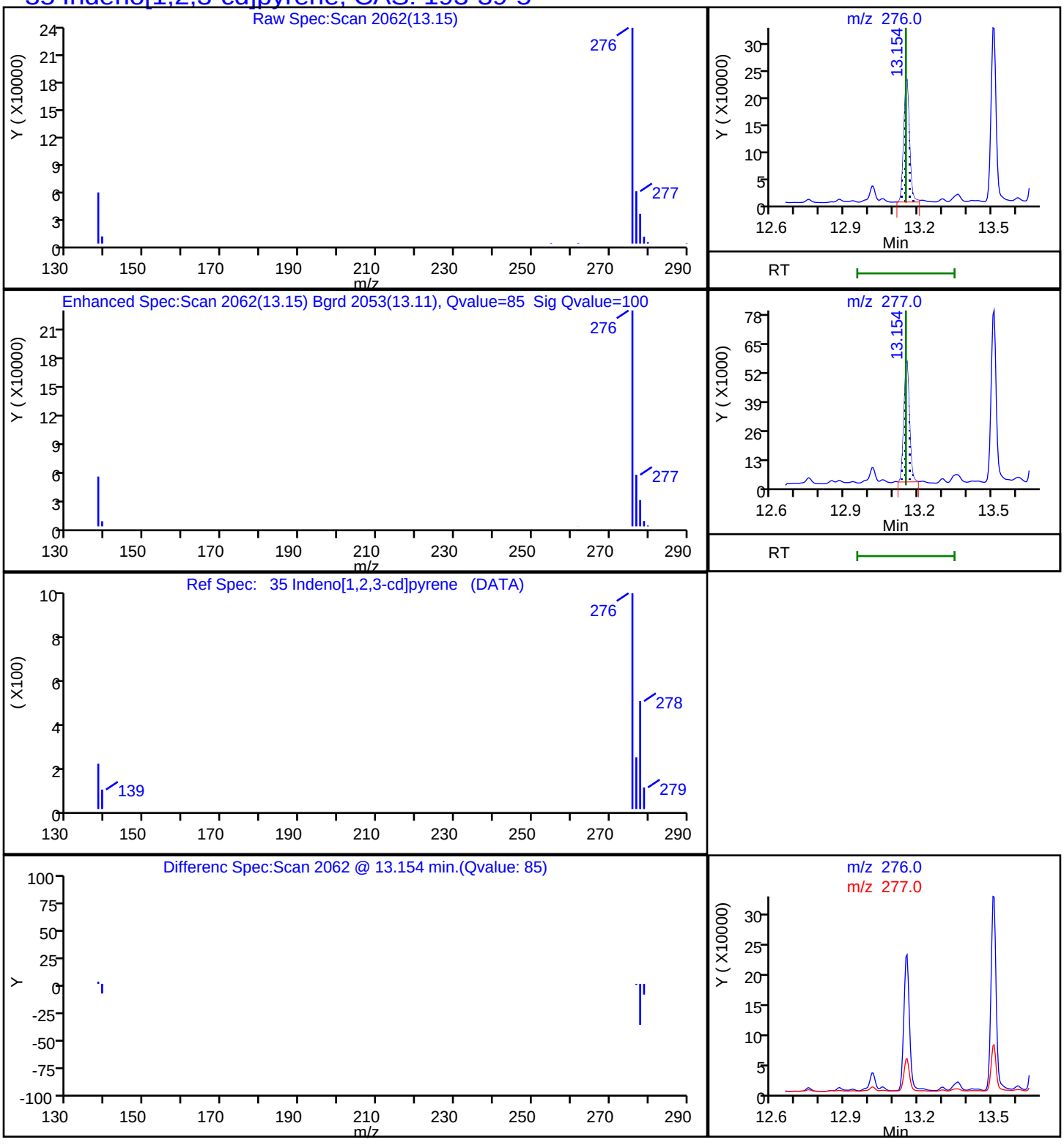


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5



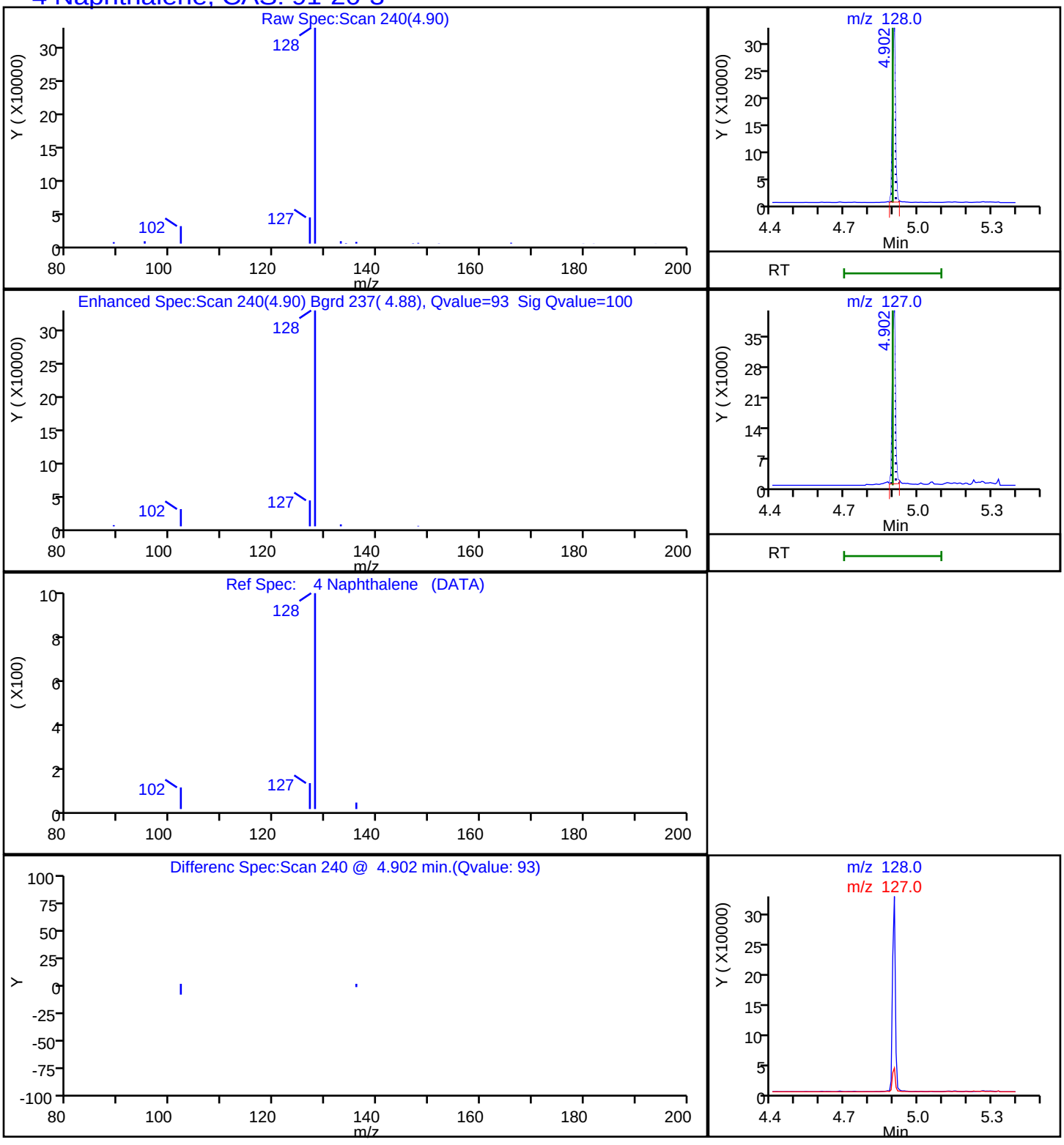
Report Date: 31-Aug-2019 11:49:32 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D

Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

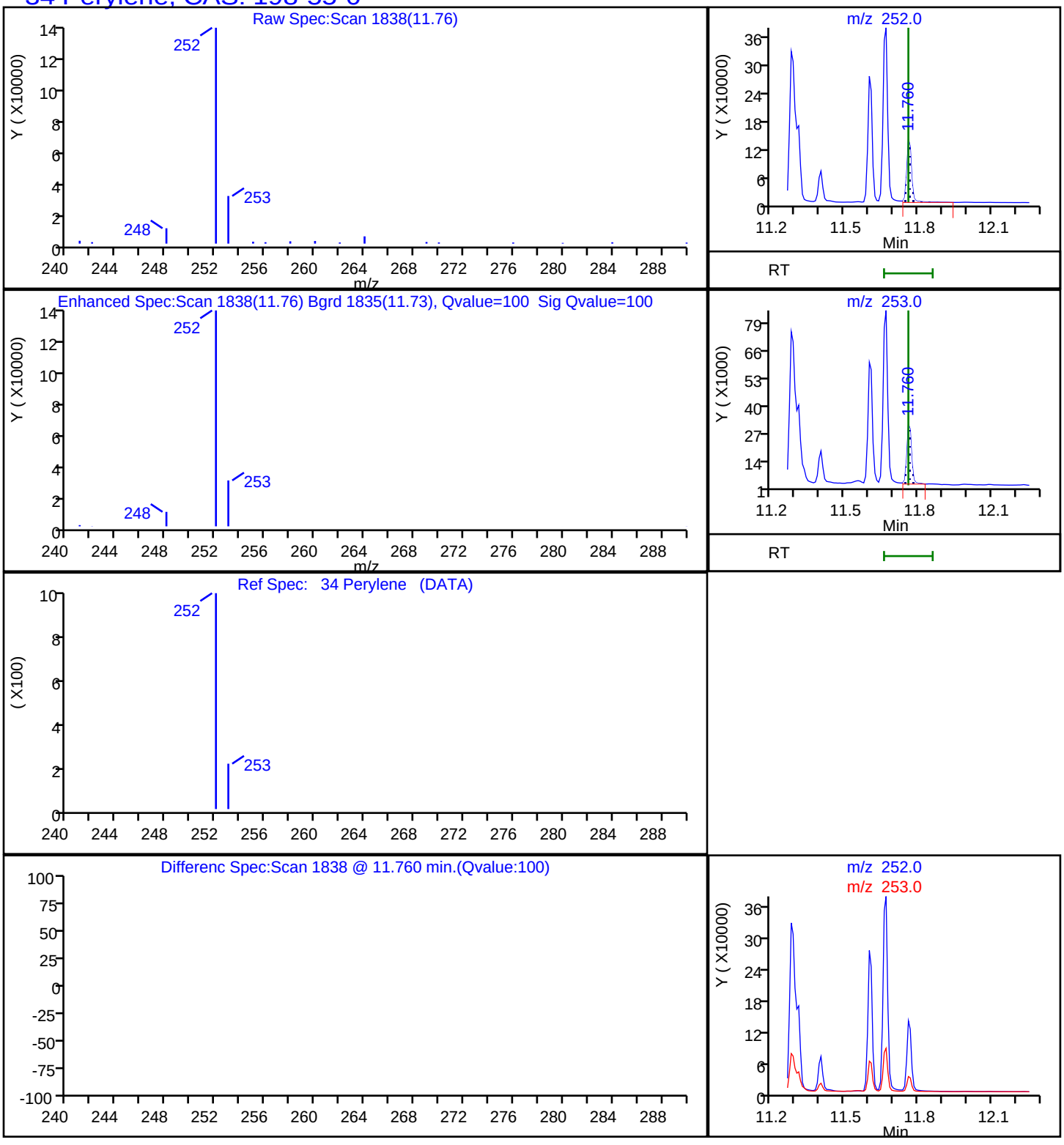


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0

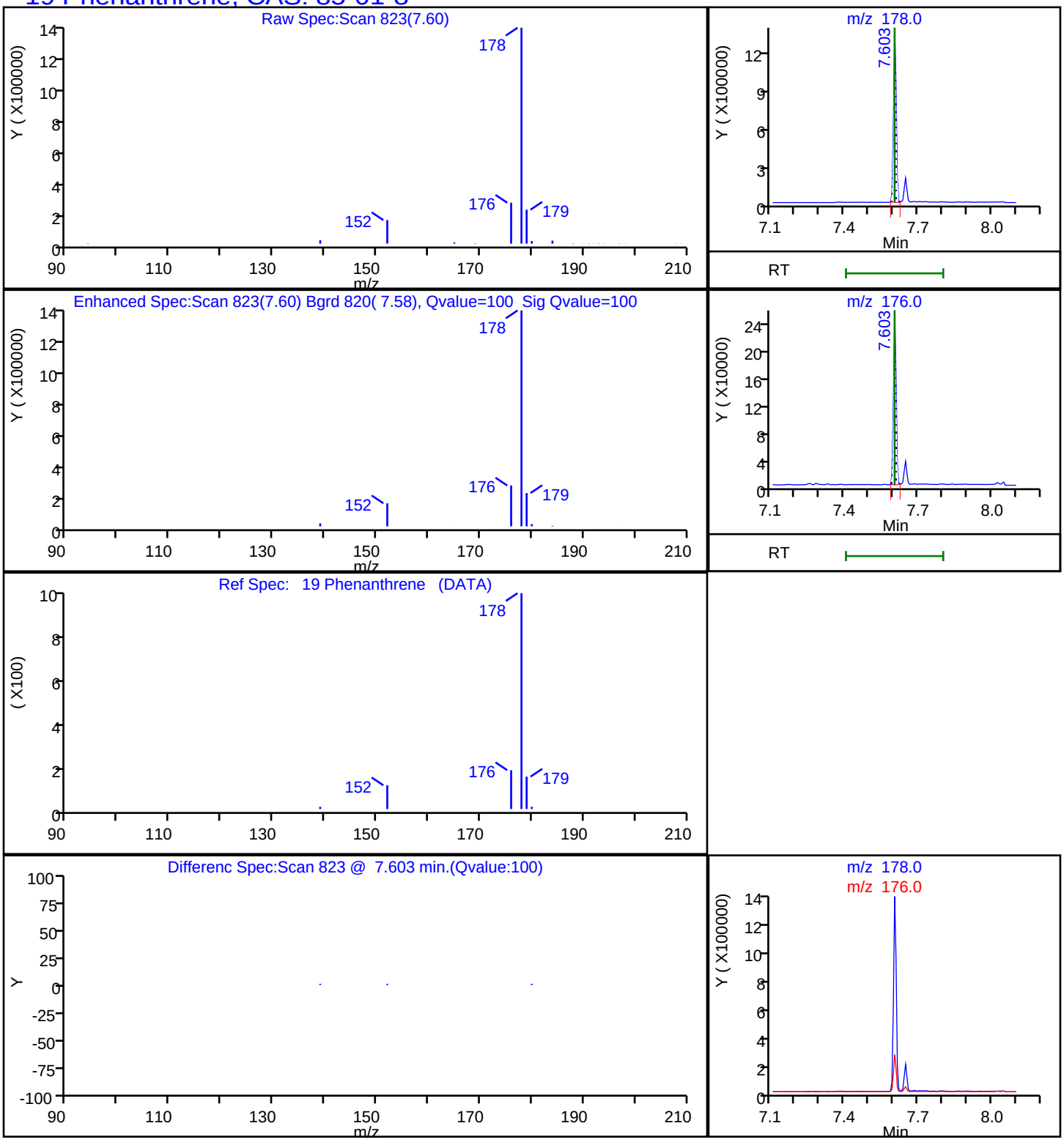


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

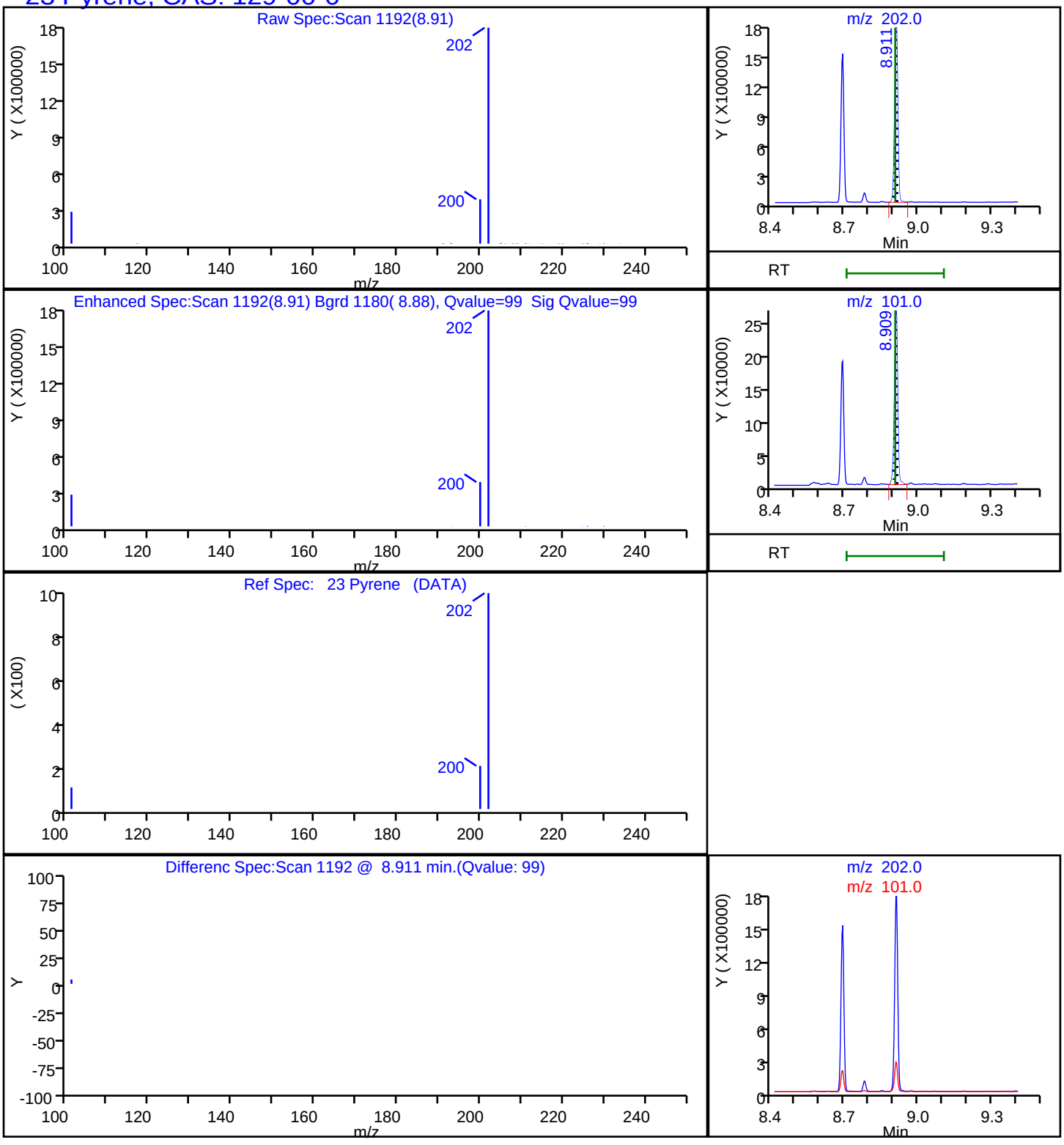


Report Date: 31-Aug-2019 11:49:33 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D		
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22
Client ID:	22T-SG-05_20190718		
Operator ID:	11211	ALS Bottle#:	15 Worklist Smp#: 23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

23 Pyrene, CAS: 129-00-0



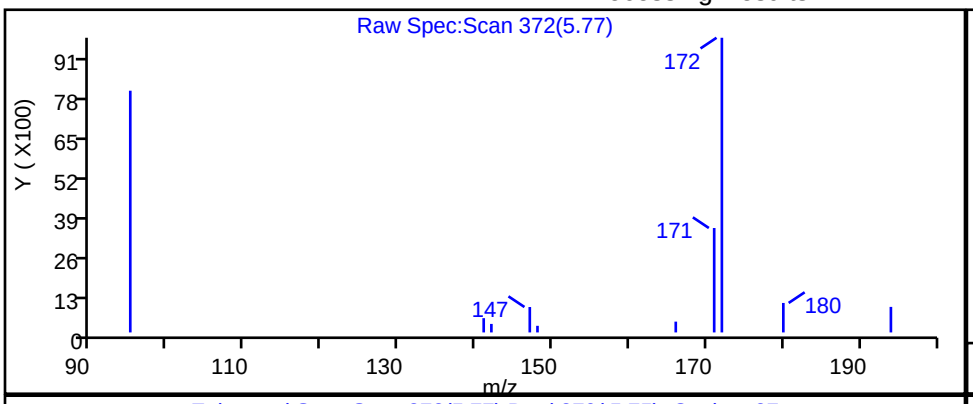
User Disabled Compound Report

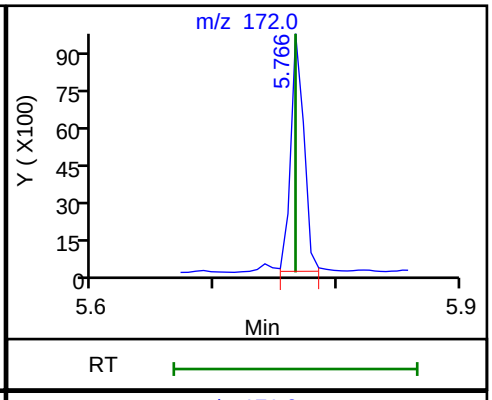
Eurofins TestAmerica, Knoxville

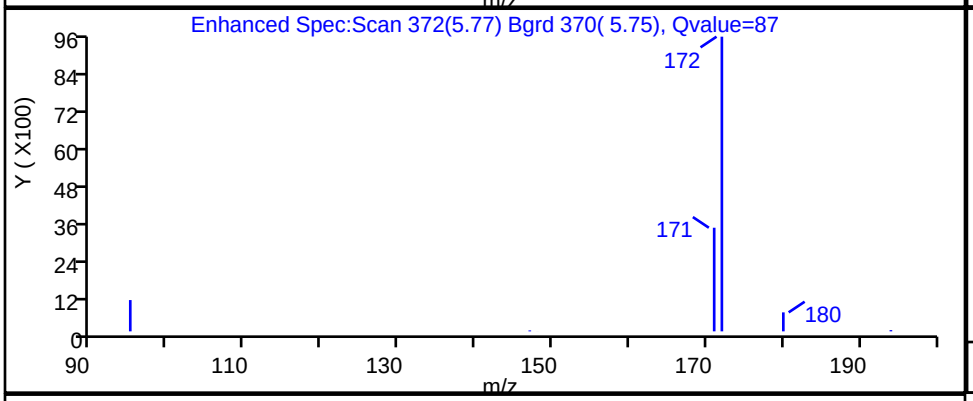
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

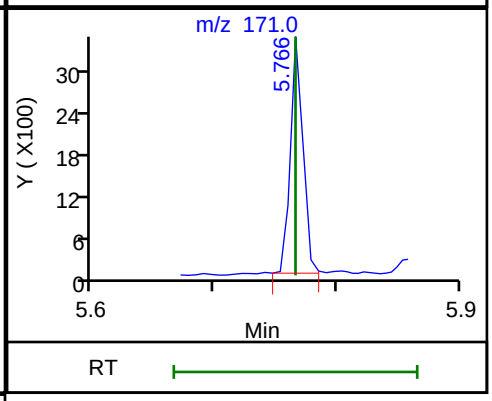
$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

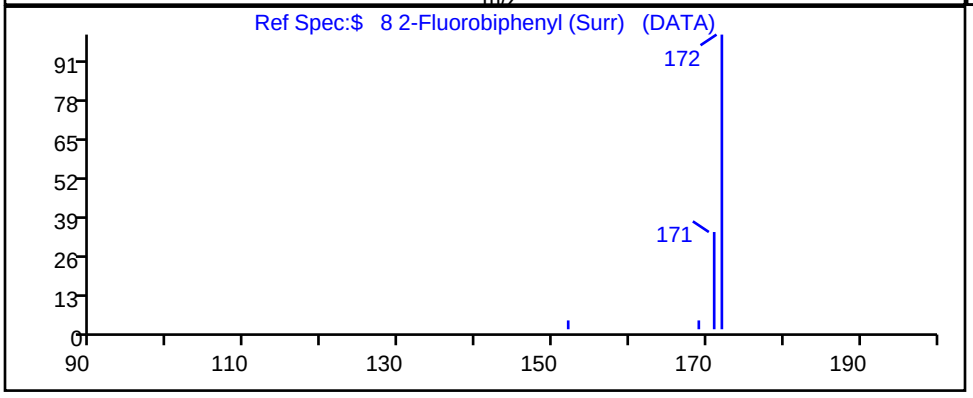
Processing Results











RT	Mass	Response	Amount
5.77	172.00	7238	0.021020
5.77	171.00	2406	

Reviewer: cochranj, 31-Aug-2019 10:59:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

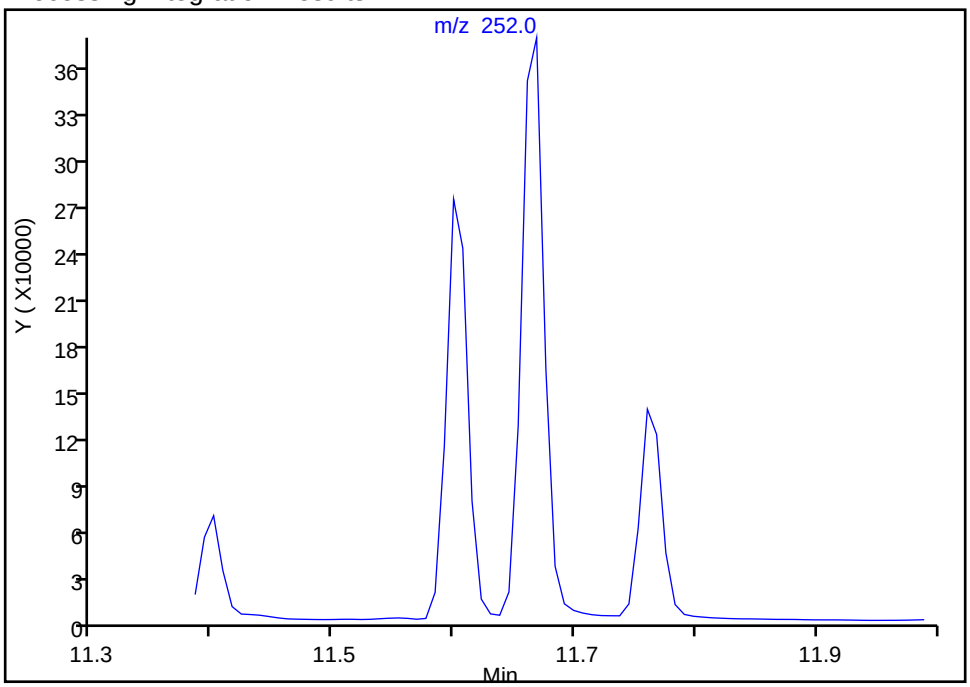
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

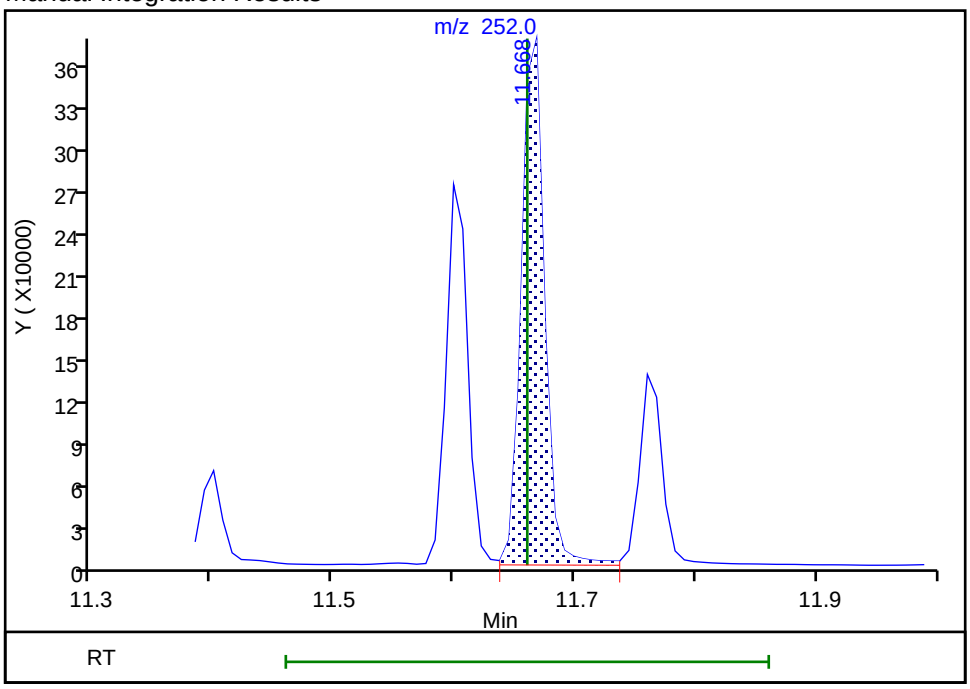
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 500236
Amount: 1.143895
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:34:03
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

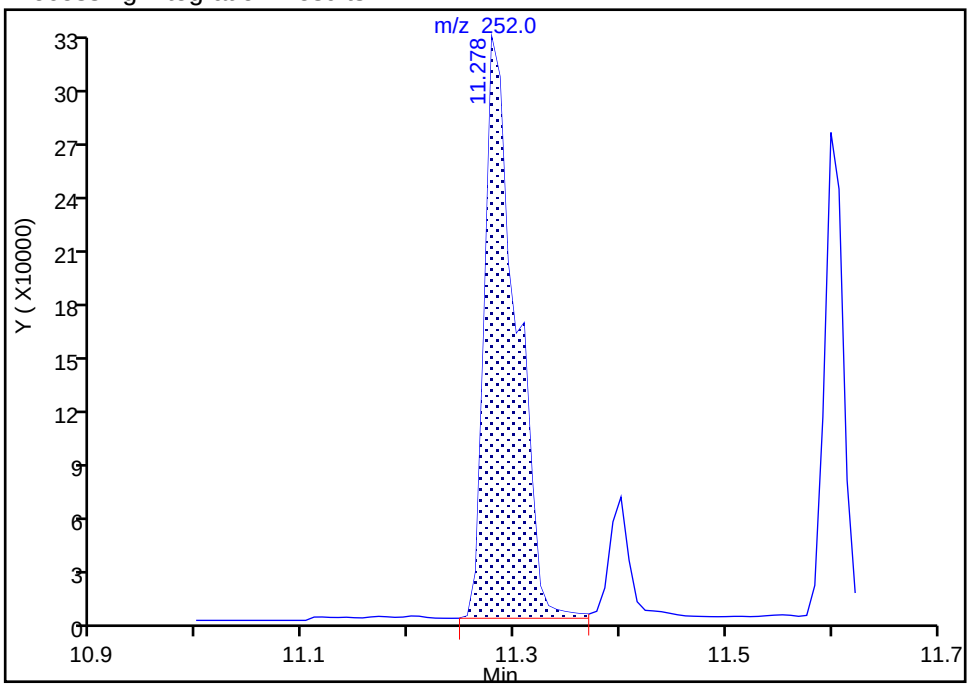
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

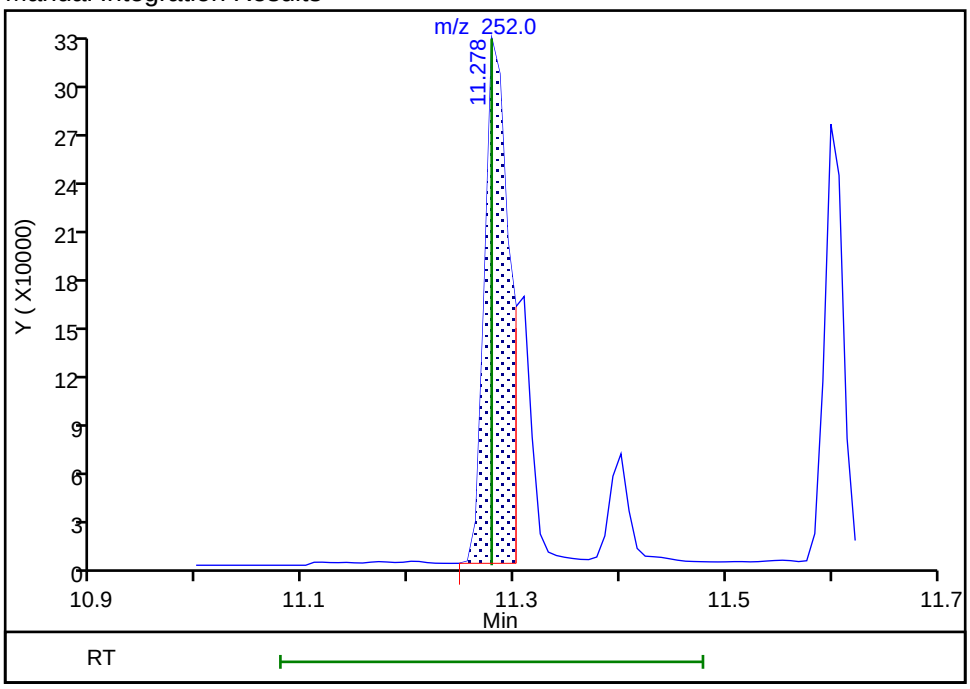
Processing Integration Results

RT: 11.28
Area: 662809
Amount: 1.303976
Amount Units: ug/ml



Manual Integration Results

RT: 11.28
Area: 533155
Amount: 1.048901
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:33:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

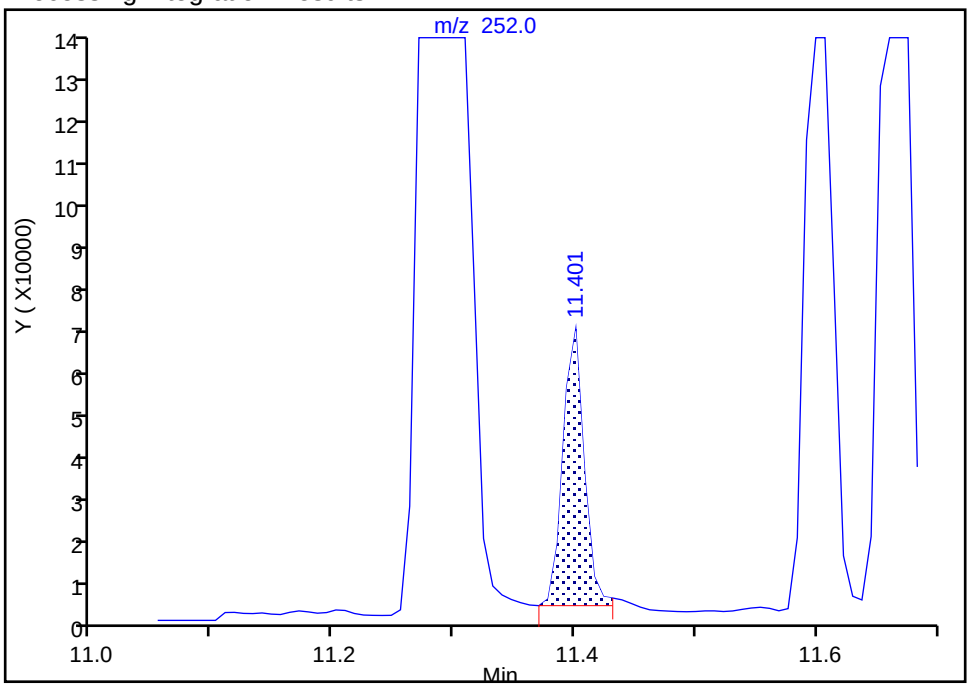
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

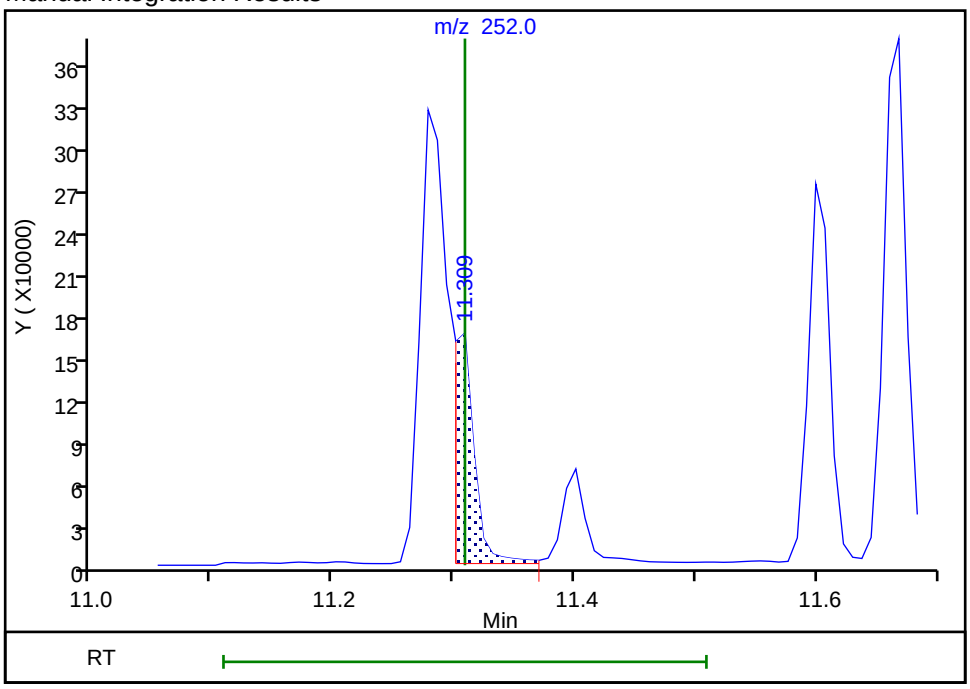
Processing Integration Results

RT: 11.40
Area: 79400
Amount: 0.137736
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 201889
Amount: 0.350219
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:33:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

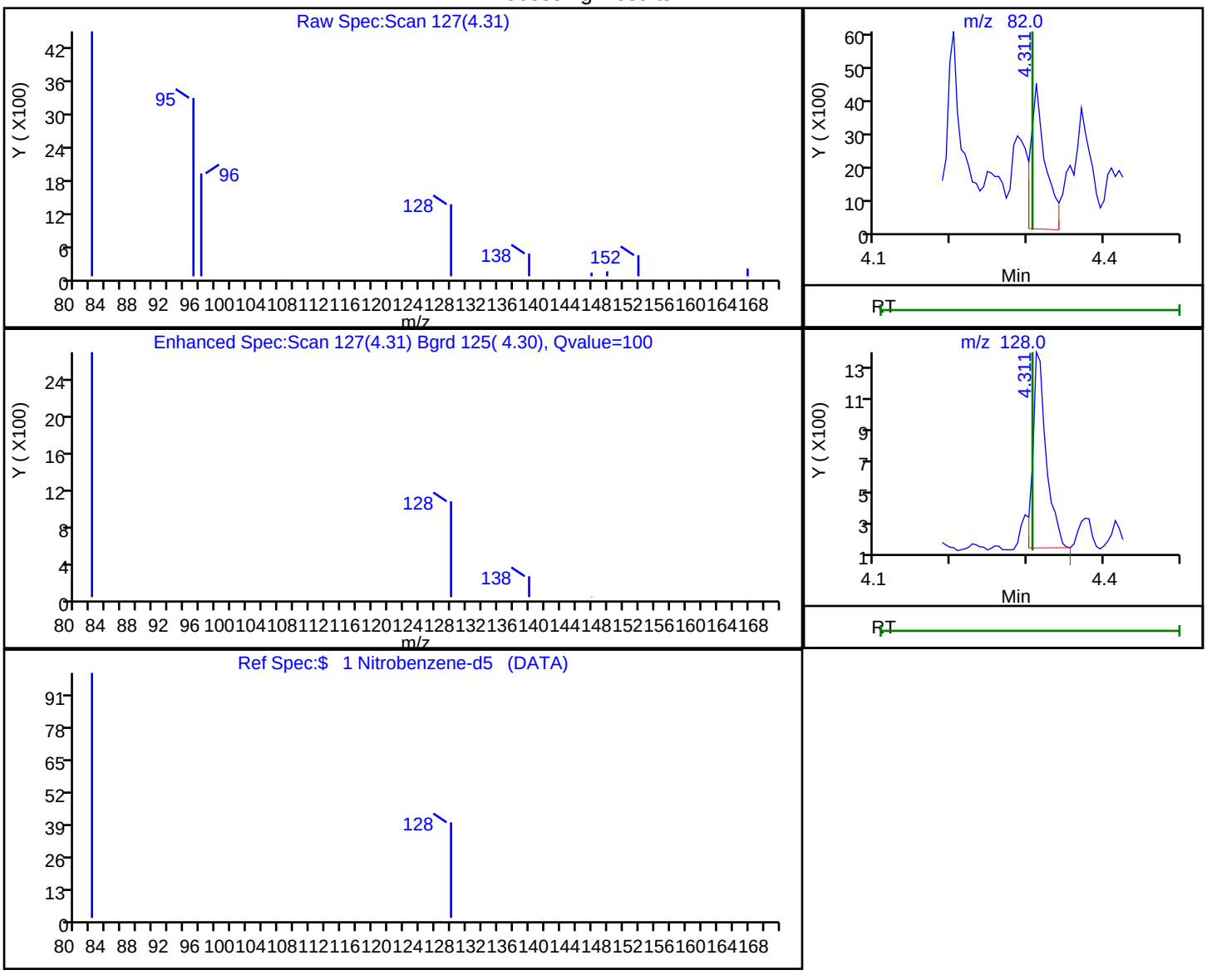
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D				
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP		
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22		
Client ID:	22T-SG-05_20190718				
Operator ID:	11211	ALS Bottle#:	15	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 1 Nitrobenzene-d5, CAS: 4165-60-0

Processing Results



RT	Mass	Response	Amount
4.31	82.00	5896	0.049652
4.31	128.00	1397	

Reviewer: cochranj, 31-Aug-2019 10:59:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

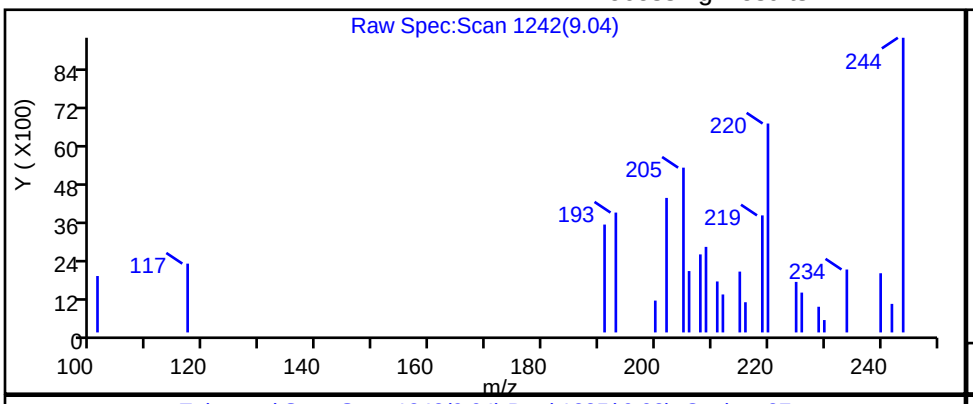
User Disabled Compound Report

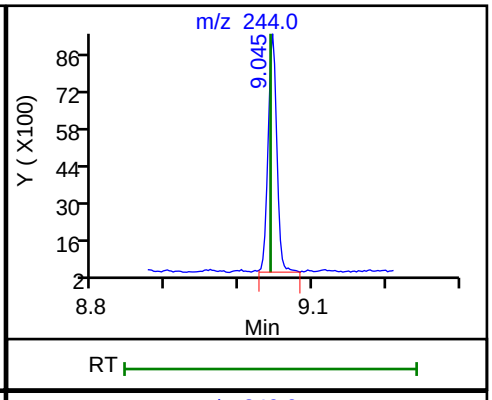
Eurofins TestAmerica, Knoxville

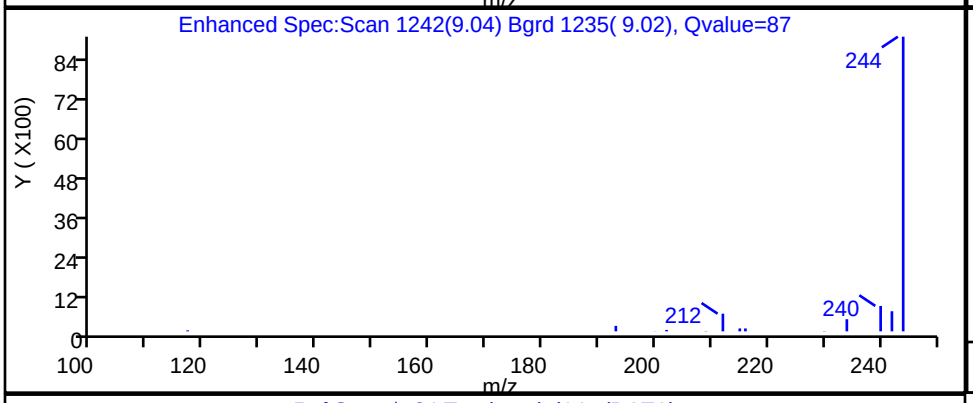
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-22-a.D		
Injection Date:	29-Aug-2019 20:55:30	Instrument ID:	MP
Lims ID:	580-87761-B-22-A	Lab Sample ID:	140-87761-22
Client ID:	22T-SG-05_20190718		
Operator ID:	11211	ALS Bottle#:	15 Worklist Smp#: 23
Injection Vol:	1.0 ul	Dil. Factor:	30.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

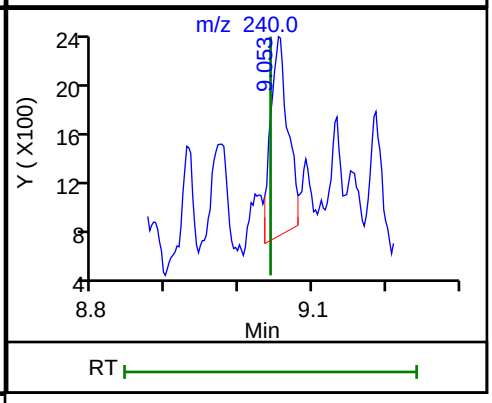
$ 24 Terphenyl-d14, CAS: 1718-51-0

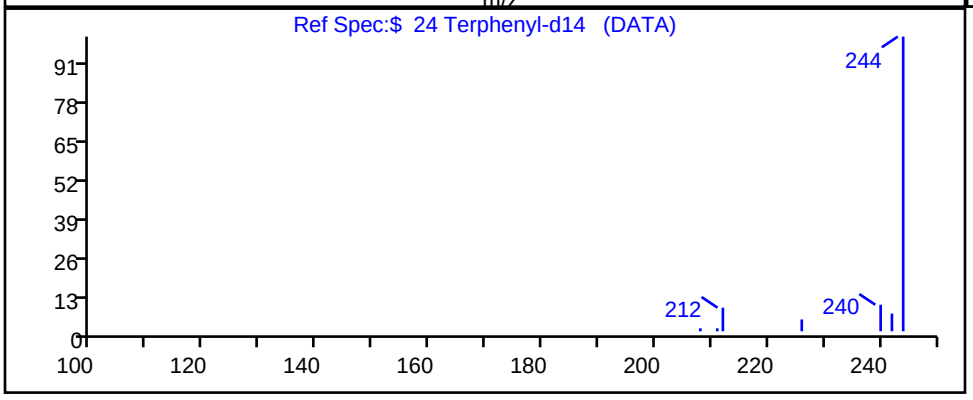
Processing Results











RT	Mass	Response	Amount
9.04	244.00	7480	0.026068
9.05	240.00	2564	

Reviewer: cochranj, 31-Aug-2019 10:59:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-06_20190718 Lab Sample ID: 580-87761-23

Matrix: Solid Lab File ID: 580-87761-b-23-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 09:11

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.29(g) Date Analyzed: 08/29/2019 21:20

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 50.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	270		150	21
91-57-6	2-Methylnaphthalene	450		300	30
83-32-9	Acenaphthene	1900		30	14
208-96-8	Acenaphthylene	300		30	7.4
120-12-7	Anthracene	1200		30	24
56-55-3	Benzo[a]anthracene	3700		30	12
50-32-8	Benzo[a]pyrene	4900		30	11
205-99-2	Benzo[b]fluoranthene	4100		30	15
192-97-2	Benzo[e]pyrene	2800		30	10
191-24-2	Benzo[g,h,i]perylene	3800		30	18
207-08-9	Benzo[k]fluoranthene	1700		30	14
STL00905	C1-Chrysenes	970		30	7.7
STL00909	C1-Dibenzothiophenes	530		30	19
STL00912	C1-Fluoranthenes/pyrene	2800		30	15
STL00913	C1-Fluorenes	530		30	17
STL00916	C1-Naphthalenes	460		300	23
STL00901	C1-Phenanthrenes/Anthracenes	2600		59	33
STL00906	C2-Chrysenes	380		30	9.2
STL00910	C2-Dibenzothiophenes	480		30	28
STL00968	C2-Fluoranthenes/Pyrene	730		30	13
STL00914	C2-Fluorenes	600		59	36
STL00917	C2-Naphthalenes	1000		59	23
STL00902	C2-Phenanthrenes/Anthracenes	1300		120	73
STL00907	C3-Chrysenes	200		30	8.9
STL00911	C3-Dibenzothiophenes	330		59	33
STL00969	C3-Fluoranthenes/Pyrene	360		30	16
STL00915	C3-Fluorenes	470		59	32
STL00918	C3-Naphthalenes	1300		59	29
STL00903	C3-Phenanthrenes/Anthracenes	700		59	47
STL00908	C4-Chrysenes	150		30	10
STL00967	C4-Dibenzothiophenes	190		30	28
STL01791	C4-Fluoranthenes/Pyrene	200		30	11
STL00919	C4-Naphthalenes	830		120	62
STL00904	C4-Phenanthrenes/Anthracenes	530	AP	59	56

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-06_20190718 Lab Sample ID: 580-87761-23

Matrix: Solid Lab File ID: 580-87761-b-23-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 09:11

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.29(g) Date Analyzed: 08/29/2019 21:20

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 50.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	3900		30	11
53-70-3	Dibenz(a,h)anthracene	460		30	17
132-65-0	Dibenzothiophene	1500		30	10
86-73-7	Fluorene	1500		30	14
193-39-5	Indeno[1,2,3-cd]pyrene	2800		30	21
91-20-3	Naphthalene	1600		590	54
198-55-0	Perylene	1300		30	5.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D
Lims ID: 580-87761-B-23-A
Client ID: 22T-SG-06_20190718
Sample Type: Client
Inject. Date: 29-Aug-2019 21:20:30 ALS Bottle#: 16 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-024
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 13:02:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	209604	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	488801	1.06	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	90858	0.3006	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	97	51536	0.1789	
11 Acenaphthylene	152	6.216	6.216	0.000	99	76557	0.1993	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	111622	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	99	377578	1.27	
16 Fluorene	166	6.793	6.793	0.000	100	321851	0.9797	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	484294	1.03	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	97	196418	0.5000	
19 Phenanthrene	178	7.609	7.603	0.006	100	3796947	7.51	E
20 Anthracene	178	7.648	7.648	0.000	100	348628	0.8263	
22 Fluoranthene	202	8.692	8.687	0.005	99	4127415	8.39	E
23 Pyrene	202	8.914	8.906	0.008	99	5088390	8.95	E
26 Benzo[a]anthracene	228	10.121	10.121	0.000	62	1098016	2.46	
* 27 Chrysene-d12	240	10.137	10.129	0.008	76	187930	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	1416371	2.65	
29 Benzo[b]fluoranthene	252	11.286	11.278	0.008	100	1500757	2.78	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	683106	1.11	Ma
31 Benzo[e]pyrene	252	11.607	11.599	0.008	100	959202	1.89	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	1534097	3.30	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	198002	0.5000	
34 Perylene	252	11.768	11.760	0.008	100	474673	0.9036	
35 Indeno[1,2,3-cd]pyrene	276	13.156	13.150	0.006	85	1071591	1.87	
36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	40	149914	0.3088	M
37 Benzo[g,h,i]perylene	276	13.514	13.508	0.006	98	1355123	2.53	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	141255	0.3062	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	313131	0.6787	
A 40 C3-Naphthalenes	170	6.555	(6.323-6.820)		0	397067	0.8607	
A 41 C4-Naphthalenes	184	6.947	(6.483-7.421)		0	257860	0.5589	
A 42 C1-Fluorenes	180	7.299	(7.219-7.413)		0	117751	0.3584	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.688	(7.565-7.939)		0	133429	0.4062	
A 44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	104441	0.3179	
A 45 C1-Dibenzothiophenes	198	7.953	(7.827-8.065)		0	167905	0.3581	
A 46 C2-Dibenzothiophenes	212	8.331	(8.209-8.703)		0	152331	0.3249	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	104779	0.2235	
A 48 C4-Dibenzothiophenes	240	9.056	(8.814-9.591)		0	59642	0.1272	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	900508	1.78	
A 50 C2-Phenanthrenes/Anthracen	206	8.554	(8.358-8.785)		0	456297	0.9019	
A 51 C3-Phenanthrenes/Anthracen	220	8.998	(8.747-9.260)		0	238540	0.4715	
A 52 C4-Phenanthrenes/Anthracen	234	9.321	(8.966-9.686)		0	180586	0.3570	
A 53 C1-Fluoranthenes/pyrene	216	9.311	(9.112-9.500)		0	1086452	1.91	
A 54 C2-Fluoranthenes/Pyrene	230	9.809	(9.587-10.039)		0	279660	0.4917	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.043-10.519)		0	137285	0.2414	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.371-10.864)		0	77059	0.1355	
A 57 C1-Chrysenes	242	10.624	(10.512-10.741)		0	349731	0.6545	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	136263	0.2550	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	73041	0.1367	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	53939	0.1009	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

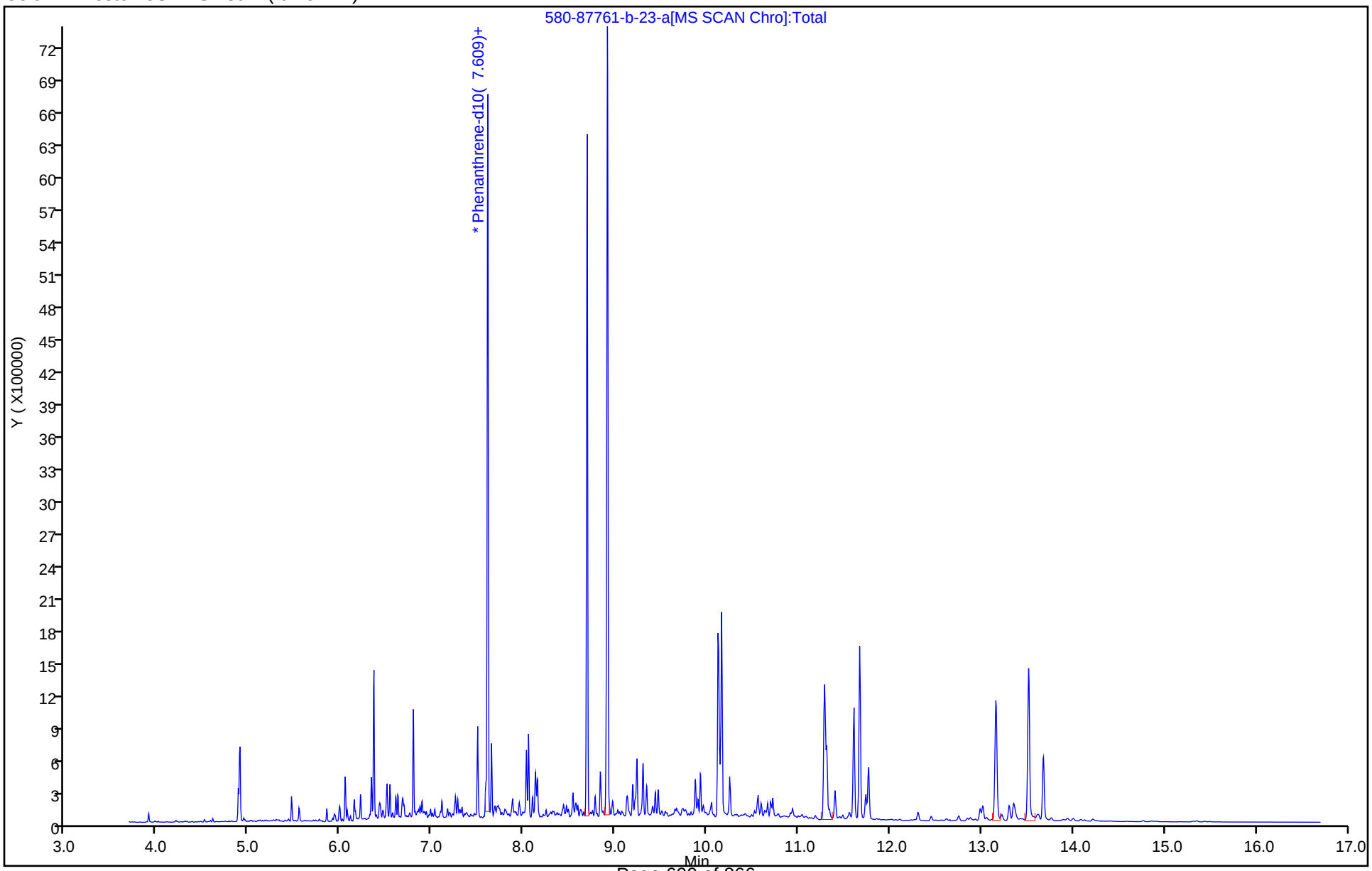
Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D

Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23	Worklist Smp#:	24
Client ID:	22T-SG-06_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	16
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

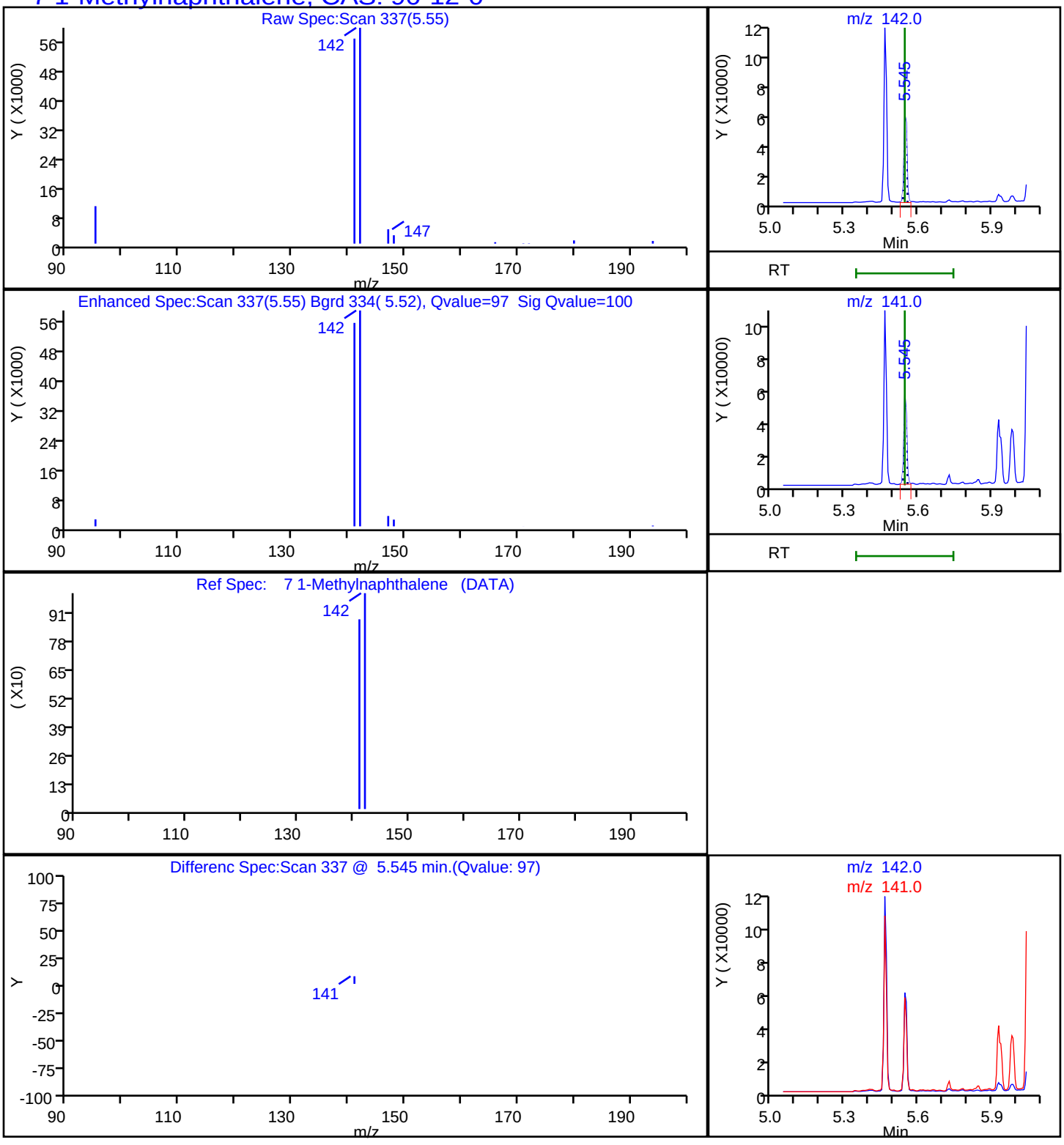


Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0

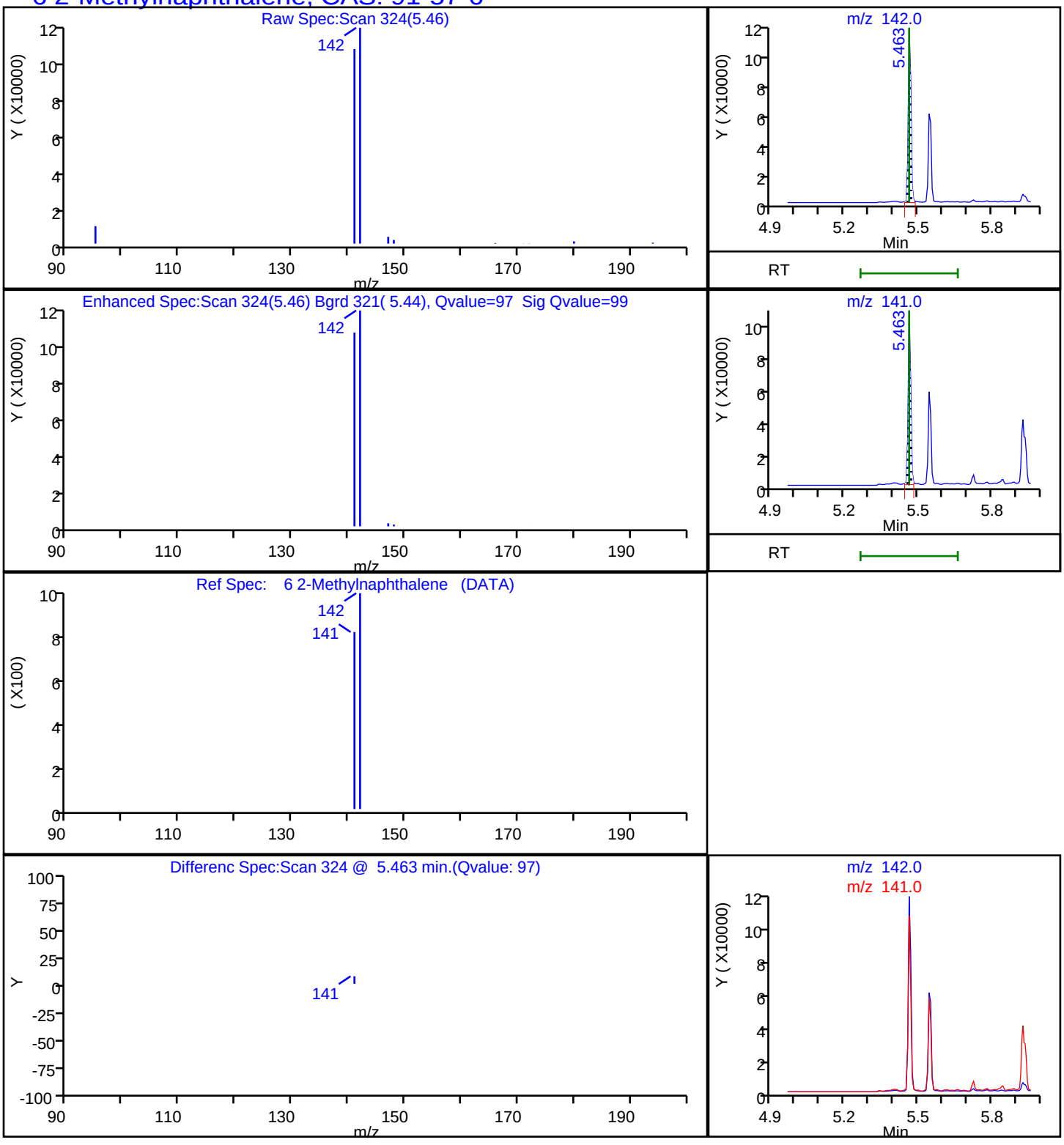


Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6



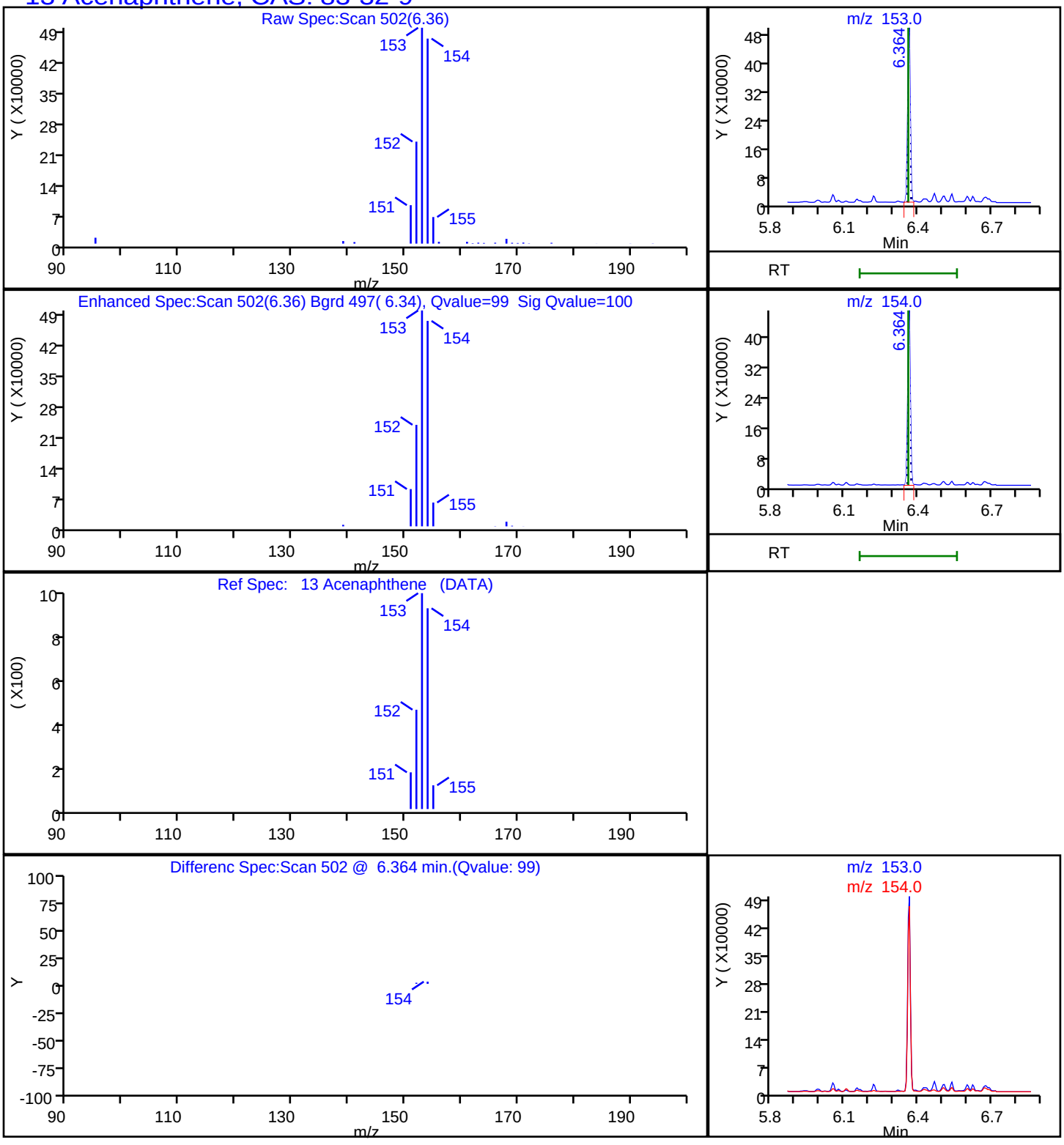
Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D

Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9



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Eurofins TestAmerica, Knoxville

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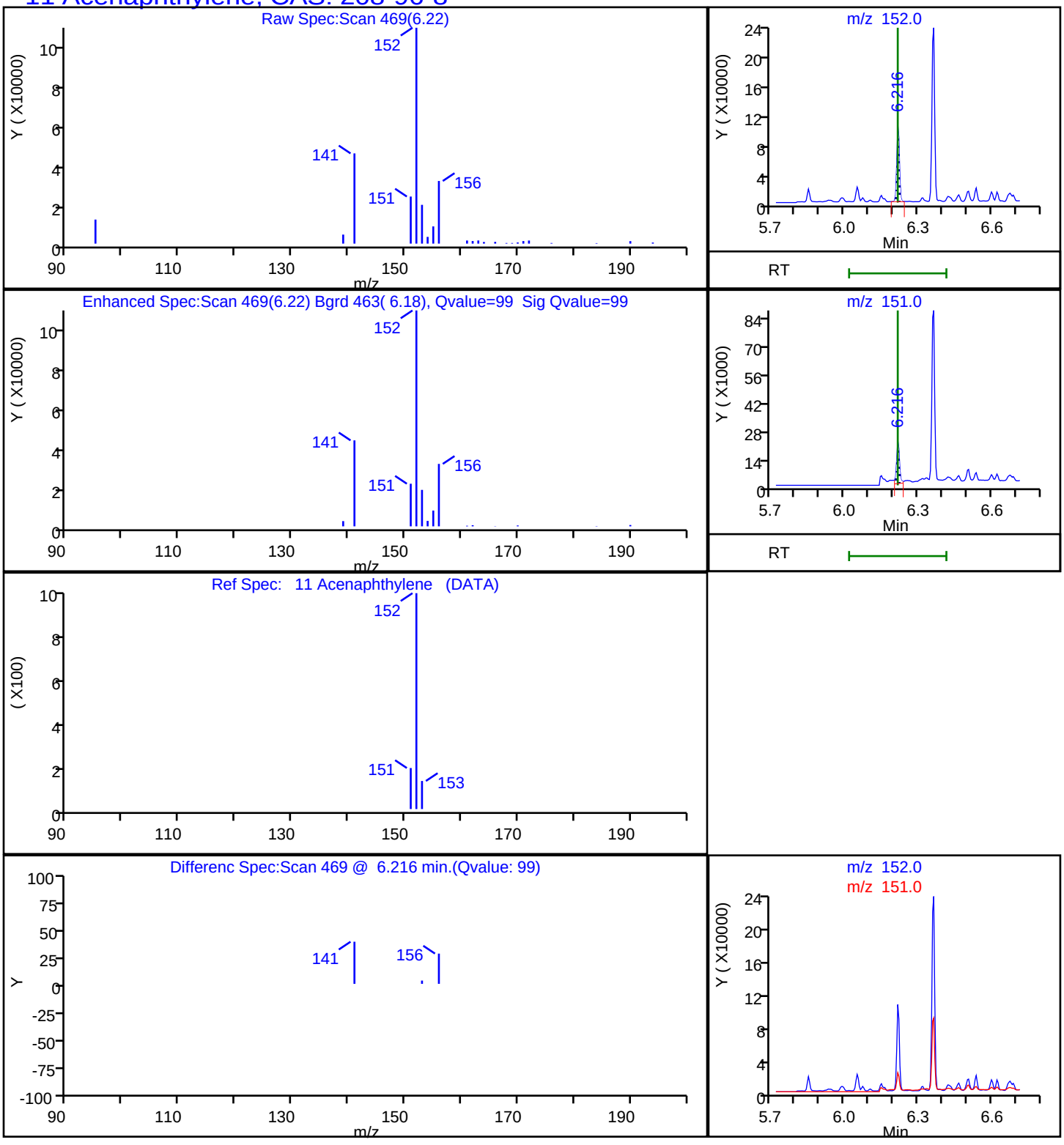
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8



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Eurofins TestAmerica, Knoxville

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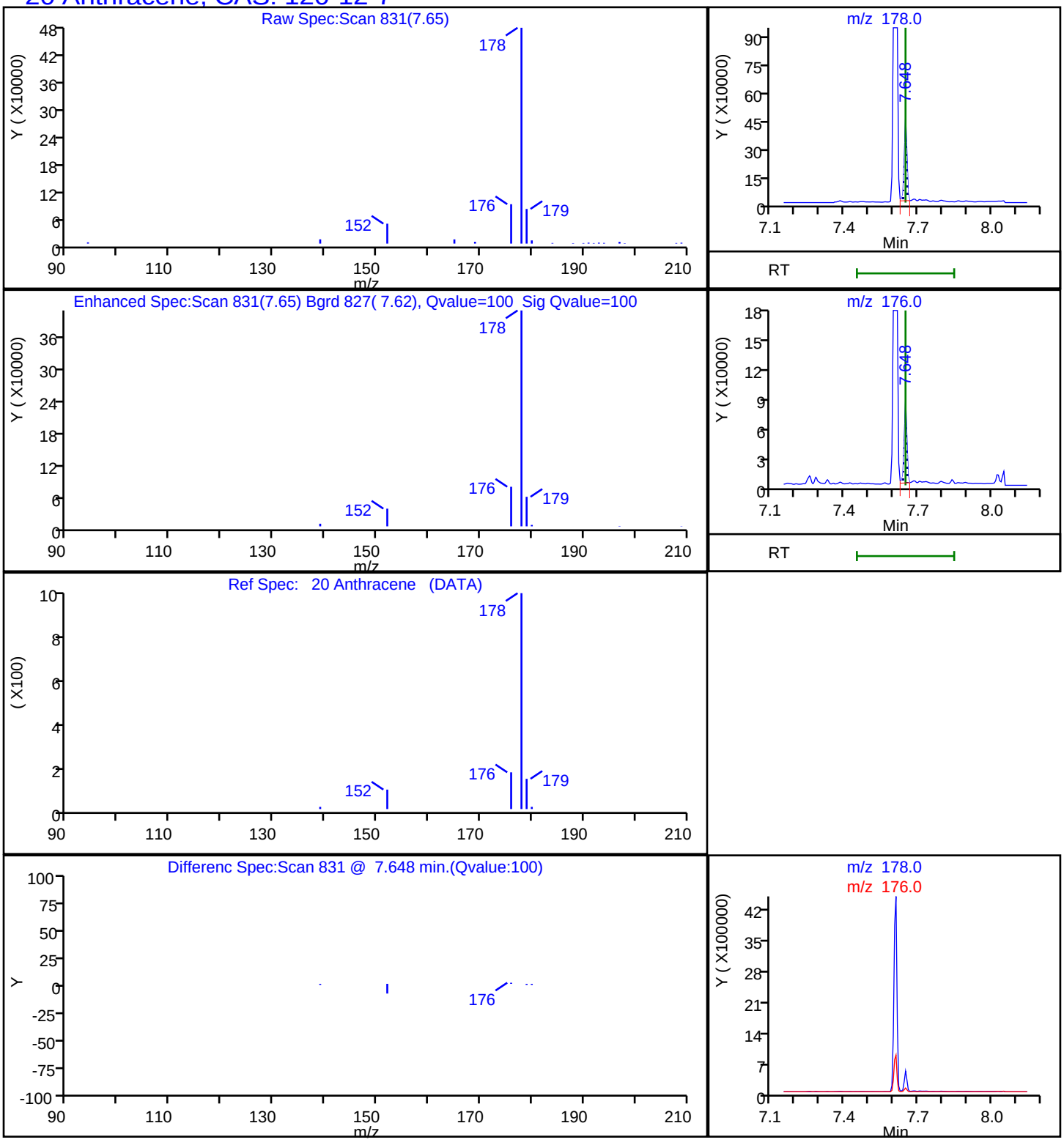
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7



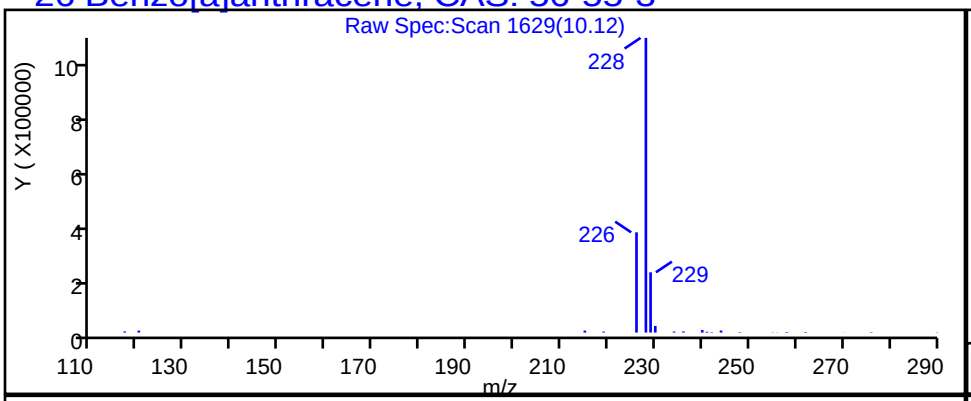
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

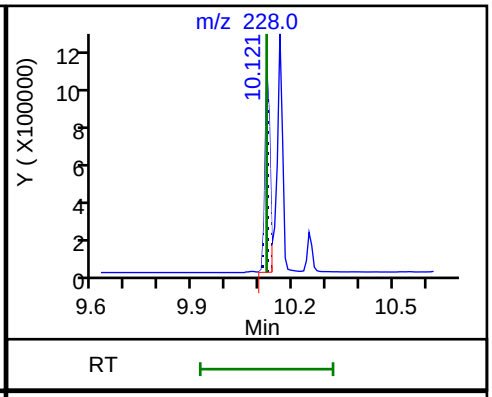
Eurofins TestAmerica, Knoxville

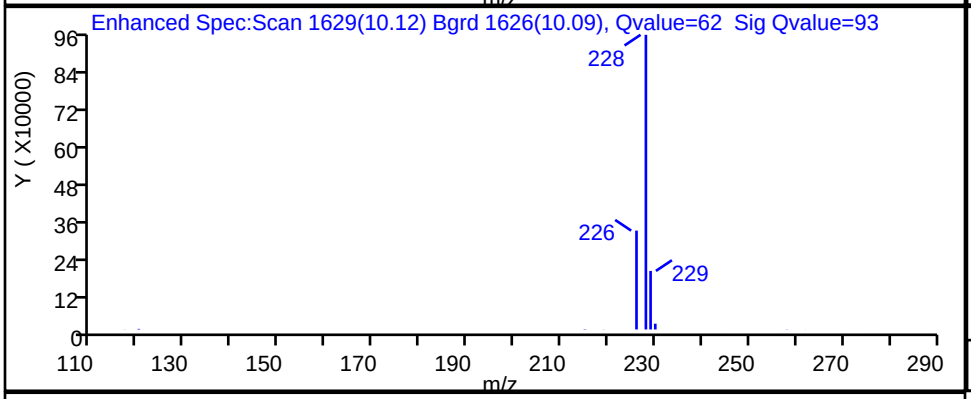
Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D

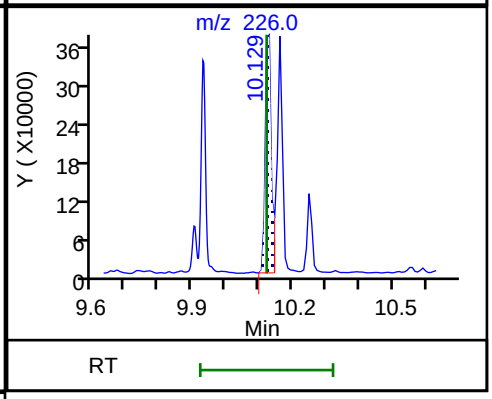
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

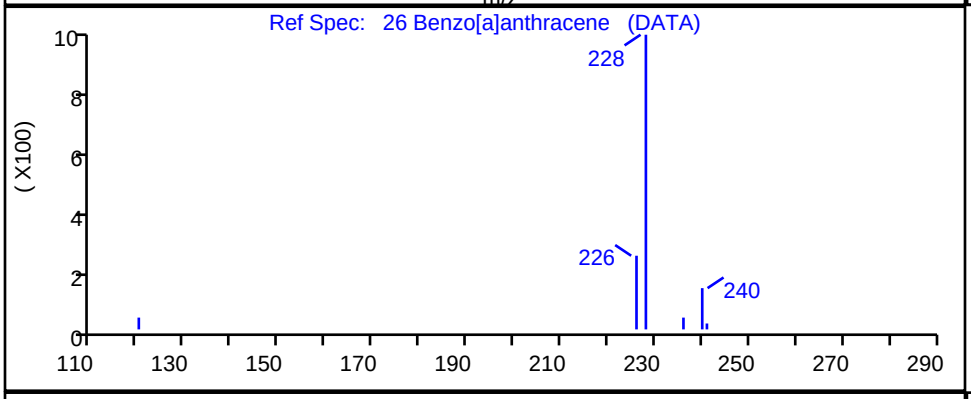
26 Benzo[a]anthracene, CAS: 56-55-3

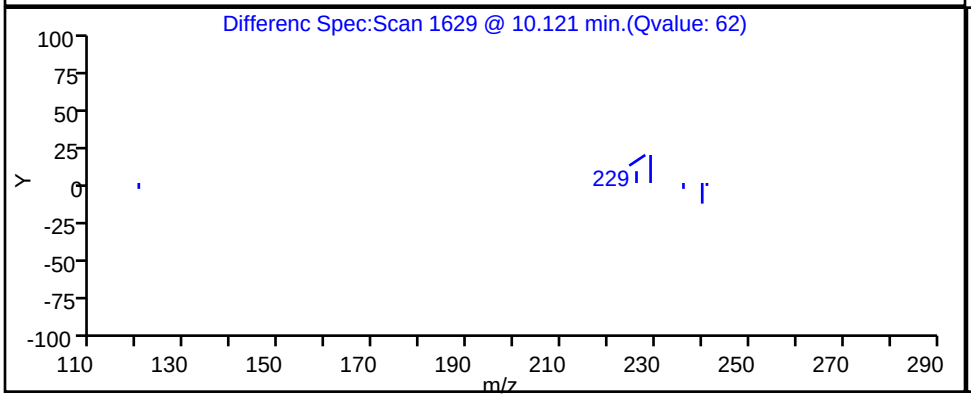


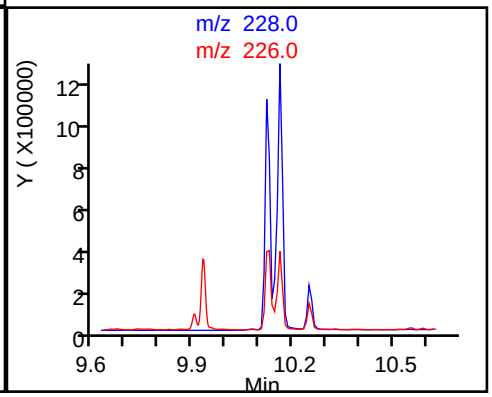












Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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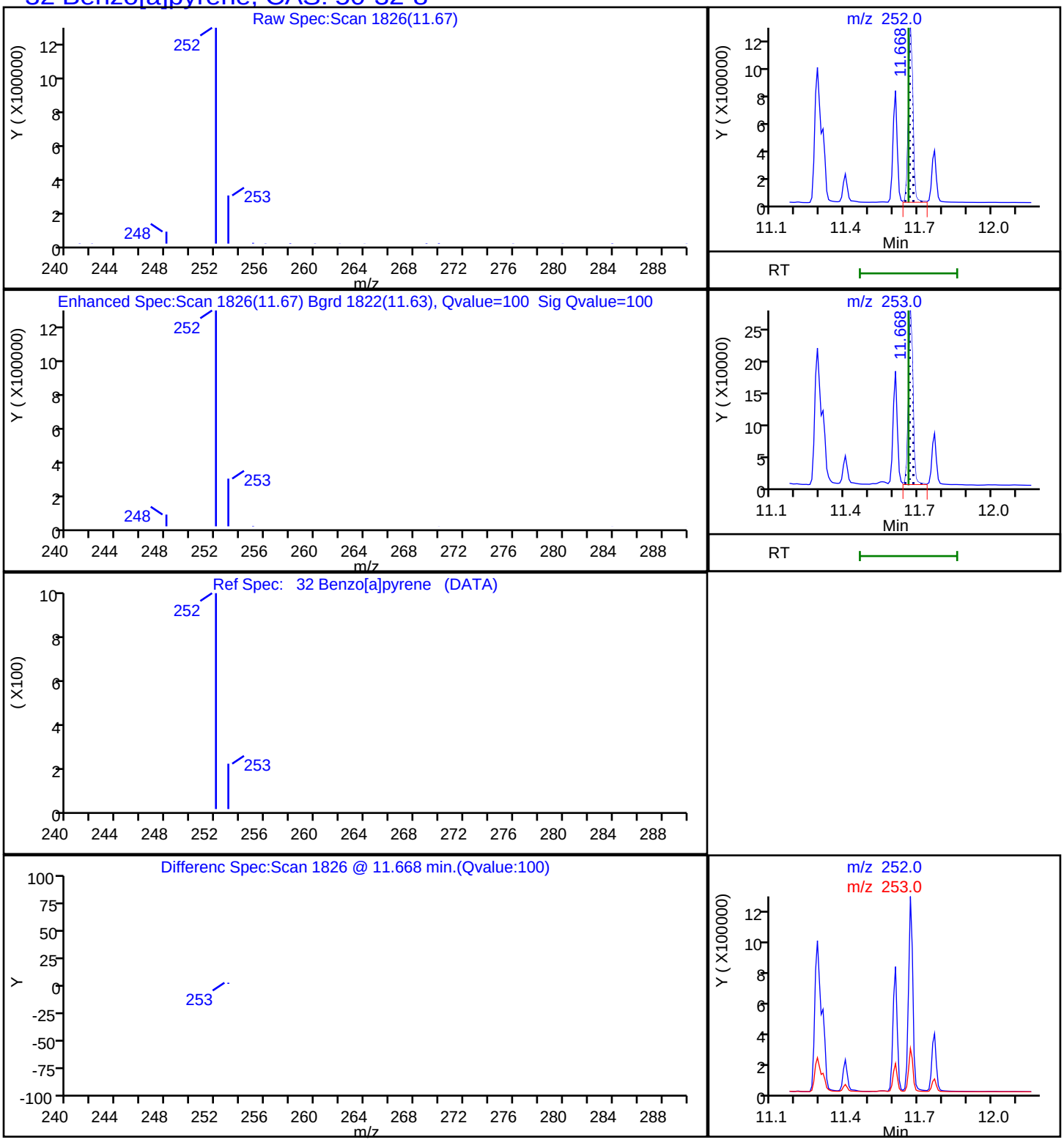
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

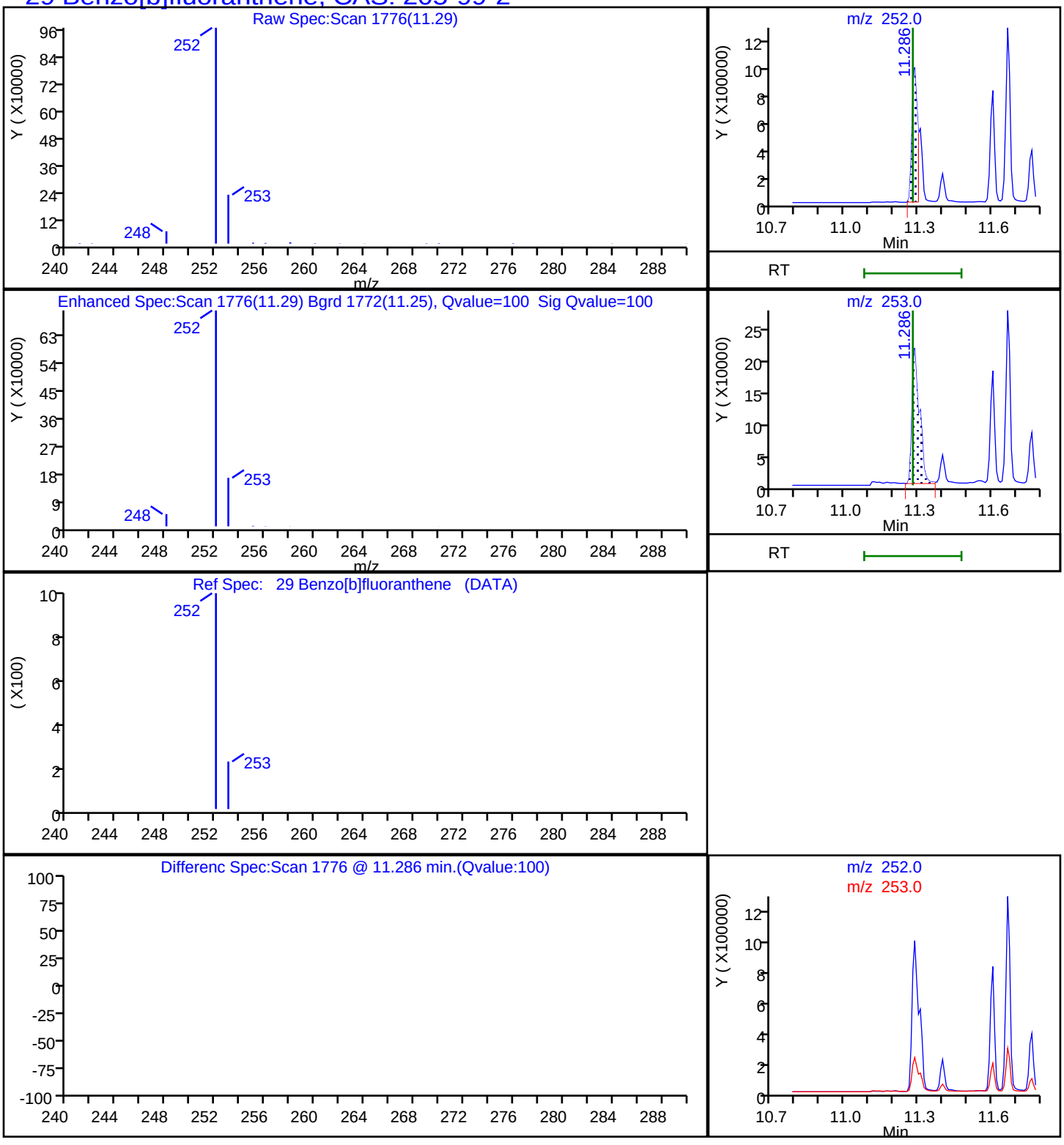


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



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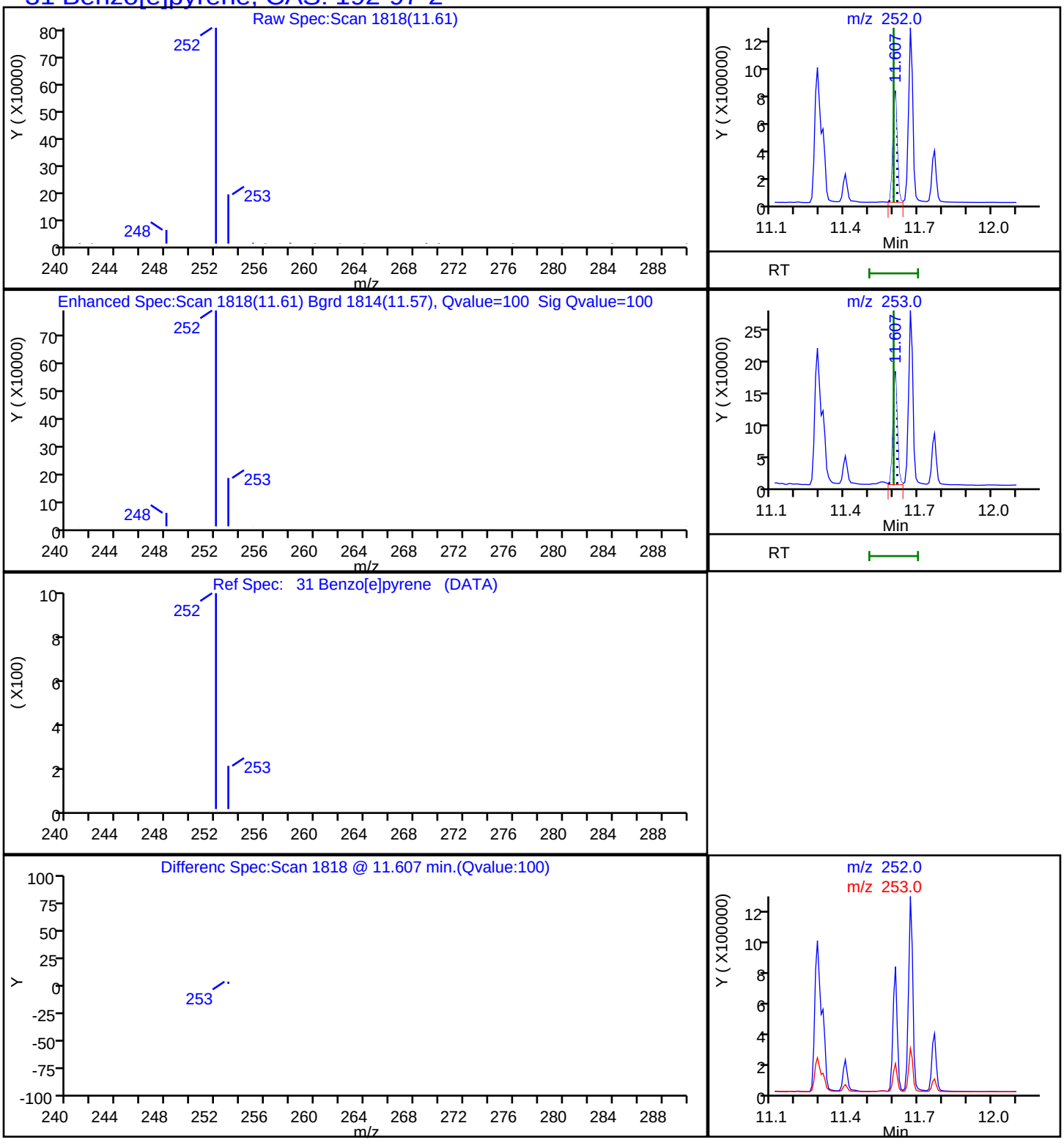
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D		
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23
Client ID:	22T-SG-06_20190718		
Operator ID:	11211	ALS Bottle#:	16 Worklist Smp#: 24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

31 Benzo[e]pyrene, CAS: 192-97-2

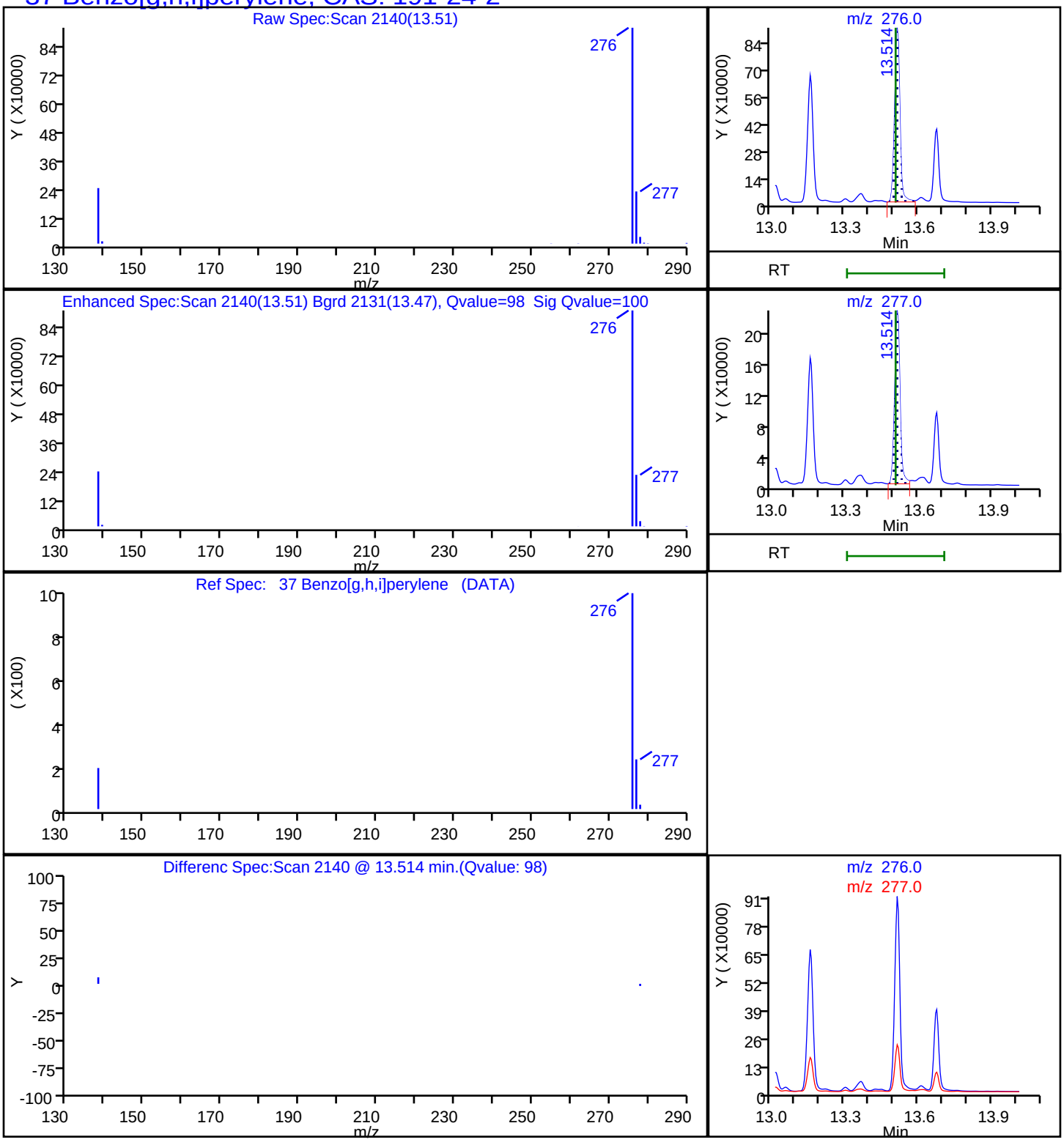


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



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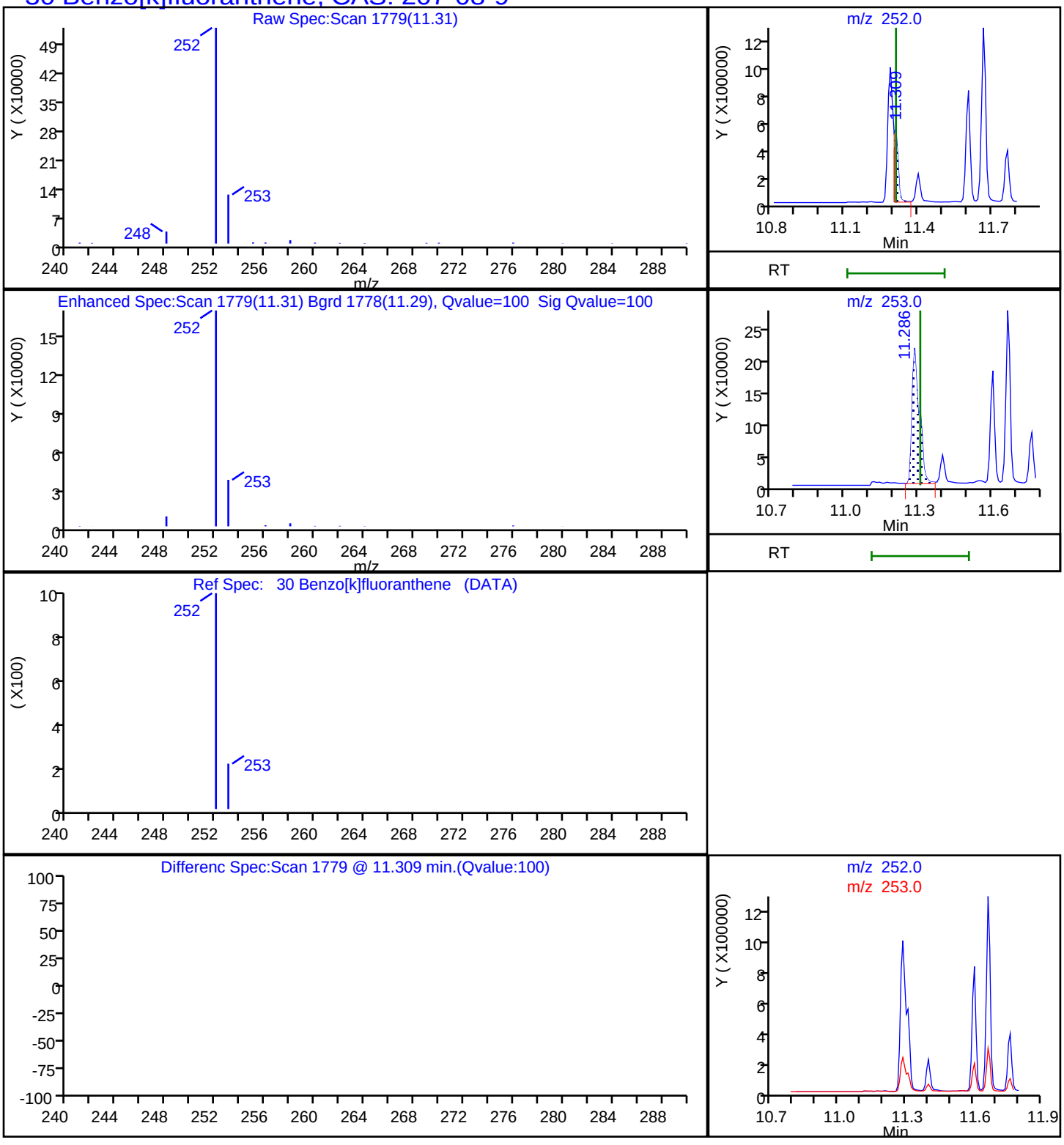
Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
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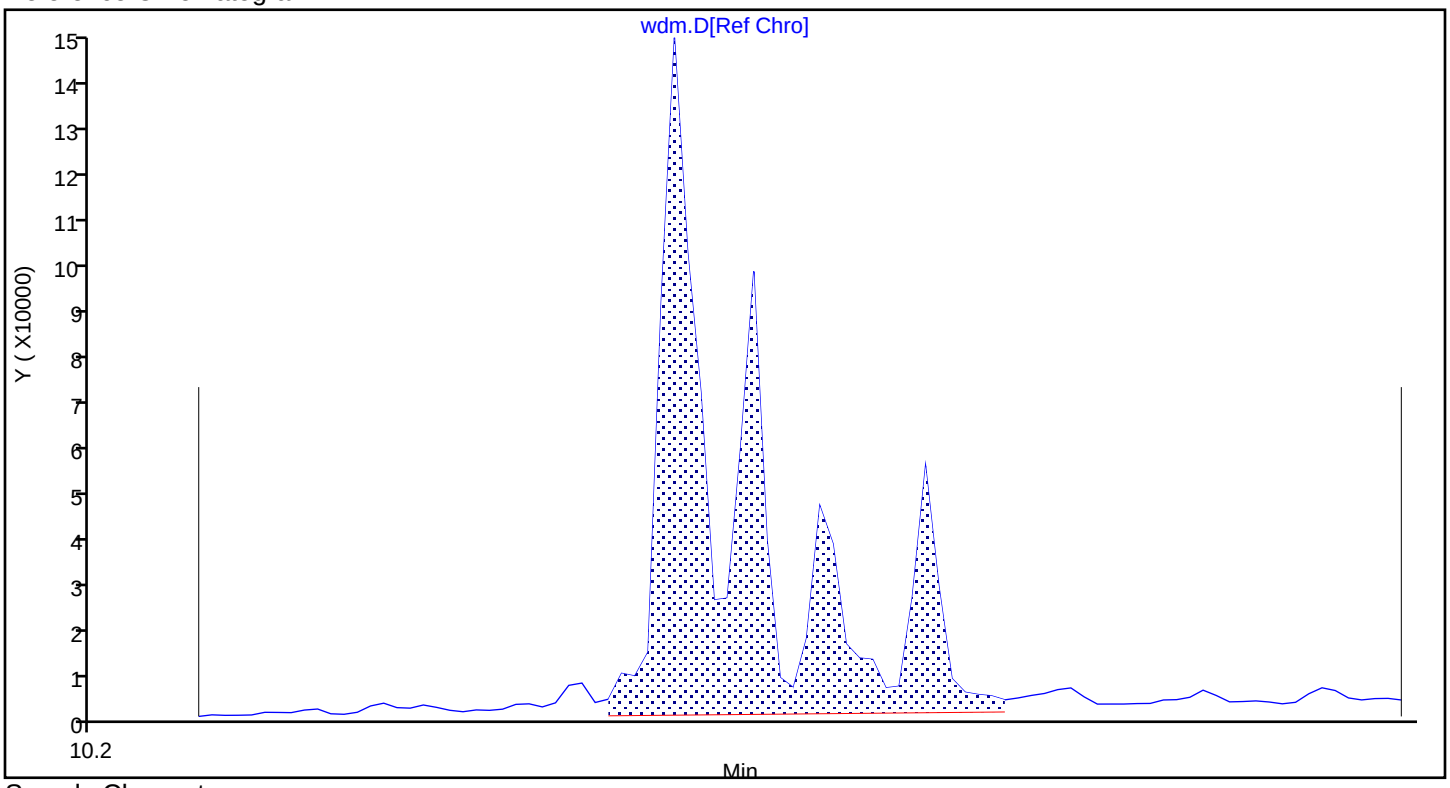
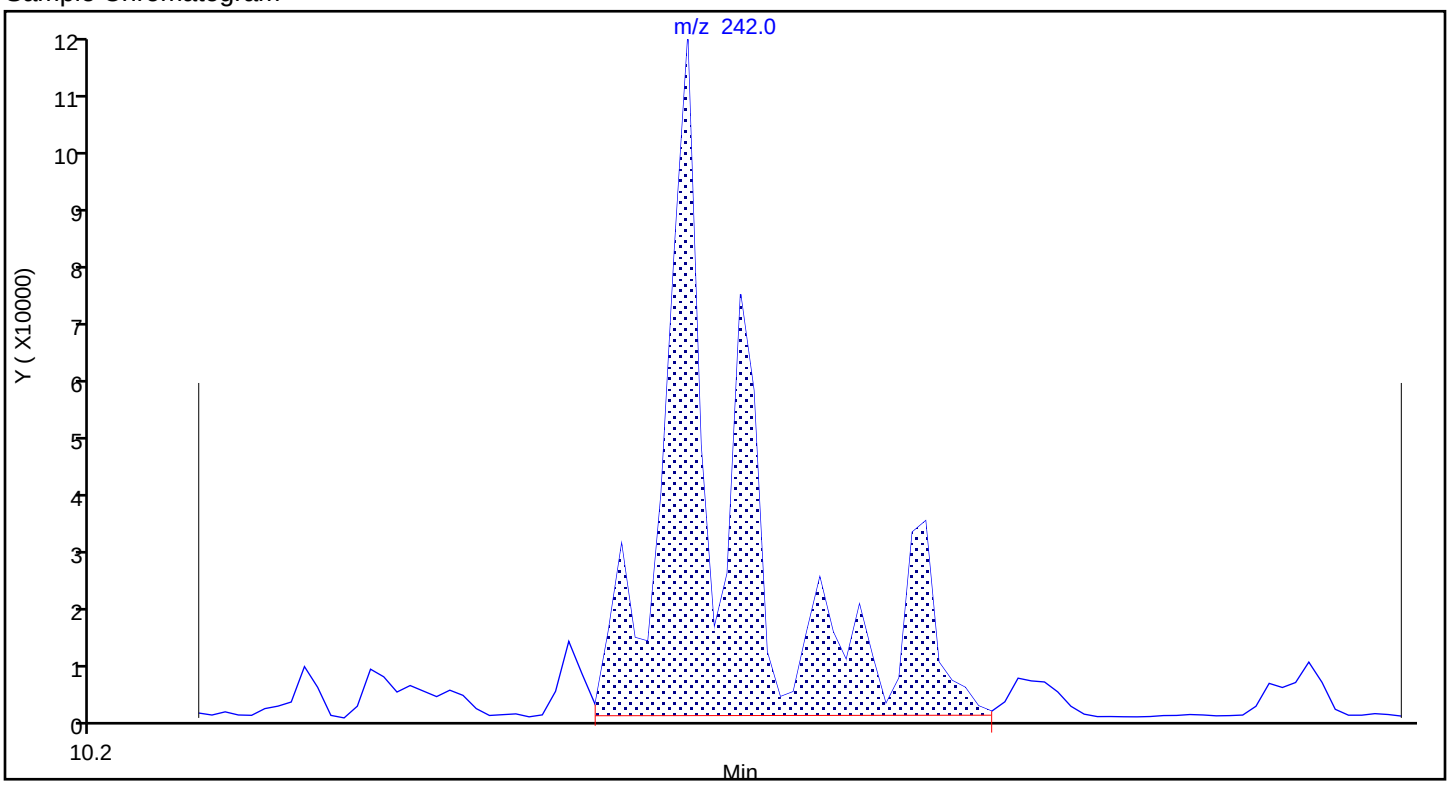
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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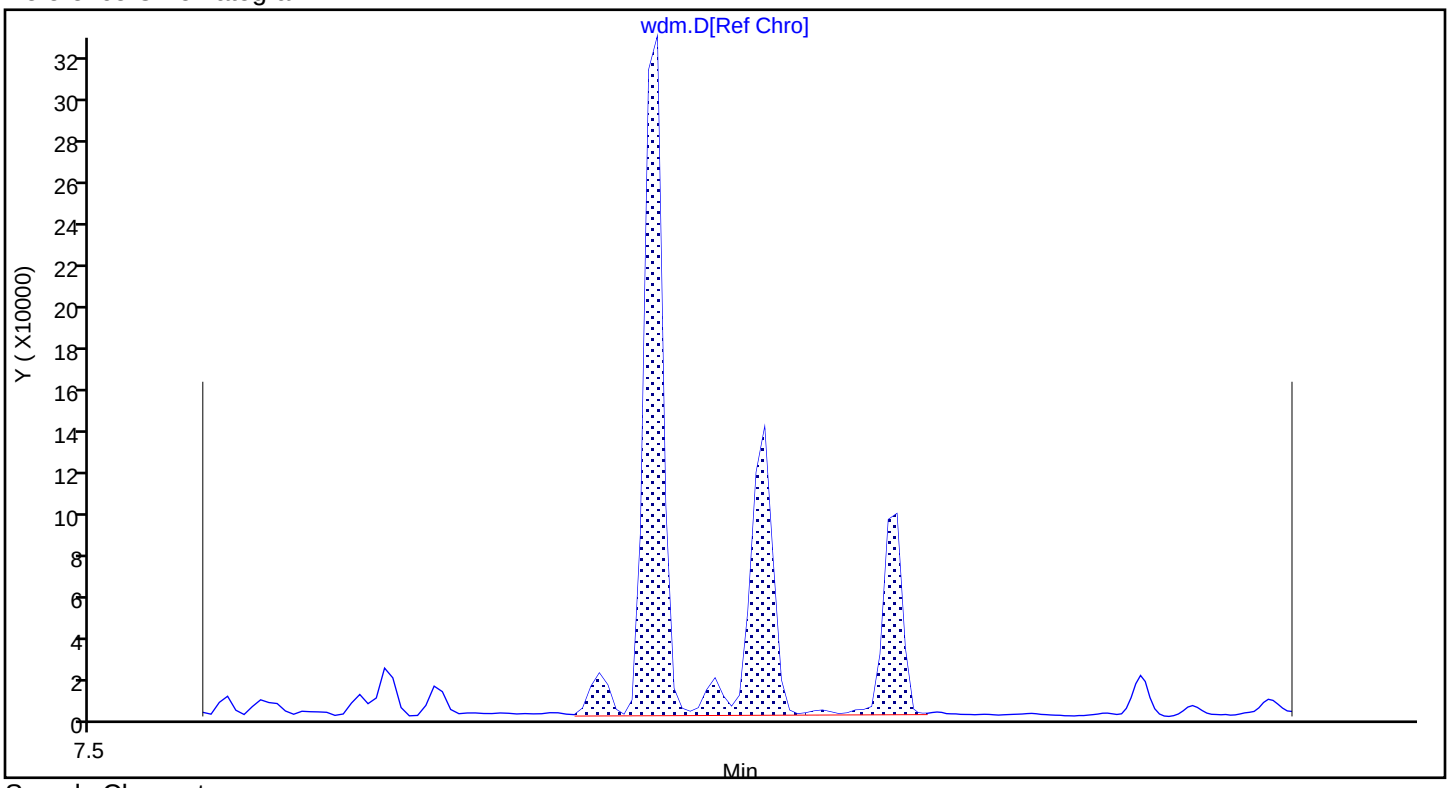
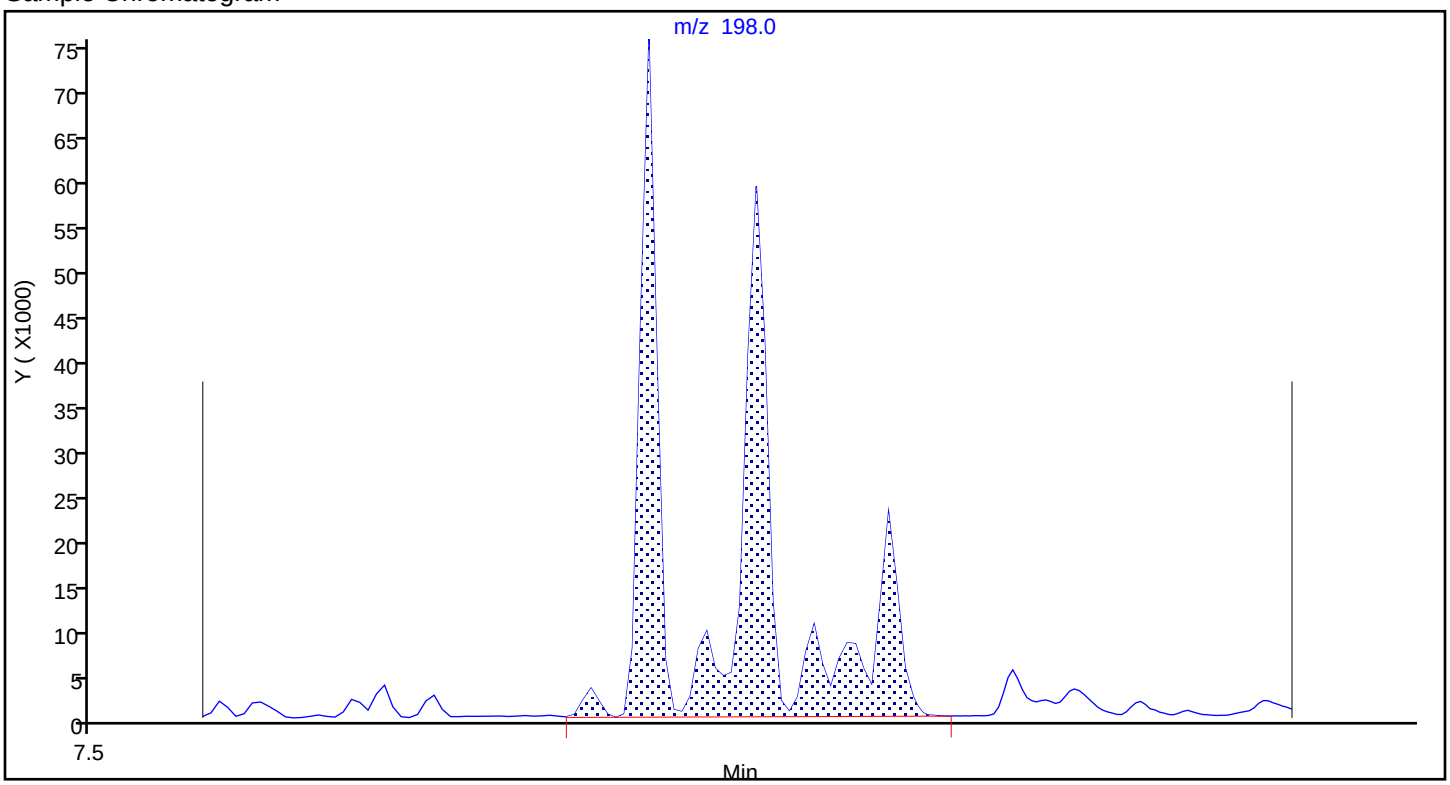
A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
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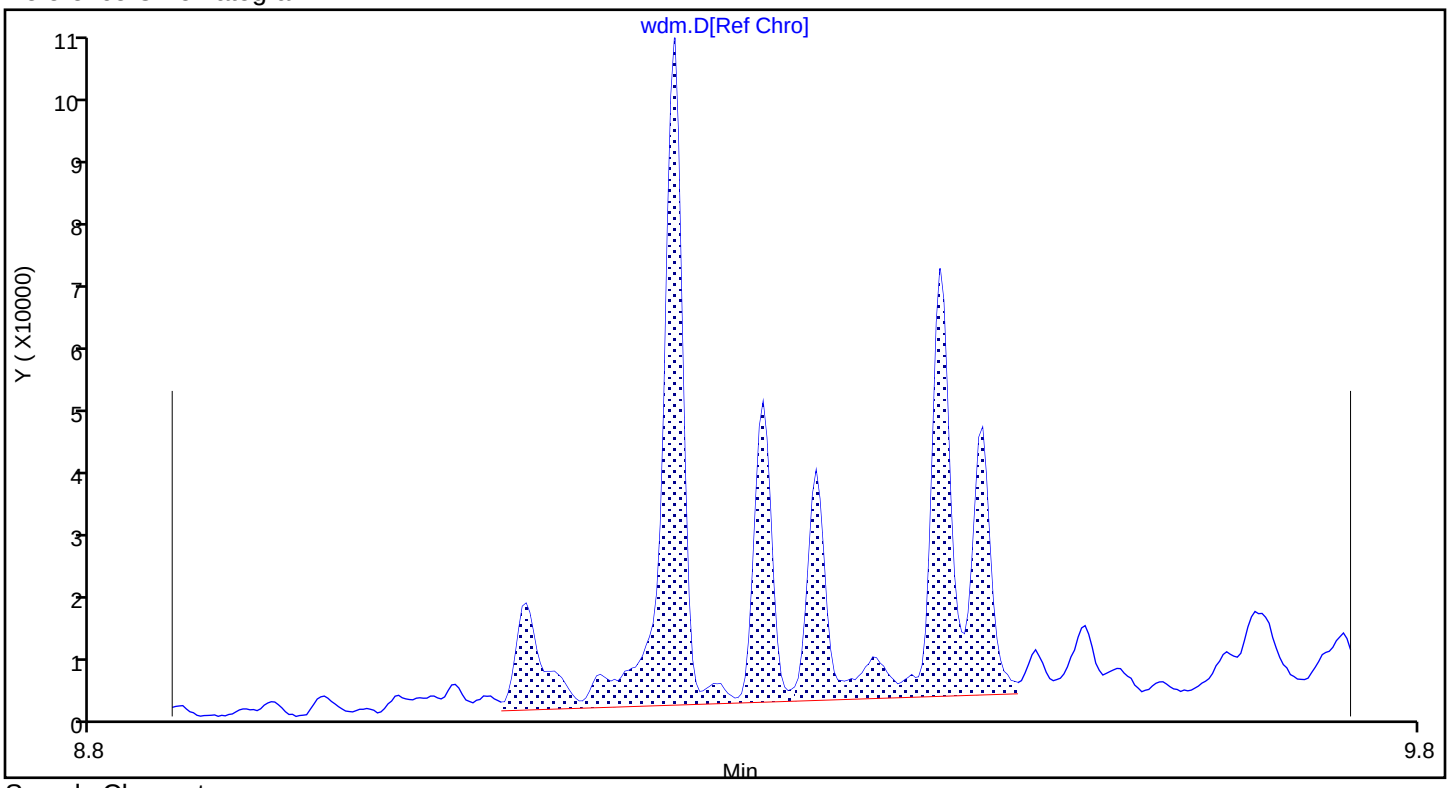
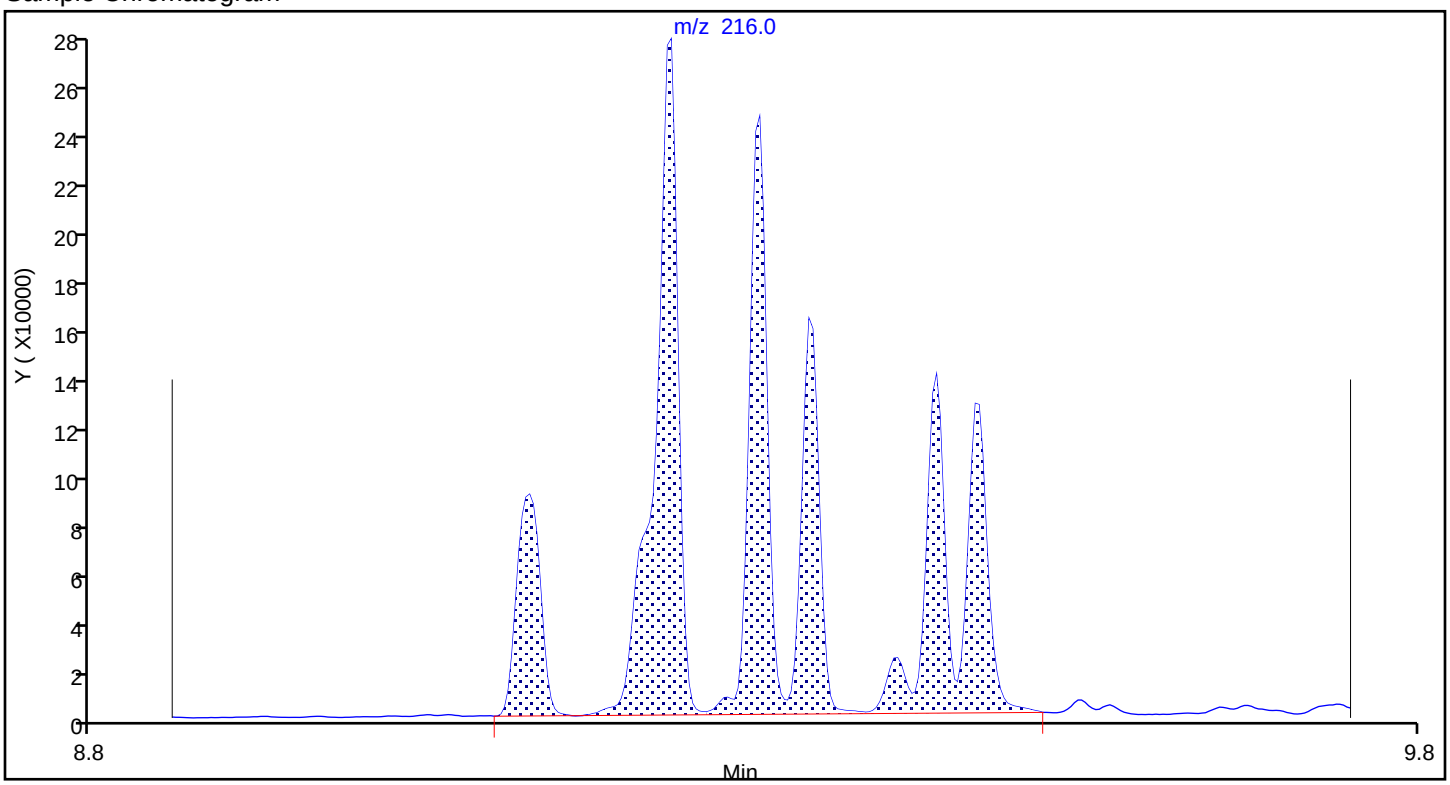
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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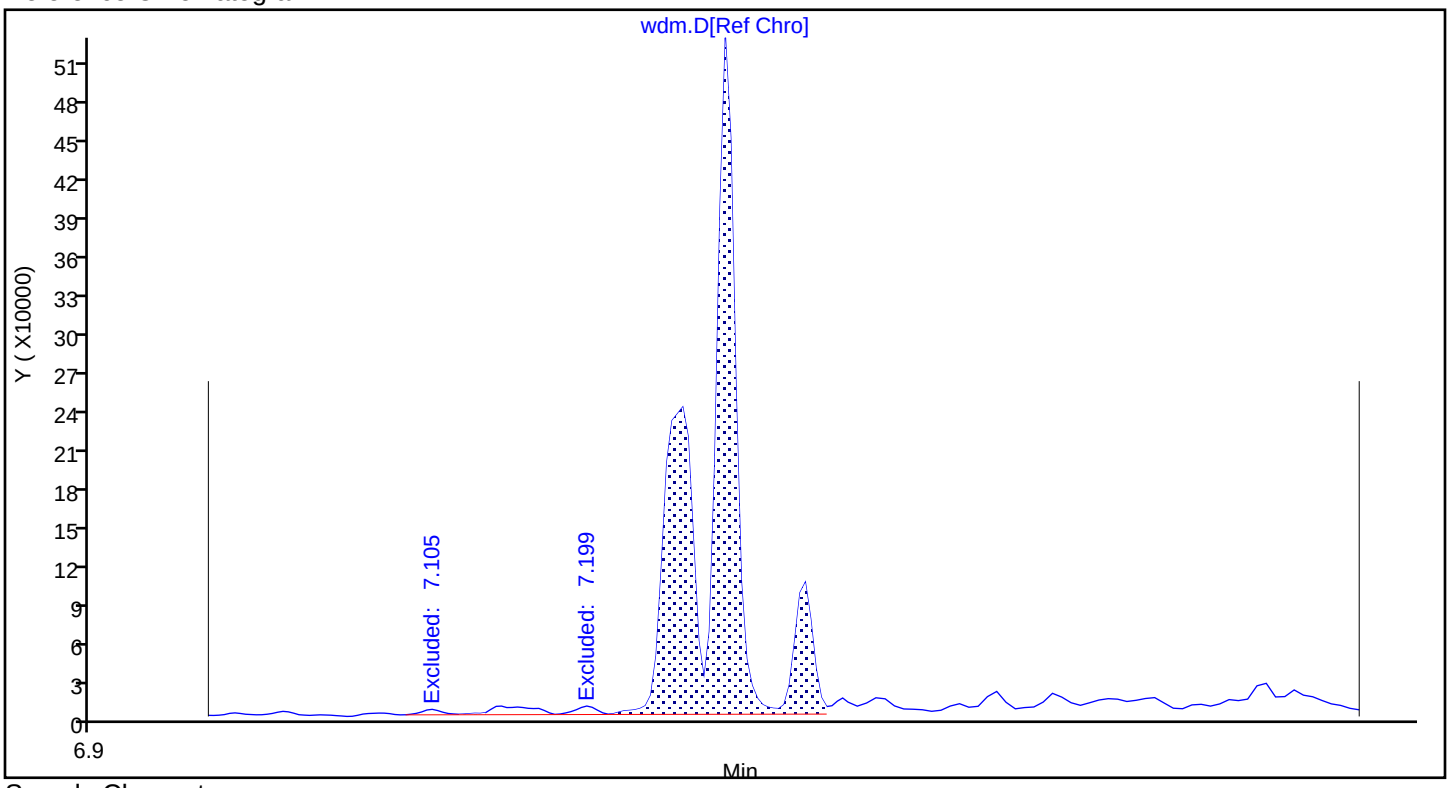
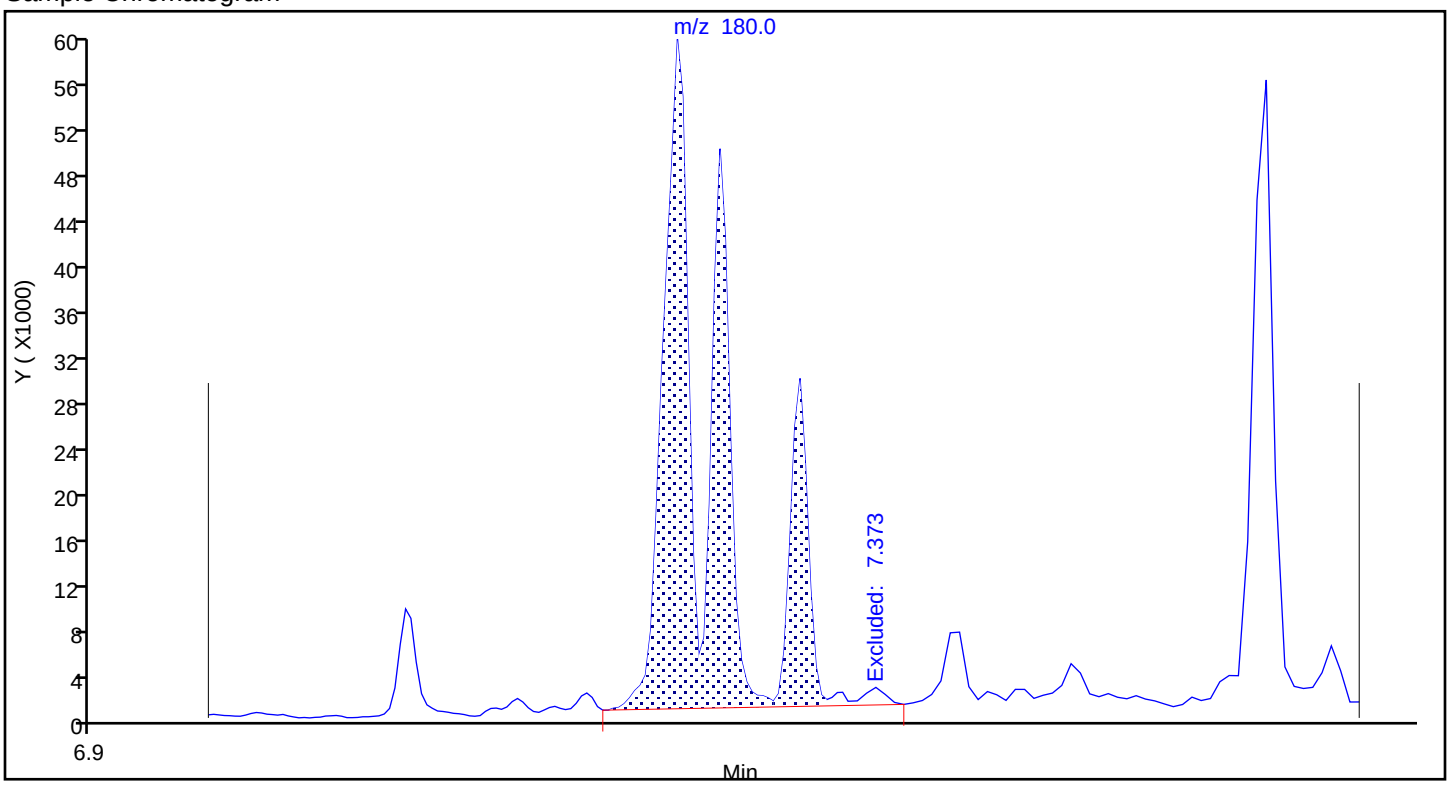
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



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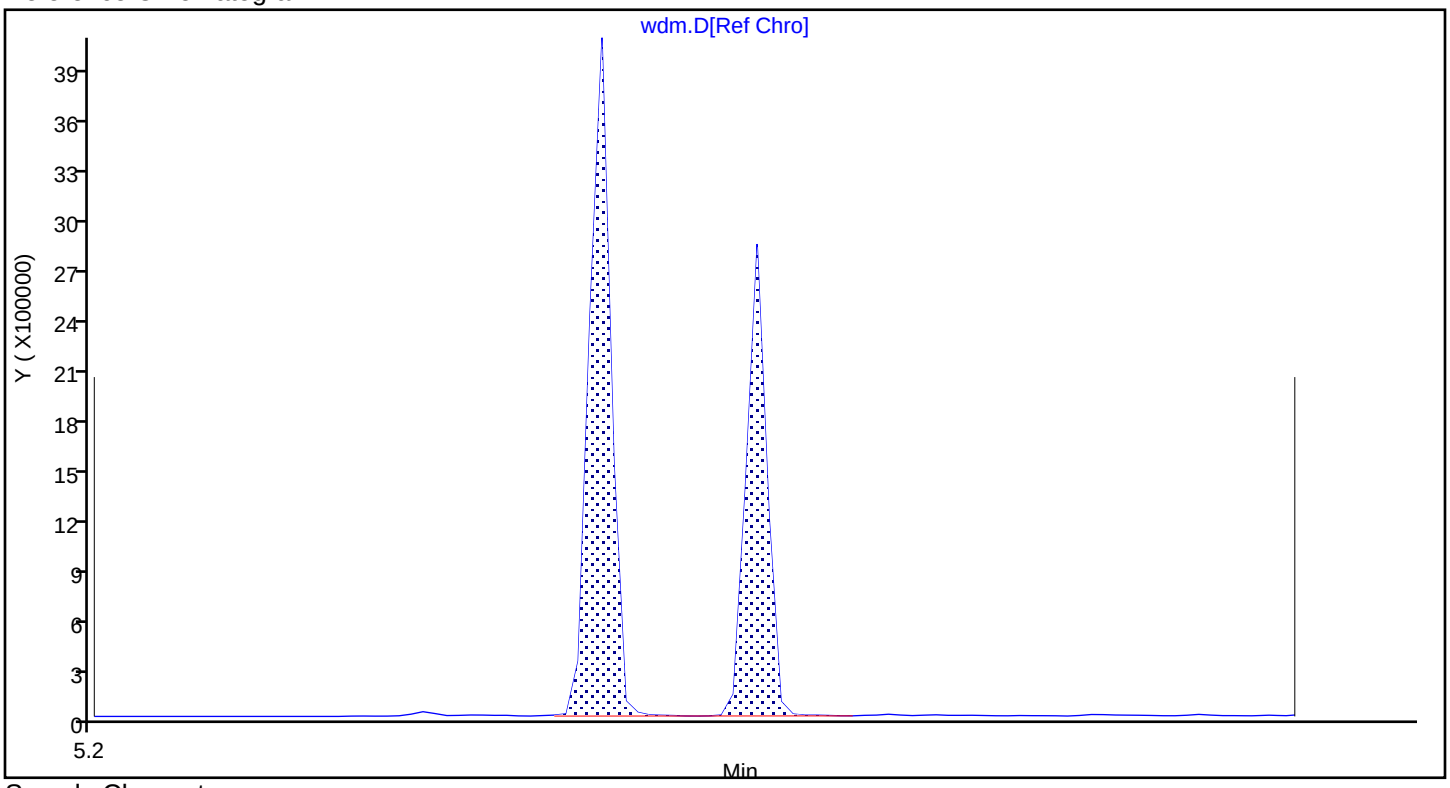
Eurofins TestAmerica, Knoxville

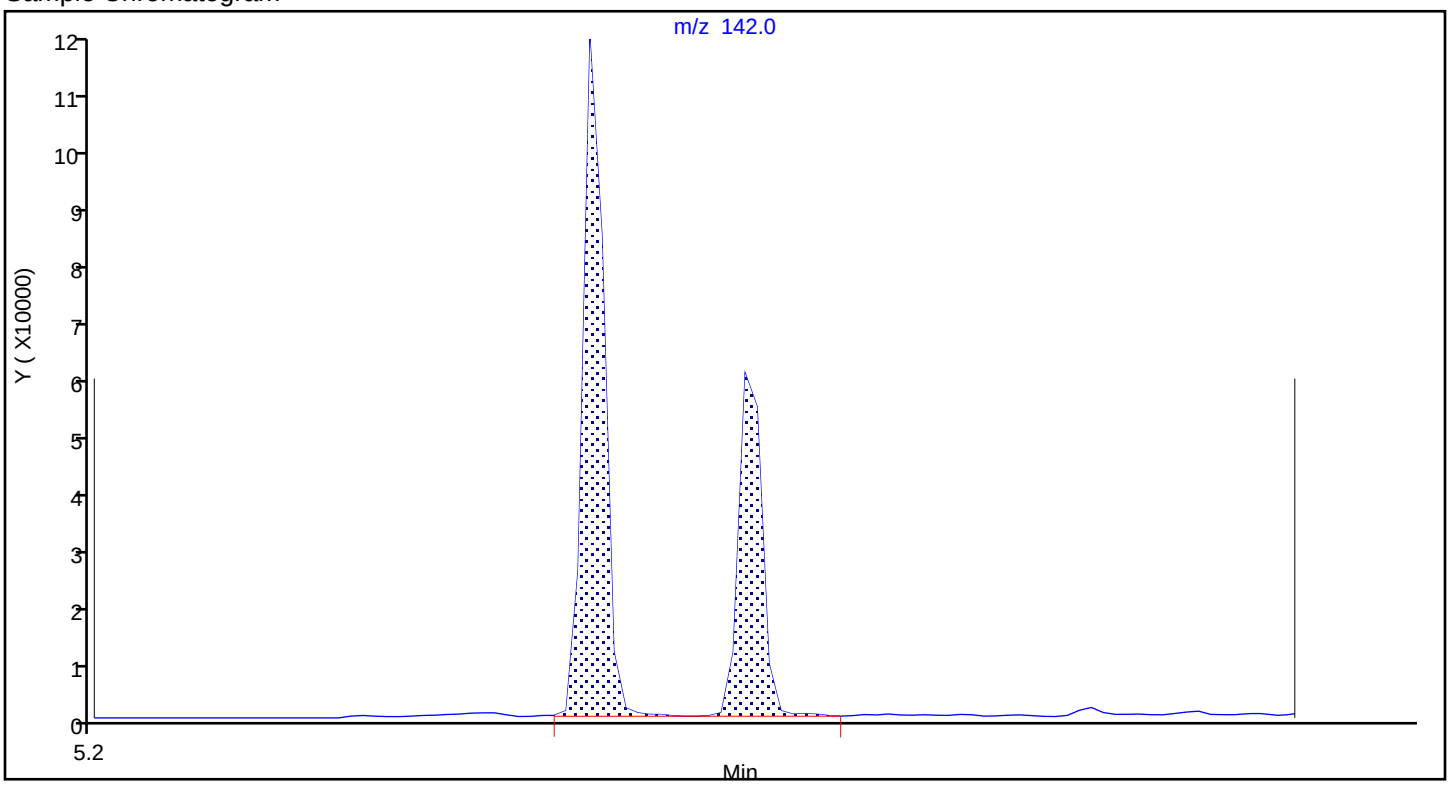
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



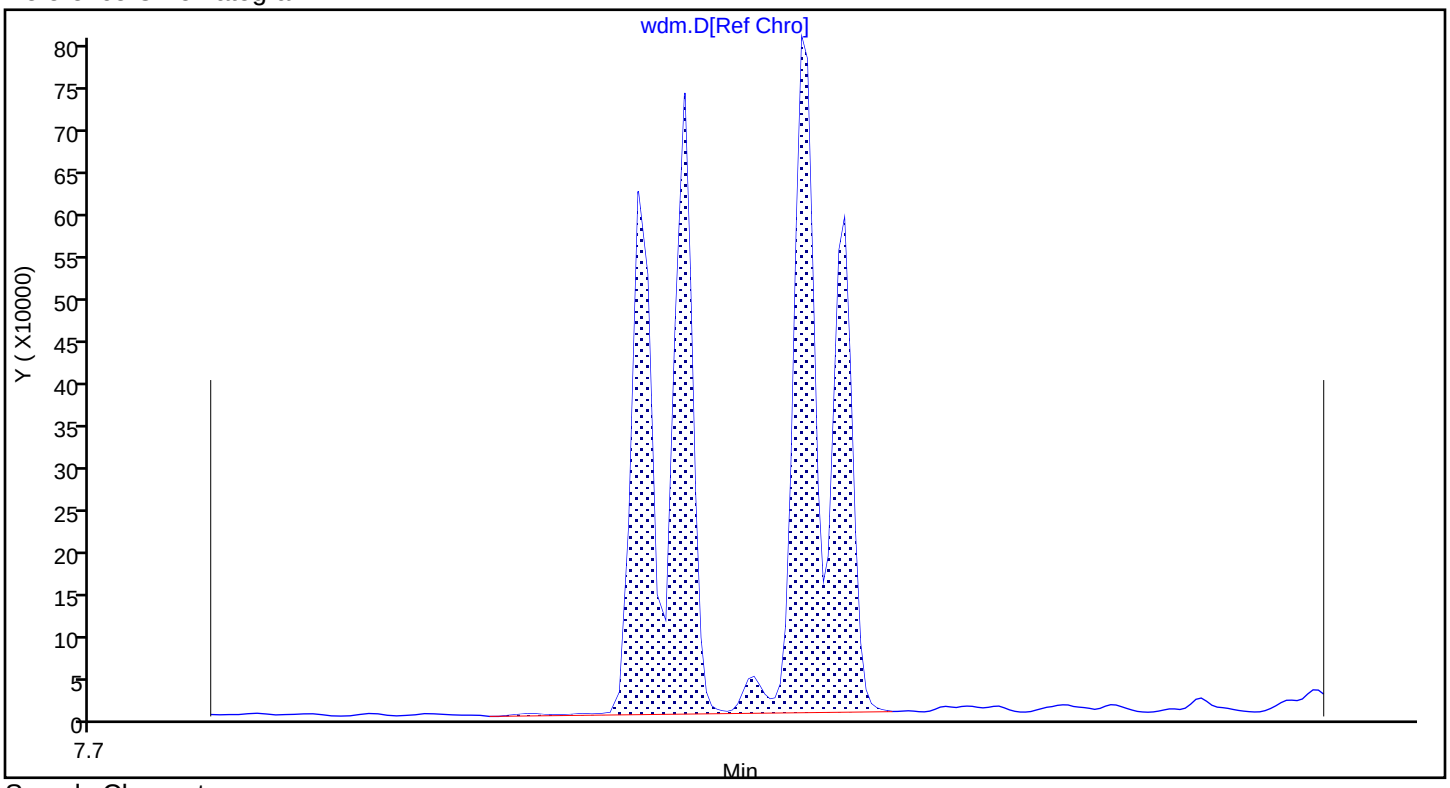
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

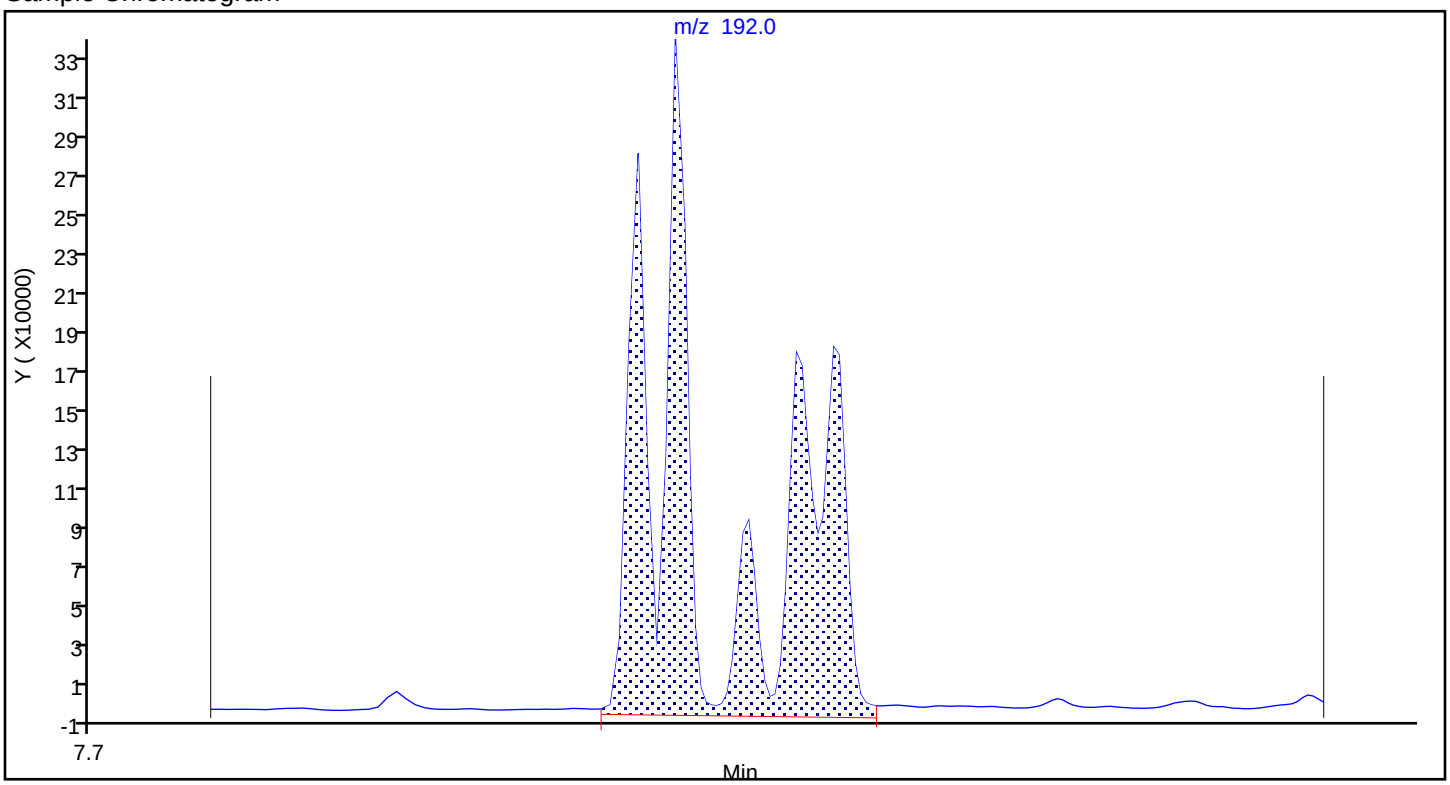
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



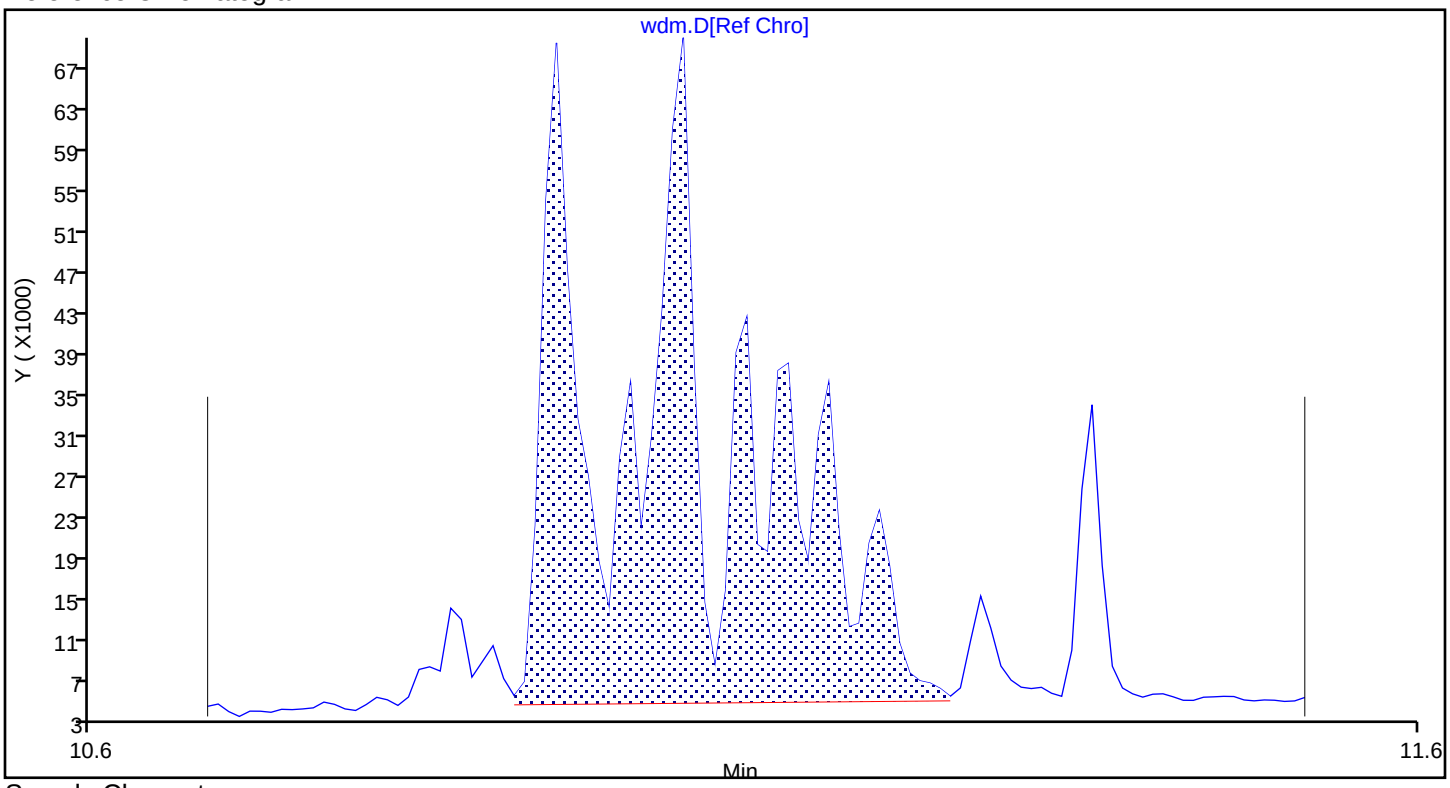
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

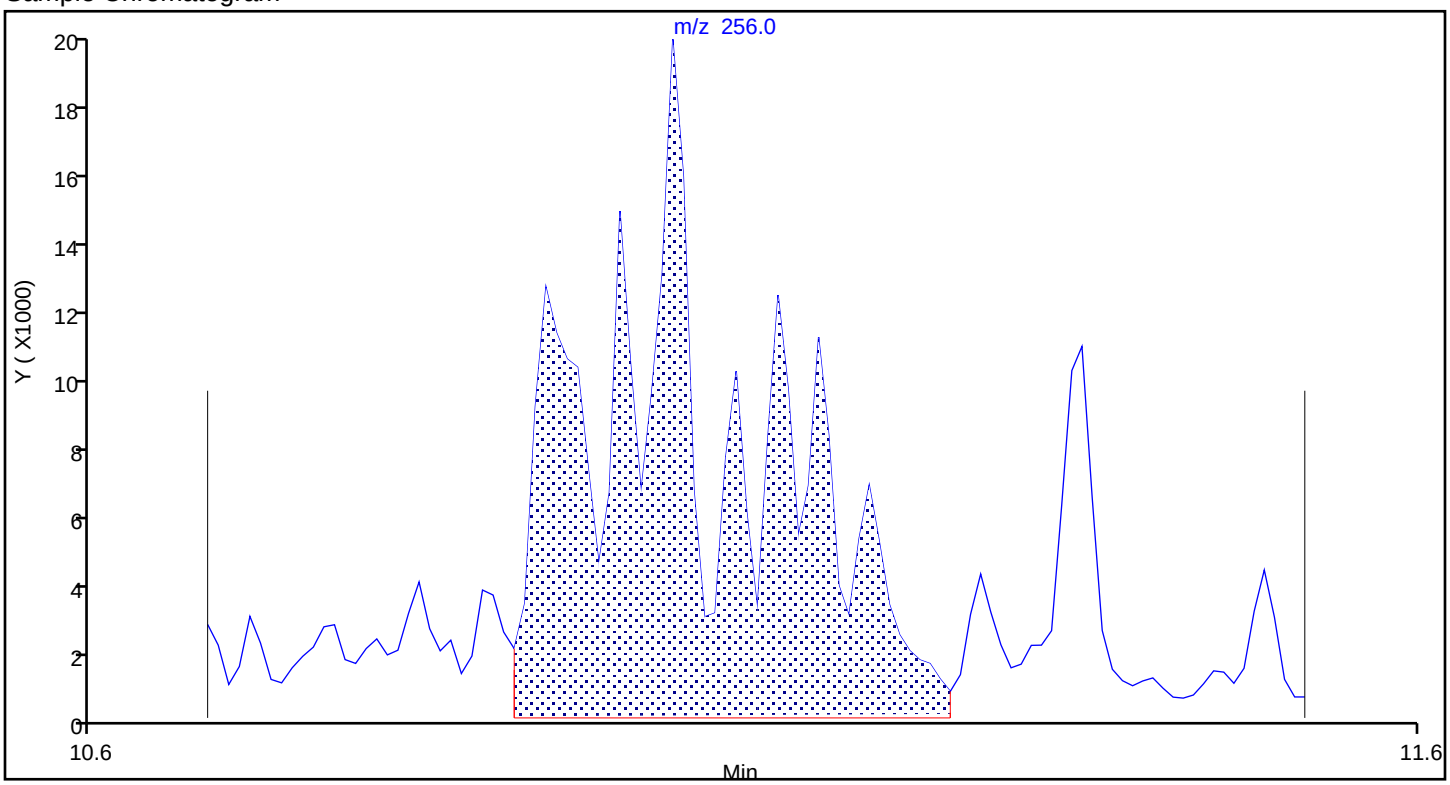
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



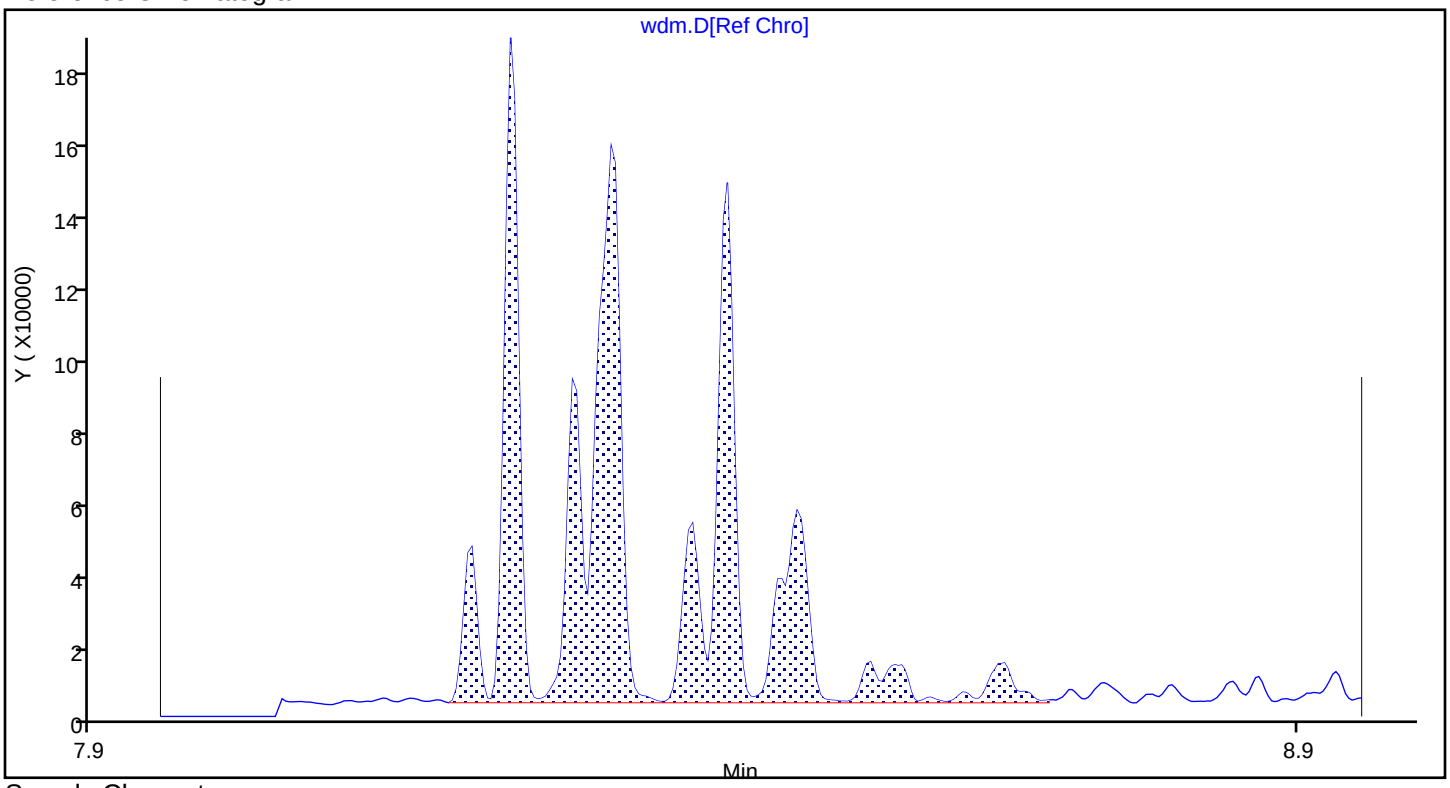
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

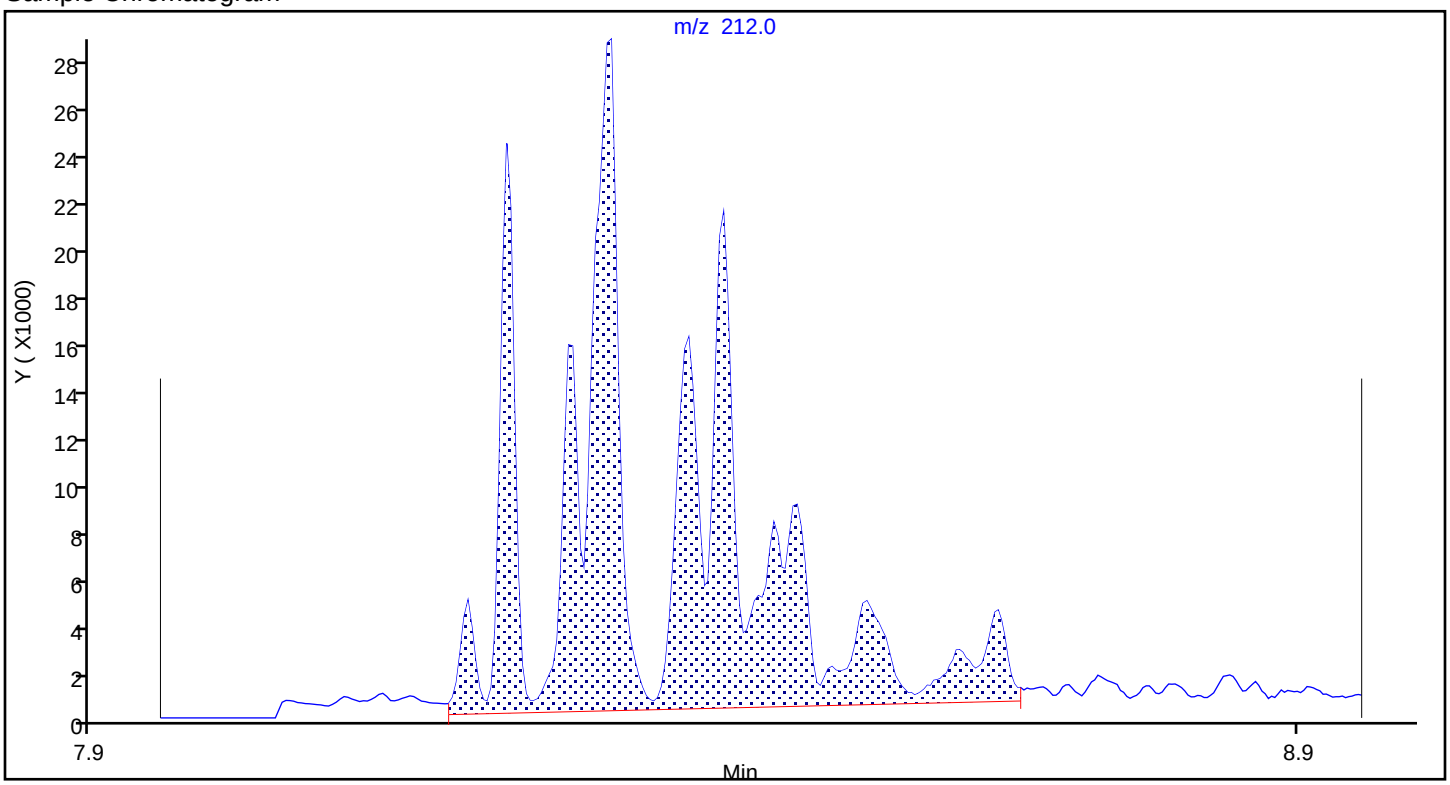
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



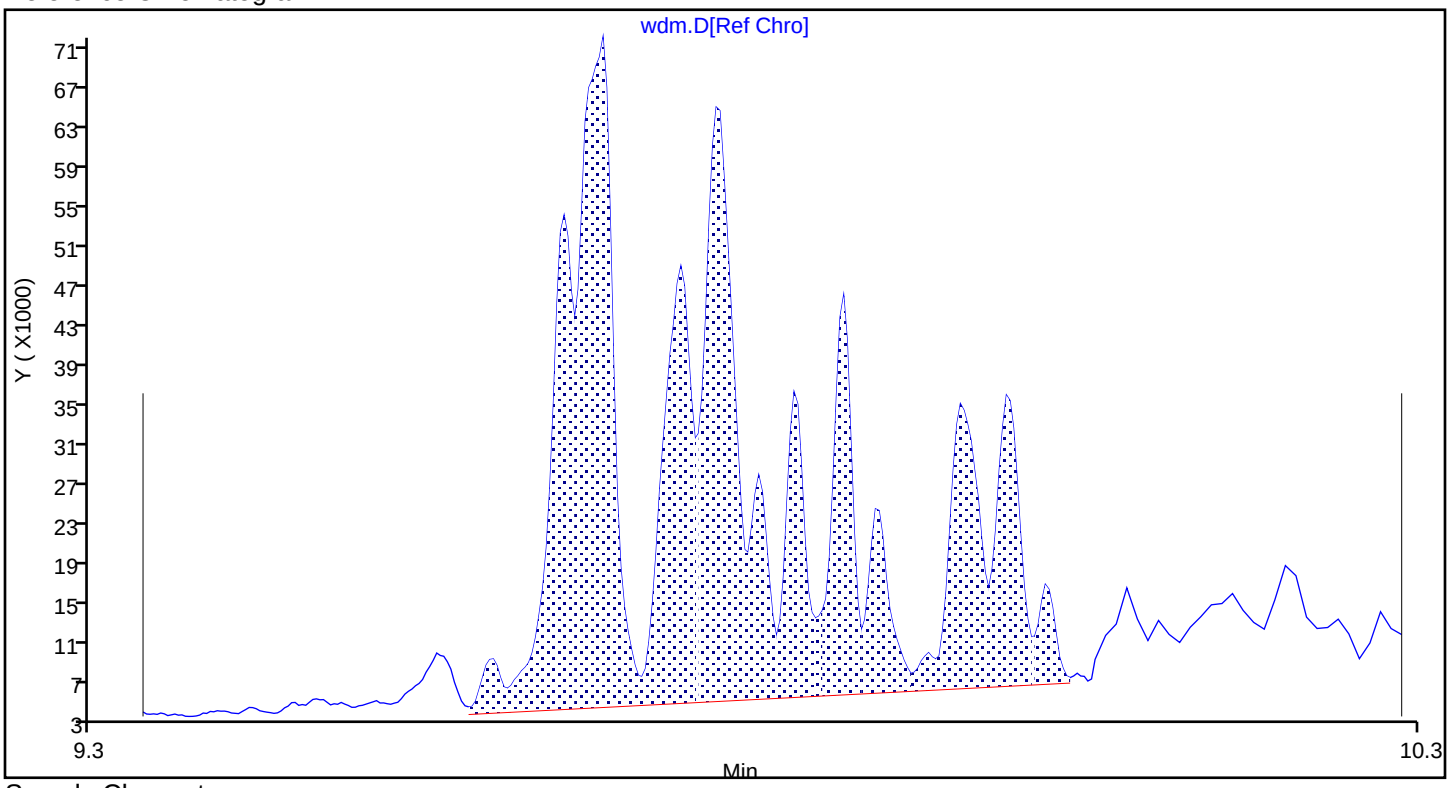
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

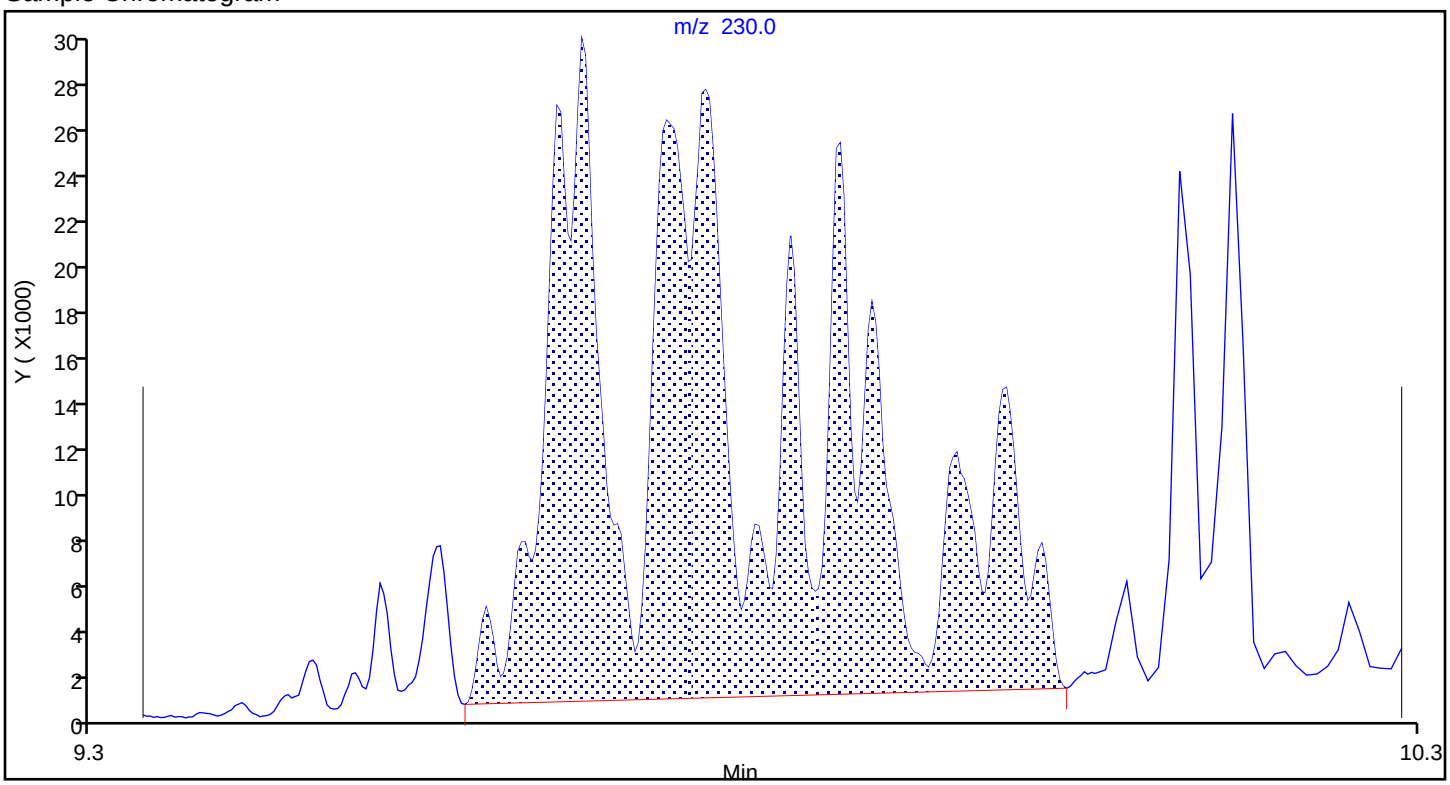
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



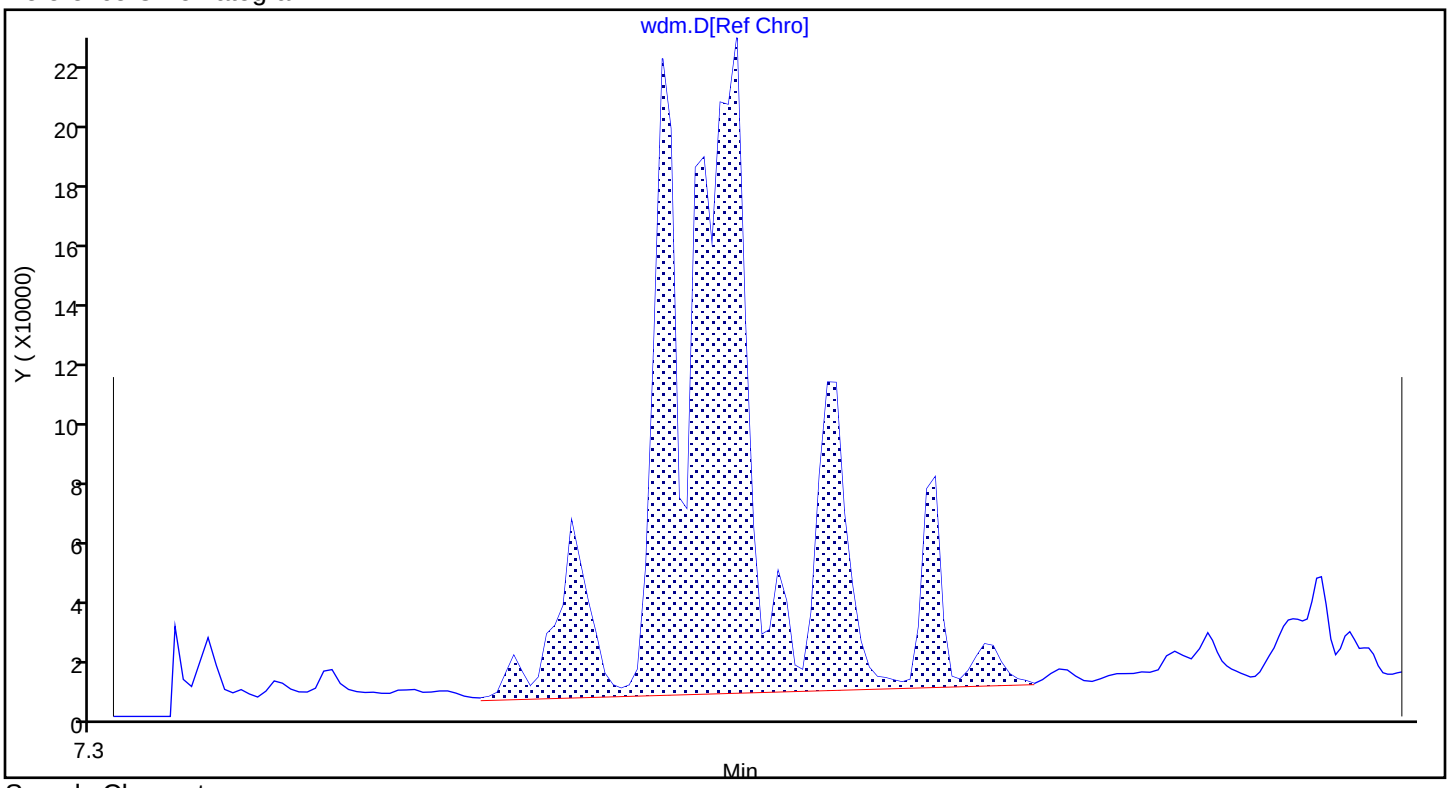
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

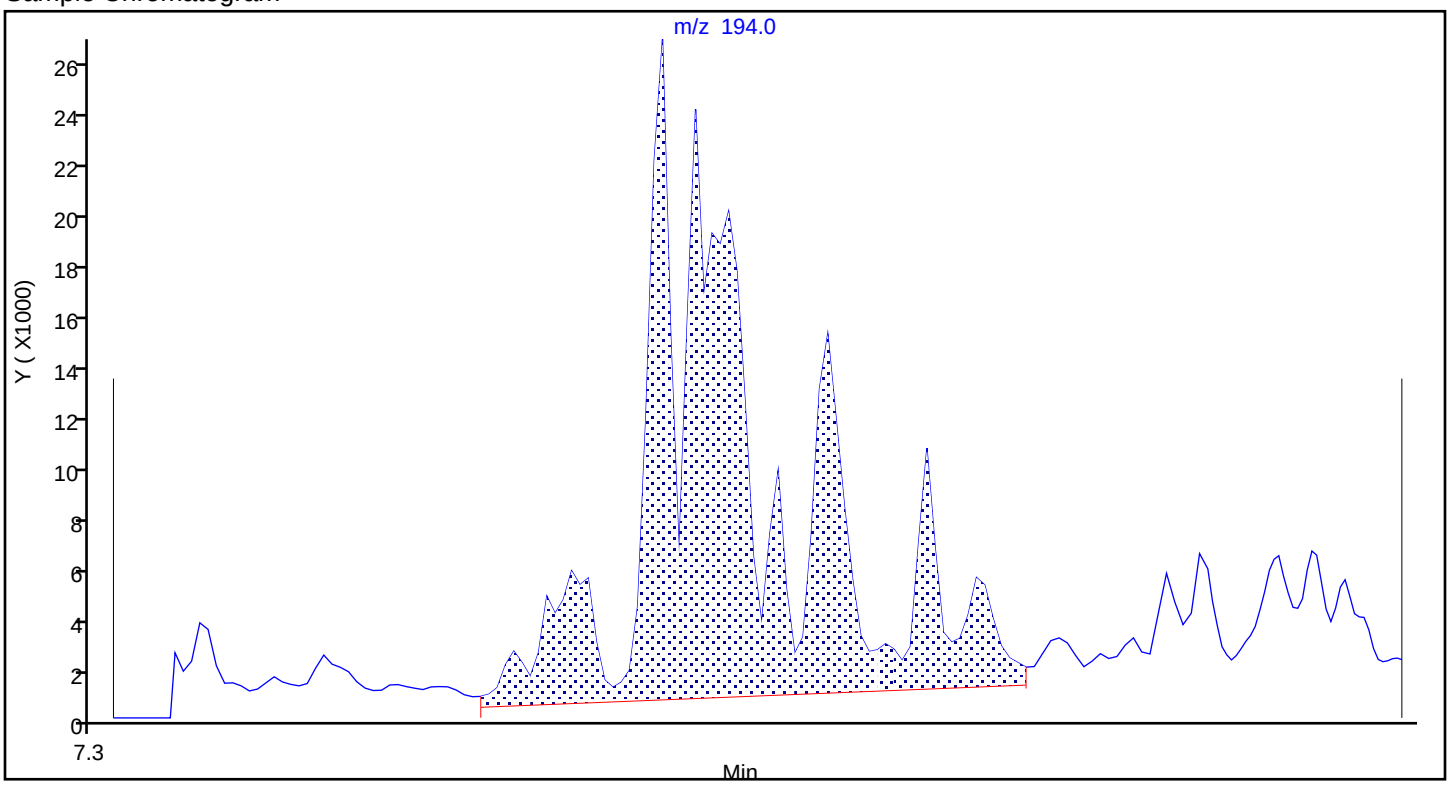
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



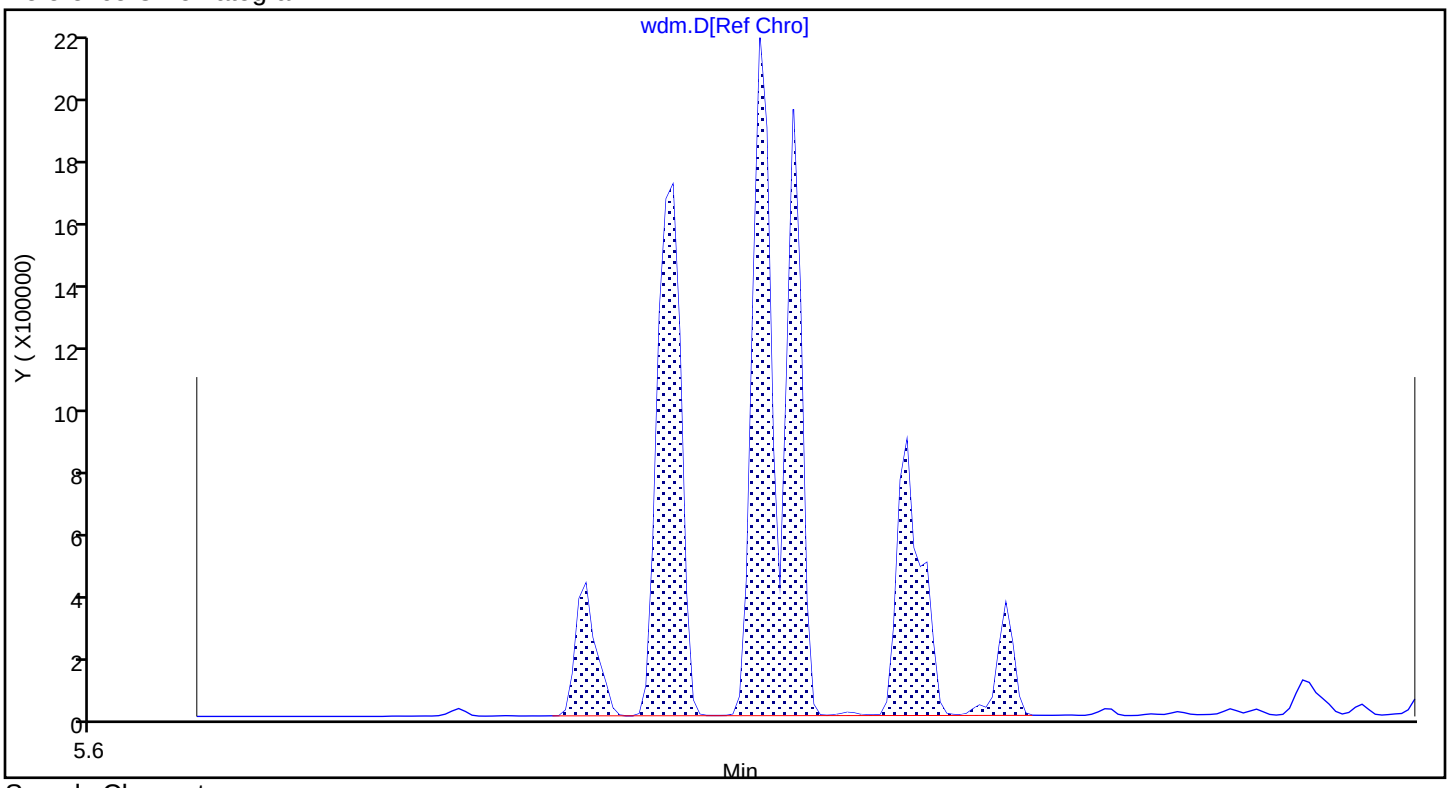
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

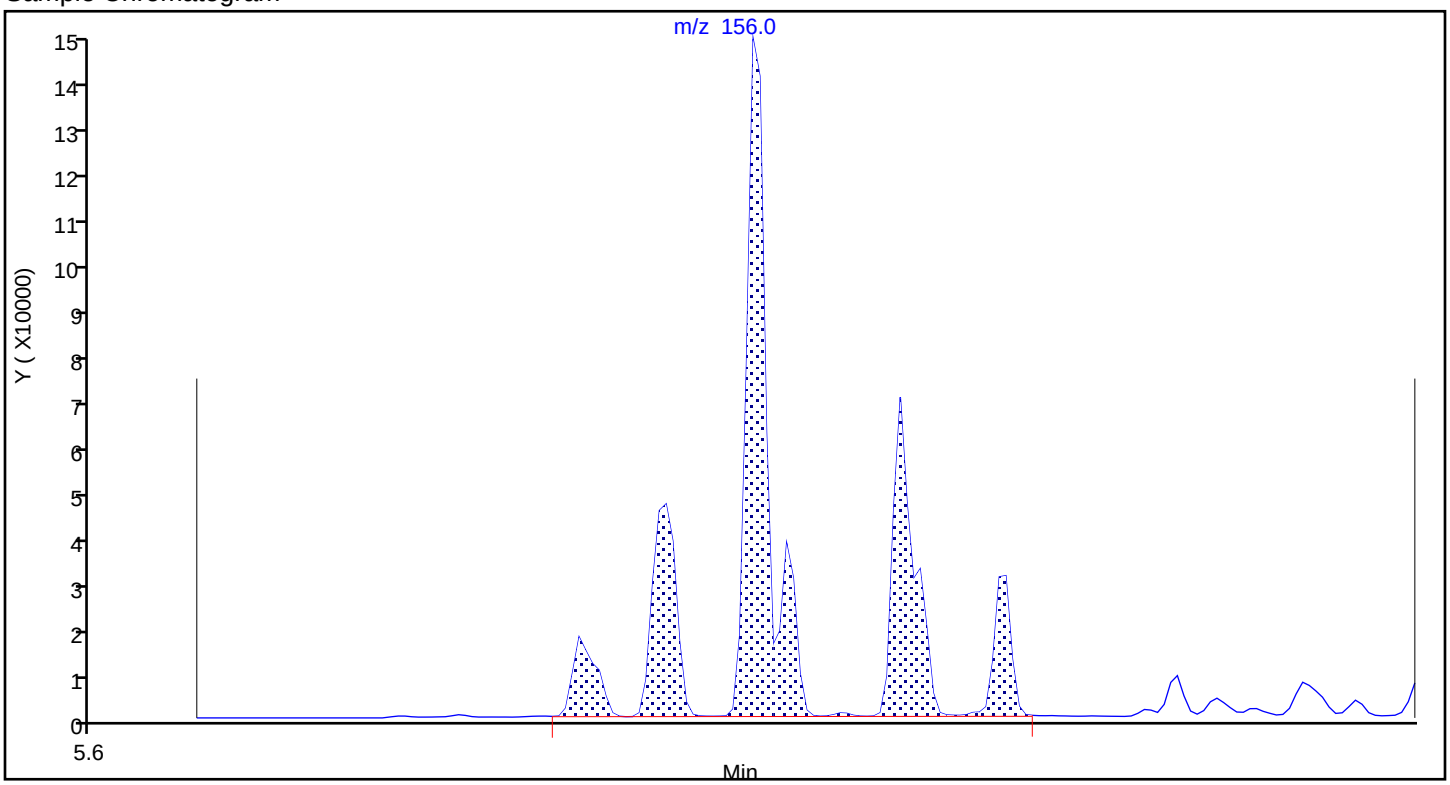
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



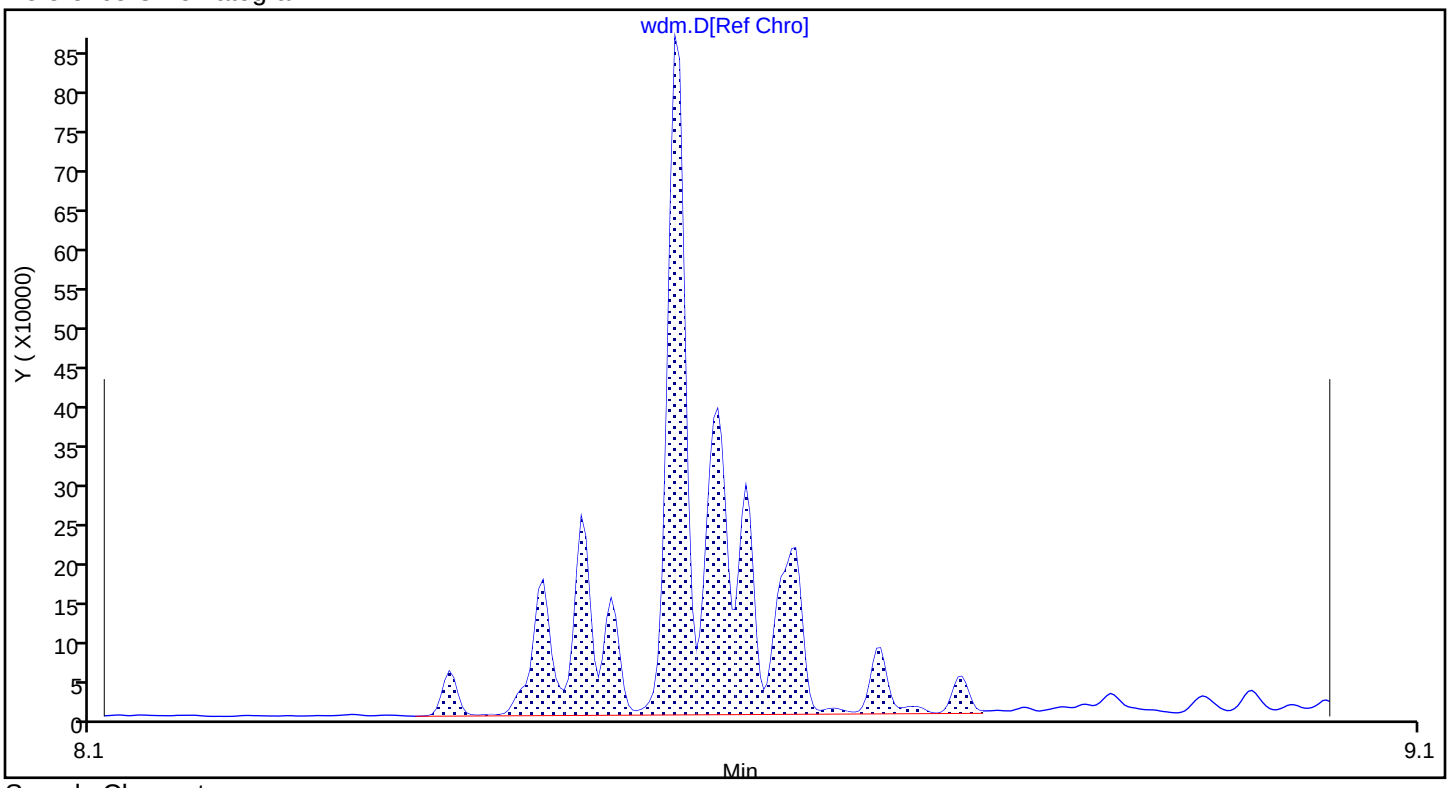
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

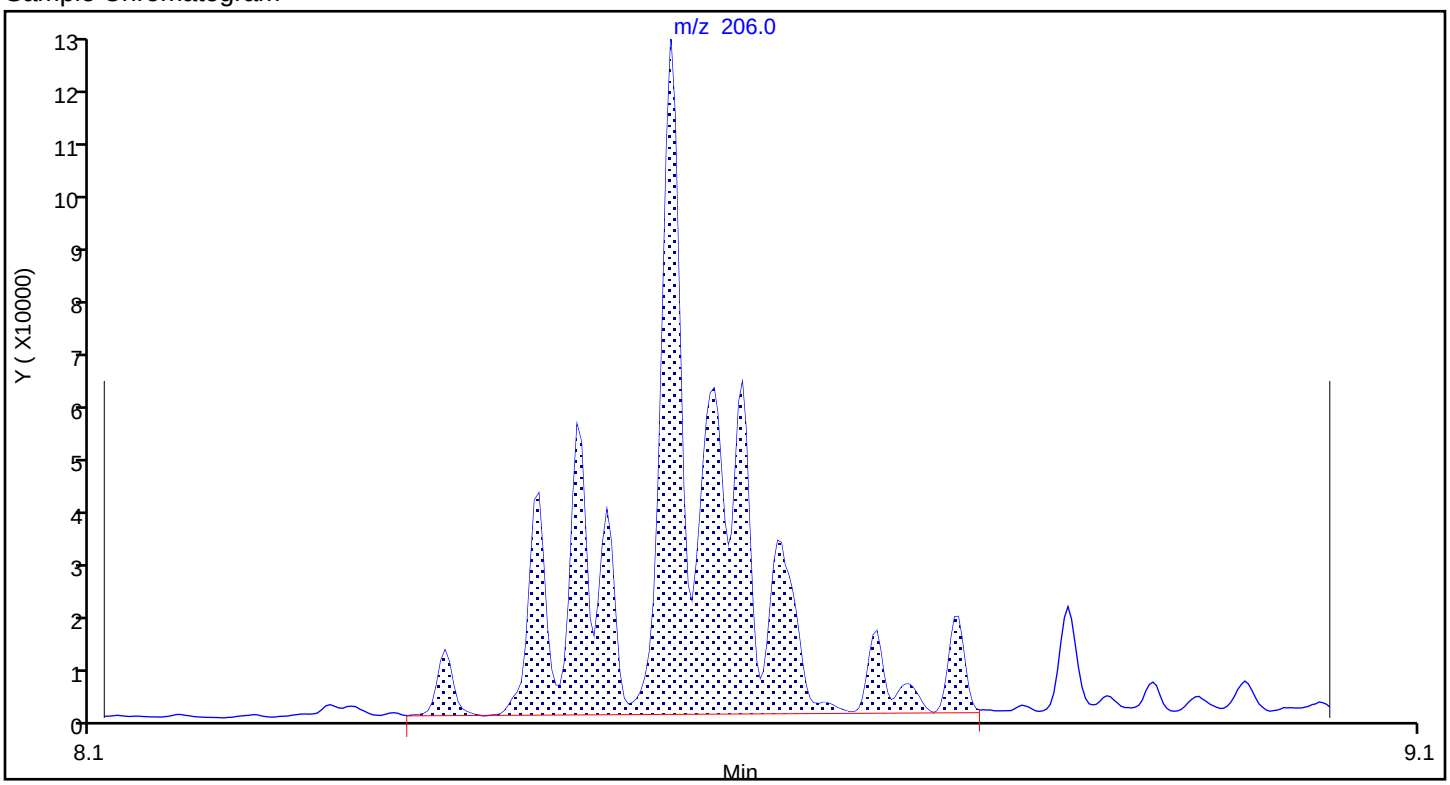
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



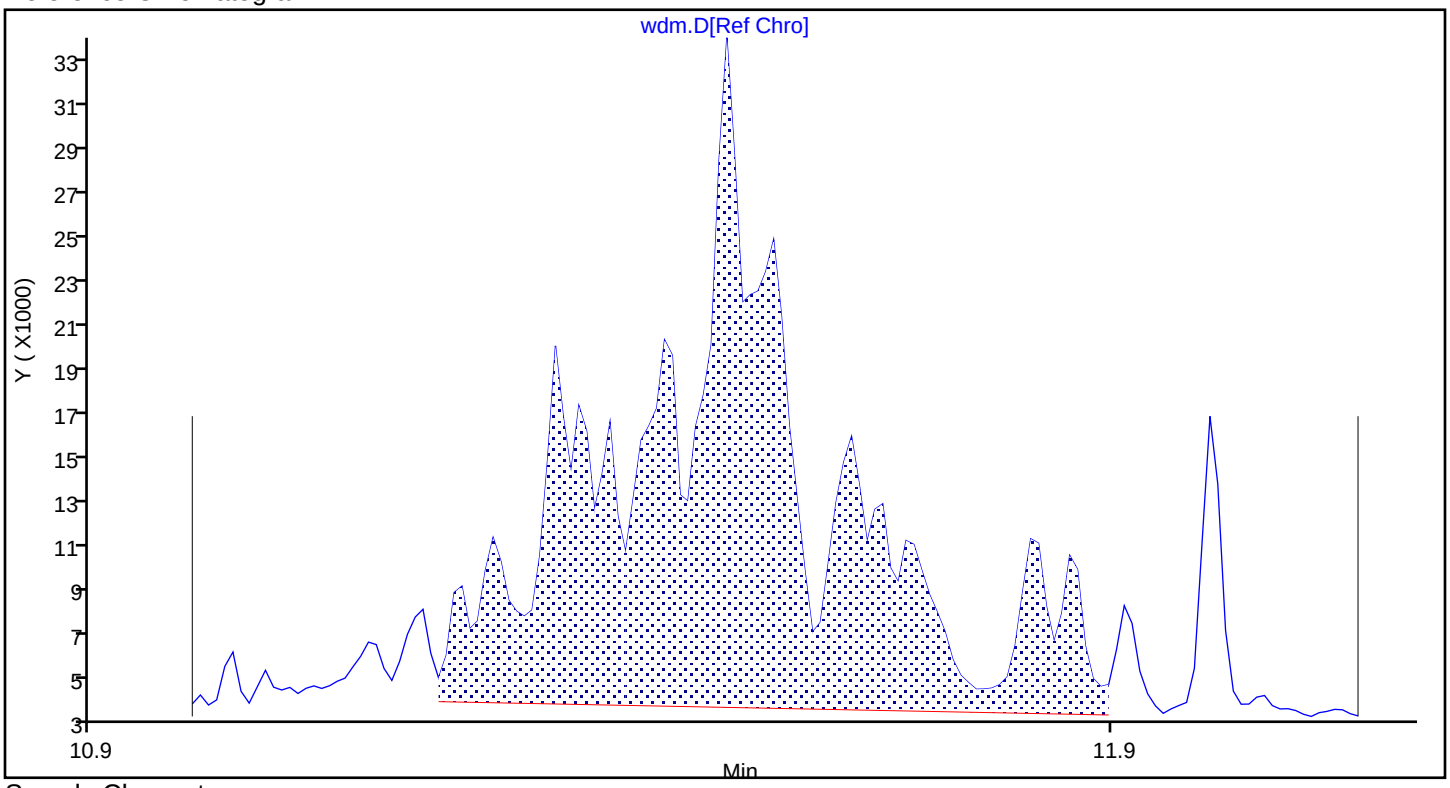
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

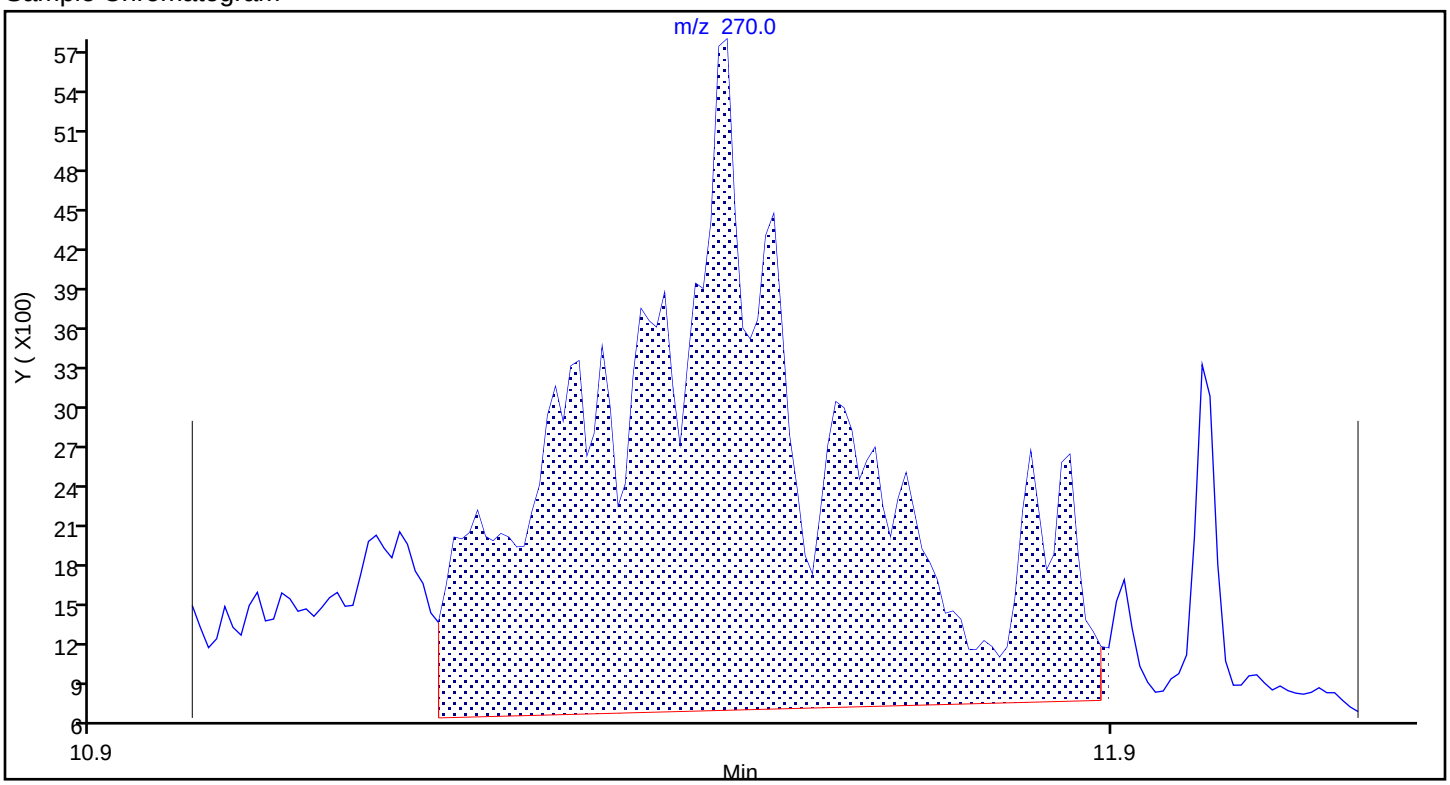
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



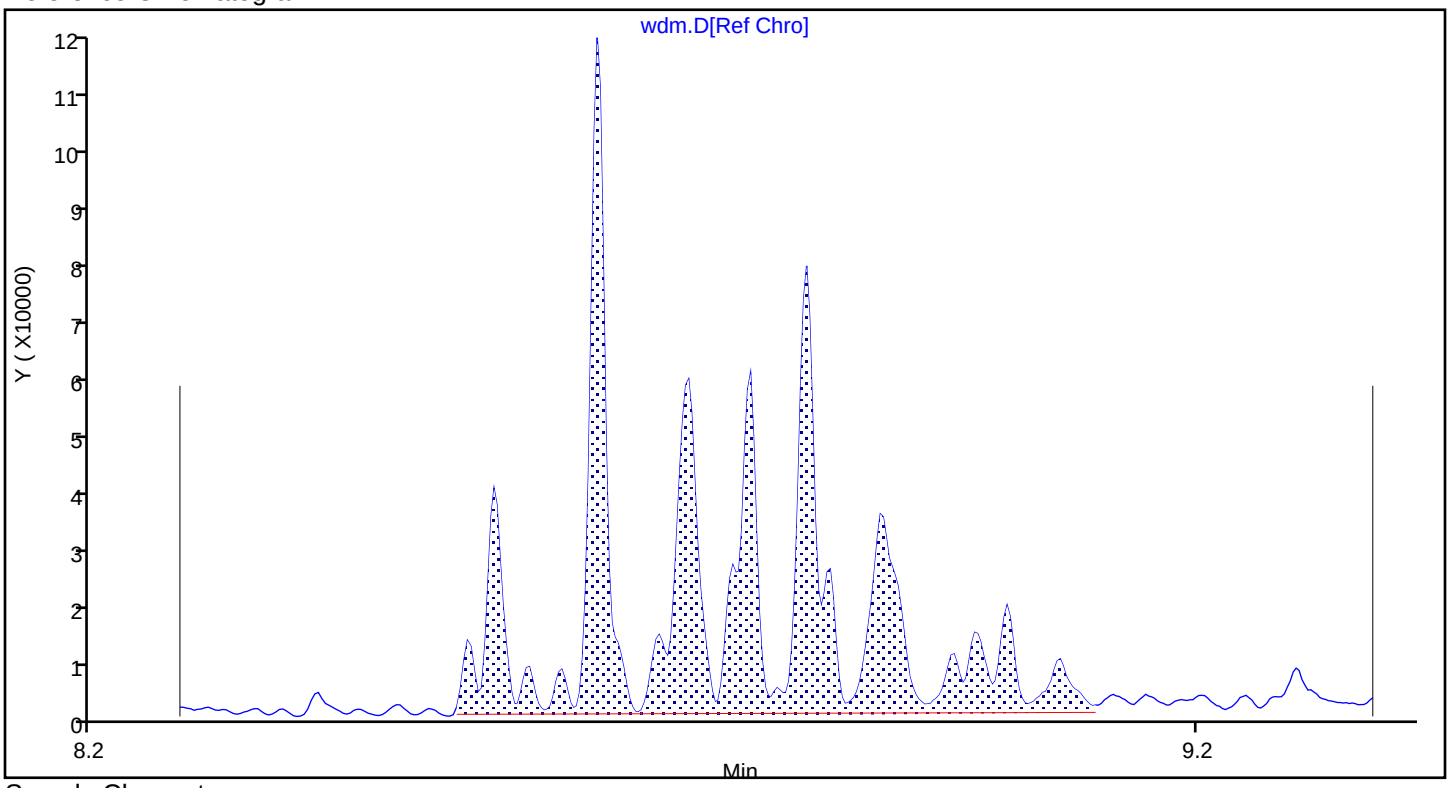
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

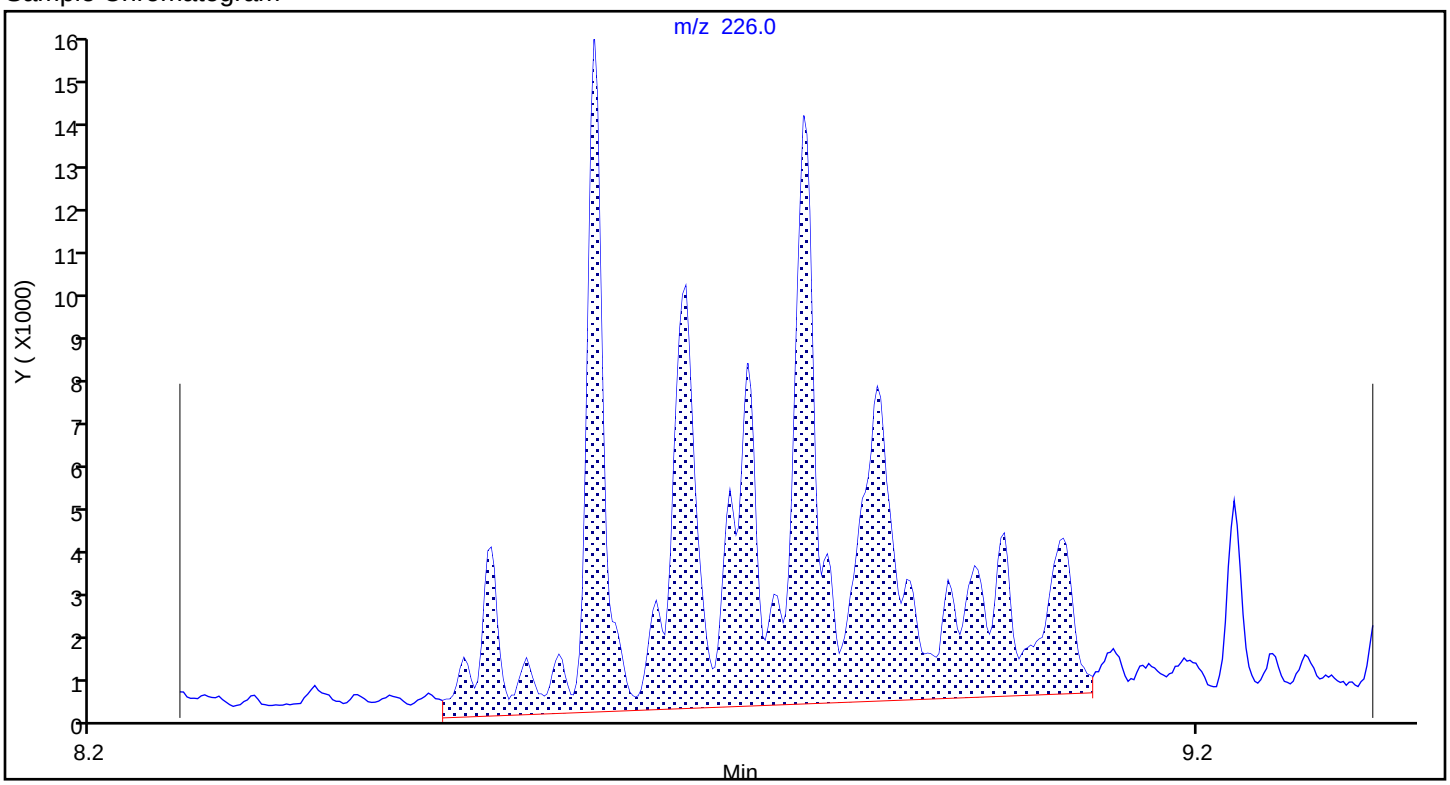
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



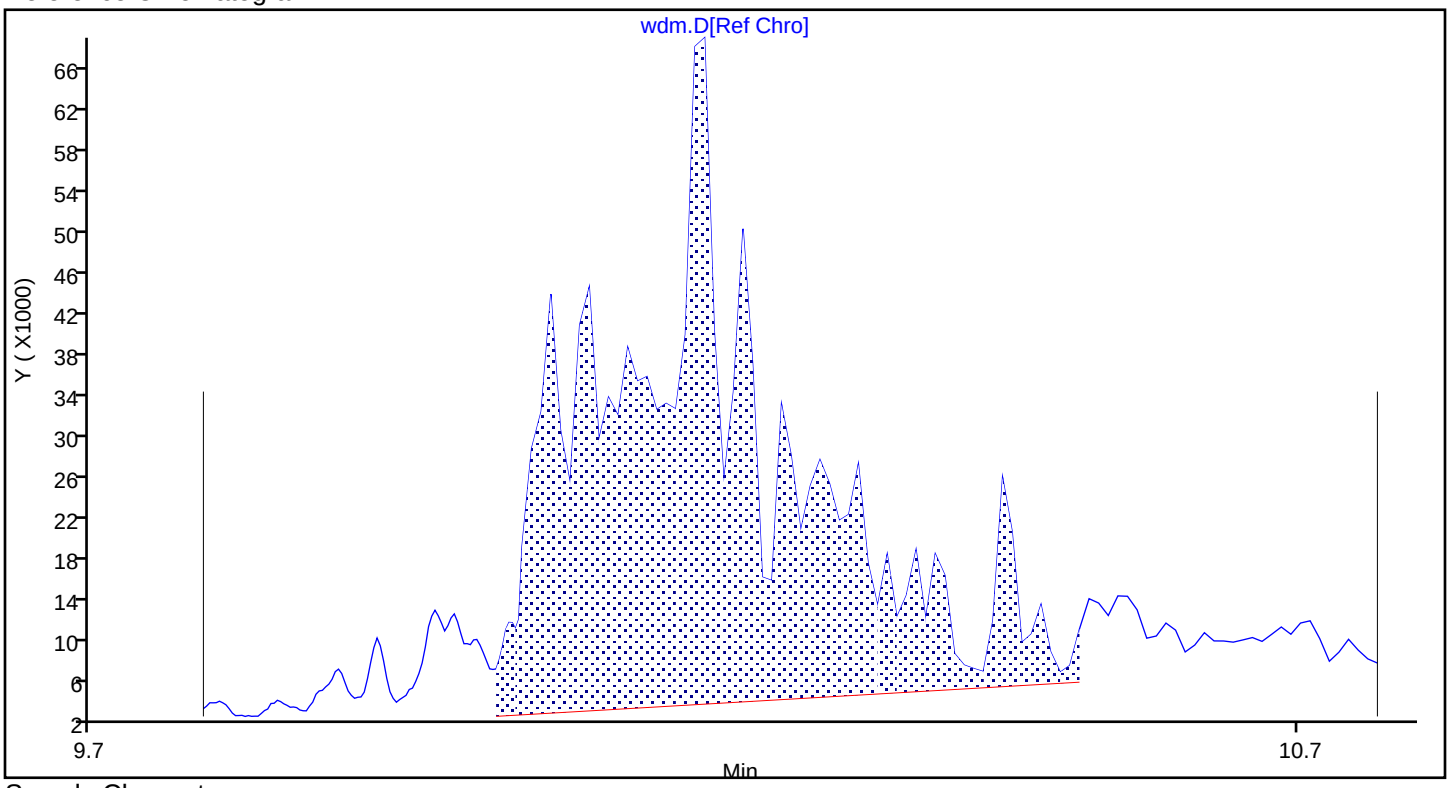
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

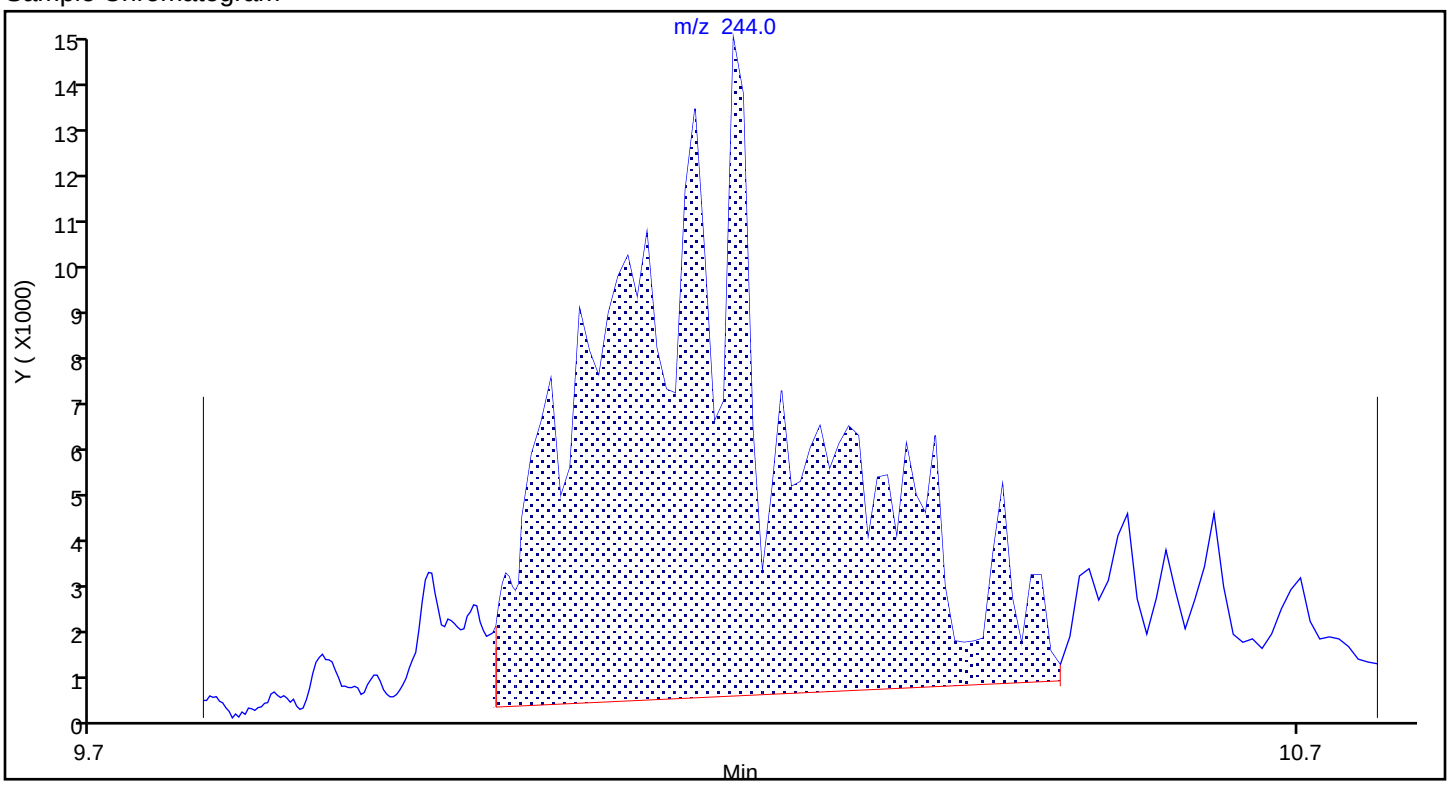
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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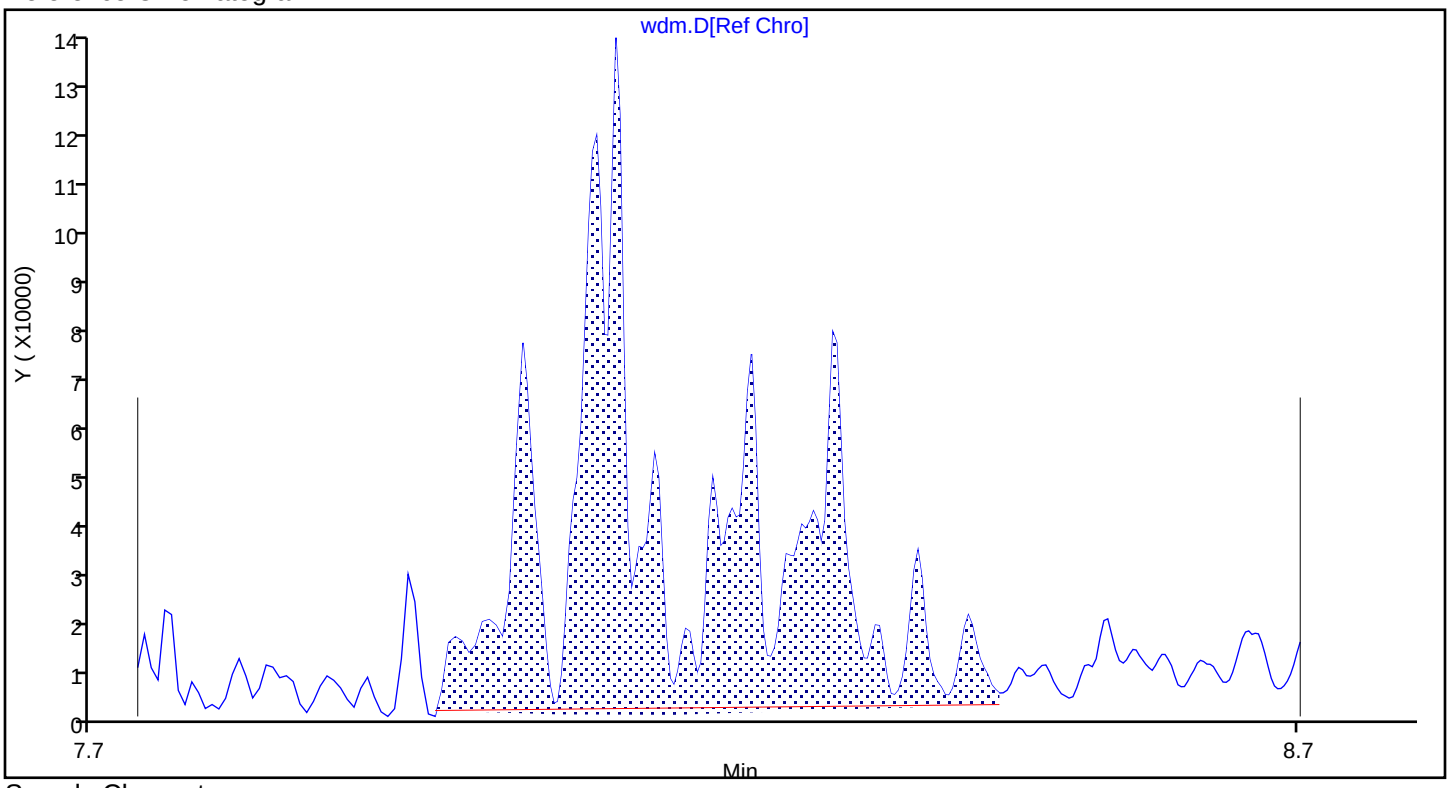
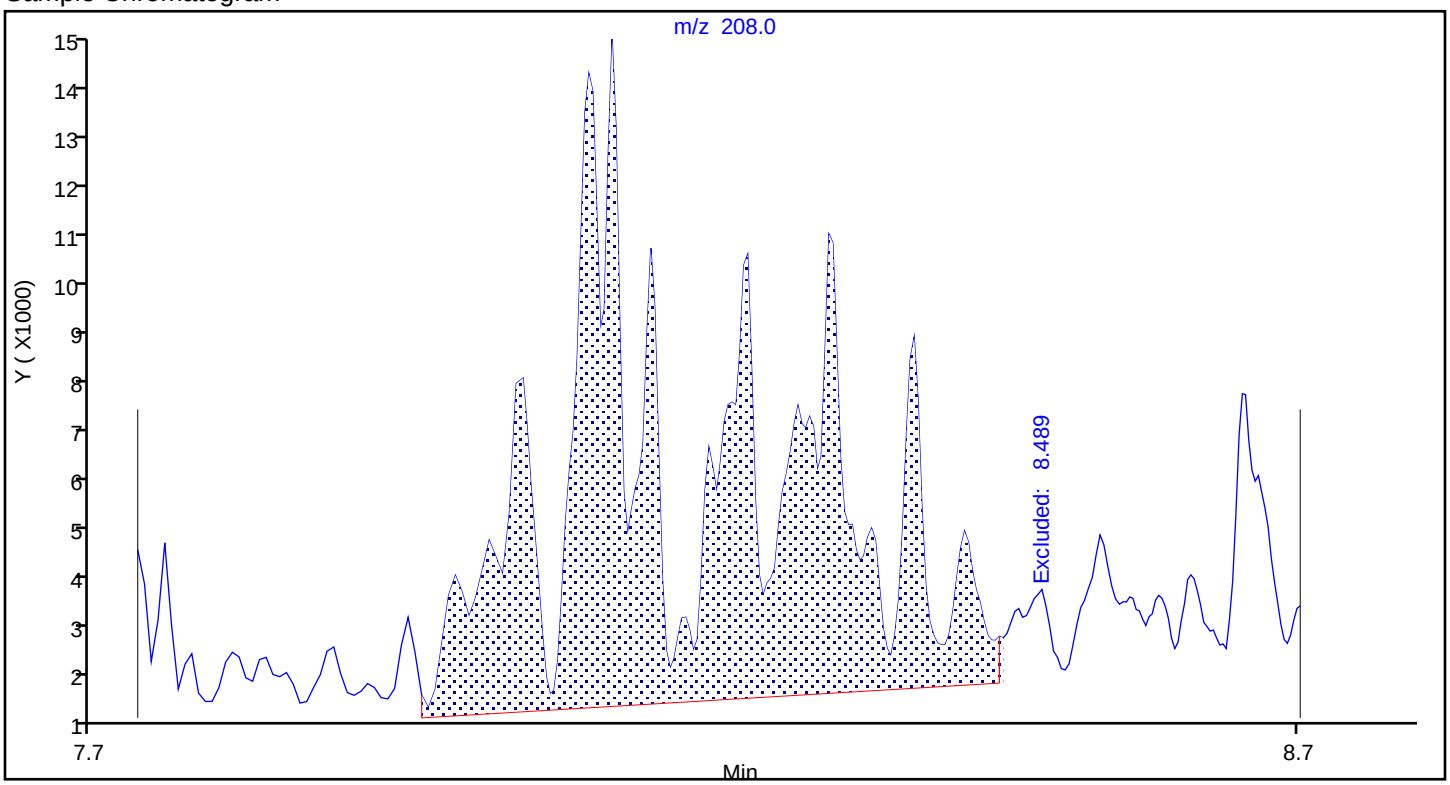
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



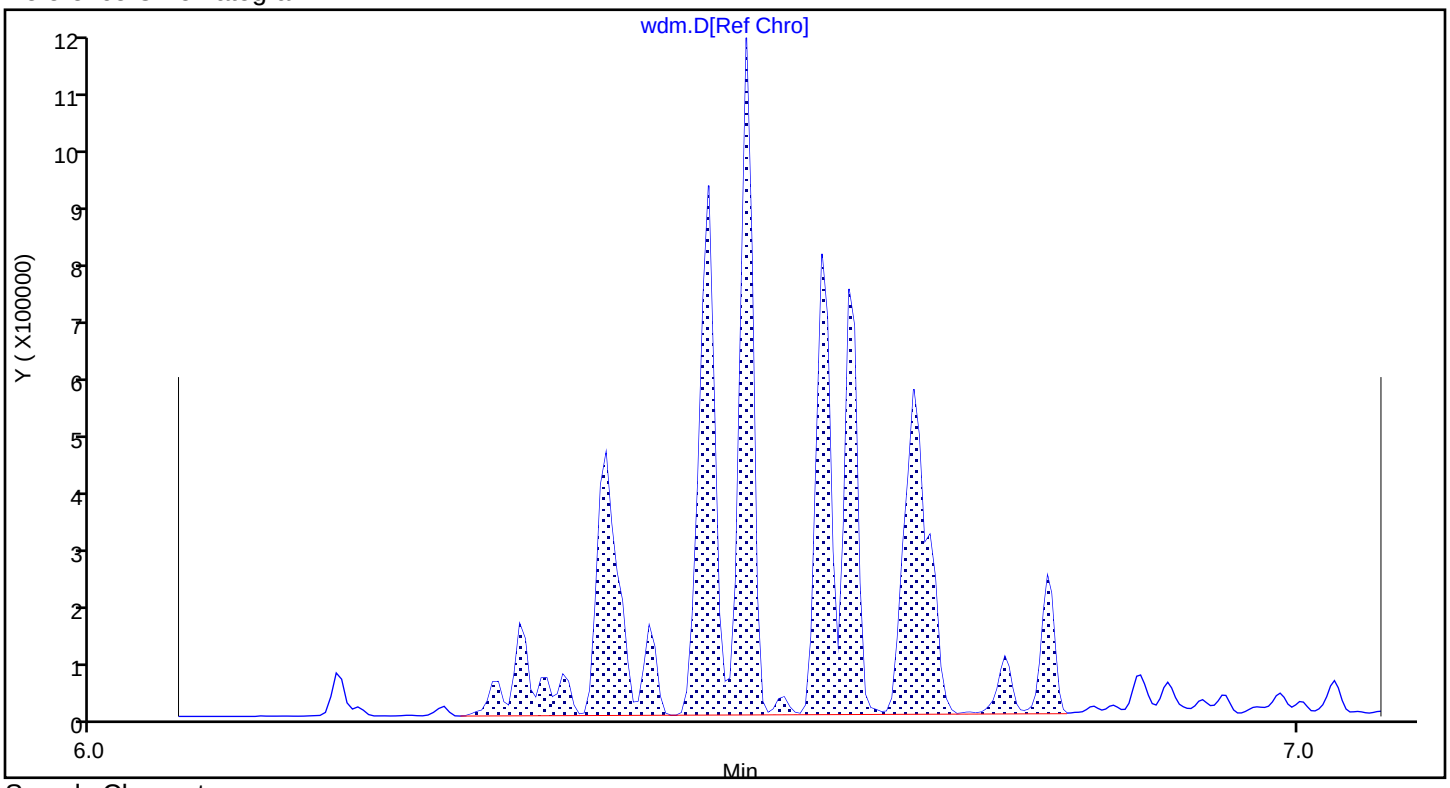
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

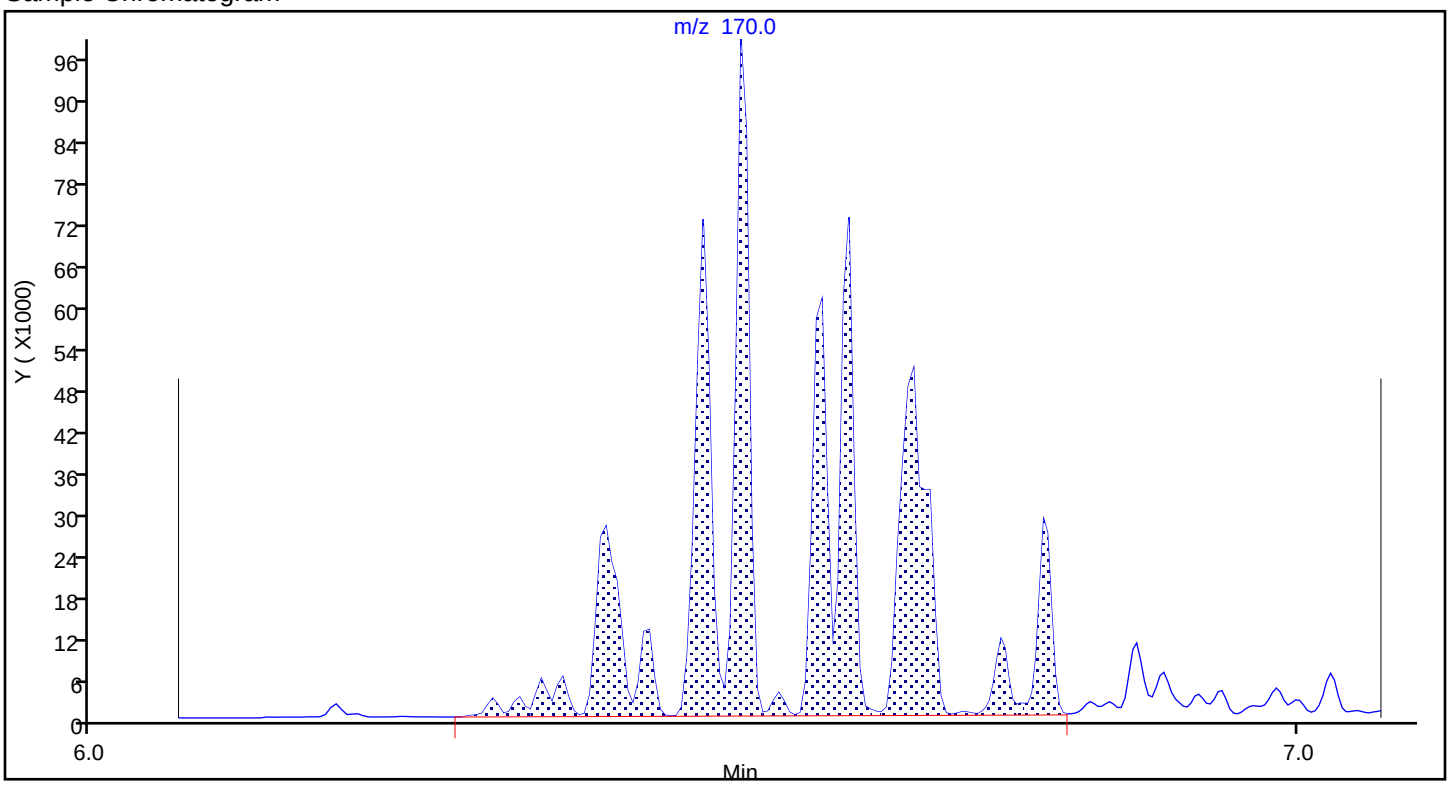
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



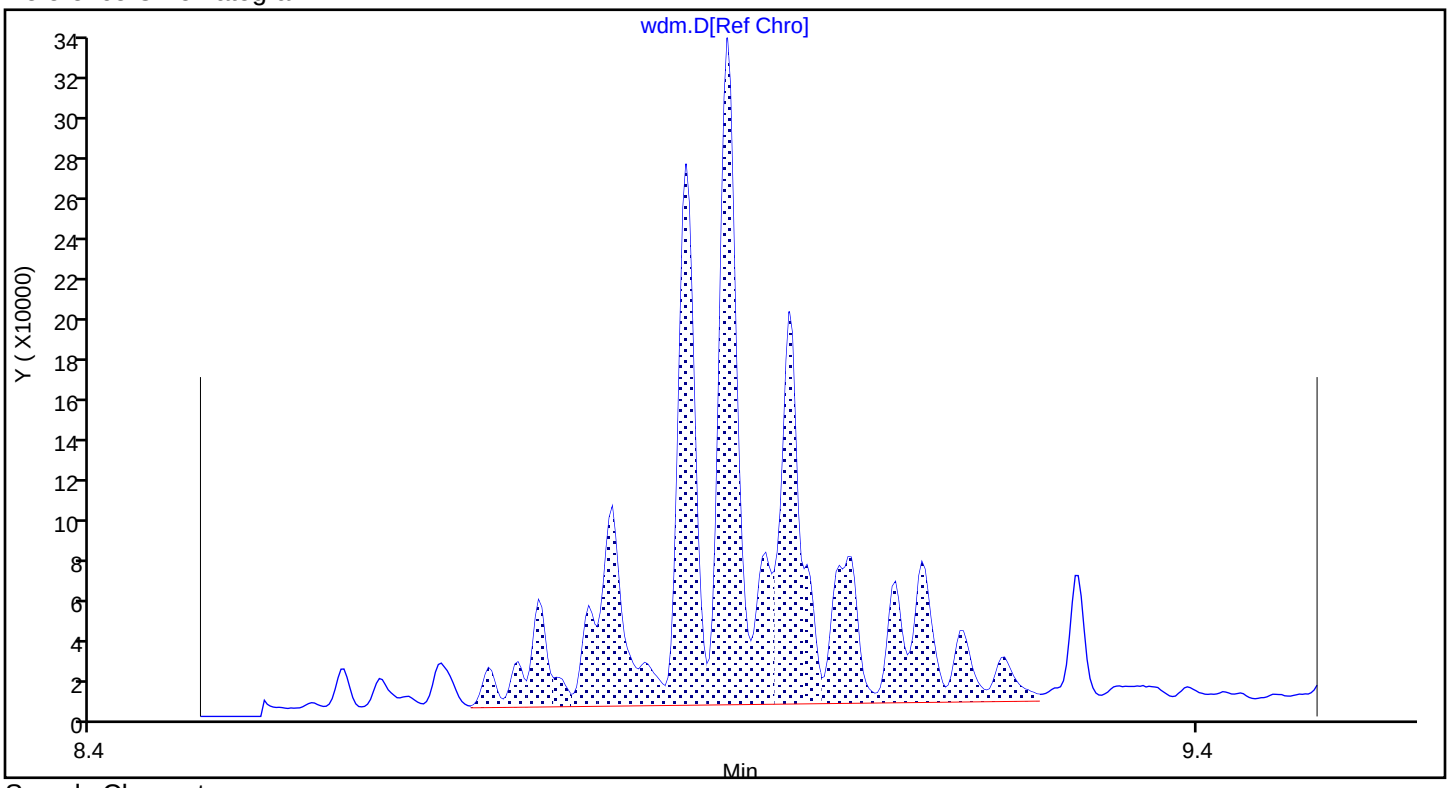
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

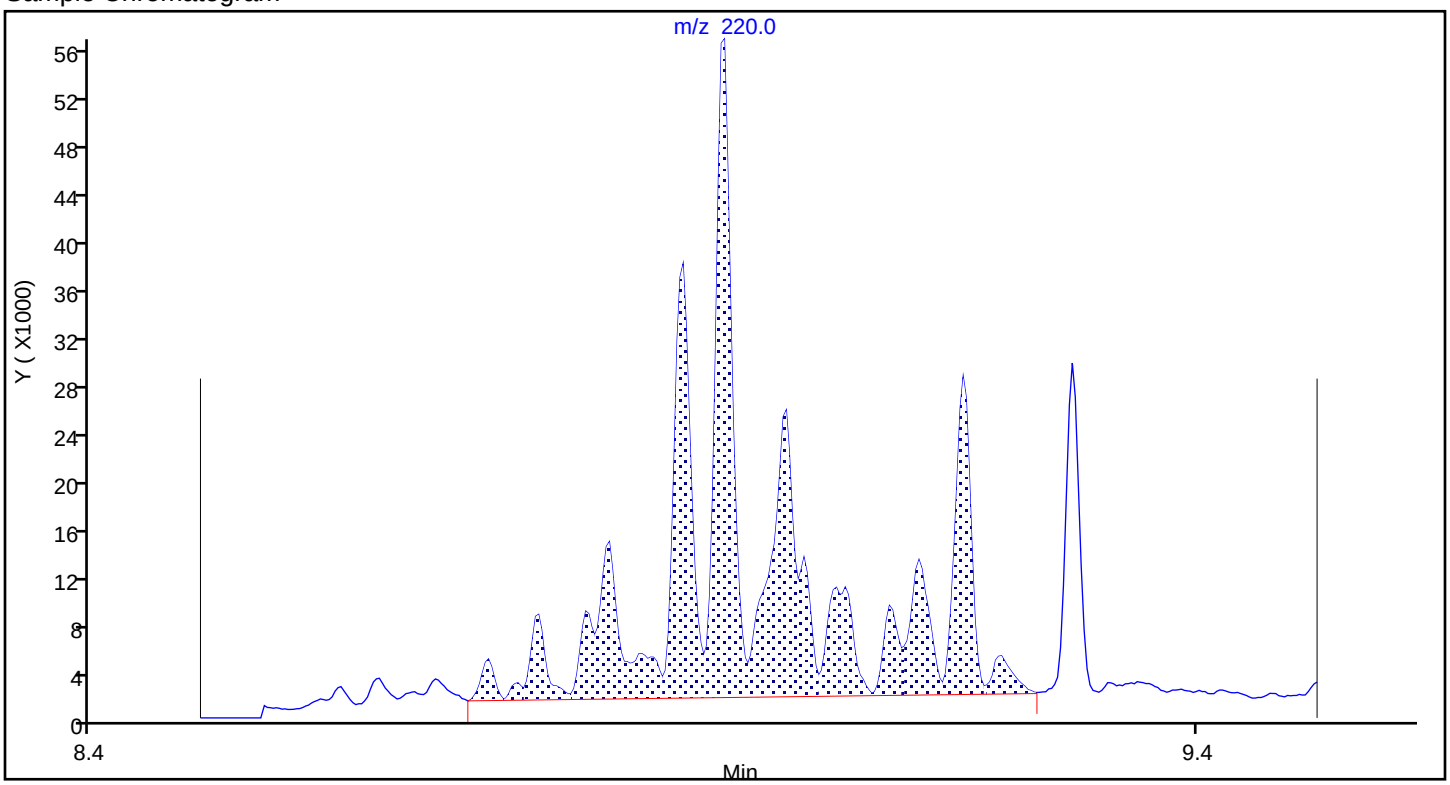
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



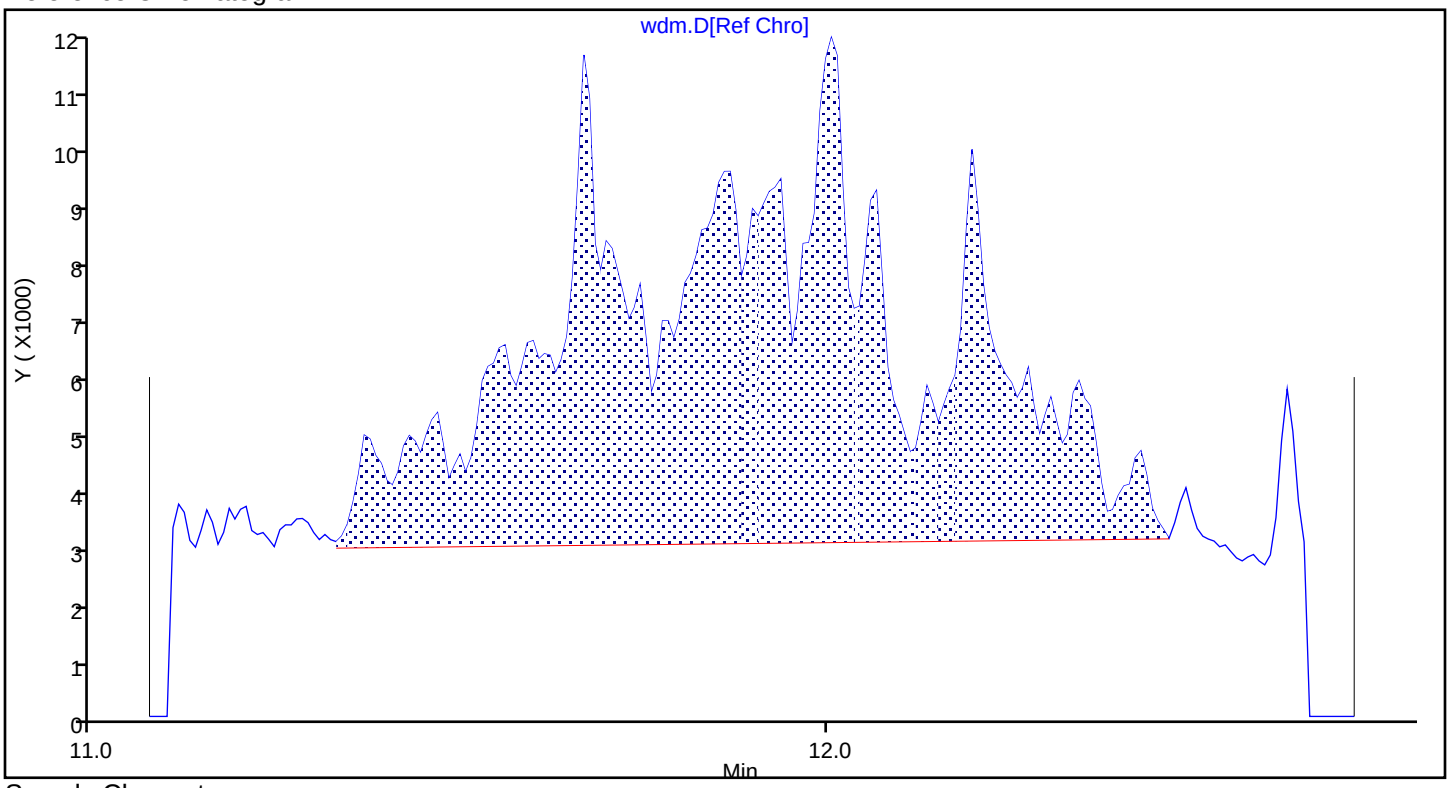
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

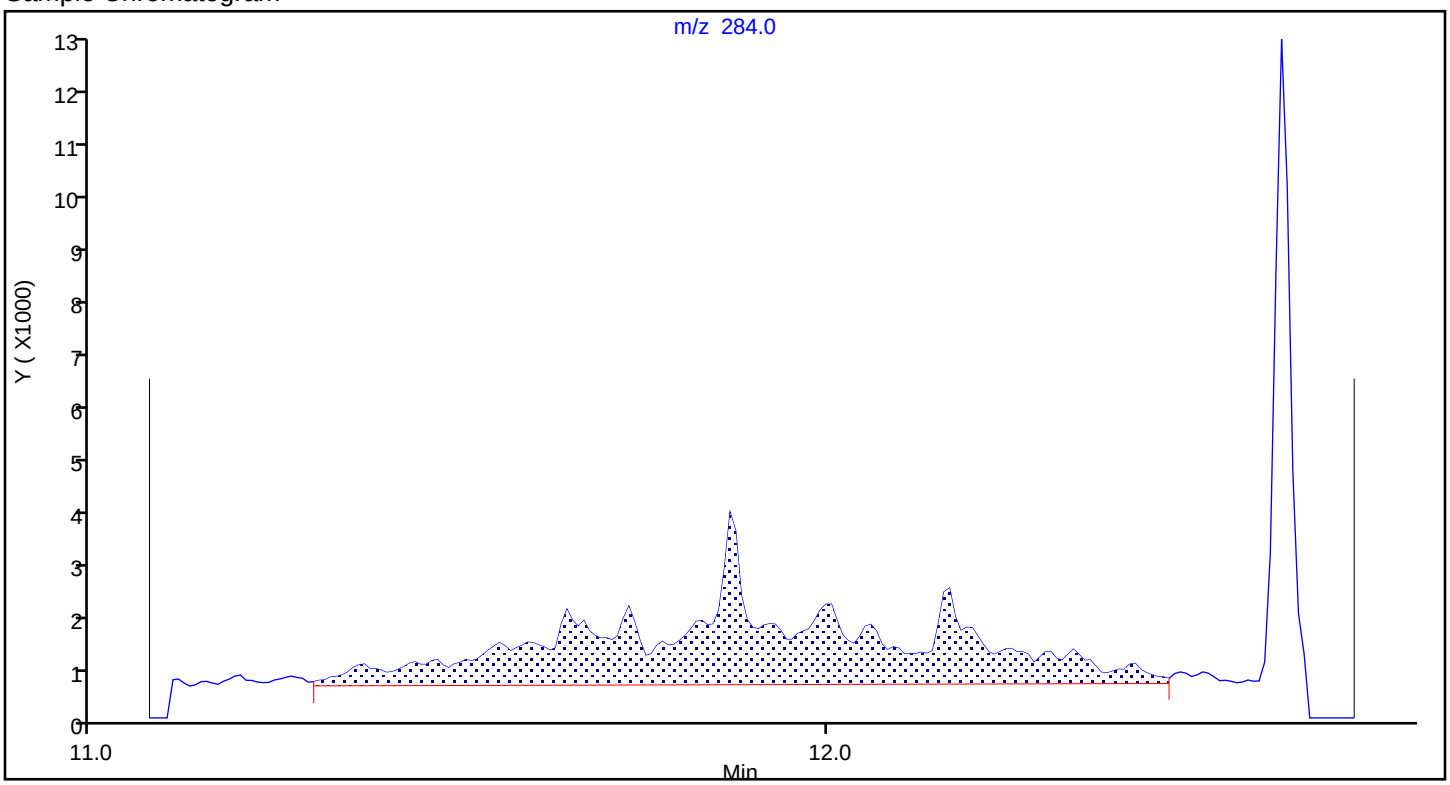
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



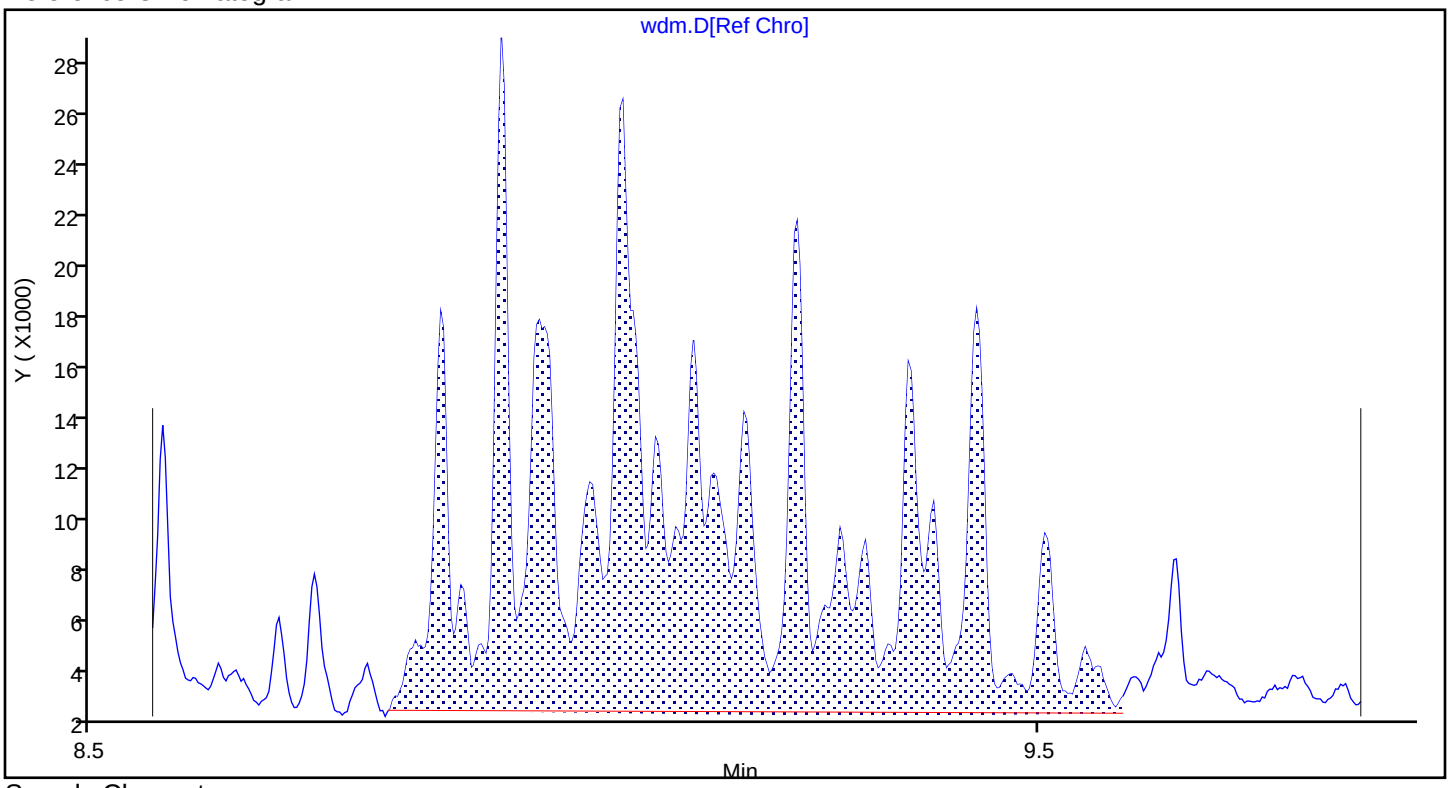
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

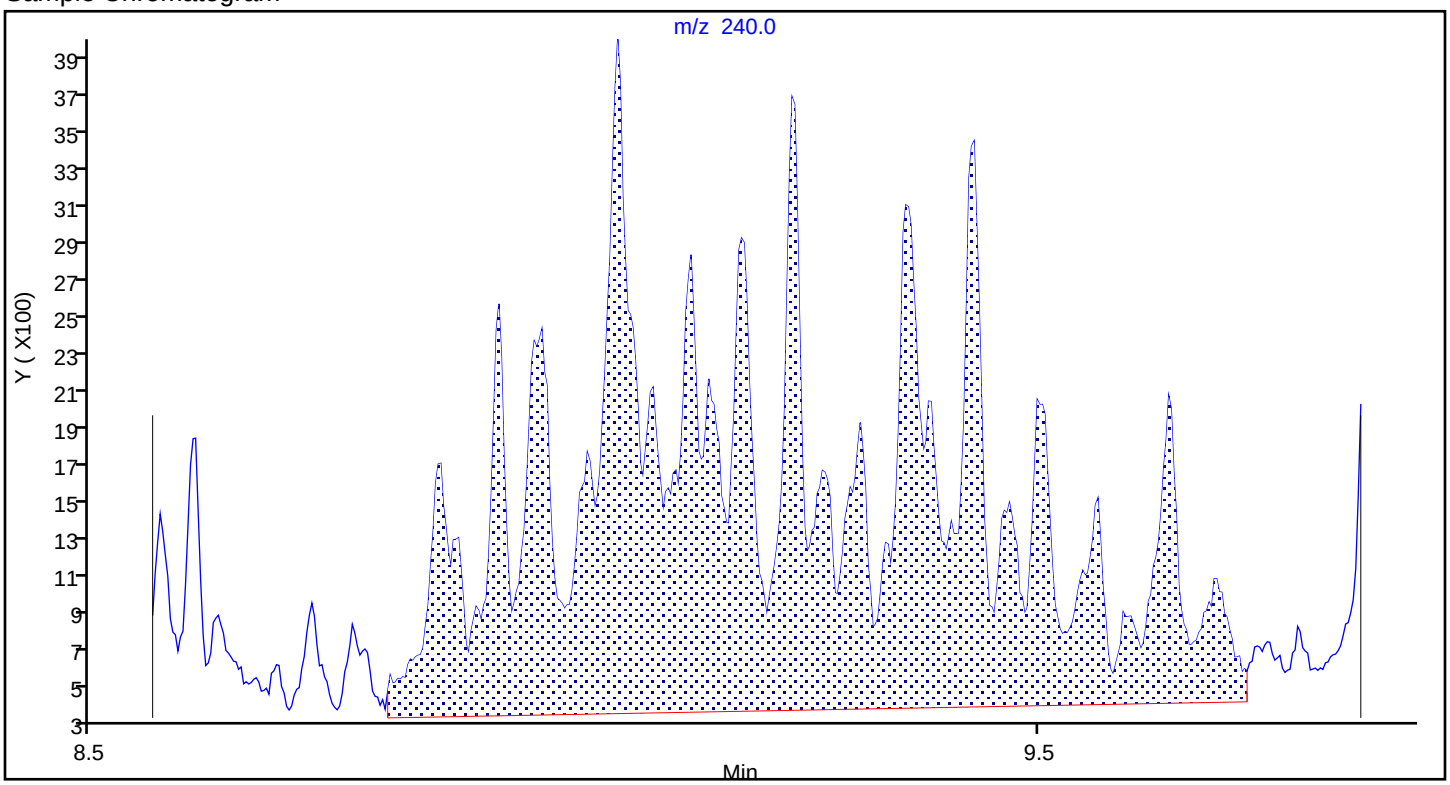
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



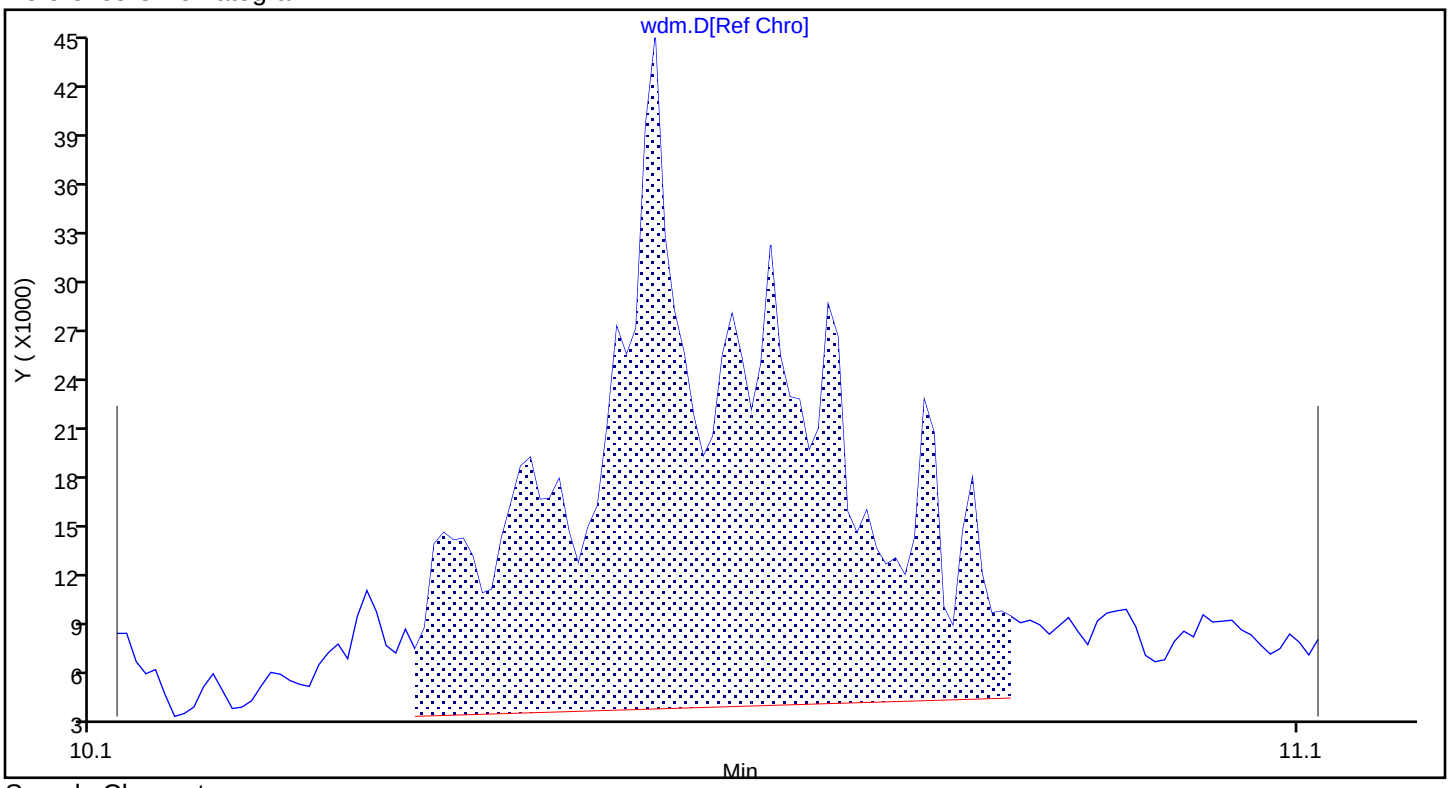
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

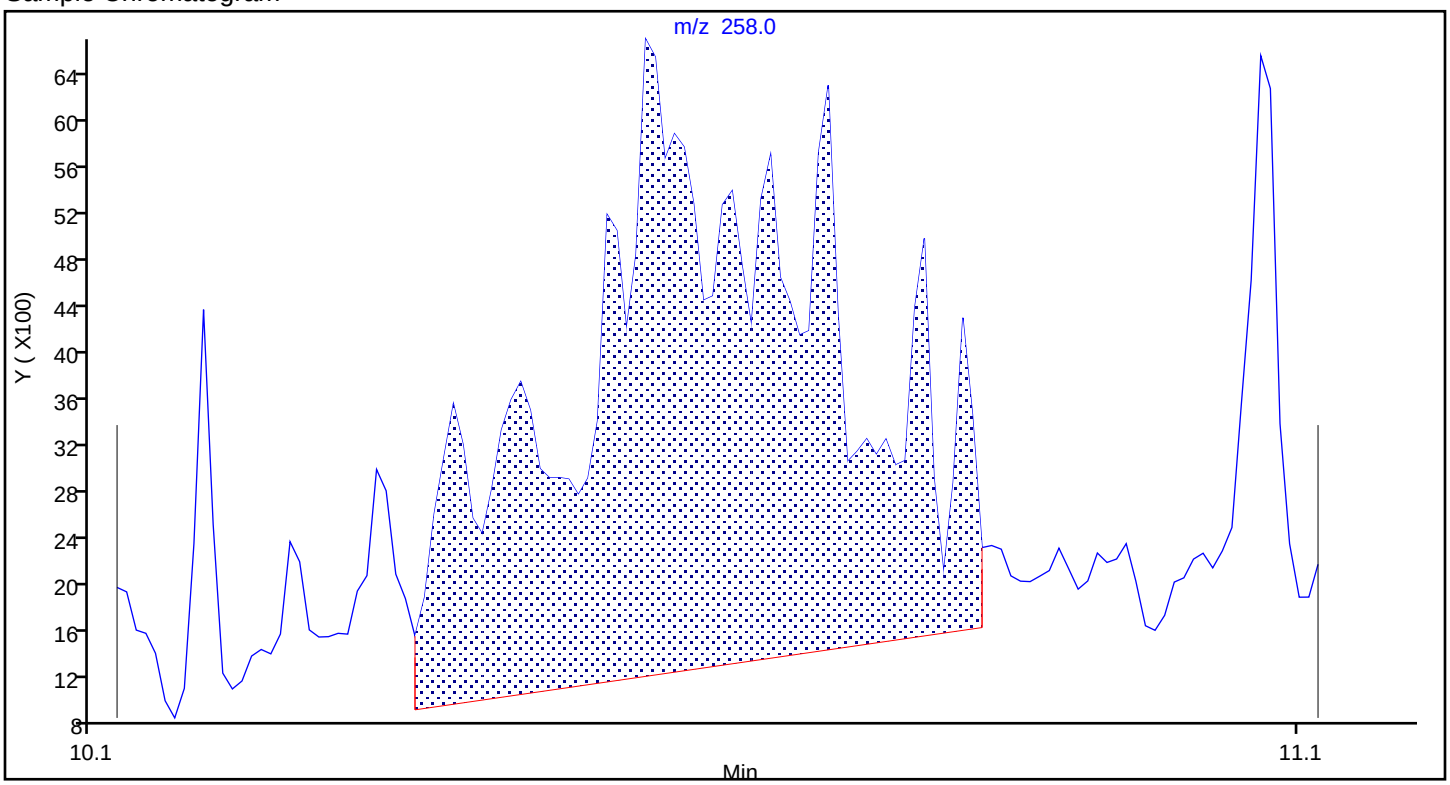
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



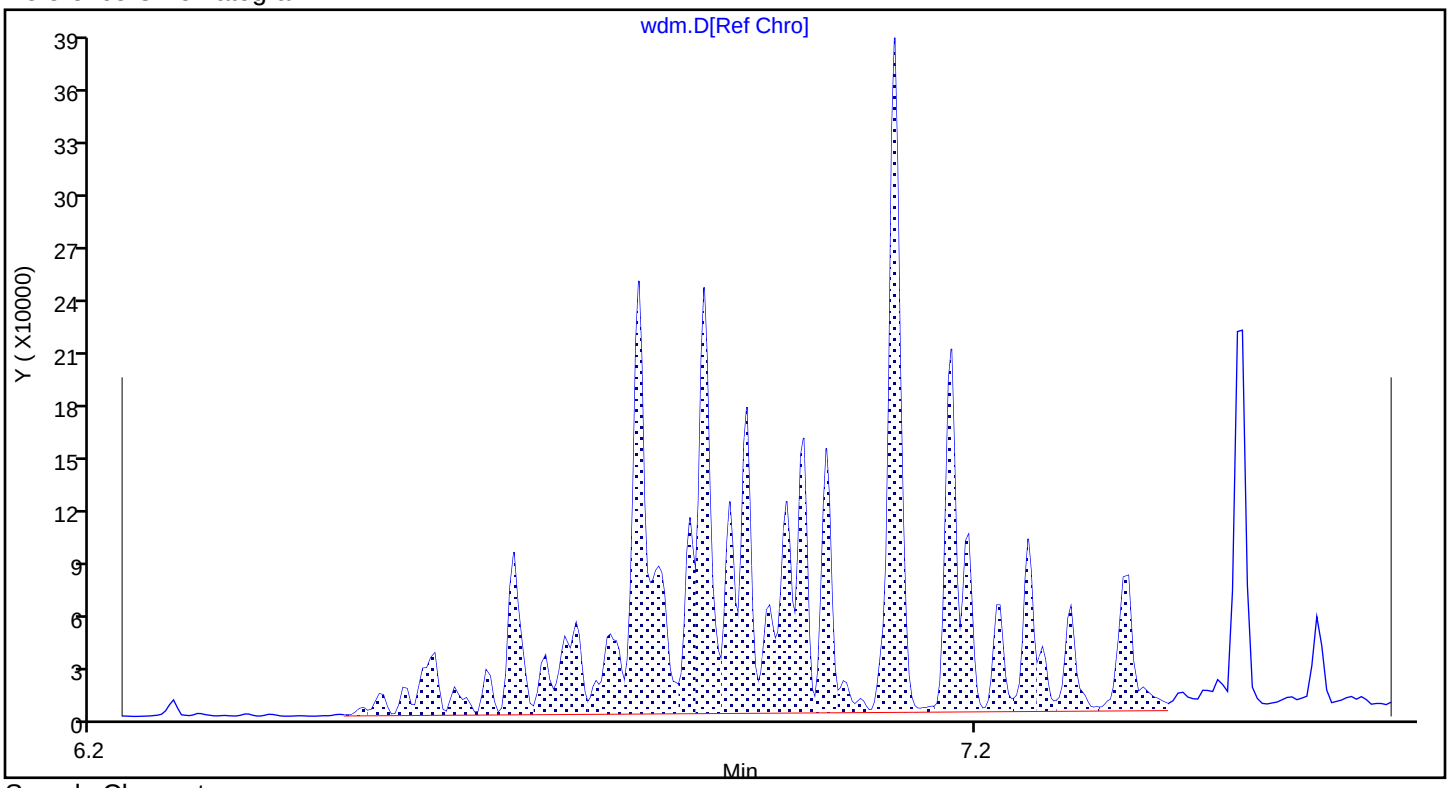
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

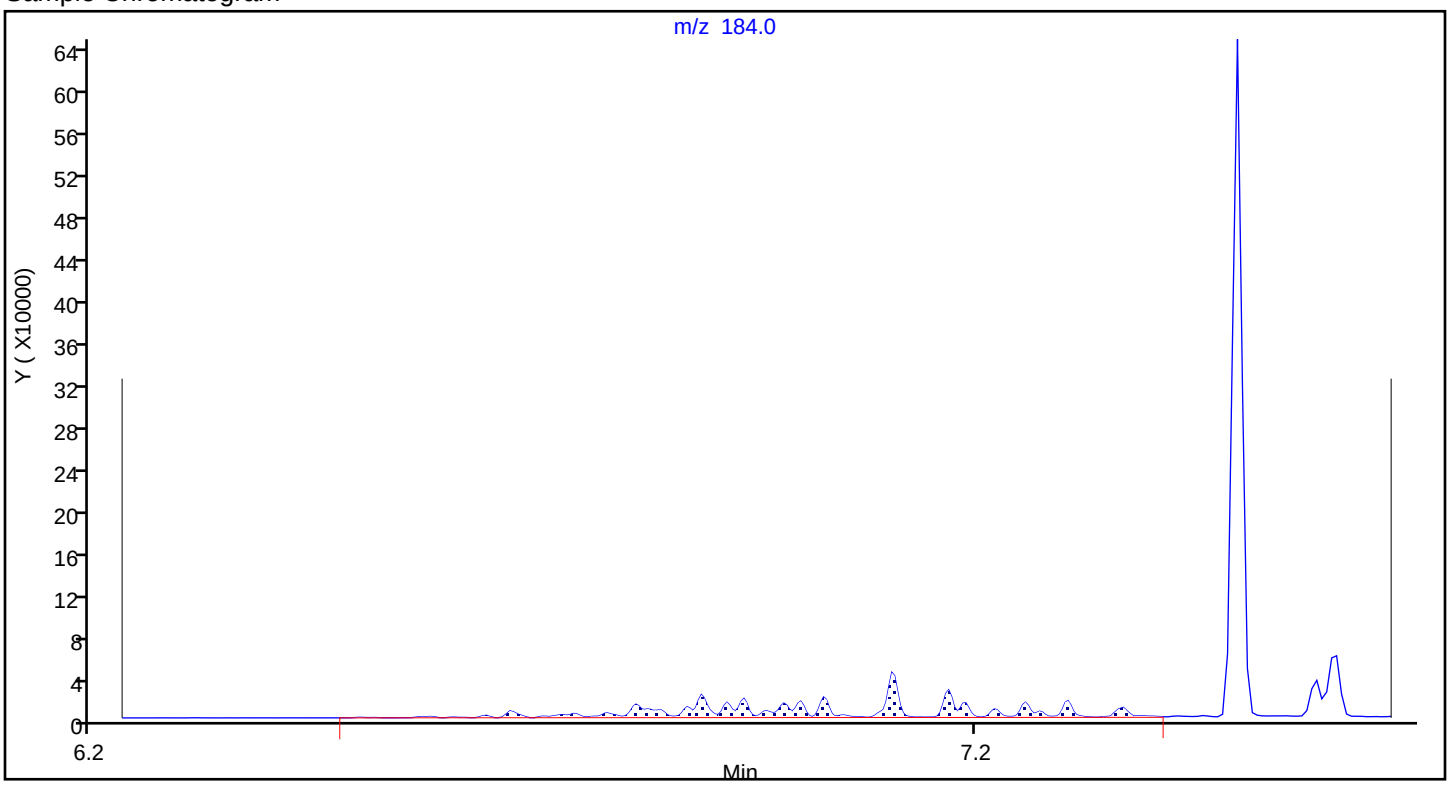
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



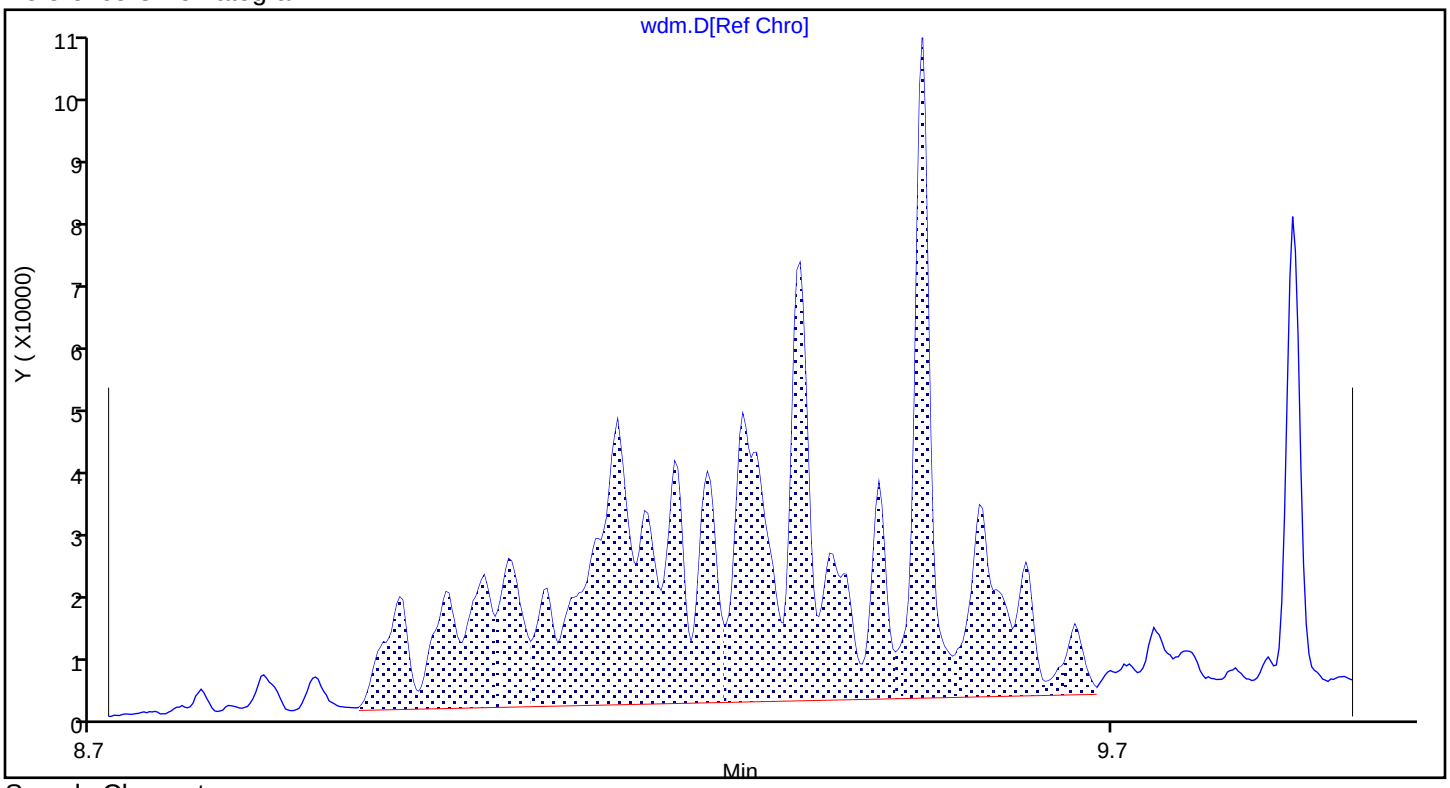
Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

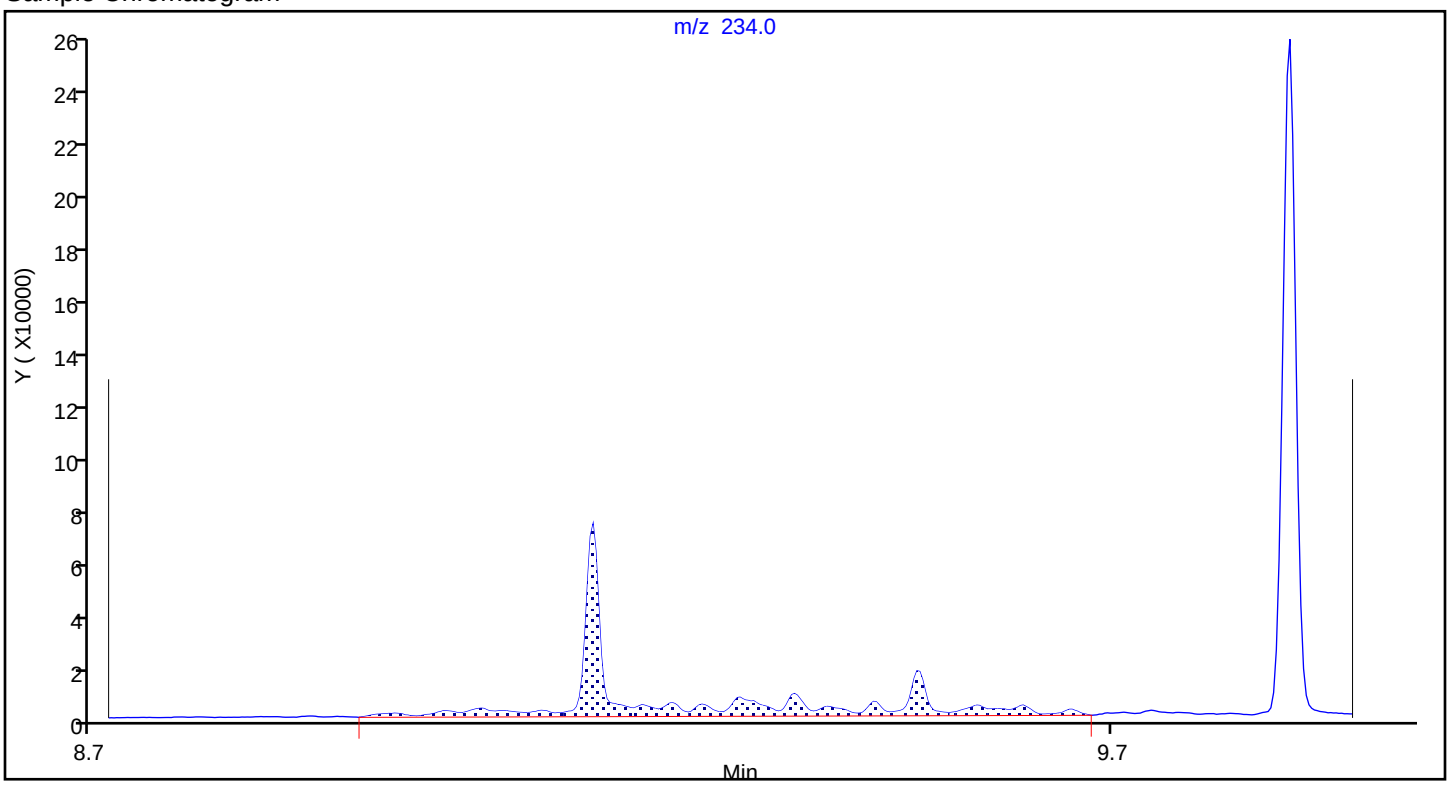
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram

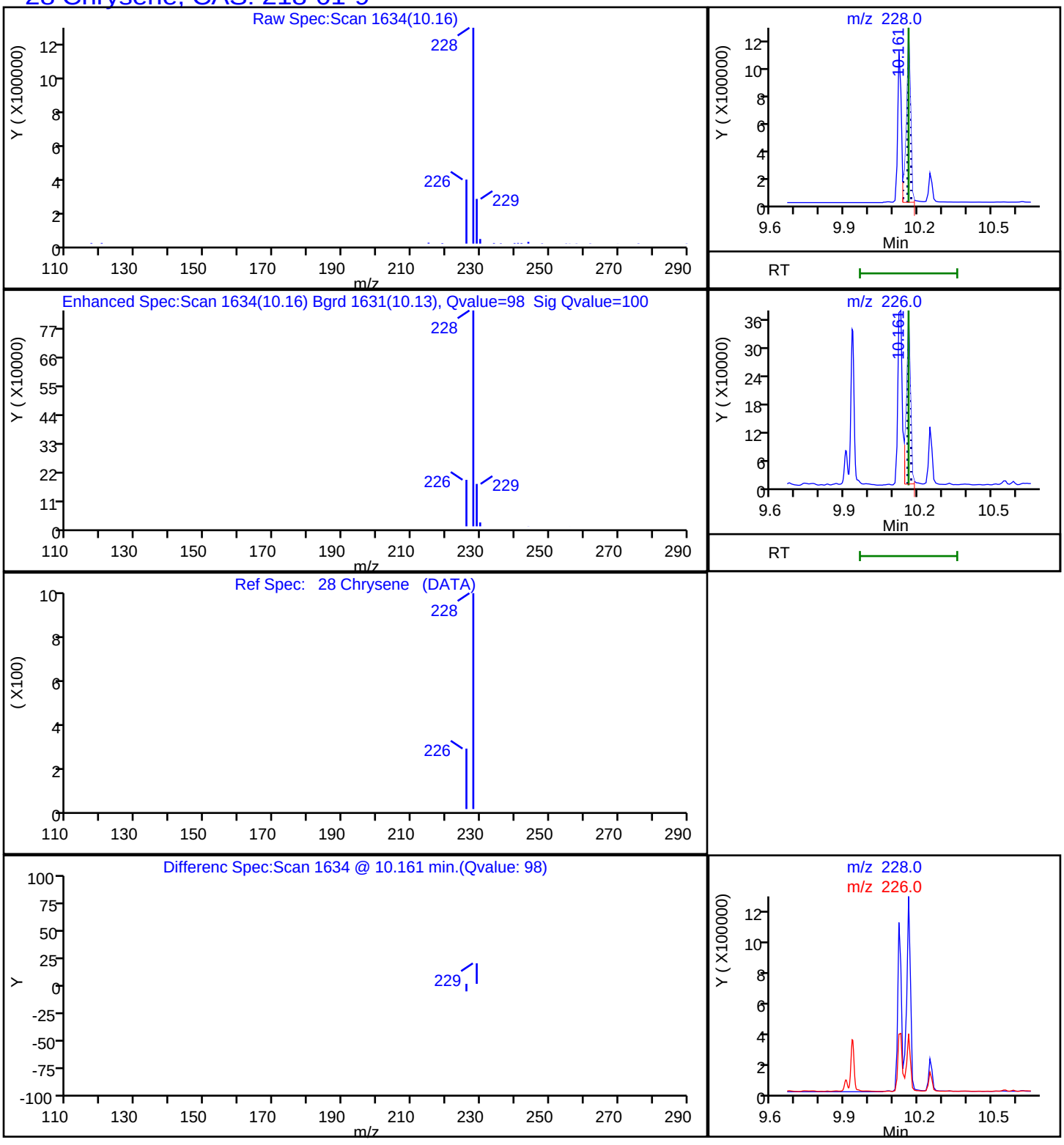


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

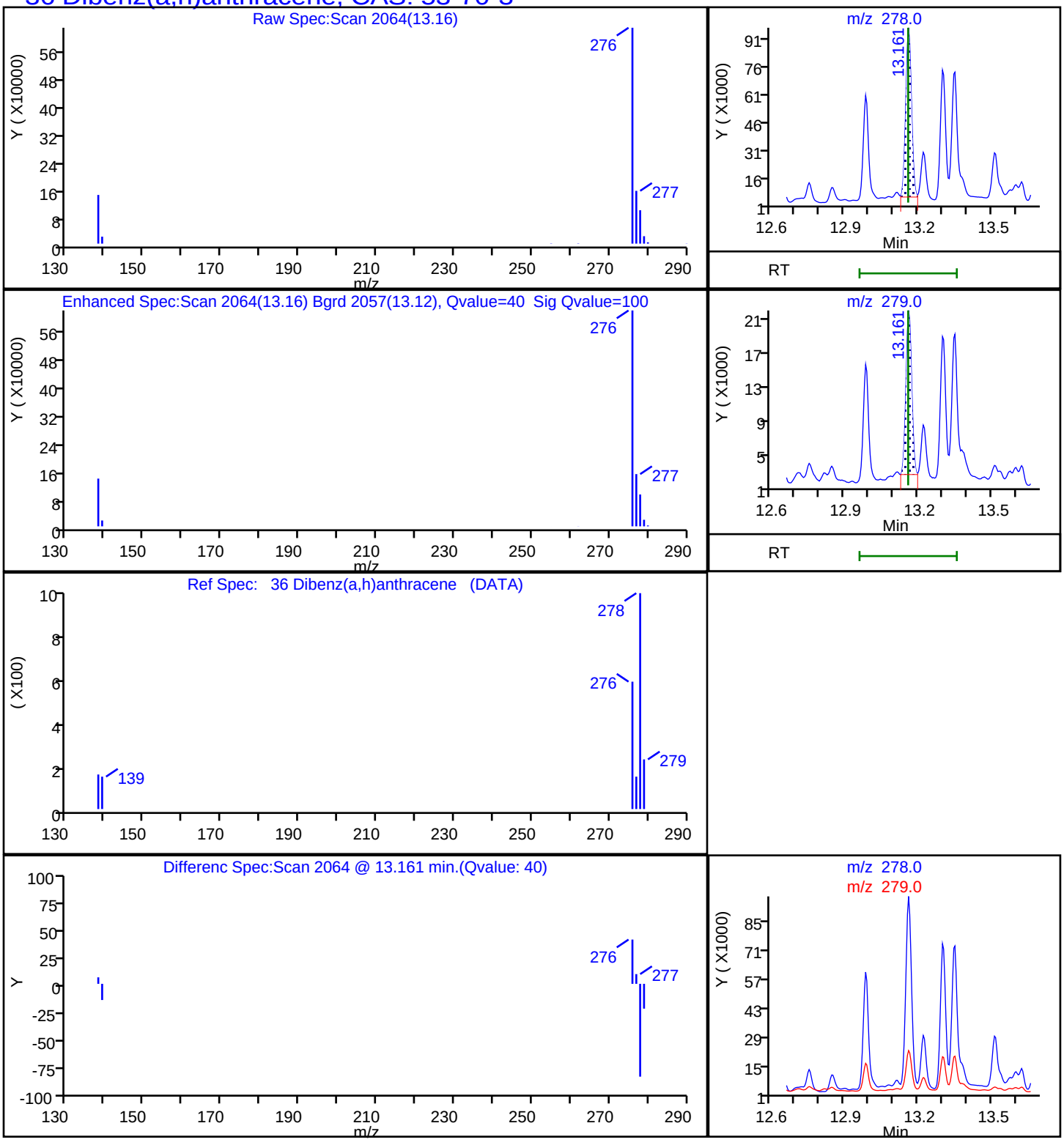


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

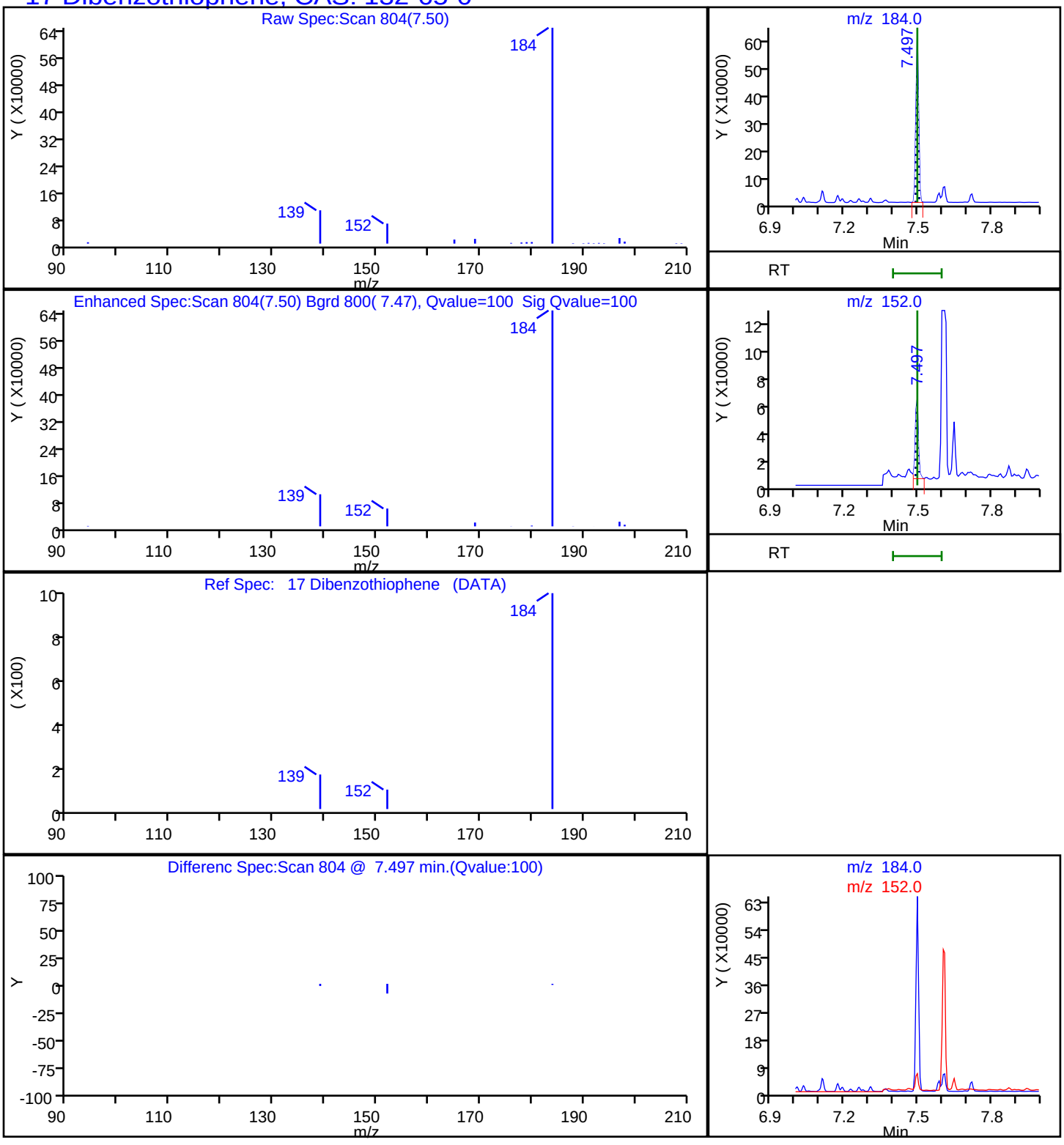


Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

17 Dibenzothiophene, CAS: 132-65-0

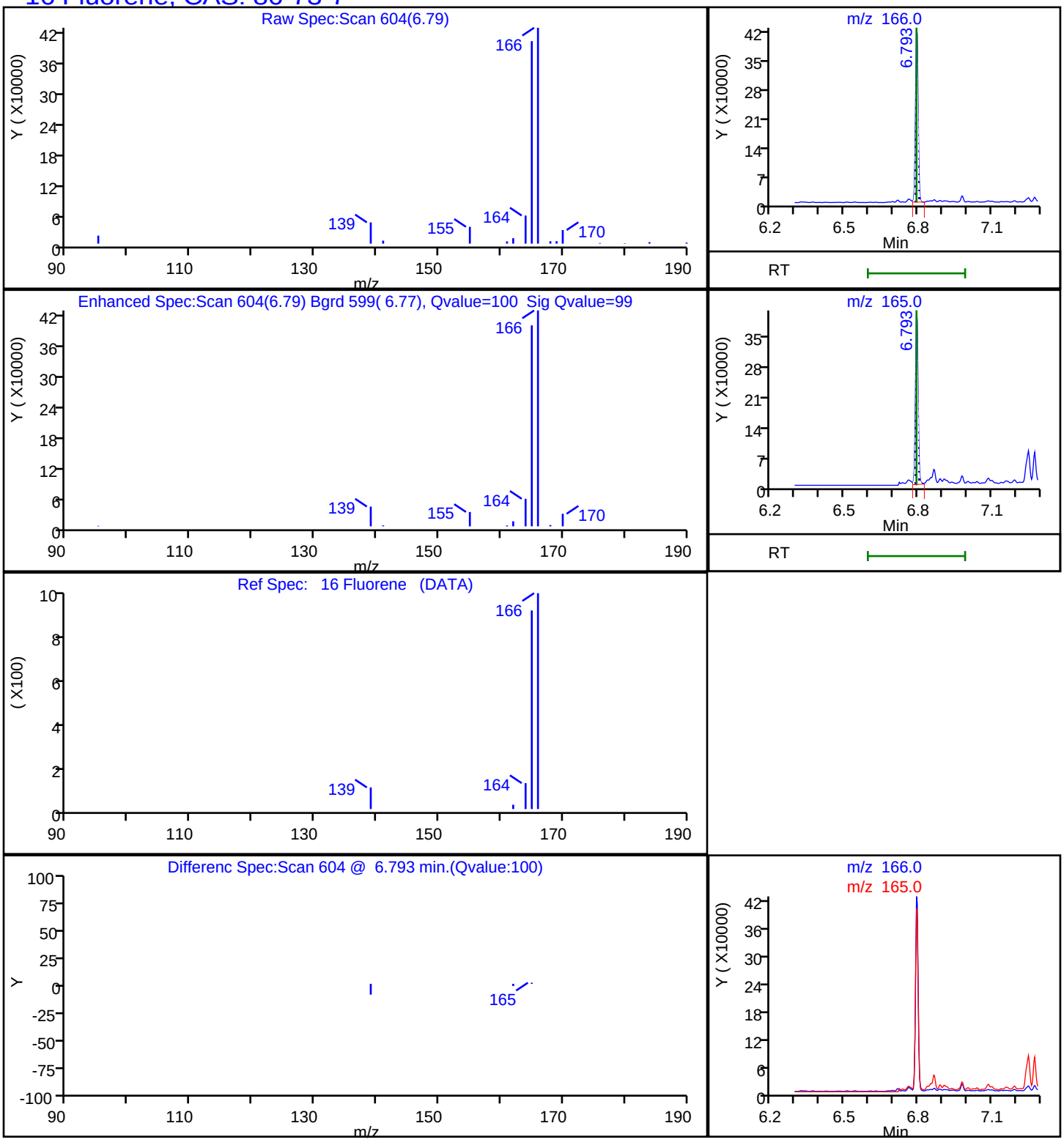


Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

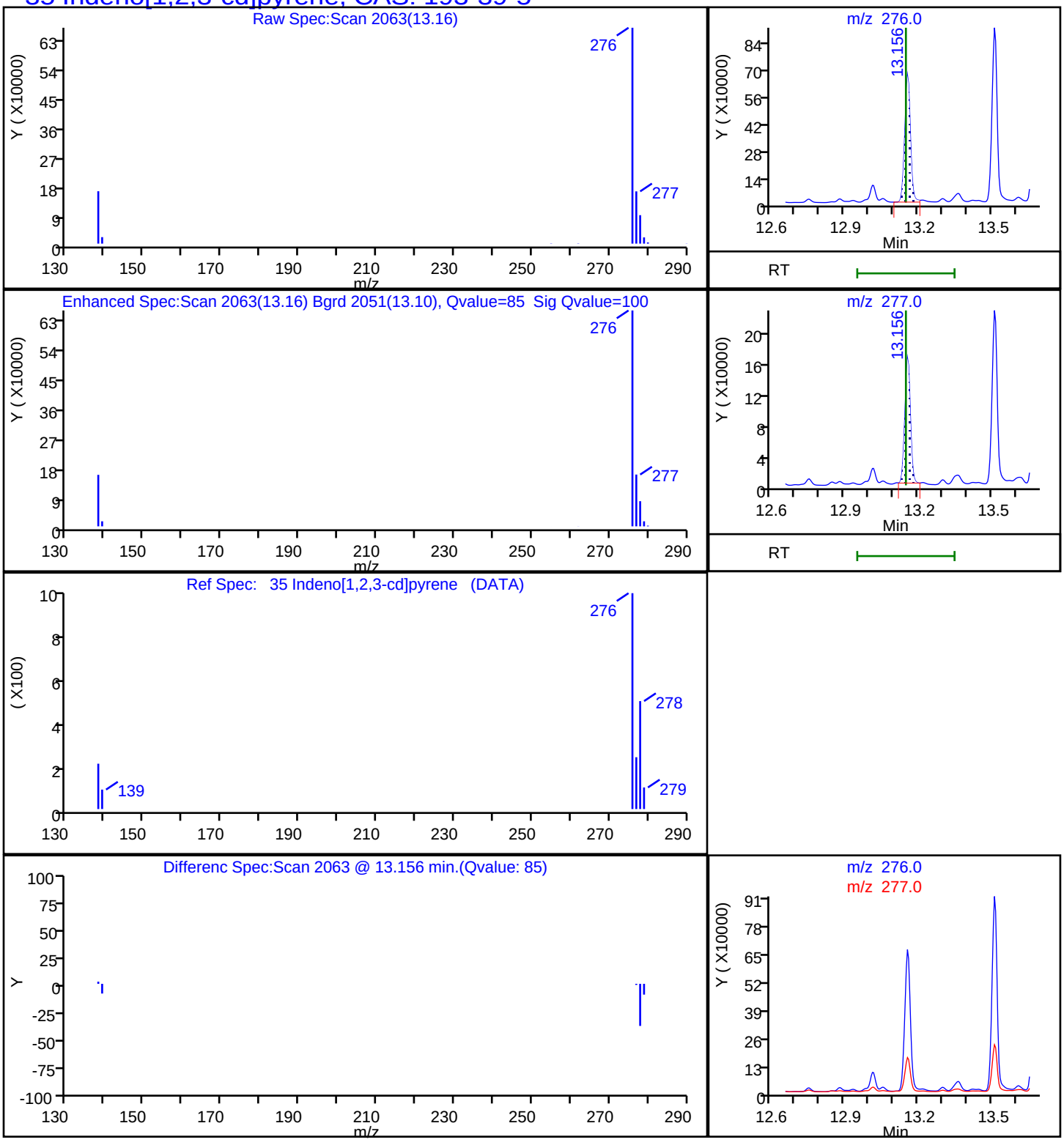


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

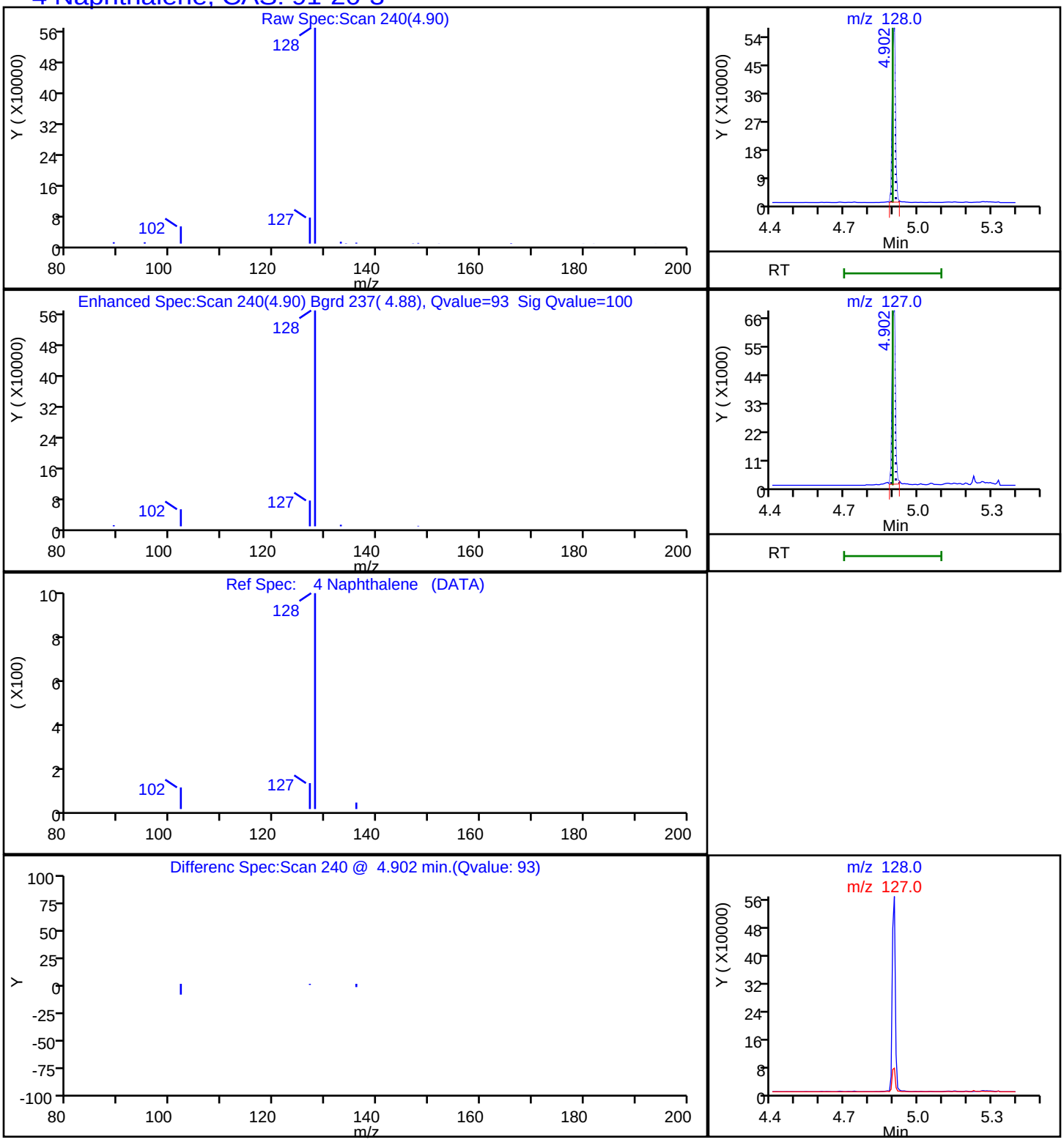


Report Date: 31-Aug-2019 11:49:36 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

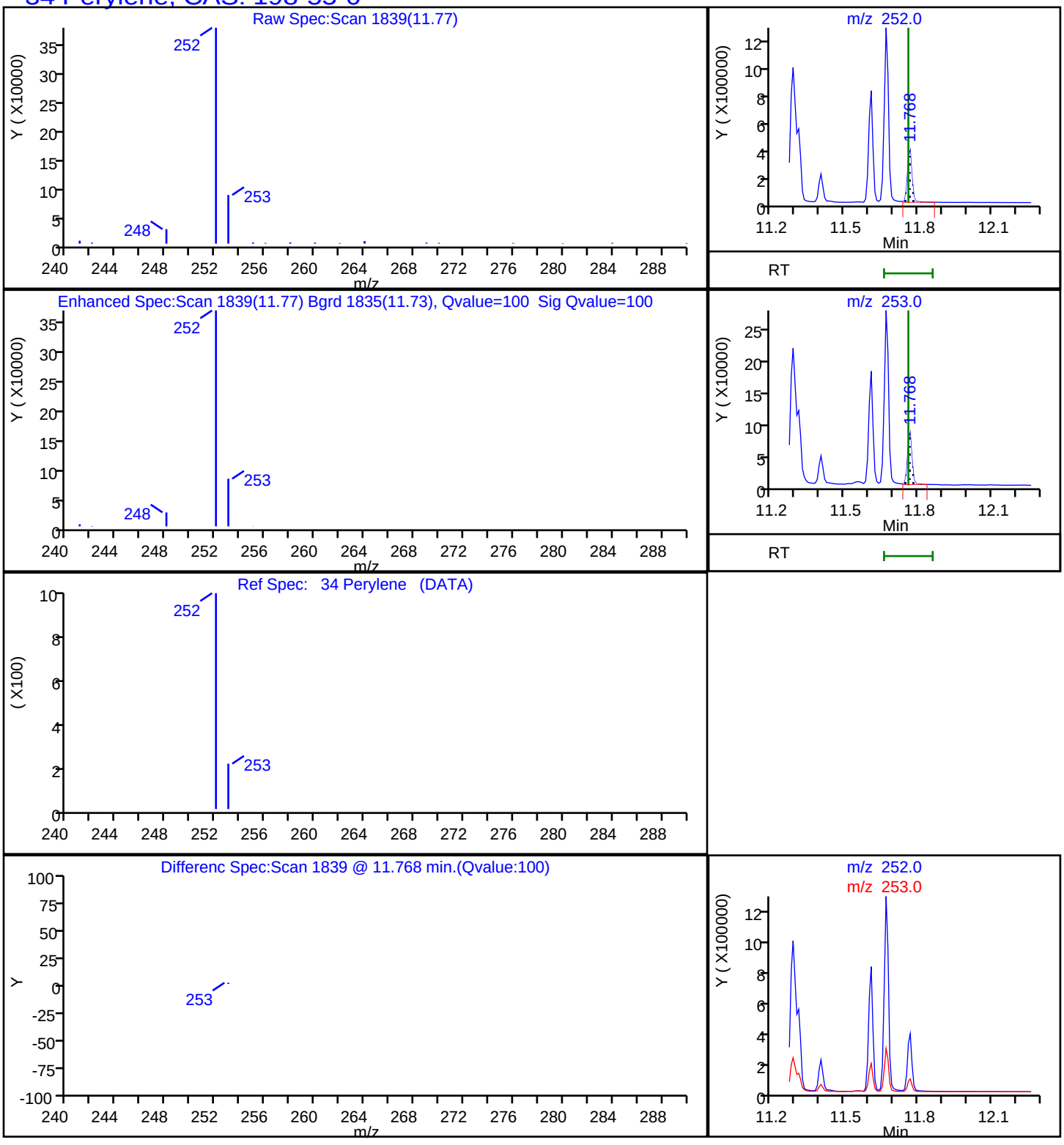


Report Date: 31-Aug-2019 11:49:37 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0



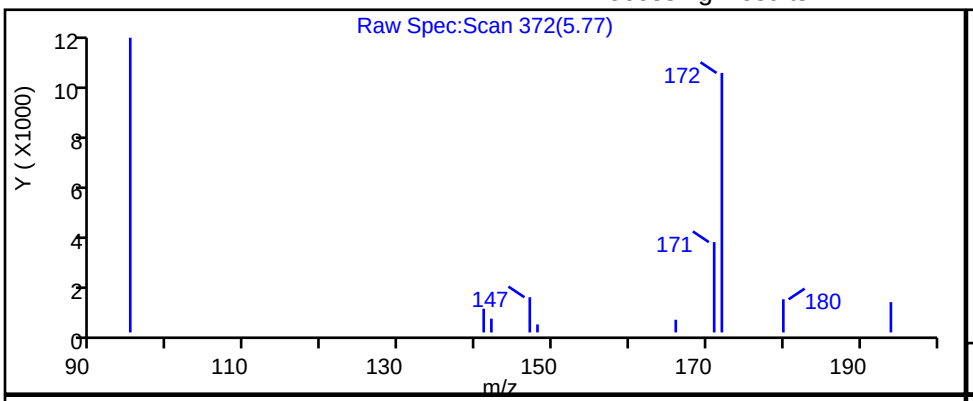
User Disabled Compound Report

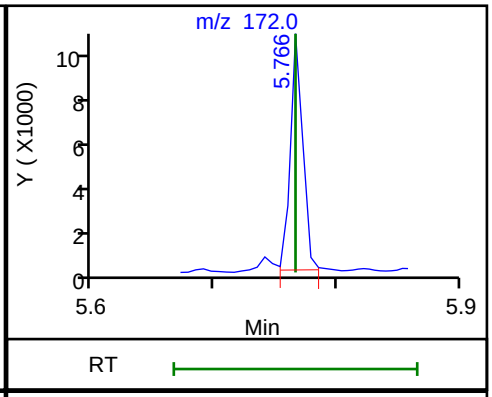
Eurofins TestAmerica, Knoxville

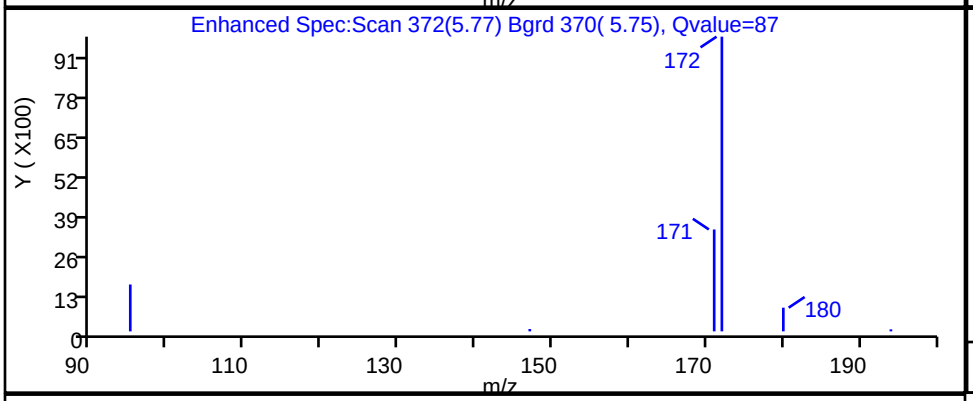
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

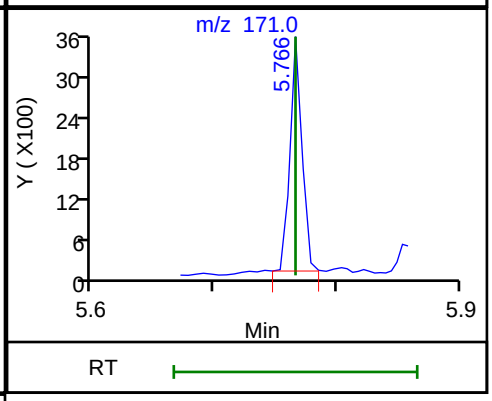
$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

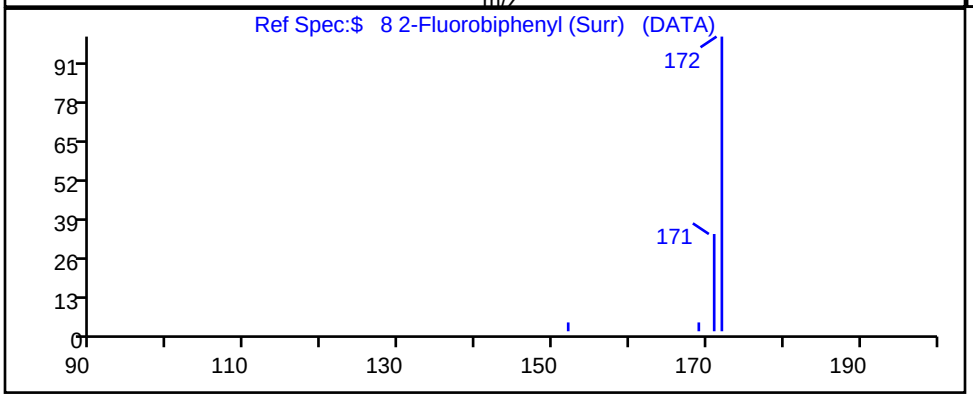
Processing Results











RT	Mass	Response	Amount
5.77	172.00	6991	0.019369
5.77	171.00	2292	

Reviewer: cochranj, 31-Aug-2019 10:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

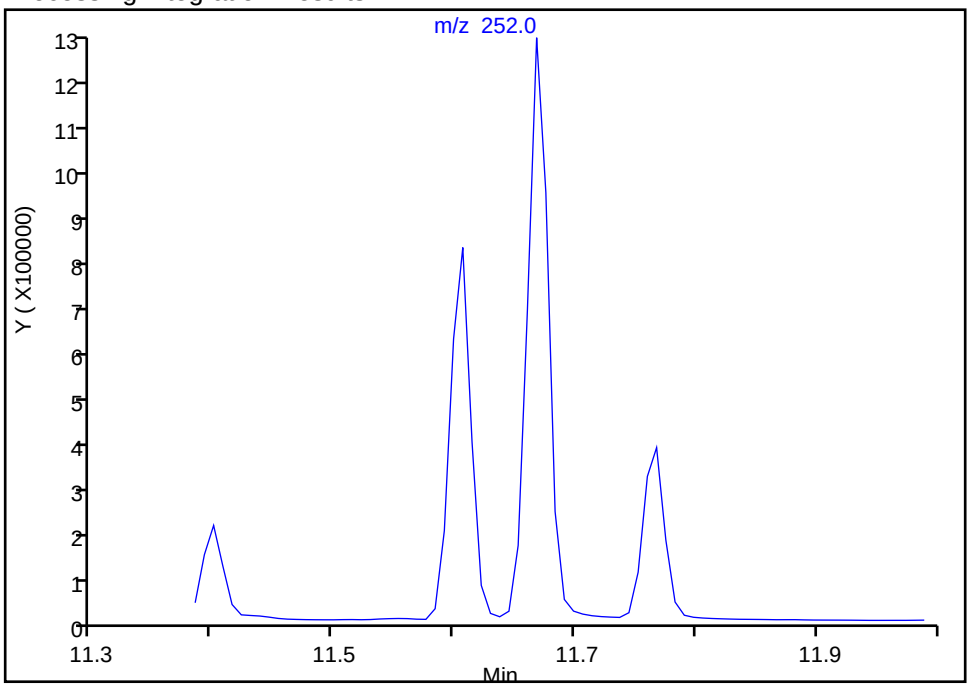
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

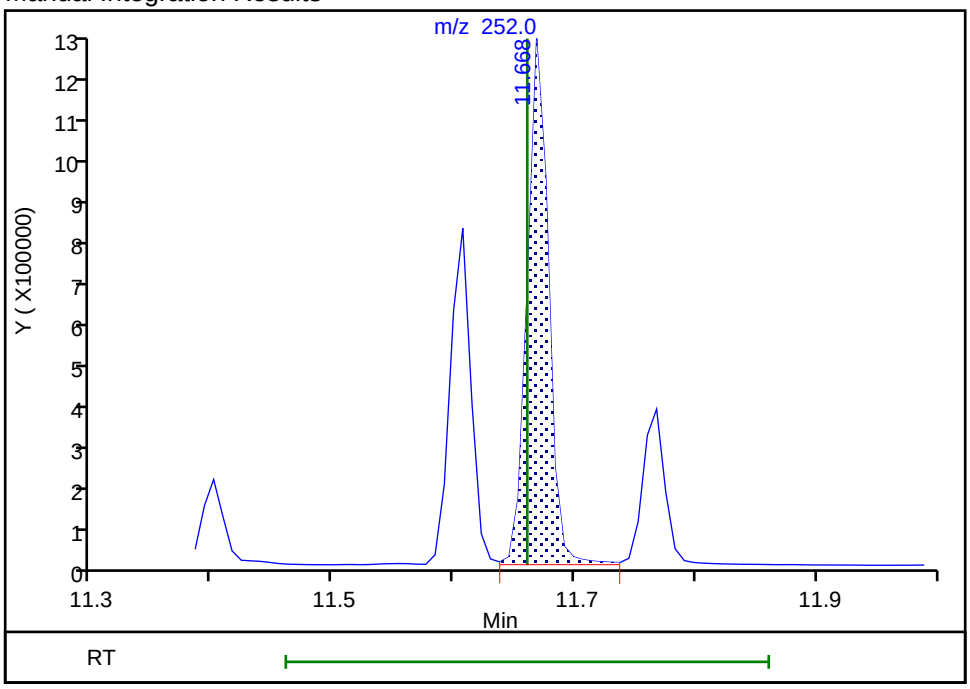
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 1534097
Amount: 3.298230
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:42:57
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

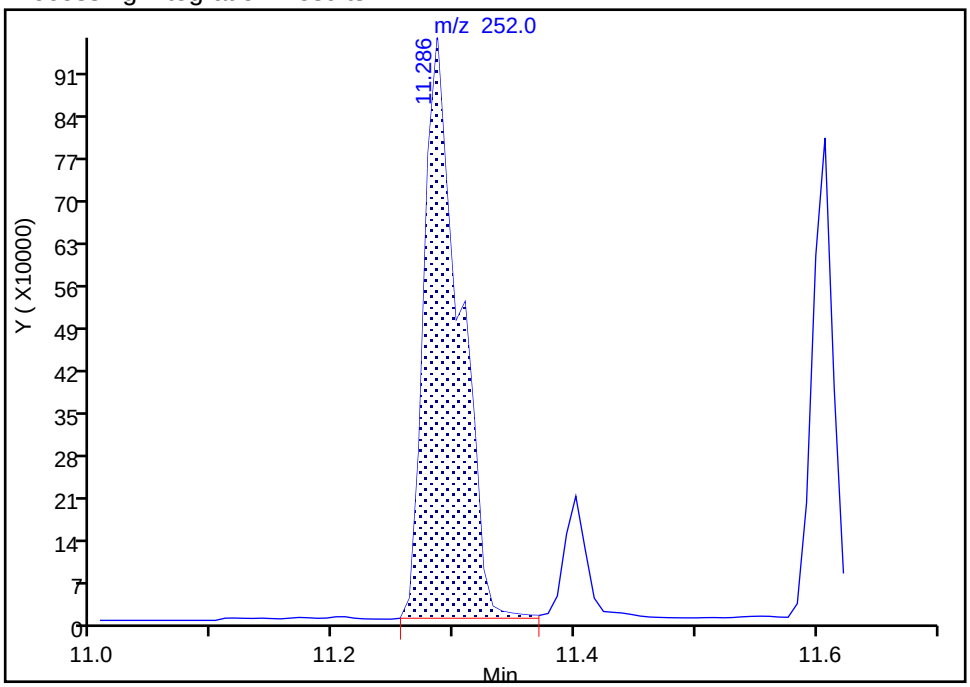
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

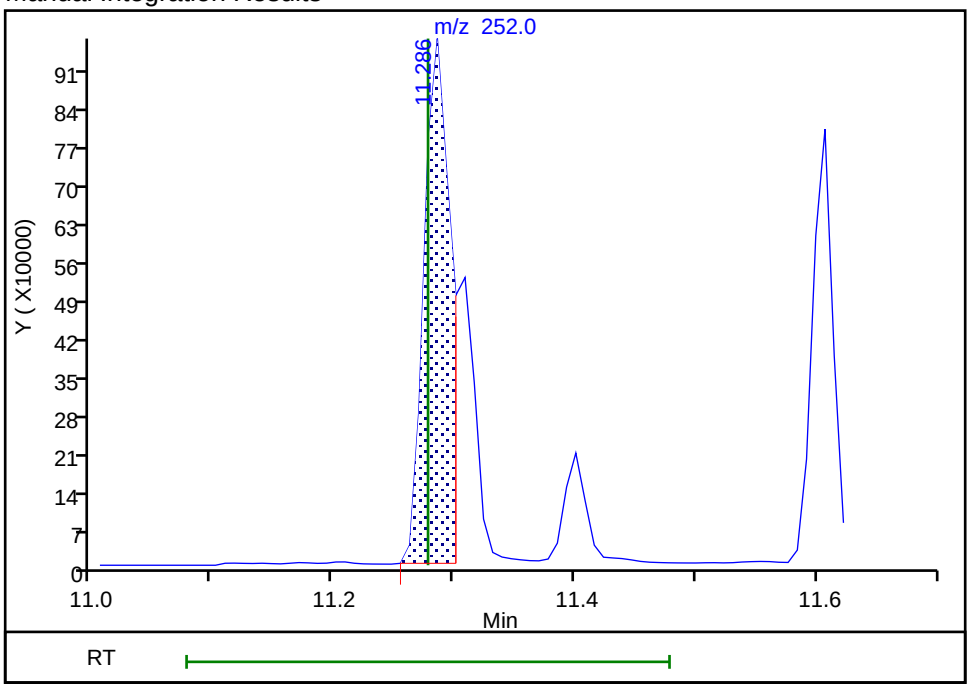
Processing Integration Results

RT: 11.29
Area: 1957555
Amount: 3.620861
Amount Units: ug/ml



Manual Integration Results

RT: 11.29
Area: 1500757
Amount: 2.775928
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:42:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

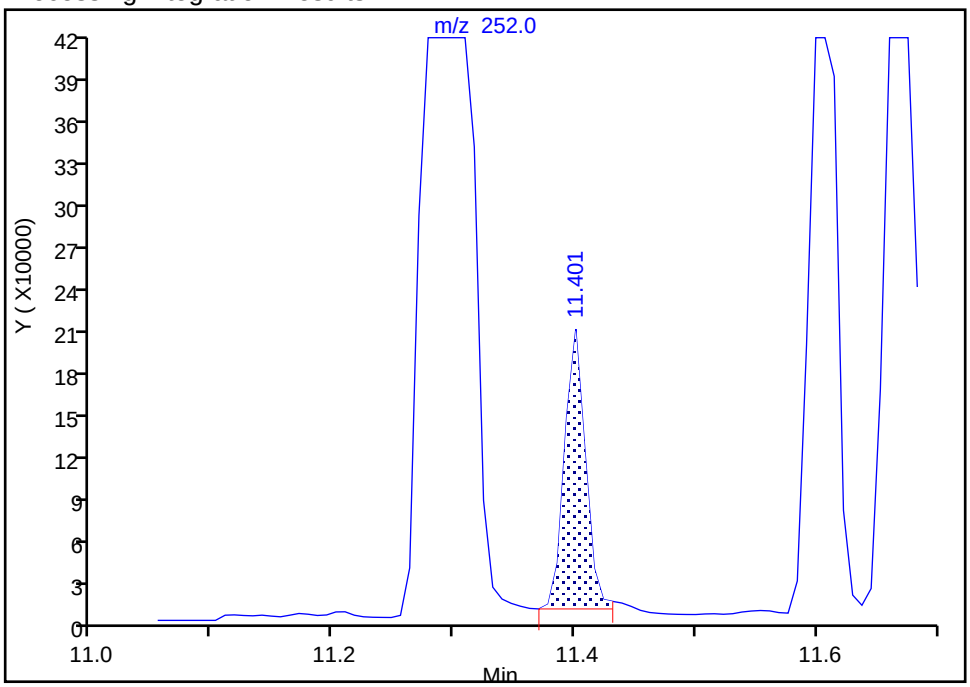
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

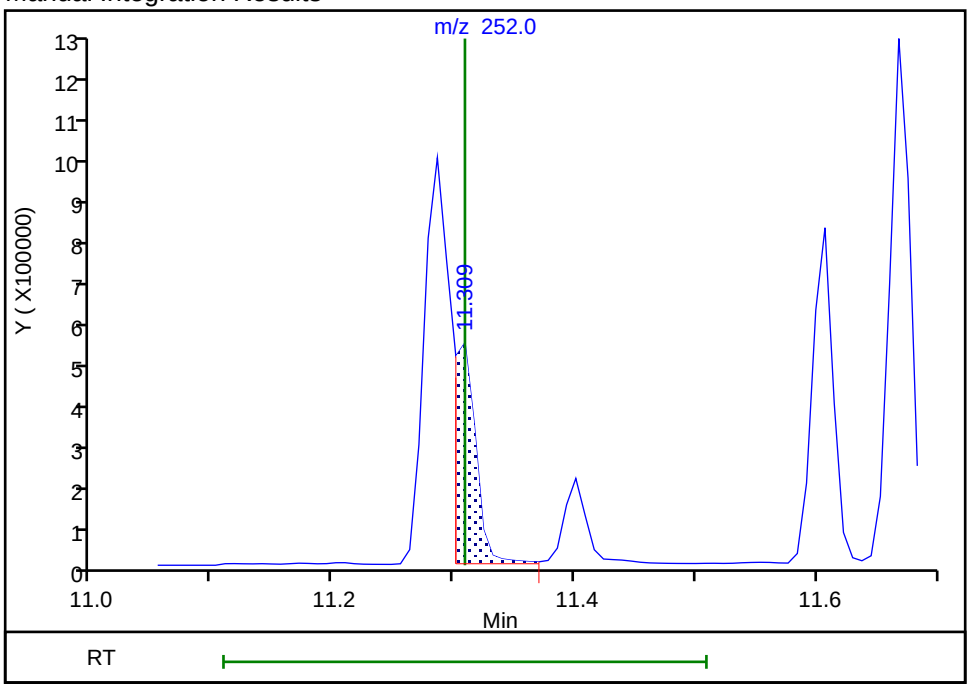
Processing Integration Results

RT: 11.40
Area: 239625
Amount: 0.390819
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 683106
Amount: 1.114119
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:42:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

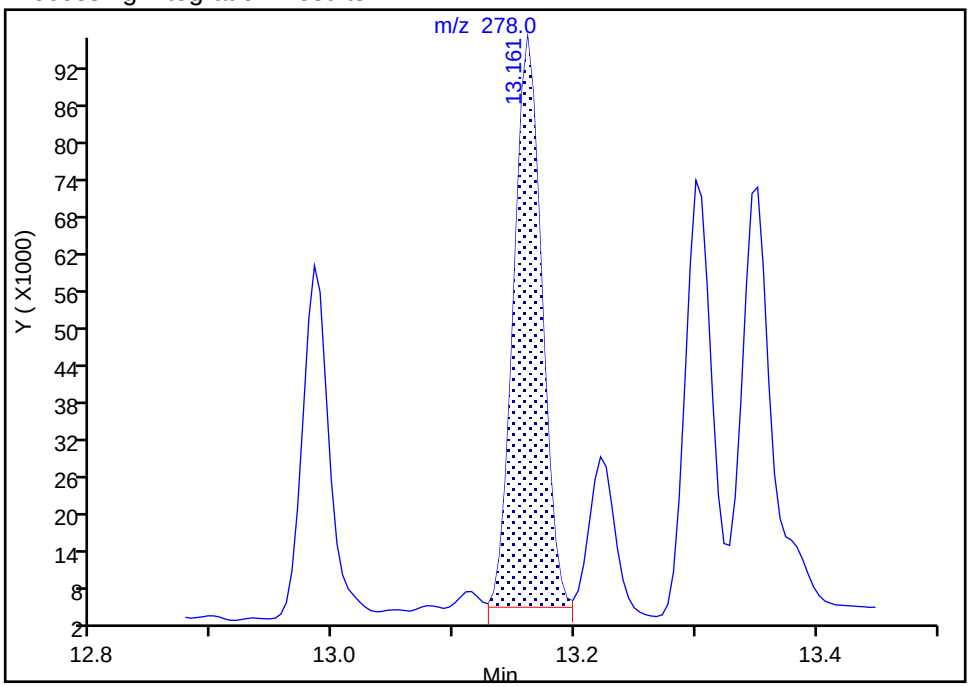
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

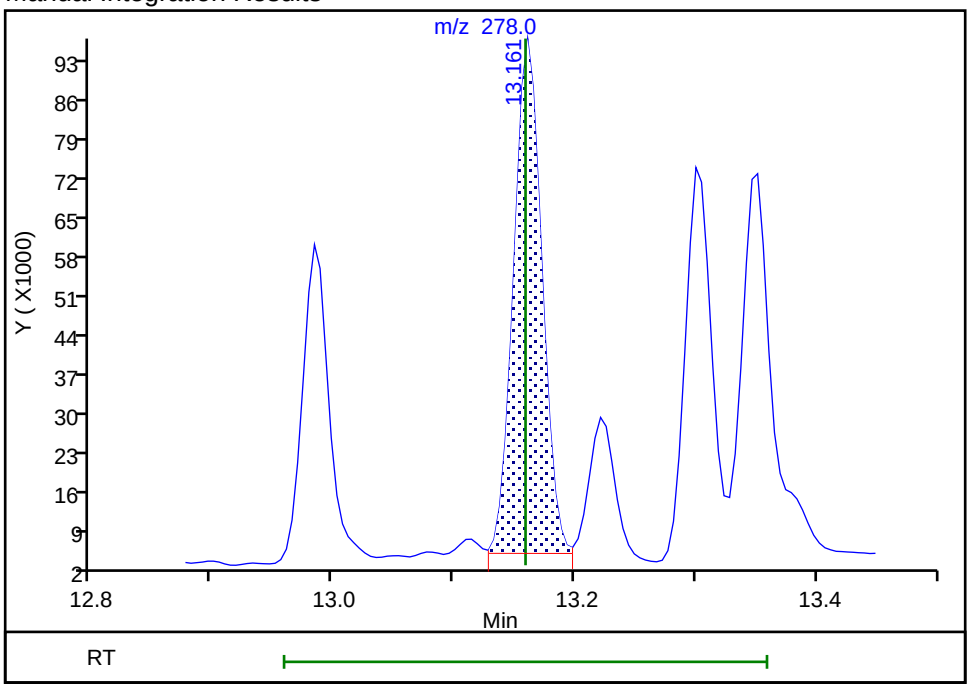
Processing Integration Results

RT: 13.16
Area: 149914
Amount: 0.308843
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 149914
Amount: 0.308843
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 12:43:20

Audit Action: Split an Integrated Peak Audit Reason: Baseline

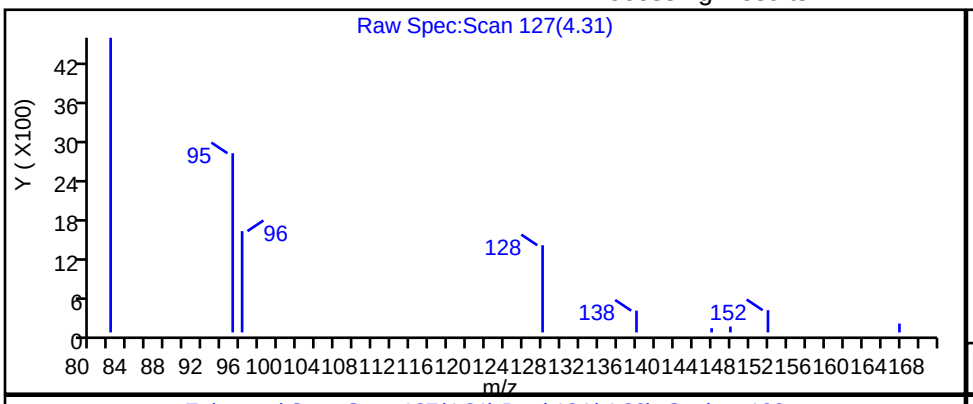
User Disabled Compound Report

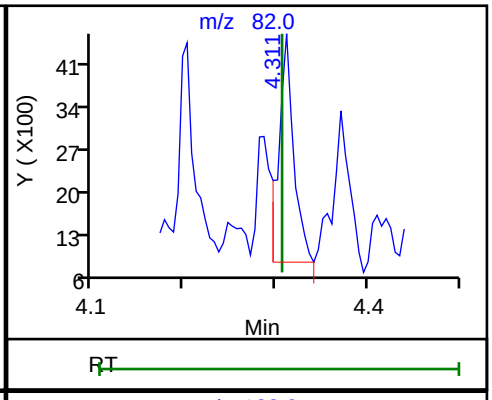
Eurofins TestAmerica, Knoxville

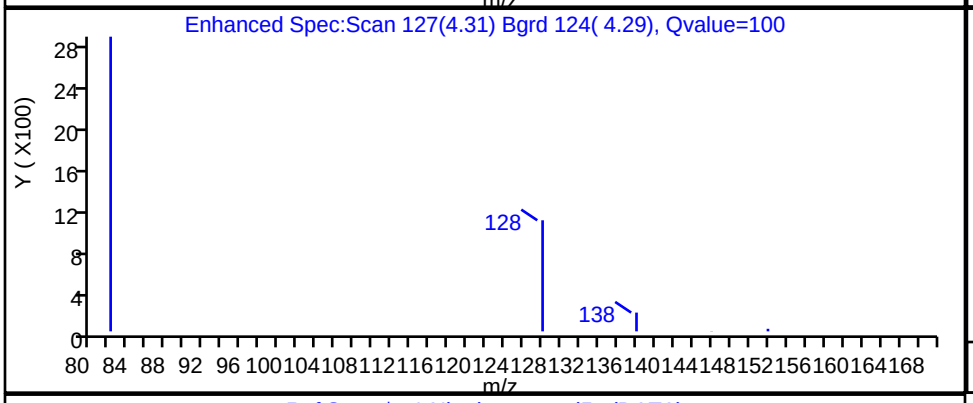
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

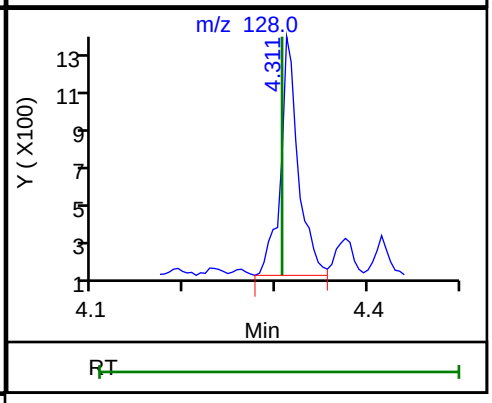
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

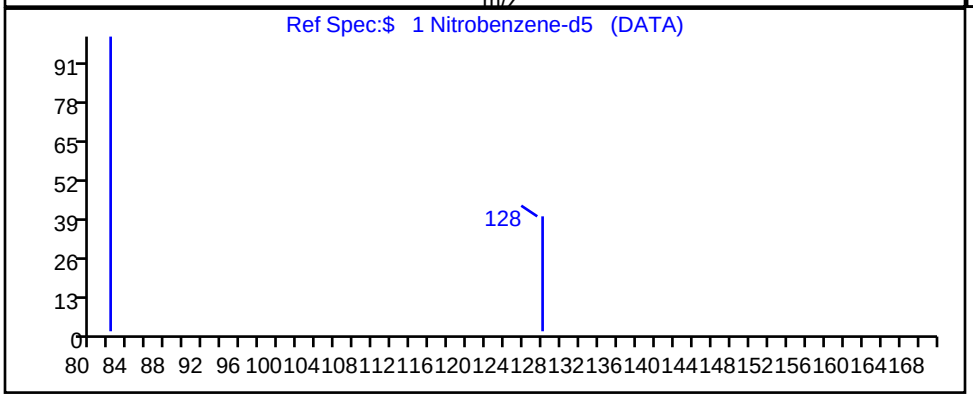
Processing Results











RT	Mass	Response	Amount
4.31	82.00	4244	0.034681
4.31	128.00	1630	

Reviewer: cochranj, 31-Aug-2019 10:59:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

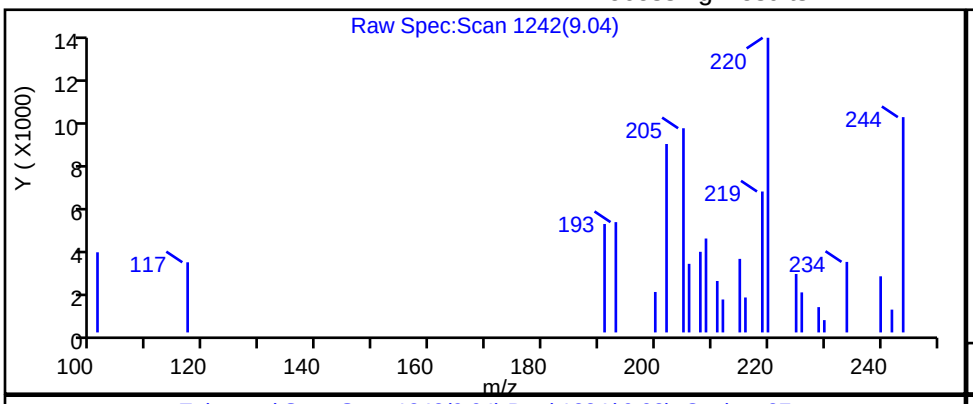
User Disabled Compound Report

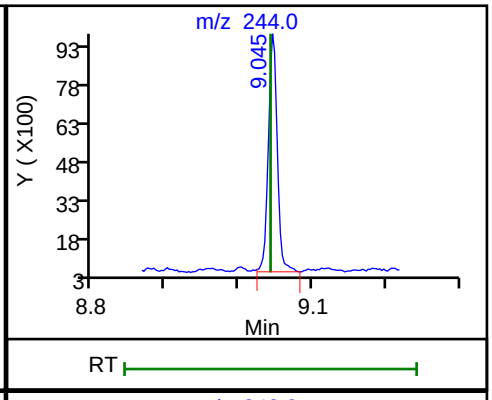
Eurofins TestAmerica, Knoxville

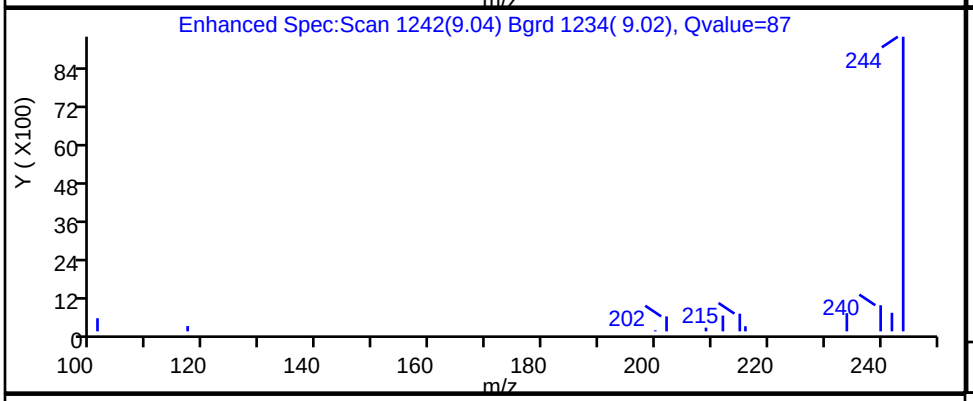
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-23-a.D				
Injection Date:	29-Aug-2019 21:20:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	16	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

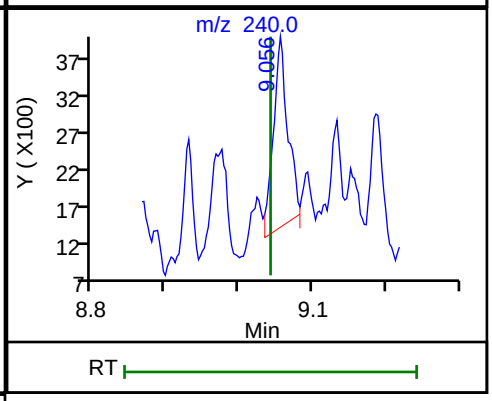
$ 24 Terphenyl-d14, CAS: 1718-51-0

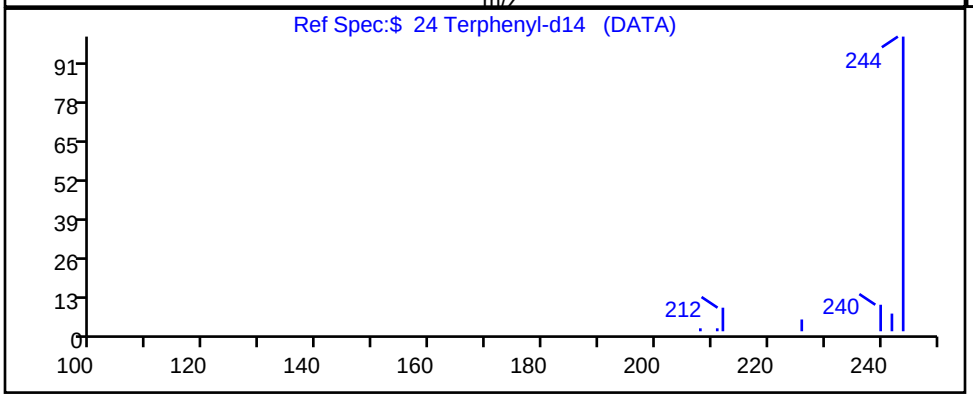
Processing Results











RT	Mass	Response	Amount
9.04	244.00	7969	0.025927
9.06	240.00	3543	

Reviewer: cochranj, 31-Aug-2019 10:59:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-06_20190718 DL Lab Sample ID: 580-87761-23 DL

Matrix: Solid Lab File ID: 580-87761-b-23-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 09:11

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.29(g) Date Analyzed: 08/30/2019 15:44

Con. Extract Vol.: 0.5(mL) Dilution Factor: 100

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 50.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33157 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
206-44-0	Fluoranthene	13000		99	90
85-01-8	Phenanthrene	13000		200	170
129-00-0	Pyrene	15000		200	59

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D
Lims ID: 580-87761-B-23-A
Client ID: 22T-SG-06_20190718
Sample Type: Client
Inject. Date: 30-Aug-2019 15:44:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 100.0000
Sample Info: 140-0012910-014
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:17:09 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 17:41:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	194097	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	140928	0.3299	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	96	25481	0.0910	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	97	14280	0.0535	
11 Acenaphthylene	152	6.216	6.216	0.000	99	19774	0.0572	
* 12 Acenaphthene-d10	164	6.337	6.333	0.004	99	100430	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	104913	0.3926	
16 Fluorene	166	6.793	6.793	0.000	99	87398	0.2957	
17 Dibenzothiophene	184	7.497	7.491	0.006	100	129158	0.3158	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	98	171363	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1128035	2.56	
20 Anthracene	178	7.648	7.648	0.000	100	92675	0.2518	
22 Fluoranthene	202	8.690	8.684	0.006	100	1168967	2.72	
23 Pyrene	202	8.909	8.906	0.003	99	1459578	3.13	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	70	287358	0.7835	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	154230	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	371724	0.8476	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	420221	0.9261	M
30 Benzo[k]fluoranthene	252	11.309	11.301	0.008	100	151521	0.2945	M
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	252848	0.5934	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	403002	1.03	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	166175	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	124434	0.2823	
35 Indeno[1,2,3-cd]pyrene	276	13.154	13.150	0.004	85	284177	0.5921	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	41	41348	0.1015	M
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	99	370470	0.8248	
A 38 C1-Naphthalenes	142	5.507	(5.444-5.596)		0	39080	0.0915	
A 39 C2-Naphthalenes	156	6.076	(5.913-6.239)		0	86421	0.2023	
A 40 C3-Naphthalenes	170	6.557	(6.306-6.809)		0	107858	0.2525	
A 41 C4-Naphthalenes	184	6.933	(6.489-7.384)		0	68797	0.1610	
A 42 C1-Fluorenes	180	7.216	(7.134-7.311)		0	25507	0.0863	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.564-7.934)		0	32077	0.1085	
A 44 C3-Fluorenes	208	8.244	(7.985-8.453)		0	26602	0.0900	
A 45 C1-Dibenzothiophenes	198	7.878	(7.822-8.064)		0	44914	0.1098	
A 46 C2-Dibenzothiophenes	212	8.328	(8.193-8.684)		0	37665	0.0921	
A 47 C3-Dibenzothiophenes	226	8.655	(8.524-9.104)		0	25753	0.0630	
A 48 C4-Dibenzothiophenes	240	9.055	(8.810-9.579)		0	15744	0.0385	
A 49 C1-Phenanthrenes/Anthracen	192	8.092	(8.002-8.183)		0	224419	0.5084	
A 50 C2-Phenanthrenes/Anthracen	206	8.558	(8.341-8.770)		0	116572	0.2641	
A 51 C3-Phenanthrenes/Anthracen	220	8.990	(8.743-9.258)		0	59310	0.1344	
A 52 C4-Phenanthrenes/Anthracen	234	9.323	(8.959-9.683)		0	45577	0.1033	
A 53 C1-Fluoranthenes/pyrene	216	9.313	(9.109-9.496)		0	274612	0.5884	
A 54 C2-Fluoranthenes/Pyrene	230	9.818	(9.584-10.051)		0	69412	0.1487	
A 55 C3-Fluoranthenes/Pyrene	244	10.233	(10.030-10.504)		0	36437	0.0781	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	20828	0.0446	
A 57 C1-Chrysenes	242	10.560	(10.504-10.751)		0	89077	0.2031	
A 58 C2-Chrysenes	256	11.038	(10.919-11.248)		0	32911	0.0750	
A 59 C3-Chrysenes	270	11.515	(11.240-11.890)		0	19010	0.0433	
A 60 C4-Chrysenes	284	11.867	(11.332-12.463)		0	12136	0.0277	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

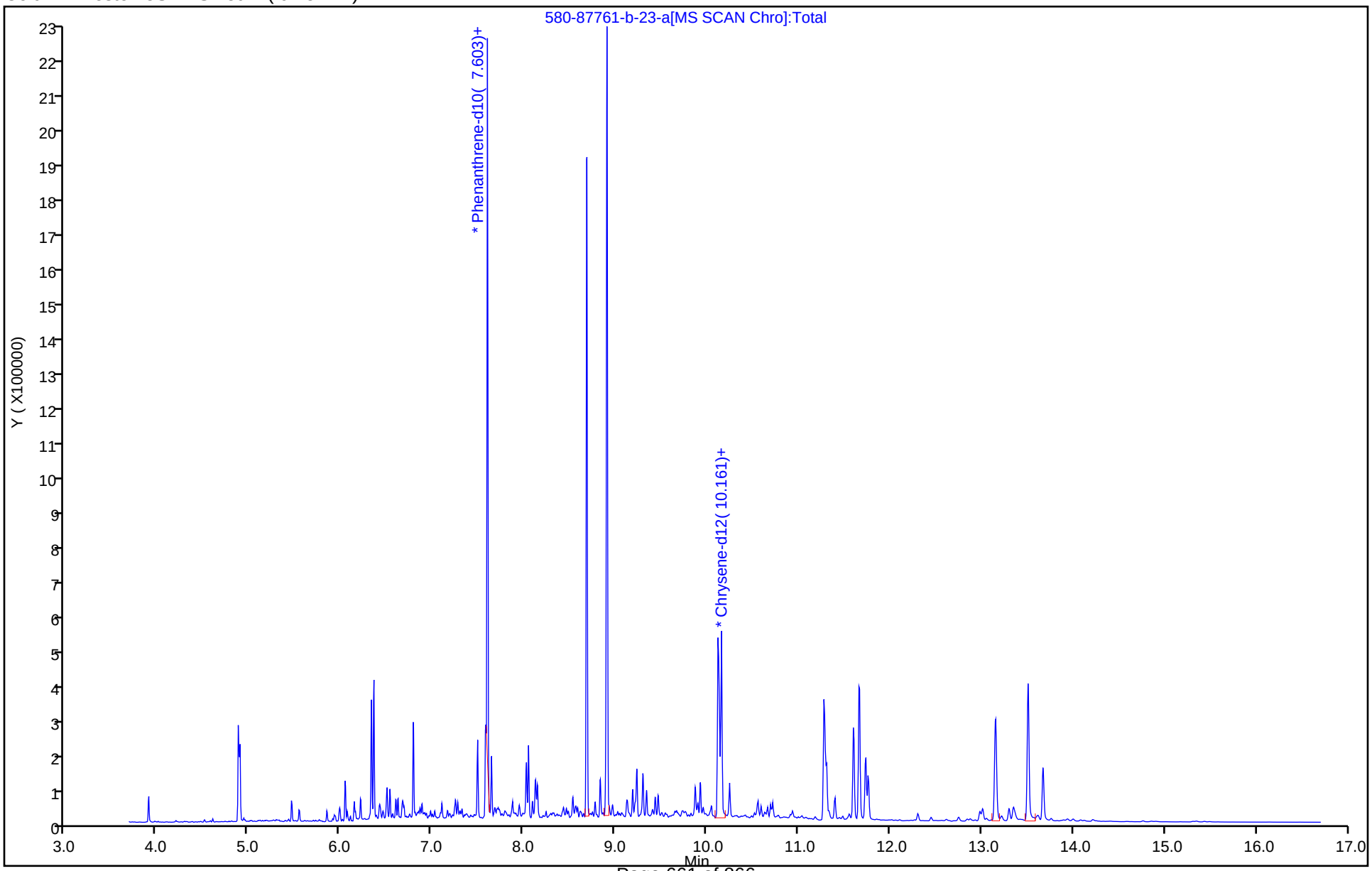
Report Date: 31-Aug-2019 13:17:56 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D

Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23	Worklist Smp#:	14
Client ID:	22T-SG-06_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	100.0000	ALS Bottle#:	14
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

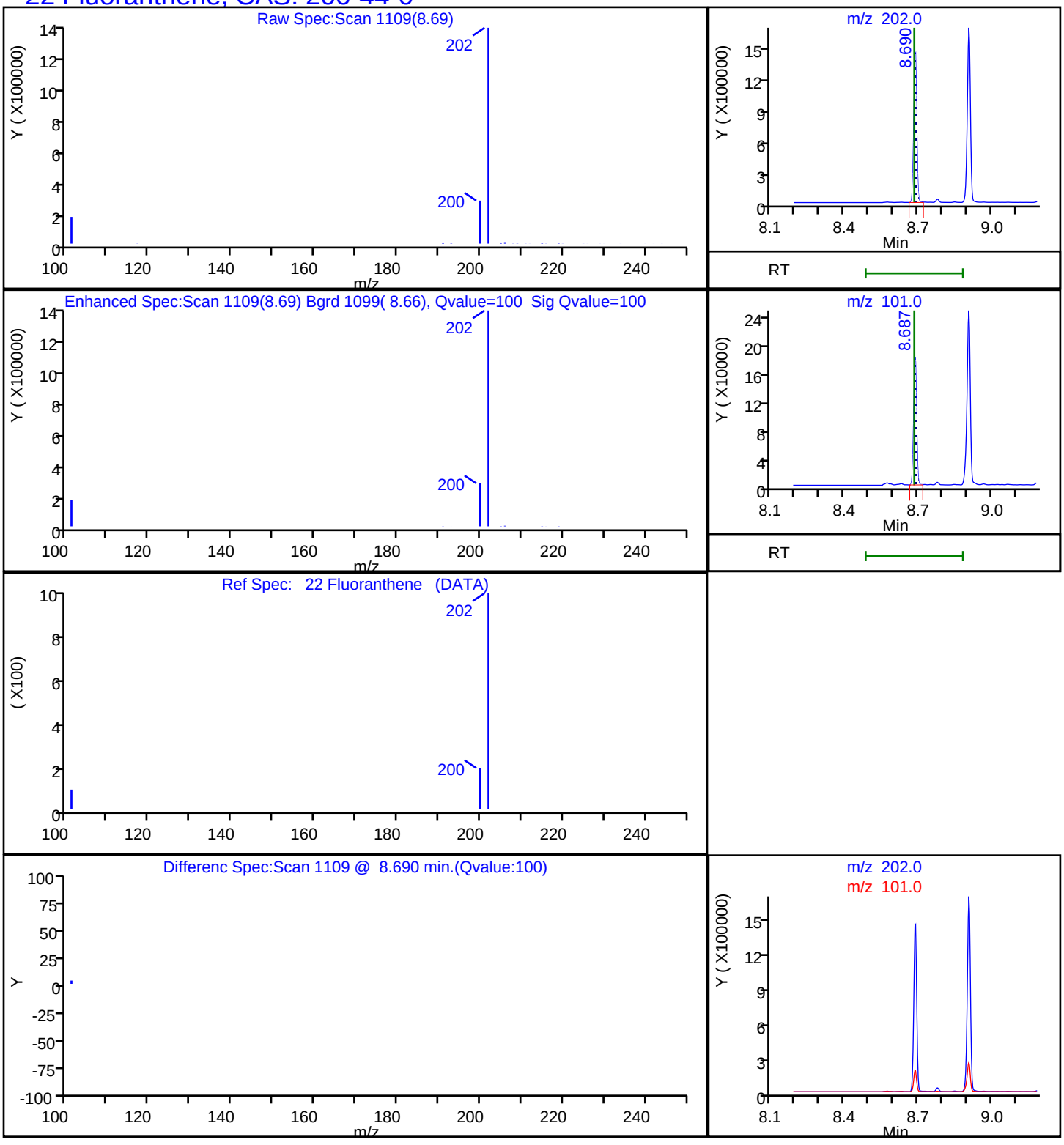


Report Date: 31-Aug-2019 13:17:57 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D				
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

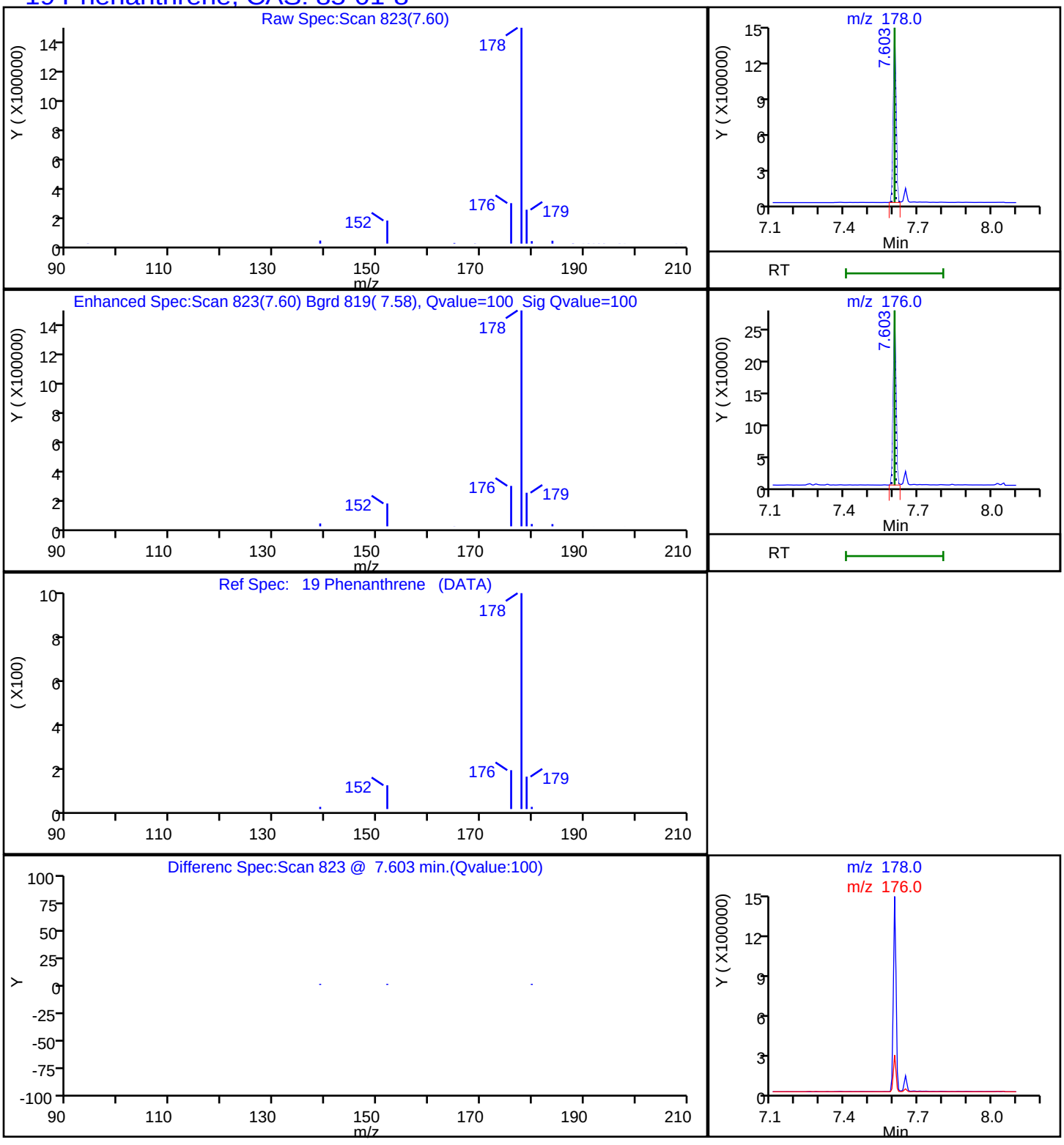


Report Date: 31-Aug-2019 13:17:57 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D				
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8

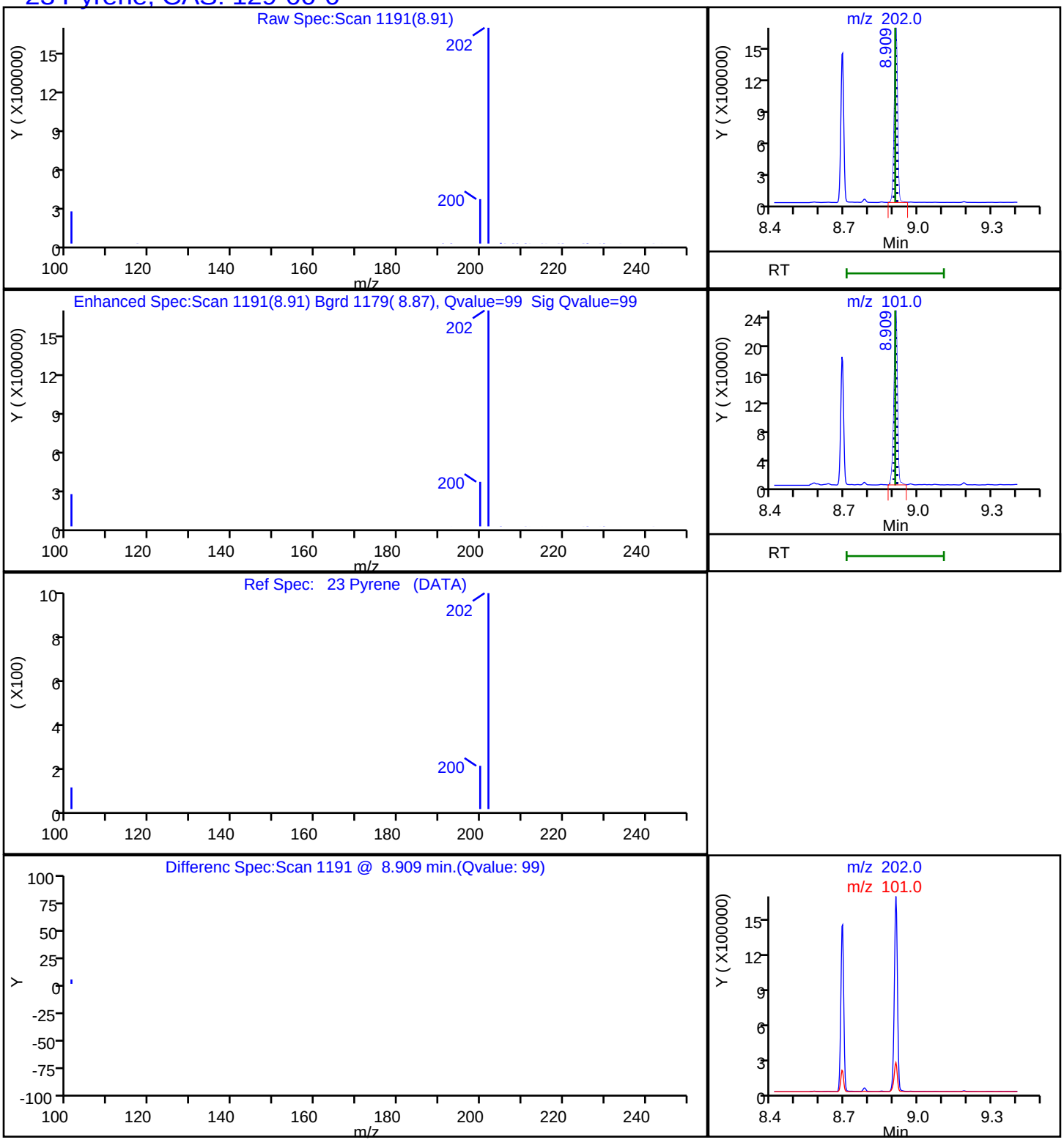


Report Date: 31-Aug-2019 13:17:57 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D				
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



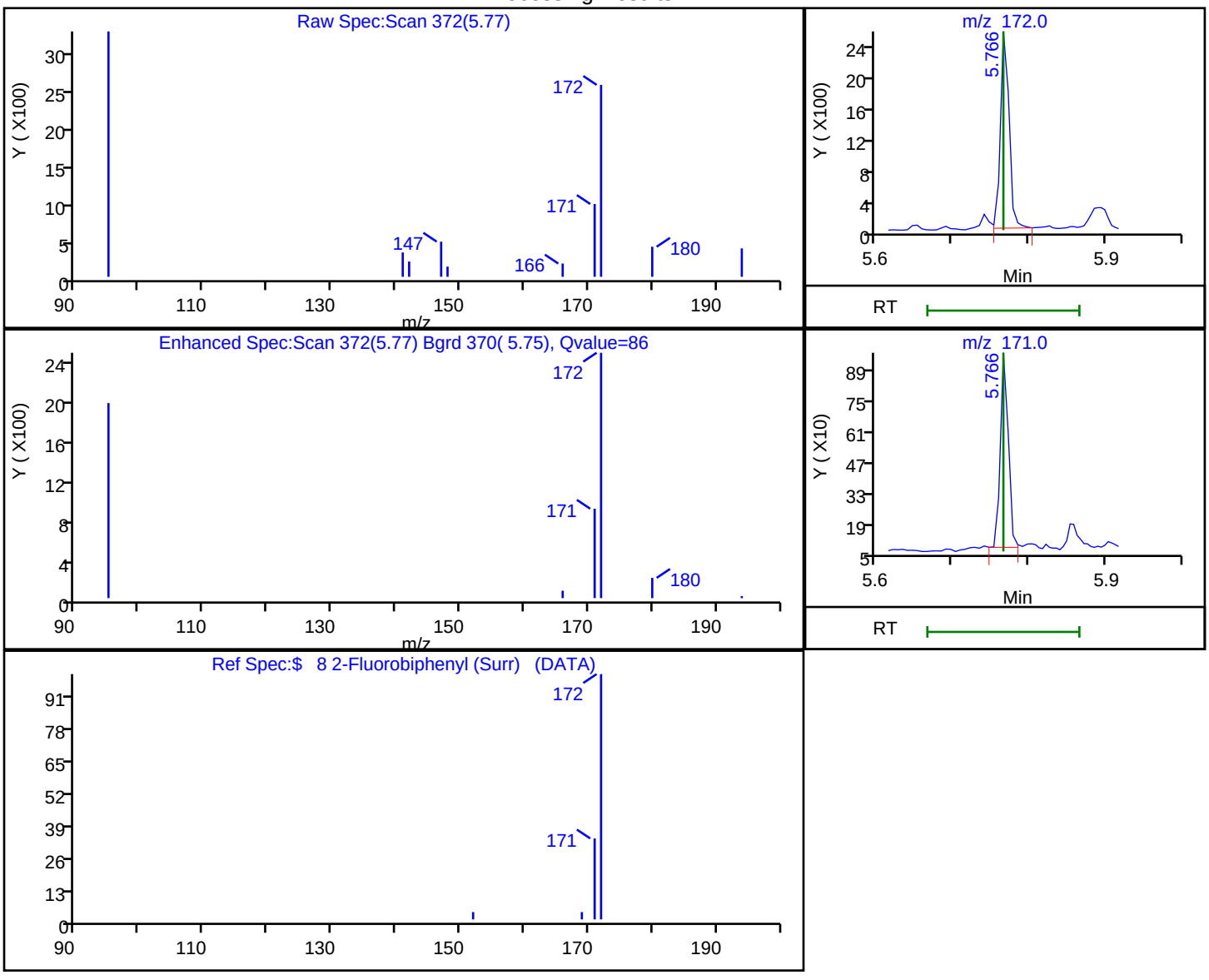
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D		
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23
Client ID:	22T-SG-06_20190718		
Operator ID:	11211	ALS Bottle#:	14 Worklist Smp#: 14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	1949	0.006001
5.77	171.00	646	

Reviewer: cochranj, 31-Aug-2019 13:16:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

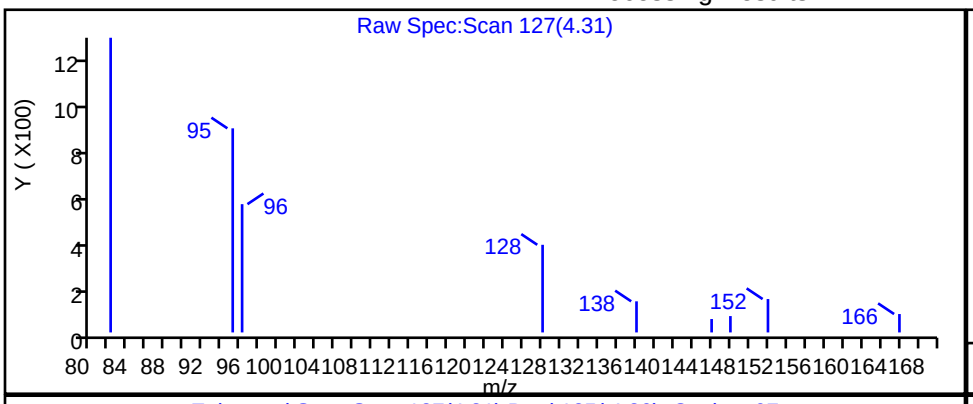
User Disabled Compound Report

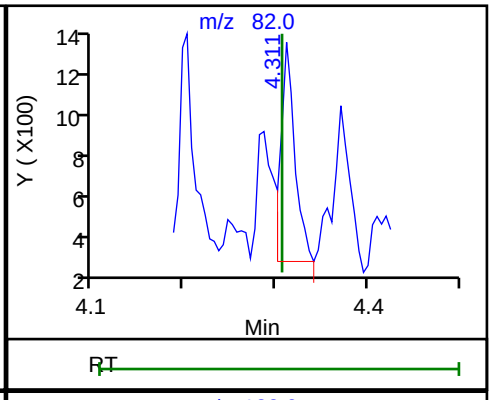
Eurofins TestAmerica, Knoxville

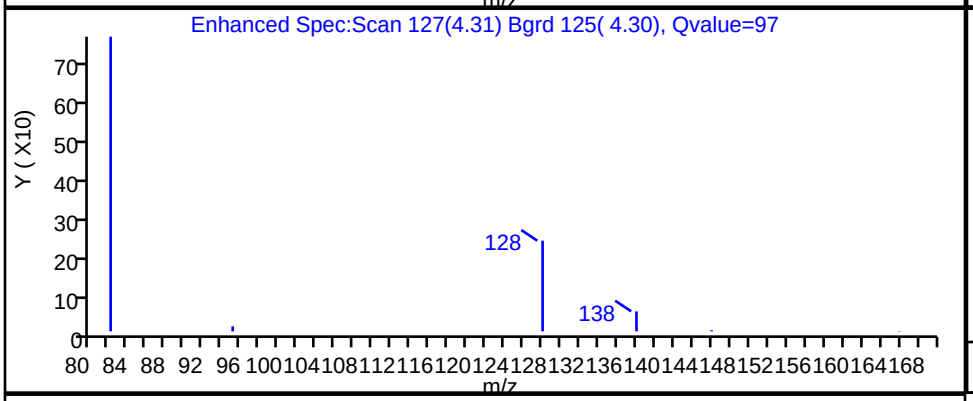
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D				
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

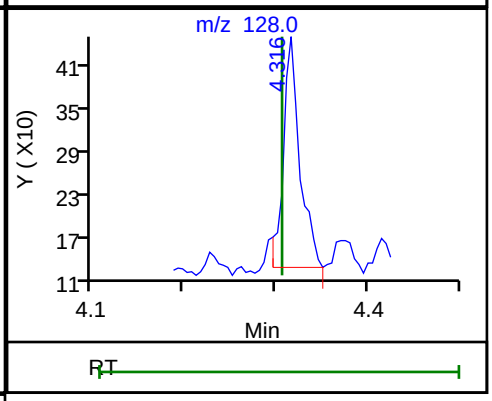
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

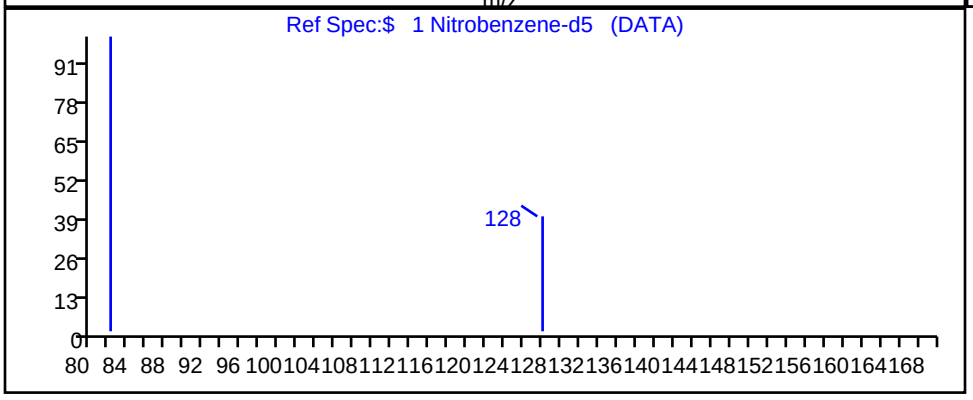
Processing Results











RT	Mass	Response	Amount
4.31	82.00	1035	0.009134
4.32	128.00	397	

Reviewer: cochranj, 31-Aug-2019 13:16:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

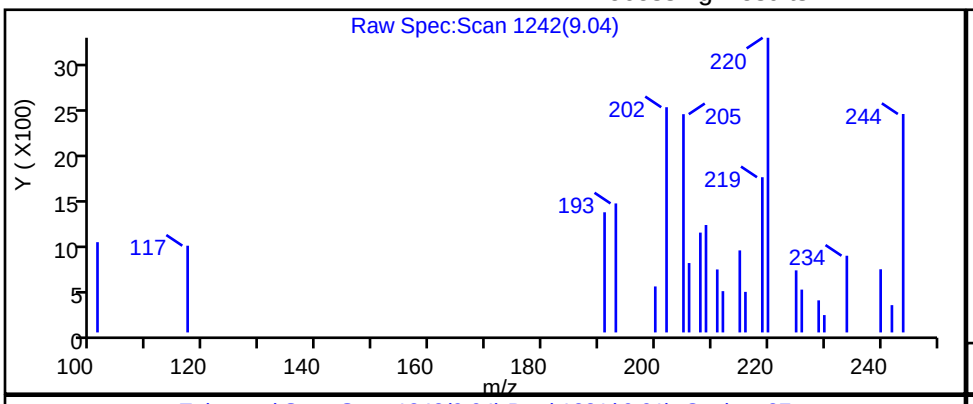
User Disabled Compound Report

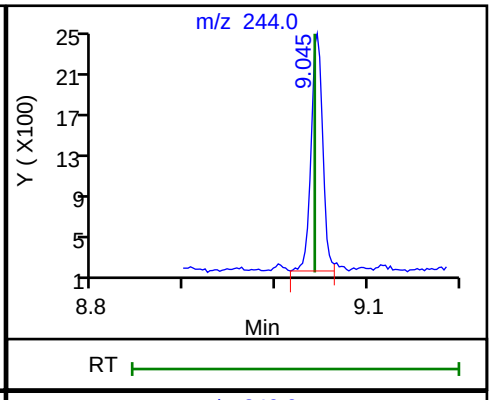
Eurofins TestAmerica, Knoxville

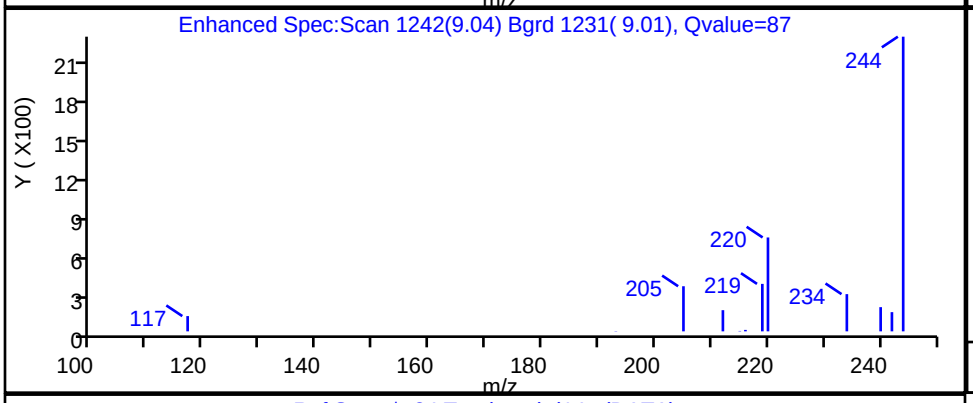
Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\580-87761-b-23-a.D				
Injection Date:	30-Aug-2019 15:44:30	Instrument ID:	MP		
Lims ID:	580-87761-B-23-A	Lab Sample ID:	140-87761-23		
Client ID:	22T-SG-06_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	100.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

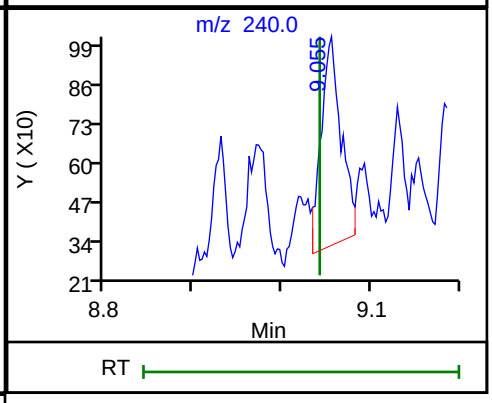
$ 24 Terphenyl-d14, CAS: 1718-51-0

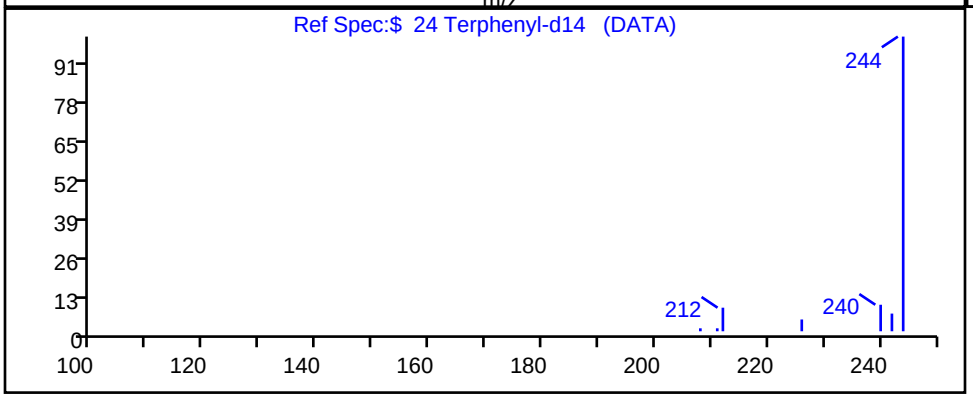
Processing Results











RT	Mass	Response	Amount
9.04	244.00	2009	0.007965
9.06	240.00	1101	

Reviewer: cochranj, 31-Aug-2019 13:16:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-09_20190718 Lab Sample ID: 580-87761-26

Matrix: Solid Lab File ID: 580-87761-b-26-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 10:29

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.01(g) Date Analyzed: 08/29/2019 21:45

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 48.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	340		140	20
91-57-6	2-Methylnaphthalene	770		290	29
83-32-9	Acenaphthene	1500		29	13
208-96-8	Acenaphthylene	230		29	7.2
120-12-7	Anthracene	850		29	23
56-55-3	Benzo[a]anthracene	2200		29	12
50-32-8	Benzo[a]pyrene	2500		29	10
205-99-2	Benzo[b]fluoranthene	2200		29	15
192-97-2	Benzo[e]pyrene	1500		29	9.8
191-24-2	Benzo[g,h,i]perylene	1900		29	17
207-08-9	Benzo[k]fluoranthene	790		29	13
STL00905	C1-Chrysenes	950		29	7.5
STL00909	C1-Dibenzothiophenes	530		29	19
STL00912	C1-Fluoranthenes/pyrene	2100		29	15
STL00913	C1-Fluorenes	500		29	16
STL00916	C1-Naphthalenes	710		290	23
STL00901	C1-Phenanthrenes/Anthracenes	2400		58	32
STL00906	C2-Chrysenes	490		29	9.0
STL00910	C2-Dibenzothiophenes	710		29	27
STL00968	C2-Fluoranthenes/Pyrene	920		29	13
STL00914	C2-Fluorenes	780		58	35
STL00917	C2-Naphthalenes	1100		58	22
STL00902	C2-Phenanthrenes/Anthracenes	2100		120	71
STL00907	C3-Chrysenes	350		29	8.7
STL00911	C3-Dibenzothiophenes	570		58	32
STL00969	C3-Fluoranthenes/Pyrene	570		29	16
STL00915	C3-Fluorenes	700		58	31
STL00918	C3-Naphthalenes	1700		58	28
STL00903	C3-Phenanthrenes/Anthracenes	1200		58	46
STL00908	C4-Chrysenes	220		29	9.8
STL00967	C4-Dibenzothiophenes	320		29	28
STL01791	C4-Fluoranthenes/Pyrene	340		29	11
STL00919	C4-Naphthalenes	1300		120	60
STL00904	C4-Phenanthrenes/Anthracenes	720	AP	58	54

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-09_20190718 Lab Sample ID: 580-87761-26

Matrix: Solid Lab File ID: 580-87761-b-26-a.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 10:29

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.01(g) Date Analyzed: 08/29/2019 21:45

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 48.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	2300		29	11
53-70-3	Dibenz(a,h)anthracene	250		29	17
132-65-0	Dibenzothiophene	830		29	9.8
206-44-0	Fluoranthene	6100		29	26
86-73-7	Fluorene	980		29	14
193-39-5	Indeno[1,2,3-cd]pyrene	1400		29	20
91-20-3	Naphthalene	1700		580	53
198-55-0	Perylene	670		29	5.8
85-01-8	Phenanthrene	5900		58	51
129-00-0	Pyrene	6900		58	17

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D
Lims ID: 580-87761-B-26-A
Client ID: 22T-SG-09_20190718
Sample Type: Client
Inject. Date: 29-Aug-2019 21:45:30 ALS Bottle#: 17 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-025
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 07:45:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	205736	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	539910	1.19	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	157091	0.5295	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	98	65599	0.2321	
11 Acenaphthylene	152	6.216	6.216	0.000	99	59728	0.1564	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	110957	0.5000	M
13 Acenaphthene	153	6.364	6.360	0.004	100	312417	1.06	
16 Fluorene	166	6.793	6.793	0.000	99	220551	0.6754	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	266378	0.5728	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	97	194834	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	2041561	4.07	
20 Anthracene	178	7.648	7.648	0.000	100	244971	0.5853	
22 Fluoranthene	202	8.690	8.687	0.003	99	2043631	4.19	
23 Pyrene	202	8.911	8.906	0.005	99	2608468	4.79	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	638478	1.49	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	179888	0.5000	
28 Chrysene	228	10.161	10.161	0.000	98	823117	1.61	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	833803	1.55	M
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	333355	0.5476	Ma
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	516499	1.02	
32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	799372	1.73	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	196605	0.5000	
34 Perylene	252	11.767	11.760	0.007	100	240912	0.4619	
35 Indeno[1,2,3-cd]pyrene	276	13.156	13.150	0.006	86	541836	0.9541	
36 Dibenz(a,h)anthracene	278	13.156	13.159	-0.003	40	83056	0.1723	M
37 Benzo[g,h,i]perylene	276	13.509	13.508	0.001	98	688656	1.30	
A 38 C1-Naphthalenes	142	5.520	(5.454-5.583)		0	223293	0.4931	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	354954	0.7839	
A 40 C3-Naphthalenes	170	6.555	(6.323-6.820)		0	519469	1.15	
A 41 C4-Naphthalenes	184	6.946	(6.483-7.421)		0	401392	0.8864	
A 42 C1-Fluorenes	180	7.279	(7.219-7.413)		0	112378	0.3441	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
A 43 C2-Fluorenes	194	7.687	(7.565-7.939)		0	175208	0.5365	
A 44 C3-Fluorenes	208	8.132	(7.989-8.454)		0	157386	0.4820	
A 45 C1-Dibenzothiophenes	198	7.959	(7.827-8.065)		0	170961	0.3676	
A 46 C2-Dibenzothiophenes	212	8.328	(8.209-8.703)		0	228255	0.4908	
A 47 C3-Dibenzothiophenes	226	8.655	(8.529-9.109)		0	183536	0.3947	
A 48 C4-Dibenzothiophenes	240	9.240	(8.814-9.591)		0	101462	0.2182	
A 49 C1-Phenanthrenes/Anthracen	192	8.052	(8.020-8.193)		0	840610	1.68	
A 50 C2-Phenanthrenes/Anthracen	206	8.537	(8.358-8.785)		0	713008	1.42	
A 51 C3-Phenanthrenes/Anthracen	220	8.999	(8.747-9.260)		0	429396	0.8557	
A 52 C4-Phenanthrenes/Anthracen	234	9.192	(8.966-9.686)		0	250968	0.5001	
A 53 C1-Fluoranthenes/pyrene	216	9.300	(9.112-9.500)		0	788103	1.45	
A 54 C2-Fluoranthenes/Pyrene	230	9.807	(9.587-10.039)		0	347461	0.6383	
A 55 C3-Fluoranthenes/Pyrene	244	10.232	(10.043-10.519)		0	214640	0.3943	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.371-10.864)		0	127511	0.2342	
A 57 C1-Chrysenes	242	10.611	(10.512-10.741)		0	333909	0.6528	
A 58 C2-Chrysenes	256	11.038	(10.937-11.264)		0	174508	0.3412	
A 59 C3-Chrysenes	270	11.515	(11.245-11.890)		0	124586	0.2436	
A 60 C4-Chrysenes	284	11.867	(11.332-12.465)		0	76173	0.1489	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

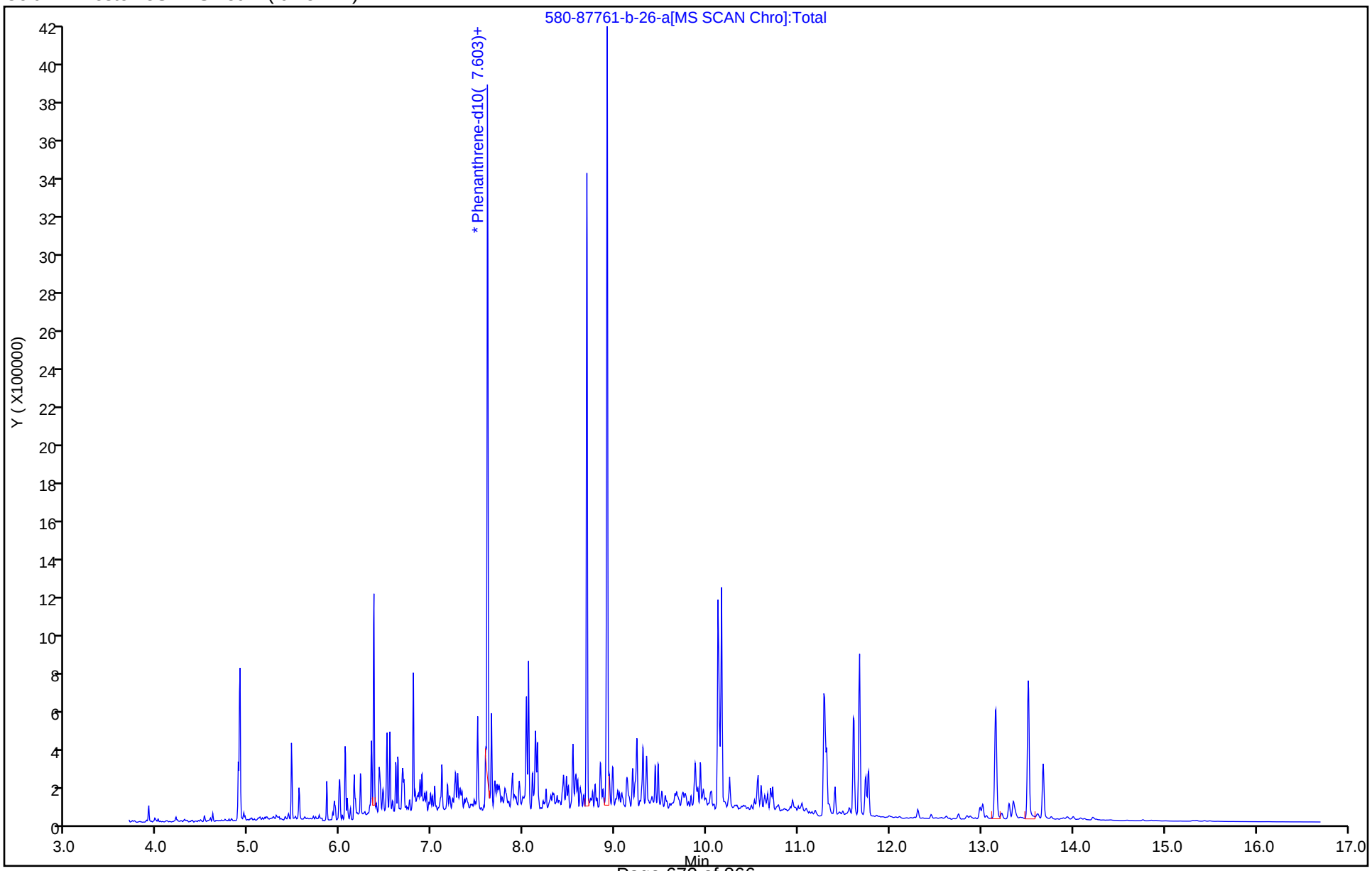
Report Date: 31-Aug-2019 11:49:39 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26	Worklist Smp#:	25
Client ID:	22T-SG-09_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	17
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)

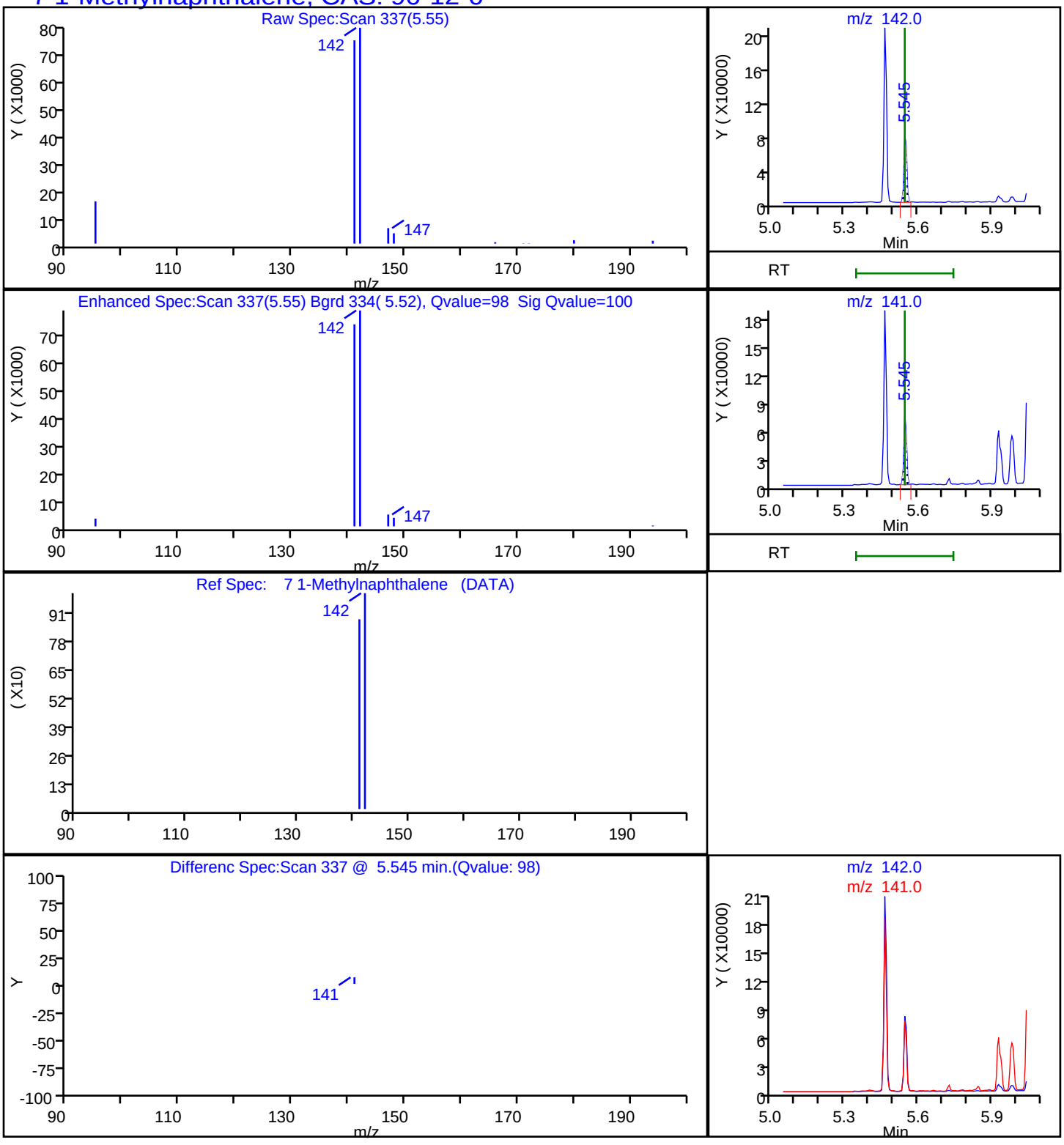


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

7 1-Methylnaphthalene, CAS: 90-12-0



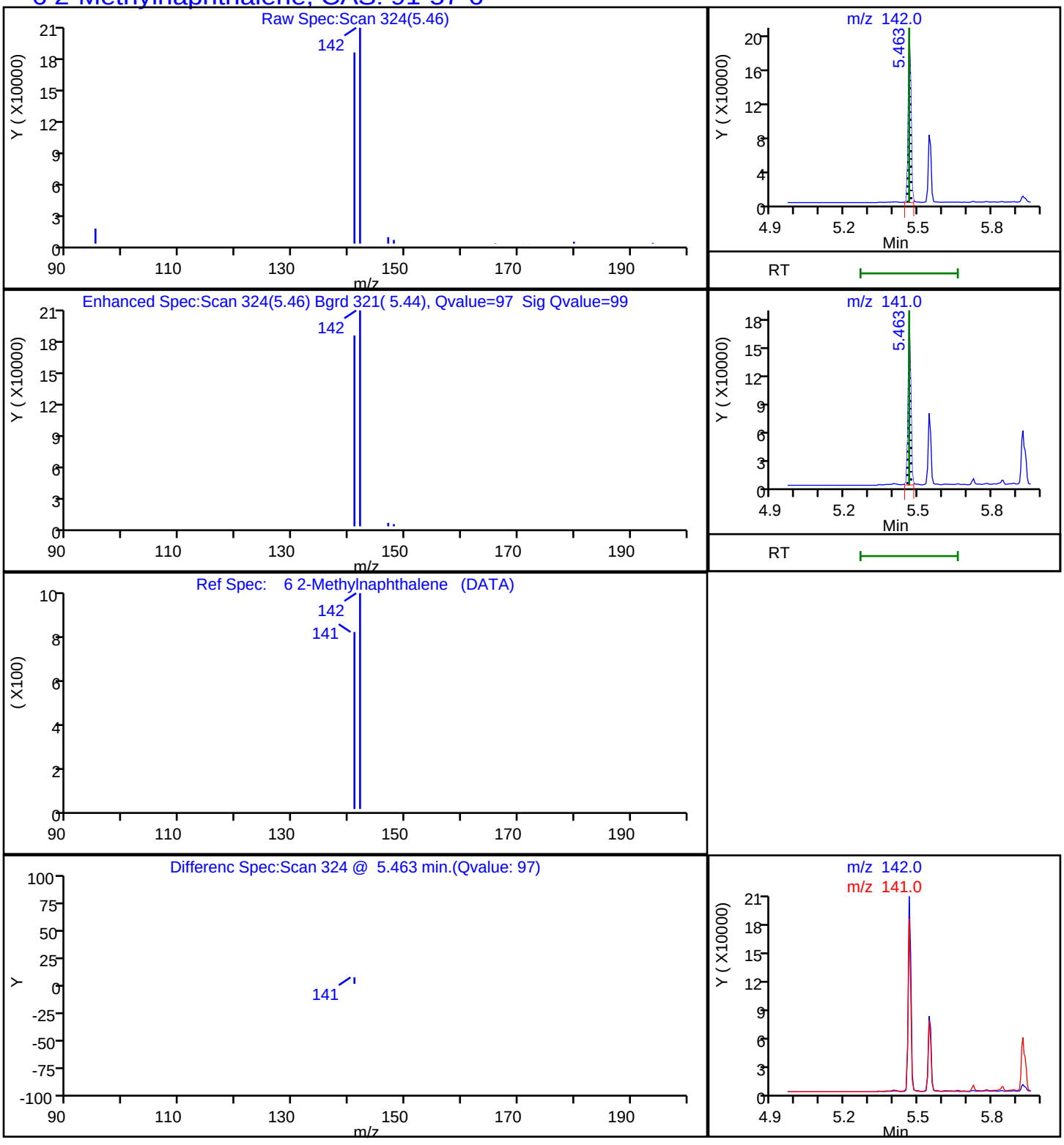
Report Date: 31-Aug-2019 11:49:39 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

6 2-Methylnaphthalene, CAS: 91-57-6

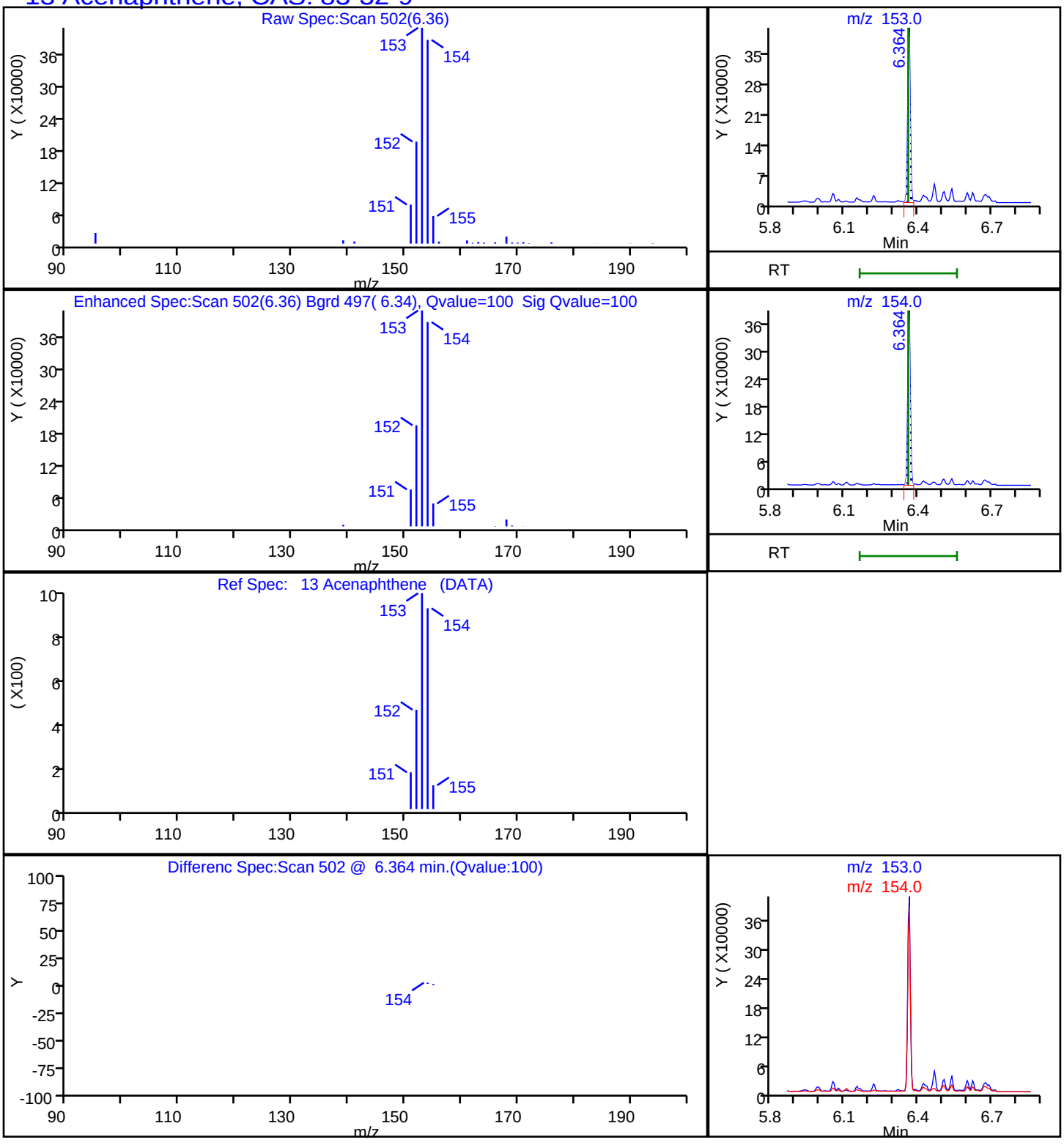


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

13 Acenaphthene, CAS: 83-32-9



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
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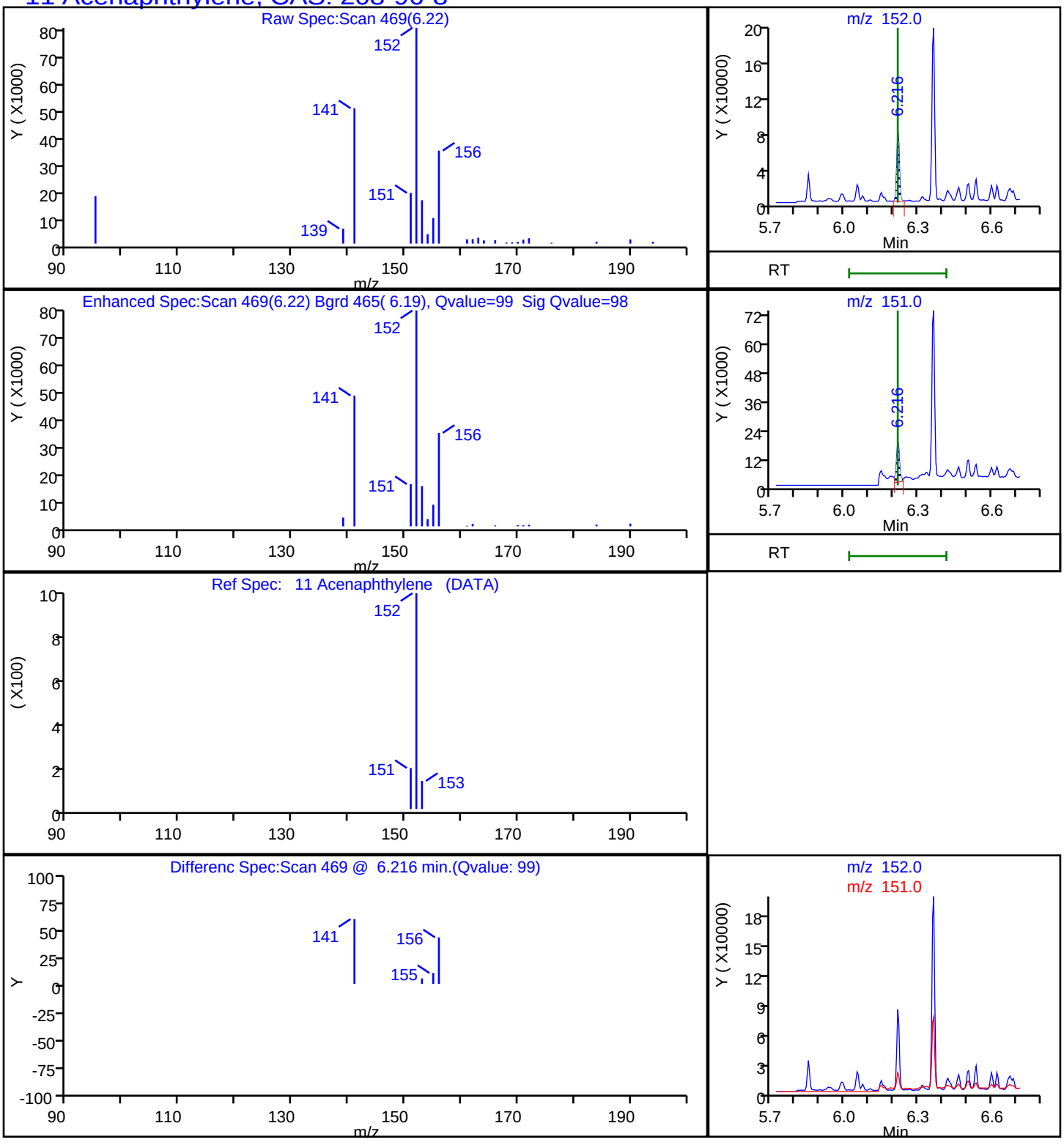
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

11 Acenaphthylene, CAS: 208-96-8



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
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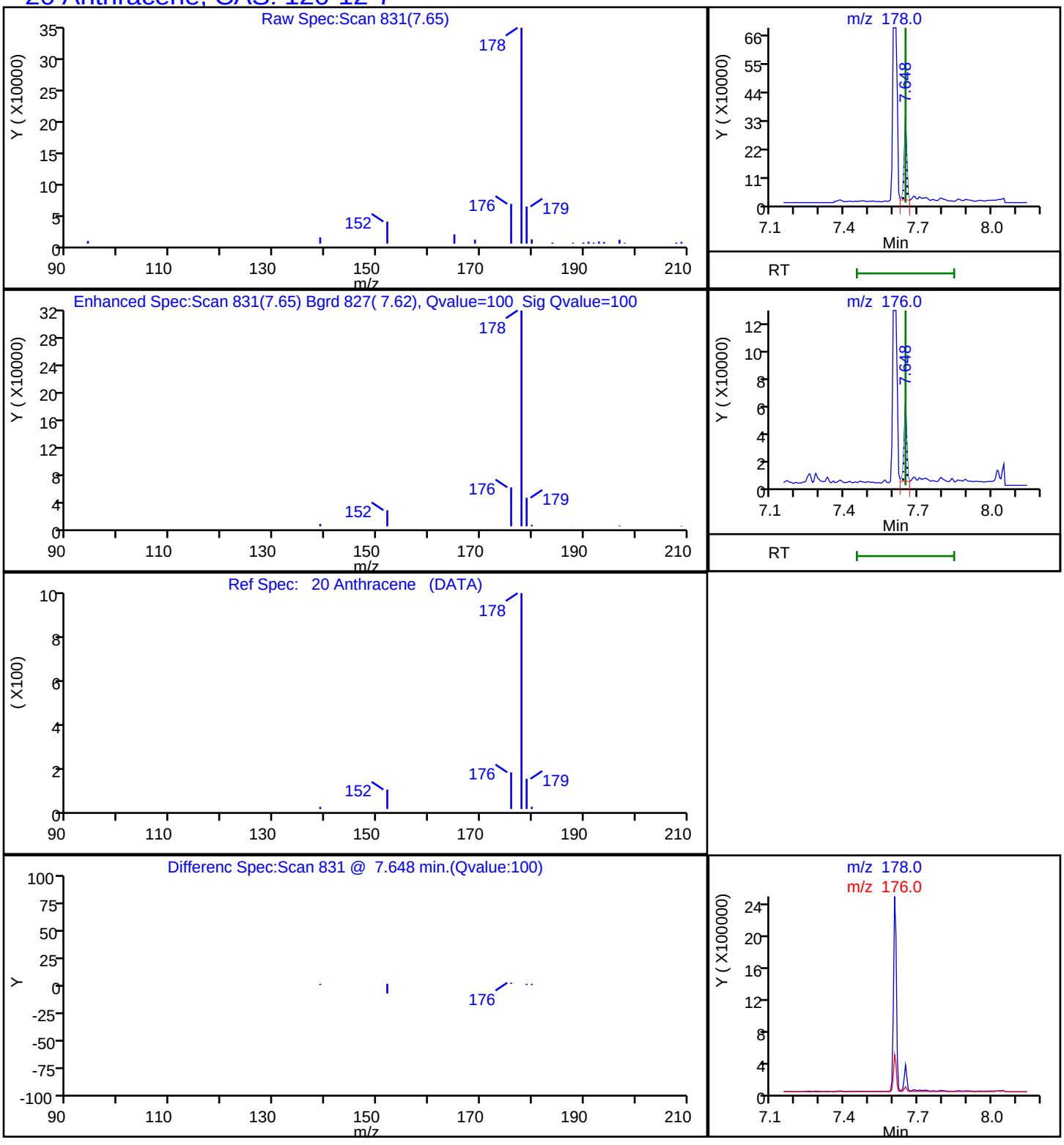
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

20 Anthracene, CAS: 120-12-7

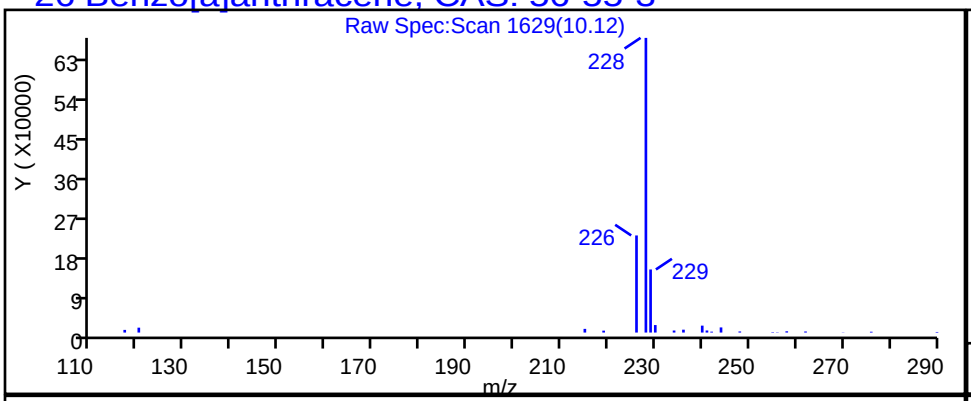


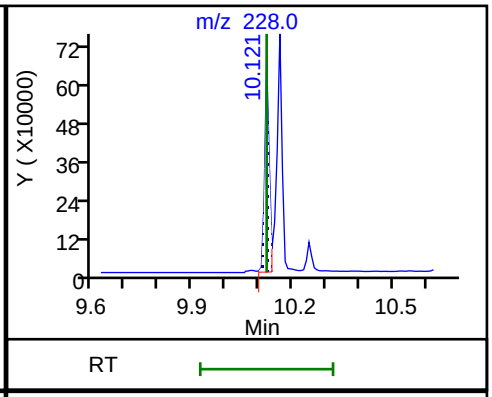
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

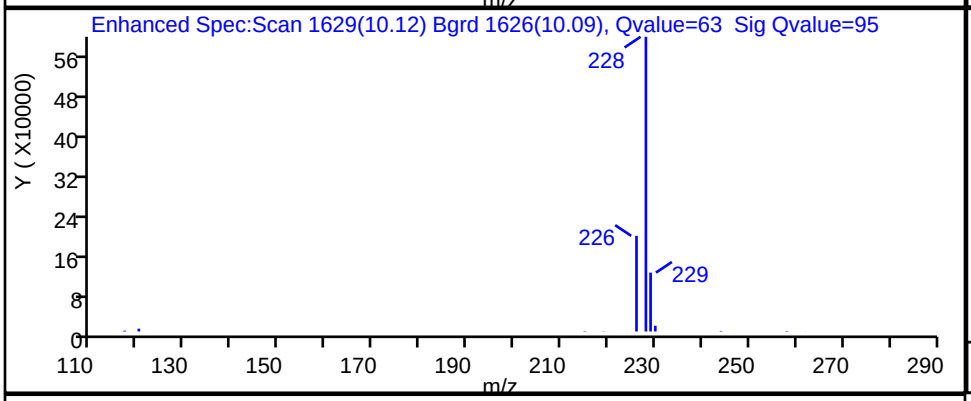
Eurofins TestAmerica, Knoxville

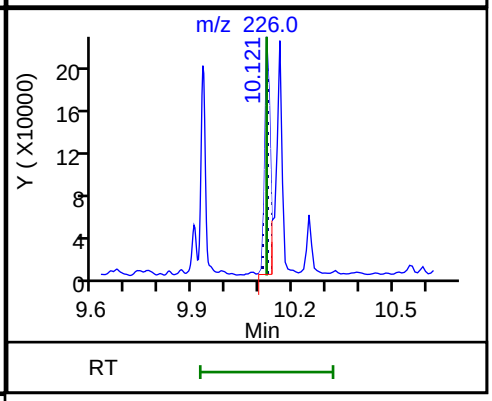
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

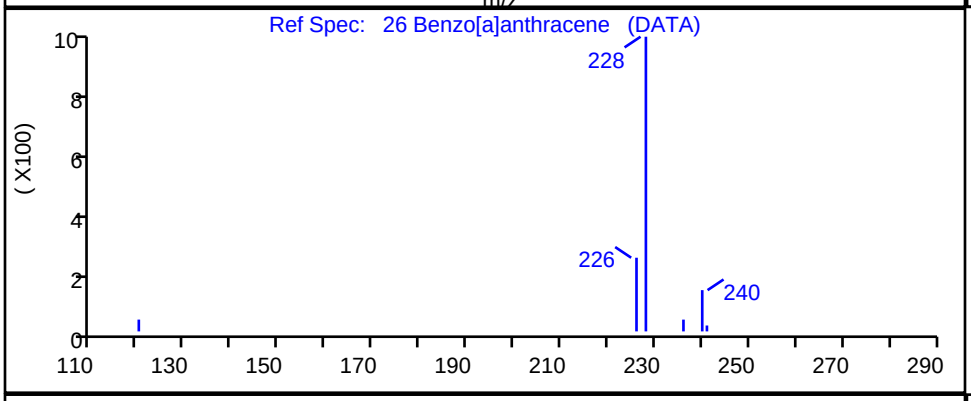
26 Benzo[a]anthracene, CAS: 56-55-3

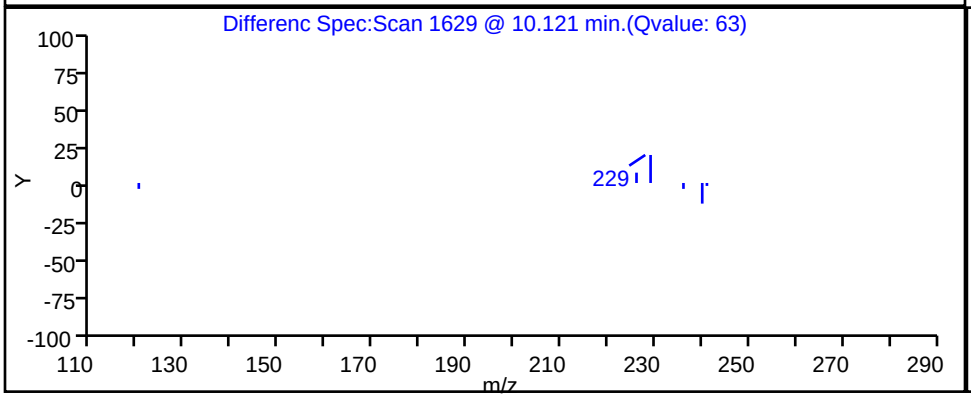


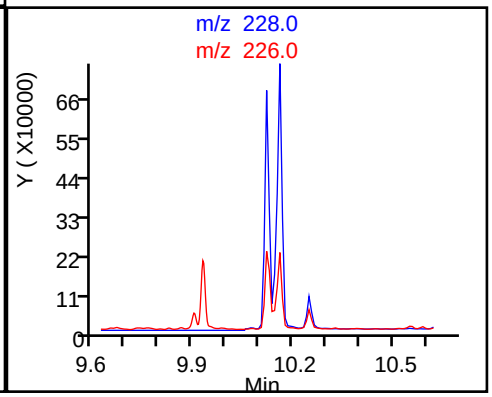












Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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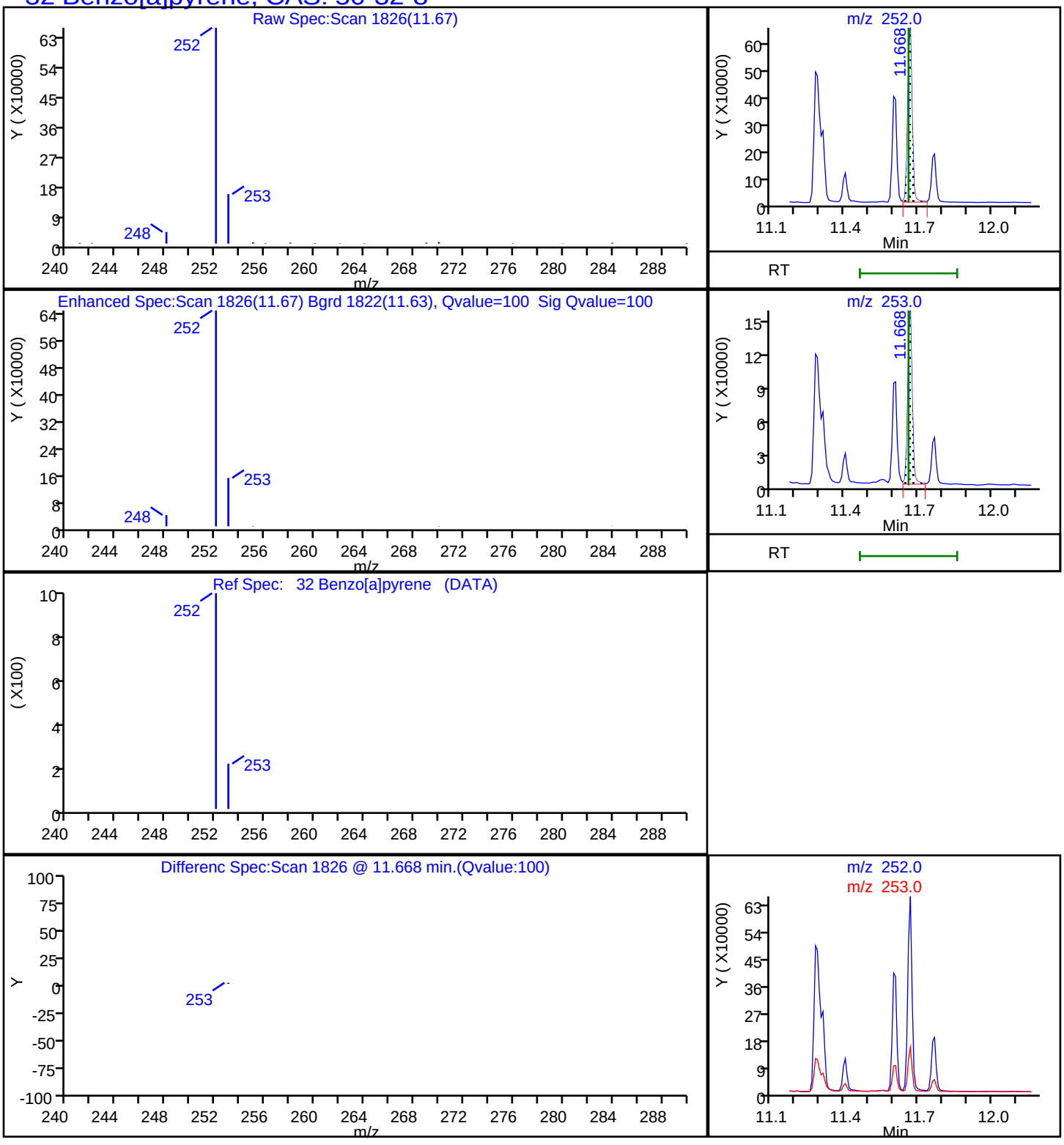
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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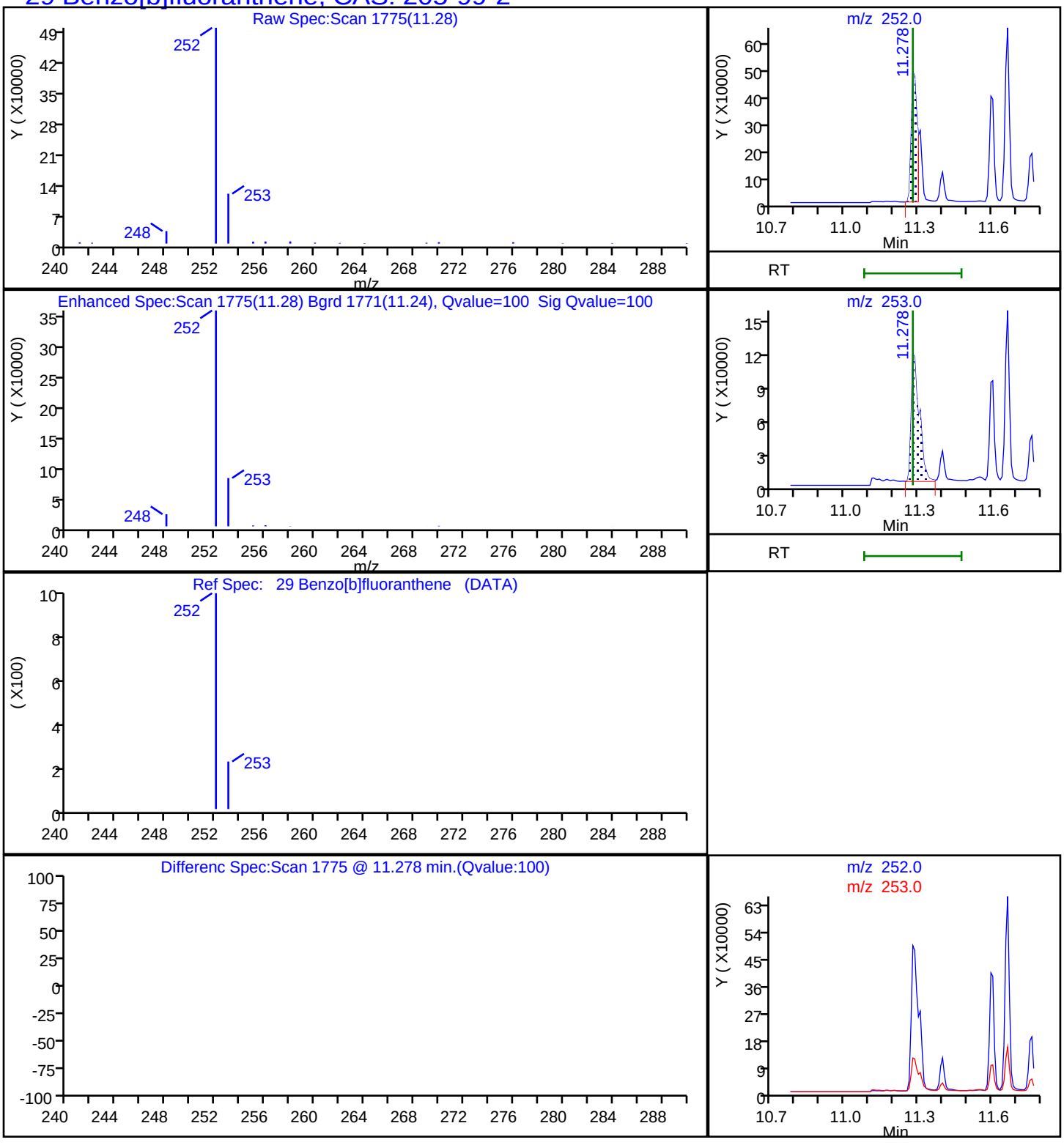
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2



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Eurofins TestAmerica, Knoxville

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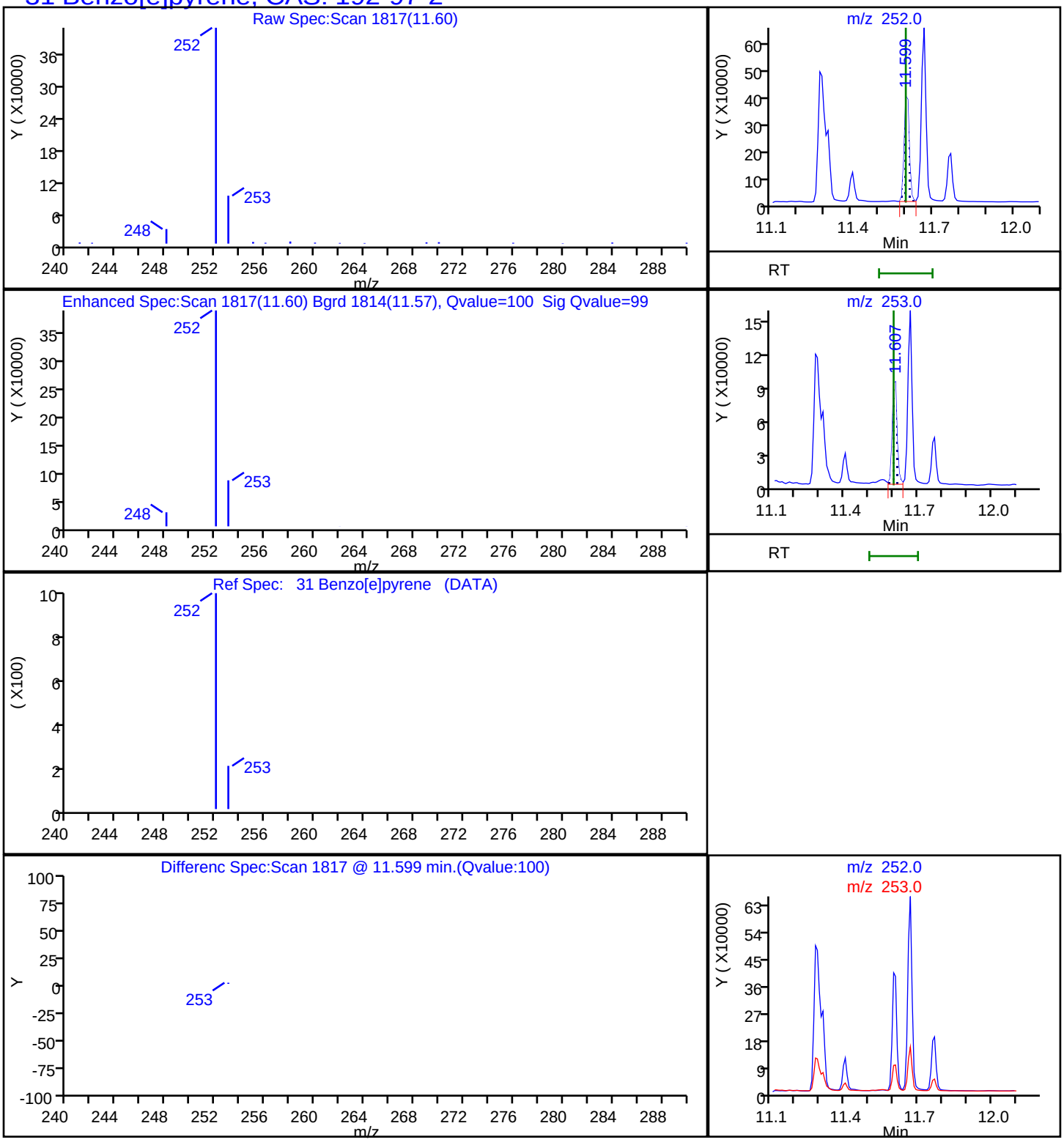
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

31 Benzo[e]pyrene, CAS: 192-97-2



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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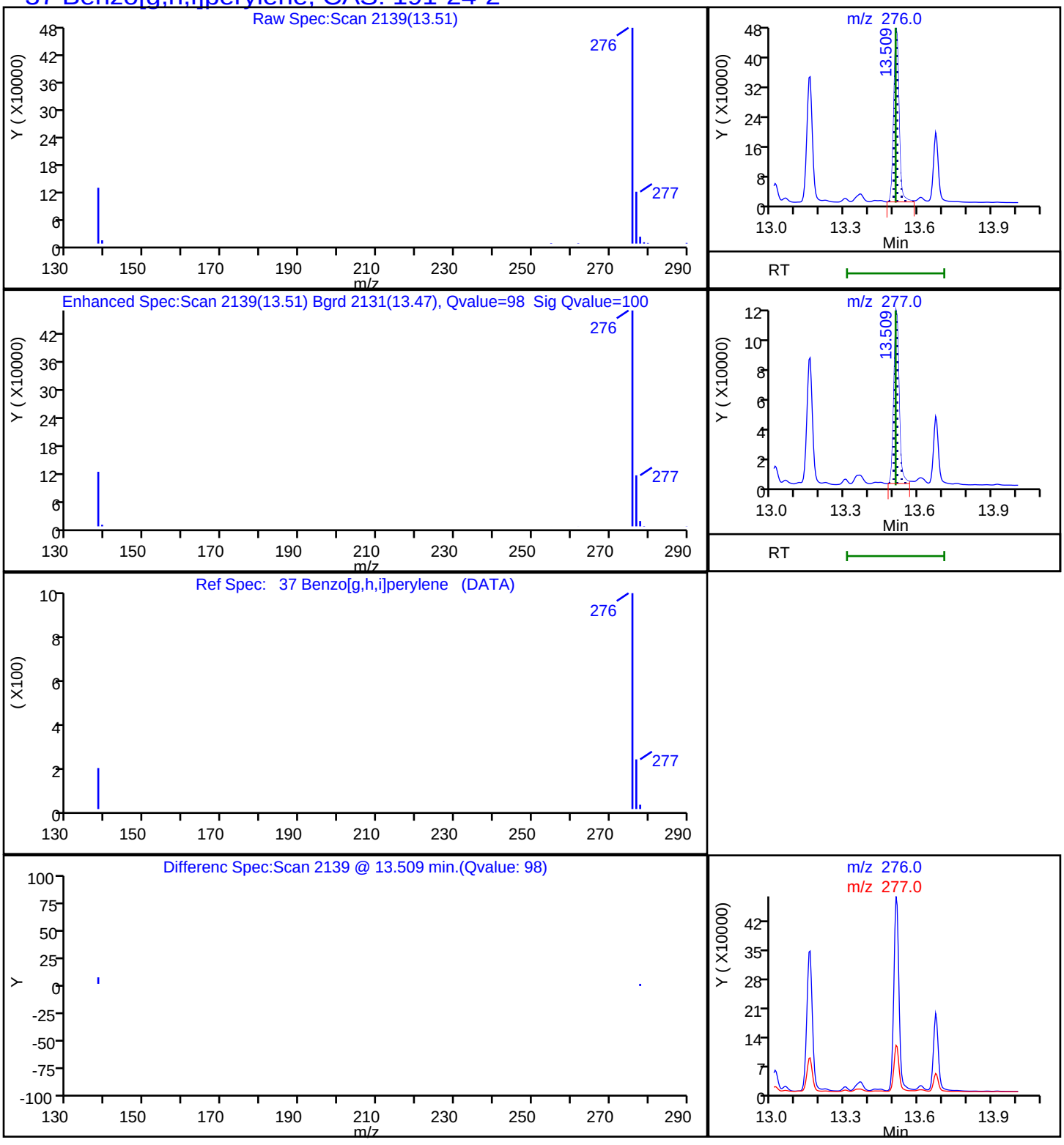
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
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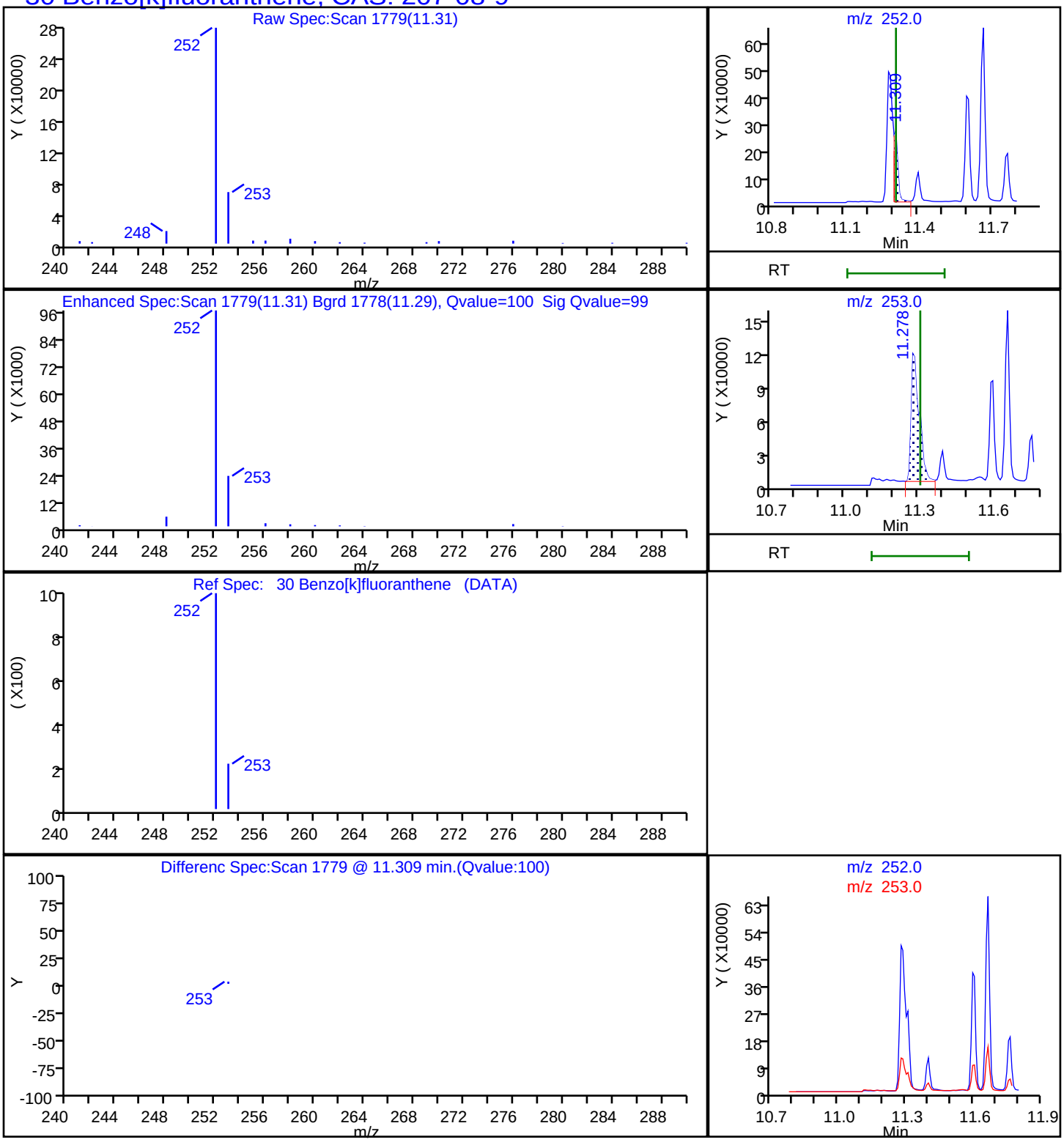
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9



Report Date: 31-Aug-2019 11:49:41 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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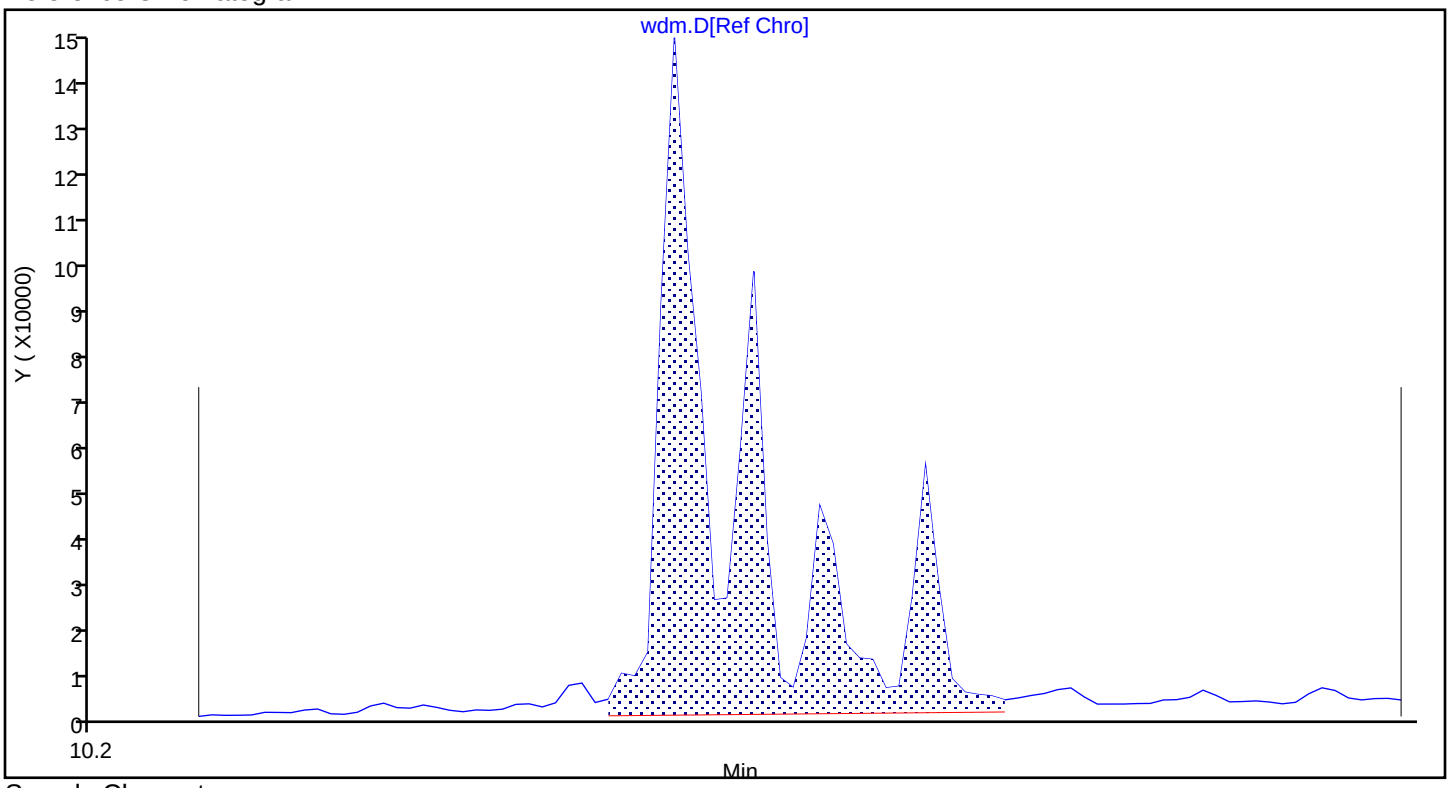
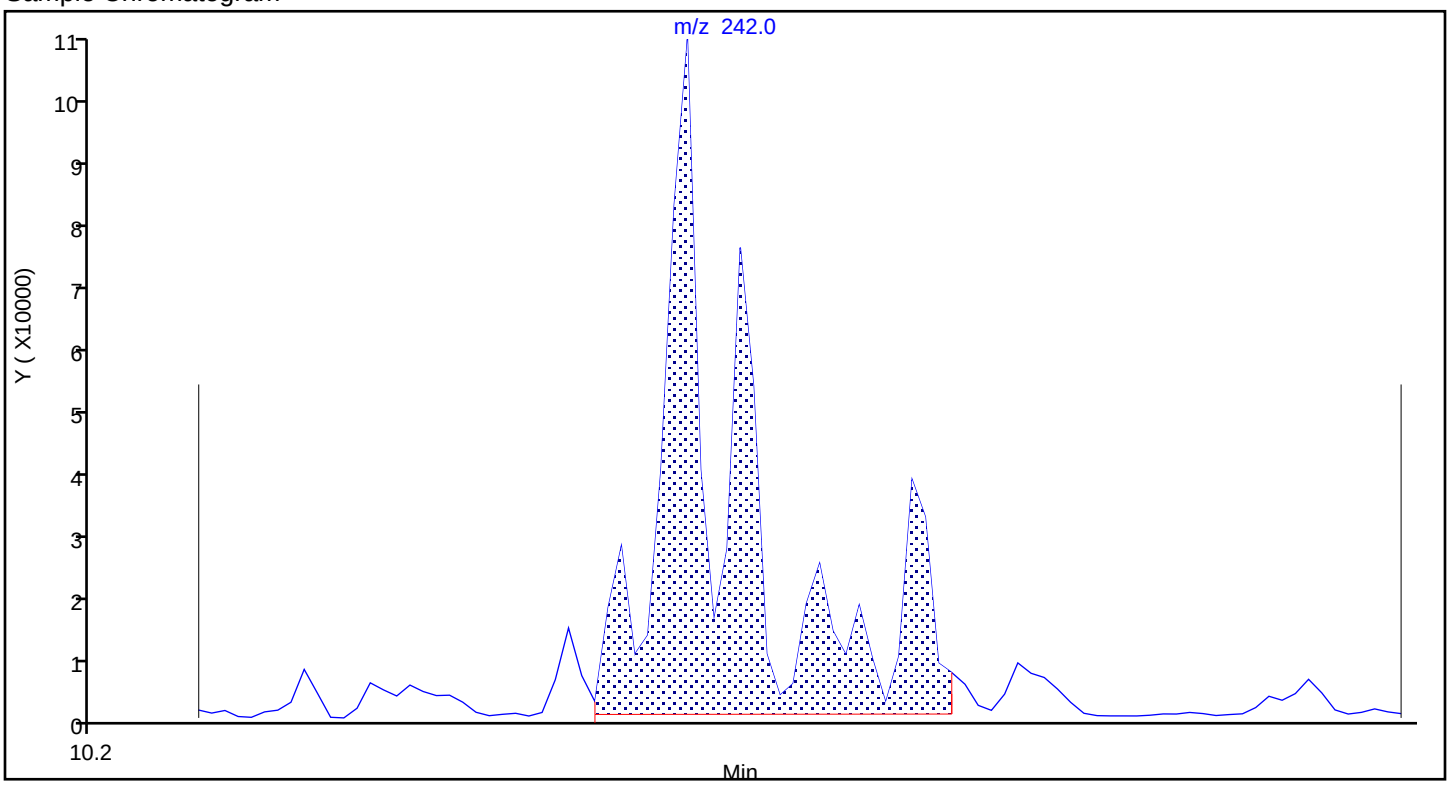
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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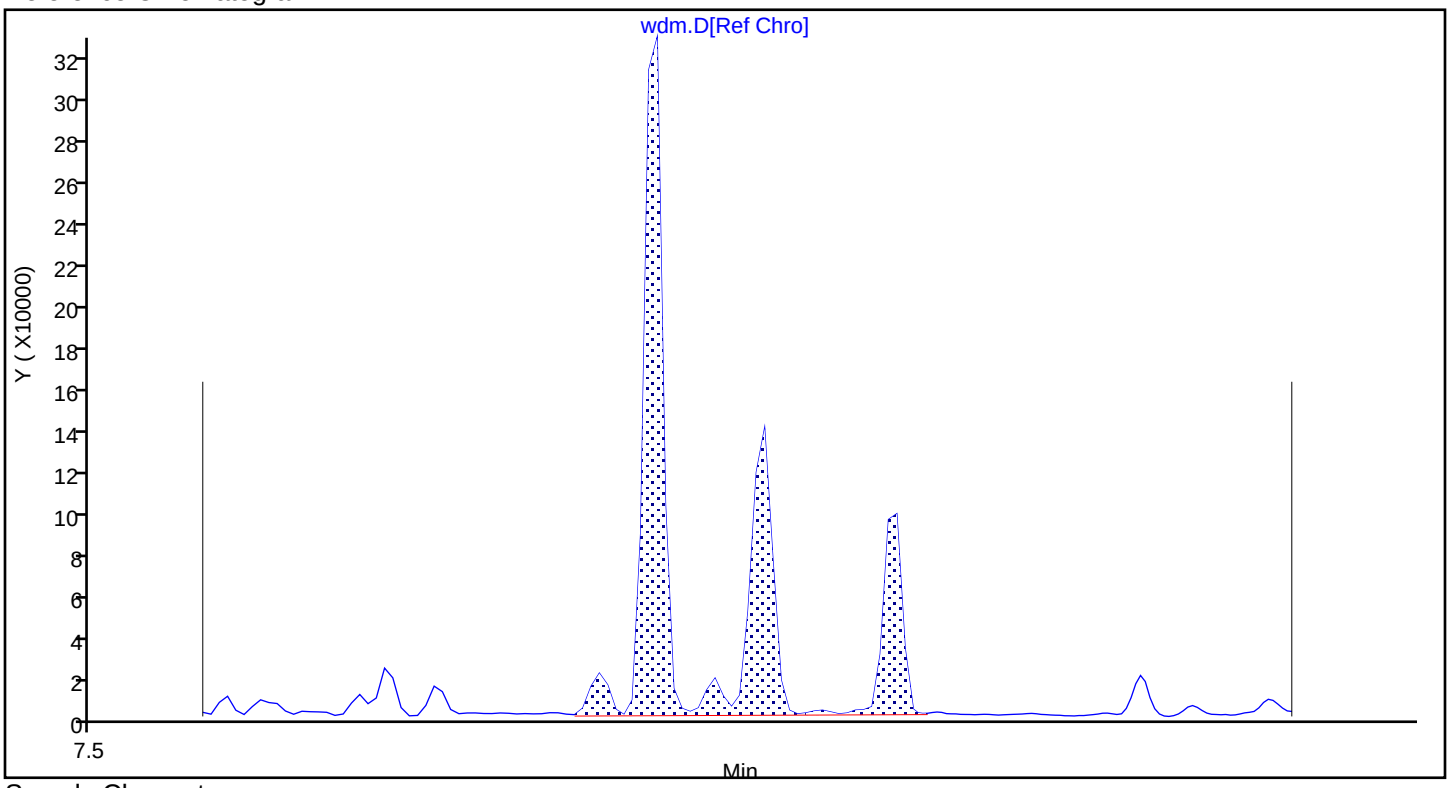
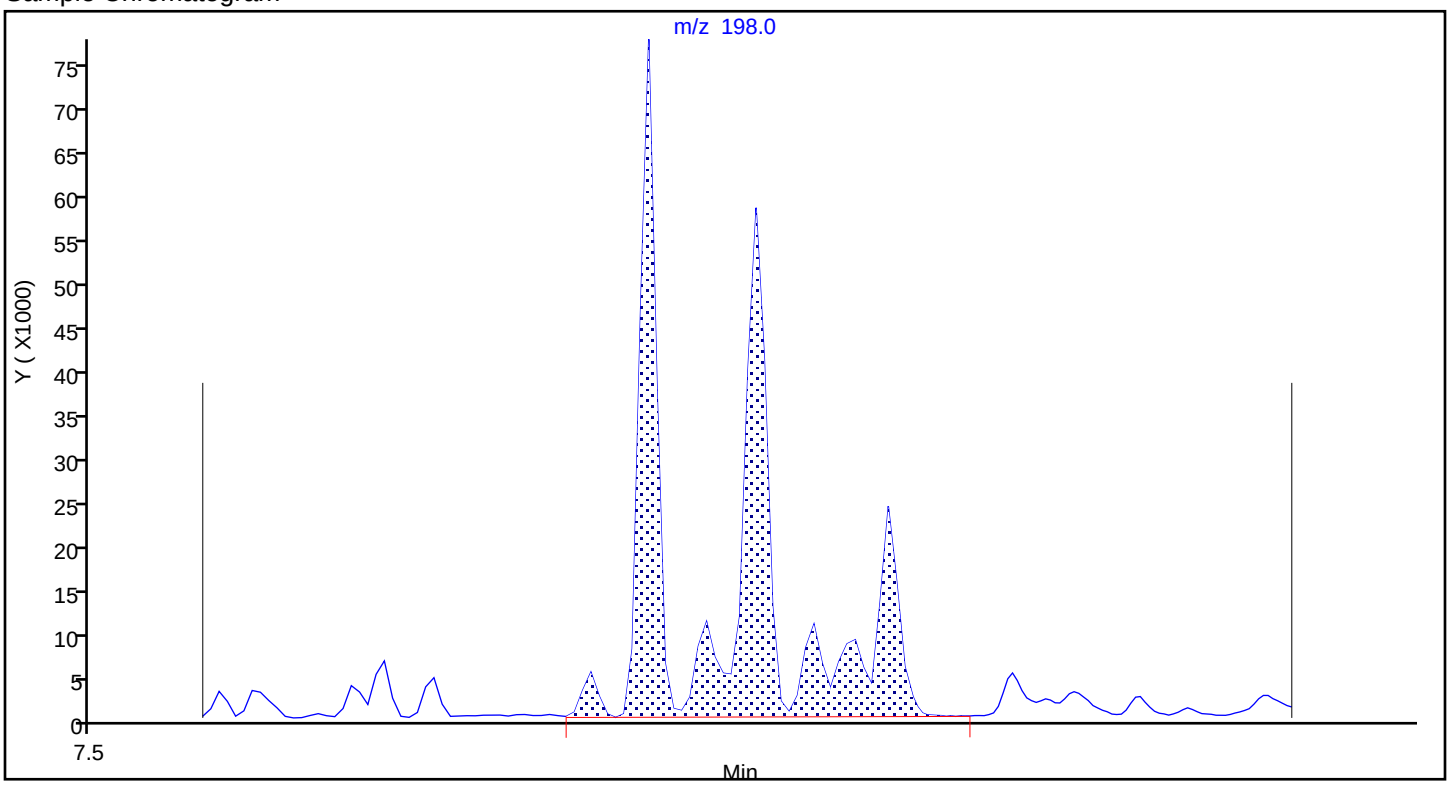
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Reference Chromatogram



Sample Chromatogram



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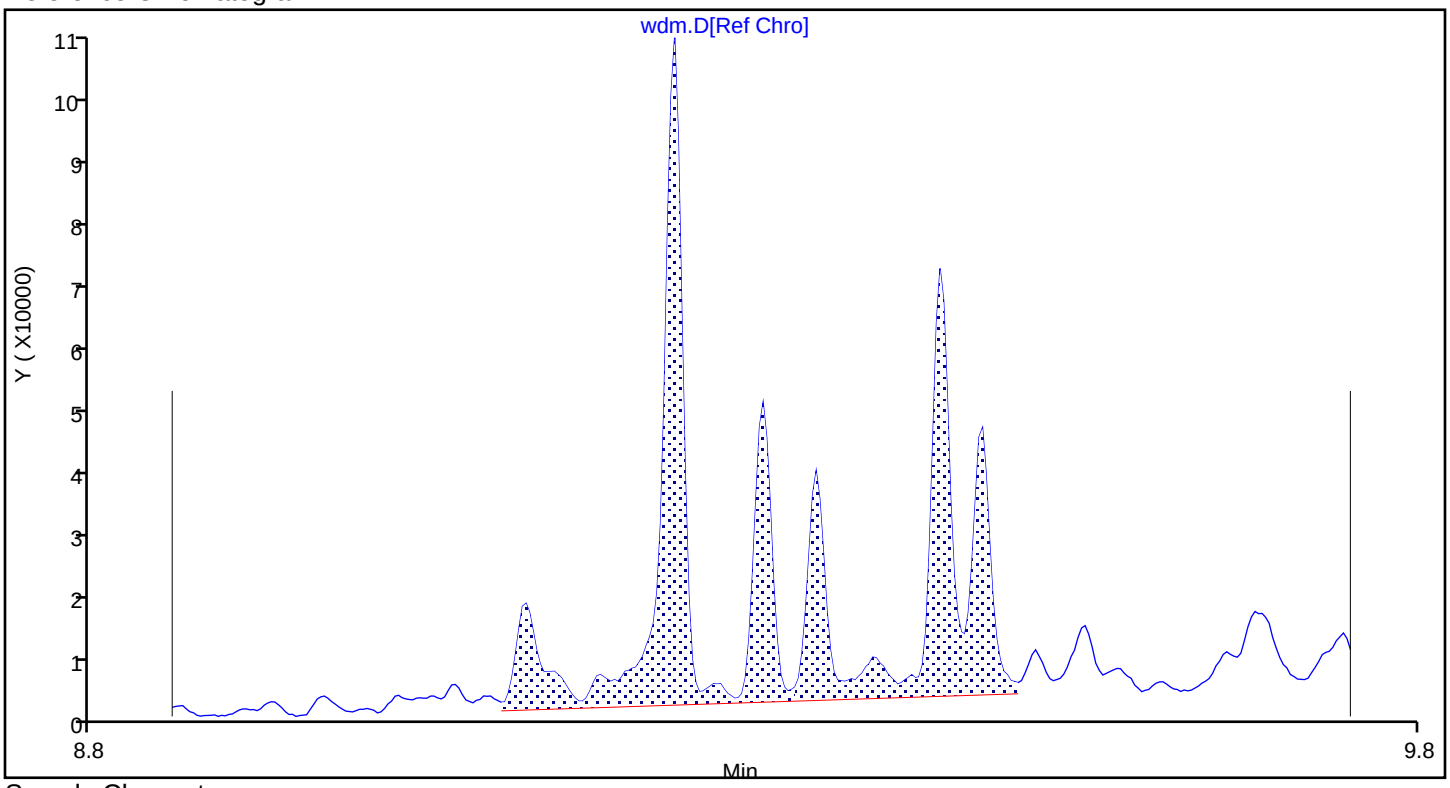
Eurofins TestAmerica, Knoxville

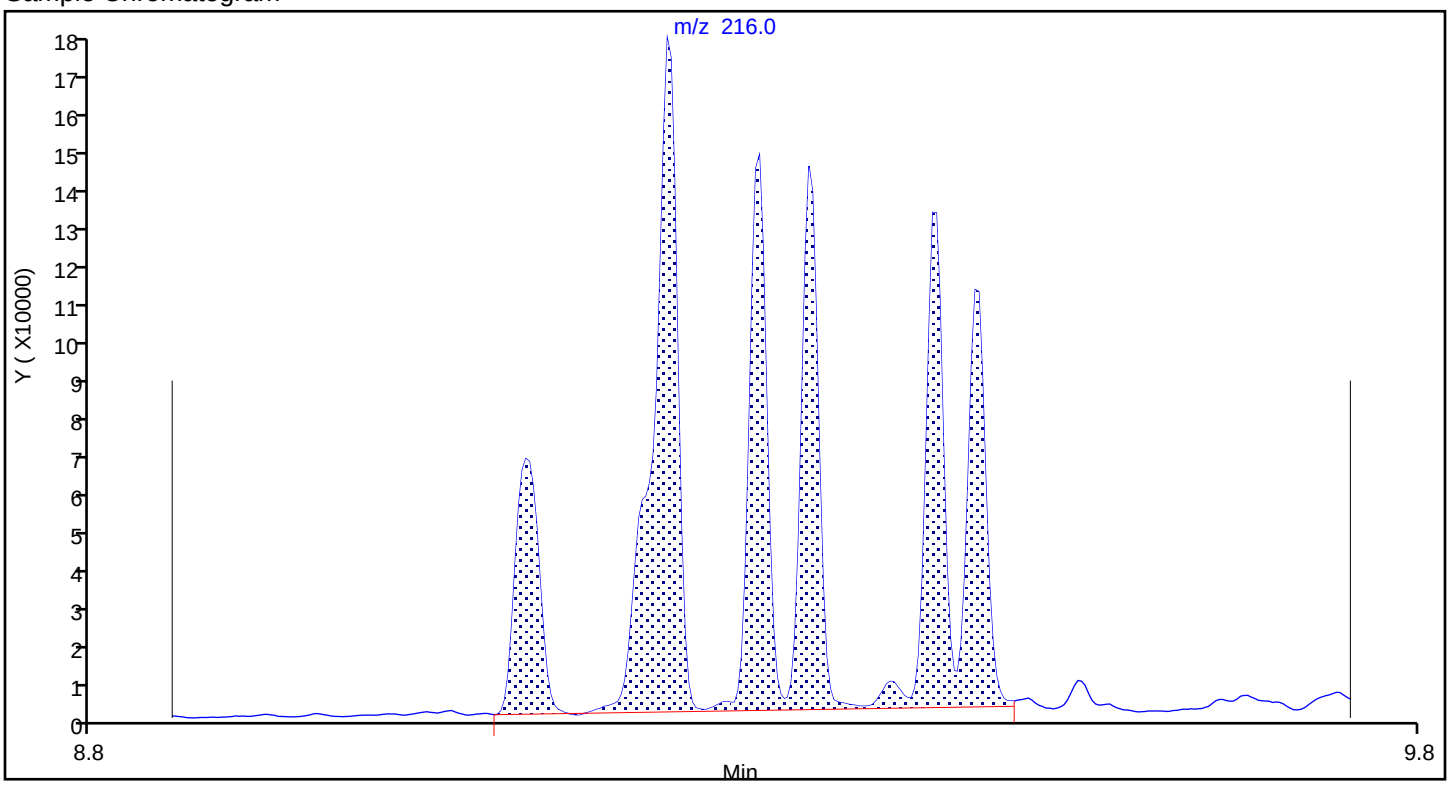
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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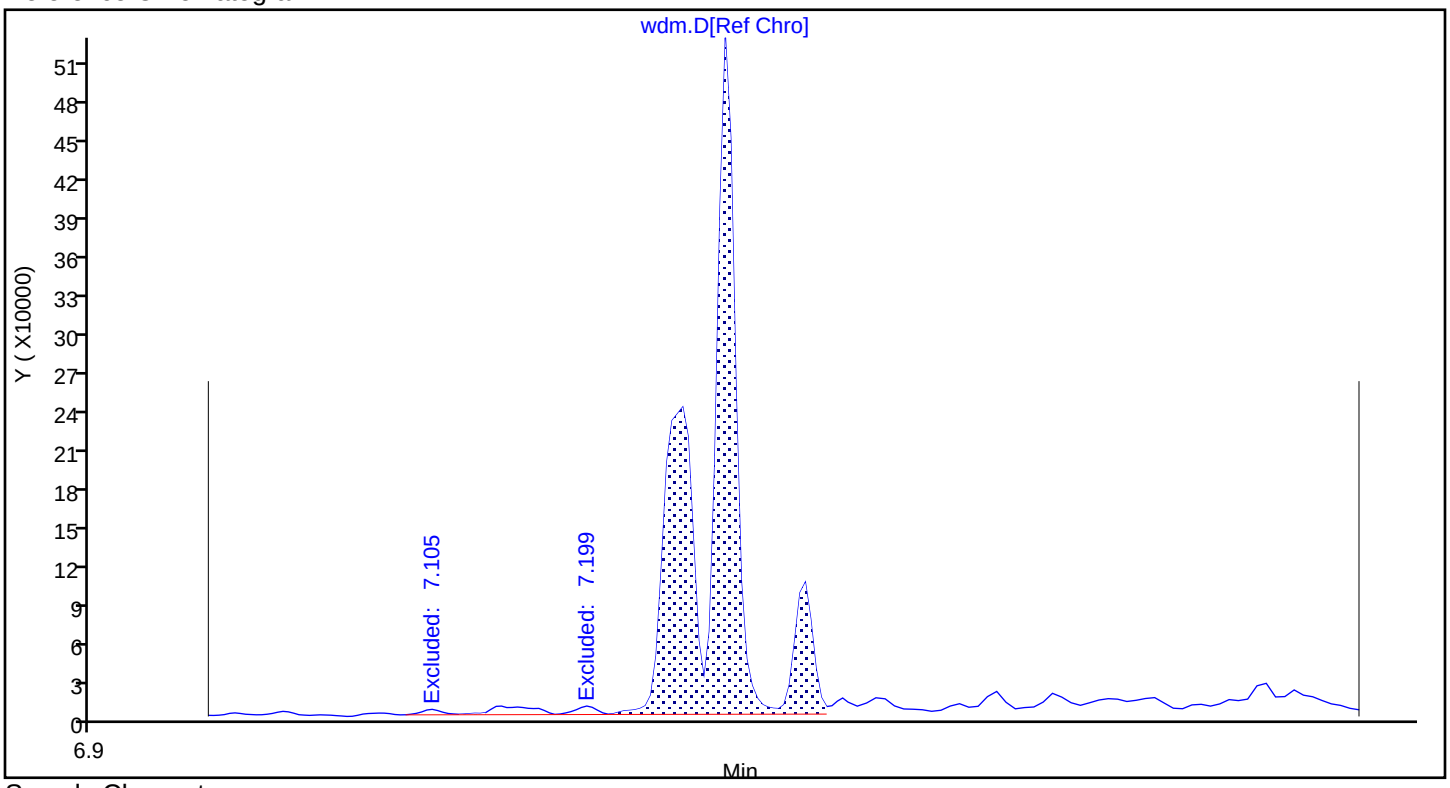
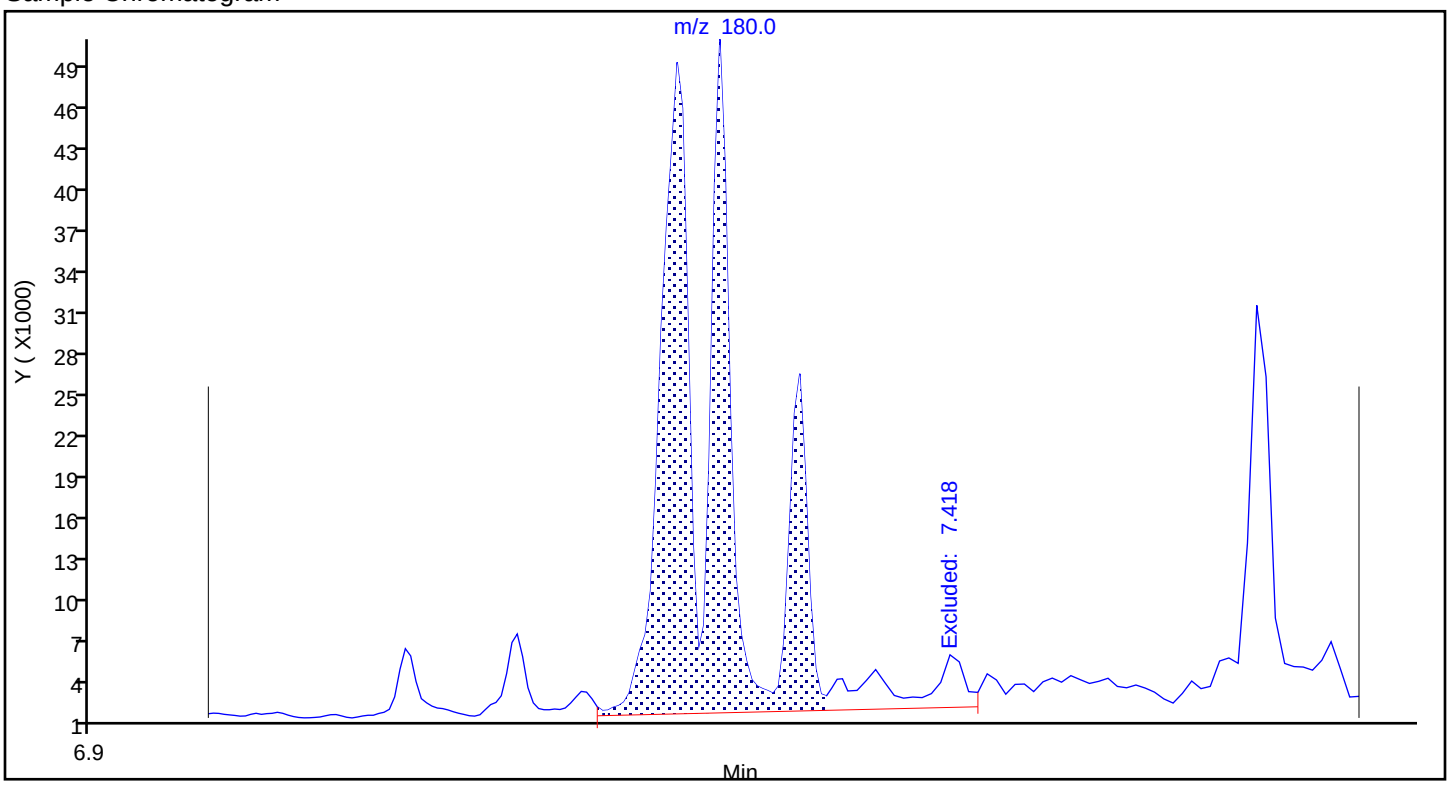
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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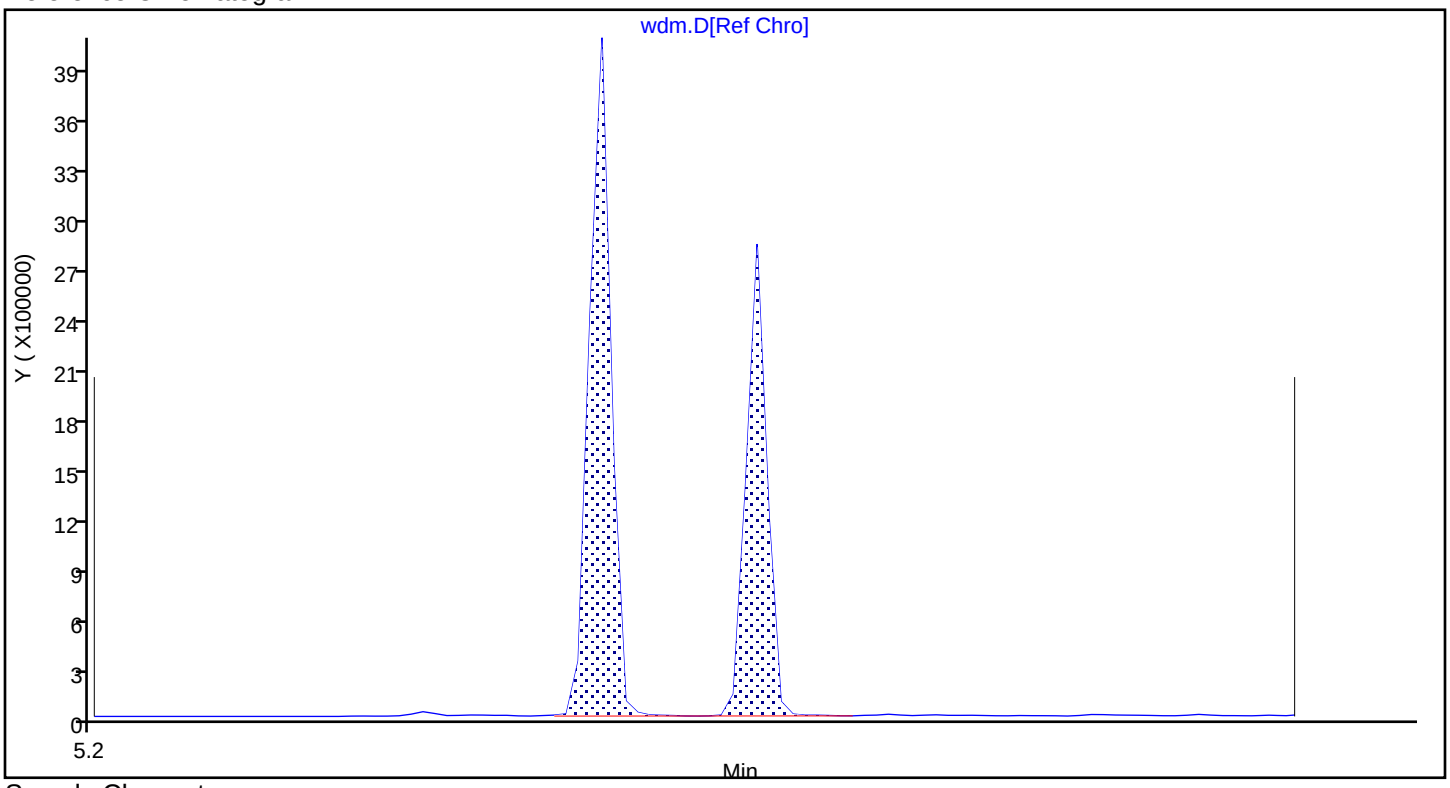
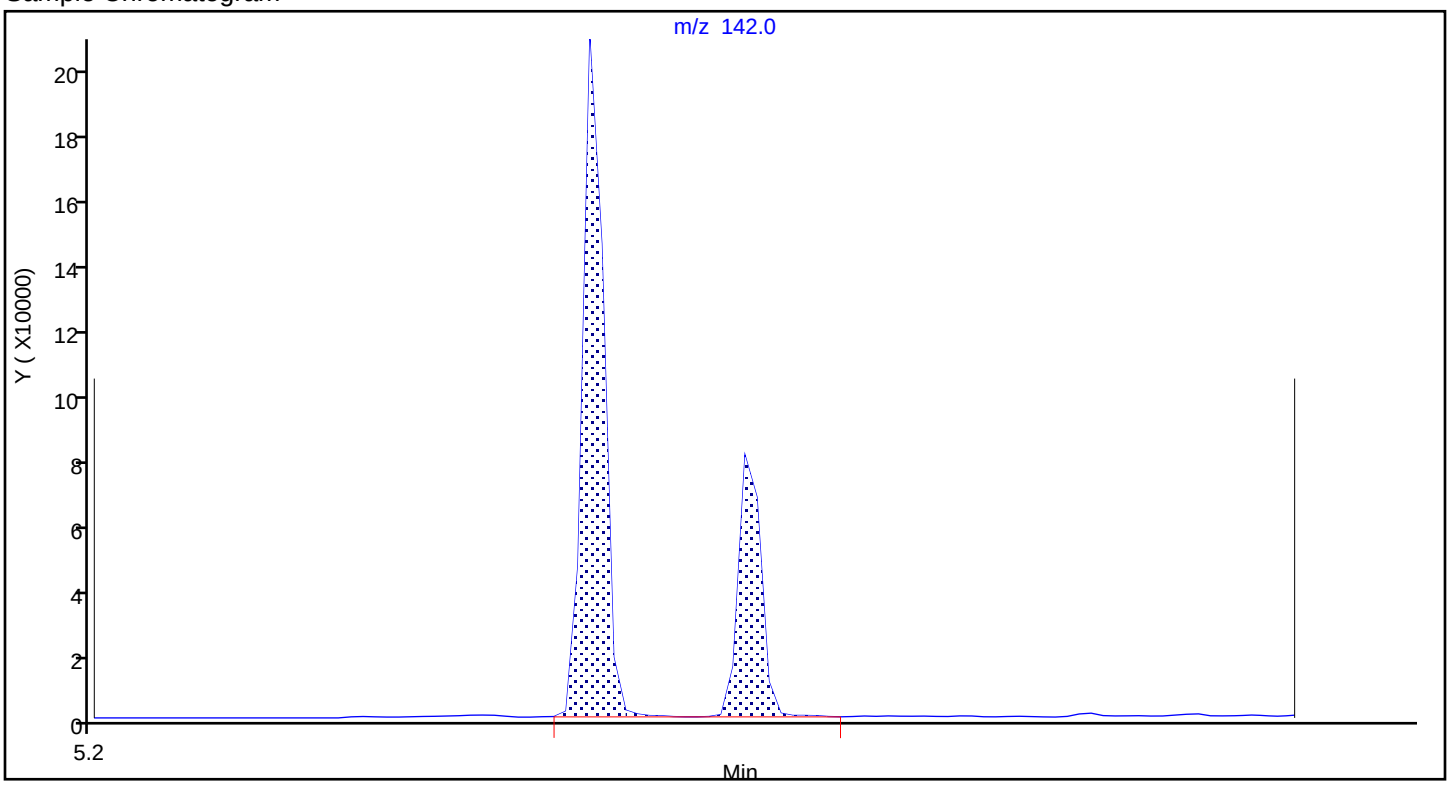
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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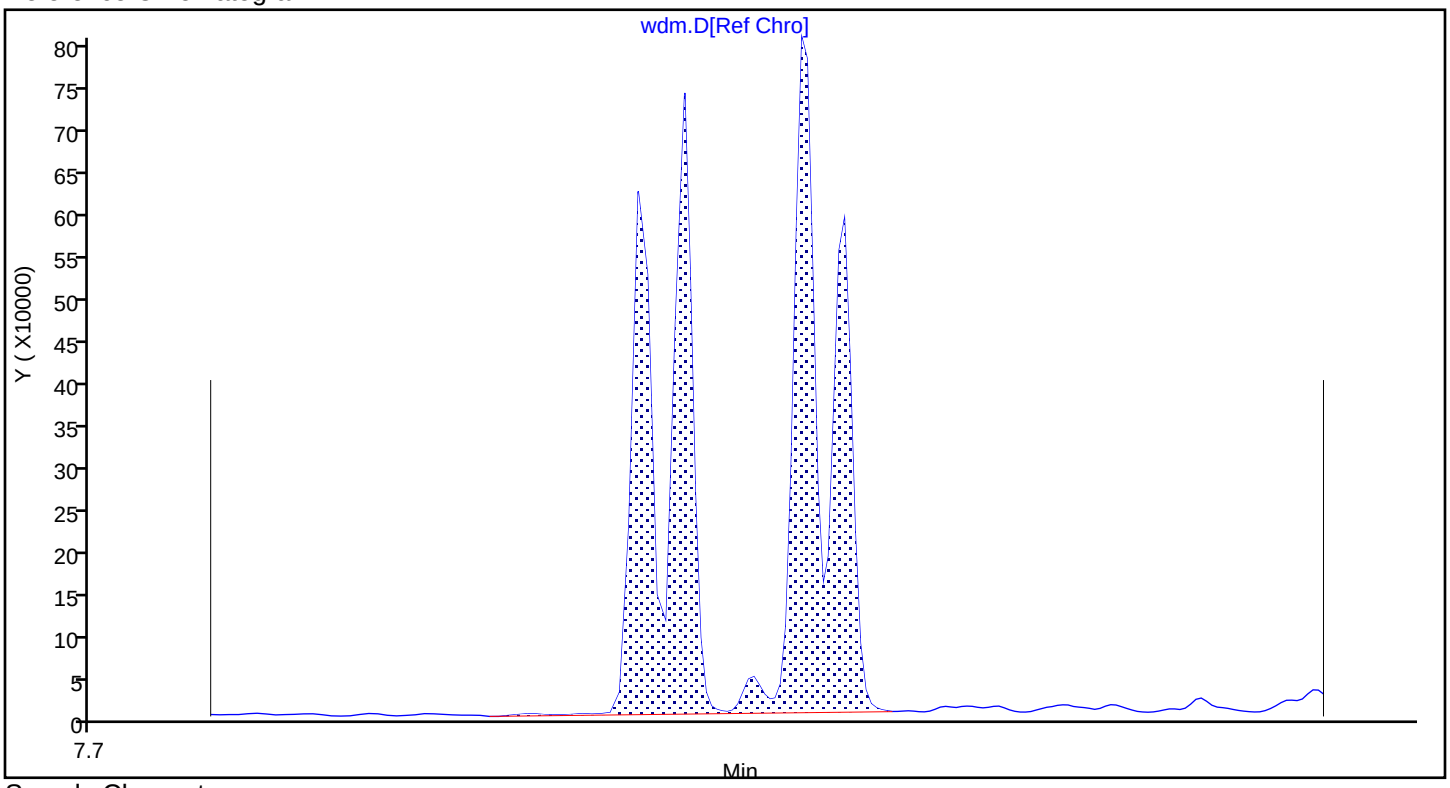
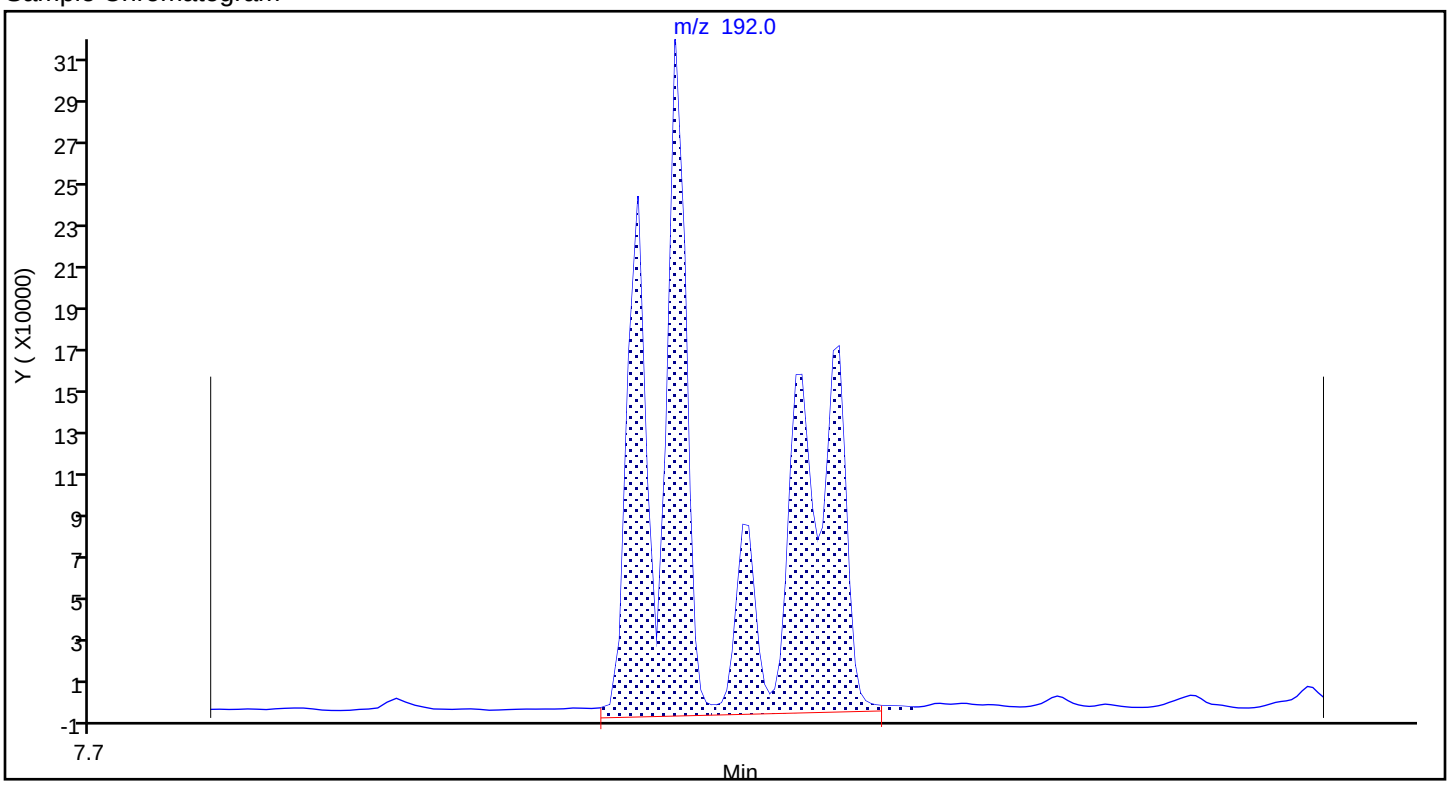
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:41 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Client ID:	22T-SG-09_20190718				
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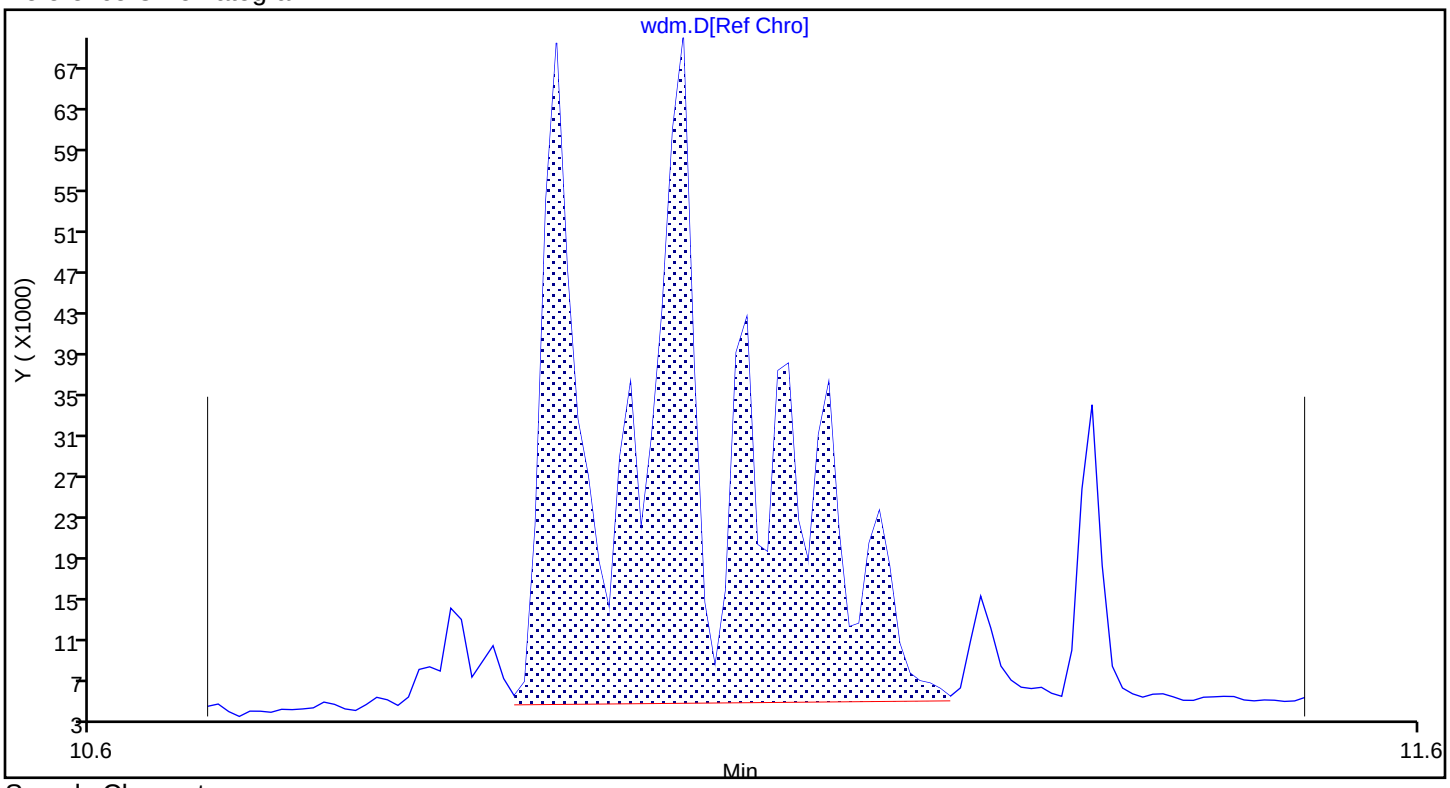
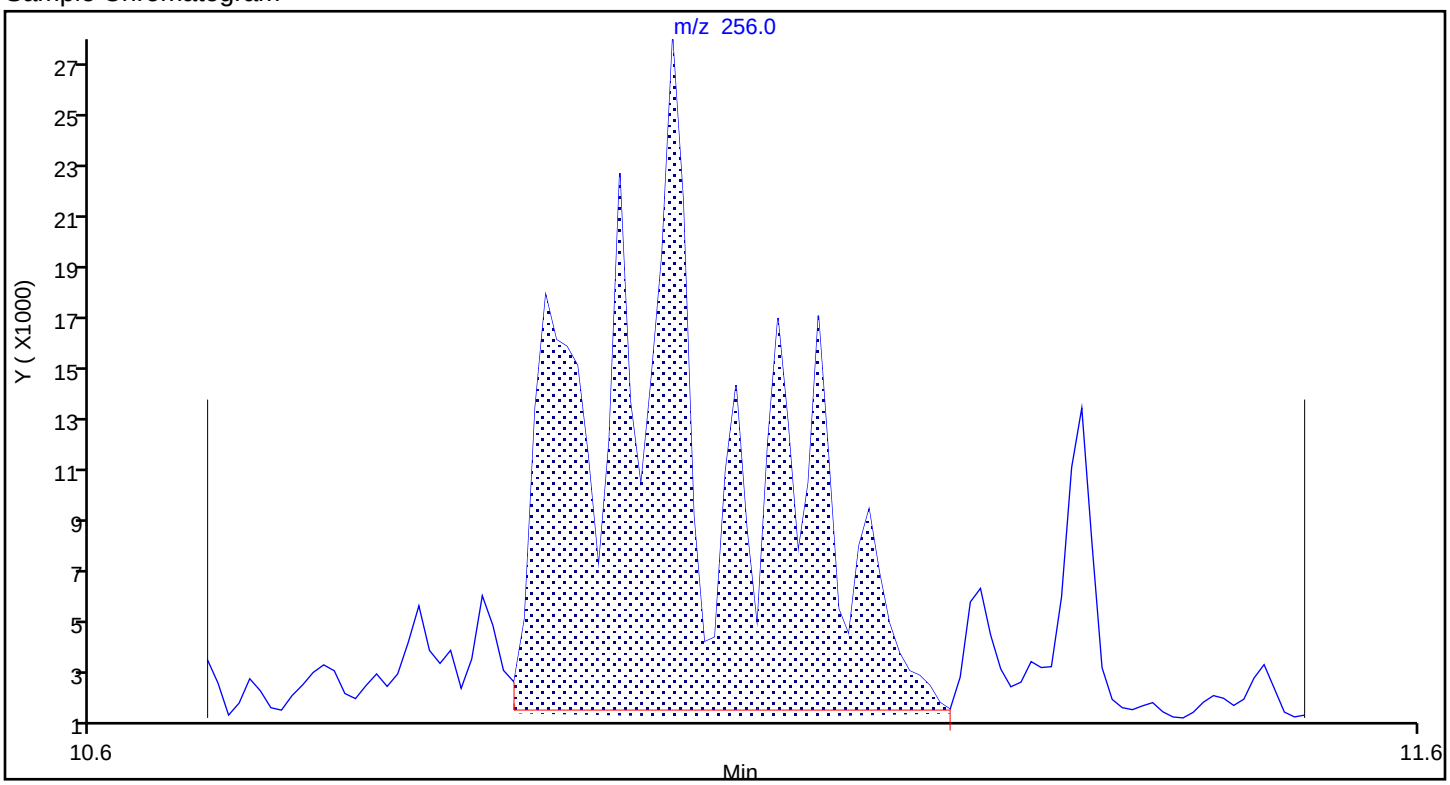
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
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Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
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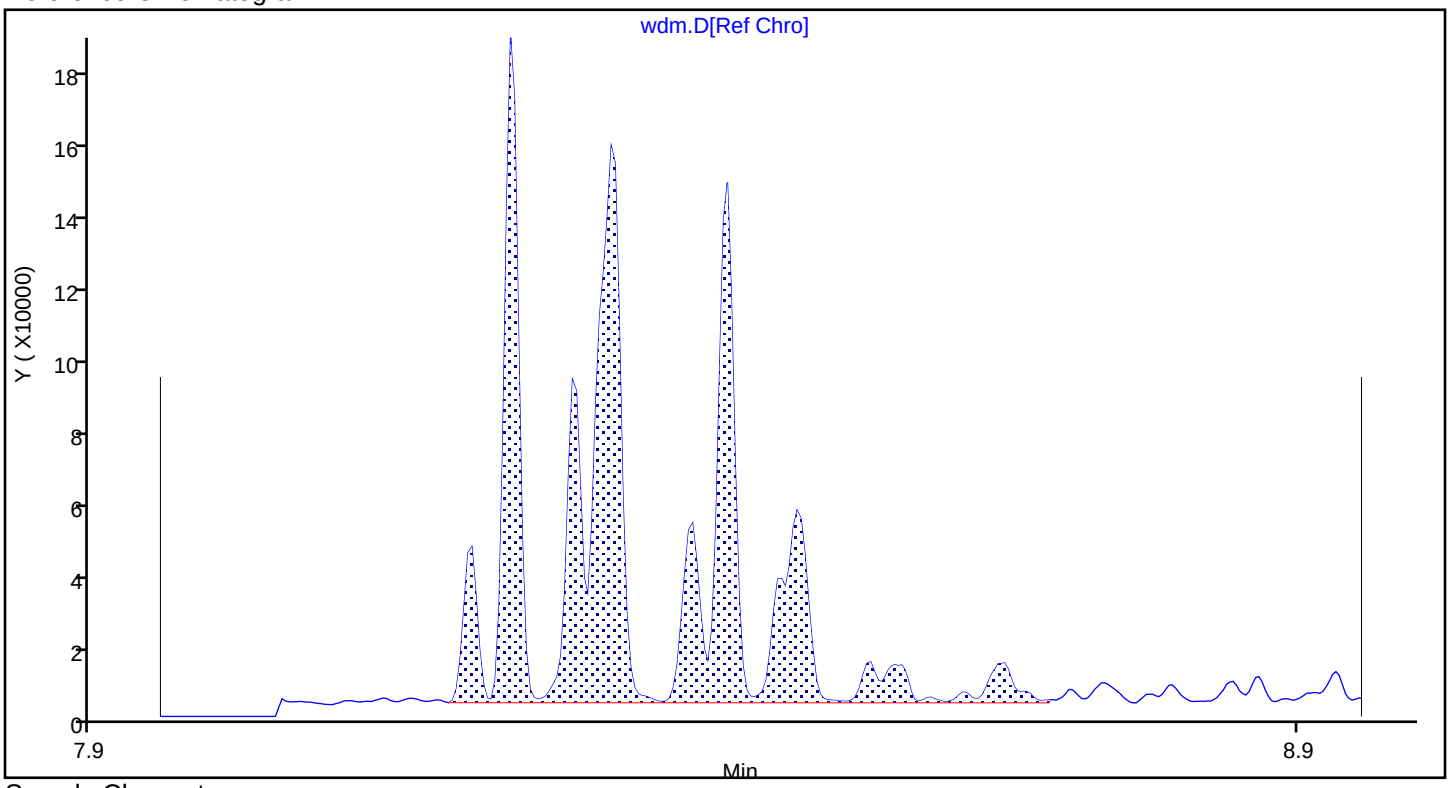
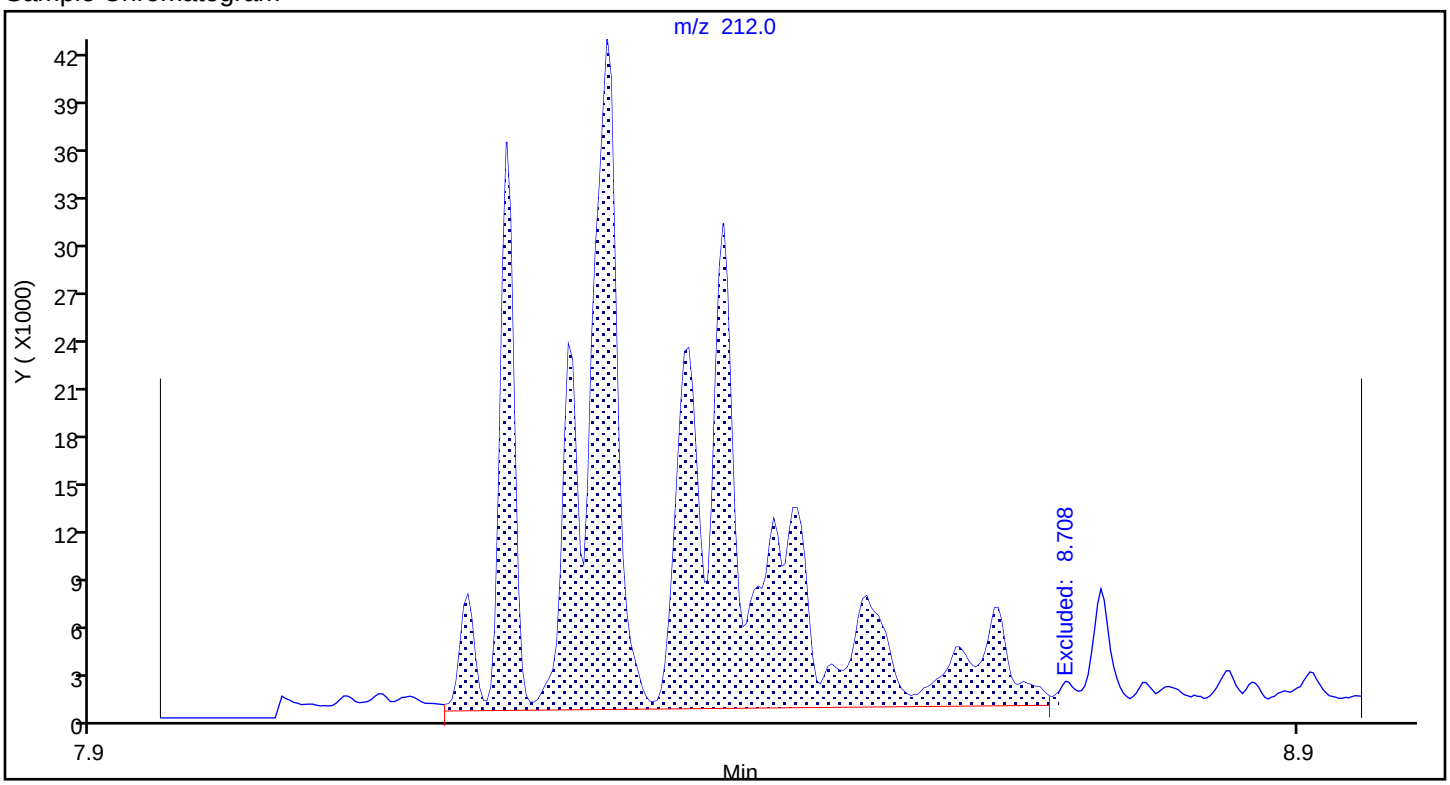
A 46 C2-Dibenzothiophenes, CAS: STL00910

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
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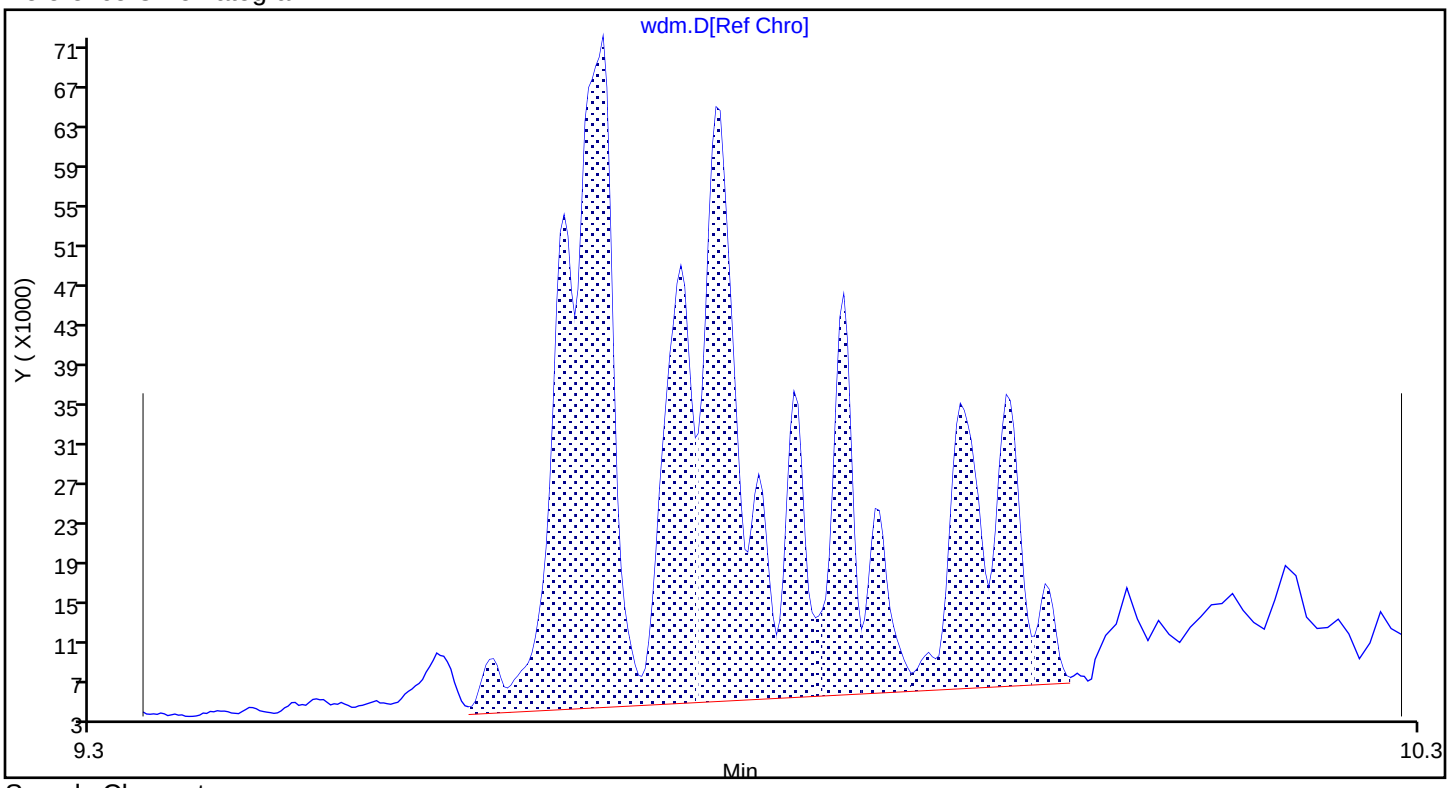
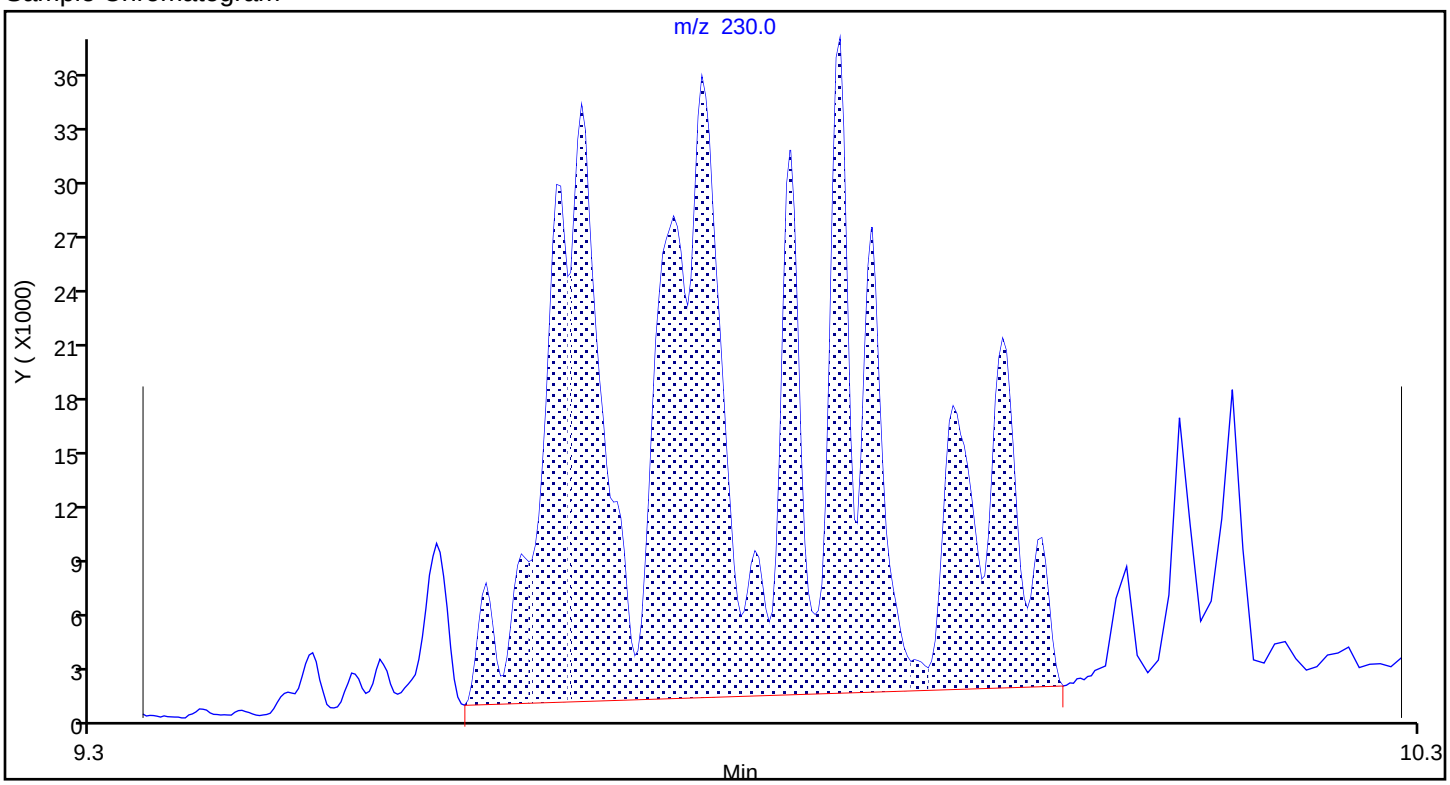
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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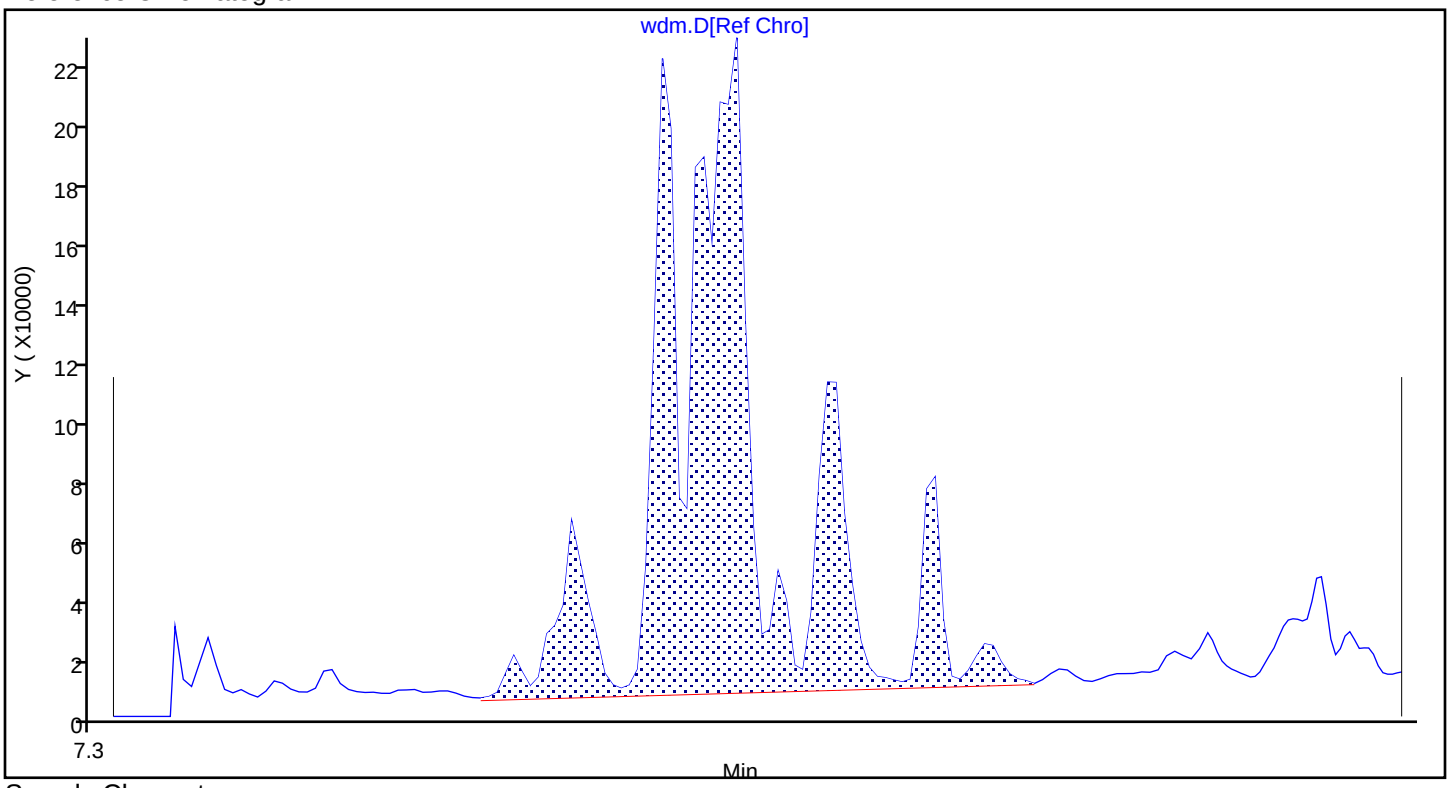
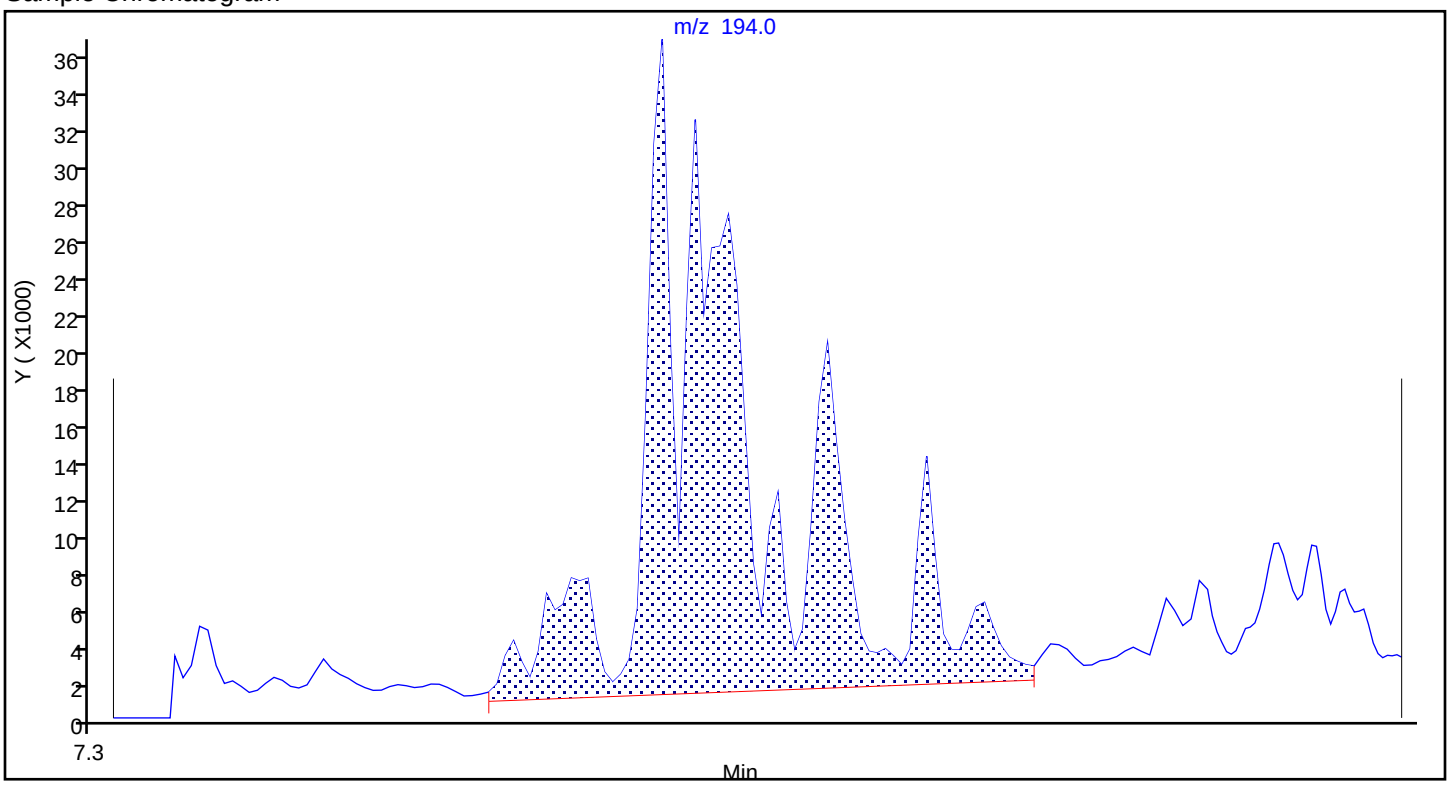
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 43 C2-Fluorenes, CAS: STL00914

Reference Chromatogram



Sample Chromatogram



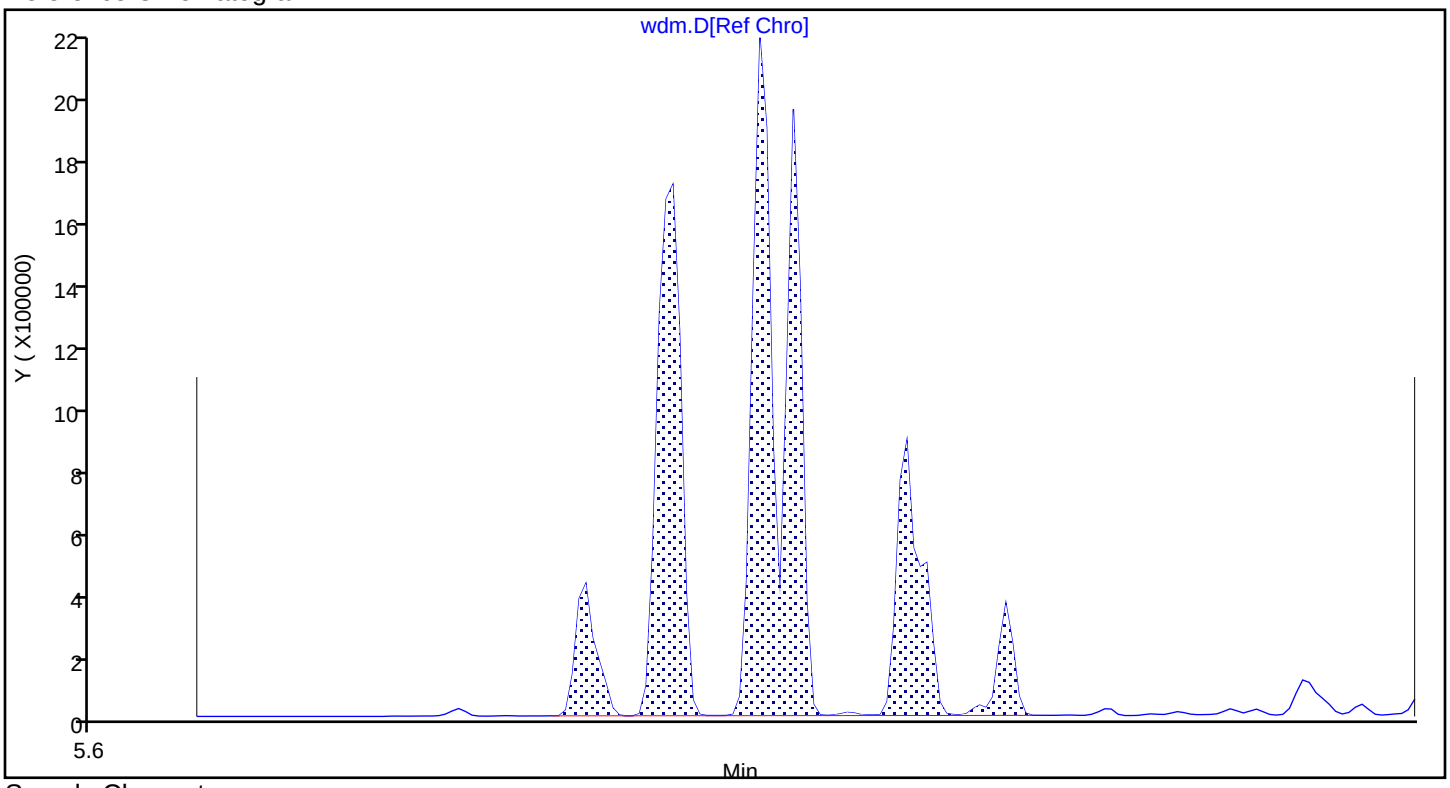
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

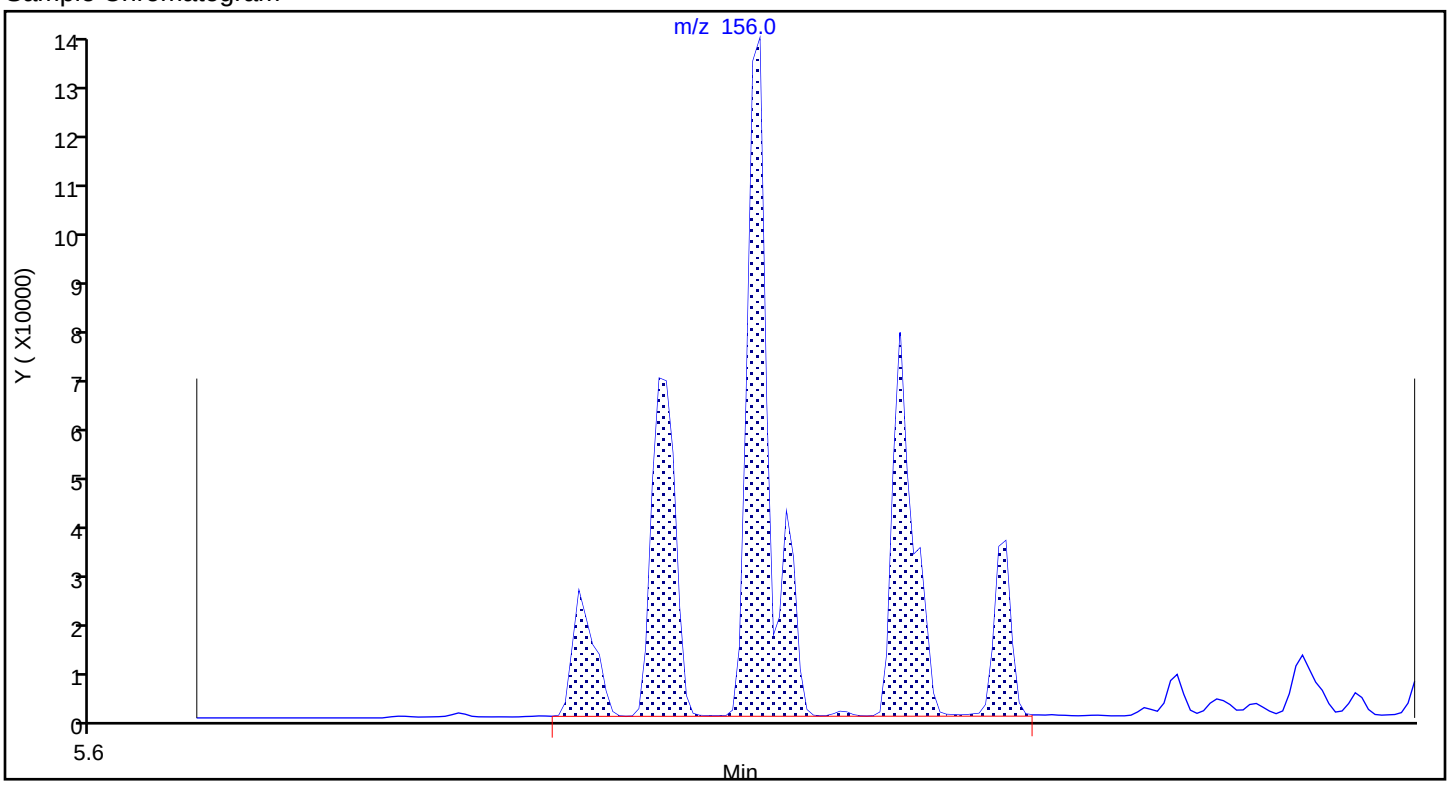
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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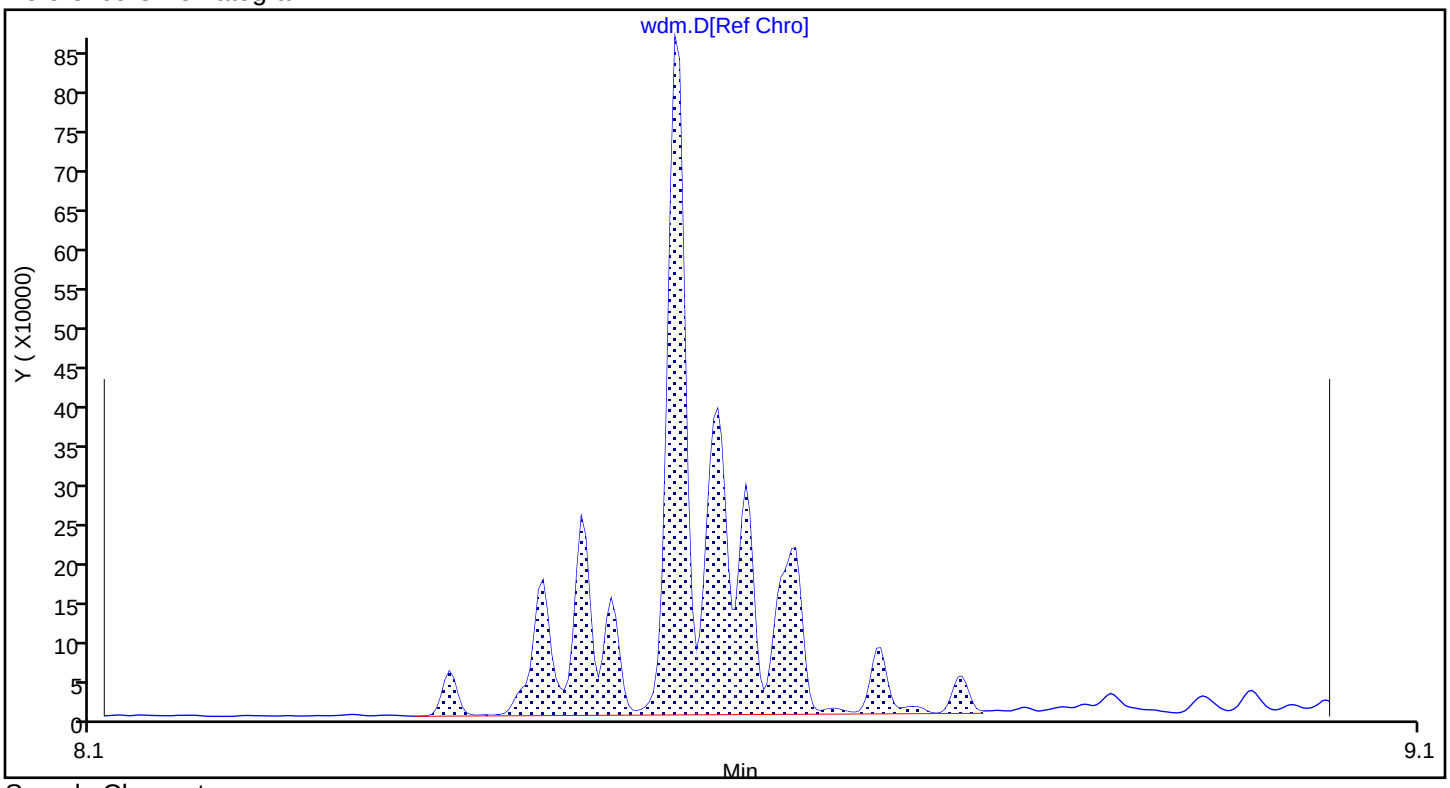
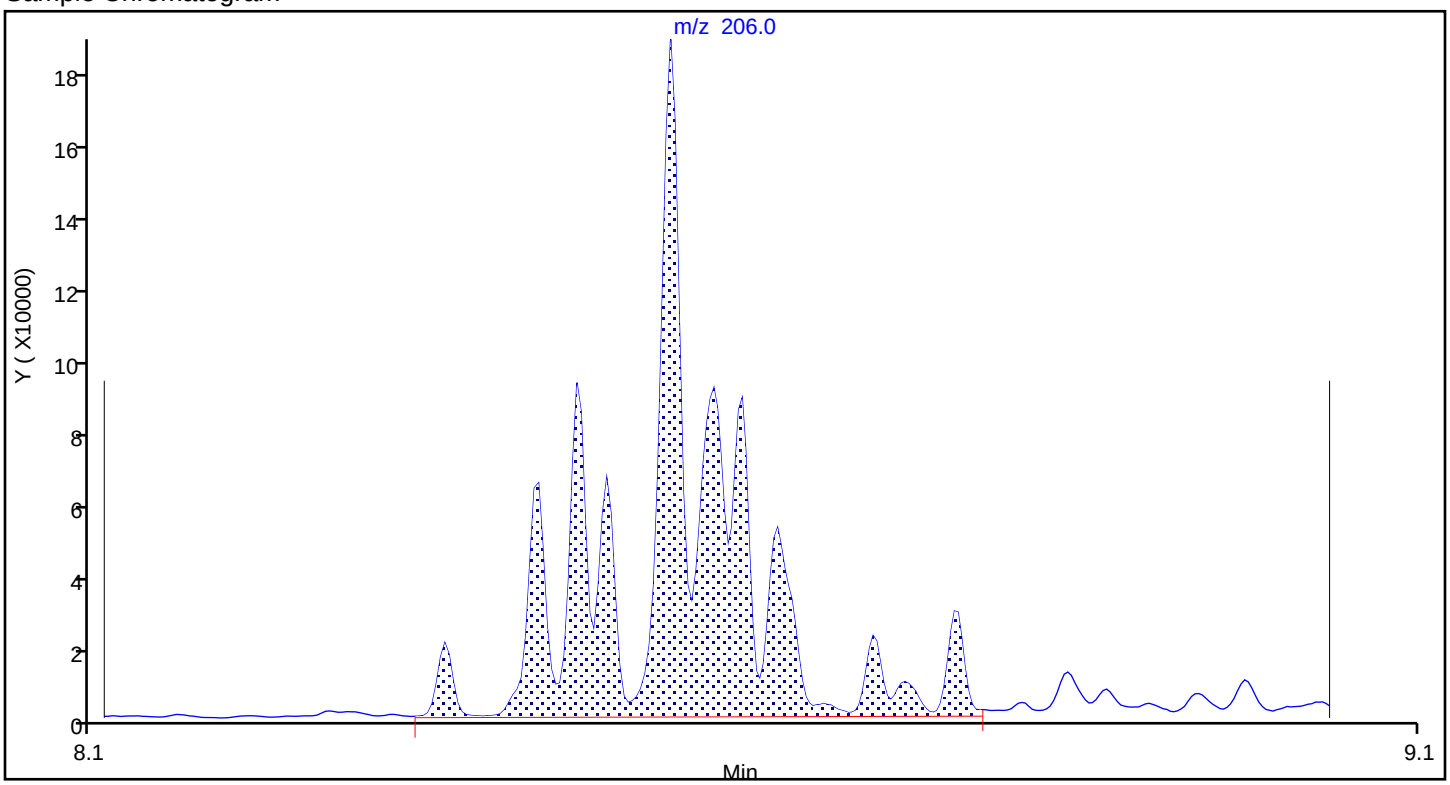
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:41 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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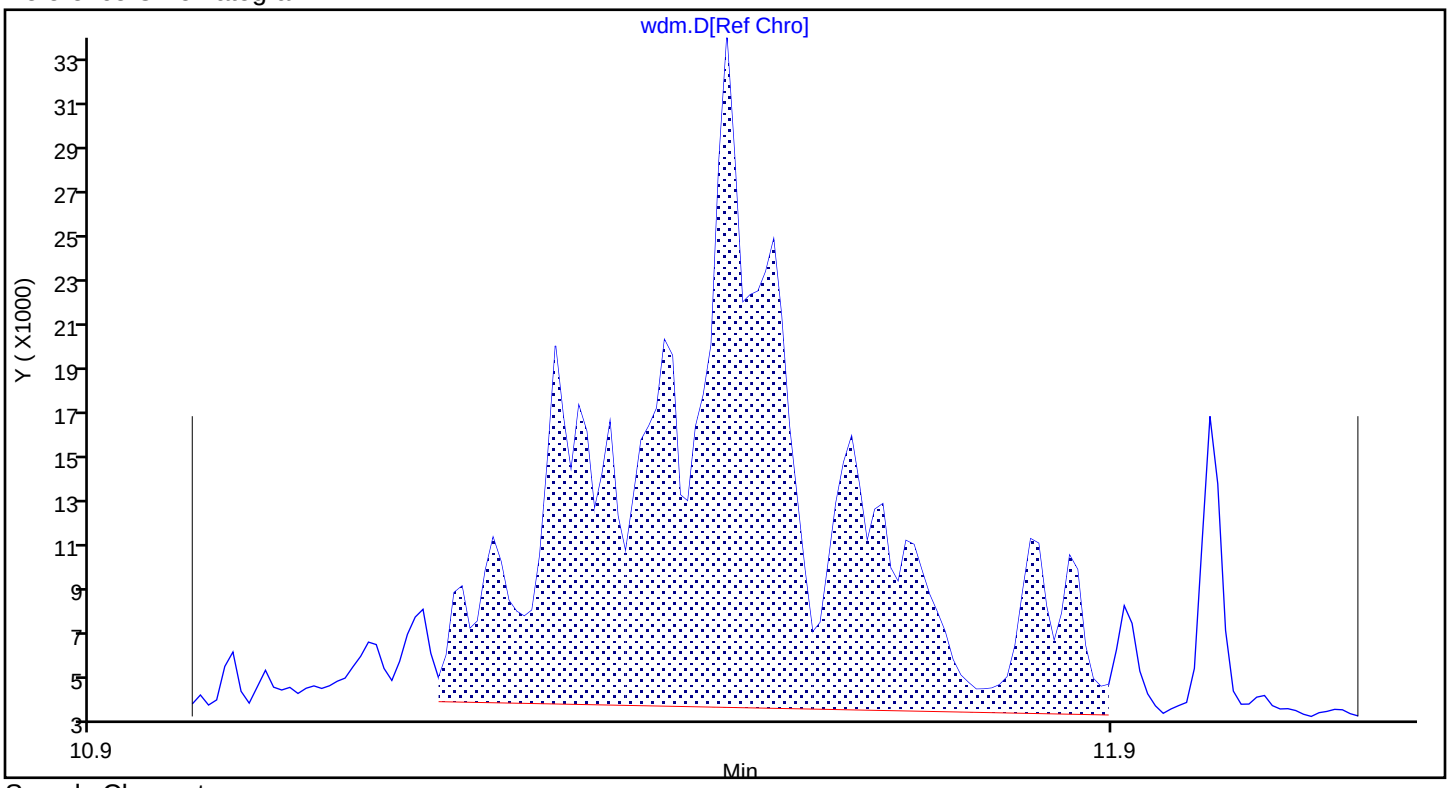
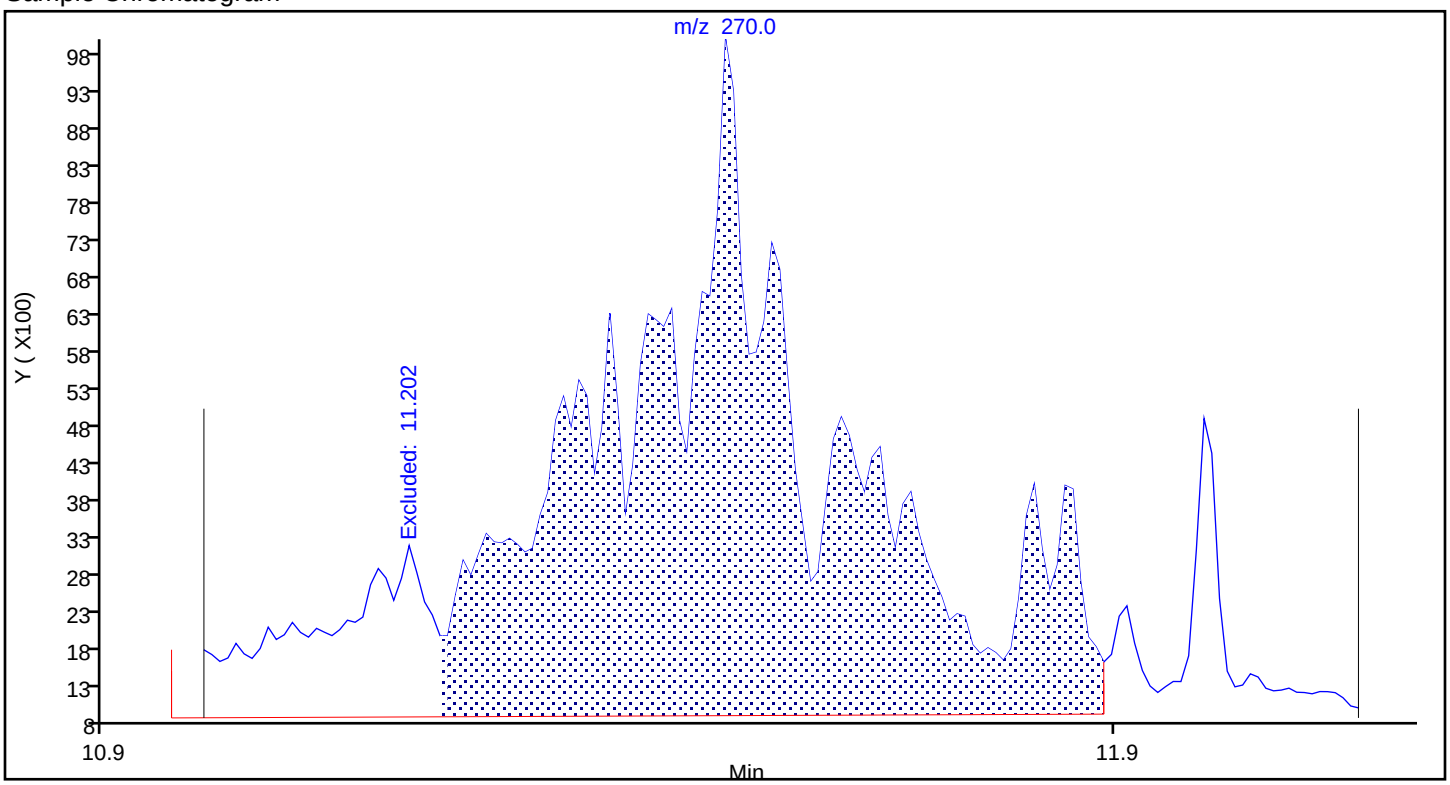
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

Reference Chromatogram



Sample Chromatogram



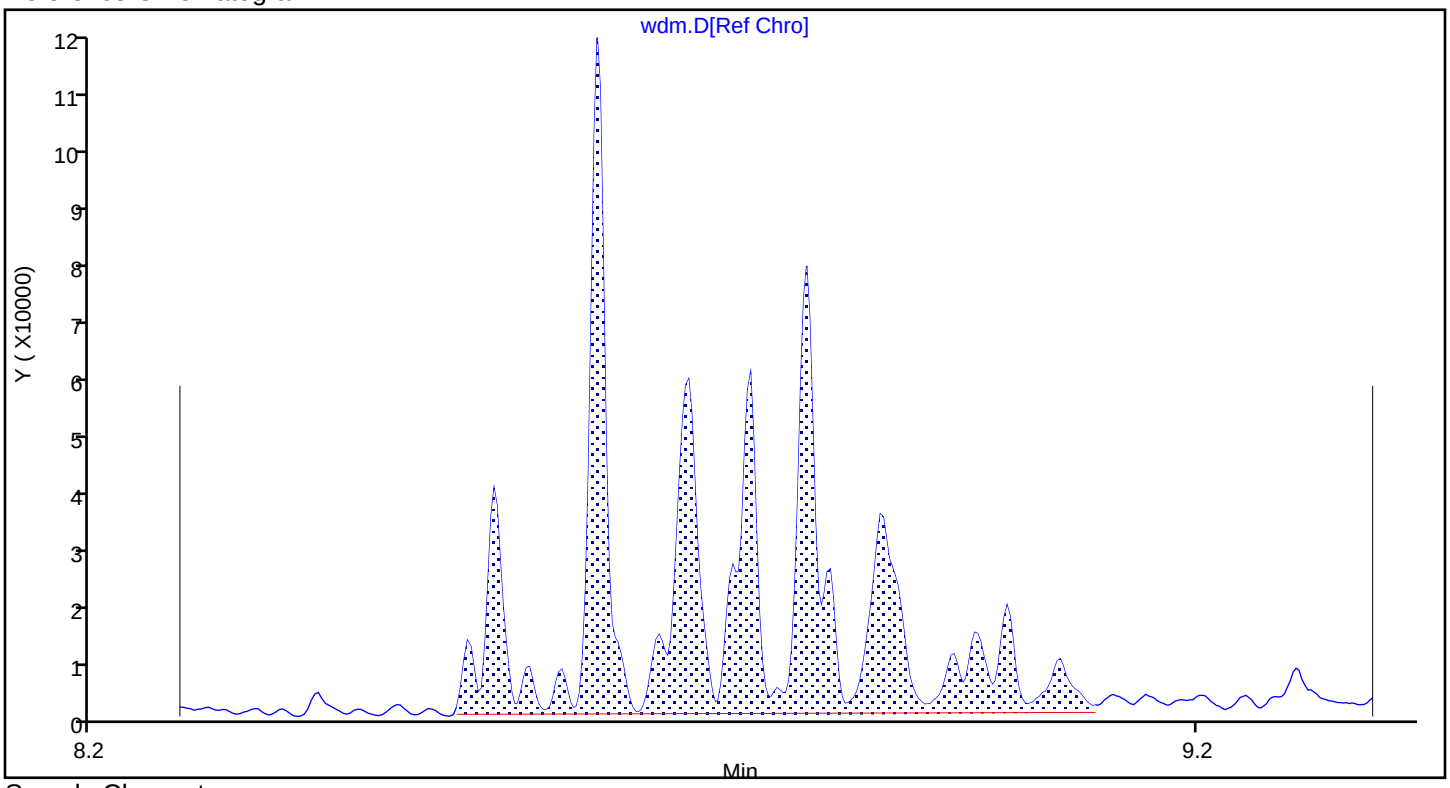
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

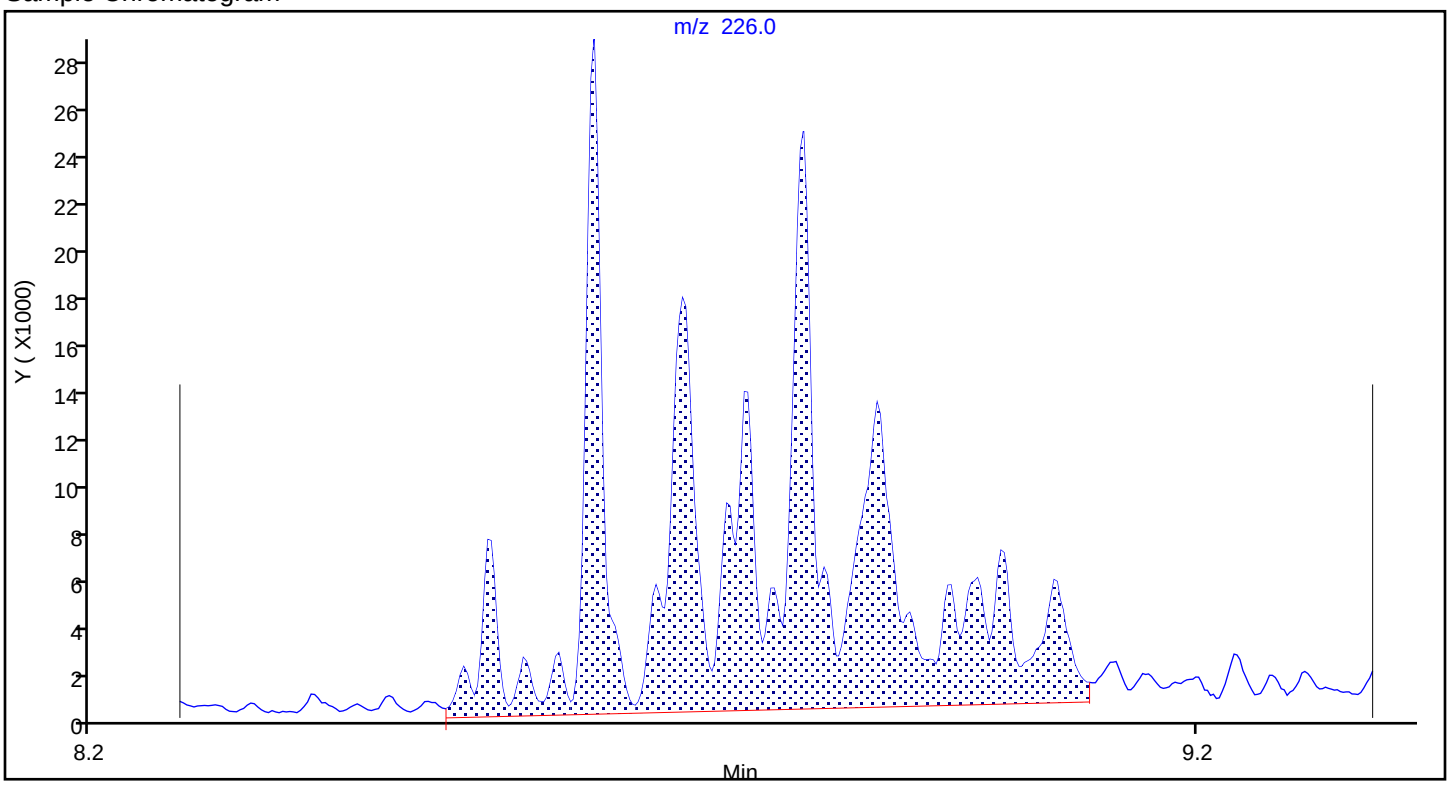
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 47 C3-Dibenzothiophenes, CAS: STL00911

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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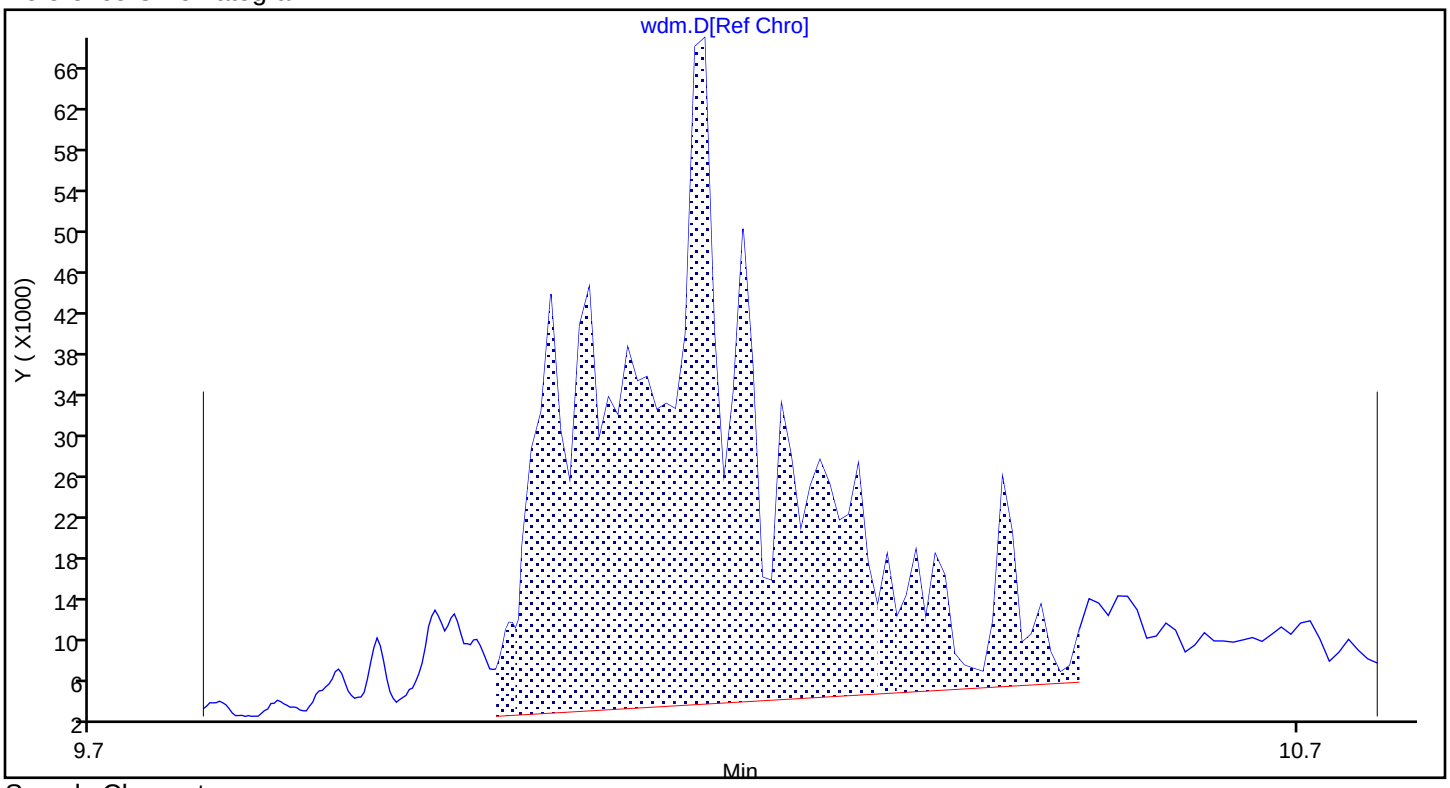
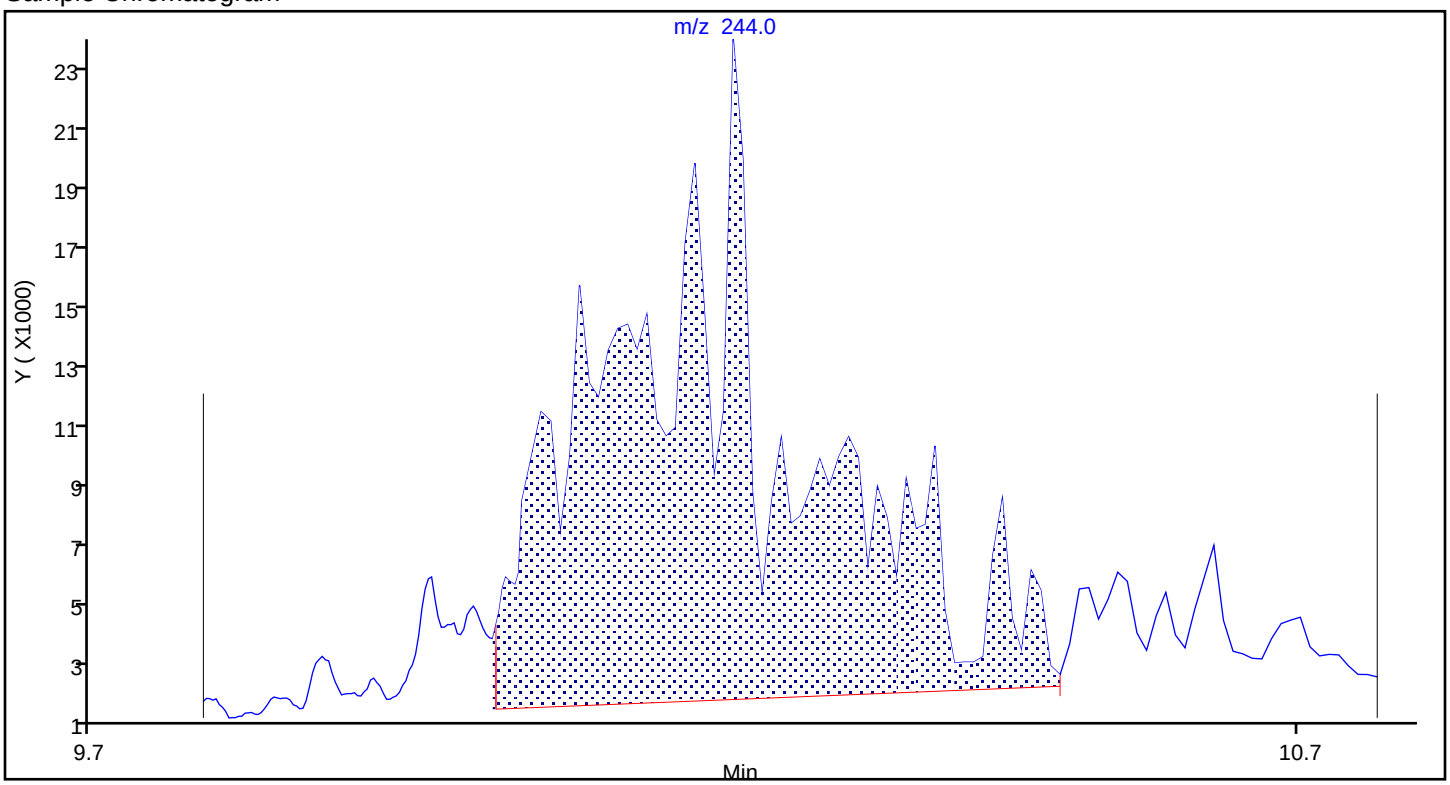
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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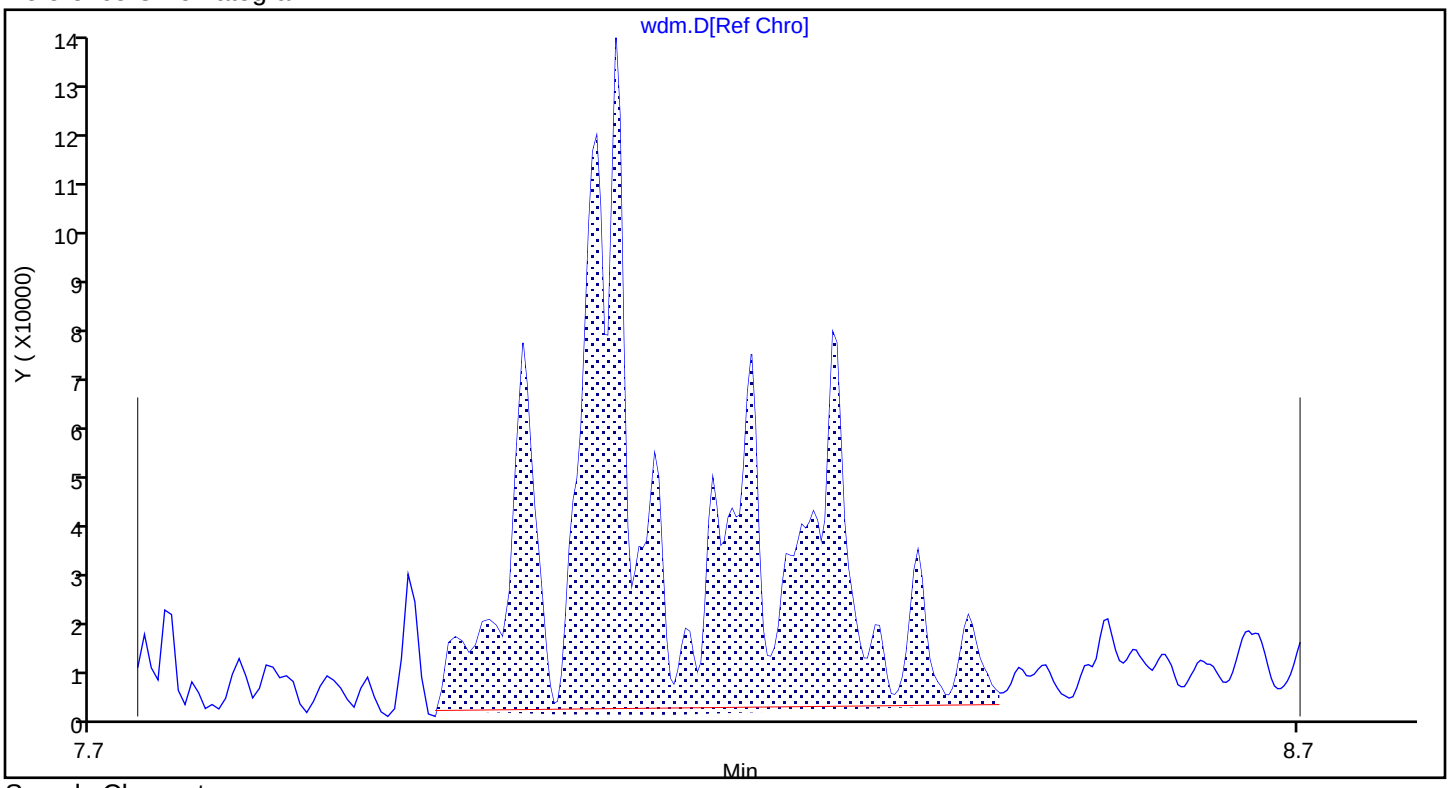
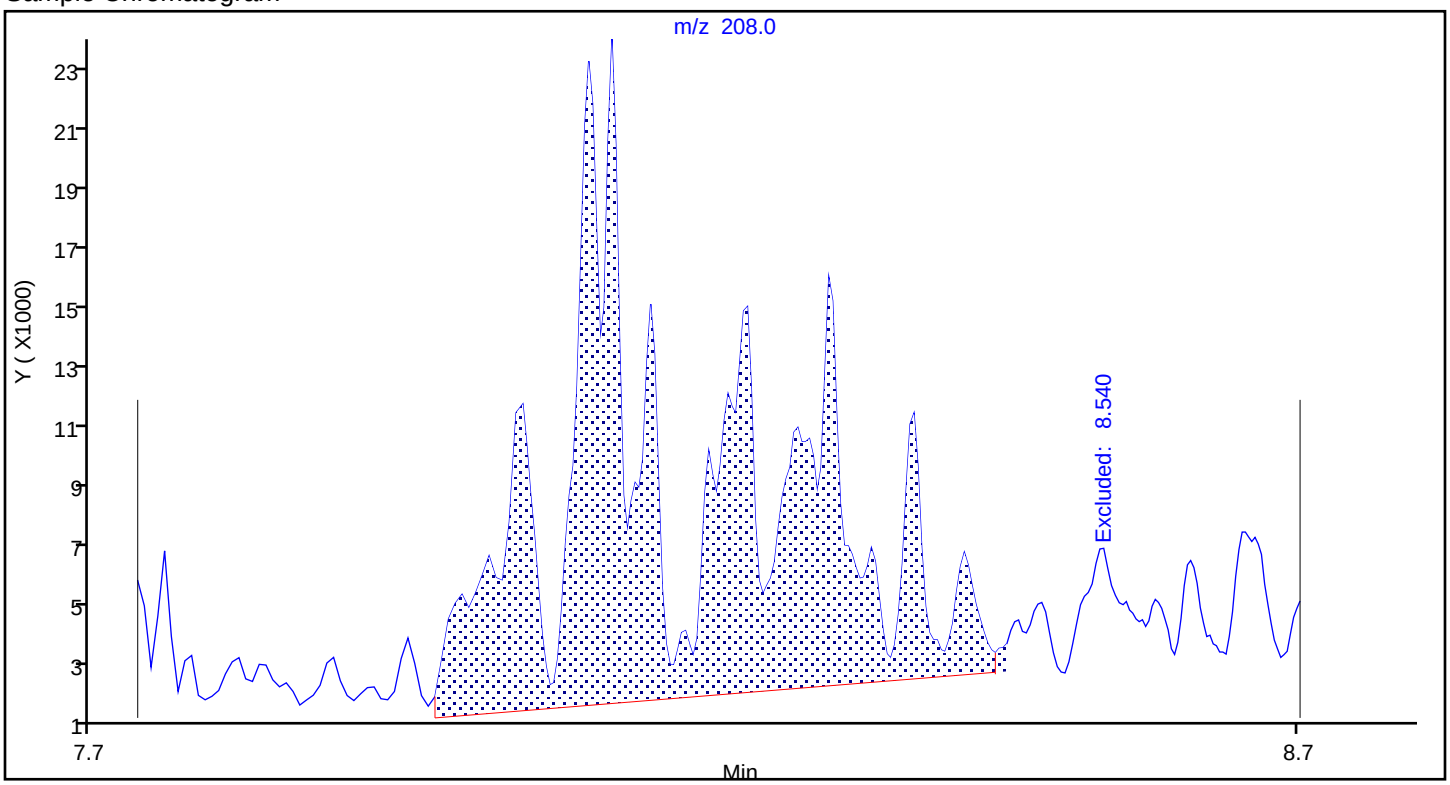
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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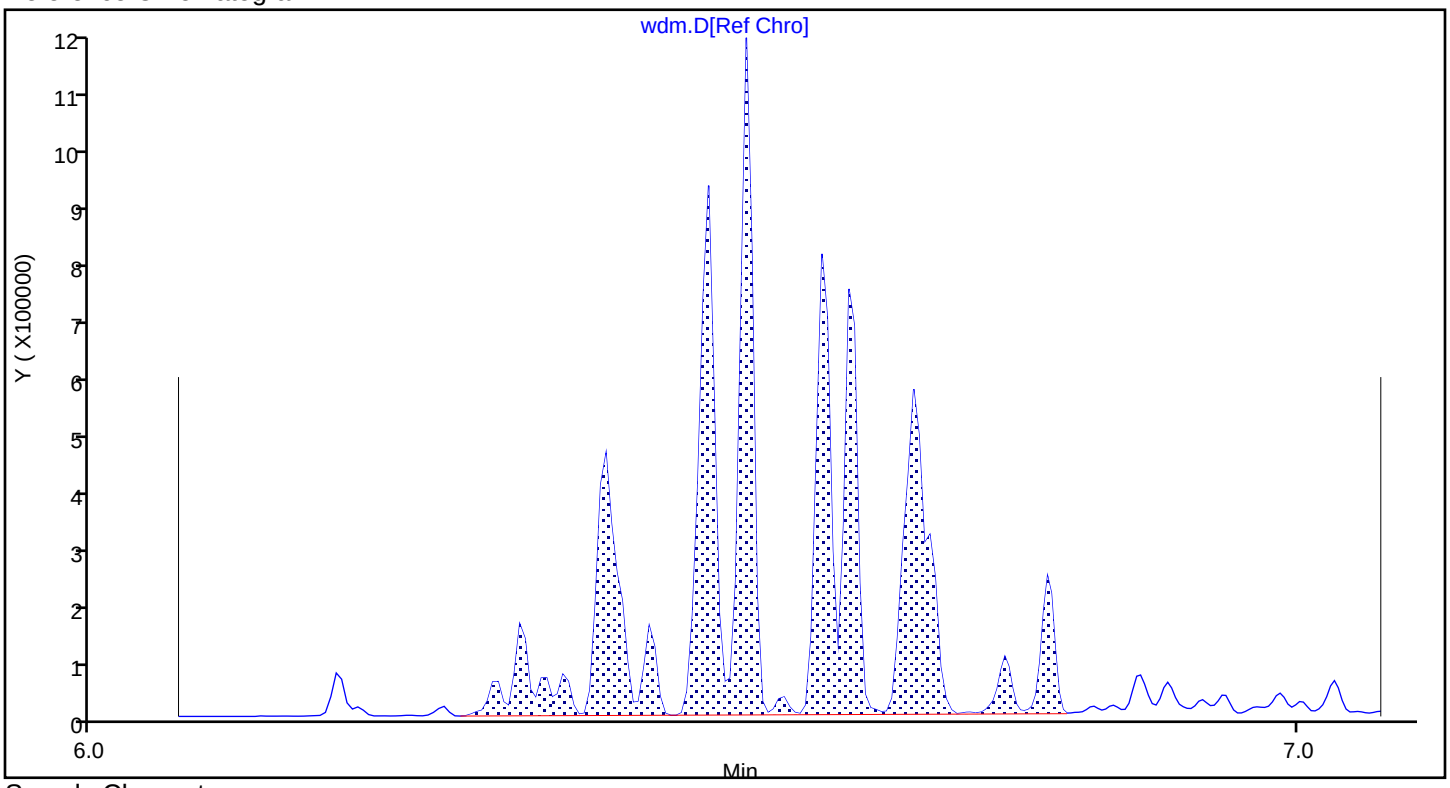
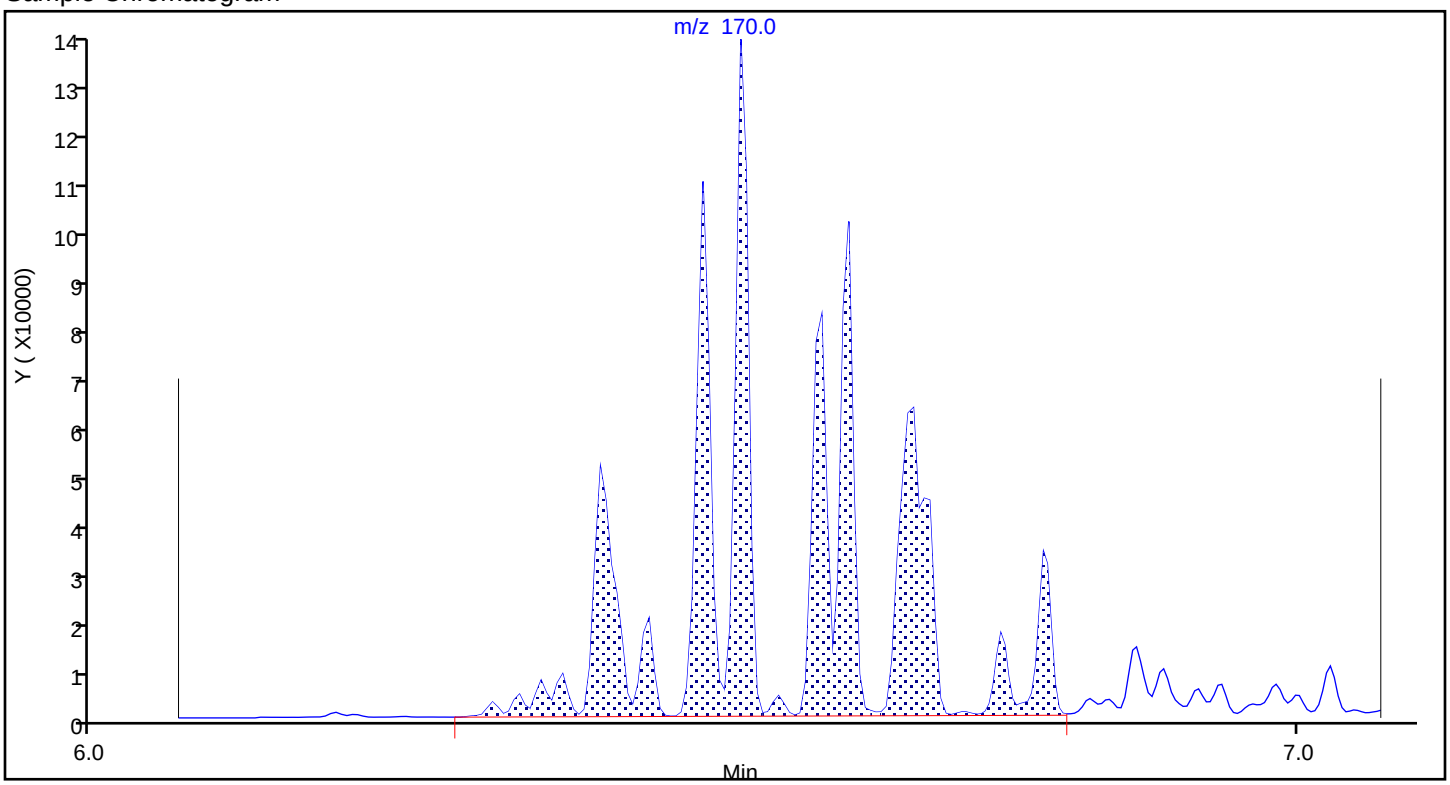
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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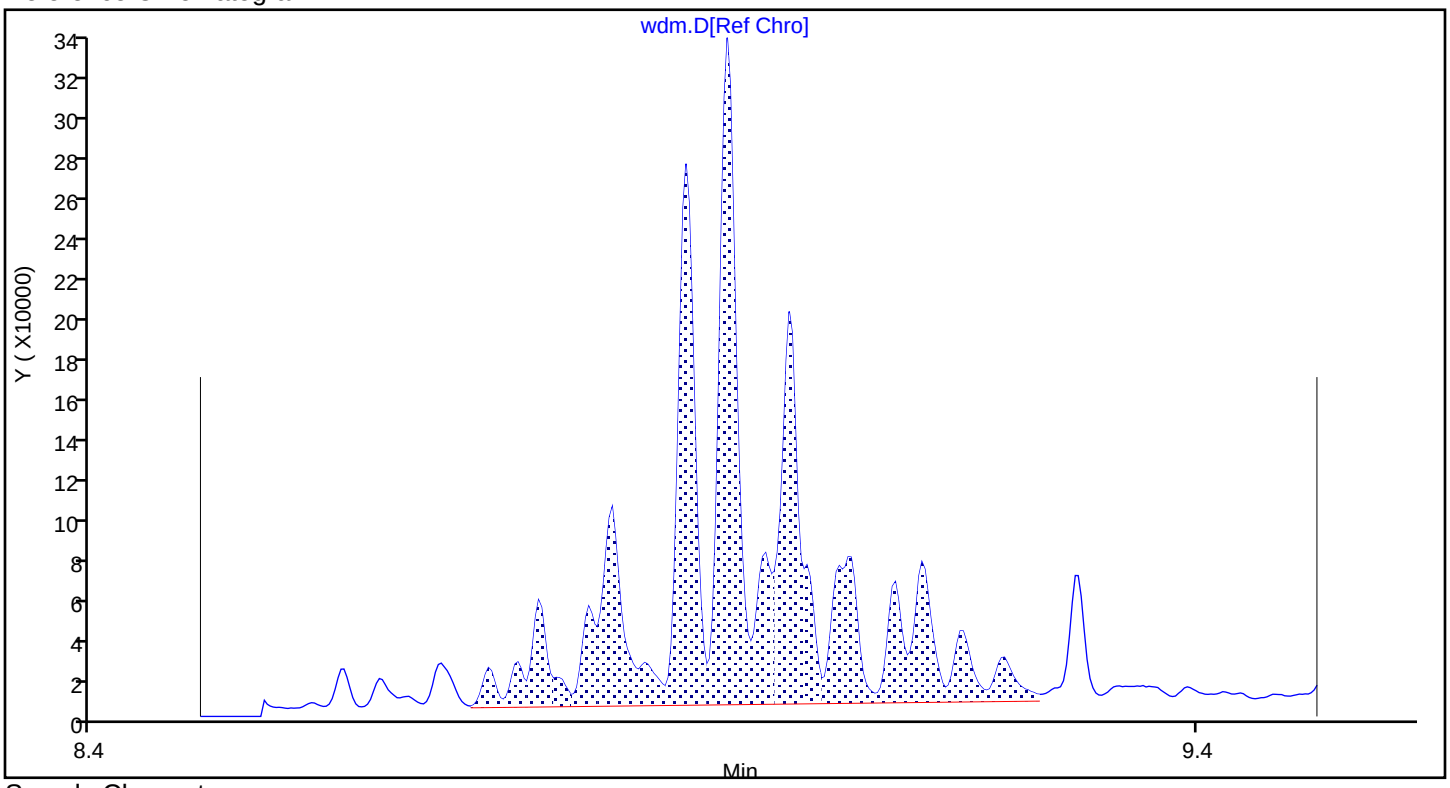
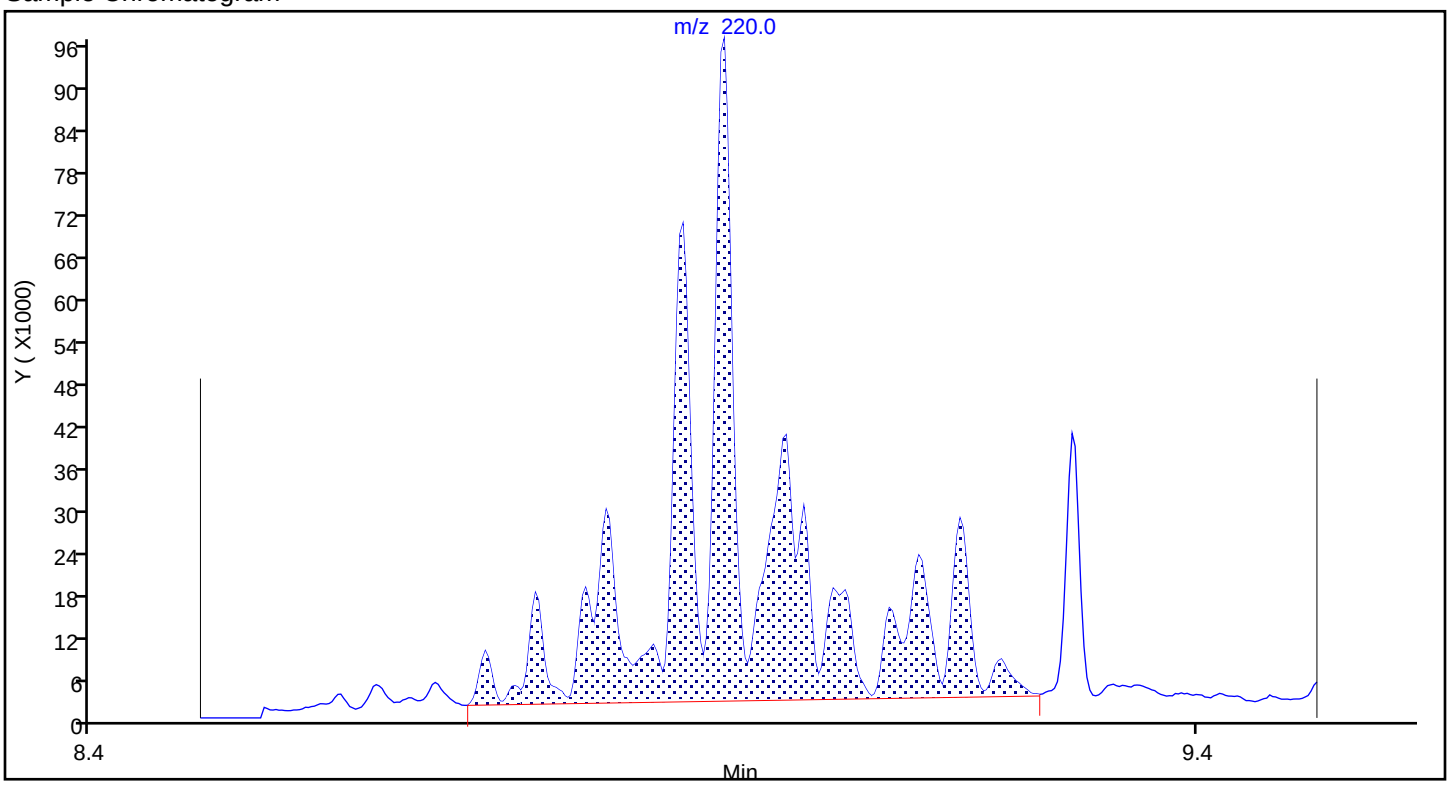
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:41 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
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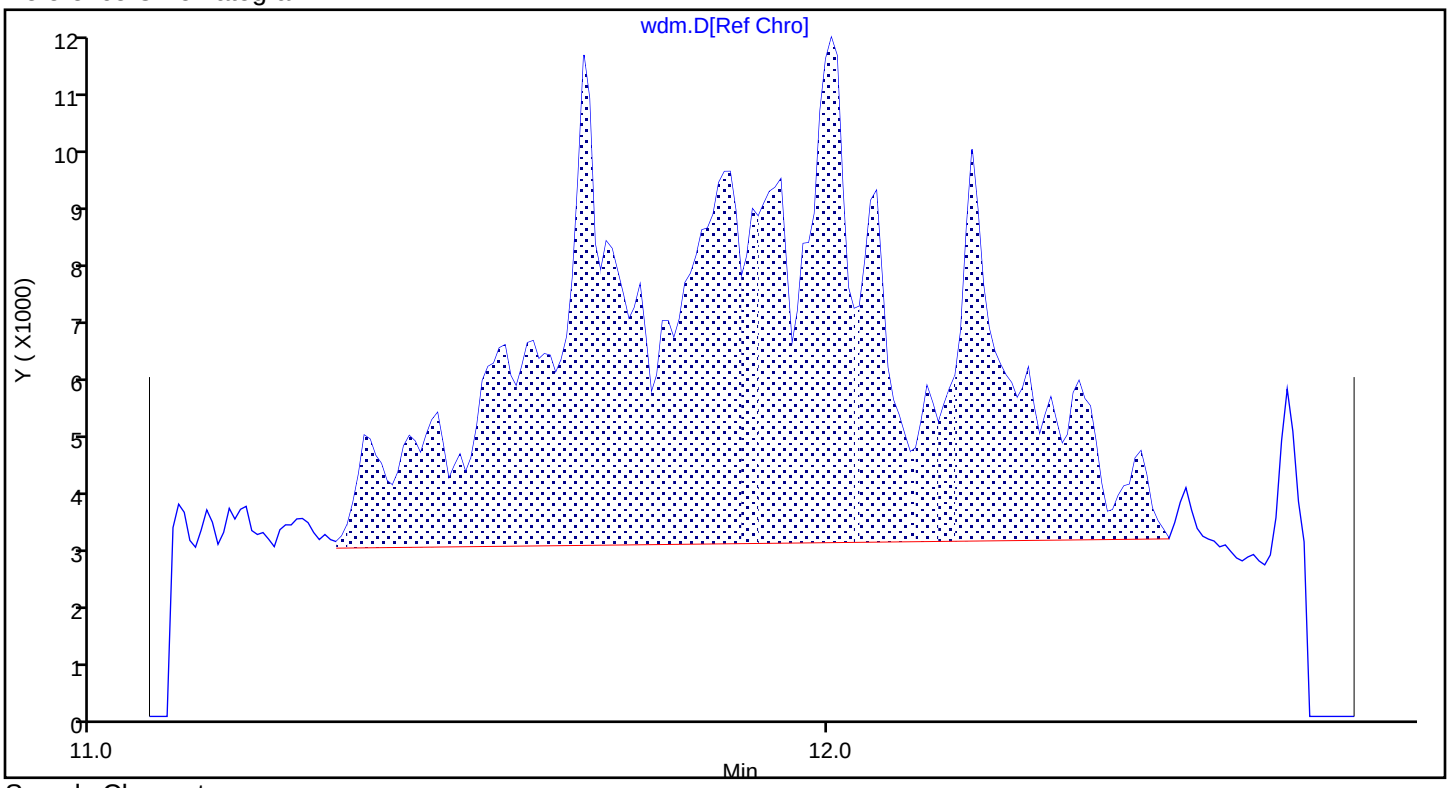
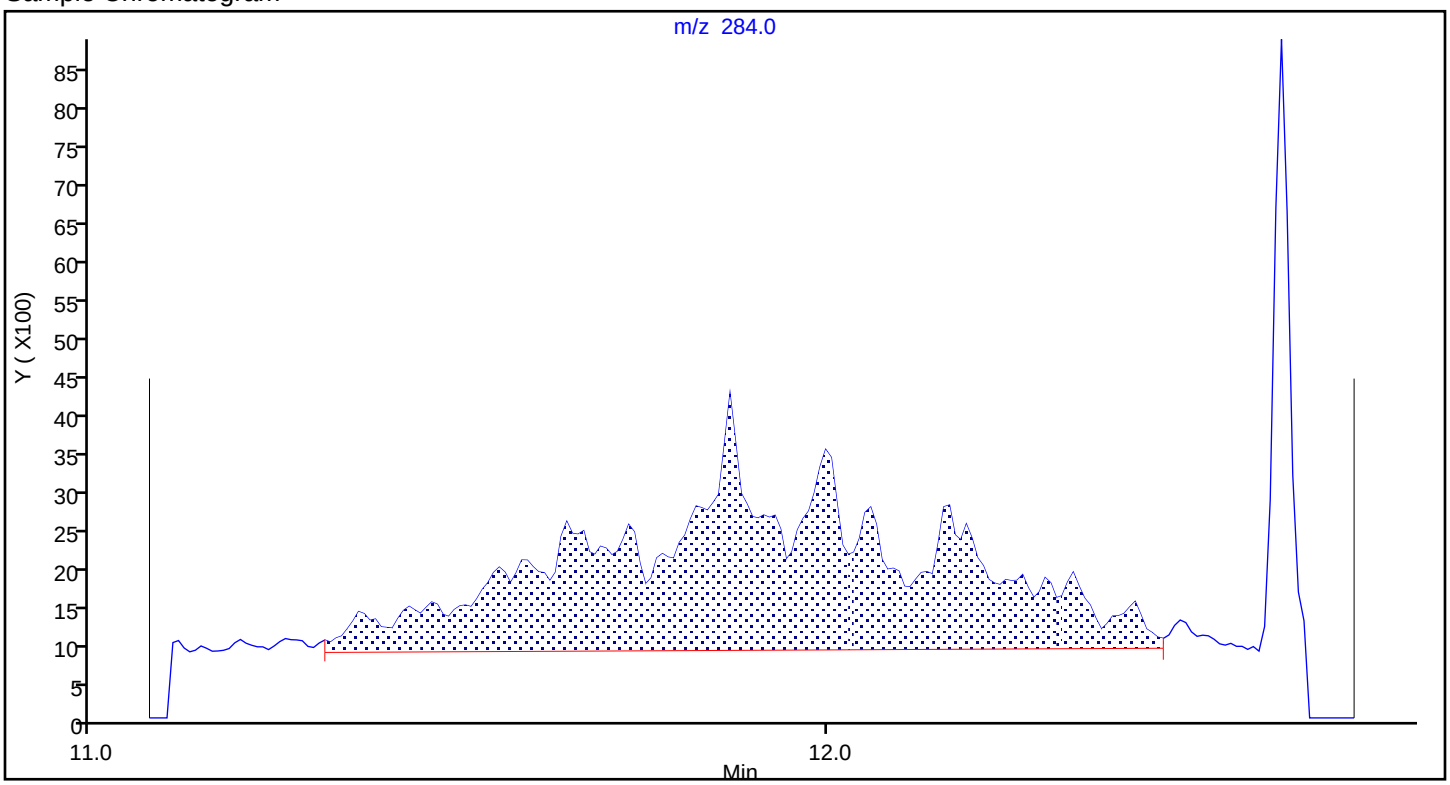
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 60 C4-Chrysenes, CAS: STL00908

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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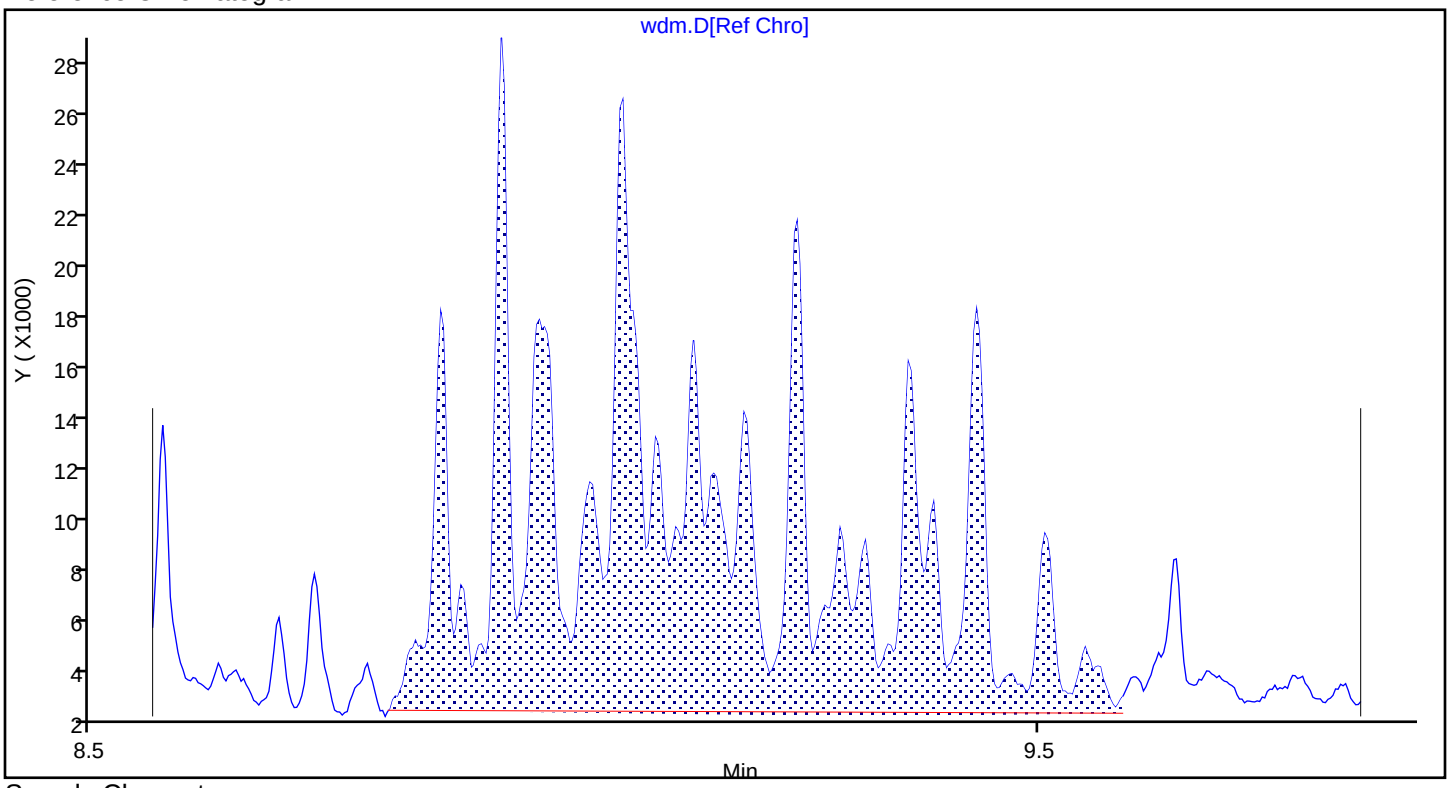
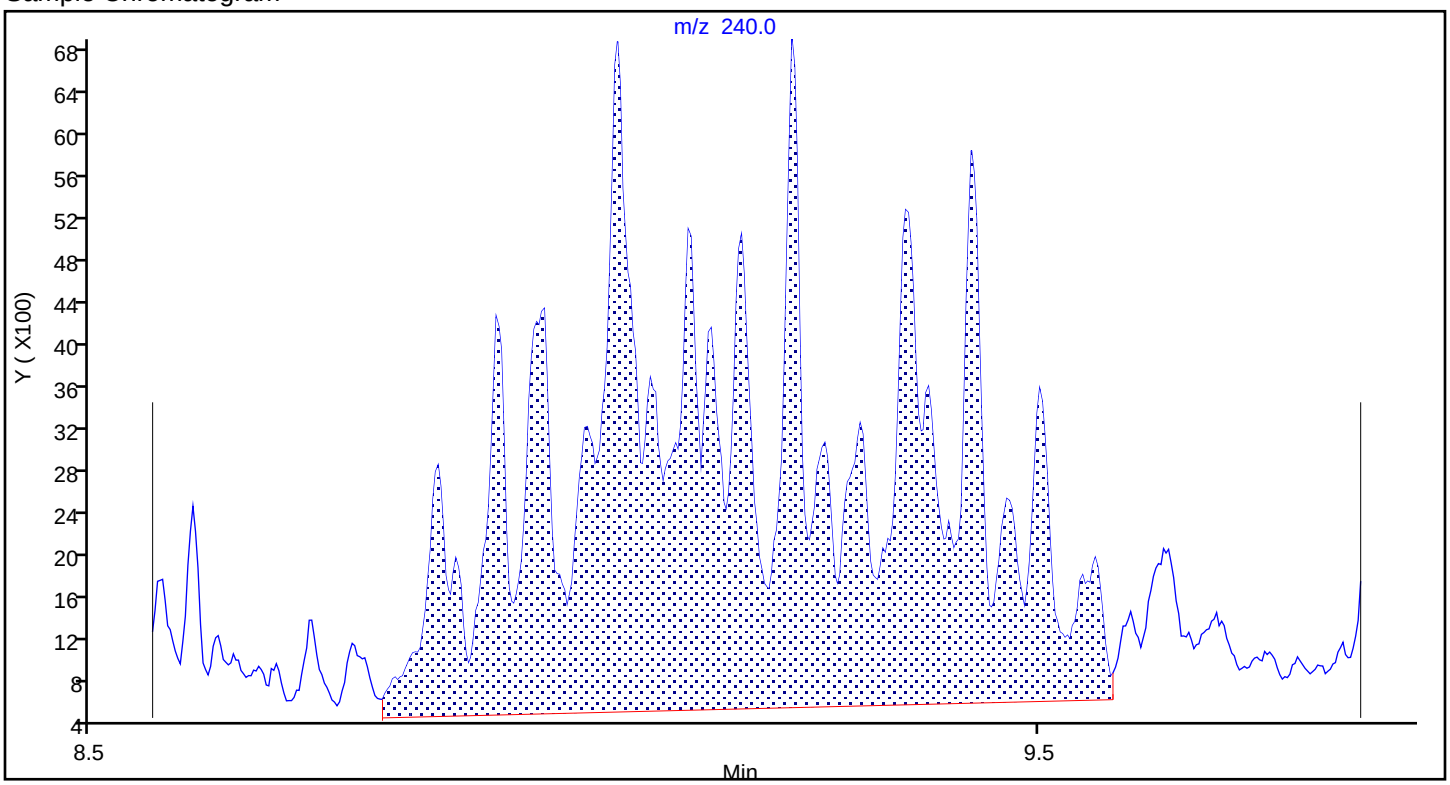
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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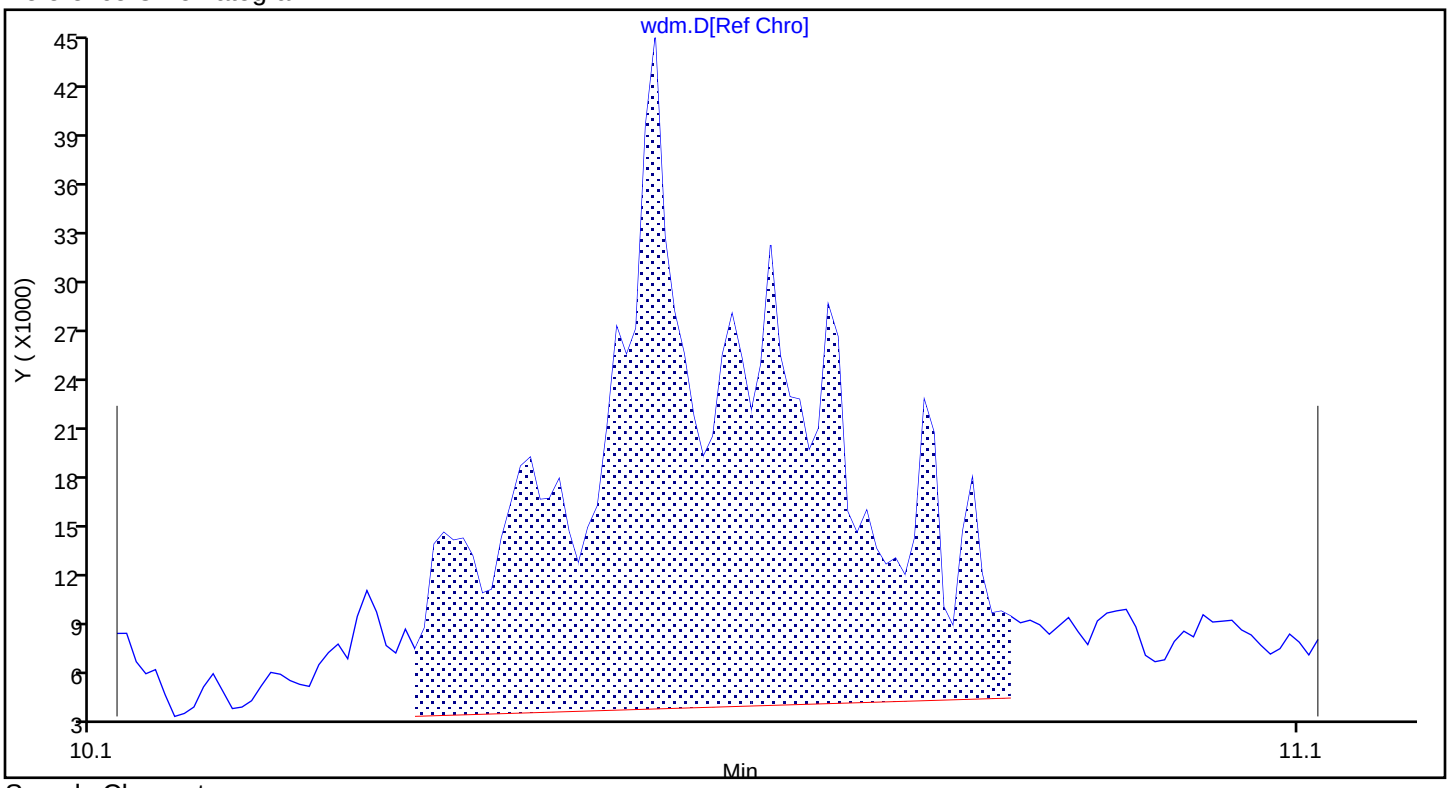
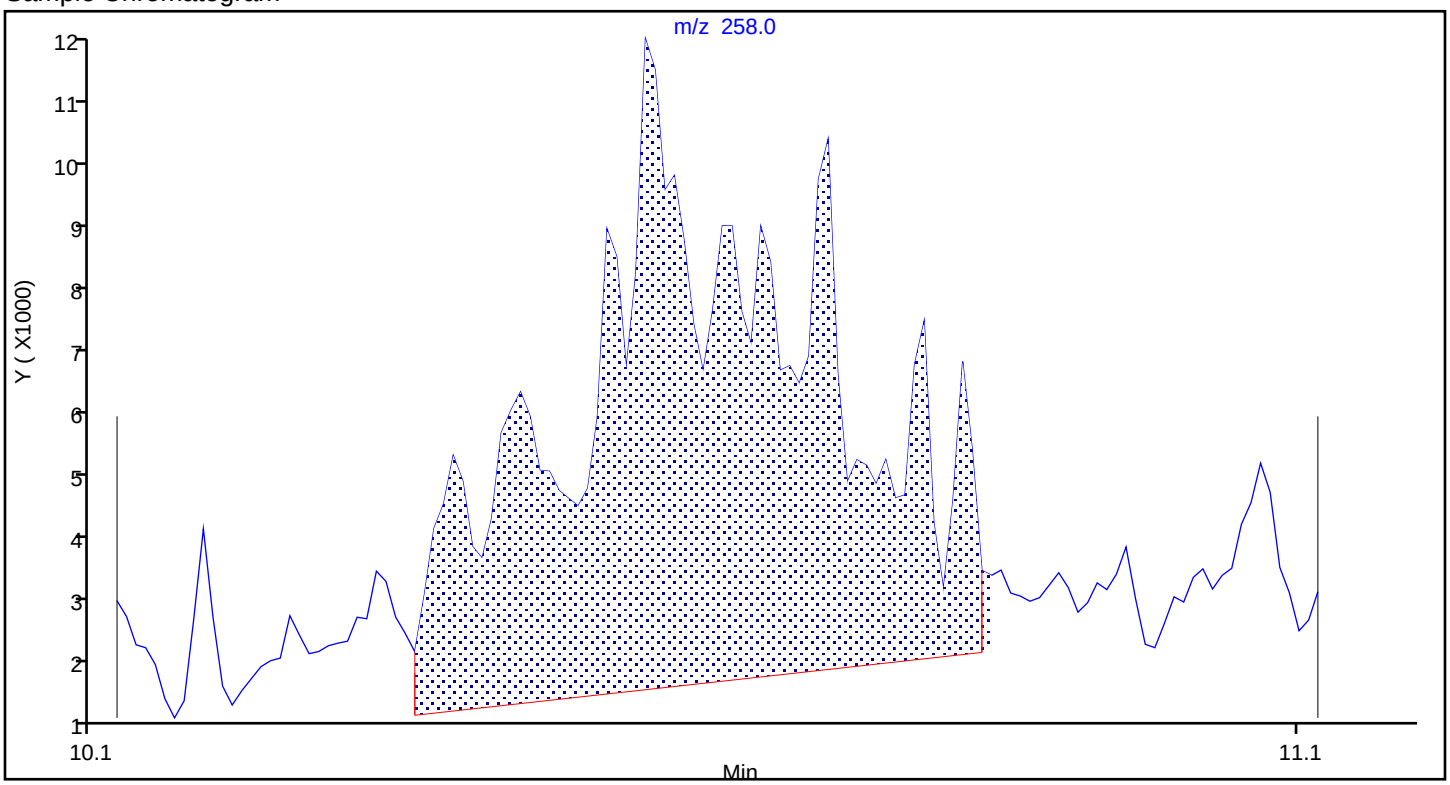
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Reference Chromatogram



Sample Chromatogram



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Eurofins TestAmerica, Knoxville

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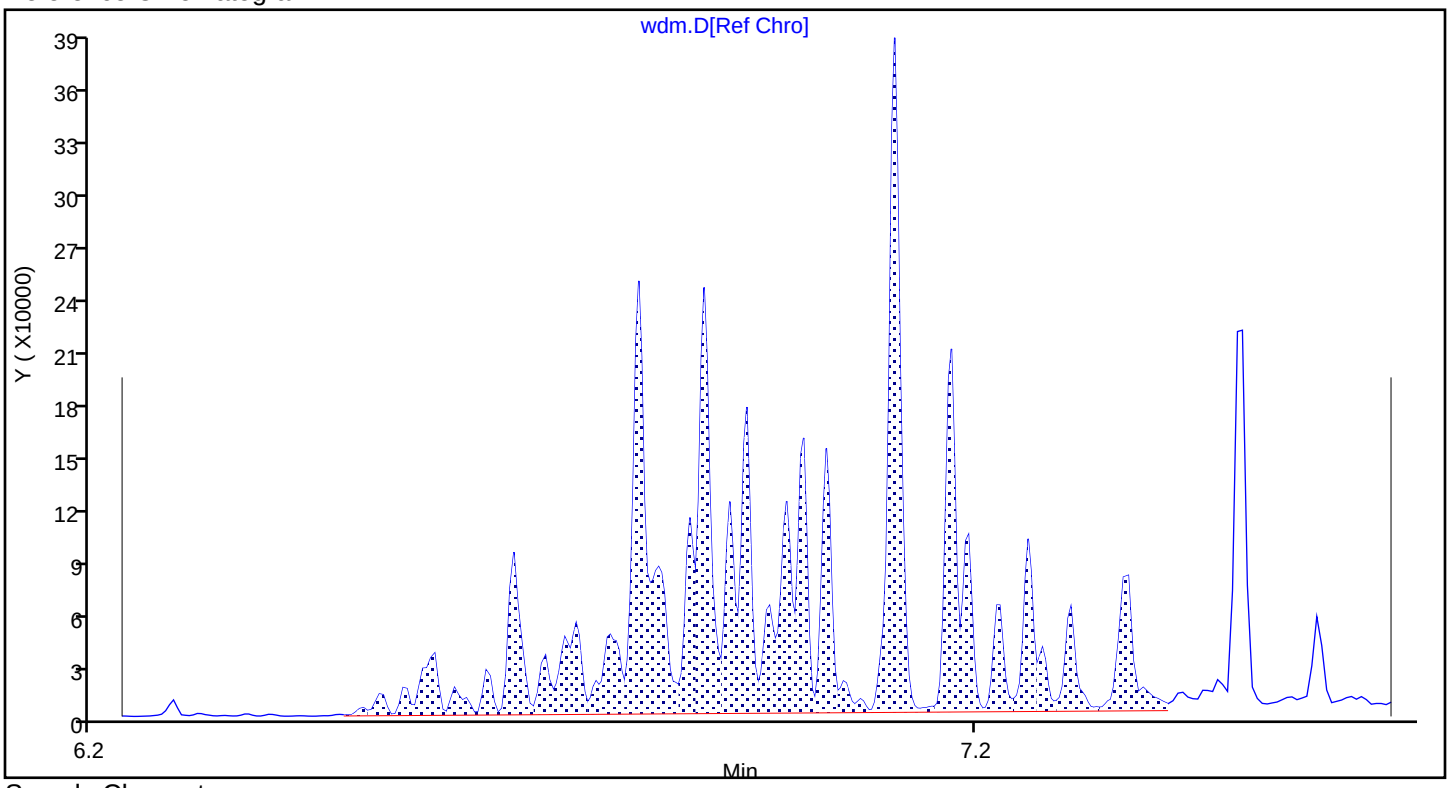
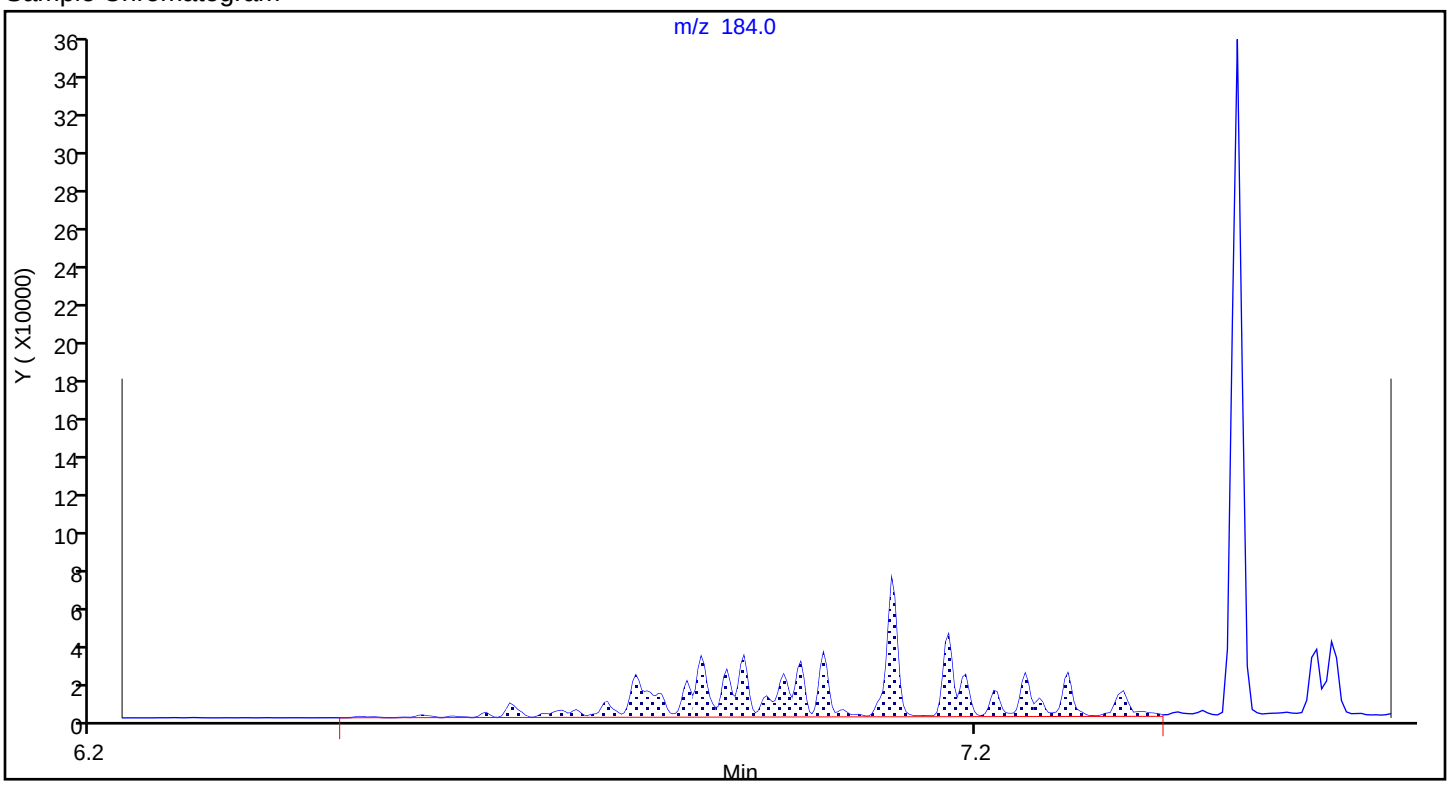
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

Reference Chromatogram



Sample Chromatogram



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

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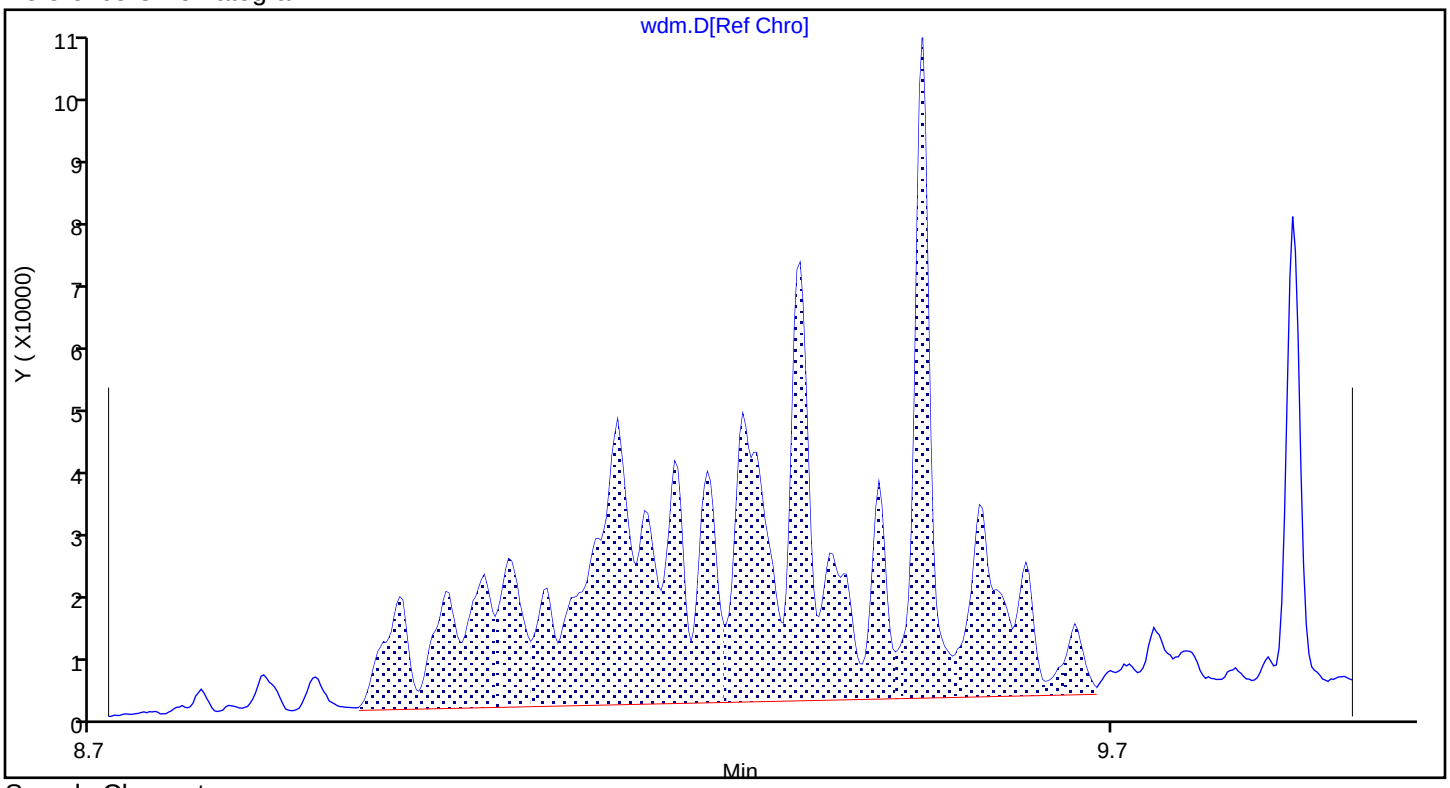
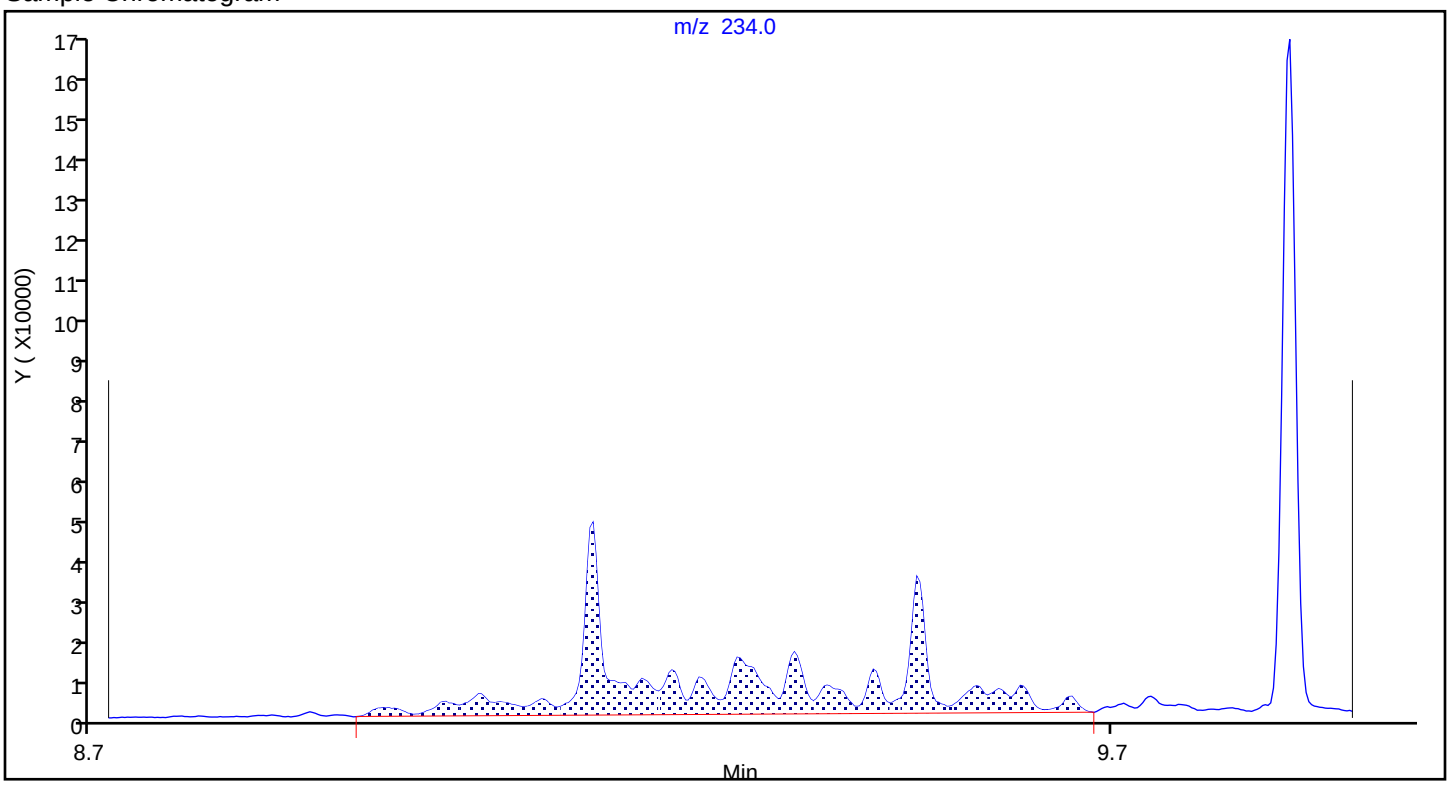
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Reference Chromatogram



Sample Chromatogram



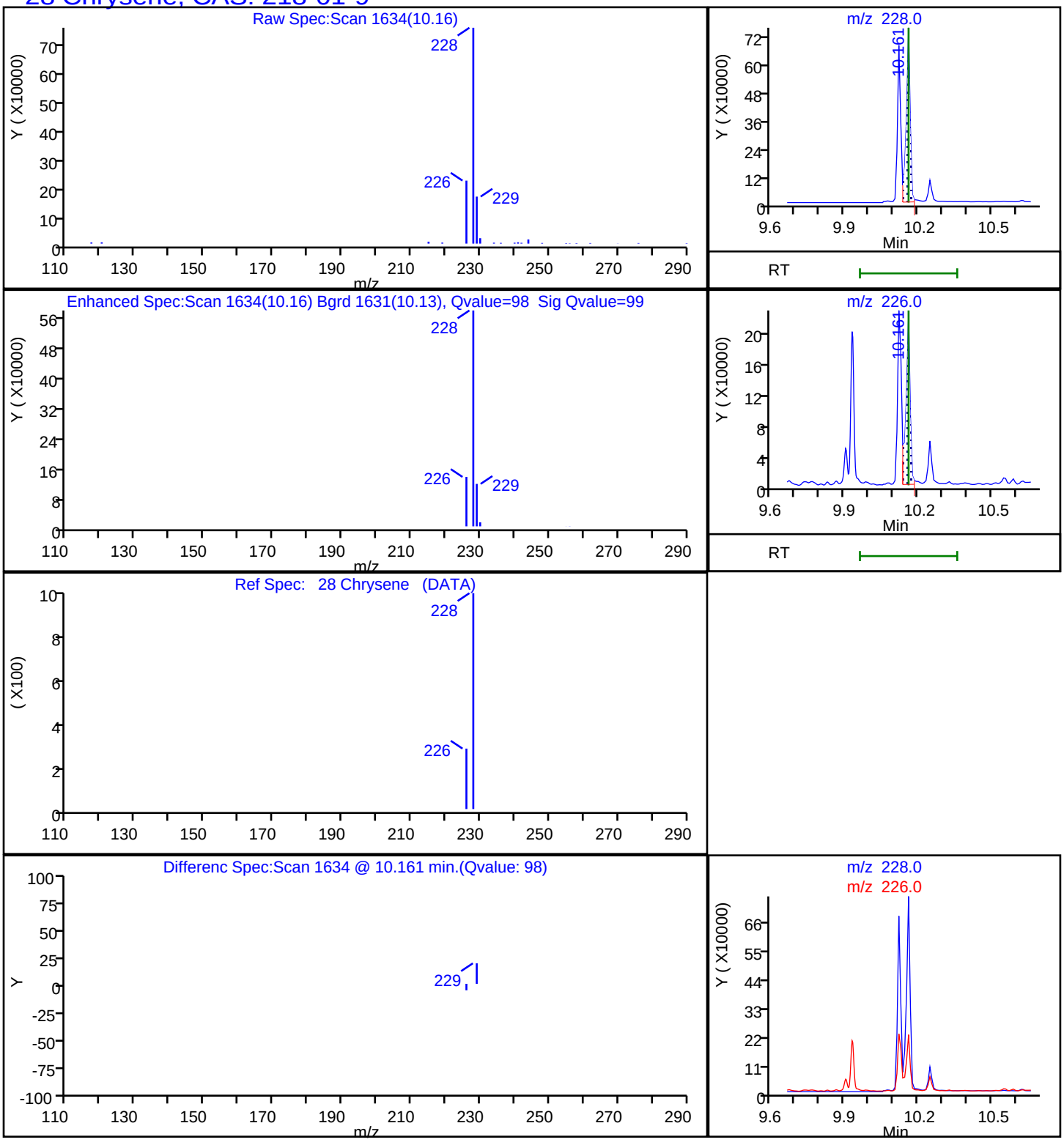
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9



Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
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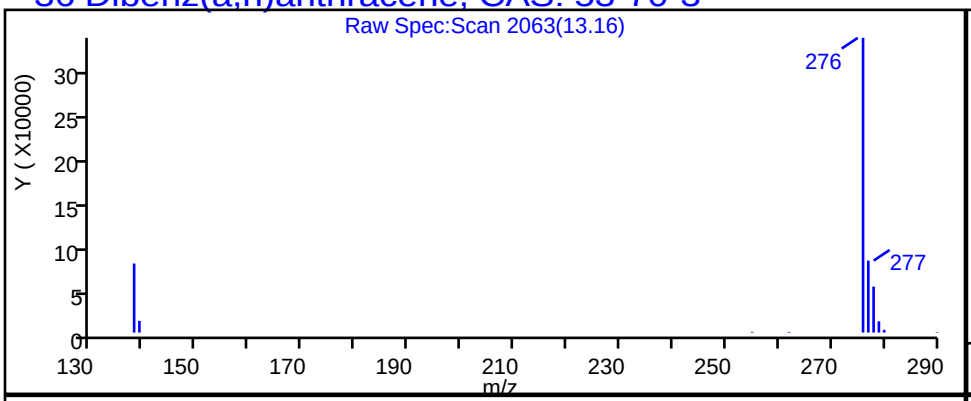
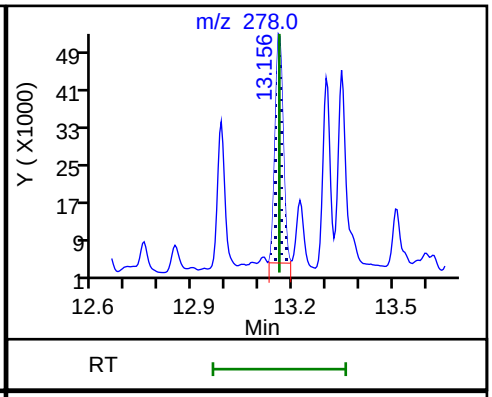
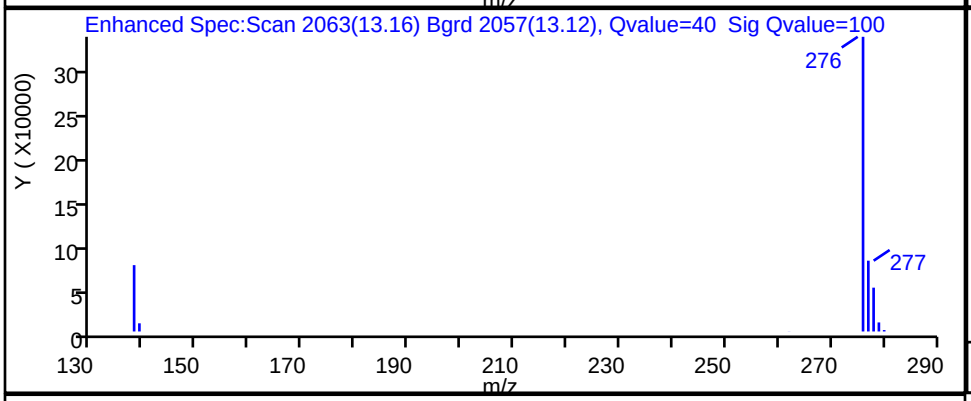
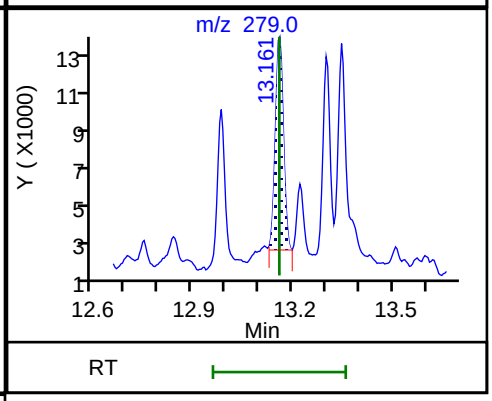
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

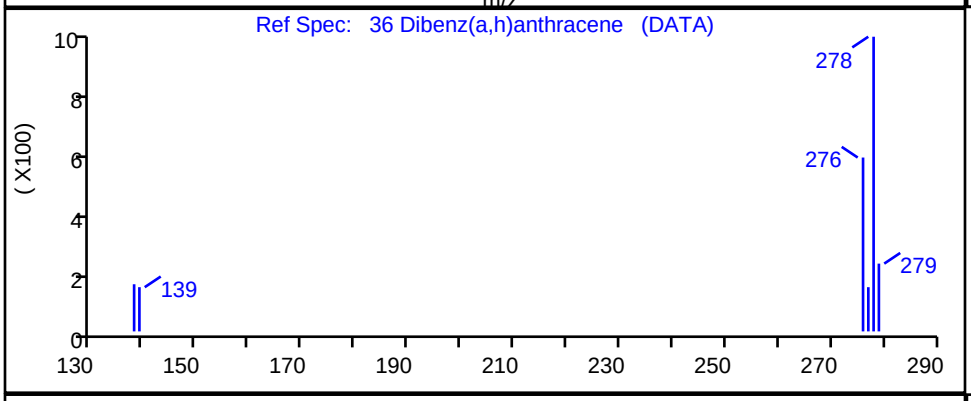
36 Dibenz(a,h)anthracene, CAS: 53-70-3

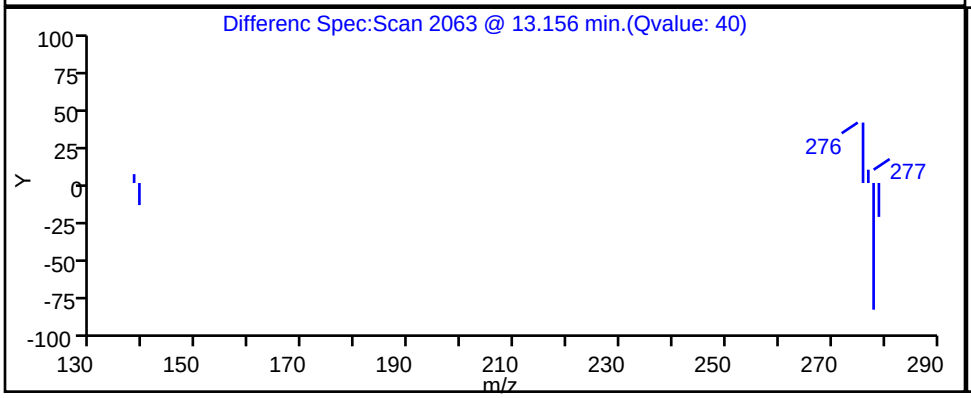


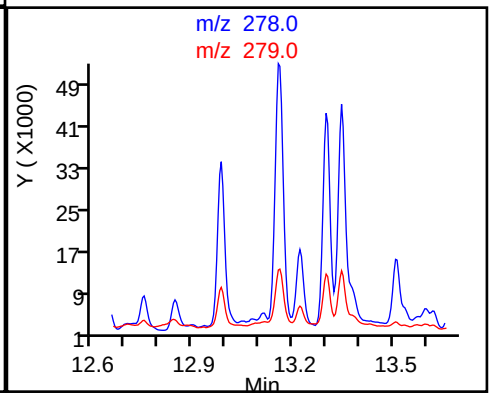












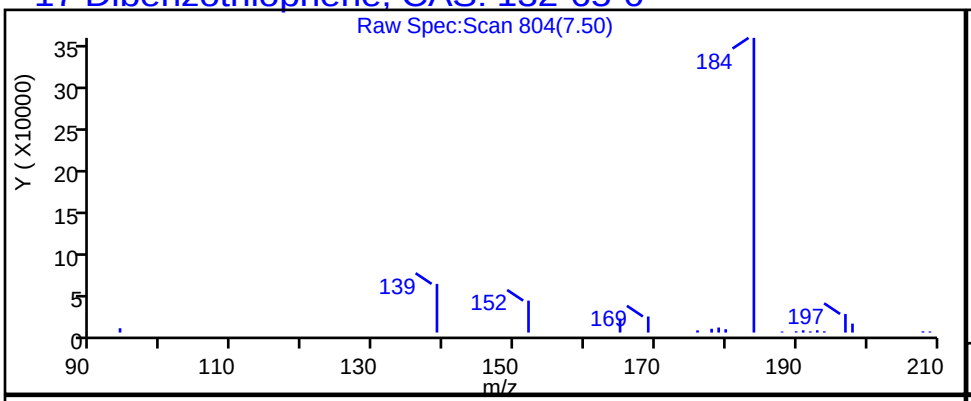
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

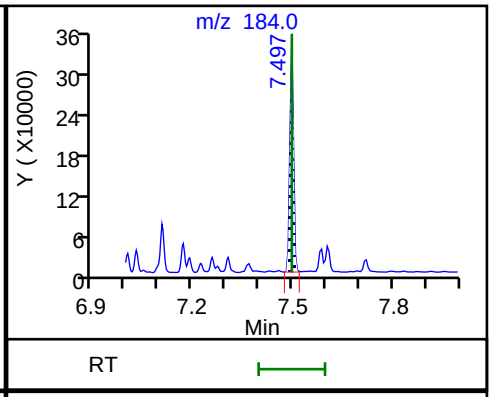
Eurofins TestAmerica, Knoxville

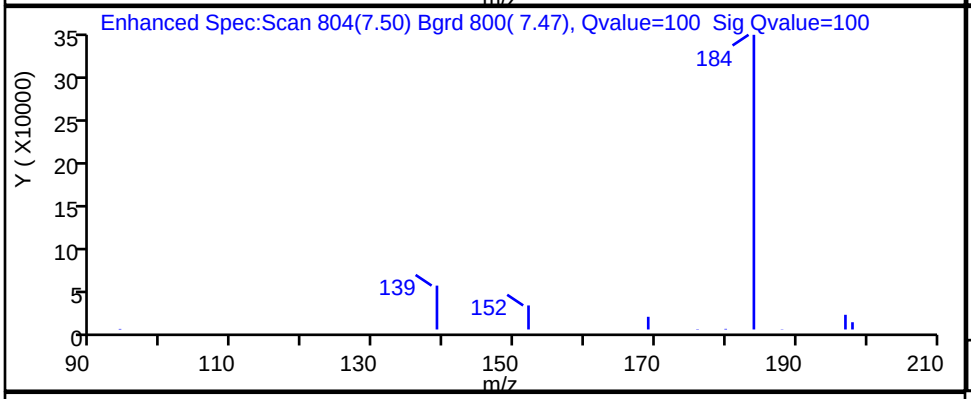
Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

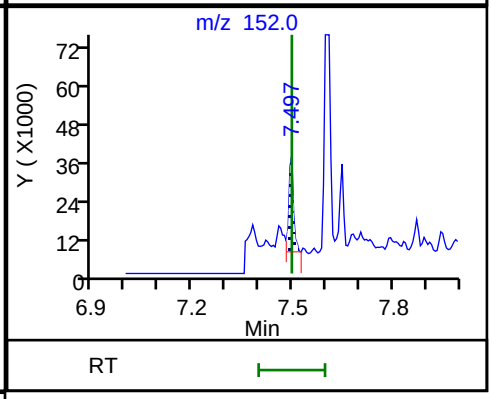
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

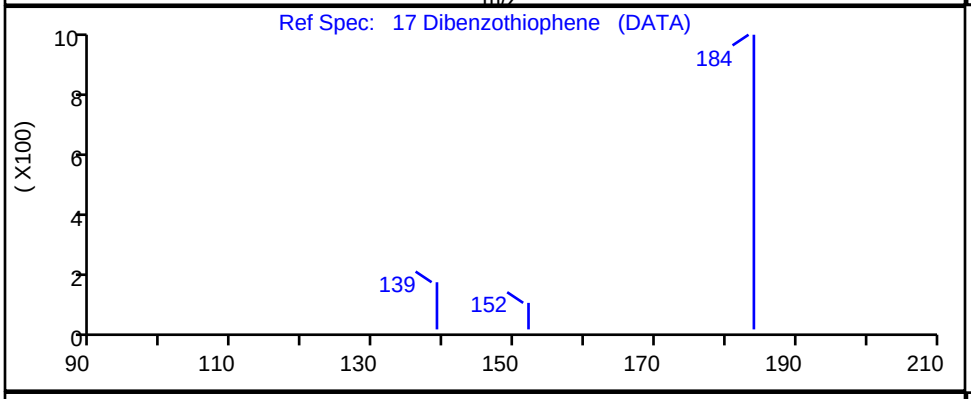
17 Dibenzothiophene, CAS: 132-65-0

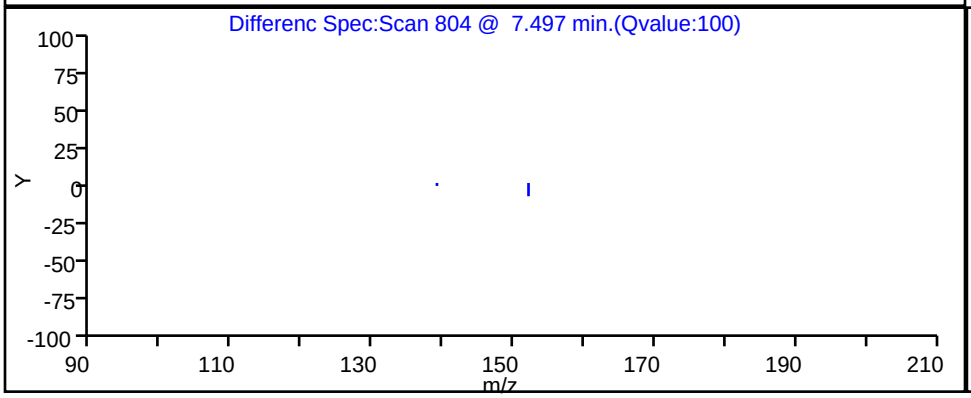


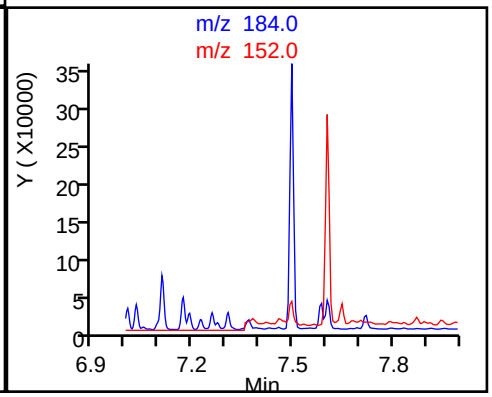










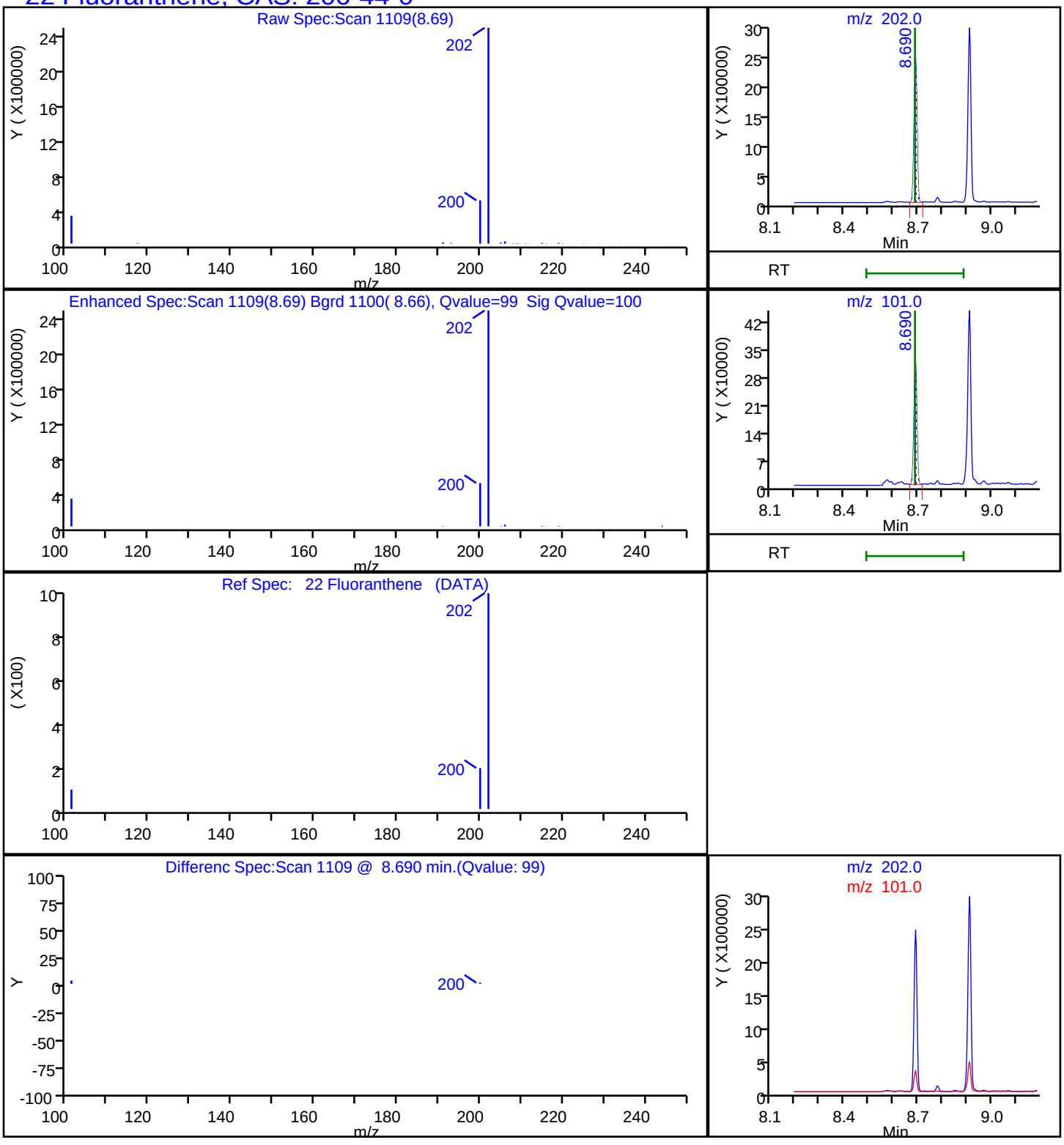


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

22 Fluoranthene, CAS: 206-44-0

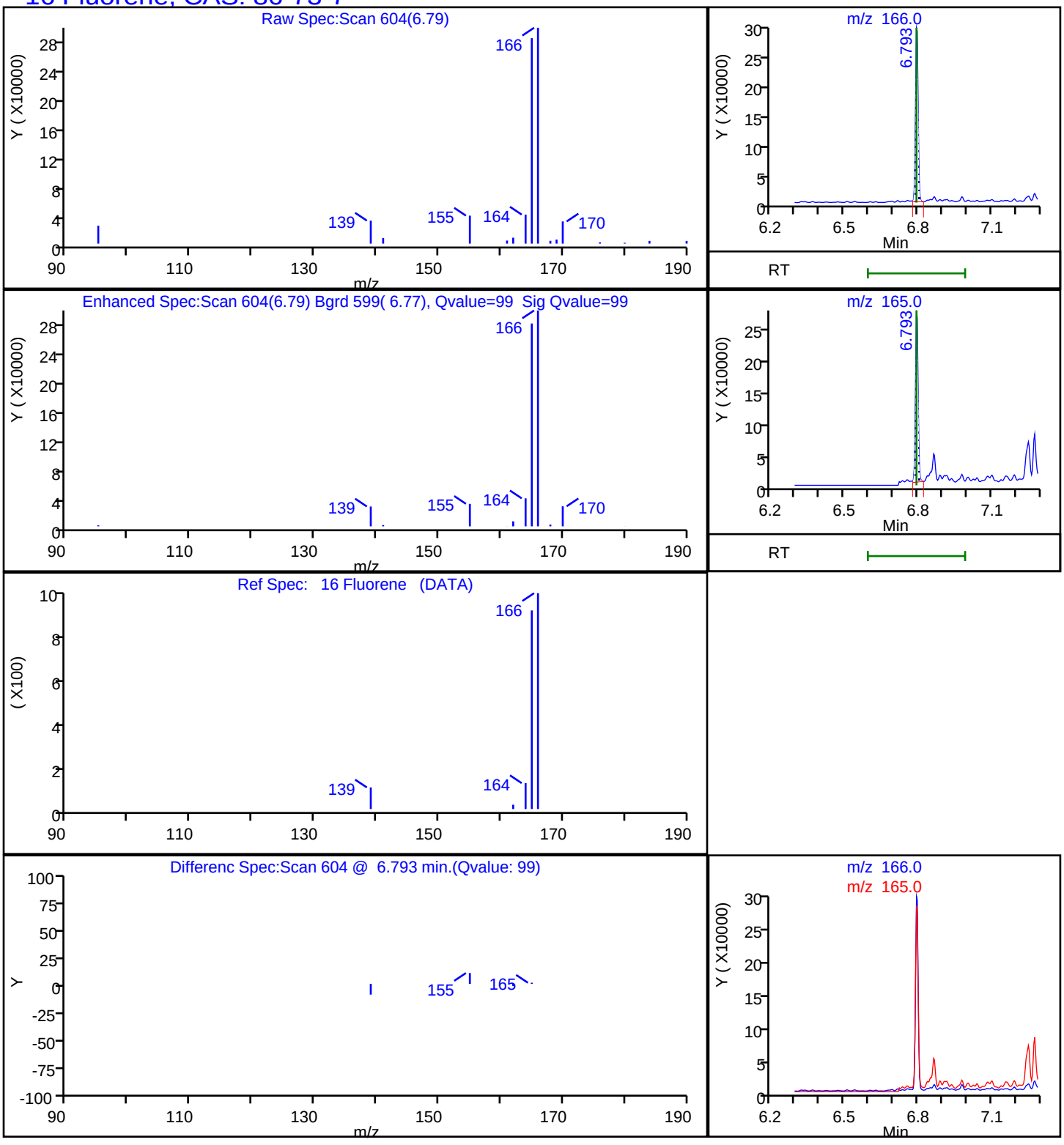


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

16 Fluorene, CAS: 86-73-7

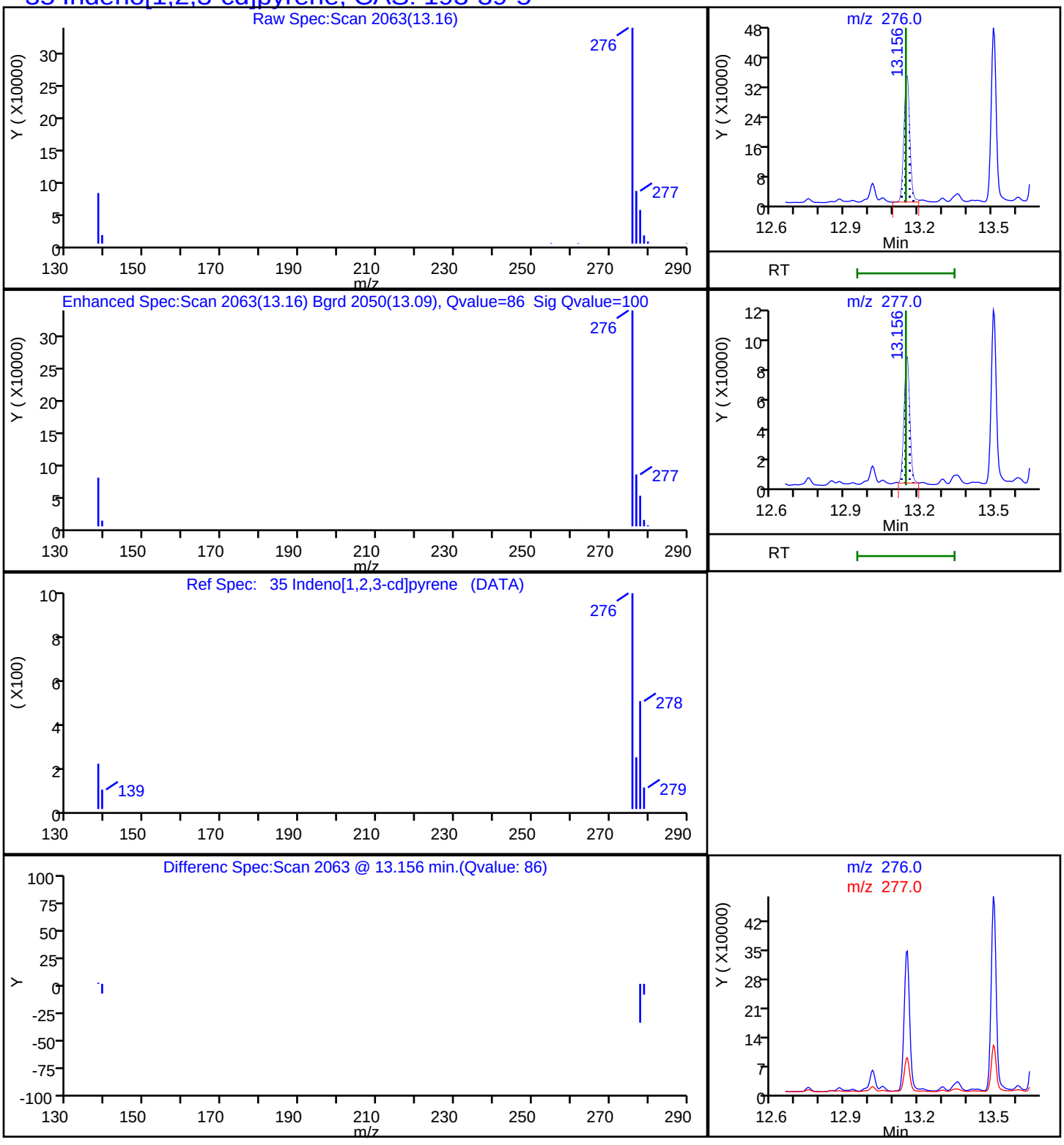


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

35 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

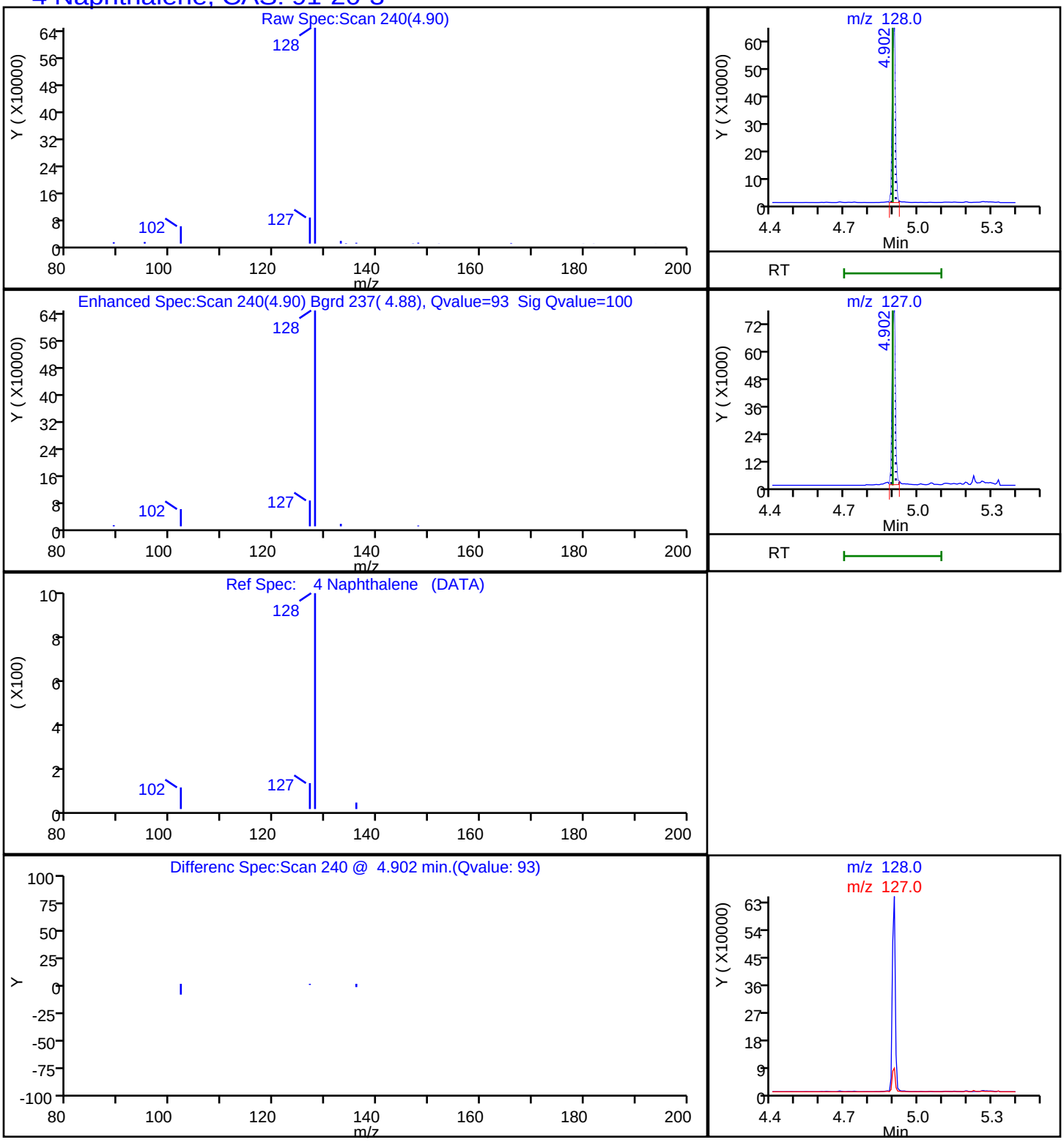


Report Date: 31-Aug-2019 11:49:39 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

4 Naphthalene, CAS: 91-20-3

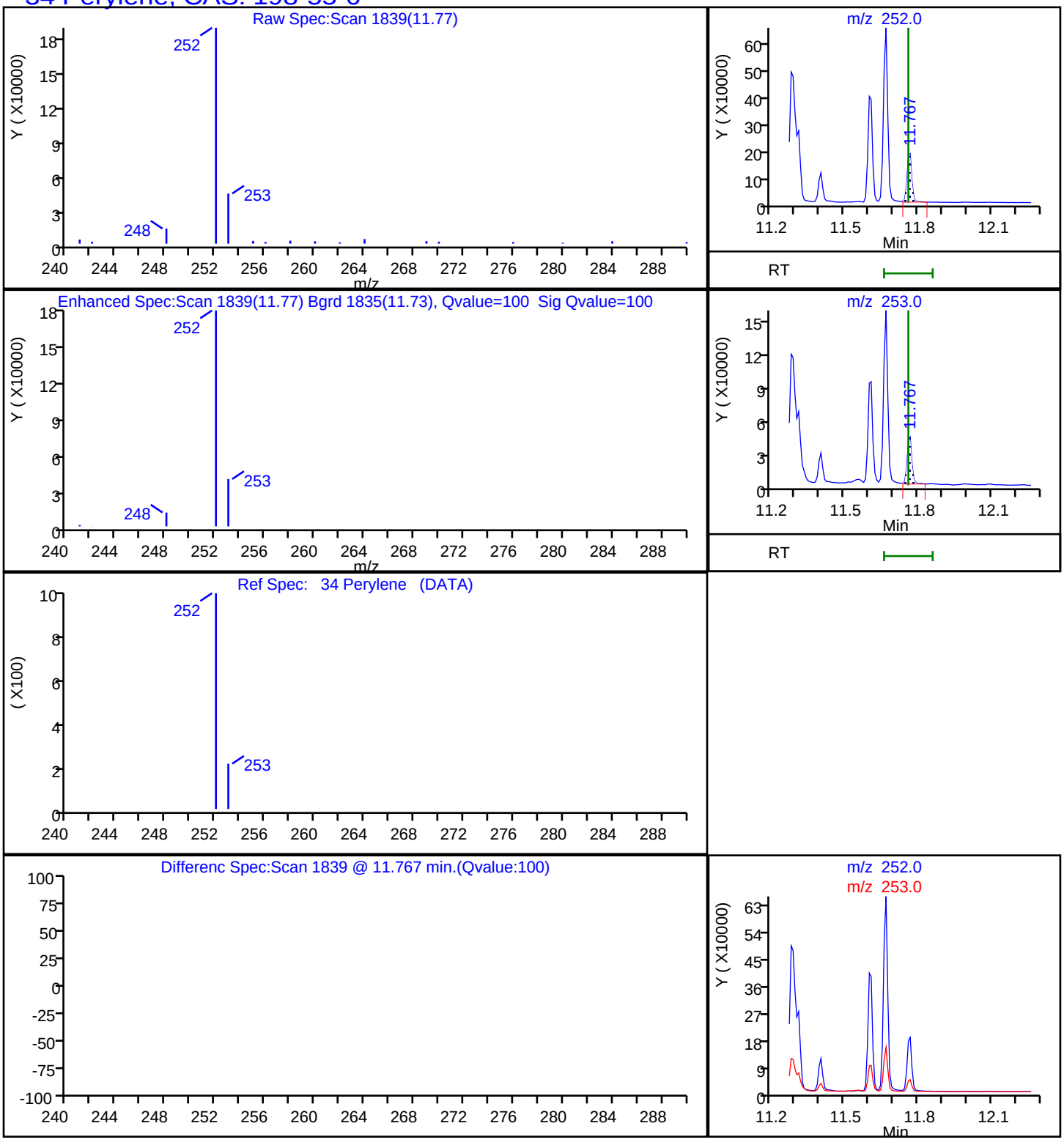


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0

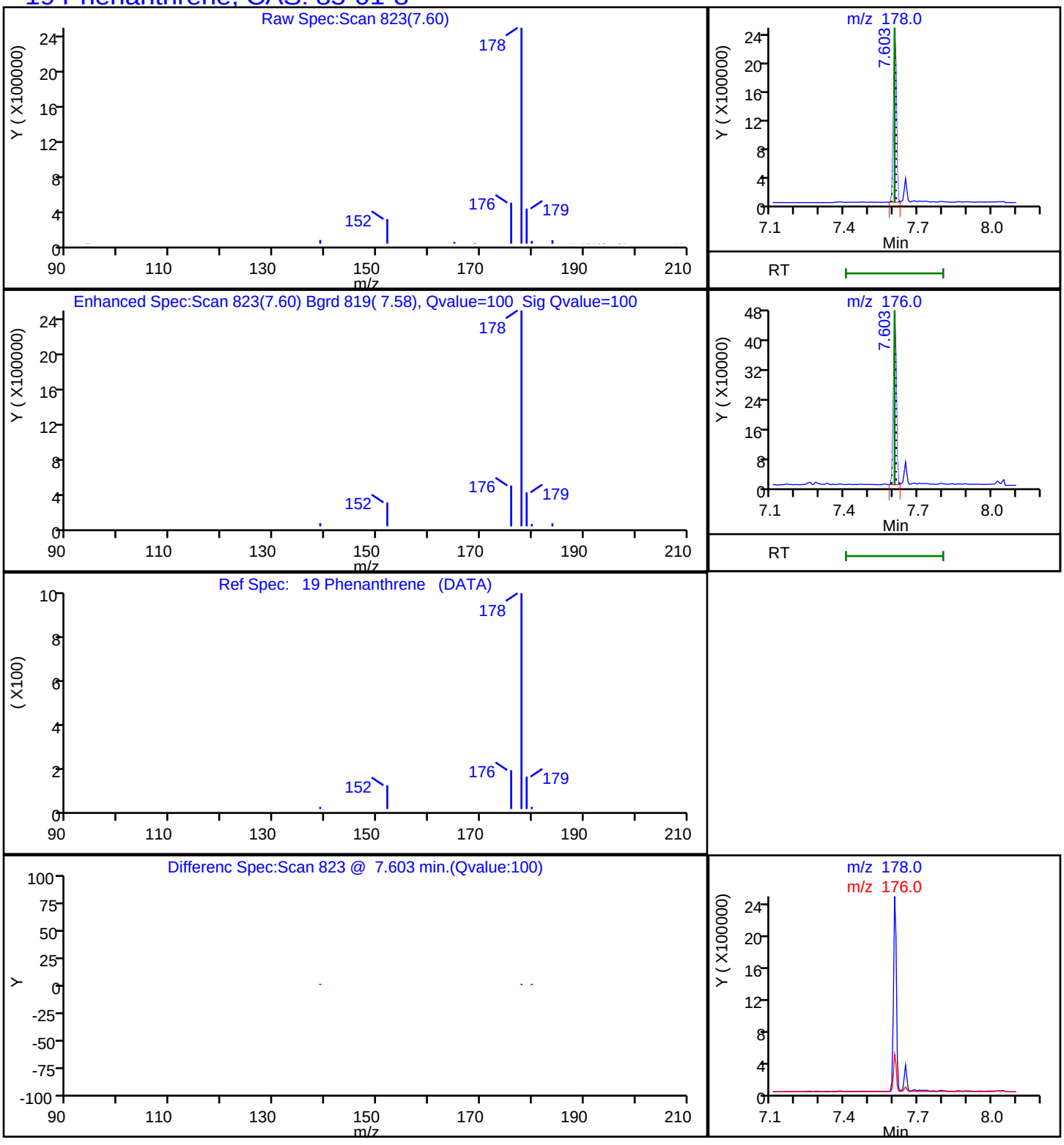


Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

19 Phenanthrene, CAS: 85-01-8



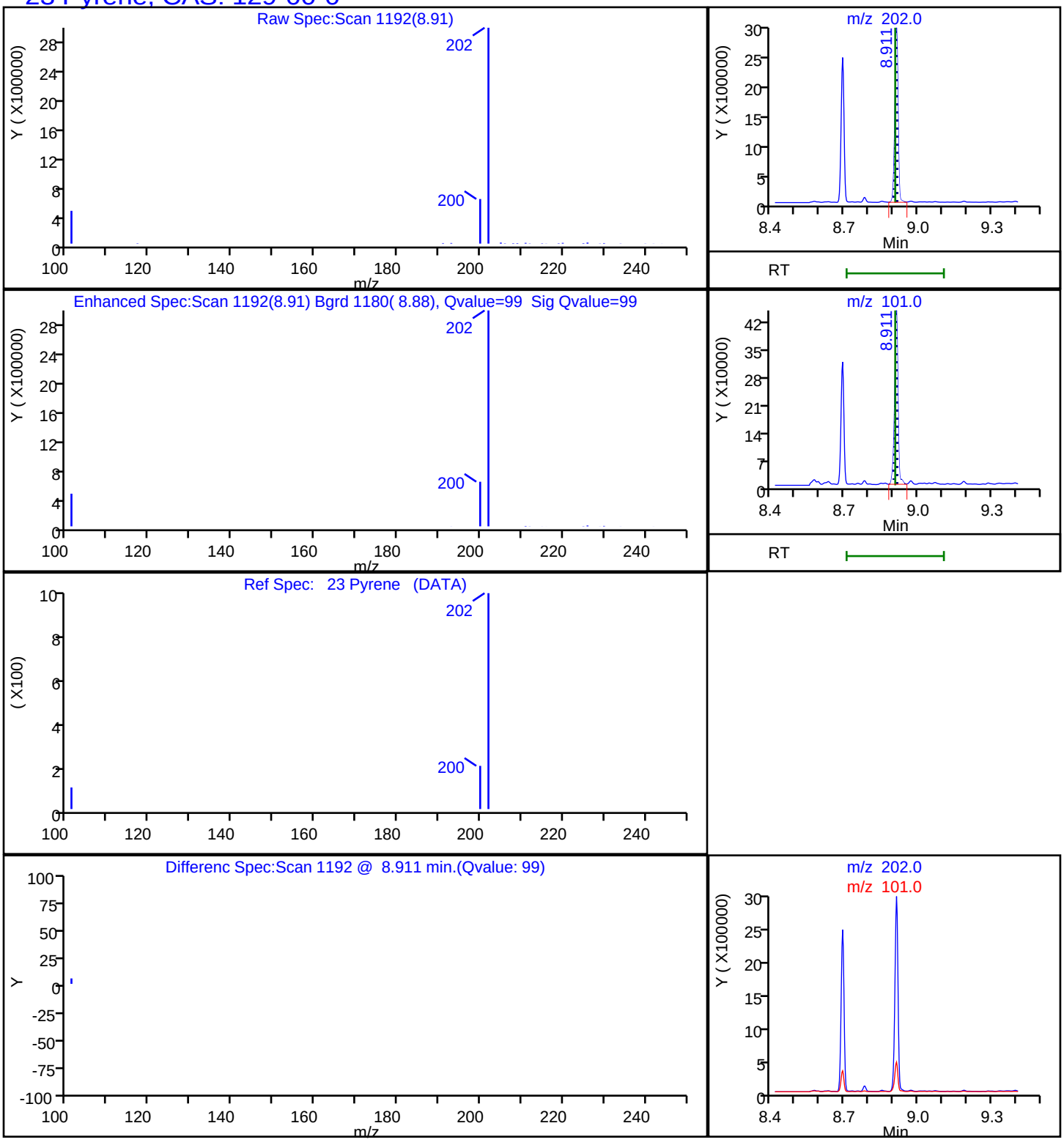
Report Date: 31-Aug-2019 11:49:40 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D

Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

23 Pyrene, CAS: 129-00-0



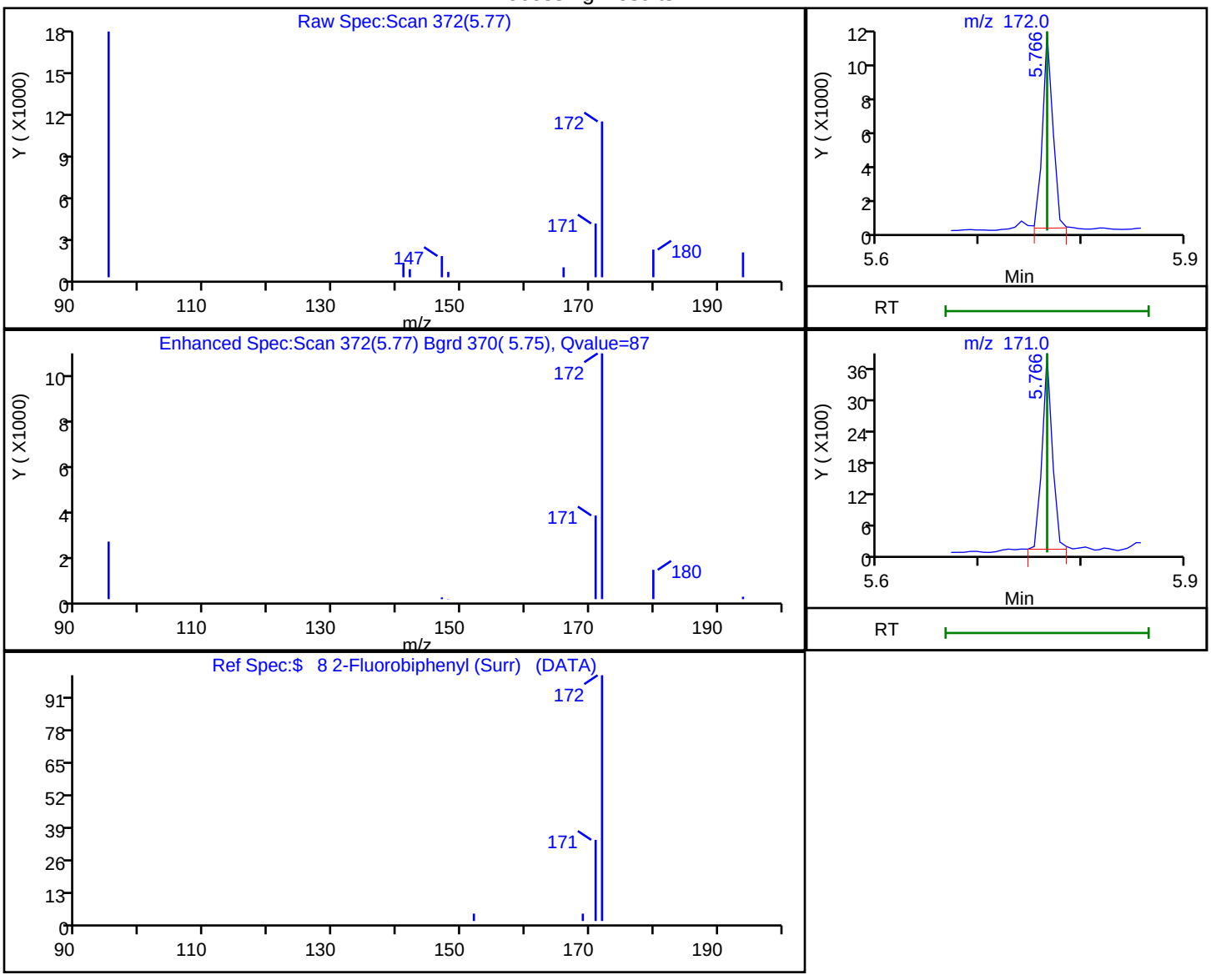
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	7627	0.021257
5.77	171.00	2564	

Reviewer: cochranj, 31-Aug-2019 10:59:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

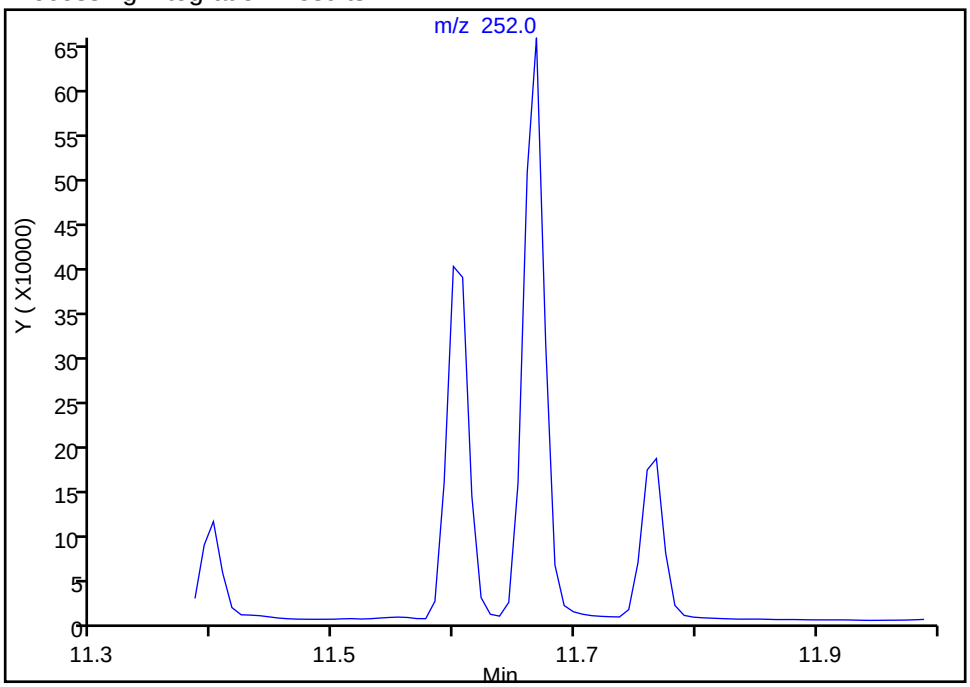
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

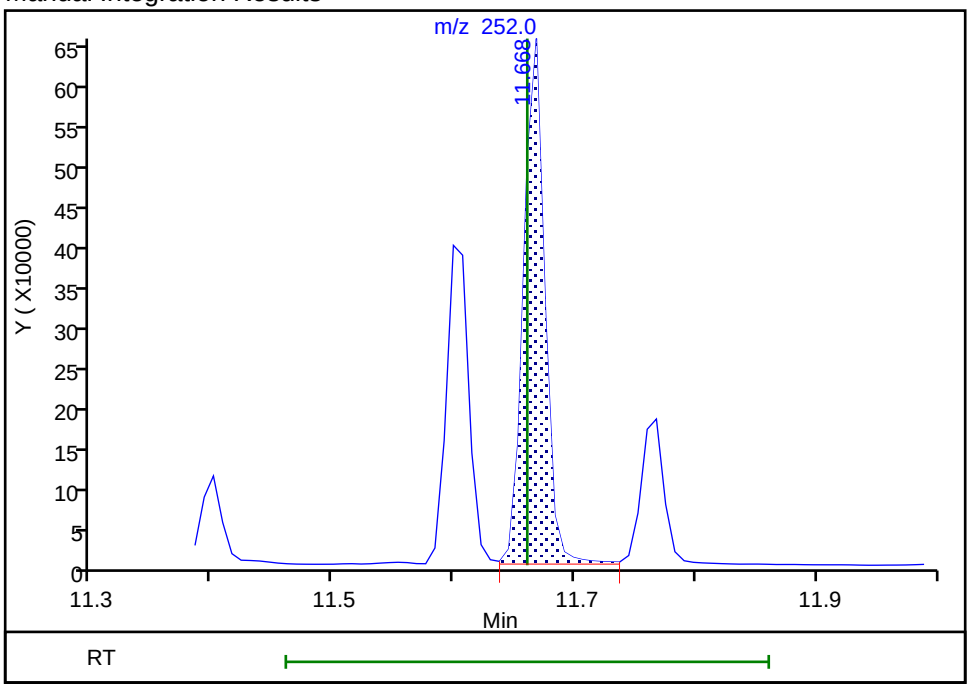
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 799372
Amount: 1.730820
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 06:56:31
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

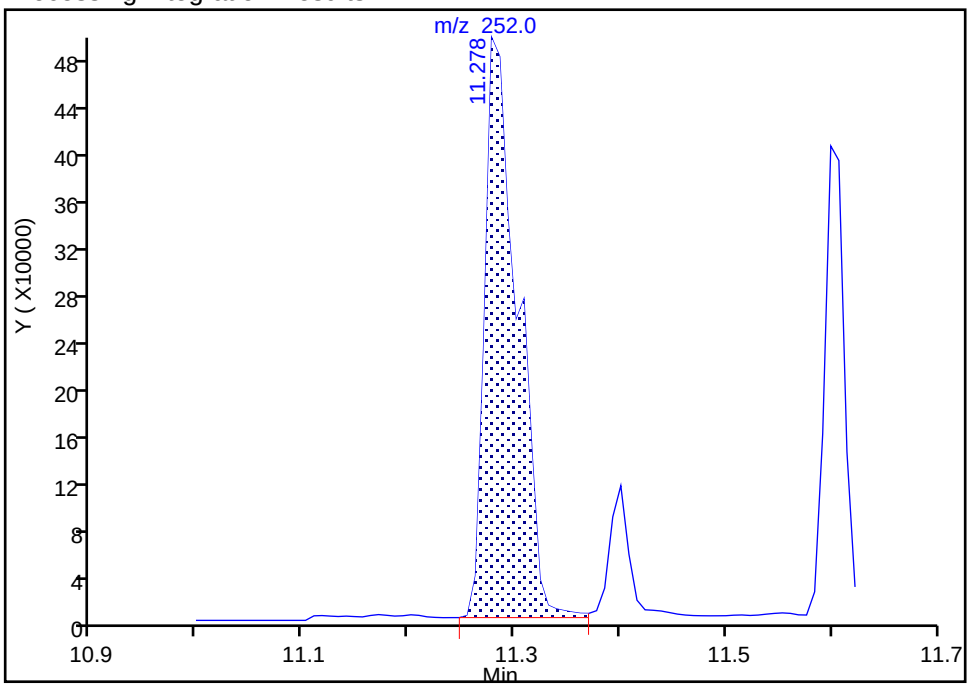
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

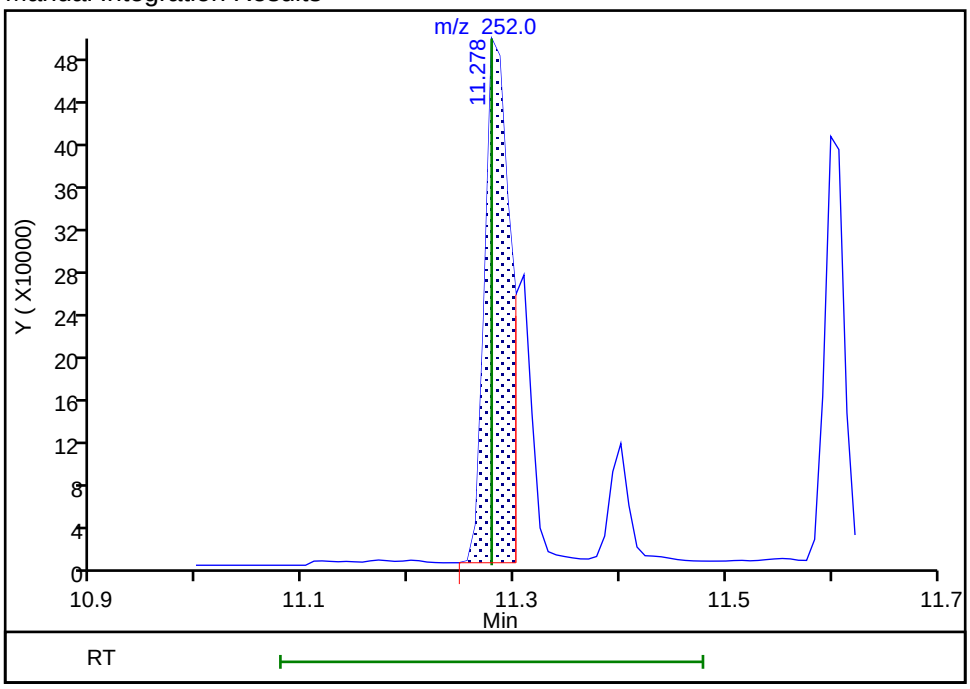
Processing Integration Results

RT: 11.28
Area: 1052270
Amount: 1.960199
Amount Units: ug/ml



Manual Integration Results

RT: 11.28
Area: 833803
Amount: 1.553232
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 06:55:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

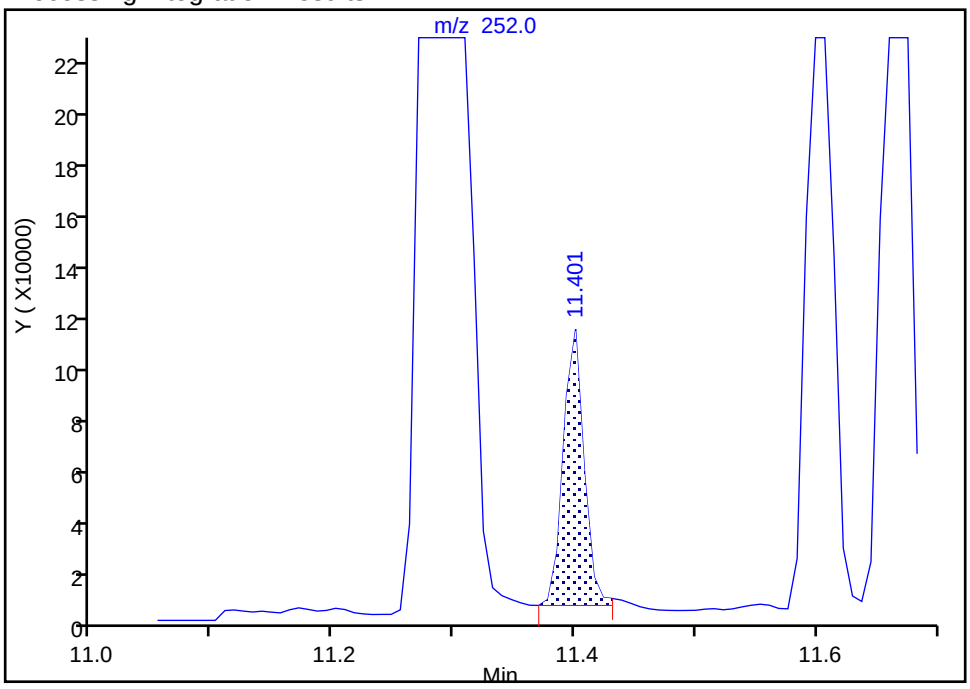
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

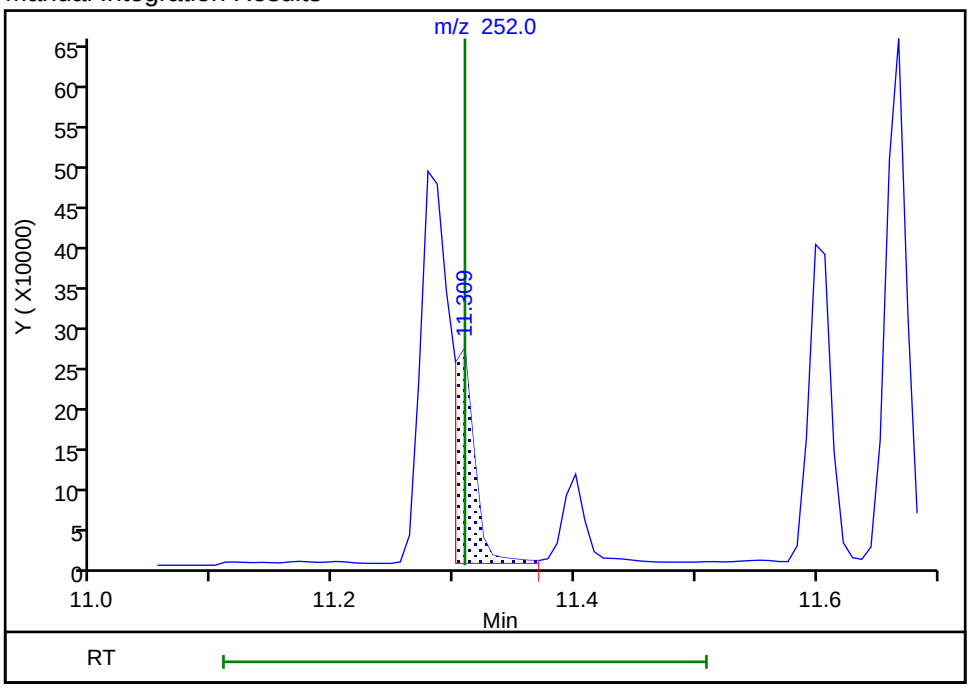
Processing Integration Results

RT: 11.40
Area: 128660
Amount: 0.211330
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 333355
Amount: 0.547552
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 06:56:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

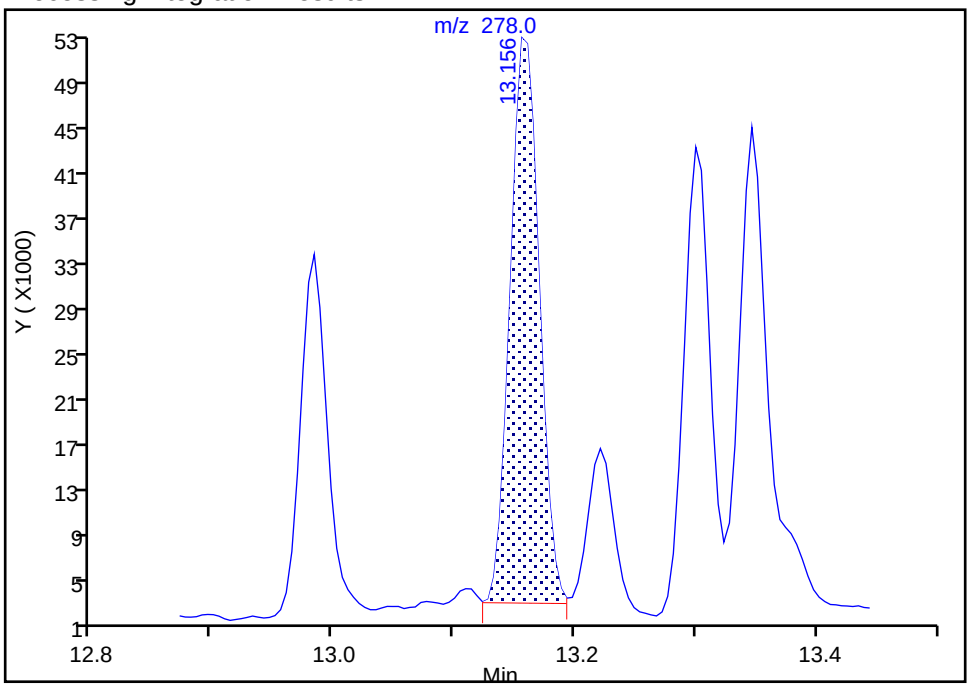
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

36 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

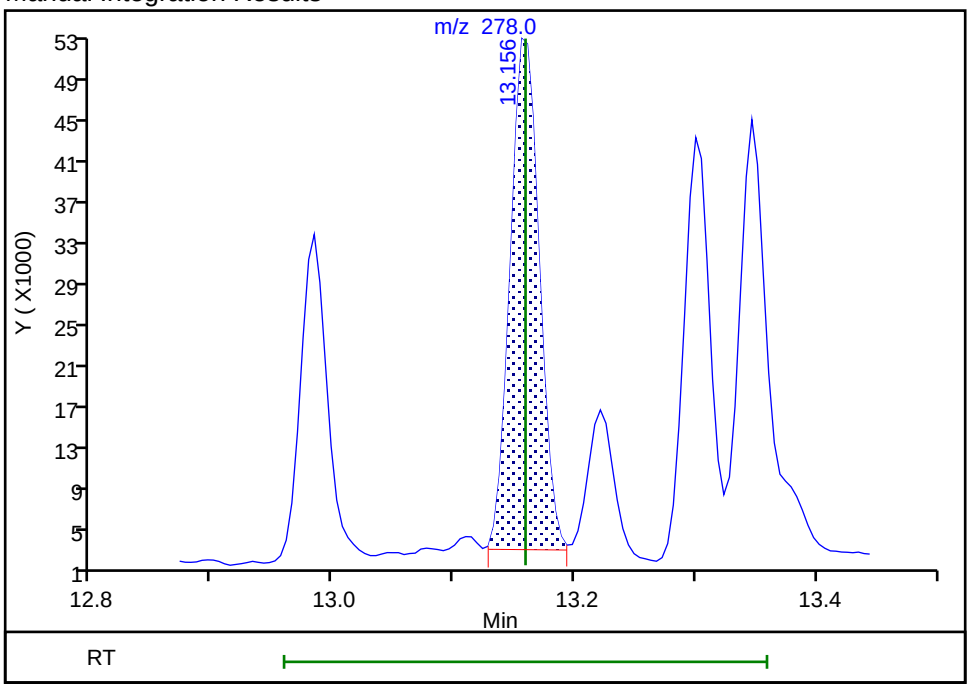
Processing Integration Results

RT: 13.16
Area: 83080
Amount: 0.172372
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 83056
Amount: 0.172322
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 06:57:15

Audit Action: Split an Integrated Peak Audit Reason: Baseline

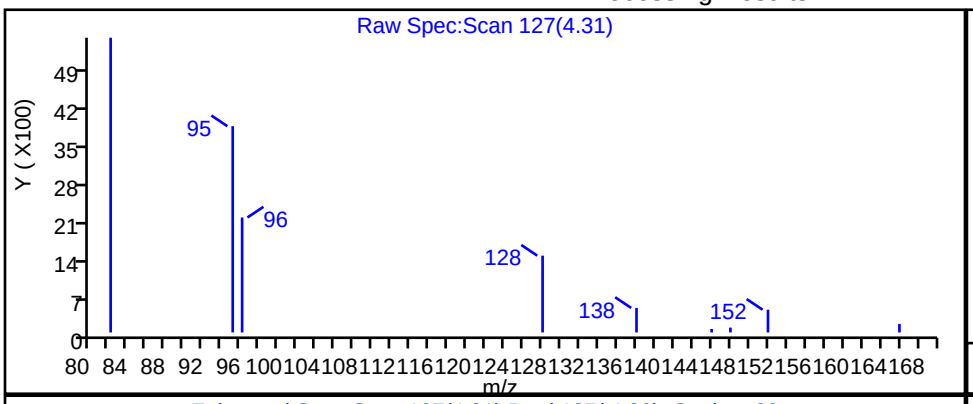
User Disabled Compound Report

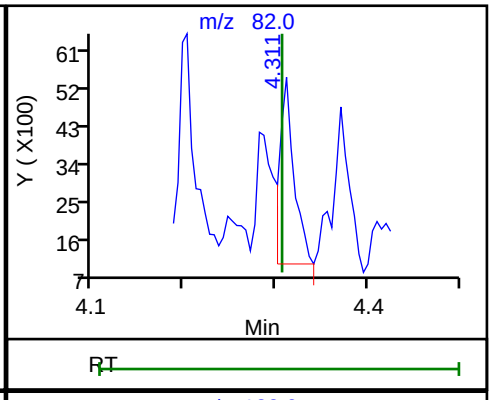
Eurofins TestAmerica, Knoxville

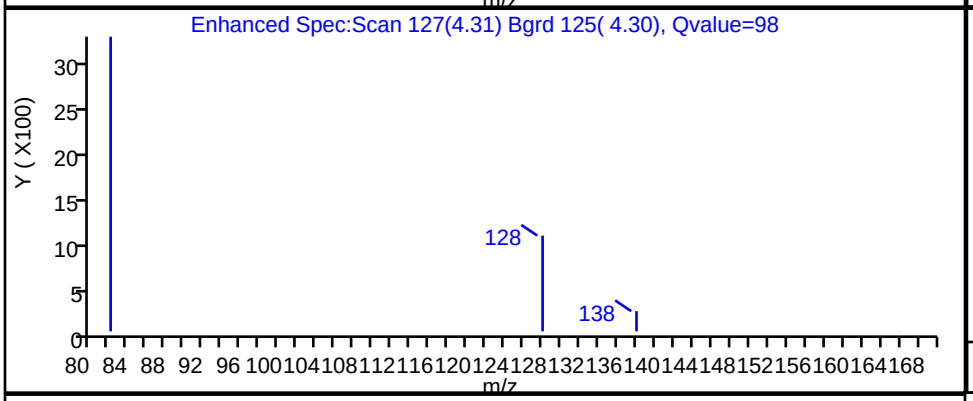
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

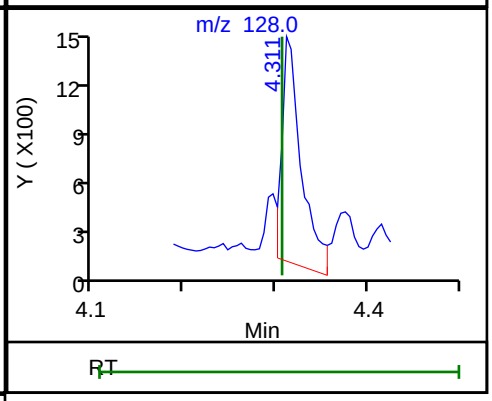
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

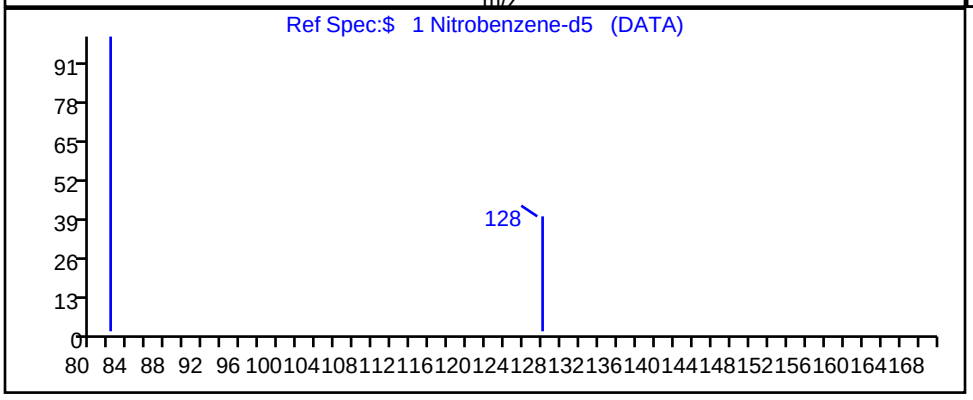
Processing Results











RT	Mass	Response	Amount
4.31	82.00	4832	0.040229
4.31	128.00	1985	

Reviewer: cochranj, 31-Aug-2019 10:59:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

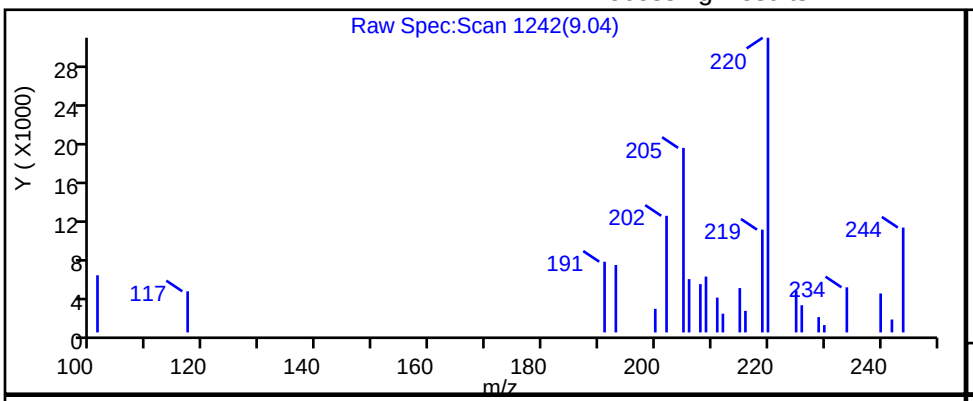
User Disabled Compound Report

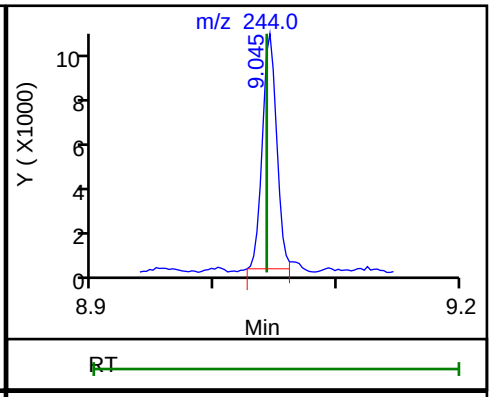
Eurofins TestAmerica, Knoxville

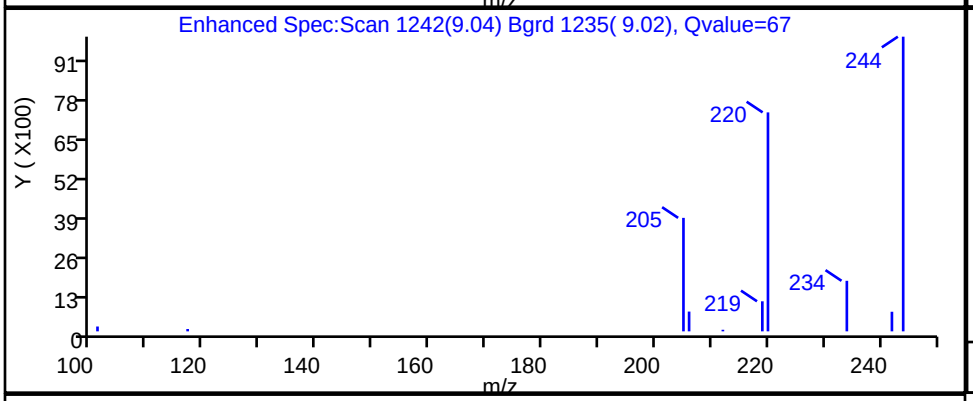
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

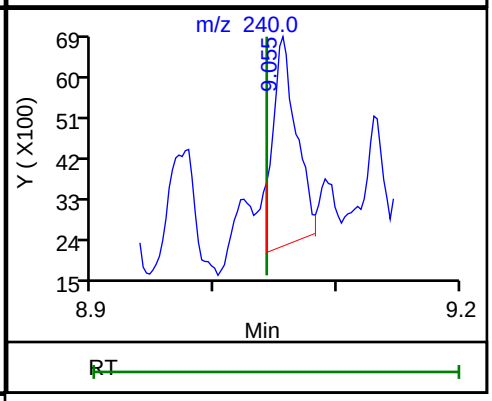
$ 24 Terphenyl-d14, CAS: 1718-51-0

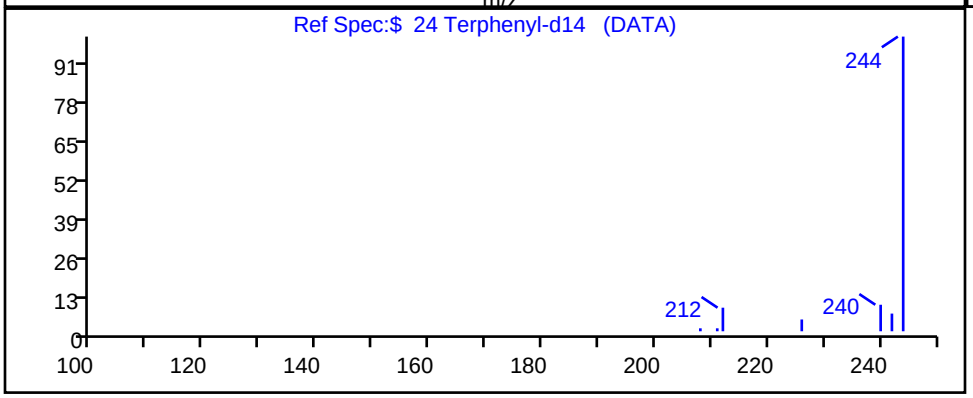
Processing Results











RT	Mass	Response	Amount
9.04	244.00	8157	0.027725
9.06	240.00	6266	

Reviewer: cochranj, 31-Aug-2019 10:59:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

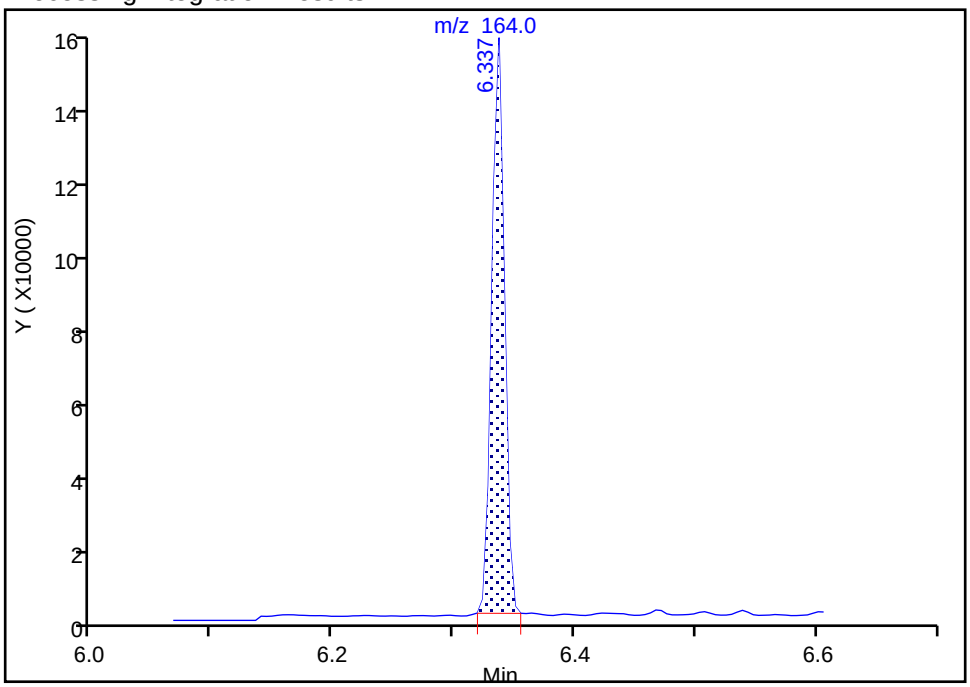
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-26-a.D				
Injection Date:	29-Aug-2019 21:45:30	Instrument ID:	MP		
Lims ID:	580-87761-B-26-A	Lab Sample ID:	140-87761-26		
Client ID:	22T-SG-09_20190718				
Operator ID:	11211	ALS Bottle#:	17	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

* 12 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

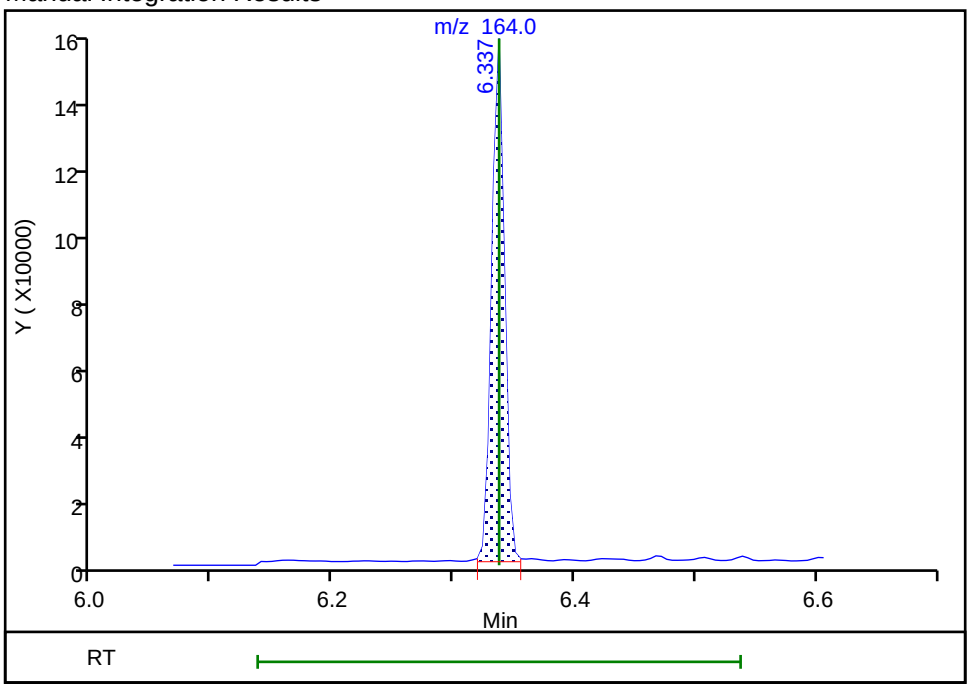
Processing Integration Results

RT: 6.34
Area: 108946
Amount: 0.500000
Amount Units: ug/ml



Manual Integration Results

RT: 6.34
Area: 110957
Amount: 0.500000
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 06:54:59

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3 Analy Batch No.: 32163

SDG No.:

Instrument ID: MP GC Column: Rxi-5SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/21/2019 11:55 Calibration End Date: 07/21/2019 14:26 Calibration ID: 2060

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-32163/2	ic 1XC.D
Level 2	IC 140-32163/3	ic 2X.D
Level 3	IC 140-32163/4	ic 3X.D
Level 4	ICIS 140-32163/5	icis 4X.D
Level 5	IC 140-32163/6	ic 5X.D
Level 6	IC 140-32163/7	ic 6X.D
Level 7	IC 140-32163/8	ic 7X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-Decalin	0.1811 0.1636	0.1561 0.1556	0.1621	0.1660	0.1659	Ave		0.1643				5.2		20.0			
Naphthalene	1.2007 1.0653	1.1375 0.9625	1.1127	1.1218	1.1030	Ave		1.1005			0.7000	6.7		20.0			
Benzo(b)thiophene	1.0487 0.9012	0.8972 0.8337	0.9228	0.9387	0.9320	Ave		0.9249				7.0		20.0			
2-Methylnaphthalene	0.7710 0.7069	0.7285 0.6501	0.7254	0.7332	0.7319	Ave		0.7210			0.4000	5.1		20.0			
1-Methylnaphthalene	0.7309 0.6710	0.7029 0.6189	0.6968	0.7025	0.6860	Ave		0.6870				5.1		20.0			
1,1'-Biphenyl	1.9450 1.7421	1.8654 1.5885	1.8143	1.8403	1.8080	Ave		1.8005				6.2		20.0			
2,6-Dimethylnaphthalene	1.2582 1.1980	1.1988 1.1190	1.1855	1.2166	1.2122	Ave		1.1983				3.5		20.0			
Acenaphthylene	1.8082 1.8700	1.6332 1.8244	1.5357	1.6621	1.7122	Ave		1.7208			0.9000	7.0		20.0			
Acenaphthene	1.4357 1.2993	1.3620 1.1922	1.3358	1.3520	1.3357	Ave		1.3304			0.9000	5.5		20.0			
Dibenzofuran	2.1400 1.9699	2.0319 1.8198	2.0166	2.0379	2.0137	Ave		2.0042			0.8000	4.8		20.0			
2,3,5-Trimethylnaphthalene	1.0750 1.1000	0.9911 1.0371	1.0517	1.0917	1.0926	Ave		1.0627				3.7		20.0			
Fluorene	1.5516 1.4718	1.4684 1.3738	1.4571	1.4879	1.4904	Ave		1.4716			0.9000	3.6		20.0			
Dibenzothiophene	1.2619 1.1955	1.1906 1.1140	1.1733	1.2024	1.2162	Ave		1.1934				3.8		20.0			
Phenanthrene	1.4130 1.2515	1.3144 1.1550	1.2827	1.3052	1.2932	Ave		1.2878			0.7000	6.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3 Analy Batch No.: 32163

SDG No.:

Instrument ID: MP GC Column: Rxi-5SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/21/2019 11:55 Calibration End Date: 07/21/2019 14:26 Calibration ID: 2060

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Anthracene	1.0921 1.1524	0.9959 1.0947	0.9963	1.0756	1.1116	Ave		1.0741			0.7000	5.4		20.0			
1-Methylphenanthrene	0.8508 0.8745	0.8095 0.8217	0.8193	0.8551	0.8719	Ave		0.8433				3.1		20.0			
Fluoranthene	1.2567 1.3377	1.1689 1.2666	1.1779	1.2561	1.3029	Ave		1.2524			0.6000	4.9		20.0			
Pyrene	1.6186 1.5458	1.4831 1.4520	1.4585	1.5190	1.5148	Ave		1.5131			0.6000	3.8		20.0			
Naphthobenzothiophene	0.9909 0.9156	0.8150 0.9094	0.8290	0.8486	0.8836	Ave		0.8846				6.9		20.0			
Benzo[a]anthracene	1.3037 1.2733	1.1187 1.2247	1.0639	1.1396	1.1988	Ave		1.1889			0.8000	7.3		20.0			
Chrysene	1.6602 1.3486	1.4602 1.2462	1.4267	1.4240	1.3865	Ave		1.4218			0.7000	8.9		20.0			
Benzo[b]fluoranthene	1.3442 1.4996	1.2601 1.3297	1.2142	1.3324	1.5764	Ave		1.3652			0.7000	9.4		20.0			
Benzo[k]fluoranthene	1.5633 1.5427	1.4725 1.4880	1.5913	1.6185	1.5618	Ave		1.5483			0.7000	3.4		20.0			
Benzo[e]pyrene	1.2881 1.3519	1.1949 1.2495	1.2545	1.2730	1.3630	Ave		1.2821				4.6		20.0			
Benzo[a]pyrene	1.1265 1.3334	1.0329 1.2880	1.0017	1.1997	1.2397	Ave		1.1746			0.7000	10.7		20.0			
Perylene	1.3122 1.3903	1.2741 1.2996	1.2992	1.3169	1.3932	Ave		1.3265				3.5		20.0			
Indeno[1,2,3-cd]pyrene	1.4633 1.5302	1.3403 1.4372	1.3612	1.4386	1.5388	Ave		1.4442			0.5000	5.2		20.0			
Dibenz(a,h)anthracene	1.2101 1.2820	1.1481 1.1933	1.1963	1.2352	1.3153	Ave		1.2258			0.4000	4.6		20.0			
Benzo[g,h,i]perylene	1.5311 1.3490	1.3231 1.2685	1.2739	1.3335	1.3816	Ave		1.3515			0.5000	6.6		20.0			
Nitrobenzene-d5	0.3323 0.3070	0.2694 0.3049	0.2618	0.2792	0.2889	Ave		0.2919				8.4		20.0			
2-Fluorobiphenyl (Surr)	1.8616 1.5574	1.6040 1.4332	1.6154	1.6307	1.6154	Ave		1.6168				7.9		20.0			
Terphenyl-d14	0.9399 0.7952	0.8033 0.7406	0.8091	0.8234	0.8128	Ave		0.8177				7.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3 Analy Batch No.: 32163

SDG No.:

Instrument ID: MP GC Column: Rxi-5SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/21/2019 11:55 Calibration End Date: 07/21/2019 14:26 Calibration ID: 2060

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-32163/2	ic 1XC.D
Level 2	IC 140-32163/3	ic 2X.D
Level 3	IC 140-32163/4	ic 3X.D
Level 4	ICIS 140-32163/5	icis 4X.D
Level 5	IC 140-32163/6	ic 5X.D
Level 6	IC 140-32163/7	ic 6X.D
Level 7	IC 140-32163/8	ic 7X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
cis-Decalin	NPT	Ave	1515 174790	6855 341828	18083	35517	72025	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Naphthalene	NPT	Ave	10043 1138352	49952 2114072	124160	239975	478933	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo(b)thiophene	NPT	Ave	8771 962993	39401 1831105	102966	200794	404704	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
2-Methylnaphthalene	NPT	Ave	6449 755402	31992 1427865	80935	156847	317802	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
1-Methylnaphthalene	NPT	Ave	6113 717030	30870 1359311	77744	150276	297864	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
1,1'-Biphenyl	ANT	Ave	8088 937053	40741 1753733	100883	194867	390720	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
2,6-Dimethylnaphthalene	ANT	Ave	5232 644421	26182 1235396	65921	128831	261961	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Acenaphthylene	ANT	Ave	7519 1005879	35669 2014135	85393	176002	370007	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Acenaphthene	ANT	Ave	5970 698905	29745 1316249	74278	143164	288656	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Dibenzofuran	ANT	Ave	8899 1059581	44376 2009087	112131	215794	435159	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
2,3,5-Trimethylnaphthalene	ANT	Ave	4470 591687	21645 1145006	58477	115603	236115	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Fluorene	ANT	Ave	6452 791685	32069 1516700	81020	157549	322076	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Dibenzothiophene	PHN	Ave	8922 1098885	43885 2115730	111190	217069	445228	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Phenanthrene	PHN	Ave	9990 1150340	48449 2193728	121561	235615	473402	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Anthracene	PHN	Ave	7721 1059249	36710 2079069	94415	194178	406940	0.0200 2.50	0.100 5.00	0.250	0.500	1.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3 Analy Batch No.: 32163

SDG No.:

Instrument ID: MP GC Column: Rxi-5SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/21/2019 11:55 Calibration End Date: 07/21/2019 14:26 Calibration ID: 2060

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Methylphenanthrene	PHN	Ave	6015 803844	29838 1560700	77645	154372	319197	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Fluoranthene	PHN	Ave	8885 1229602	43087 2405679	111627	226763	476969	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Pyrene	CRY	Ave	9329 1286874	45374 2501407	117477	240127	503278	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Naphthobenzothiophene	CRY	Ave	5711 762257	24933 1566646	66774	134156	293581	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[a]anthracene	CRY	Ave	7514 1059968	34225 2109714	85690	180154	398285	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Chrysene	CRY	Ave	9569 1122677	44673 2146798	114916	225110	460660	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[b]fluoranthene	PRY	Ave	7687 1148803	37758 2168983	88756	199208	459515	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[k]fluoranthene	PRY	Ave	8940 1181881	44122 2427192	116322	241982	455269	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[e]pyrene	PRY	Ave	7366 1035672	35804 2038126	91702	190336	397305	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[a]pyrene	PRY	Ave	6442 1021484	30951 2100916	73223	179370	361370	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Perylene	PRY	Ave	7504 1065065	38177 2119821	94970	196892	406114	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Indeno[1,2,3-cd]pyrene	PRY	Ave	8368 1172244	40160 2344306	99498	215083	448572	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Dibenz(a,h)anthracene	PRY	Ave	6920 982147	34402 1946519	87445	184681	383410	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Benzo[g,h,i]perylene	PRY	Ave	8756 1033468	39646 2069141	93120	199375	402739	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Nitrobenzene-d5	NPT	Ave	2779 328062	11829 669758	29211	59715	125430	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
2-Fluorobiphenyl (Surr)	ANT	Ave	7741 837706	35031 1582268	89825	172674	349096	0.0200 2.50	0.100 5.00	0.250	0.500	1.00
Terphenyl-d14	CRY	Ave	5417 661955	24577 1275914	65167	130168	270035	0.0200 2.50	0.100 5.00	0.250	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 1XC.D
Lims ID: ic 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Jul-2019 11:55:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-002
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:32 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:33:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	99	2779	0.0200	0.0228	
2 cis-Decalin	138	4.465	4.465	0.000	95	1515	0.0200	0.0220	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	209099	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	92	10043	0.0200	0.0218	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	8771	0.0200	0.0227	
6 2-Methylnaphthalene	142	5.470	5.469	0.001	98	6449	0.0200	0.0214	
7 1-Methylnaphthalene	142	5.552	5.558	-0.006	97	6113	0.0200	0.0213	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	7741	0.0200	0.0230	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	8088	0.0200	0.0216	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	98	5232	0.0200	0.0210	
11 Acenaphthylene	152	6.225	6.225	0.000	100	7519	0.0200	0.0210	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	98	103958	0.5000	0.5000	
13 Acenaphthene	153	6.369	6.368	0.001	99	5970	0.0200	0.0216	
14 Dibenzofuran	168	6.516	6.516	0.000	98	8899	0.0200	0.0214	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	0.000	91	4470	0.0200	0.0202	
16 Fluorene	166	6.803	6.803	0.000	100	6452	0.0200	0.0211	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	8922	0.0200	0.0211	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	176754	0.5000	0.5000	
19 Phenanthrene	178	7.609	7.609	0.000	98	9990	0.0200	0.0219	
20 Anthracene	178	7.660	7.659	0.001	100	7721	0.0200	0.0203	
21 1-Methylphenanthrene	192	8.158	8.157	0.001	100	6015	0.0200	0.0202	
22 Fluoranthene	202	8.698	8.698	0.000	99	8885	0.0200	0.0201	
23 Pyrene	202	8.917	8.917	0.000	99	9329	0.0200	0.0214	
$ 24 Terphenyl-d14	244	9.053	9.053	0.000	100	5417	0.0200	0.0230	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	100	5711	0.0200	0.0224	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	31	7514	0.0200	0.0219	
* 27 Chrysene-d12	240	10.145	10.145	0.000	70	144091	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	9569	0.0200	0.0234	M
29 Benzo[b]fluoranthene	252	11.286	11.286	0.000	100	7687	0.0200	0.0197	
30 Benzo[k]fluoranthene	252	11.317	11.316	0.001	100	8940	0.0200	0.0202	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	7366	0.0200	0.0201	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	6442	0.0200	0.0192	
* 33 Perylene-d12	264	11.745	11.745	0.000	100	142965	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	7504	0.0200	0.0198	
35 Indeno[1,2,3-cd]pyrene	276	13.165	13.165	0.000	97	8368	0.0200	0.0203	
36 Dibenz(a,h)anthracene	278	13.179	13.175	0.004	96	6920	0.0200	0.0197	
37 Benzo[g,h,i]perylene	276	13.519	13.518	0.001	98	8756	0.0200	0.0227	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

60L18270SIM_00005 Amount Added: 1.00 Units: mL

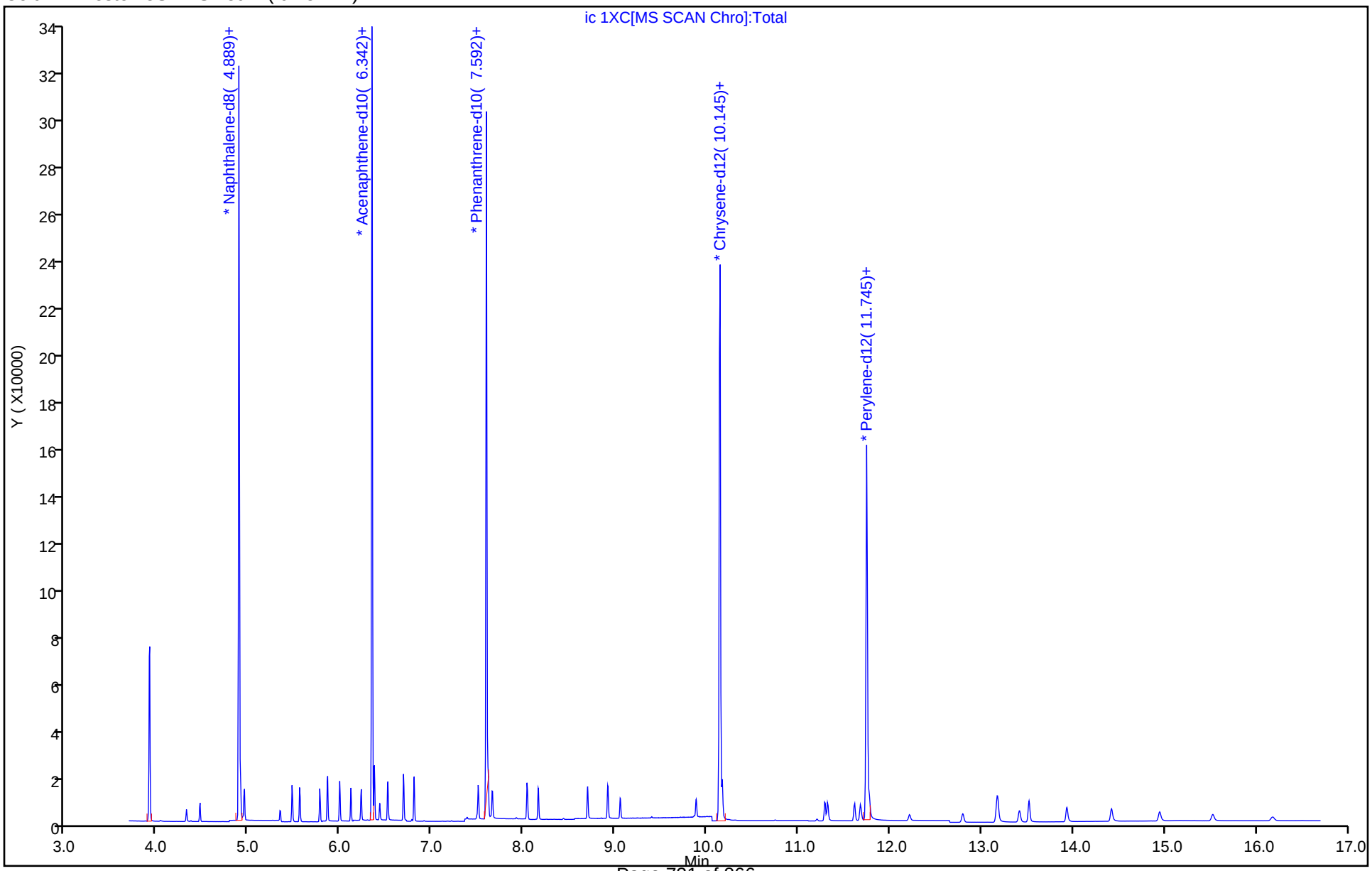
Report Date: 29-Jul-2019 18:38:33 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 1XC.D

Injection Date:	21-Jul-2019 11:55:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 1			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

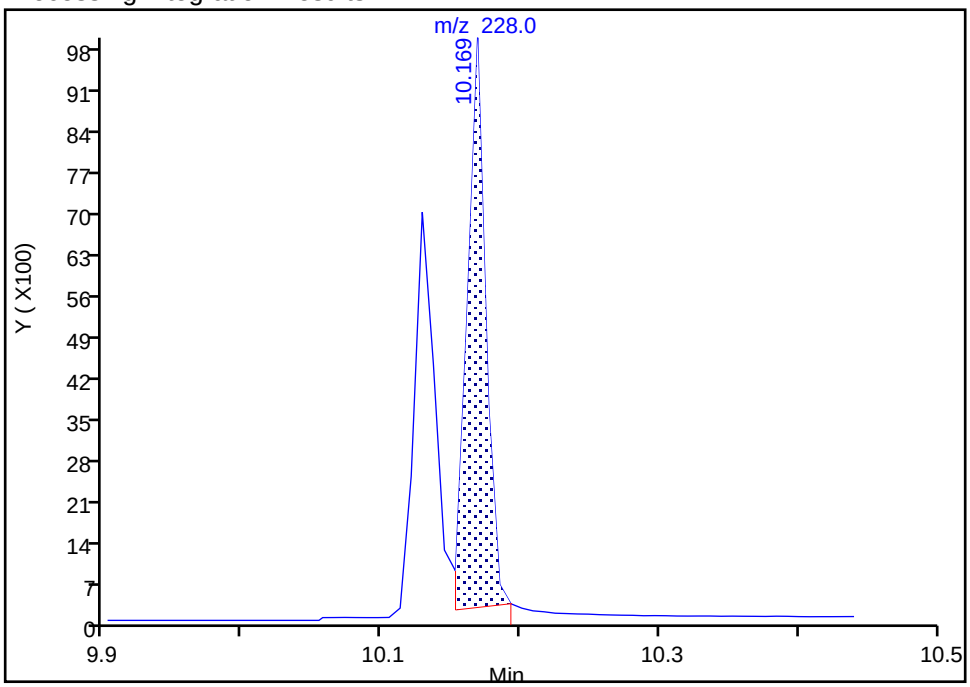
Data File:	\\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 1XC.D				
Injection Date:	21-Jul-2019 11:55:30	Instrument ID:	MP		
Lims ID:	ic 1				
Client ID:					
Operator ID:	11211	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

28 Chrysene, CAS: 218-01-9

Signal: 1

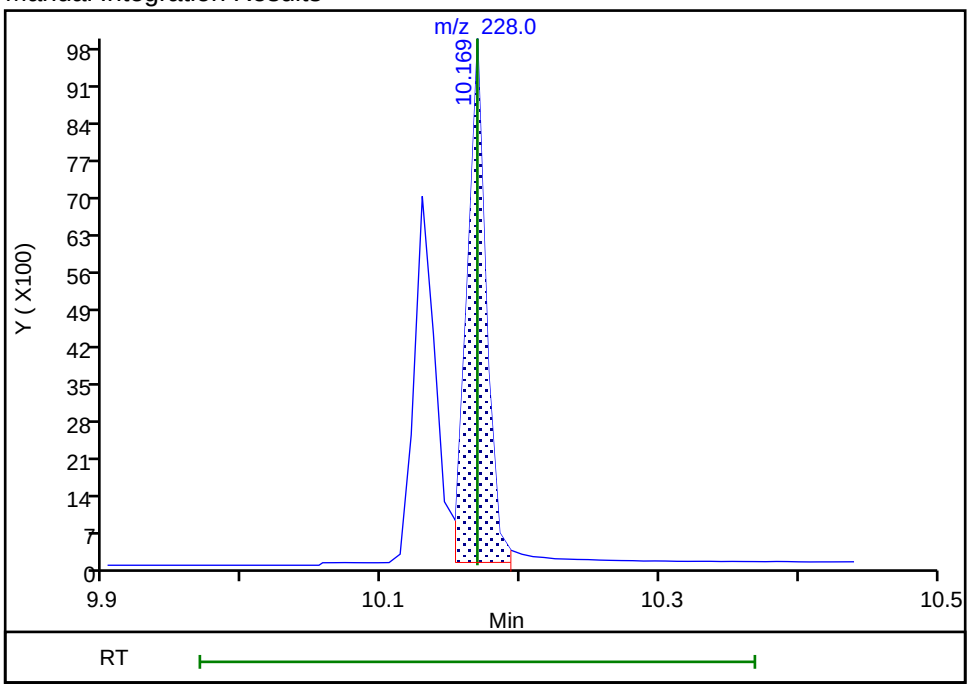
Processing Integration Results

RT: 10.17
Area: 9061
Amount: 0.022312
Amount Units: ug/ml



Manual Integration Results

RT: 10.17
Area: 9569
Amount: 0.023354
Amount Units: ug/ml



Reviewer: cochranj, 29-Jul-2019 14:32:51
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 2X.D
Lims ID: ic 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Jul-2019 12:20:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-003
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:36 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:34:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	99	11829	0.1000	0.0923	
2 cis-Decalin	138	4.465	4.465	0.000	95	6855	0.1000	0.0950	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	219575	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	49952	0.1000	0.1034	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	39401	0.1000	0.0970	
6 2-Methylnaphthalene	142	5.469	5.469	0.000	97	31992	0.1000	0.1010	
7 1-Methylnaphthalene	142	5.551	5.558	-0.007	97	30870	0.1000	0.1023	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	35031	0.1000	0.0992	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	40741	0.1000	0.1036	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	98	26182	0.1000	0.1000	
11 Acenaphthylene	152	6.225	6.225	0.000	100	35669	0.1000	0.0949	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	99	109200	0.5000	0.5000	
13 Acenaphthene	153	6.369	6.368	0.001	100	29745	0.1000	0.1024	
14 Dibenzofuran	168	6.516	6.516	0.000	97	44376	0.1000	0.1014	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	0.000	93	21645	0.1000	0.0933	
16 Fluorene	166	6.803	6.803	0.000	100	32069	0.1000	0.0998	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	43885	0.1000	0.0998	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	184299	0.5000	0.5000	
19 Phenanthrene	178	7.609	7.609	0.000	98	48449	0.1000	0.1021	
20 Anthracene	178	7.654	7.659	-0.005	100	36710	0.1000	0.0927	
21 1-Methylphenanthrene	192	8.158	8.157	0.001	100	29838	0.1000	0.0960	
22 Fluoranthene	202	8.698	8.698	0.000	99	43087	0.1000	0.0933	
23 Pyrene	202	8.917	8.917	0.000	99	45374	0.1000	0.0980	
$ 24 Terphenyl-d14	244	9.056	9.053	0.003	100	24577	0.1000	0.0982	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	100	24933	0.1000	0.0921	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	89	34225	0.1000	0.0941	
* 27 Chrysene-d12	240	10.145	10.145	0.000	70	152968	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	44673	0.1000	0.1027	
29 Benzo[b]fluoranthene	252	11.286	11.286	0.000	100	37758	0.1000	0.0923	
30 Benzo[k]fluoranthene	252	11.317	11.316	0.001	100	44122	0.1000	0.0951	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	35804	0.1000	0.0932	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	30951	0.1000	0.0879	
* 33 Perylene-d12	264	11.745	11.745	0.000	100	149822	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	38177	0.1000	0.0960	
35 Indeno[1,2,3-cd]pyrene	276	13.165	13.165	0.000	94	40160	0.1000	0.0928	
36 Dibenz(a,h)anthracene	278	13.175	13.175	0.000	93	34402	0.1000	0.0937	
37 Benzo[g,h,i]perylene	276	13.514	13.518	-0.004	98	39646	0.1000	0.0979	

Reagents:

60L28270SIM_00006 Amount Added: 1.00 Units: mL

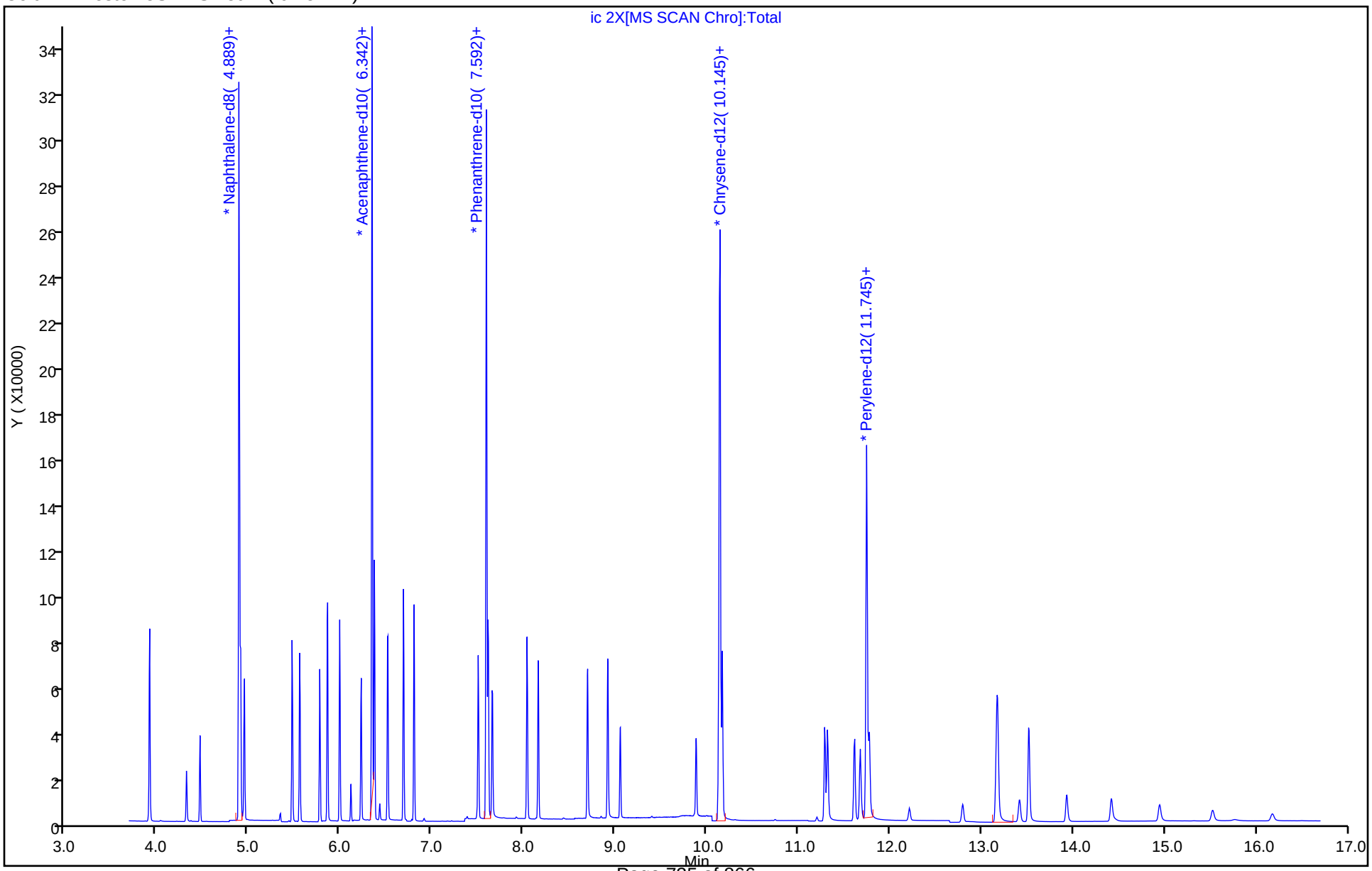
Report Date: 29-Jul-2019 18:38:37 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 2X.D

Injection Date:	21-Jul-2019 12:20:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 2			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 3X.D
Lims ID: ic 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Jul-2019 12:45:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-004
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:40 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:34:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	99	29211	0.2500	0.2242	
2 cis-Decalin	138	4.465	4.465	0.000	94	18083	0.2500	0.2465	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	223159	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	124160	0.2500	0.2528	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	102966	0.2500	0.2494	
6 2-Methylnaphthalene	142	5.469	5.469	0.000	97	80935	0.2500	0.2515	
7 1-Methylnaphthalene	142	5.551	5.558	-0.007	97	77744	0.2500	0.2536	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	89825	0.2500	0.2498	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	100883	0.2500	0.2519	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	98	65921	0.2500	0.2473	
11 Acenaphthylene	152	6.225	6.225	0.000	100	85393	0.2500	0.2231	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	98	111209	0.5000	0.5000	
13 Acenaphthene	153	6.368	6.368	0.000	100	74278	0.2500	0.2510	
14 Dibenzofuran	168	6.516	6.516	0.000	97	112131	0.2500	0.2515	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	0.000	91	58477	0.2500	0.2474	
16 Fluorene	166	6.803	6.803	0.000	100	81020	0.2500	0.2475	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	111190	0.2500	0.2458	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	189535	0.5000	0.5000	
19 Phenanthrene	178	7.609	7.609	0.000	100	121561	0.2500	0.2490	
20 Anthracene	178	7.659	7.659	0.000	100	94415	0.2500	0.2319	
21 1-Methylphenanthrene	192	8.157	8.157	0.000	100	77645	0.2500	0.2429	
22 Fluoranthene	202	8.698	8.698	0.000	99	111627	0.2500	0.2351	
23 Pyrene	202	8.917	8.917	0.000	99	117477	0.2500	0.2410	
$ 24 Terphenyl-d14	244	9.055	9.053	0.002	100	65167	0.2500	0.2473	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	100	66774	0.2500	0.2343	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	99	85690	0.2500	0.2237	
* 27 Chrysene-d12	240	10.145	10.145	0.000	70	161093	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	114916	0.2500	0.2509	
29 Benzo[b]fluoranthene	252	11.294	11.286	0.008	100	88756	0.2500	0.2223	
30 Benzo[k]fluoranthene	252	11.316	11.316	0.000	100	116322	0.2500	0.2569	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	91702	0.2500	0.2446	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	73223	0.2500	0.2132	
* 33 Perylene-d12	264	11.745	11.745	0.000	100	146195	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	94970	0.2500	0.2449	
35 Indeno[1,2,3-cd]pyrene	276	13.165	13.165	0.000	96	99498	0.2500	0.2356	
36 Dibenz(a,h)anthracene	278	13.175	13.175	0.000	91	87445	0.2500	0.2440	
37 Benzo[g,h,i]perylene	276	13.518	13.518	0.000	98	93120	0.2500	0.2356	

Reagents:

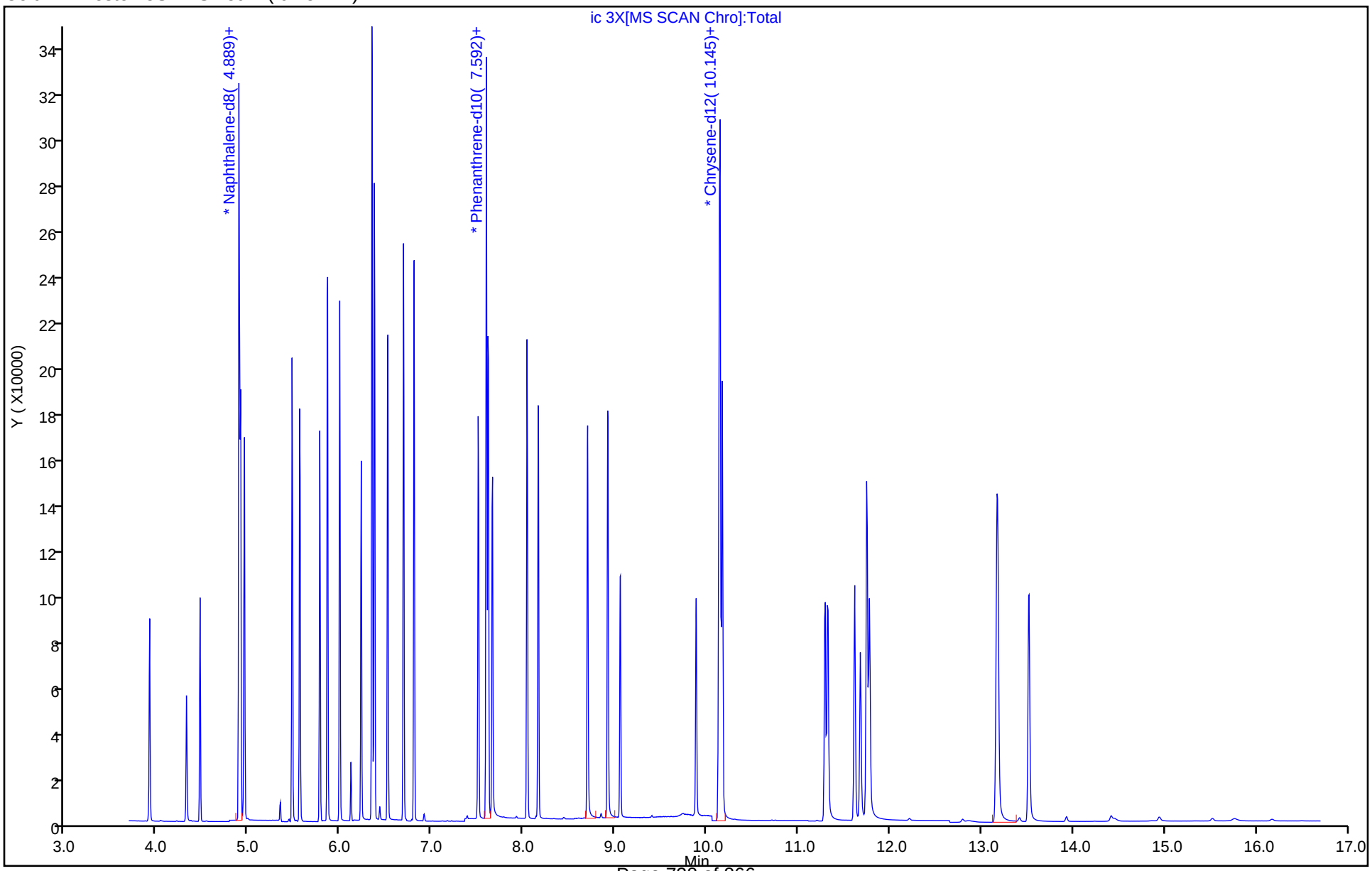
60L38270SIM_00006 Amount Added: 1.00 Units: mL

Report Date: 29-Jul-2019 18:38:41 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 3X.D				
Injection Date:	21-Jul-2019 12:45:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 3			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\icis 4X.D
Lims ID: icis 4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 21-Jul-2019 13:11:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-005
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:42 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:35:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	99	59715	0.5000	0.4782	
2 cis-Decalin	138	4.465	4.465	0.000	94	35517	0.5000	0.5051	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	213911	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	239975	0.5000	0.5097	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	200794	0.5000	0.5075	
6 2-Methylnaphthalene	142	5.469	5.469	0.000	97	156847	0.5000	0.5085	
7 1-Methylnaphthalene	142	5.558	5.558	0.000	97	150276	0.5000	0.5113	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	172674	0.5000	0.5043	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	194867	0.5000	0.5110	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	99	128831	0.5000	0.5076	
11 Acenaphthylene	152	6.225	6.225	0.000	100	176002	0.5000	0.4829	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	98	105890	0.5000	0.5000	
13 Acenaphthene	153	6.368	6.368	0.000	100	143164	0.5000	0.5081	
14 Dibenzofuran	168	6.516	6.516	0.000	97	215794	0.5000	0.5084	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	0.000	93	115603	0.5000	0.5136	
16 Fluorene	166	6.803	6.803	0.000	100	157549	0.5000	0.5055	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	217069	0.5000	0.5038	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	180526	0.5000	0.5000	
19 Phenanthrene	178	7.609	7.609	0.000	100	235615	0.5000	0.5067	
20 Anthracene	178	7.659	7.659	0.000	100	194178	0.5000	0.5007	
21 1-Methylphenanthrene	192	8.157	8.157	0.000	100	154372	0.5000	0.5070	
22 Fluoranthene	202	8.698	8.698	0.000	99	226763	0.5000	0.5015	
23 Pyrene	202	8.917	8.917	0.000	99	240127	0.5000	0.5019	
$ 24 Terphenyl-d14	244	9.053	9.053	0.000	100	130168	0.5000	0.5035	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	100	134156	0.5000	0.4797	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	98	180154	0.5000	0.4793	
* 27 Chrysene-d12	240	10.145	10.145	0.000	70	158085	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	225110	0.5000	0.5008	
29 Benzo[b]fluoranthene	252	11.286	11.286	0.000	100	199208	0.5000	0.4880	
30 Benzo[k]fluoranthene	252	11.316	11.316	0.000	100	241982	0.5000	0.5227	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	190336	0.5000	0.4965	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	179370	0.5000	0.5107	
* 33 Perylene-d12	264	11.745	11.745	0.000	100	149512	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	196892	0.5000	0.4964	
35 Indeno[1,2,3-cd]pyrene	276	13.165	13.165	0.000	95	215083	0.5000	0.4980	
36 Dibenz(a,h)anthracene	278	13.175	13.175	0.000	91	184681	0.5000	0.5039	
37 Benzo[g,h,i]perylene	276	13.518	13.518	0.000	98	199375	0.5000	0.4933	

Reagents:

60L48270SIM_00006 Amount Added: 1.00 Units: mL

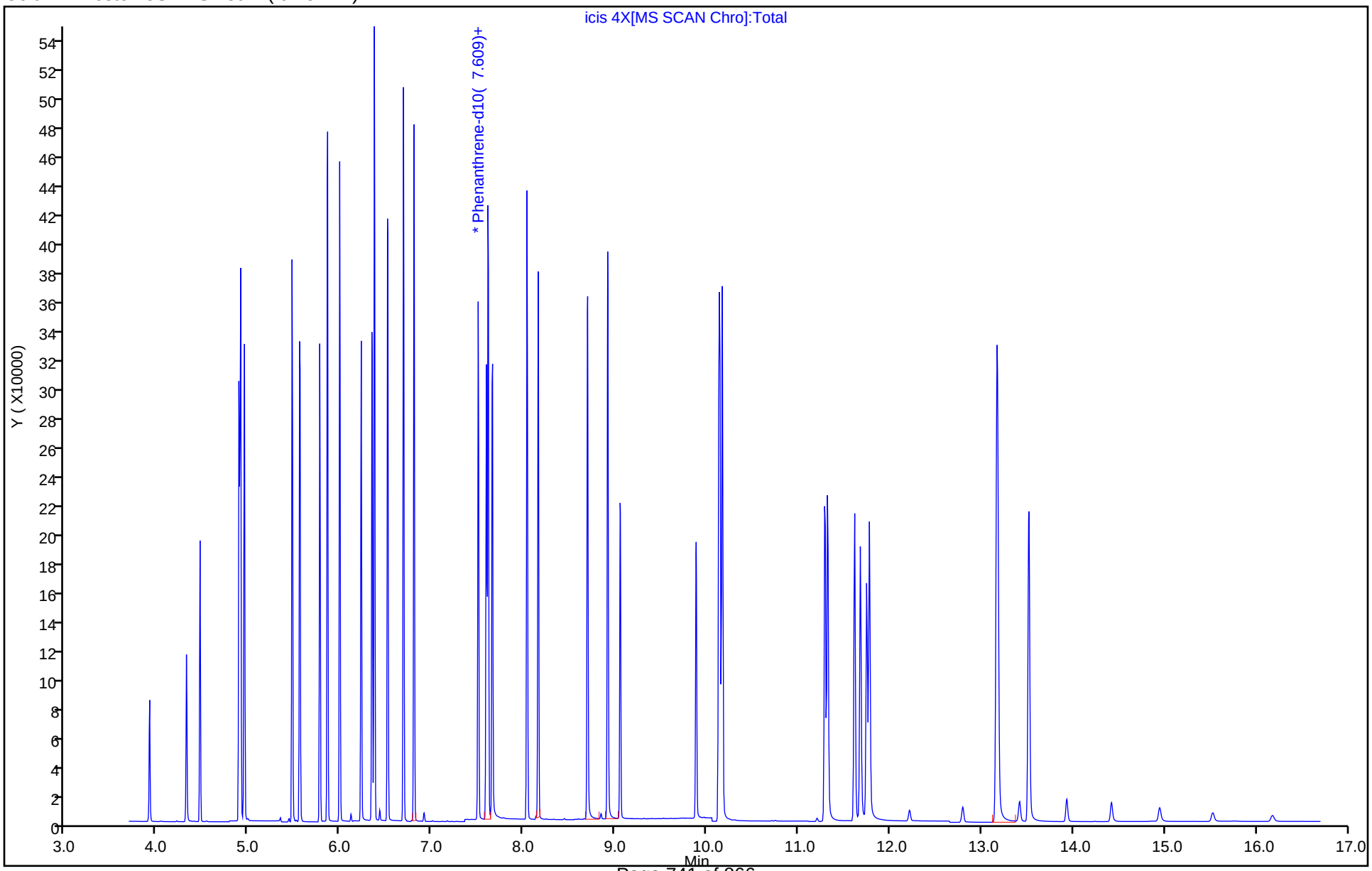
Report Date: 29-Jul-2019 18:38:43 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\icis 4X.D

Injection Date:	21-Jul-2019 13:11:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	icis 4			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 5X.D
Lims ID: ic 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Jul-2019 13:36:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-006
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:44 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:36:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	99	125430	1.00	0.9896	
2 cis-Decalin	138	4.465	4.465	0.000	93	72025	1.00	1.01	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	217109	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	478933	1.00	1.00	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	404704	1.00	1.01	
6 2-Methylnaphthalene	142	5.469	5.469	0.000	97	317802	1.00	1.02	
7 1-Methylnaphthalene	142	5.551	5.558	-0.007	98	297864	1.00	1.00	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	349096	1.00	1.00	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	390720	1.00	1.00	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	98	261961	1.00	1.01	
11 Acenaphthylene	152	6.225	6.225	0.000	100	370007	1.00	0.99	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	99	108051	0.5000	0.5000	
13 Acenaphthene	153	6.368	6.368	0.000	100	288656	1.00	1.00	
14 Dibenzofuran	168	6.516	6.516	0.000	97	435159	1.00	1.00	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	-0.001	92	236115	1.00	1.03	
16 Fluorene	166	6.803	6.803	0.000	100	322076	1.00	1.01	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	445228	1.00	1.02	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	183042	0.5000	0.5000	
19 Phenanthrene	178	7.614	7.609	0.005	100	473402	1.00	1.00	
20 Anthracene	178	7.659	7.659	0.000	100	406940	1.00	1.03	
21 1-Methylphenanthrene	192	8.157	8.157	0.000	100	319197	1.00	1.03	
22 Fluoranthene	202	8.698	8.698	0.000	99	476969	1.00	1.04	
23 Pyrene	202	8.919	8.917	0.002	99	503278	1.00	1.00	
$ 24 Terphenyl-d14	244	9.055	9.053	0.002	100	270035	1.00	0.99	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	100	293581	1.00	1.00	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	97	398285	1.00	1.01	
* 27 Chrysene-d12	240	10.145	10.145	0.000	70	166121	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	460660	1.00	0.9752	
29 Benzo[b]fluoranthene	252	11.293	11.286	0.007	100	459515	1.00	1.15	
30 Benzo[k]fluoranthene	252	11.316	11.316	0.000	100	455269	1.00	1.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	397305	1.00	1.06	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	361370	1.00	1.06	
* 33 Perylene-d12	264	11.744	11.745	-0.001	100	145750	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	406114	1.00	1.05	
35 Indeno[1,2,3-cd]pyrene	276	13.168	13.165	0.003	92	448572	1.00	1.07	
36 Dibenz(a,h)anthracene	278	13.178	13.175	0.003	94	383410	1.00	1.07	
37 Benzo[g,h,i]perylene	276	13.517	13.518	-0.001	97	402739	1.00	1.02	

Reagents:

60L58270SIM_00006 Amount Added: 1.00 Units: mL

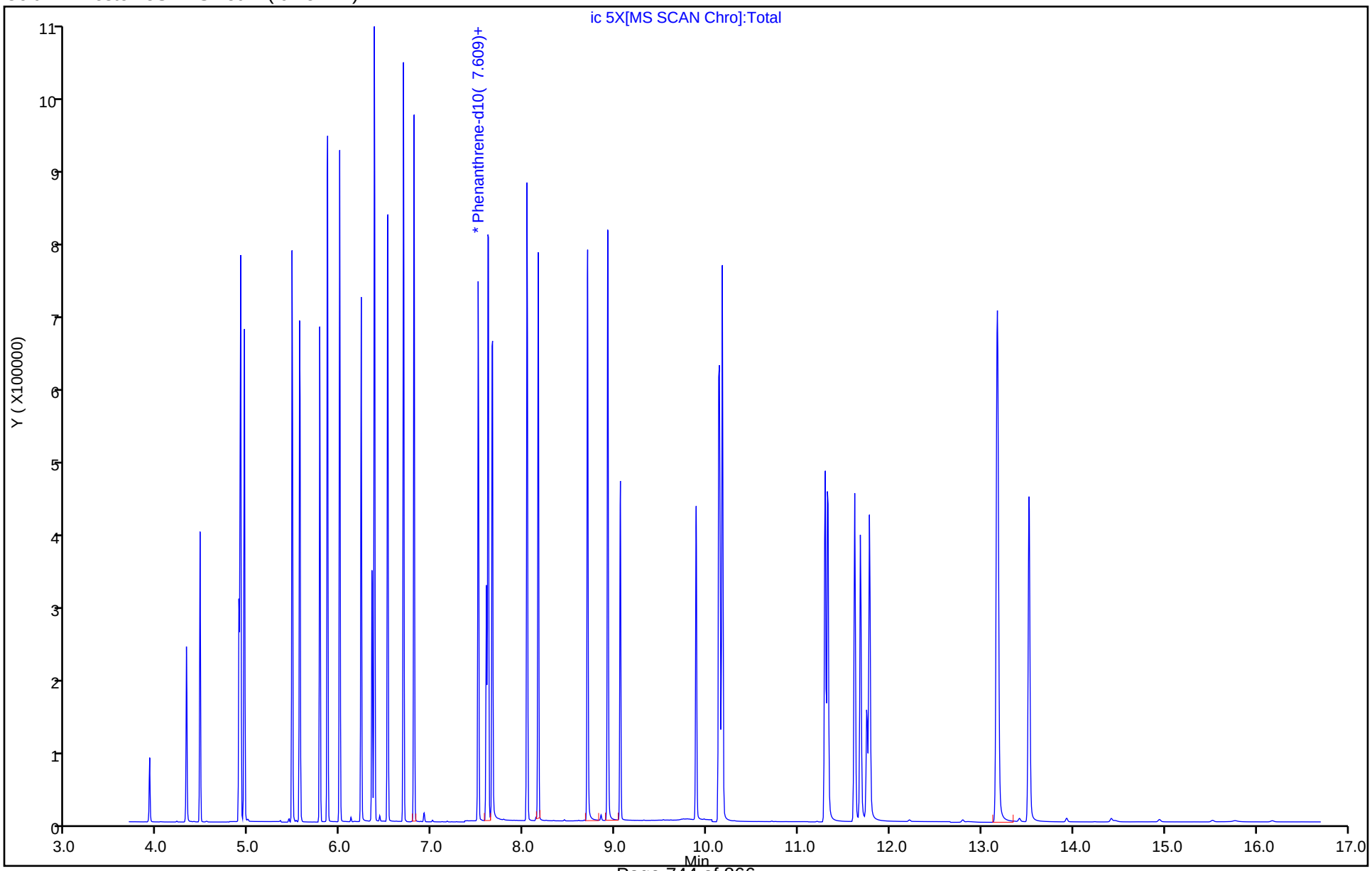
Report Date: 29-Jul-2019 18:38:45 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 5X.D

Injection Date:	21-Jul-2019 13:36:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 5			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Report Date: 29-Jul-2019 18:38:47 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 6X.D
Lims ID: ic 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Jul-2019 14:01:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-007
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:46 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:37:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	98	328062	2.50	2.63	
2 cis-Decalin	138	4.465	4.465	0.000	93	174790	2.50	2.49	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	213714	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	1138352	2.50	2.42	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	962993	2.50	2.44	
6 2-Methylnaphthalene	142	5.470	5.469	0.001	99	755402	2.50	2.45	
7 1-Methylnaphthalene	142	5.552	5.558	-0.006	99	717030	2.50	2.44	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	837706	2.50	2.41	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	937053	2.50	2.42	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	98	644421	2.50	2.50	
11 Acenaphthylene	152	6.225	6.225	0.000	100	1005879	2.50	2.72	
* 12 Acenaphthene-d10	164	6.342	6.342	0.000	98	107579	0.5000	0.5000	
13 Acenaphthene	153	6.369	6.368	0.001	99	698905	2.50	2.44	
14 Dibenzofuran	168	6.516	6.516	0.000	97	1059581	2.50	2.46	
15 2,3,5-Trimethylnaphthalene	170	6.687	6.687	0.000	92	591687	2.50	2.59	
16 Fluorene	166	6.803	6.803	0.000	99	791685	2.50	2.50	
17 Dibenzothiophene	184	7.502	7.502	0.000	100	1098885	2.50	2.50	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	100	183836	0.5000	0.5000	
19 Phenanthrene	178	7.615	7.609	0.006	100	1150340	2.50	2.43	
20 Anthracene	178	7.654	7.659	-0.005	100	1059249	2.50	2.68	
21 1-Methylphenanthrene	192	8.158	8.157	0.001	100	803844	2.50	2.59	
22 Fluoranthene	202	8.698	8.698	0.000	99	1229602	2.50	2.67	
23 Pyrene	202	8.917	8.917	0.000	99	1286874	2.50	2.55	
$ 24 Terphenyl-d14	244	9.053	9.053	0.000	100	661955	2.50	2.43	
25 Naphthobenzothiophene	234	9.883	9.883	0.000	99	762257	2.50	2.59	
26 Benzo[a]anthracene	228	10.129	10.129	0.000	96	1059968	2.50	2.68	
* 27 Chrysene-d12	240	10.145	10.145	0.000	69	166497	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	1122677	2.50	2.37	
29 Benzo[b]fluoranthene	252	11.294	11.286	0.008	100	1148803	2.50	2.75	
30 Benzo[k]fluoranthene	252	11.324	11.316	0.008	100	1181881	2.50	2.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	1035672	2.50	2.64	
32 Benzo[a]pyrene	252	11.676	11.676	0.000	100	1021484	2.50	2.84	
* 33 Perylene-d12	264	11.745	11.745	0.000	100	153219	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	1065065	2.50	2.62	
35 Indeno[1,2,3-cd]pyrene	276	13.170	13.165	0.005	96	1172244	2.50	2.65	
36 Dibenz(a,h)anthracene	278	13.179	13.175	0.004	90	982147	2.50	2.61	
37 Benzo[g,h,i]perylene	276	13.523	13.518	0.005	97	1033468	2.50	2.50	

Reagents:

60L68270SIM_00006 Amount Added: 1.00 Units: mL

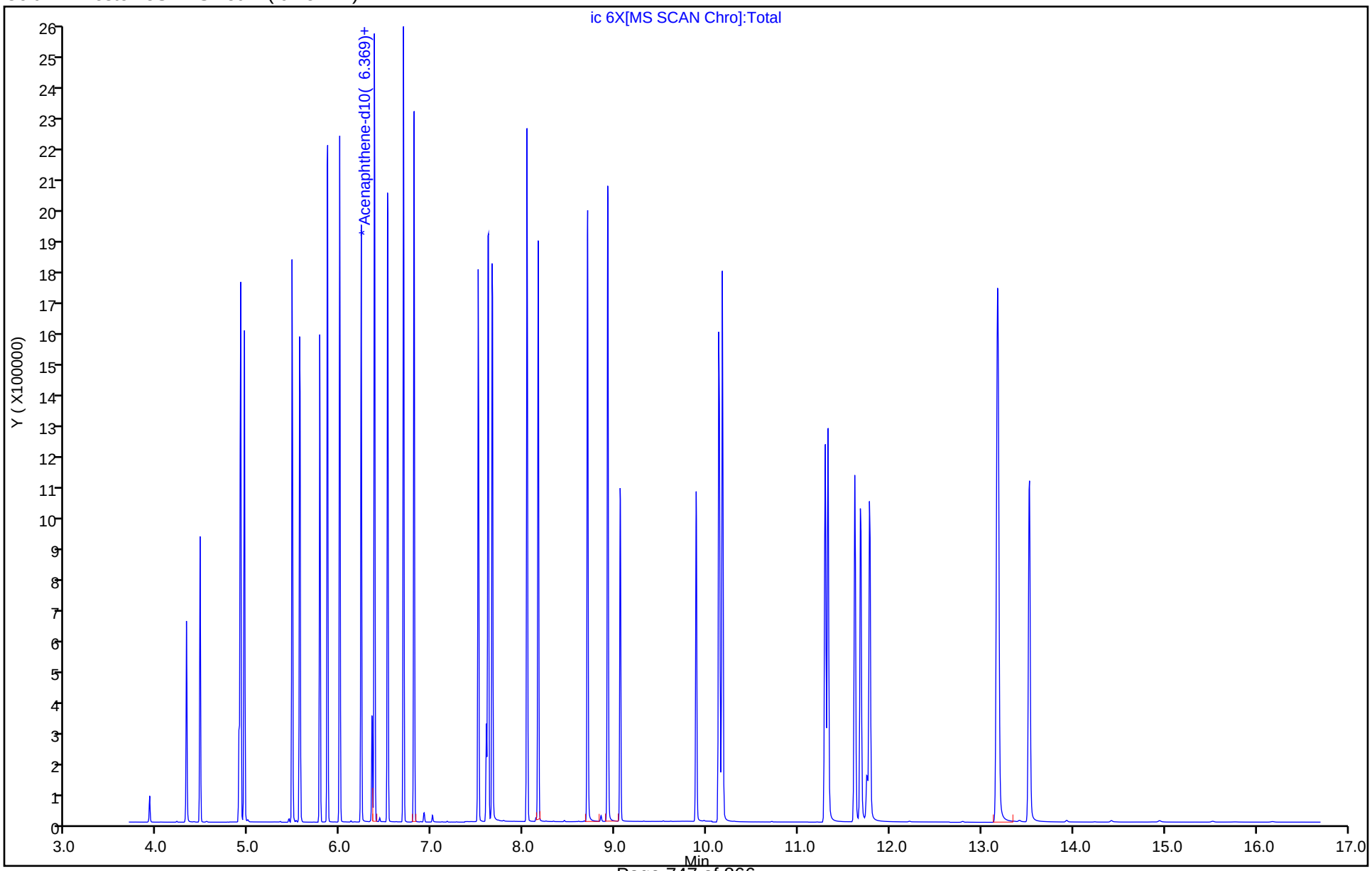
Report Date: 29-Jul-2019 18:38:47 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 6X.D

Injection Date:	21-Jul-2019 14:01:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 6			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D
Lims ID: ic 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Jul-2019 14:26:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-008
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:49 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: cochranj Date: 29-Jul-2019 14:46:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	98	669758	5.00	5.22	
2 cis-Decalin	138	4.470	4.465	0.005	97	341828	5.00	4.73	
* 3 Naphthalene-d8	136	4.889	4.889	0.000	95	219644	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	2114072	5.00	4.37	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	1831105	5.00	4.51	
6 2-Methylnaphthalene	142	5.476	5.469	0.007	97	1427865	5.00	4.51	
7 1-Methylnaphthalene	142	5.558	5.558	0.000	96	1359311	5.00	4.50	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	1582268	5.00	4.43	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	1753733	5.00	4.41	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	100	1235396	5.00	4.67	
11 Acenaphthylene	152	6.225	6.225	0.000	100	2014135	5.00	5.30	
* 12 Acenaphthene-d10	164	6.346	6.342	0.004	98	110402	0.5000	0.5000	
13 Acenaphthene	153	6.373	6.368	0.005	98	1316249	5.00	4.48	
14 Dibenzofuran	168	6.516	6.516	0.000	98	2009087	5.00	4.54	
15 2,3,5-Trimethylnaphthalene	170	6.691	6.687	0.004	87	1145006	5.00	4.88	
16 Fluorene	166	6.803	6.803	0.000	99	1516700	5.00	4.67	
17 Dibenzothiophene	184	7.508	7.502	0.006	99	2115730	5.00	4.67	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	98	189930	0.5000	0.5000	
19 Phenanthrene	178	7.615	7.609	0.006	100	2193728	5.00	4.48	
20 Anthracene	178	7.659	7.659	0.000	99	2079069	5.00	5.10	
21 1-Methylphenanthrene	192	8.161	8.157	0.004	100	1560700	5.00	4.87	
22 Fluoranthene	202	8.700	8.698	0.002	99	2405679	5.00	5.06	
23 Pyrene	202	8.919	8.917	0.002	98	2501407	5.00	4.80	
$ 24 Terphenyl-d14	244	9.058	9.053	0.005	100	1275914	5.00	4.53	
25 Naphthobenzothiophene	234	9.886	9.883	0.003	99	1566646	5.00	5.14	
26 Benzo[a]anthracene	228	10.137	10.129	0.008	97	2109714	5.00	5.15	
* 27 Chrysene-d12	240	10.145	10.145	0.000	69	172270	0.5000	0.5000	
28 Chrysene	228	10.177	10.169	0.008	100	2146798	5.00	4.38	
29 Benzo[b]fluoranthene	252	11.294	11.286	0.008	100	2168983	5.00	4.87	
30 Benzo[k]fluoranthene	252	11.324	11.316	0.008	100	2427192	5.00	4.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.622	11.615	0.007	99	2038126	5.00	4.87	
32 Benzo[a]pyrene	252	11.683	11.676	0.007	100	2100916	5.00	5.48	
* 33 Perylene-d12	264	11.752	11.745	0.007	100	163119	0.5000	0.5000	
34 Perylene	252	11.783	11.775	0.008	100	2119821	5.00	4.90	
35 Indeno[1,2,3-cd]pyrene	276	13.178	13.165	0.013	91	2344306	5.00	4.98	
36 Dibenz(a,h)anthracene	278	13.187	13.175	0.012	92	1946519	5.00	4.87	
37 Benzo[g,h,i]perylene	276	13.531	13.518	0.013	97	2069141	5.00	4.69	

Reagents:

60L78270SIM_00006 Amount Added: 1.00 Units: mL

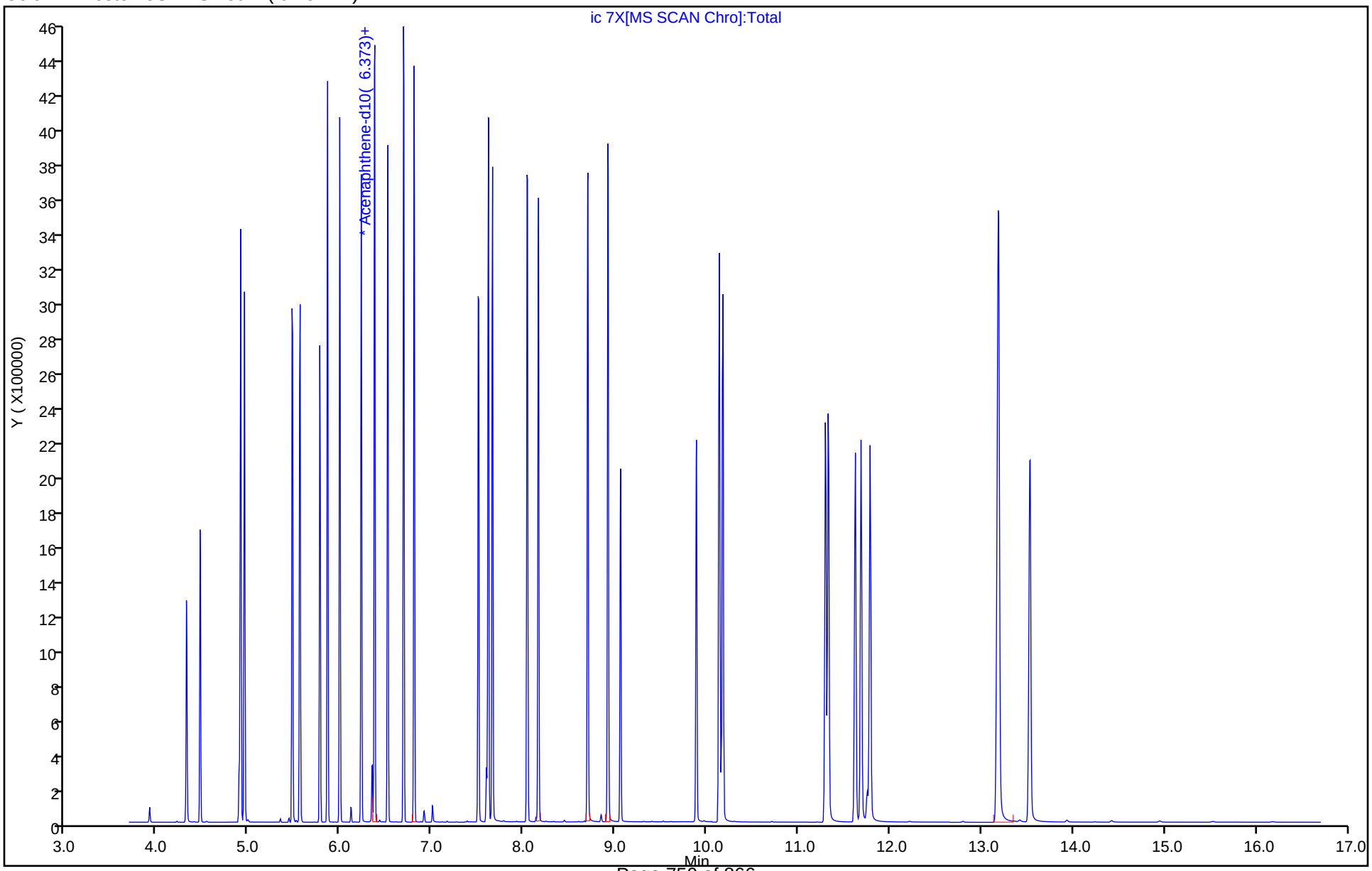
Report Date: 29-Jul-2019 18:38:50 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Injection Date:	21-Jul-2019 14:26:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	ic 7			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab Sample ID (1): CCVIS 140-33099/2 Instrument ID (1): MP

GC Column (1): Rxi-5SilMS 25 ID: 0.25(mm) Date Analyzed (1): 08/29/2019 12:06

ANALYTE	RT	RESOLUTION (%)
Benzo[b]fluoranthene	11.28	34.10

Resolution Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\ccvis.D				
Injection Date:	29-Aug-2019 12:06:30	Instrument ID:	MP		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	11211	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

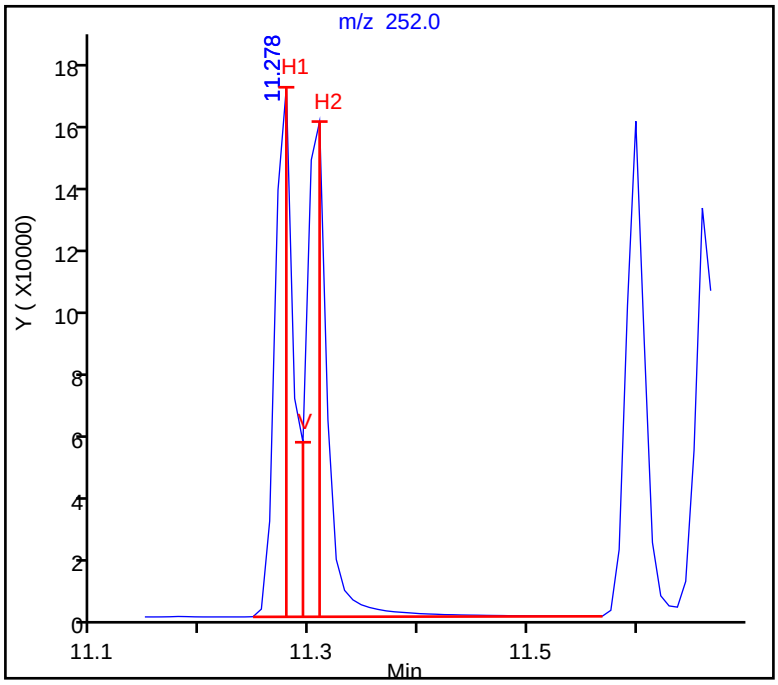
29 Benzo[b]fluoranthene - 30 Benzo[k]fluoranthene

SW-846 Method

Version D: %R = (V / ((H1 + H2)/2)) * 100

V (Valley Height) = 54713
H1(29 Benzo[b]fluoranthen) = 165986
H2(30 Benzo[k]fluoranthen) = 155217

Version D: %R = 34.1 <= 50.0
Passed



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab Sample ID (1): CCVIS 140-33157/2 Instrument ID (1): MP

GC Column (1): Rxi-5SilMS 25 ID: 0.25(mm) Date Analyzed (1): 08/30/2019 10:26

ANALYTE	RT	RESOLUTION (%)
Benzo[b]fluoranthene	11.28	36.30

Resolution Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190830-12910.b\ccvis.D				
Injection Date:	30-Aug-2019 10:26:30	Instrument ID:	MP		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	11211	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

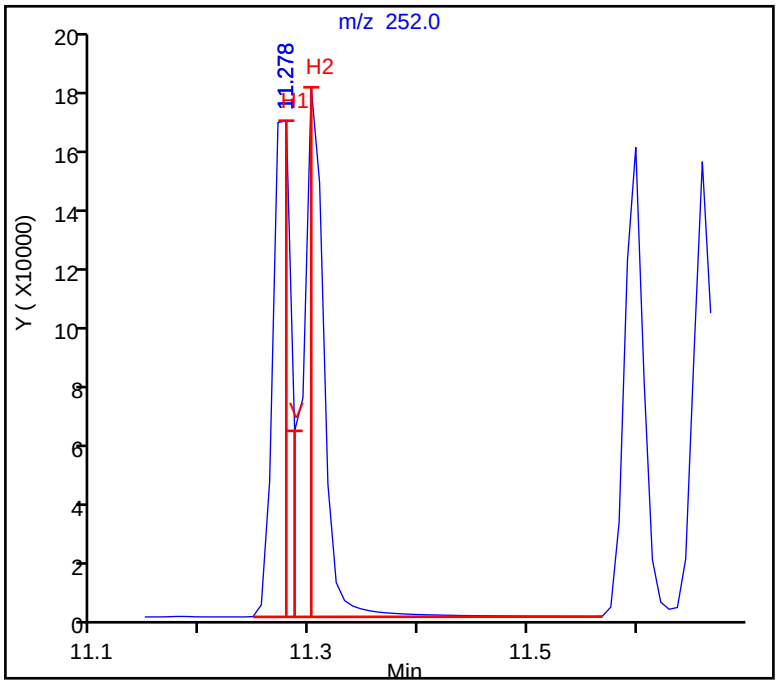
29 Benzo[b]fluoranthene - 30 Benzo[k]fluoranthene

SW-846 Method

Version D: %R = (V / ((H1 + H2)/2)) * 100

V (Valley Height) = 62712
H1(29 Benzo[b]fluoranthen) = 167242
H2(30 Benzo[k]fluoranthen) = 178499

Version D: %R = 36.3 <= 50.0
Passed



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab Sample ID: ICV 140-32163/10 Calibration Date: 07/21/2019 15:17

Instrument ID: MP Calib Start Date: 07/21/2019 11:55

GC Column: Rxi-5SilMS 25 ID: 0.25(mm) Calib End Date: 07/21/2019 14:26

Lab File ID: icvX.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-Decalin	Ave	0.1643	0.1669		508000	500000	1.5	30.0
Naphthalene	Ave	1.101	1.105	0.7000	502000	500000	0.4	30.0
Benzo(b)thiophene	Ave	0.9249	0.9457		511000	500000	2.3	30.0
2-Methylnaphthalene	Ave	0.7210	0.6900	0.4000	479000	500000	-4.3	30.0
1-Methylnaphthalene	Ave	0.6870	0.6519		474000	500000	-5.1	30.0
1,1'-Biphenyl	Ave	1.801	1.848		513000	500000	2.6	30.0
2,6-Dimethylnaphthalene	Ave	1.198	1.220		509000	500000	1.8	30.0
Acenaphthylene	Ave	1.721	1.548	0.9000	450000	500000	-10.0	30.0
Acenaphthene	Ave	1.330	1.328	0.9000	499000	500000	-0.2	30.0
Dibenzofuran	Ave	2.004	2.047	0.8000	511000	500000	2.1	30.0
2,3,5-Trimethylnaphthalene	Ave	1.063	1.102		519000	500000	3.7	30.0
Fluorene	Ave	1.472	1.470	0.9000	499000	500000	-0.1	30.0
Dibenzothiophene	Ave	1.193	1.306		547000	500000	9.5	30.0
Phenanthrene	Ave	1.288	1.296	0.7000	503000	500000	0.6	30.0
Anthracene	Ave	1.074	1.009	0.7000	470000	500000	-6.1	30.0
1-Methylphenanthrene	Ave	0.8433	0.8464		502000	500000	0.4	30.0
Fluoranthene	Ave	1.252	1.181	0.6000	471000	500000	-5.7	30.0
Pyrene	Ave	1.513	1.413	0.6000	467000	500000	-6.6	30.0
Naphthobenzothiophene	Ave	0.8846	0.6840		387000	500000	-22.7	30.0
Benzo[a]anthracene	Ave	1.189	0.998	0.8000	420000	500000	-16.1	30.0
Chrysene	Ave	1.422	1.457	0.7000	513000	500000	2.5	30.0
Benzo[b]fluoranthene	Ave	1.365	1.455	0.7000	533000	500000	6.6	30.0
Benzo[k]fluoranthene	Ave	1.548	1.607	0.7000	519000	500000	3.8	30.0
Benzo[e]pyrene	Ave	1.282	1.420		554000	500000	10.7	30.0
Benzo[a]pyrene	Ave	1.175	1.016	0.7000	432000	500000	-13.5	30.0
Perylene	Ave	1.326	1.502		566000	500000	13.2	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.444	1.386	0.5000	480000	500000	-4.0	30.0
Dibenz(a,h)anthracene	Ave	1.226	1.273	0.4000	519000	500000	3.9	30.0
Benzo[g,h,i]perylene	Ave	1.352	1.299	0.5000	481000	500000	-3.9	30.0
Nitrobenzene-d5	Ave	0.2919	0.2571		440000	500000	-11.9	30.0
2-Fluorobiphenyl (Surr)	Ave	1.617	1.659		513000	500000	2.6	30.0
Terphenyl-d14	Ave	0.8177	0.8286		507000	500000	1.3	30.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\icvX.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 21-Jul-2019 15:17:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012421-010
Misc. Info.: P072119(8270)ICSC
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 29-Jul-2019 18:38:49 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX1022

First Level Reviewer: jacksonc Date: 29-Jul-2019 18:54:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.316	4.316	0.000	100	51083	0.5000	0.4403	
2 cis-Decalin	138	4.465	4.465	0.000	90	33161	0.5000	0.5077	
* 3 Naphthalene-d8	136	4.896	4.889	0.007	100	198727	0.5000	0.5000	
4 Naphthalene	128	4.909	4.909	0.000	93	219660	0.5000	0.5022	
5 Benzo(b)thiophene	134	4.950	4.950	0.000	100	187937	0.5000	0.5113	
6 2-Methylnaphthalene	142	5.476	5.469	0.007	98	137124	0.5000	0.4785	
7 1-Methylnaphthalene	142	5.558	5.558	0.000	97	129549	0.5000	0.4745	
$ 8 2-Fluorobiphenyl (Surr)	172	5.772	5.772	0.000	87	162182	0.5000	0.5129	
9 1,1'-Biphenyl	154	5.858	5.858	0.000	100	180700	0.5000	0.5132	
10 2,6-Dimethylnaphthalene	156	5.990	5.990	0.000	99	119306	0.5000	0.5091	
11 Acenaphthylene	152	6.225	6.225	0.000	100	151363	0.5000	0.4498	
* 12 Acenaphthene-d10	164	6.346	6.342	0.004	99	97779	0.5000	0.5000	
13 Acenaphthene	153	6.369	6.368	0.000	100	129871	0.5000	0.4992	
14 Dibenzofuran	168	6.516	6.516	0.000	98	200165	0.5000	0.5107	
15 2,3,5-Trimethylnaphthalene	170	6.691	6.687	0.004	86	107764	0.5000	0.5185	
16 Fluorene	166	6.803	6.803	0.000	100	143725	0.5000	0.4994	
17 Dibenzothiophene	184	7.508	7.502	0.006	99	215642	0.5000	0.5473	
* 18 Phenanthrene-d10	188	7.592	7.592	0.000	99	165088	0.5000	0.5000	
19 Phenanthrene	178	7.615	7.609	0.006	100	213927	0.5000	0.5031	
20 Anthracene	178	7.659	7.659	0.000	100	166513	0.5000	0.4695	
21 1-Methylphenanthrene	192	8.161	8.157	0.004	100	139730	0.5000	0.5019	
22 Fluoranthene	202	8.698	8.698	0.000	99	194906	0.5000	0.4713	
23 Pyrene	202	8.919	8.917	0.002	99	203806	0.5000	0.4668	
$ 24 Terphenyl-d14	244	9.055	9.053	0.002	100	119540	0.5000	0.5066	
25 Naphthobenzothiophene	234	9.886	9.883	0.003	100	98686	0.5000	0.3866	
26 Benzo[a]anthracene	228	10.137	10.129	0.008	85	143946	0.5000	0.4196	
* 27 Chrysene-d12	240	10.145	10.145	0.000	69	144275	0.5000	0.5000	
28 Chrysene	228	10.169	10.169	0.000	100	210262	0.5000	0.5125	
29 Benzo[b]fluoranthene	252	11.294	11.286	0.008	100	168733	0.5000	0.5329	
30 Benzo[k]fluoranthene	252	11.324	11.316	0.008	100	186318	0.5000	0.5189	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.615	11.615	0.000	100	164618	0.5000	0.5536	
32 Benzo[a]pyrene	252	11.683	11.676	0.007	100	117777	0.5000	0.4324	
* 33 Perylene-d12	264	11.752	11.745	0.007	100	115957	0.5000	0.5000	
34 Perylene	252	11.775	11.775	0.000	100	174114	0.5000	0.5660	
35 Indeno[1,2,3-cd]pyrene	276	13.170	13.165	0.005	90	160701	0.5000	0.4798	
36 Dibenz(a,h)anthracene	278	13.179	13.175	0.004	95	147633	0.5000	0.5193	
37 Benzo[g,h,i]perylene	276	13.518	13.518	0.000	97	150646	0.5000	0.4806	

Reagents:

60ICV8270SIM_00010 Amount Added: 1.00 Units: mL

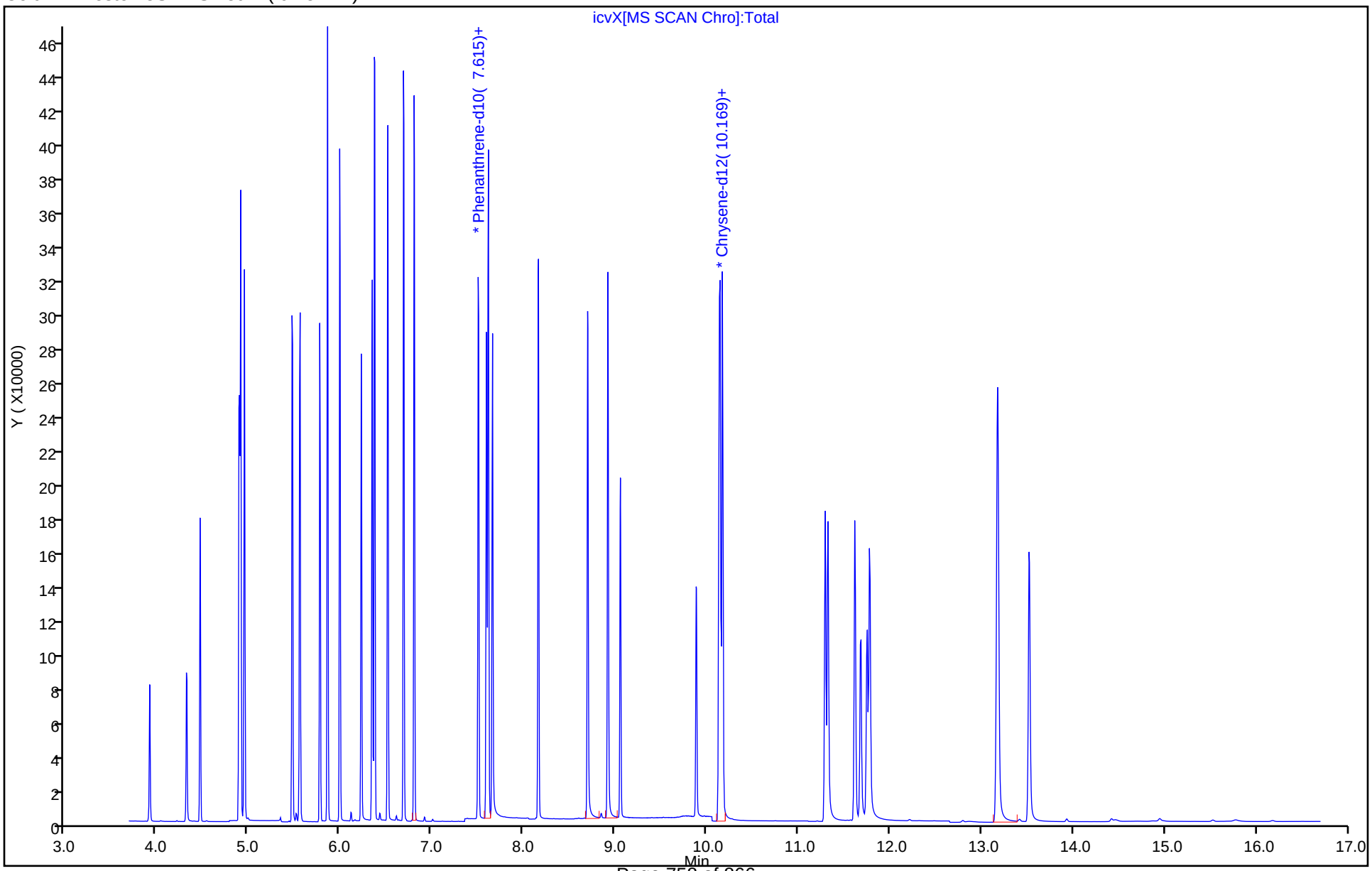
Report Date: 29-Jul-2019 18:55:11 Chrom Revision: 2.3 15-Jul-2019 06:58:08

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\icvX.D

Injection Date:	21-Jul-2019 15:17:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	icv			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab Sample ID: CCVIS 140-33099/2 Calibration Date: 08/29/2019 12:06

Instrument ID: MP Calib Start Date: 07/21/2019 11:55

GC Column: Rxi-5SilMS 25 ID: 0.25(mm) Calib End Date: 07/21/2019 14:26

Lab File ID: ccvis.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-Decalin	Ave	0.1643	0.1703		518000	500000	3.7	20.0
Naphthalene	Ave	1.101	1.118	0.7000	508000	500000	1.6	20.0
Benzo(b)thiophene	Ave	0.9249	0.9140		494000	500000	-1.2	20.0
2-Methylnaphthalene	Ave	0.7210	0.7355	0.4000	510000	500000	2.0	20.0
1-Methylnaphthalene	Ave	0.6870	0.7038		512000	500000	2.4	20.0
1,1'-Biphenyl	Ave	1.801	1.805		501000	500000	0.3	20.0
2,6-Dimethylnaphthalene	Ave	1.198	1.196		499000	500000	-0.2	20.0
Acenaphthylene	Ave	1.721	1.655	0.9000	481000	500000	-3.8	20.0
Acenaphthene	Ave	1.330	1.341	0.9000	504000	500000	0.8	20.0
Dibenzofuran	Ave	2.004	1.969	0.8000	491000	500000	-1.7	20.0
2,3,5-Trimethylnaphthalene	Ave	1.063	1.086		511000	500000	2.2	20.0
Fluorene	Ave	1.472	1.522	0.9000	517000	500000	3.4	20.0
Dibenzothiophene	Ave	1.193	1.188		498000	500000	-0.5	20.0
Phenanthrene	Ave	1.288	1.300	0.7000	505000	500000	0.9	20.0
Anthracene	Ave	1.074	1.073	0.7000	500000	500000	-0.0	20.0
1-Methylphenanthrene	Ave	0.8433	0.8674		514000	500000	2.9	20.0
Fluoranthene	Ave	1.252	1.271	0.6000	507000	500000	1.4	20.0
Pyrene	Ave	1.513	1.603	0.6000	530000	500000	6.0	20.0
Naphthobenzothiophene	Ave	0.8846	0.8916		504000	500000	0.8	20.0
Benzo[a]anthracene	Ave	1.189	1.128	0.8000	474000	500000	-5.2	20.0
Chrysene	Ave	1.422	1.458	0.7000	513000	500000	2.6	20.0
Benzo[b]fluoranthene	Ave	1.365	1.543	0.7000	565000	500000	13.0	20.0
Benzo[k]fluoranthene	Ave	1.548	1.588	0.7000	513000	500000	2.5	20.0
Benzo[e]pyrene	Ave	1.282	1.349		526000	500000	5.2	20.0
Benzo[a]pyrene	Ave	1.175	1.206	0.7000	513000	500000	2.7	20.0
Perylene	Ave	1.326	1.349		508000	500000	1.7	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.444	1.426	0.5000	494000	500000	-1.2	20.0
Dibenz(a,h)anthracene	Ave	1.226	1.240	0.4000	506000	500000	1.2	20.0
Benzo[g,h,i]perylene	Ave	1.352	1.321	0.5000	489000	500000	-2.3	20.0
Nitrobenzene-d5	Ave	0.2919	0.2945		504000	500000	0.9	20.0
2-Fluorobiphenyl (Surr)	Ave	1.617	1.592		492000	500000	-1.5	20.0
Terphenyl-d14	Ave	0.8177	0.8368		512000	500000	2.3	20.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\ccvis.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 29-Aug-2019 12:06:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012890-002
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 12:30:20 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 31-Aug-2019 12:30:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.306	4.306	0.000	100	64076	0.5000	0.5044	
2 cis-Decalin	138	4.455	4.455	0.000	97	37066	0.5000	0.5183	
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	217594	0.5000	0.5000	
4 Naphthalene	128	4.896	4.896	0.000	100	243349	0.5000	0.5081	
5 Benzo(b)thiophene	134	4.936	4.936	0.000	99	198888	0.5000	0.4941	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	100	160033	0.5000	0.5100	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	100	153142	0.5000	0.5122	
$ 8 2-Fluorobiphenyl (Surr)	172	5.766	5.766	0.000	87	175259	0.5000	0.4925	
9 1,1'-Biphenyl	154	5.849	5.849	0.000	100	198666	0.5000	0.5013	
10 2,6-Dimethylnaphthalene	156	5.981	5.981	0.000	99	131606	0.5000	0.4989	
11 Acenaphthylene	152	6.216	6.216	0.000	100	182112	0.5000	0.4808	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	98	110054	0.5000	0.5000	
13 Acenaphthene	153	6.360	6.360	0.000	100	147630	0.5000	0.5041	
14 Dibenzofuran	168	6.507	6.507	0.000	98	216746	0.5000	0.4913	
15 2,3,5-Trimethylnaphthalene	170	6.678	6.678	0.000	89	119563	0.5000	0.5111	
16 Fluorene	166	6.793	6.793	0.000	100	167487	0.5000	0.5171	
17 Dibenzothiophene	184	7.497	7.497	0.000	99	215562	0.5000	0.4977	
* 18 Phenanthrene-d10	188	7.581	7.581	0.000	99	181476	0.5000	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	235874	0.5000	0.5046	
20 Anthracene	178	7.648	7.648	0.000	100	194779	0.5000	0.4996	
21 1-Methylphenanthrene	192	8.148	8.148	0.000	100	157418	0.5000	0.5143	
22 Fluoranthene	202	8.687	8.687	0.000	99	230575	0.5000	0.5072	
23 Pyrene	202	8.906	8.906	0.000	99	248212	0.5000	0.5298	
$ 24 Terphenyl-d14	244	9.042	9.042	0.000	100	129538	0.5000	0.5116	
25 Naphthobenzothiophene	234	9.873	9.873	0.000	100	138025	0.5000	0.5040	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	100	174557	0.5000	0.4742	
* 27 Chrysene-d12	240	10.129	10.129	0.000	93	154805	0.5000	0.5000	
28 Chrysene	228	10.161	10.161	0.000	100	225746	0.5000	0.5128	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	208900	0.5000	0.5652	
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	214906	0.5000	0.5127	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	182581	0.5000	0.5260	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	163289	0.5000	0.5135	
* 33 Perylene-d12	264	11.729	11.729	0.000	100	135373	0.5000	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	182615	0.5000	0.5085	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	94	193096	0.5000	0.4938	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	90	167867	0.5000	0.5058	
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	99	178760	0.5000	0.4885	

Reagents:

608270simccv_00005 Amount Added: 1.00 Units: mL

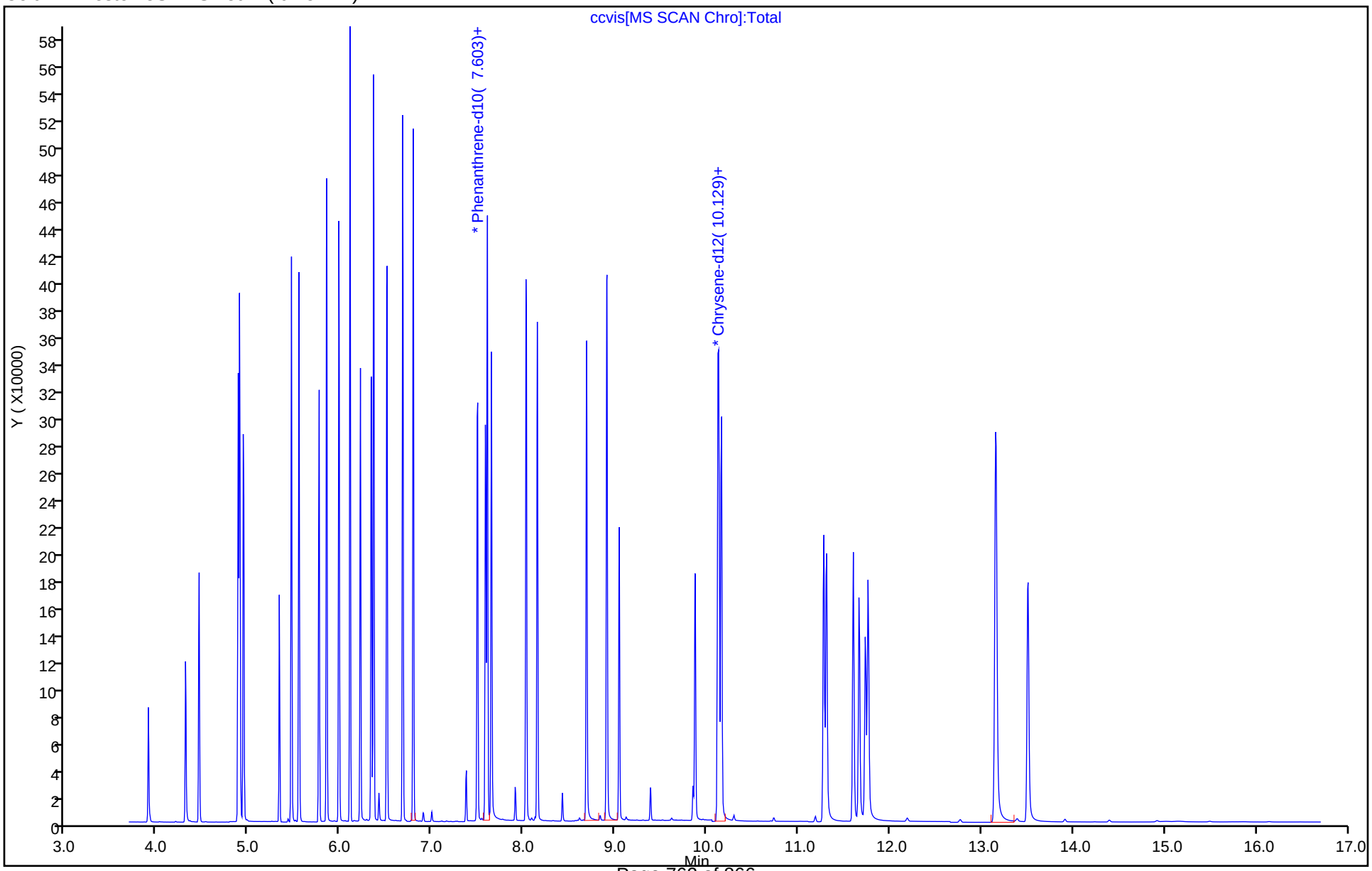
Report Date: 31-Aug-2019 12:30:21 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\ccvis.D

Injection Date:	29-Aug-2019 12:06:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Lab Sample ID: CCVIS 140-33157/2 Calibration Date: 08/30/2019 10:26

Instrument ID: MP Calib Start Date: 07/21/2019 11:55

GC Column: Rxi-5SilMS 25 ID: 0.25(mm) Calib End Date: 07/21/2019 14:26

Lab File ID: ccvis.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-Decalin	Ave	0.1643	0.1702		518000	500000	3.5	20.0
Naphthalene	Ave	1.101	1.108	0.7000	503000	500000	0.7	20.0
Benzo(b)thiophene	Ave	0.9249	0.9029		488000	500000	-2.4	20.0
2-Methylnaphthalene	Ave	0.7210	0.7389	0.4000	512000	500000	2.5	20.0
1-Methylnaphthalene	Ave	0.6870	0.7027		511000	500000	2.3	20.0
1,1'-Biphenyl	Ave	1.801	1.783		495000	500000	-1.0	20.0
2,6-Dimethylnaphthalene	Ave	1.198	1.203		502000	500000	0.4	20.0
Acenaphthylene	Ave	1.721	1.902	0.9000	553000	500000	10.5	20.0
Acenaphthene	Ave	1.330	1.338	0.9000	503000	500000	0.5	20.0
Dibenzofuran	Ave	2.004	1.942	0.8000	485000	500000	-3.1	20.0
2,3,5-Trimethylnaphthalene	Ave	1.063	1.103		519000	500000	3.8	20.0
Fluorene	Ave	1.472	1.525	0.9000	518000	500000	3.6	20.0
Dibenzothiophene	Ave	1.193	1.173		492000	500000	-1.7	20.0
Phenanthrene	Ave	1.288	1.282	0.7000	498000	500000	-0.5	20.0
Anthracene	Ave	1.074	1.163	0.7000	541000	500000	8.3	20.0
1-Methylphenanthrene	Ave	0.8433	0.8748		519000	500000	3.7	20.0
Fluoranthene	Ave	1.252	1.321	0.6000	527000	500000	5.5	20.0
Pyrene	Ave	1.513	1.616	0.6000	534000	500000	6.8	20.0
Naphthobenzothiophene	Ave	0.8846	0.9057		512000	500000	2.4	20.0
Benzo[a]anthracene	Ave	1.189	1.271	0.8000	534000	500000	6.9	20.0
Chrysene	Ave	1.422	1.335	0.7000	469000	500000	-6.1	20.0
Benzo[b]fluoranthene	Ave	1.365	1.371	0.7000	502000	500000	0.4	20.0
Benzo[k]fluoranthene	Ave	1.548	1.674	0.7000	540000	500000	8.1	20.0
Benzo[e]pyrene	Ave	1.282	1.289		503000	500000	0.5	20.0
Benzo[a]pyrene	Ave	1.175	1.293	0.7000	550000	500000	10.1	20.0
Perylene	Ave	1.326	1.290		486000	500000	-2.8	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.444	1.477	0.5000	511000	500000	2.2	20.0
Dibenz(a,h)anthracene	Ave	1.226	1.234	0.4000	503000	500000	0.6	20.0
Benzo[g,h,i]perylene	Ave	1.352	1.301	0.5000	481000	500000	-3.8	20.0
Nitrobenzene-d5	Ave	0.2919	0.3267		560000	500000	11.9	20.0
2-Fluorobiphenyl (Surr)	Ave	1.617	1.574		487000	500000	-2.6	20.0
Terphenyl-d14	Ave	0.8177	0.8399		514000	500000	2.7	20.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\ccvis.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 30-Aug-2019 10:26:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012910-002
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP
Sublist: chrom-8270D_SIM_MP*sub5

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:01:03 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 10:51:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.306	4.306	0.000	98	69400	0.5000	0.5596	
2 cis-Decalin	138	4.455	4.455	0.000	97	36145	0.5000	0.5177	
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	212421	0.5000	0.5000	
4 Naphthalene	128	4.896	4.896	0.000	100	235318	0.5000	0.5033	
5 Benzo(b)thiophene	134	4.936	4.936	0.000	99	191788	0.5000	0.4881	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	100	156964	0.5000	0.5124	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	100	149258	0.5000	0.5114	
$ 8 2-Fluorobiphenyl (Surr)	172	5.766	5.766	0.000	87	170221	0.5000	0.4869	
9 1,1'-Biphenyl	154	5.844	5.844	0.000	99	192720	0.5000	0.4950	
10 2,6-Dimethylnaphthalene	156	5.981	5.981	0.000	99	130060	0.5000	0.5019	
11 Acenaphthylene	152	6.216	6.216	0.000	100	205599	0.5000	0.5526	
* 12 Acenaphthene-d10	164	6.333	6.333	0.000	99	108113	0.5000	0.5000	
13 Acenaphthene	153	6.360	6.360	0.000	100	144617	0.5000	0.5027	
14 Dibenzofuran	168	6.507	6.507	0.000	97	209976	0.5000	0.4845	
15 2,3,5-Trimethylnaphthalene	170	6.678	6.678	0.000	93	119279	0.5000	0.5191	
16 Fluorene	166	6.793	6.793	0.000	100	164826	0.5000	0.5180	
17 Dibenzothiophene	184	7.491	7.491	0.000	99	212875	0.5000	0.4916	
* 18 Phenanthrene-d10	188	7.581	7.581	0.000	100	181428	0.5000	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	232558	0.5000	0.4977	
20 Anthracene	178	7.648	7.648	0.000	100	210992	0.5000	0.5414	
21 1-Methylphenanthrene	192	8.148	8.148	0.000	100	158709	0.5000	0.5187	
22 Fluoranthene	202	8.684	8.684	0.000	99	239672	0.5000	0.5274	
23 Pyrene	202	8.906	8.906	0.000	99	255325	0.5000	0.5340	
$ 24 Terphenyl-d14	244	9.042	9.042	0.000	100	132709	0.5000	0.5135	
25 Naphthobenzothiophene	234	9.870	9.870	0.000	100	143109	0.5000	0.5119	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	99	200788	0.5000	0.5344	
* 27 Chrysene-d12	240	10.129	10.129	0.000	95	158011	0.5000	0.5000	
28 Chrysene	228	10.161	10.161	0.000	100	210871	0.5000	0.4693	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	204825	0.5000	0.5020	
30 Benzo[k]fluoranthene	252	11.301	11.301	0.000	100	250085	0.5000	0.5404	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	192569	0.5000	0.5025	
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	193191	0.5000	0.5503	
* 33 Perylene-d12	264	11.729	11.729	0.000	100	149435	0.5000	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	192730	0.5000	0.4861	
35 Indeno[1,2,3-cd]pyrene	276	13.150	13.150	0.000	93	220650	0.5000	0.5112	
36 Dibenz(a,h)anthracene	278	13.159	13.159	0.000	93	184348	0.5000	0.5032	
37 Benzo[g,h,i]perylene	276	13.508	13.508	0.000	99	194360	0.5000	0.4812	

Reagents:

608270simccv_00005 Amount Added: 1.00 Units: mL

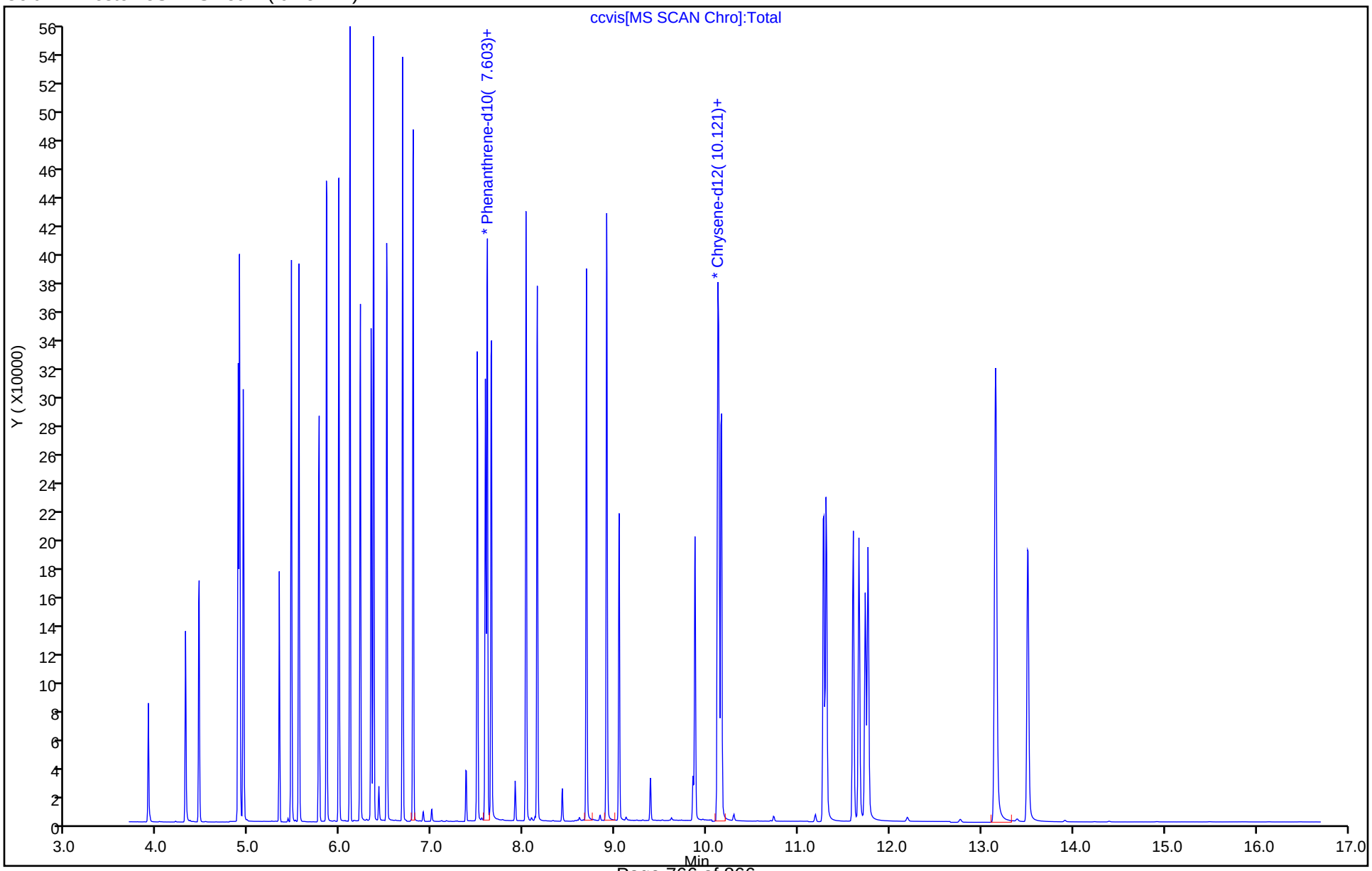
Report Date: 31-Aug-2019 13:01:03 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\ccvis.D

Injection Date:	30-Aug-2019 10:26:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\wdm.D
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 29-Aug-2019 12:31:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012890-003
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:01:00 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 29-Aug-2019 13:34:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	276980	0.5000	0.5000	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	97	155835	0.5000	0.5000	
* 18 Phenanthrene-d10	188	7.587	7.587	0.000	100	259731	0.5000	0.5000	
* 27 Chrysene-d12	240	10.137	10.137	0.000	70	240862	0.5000	0.5000	
* 33 Perylene-d12	264	11.737	11.737	0.000	100	224807	0.5000	0.5000	
A 38 C1-Naphthalenes	142	5.523	(5.454-5.583)		0	5330901	5000.0	5000.0	
A 39 C2-Naphthalenes	156	6.076	(5.923-6.247)		0	6881176	5000.0	5000.0	
A 40 C3-Naphthalenes	170	6.558	(6.323-6.820)		0	4642182	5000.0	5000.0	
A 41 C4-Naphthalenes	184	7.109	(6.483-7.421)		0	2521709	5000.0	5000.0	
A 42 C1-Fluorenes	180	7.200	(7.219-7.413)		0	684696	5000.0	5000.0	
A 43 C2-Fluorenes	194	7.738	(7.565-7.939)		0	1021327	5000.0	5000.0	
A 44 C3-Fluorenes	208	8.135	(7.989-8.454)		0	779590	5000.0	5000.0	
A 45 C1-Dibenzothiophenes	198	7.884	(7.827-8.065)		0	535261	5000.0	5000.0	
A 46 C2-Dibenzothiophenes	212	8.596	(8.209-8.703)		0	739326	5000.0	5000.0	
A 47 C3-Dibenzothiophenes	226	8.658	(8.529-9.109)		0	551268	5000.0	5000.0	
A 48 C4-Dibenzothiophenes	240	8.933	(8.814-9.591)		0	292405	5000.0	5000.0	
A 49 C1-Phenanthrenes/Anthracen	192	8.062	(8.020-8.193)		0	2262763	5000.0	5000.0	
A 50 C2-Phenanthrenes/Anthracen	206	8.558	(8.358-8.785)		0	2384500	5000.0	5000.0	
A 51 C3-Phenanthrenes/Anthracen	220	8.975	(8.747-9.260)		0	1522585	5000.0	5000.0	
A 52 C4-Phenanthrenes/Anthracen	234	9.515	(8.966-9.686)		0	806053	5000.0	5000.0	
A 53 C1-Fluoranthenes/pyrene	216	9.240	(9.112-9.500)		0	330827	5000.0	5000.0	
A 54 C2-Fluoranthenes/Pyrene	230	9.686	(9.587-10.039)		0	541232	5000.0	5000.0	
A 55 C3-Fluoranthenes/Pyrene	244	10.209	(10.043-10.519)		0	590816	5000.0	5000.0	
A 56 C4-Fluoranthenes/Pyrene	258	10.568	(10.371-10.864)		0	452045	5000.0	5000.0	
A 57 C1-Chrysenes	242	10.552	(10.512-10.741)		0	442436	5000.0	5000.0	
A 58 C2-Chrysenes	256	11.083	(10.937-11.264)		0	425697	5000.0	5000.0	
A 59 C3-Chrysenes	270	11.523	(11.245-11.890)		0	361957	5000.0	5000.0	
A 60 C4-Chrysenes	284	12.005	(11.332-12.465)		0	232967	5000.0	5000.0	
A 61 C1-Decalins	152	4.564	(4.506-4.633)		0	682084	5000.0	5000.0	
A 62 C2-Decalins	166	4.970	(4.802-5.149)		0	648247	5000.0	5000.0	
A 63 C3-Decalins	180	5.615	(5.190-5.695)		0	525565	5000.0	5000.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
A 64 C4-Decalins	194	5.872	(5.670-6.092)		0	343764	5000.0	5000.0	
A 65 C1-Naphthobenzothiophenes	248	10.241	(10.219-10.521)		0	198057	5000.0	5000.0	
A 66 C2-Naphthobenzothiophenes	262	10.783	(10.578-11.234)		0	279749	5000.0	5000.0	
A 67 C3-Naphthobenzothiophenes	276	11.248	(11.022-11.652)		0	186524	5000.0	5000.0	
A 68 C4-Naphthobenzothiophenes	290	11.584	(11.179-12.230)		0	96747	5000.0	5000.0	
A 69 C1-Benzothiophenes	148	5.350	(5.202-5.375)		0	80185	5000.0	5000.0	
A 70 C2-Benzothiophenes	162	6.090	(5.902-6.104)		0	75566	5000.0	5000.0	
A 71 C3-Benzothiophenes	176	6.499	(6.327-6.645)		0	101037	5000.0	5000.0	
A 72 C4-Benzothiophenes	190	6.932	(6.692-7.177)		0	90474	5000.0	5000.0	

Reagents:

60WDM8270D_00003 Amount Added: 1.00 Units: mL

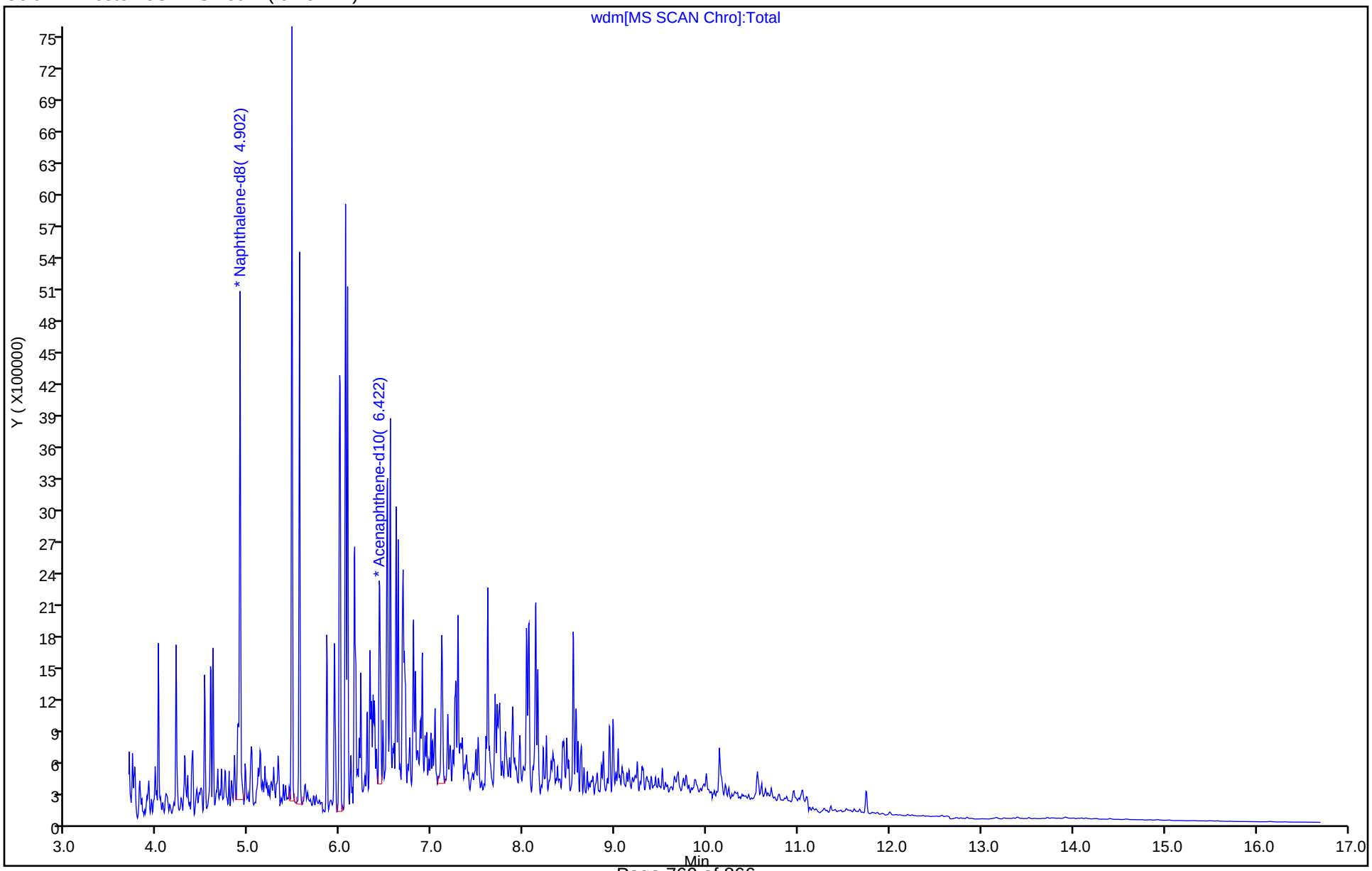
Report Date: 31-Aug-2019 11:01:03 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\wdm.D

Injection Date:	29-Aug-2019 12:31:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	WDM			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\wdm.D
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 30-Aug-2019 10:51:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012910-003
Misc. Info.: P083019(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 13:01:04 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 15:40:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	258043	0.5000	0.5000	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	151931	0.5000	0.5000	
* 18 Phenanthrene-d10	188	7.586	7.586	0.000	100	241077	0.5000	0.5000	
* 27 Chrysene-d12	240	10.137	10.137	0.000	70	228735	0.5000	0.5000	
* 33 Perylene-d12	264	11.737	11.737	0.000	100	205218	0.5000	0.5000	
A 38 C1-Naphthalenes	142	5.520	(5.444-5.596)		0	4993821	5000.0	5000.0	
A 39 C2-Naphthalenes	156	6.076	(5.913-6.239)		0	6404676	5000.0	5000.0	
A 40 C3-Naphthalenes	170	6.558	(6.306-6.809)		0	4311117	5000.0	5000.0	
A 41 C4-Naphthalenes	184	6.937	(6.489-7.384)		0	2316646	5000.0	5000.0	
A 42 C1-Fluorenes	180	7.223	(7.134-7.311)		0	634090	5000.0	5000.0	
A 43 C2-Fluorenes	194	7.749	(7.564-7.934)		0	934045	5000.0	5000.0	
A 44 C3-Fluorenes	208	8.219	(7.985-8.453)		0	690996	5000.0	5000.0	
A 45 C1-Dibenzothiophenes	198	7.943	(7.822-8.064)		0	489285	5000.0	5000.0	
A 46 C2-Dibenzothiophenes	212	8.247	(8.193-8.684)		0	676402	5000.0	5000.0	
A 47 C3-Dibenzothiophenes	226	8.658	(8.524-9.104)		0	501575	5000.0	5000.0	
A 48 C4-Dibenzothiophenes	240	8.933	(8.810-9.579)		0	262533	5000.0	5000.0	
A 49 C1-Phenanthrenes/Anthracen	192	8.129	(8.002-8.183)		0	2122333	5000.0	5000.0	
A 50 C2-Phenanthrenes/Anthracen	206	8.555	(8.341-8.770)		0	2226302	5000.0	5000.0	
A 51 C3-Phenanthrenes/Anthracen	220	9.001	(8.743-9.258)		0	1365919	5000.0	5000.0	
A 52 C4-Phenanthrenes/Anthracen	234	9.512	(8.959-9.683)		0	728801	5000.0	5000.0	
A 53 C1-Fluoranthenes/pyrene	216	9.302	(9.109-9.496)		0	289325	5000.0	5000.0	
A 54 C2-Fluoranthenes/Pyrene	230	9.683	(9.584-10.051)		0	497111	5000.0	5000.0	
A 55 C3-Fluoranthenes/Pyrene	244	10.201	(10.030-10.504)		0	559935	5000.0	5000.0	
A 56 C4-Fluoranthenes/Pyrene	258	10.560	(10.368-10.847)		0	375156	5000.0	5000.0	
A 57 C1-Chrysenes	242	10.552	(10.504-10.751)		0	397539	5000.0	5000.0	
A 58 C2-Chrysenes	256	11.083	(10.919-11.248)		0	397757	5000.0	5000.0	
A 59 C3-Chrysenes	270	11.523	(11.240-11.890)		0	336523	5000.0	5000.0	
A 60 C4-Chrysenes	284	12.004	(11.332-12.463)		0	214252	5000.0	5000.0	
A 61 C1-Decalins	152	4.564	(4.500-4.628)		0	635906	5000.0	5000.0	
A 62 C2-Decalins	166	4.967	(4.794-5.140)		0	606314	5000.0	5000.0	
A 63 C3-Decalins	180	5.429	(5.167-5.690)		0	469930	5000.0	5000.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
A 64 C4-Decalins	194	5.881	(5.671-6.090)		0	174663	5000.0	5000.0	
A 65 C1-Naphthobenzothiophenes	248	10.368	(10.217-10.520)		0	190940	5000.0	5000.0	
A 66 C2-Naphthobenzothiophenes	262	10.831	(10.576-11.086)		0	253860	5000.0	5000.0	
A 67 C3-Naphthobenzothiophenes	276	11.288	(11.022-11.553)		0	136101	5000.0	5000.0	
A 68 C4-Naphthobenzothiophenes	290	11.695	(11.171-12.218)		0	89911	5000.0	5000.0	
A 69 C1-Benzothiophenes	148	5.288	(5.201-5.375)		0	65199	5000.0	5000.0	
A 70 C2-Benzothiophenes	162	6.001	(5.899-6.104)		0	55580	5000.0	5000.0	
A 71 C3-Benzothiophenes	176	6.481	(6.324-6.637)		0	84899	5000.0	5000.0	
A 72 C4-Benzothiophenes	190	6.935	(6.691-7.179)		0	74665	5000.0	5000.0	

Reagents:

60WDM8270D_00003 Amount Added: 1.00 Units: mL

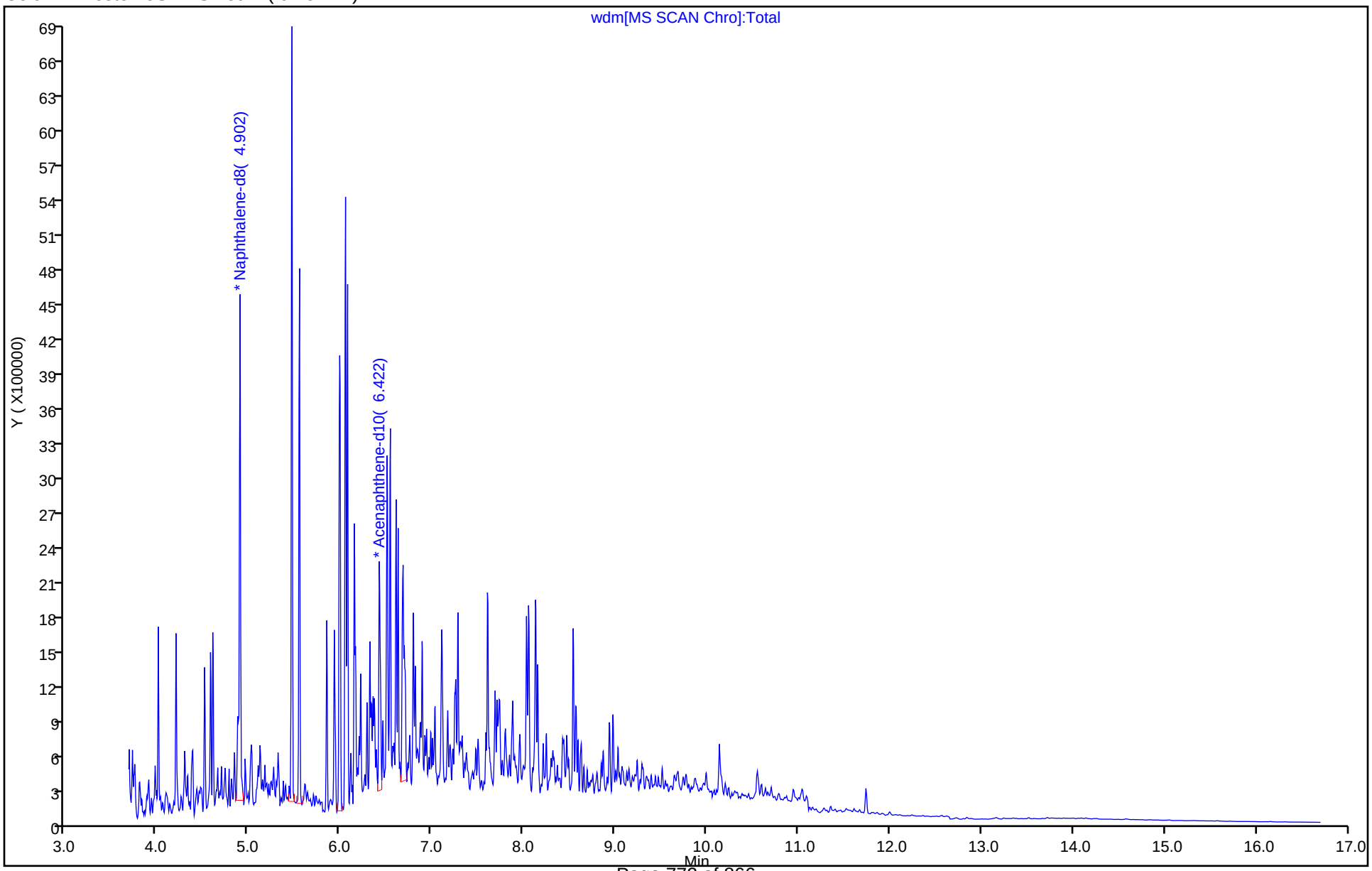
Report Date: 31-Aug-2019 13:01:05 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190830-12910.b\wdm.D

Injection Date:	30-Aug-2019 10:51:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	WDM			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-32772/1-A

Matrix: Solid Lab File ID: mb 140-32772-1-a.D

Analysis Method: 8270D SIM Date Collected:

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 10(g) Date Analyzed: 08/29/2019 15:02

Con. Extract Vol.: 0.5(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	ND		5.0	0.70
91-57-6	2-Methylnaphthalene	ND		10	1.0
83-32-9	Acenaphthene	ND		1.0	0.46
208-96-8	Acenaphthylene	ND		1.0	0.25
120-12-7	Anthracene	ND		1.0	0.81
56-55-3	Benzo[a]anthracene	ND		1.0	0.40
50-32-8	Benzo[a]pyrene	ND		1.0	0.36
205-99-2	Benzo[b]fluoranthene	ND		1.0	0.51
192-97-2	Benzo[e]pyrene	ND		1.0	0.34
191-24-2	Benzo[g,h,i]perylene	ND		1.0	0.59
207-08-9	Benzo[k]fluoranthene	ND		1.0	0.46
STL00905	C1-Chrysenes	ND		1.0	0.26
STL00909	C1-Dibenzothiophenes	ND		1.0	0.65
STL00912	C1-Fluoranthenes/pyrene	ND		1.0	0.52
STL00913	C1-Fluorenes	ND		1.0	0.56
STL00916	C1-Naphthalenes	ND		10	0.79
STL00901	C1-Phenanthrenes/Anthracenes	ND		2.0	1.1
STL00906	C2-Chrysenes	ND		1.0	0.31
STL00910	C2-Dibenzothiophenes	ND		1.0	0.93
STL00968	C2-Fluoranthenes/Pyrene	ND		1.0	0.45
STL00914	C2-Fluorenes	ND		2.0	1.2
STL00917	C2-Naphthalenes	ND		2.0	0.76
STL00902	C2-Phenanthrenes/Anthracenes	ND		4.0	2.5
STL00907	C3-Chrysenes	ND		1.0	0.30
STL00911	C3-Dibenzothiophenes	ND		2.0	1.1
STL00969	C3-Fluoranthenes/Pyrene	ND		1.0	0.55
STL00915	C3-Fluorenes	ND		2.0	1.1
STL00918	C3-Naphthalenes	ND		2.0	0.98
STL00903	C3-Phenanthrenes/Anthracenes	ND		2.0	1.6
STL00908	C4-Chrysenes	ND		1.0	0.34
STL00967	C4-Dibenzothiophenes	ND		1.0	0.95
STL01791	C4-Fluoranthenes/Pyrene	ND		1.0	0.38
STL00919	C4-Naphthalenes	ND		4.0	2.1
STL00904	C4-Phenanthrenes/Anthracenes	ND		2.0	1.9

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-32772/1-A

Matrix: Solid Lab File ID: mb 140-32772-1-a.D

Analysis Method: 8270D SIM Date Collected:

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 10(g) Date Analyzed: 08/29/2019 15:02

Con. Extract Vol.: 0.5(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	ND		1.0	0.38
53-70-3	Dibenz(a,h)anthracene	ND		1.0	0.57
132-65-0	Dibenzothiophene	ND		1.0	0.34
206-44-0	Fluoranthene	ND		1.0	0.91
86-73-7	Fluorene	ND		1.0	0.48
193-39-5	Indeno[1,2,3-cd]pyrene	ND		1.0	0.70
91-20-3	Naphthalene	ND		20	1.8
198-55-0	Perylene	ND		1.0	0.20
85-01-8	Phenanthrene	ND		2.0	1.8
129-00-0	Pyrene	ND		2.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	68		20-142
4165-60-0	Nitrobenzene-d5	68		20-121
1718-51-0	Terphenyl-d14	78		35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D
Lims ID: MB 140-32772/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Aug-2019 15:02:30 ALS Bottle#: 1 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012890-009
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:01:00 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 29-Aug-2019 15:56:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.311	4.306	0.005	95	80250	1.00	0.6823	
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	201450	0.5000	0.5000	
$ 8 2-Fluorobiphenyl (Surr)	172	5.766	5.766	0.000	87	237911	1.00	0.6830	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	107716	0.5000	0.5000	
* 18 Phenanthrene-d10	188	7.587	7.581	0.006	100	186946	0.5000	0.5000	
$ 24 Terphenyl-d14	244	9.048	9.042	0.006	100	206675	1.00	0.7807	
* 27 Chrysene-d12	240	10.137	10.129	0.008	95	161863	0.5000	0.5000	
* 33 Perylene-d12	264	11.737	11.729	0.008	100	159849	0.5000	0.5000	
34 Perylene	252	11.768	11.760	0.008	1	149		0.000351	7a
37 Benzo[g,h,i]perylene	276	13.522	13.508	0.014	100	308		0.000713	7a

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

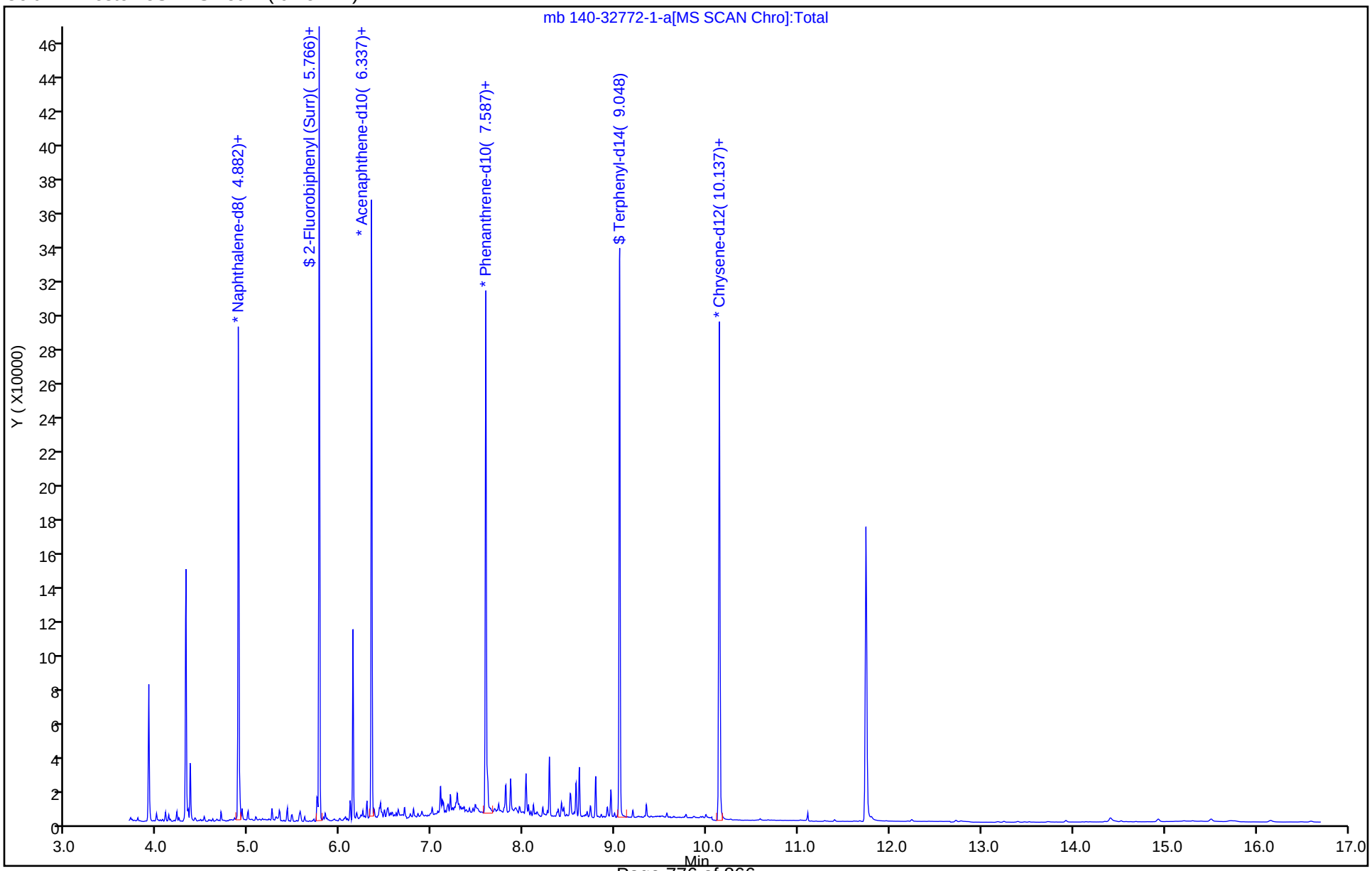
Report Date: 31-Aug-2019 11:01:12 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D

Injection Date:	29-Aug-2019 15:02:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	MB 140-32772/1-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D
Lims ID: MB 140-32772/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Aug-2019 15:02:30 ALS Bottle#: 1 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012890-009
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:01:00 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 29-Aug-2019 15:56:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 1 Nitrobenzene-d5	1.00	0.6823	68.23
$ 8 2-Fluorobiphenyl (Surr)	1.00	0.6830	68.30
$ 24 Terphenyl-d14	1.00	0.7807	78.07

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

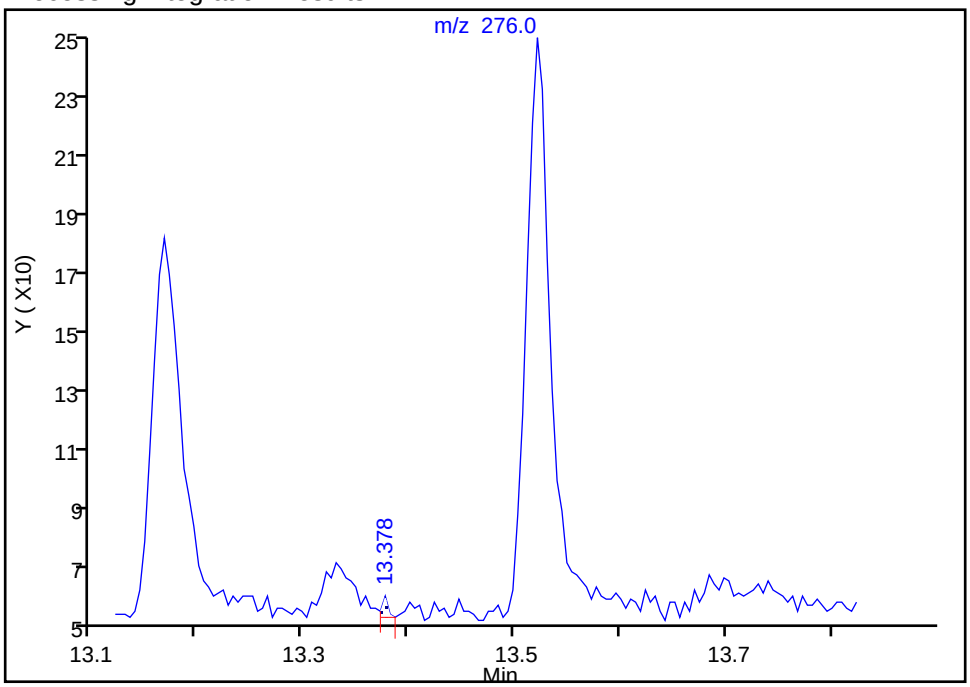
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D				
Injection Date:	29-Aug-2019 15:02:30	Instrument ID:	MP		
Lims ID:	MB 140-32772/1-A				
Client ID:					
Operator ID:	11211	ALS Bottle#:	1	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

37 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

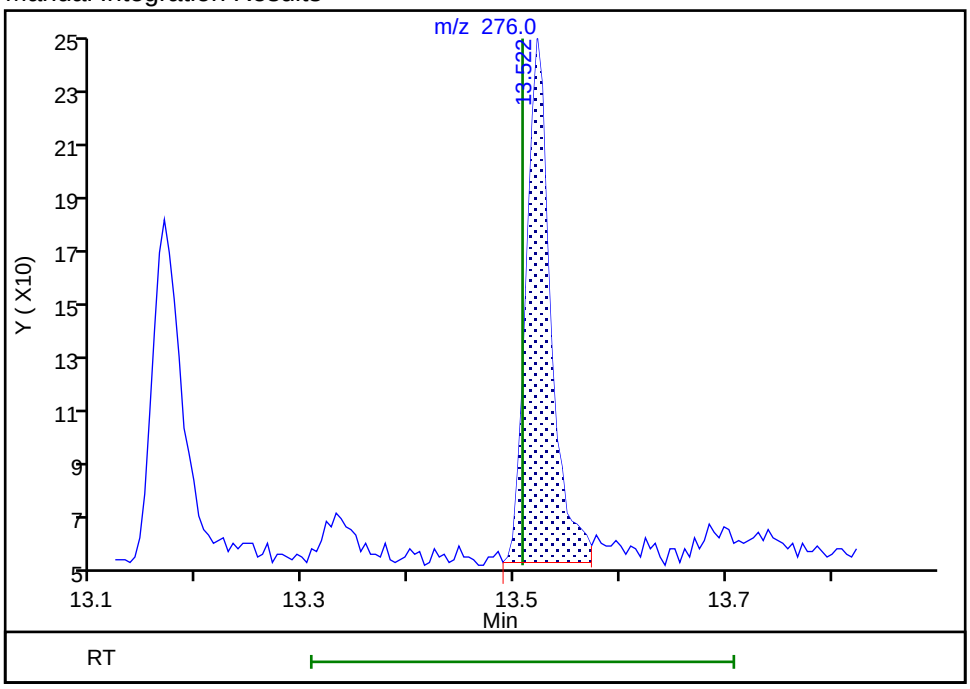
Processing Integration Results

RT: 13.38
Area: 3
Amount: 0.000007
Amount Units: ug/ml



Manual Integration Results

RT: 13.52
Area: 308
Amount: 0.000713
Amount Units: ug/ml



Reviewer: cochranj, 29-Aug-2019 15:40:42

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

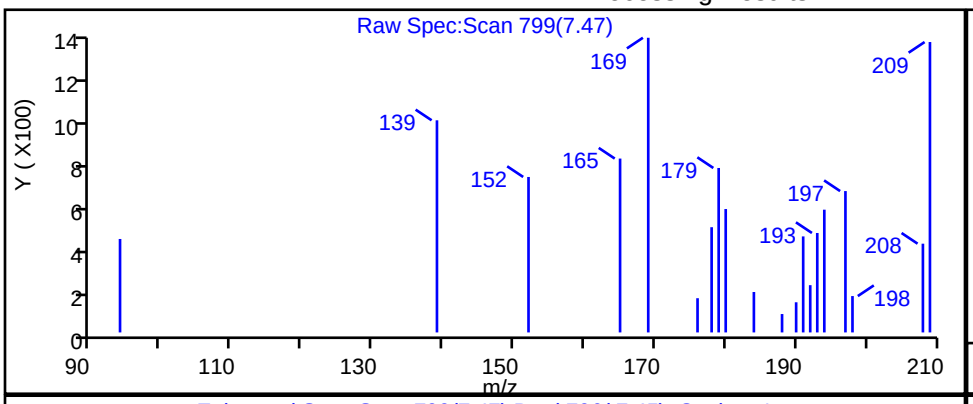
User Disabled Compound Report

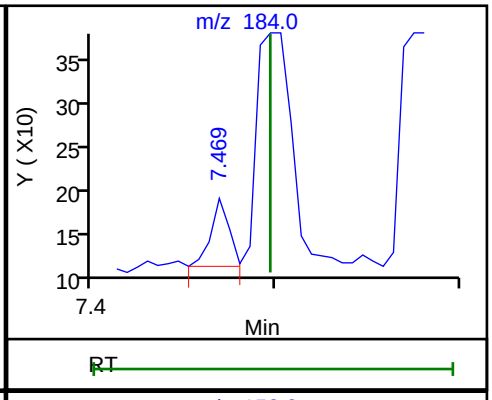
Eurofins TestAmerica, Knoxville

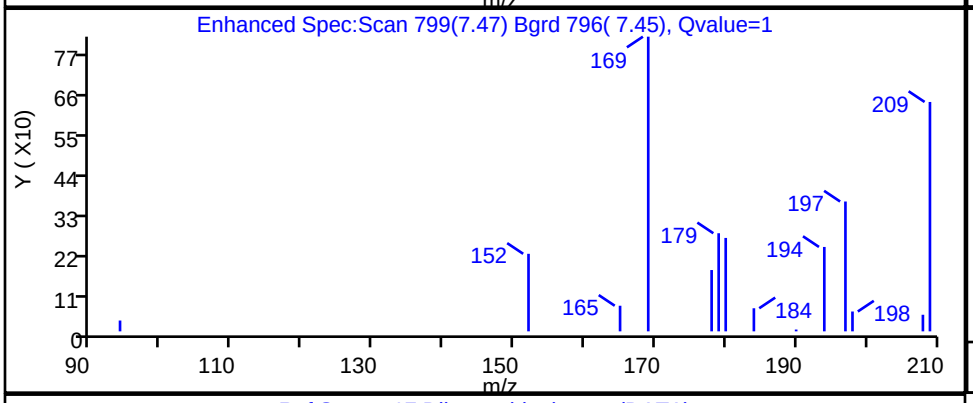
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D				
Injection Date:	29-Aug-2019 15:02:30	Instrument ID:	MP		
Lims ID:	MB 140-32772/1-A				
Client ID:					
Operator ID:	11211	ALS Bottle#:	1	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

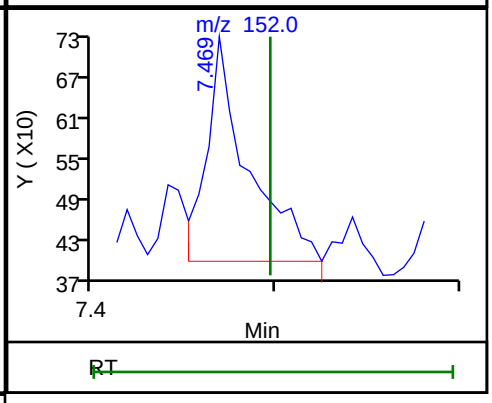
17 Dibenzothiophene, CAS: 132-65-0

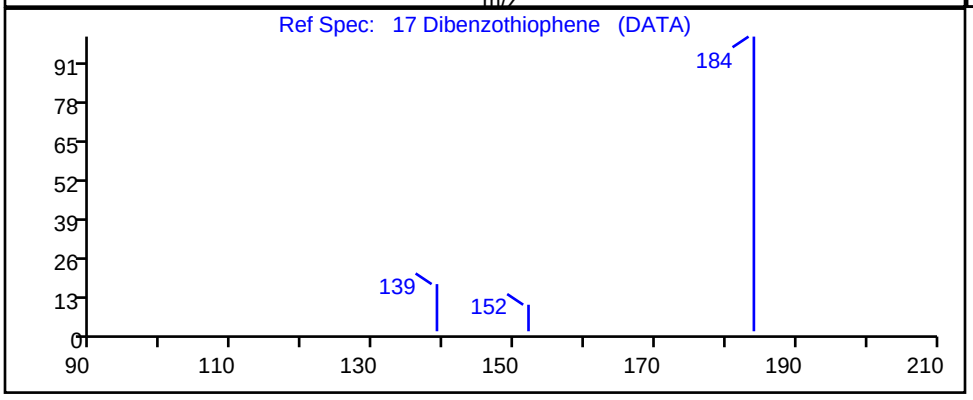
Processing Results











RT	Mass	Response	Amount
7.47	184.00	54	0.000121
7.47	152.00	531	

Reviewer: cochranj, 30-Aug-2019 09:12:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

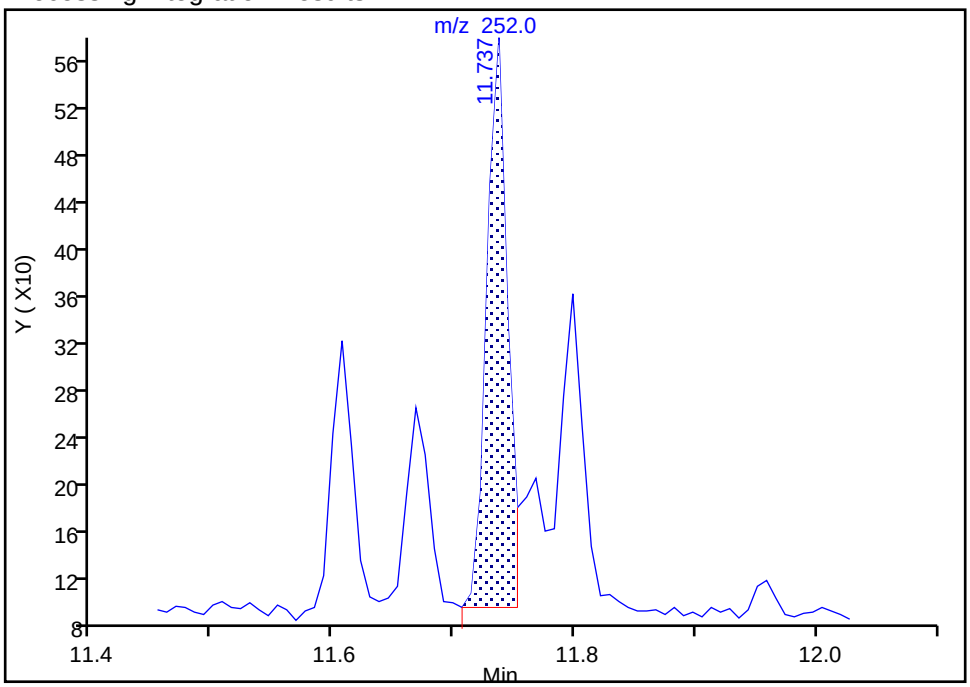
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\mb 140-32772-1-a.D				
Injection Date:	29-Aug-2019 15:02:30	Instrument ID:	MP		
Lims ID:	MB 140-32772/1-A				
Client ID:					
Operator ID:	11211	ALS Bottle#:	1	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

34 Perylene, CAS: 198-55-0

Signal: 1

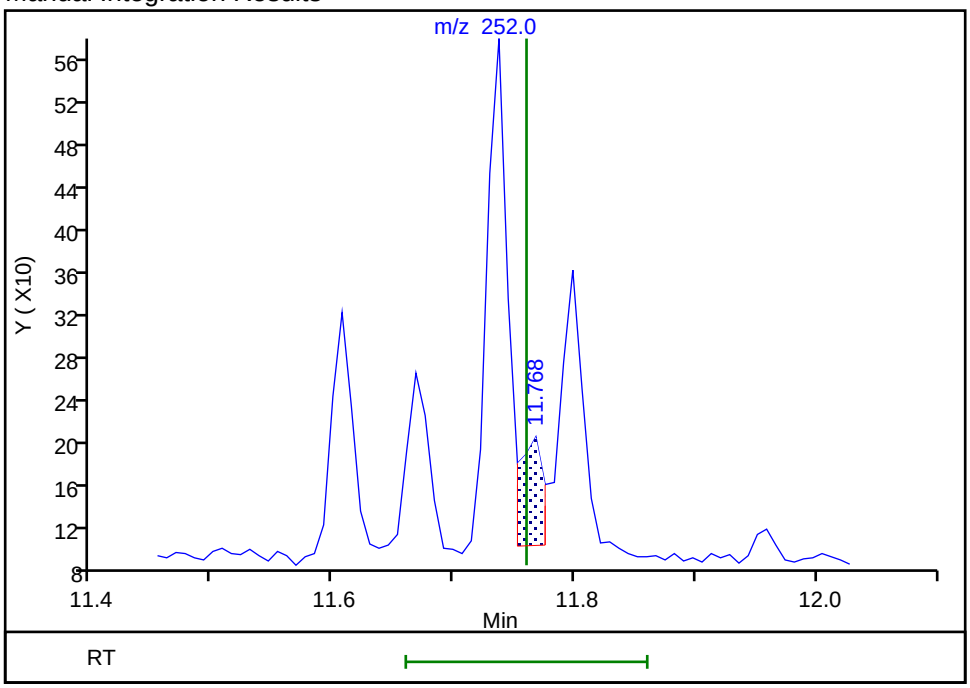
Processing Integration Results

RT: 11.74
Area: 586
Amount: 0.001382
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 149
Amount: 0.000351
Amount Units: ug/ml



Reviewer: cochranj, 29-Aug-2019 15:40:26

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-32772/2-A

Matrix: Solid Lab File ID: lcs 140-32772-2-a.D

Analysis Method: 8270D SIM Date Collected:

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 10(g) Date Analyzed: 08/29/2019 15:27

Con. Extract Vol.: 0.5(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	37.9		5.0	0.70
91-57-6	2-Methylnaphthalene	38.5		10	1.0
83-32-9	Acenaphthene	36.3		1.0	0.46
208-96-8	Acenaphthylene	33.1		1.0	0.25
120-12-7	Anthracene	33.1		1.0	0.81
56-55-3	Benzo[a]anthracene	43.3		1.0	0.40
50-32-8	Benzo[a]pyrene	36.5		1.0	0.36
205-99-2	Benzo[b]fluoranthene	40.1		1.0	0.51
192-97-2	Benzo[e]pyrene	37.7		1.0	0.34
191-24-2	Benzo[g,h,i]perylene	36.4		1.0	0.59
207-08-9	Benzo[k]fluoranthene	36.6		1.0	0.46
218-01-9	Chrysene	38.4		1.0	0.38
53-70-3	Dibenz(a,h)anthracene	38.2		1.0	0.57
132-65-0	Dibenzothiophene	35.0		1.0	0.34
206-44-0	Fluoranthene	42.0		1.0	0.91
86-73-7	Fluorene	36.6		1.0	0.48
193-39-5	Indeno[1,2,3-cd]pyrene	39.1		1.0	0.70
91-20-3	Naphthalene	37.2		20	1.8
198-55-0	Perylene	31.7		1.0	0.20
85-01-8	Phenanthrene	36.4		2.0	1.8
129-00-0	Pyrene	40.4		2.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	74		20-142
4165-60-0	Nitrobenzene-d5	78		20-121
1718-51-0	Terphenyl-d14	83		35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\lcs 140-32772-2-a.D
Lims ID: LCS 140-32772/2-A
Client ID:
Sample Type: LCS
Inject. Date: 29-Aug-2019 15:27:30 ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 140-0012890-010
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:01:00 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 29-Aug-2019 15:57:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 1 Nitrobenzene-d5	82	4.311	4.306	0.005	97	96749	1.00	0.7766	
2 cis-Decalin	138	4.460	4.455	0.005	98	49880	1.00	0.7112	
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	213389	0.5000	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	349319	1.00	0.7437	
5 Benzo(b)thiophene	134	4.943	4.936	0.007	100	283309	1.00	0.7177	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	236794	1.00	0.7695	
7 1-Methylnaphthalene	142	5.545	5.545	0.000	98	222424	1.00	0.7586	
$ 8 2-Fluorobiphenyl (Surr)	172	5.766	5.766	0.000	87	268138	1.00	0.7357	
9 1,1'-Biphenyl	154	5.849	5.849	0.000	99	288326	1.00	0.7104	
10 2,6-Dimethylnaphthalene	156	5.985	5.981	0.004	93	197565	1.00	0.7314	
11 Acenaphthylene	152	6.216	6.216	0.000	100	256573	1.00	0.6614	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	112706	0.5000	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	217765	1.00	0.7262	
14 Dibenzofuran	168	6.507	6.507	0.000	99	314424	1.00	0.6960	
15 2,3,5-Trimethylnaphthalene	170	6.682	6.678	0.004	88	185710	1.00	0.7752	
16 Fluorene	166	6.793	6.793	0.000	100	242814	1.00	0.7320	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	327570	1.00	0.6990	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	100	196330	0.5000	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	367717	1.00	0.7272	
20 Anthracene	178	7.648	7.648	0.000	100	279446	1.00	0.6626	
21 1-Methylphenanthrene	192	8.148	8.148	0.000	100	263937	1.00	0.7971	
22 Fluoranthene	202	8.687	8.687	0.000	99	413530	1.00	0.8409	
23 Pyrene	202	8.909	8.906	0.003	99	431752	1.00	0.8078	
$ 24 Terphenyl-d14	244	9.045	9.042	0.003	100	240705	1.00	0.8333	
25 Naphthobenzothiophene	234	9.873	9.873	0.000	100	254587	1.00	0.8147	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	97	363931	1.00	0.8665	
* 27 Chrysene-d12	240	10.137	10.129	0.008	70	176624	0.5000	0.5000	
28 Chrysene	228	10.161	10.161	0.000	100	385372	1.00	0.7673	
29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	402728	1.00	0.8021	
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	416582	1.00	0.7316	
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	355174	1.00	0.7533	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
32 Benzo[a]pyrene	252	11.660	11.660	0.000	100	315714	1.00	0.7309	
* 33 Perylene-d12	264	11.729	11.729	0.000	100	183878	0.5000	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	308868	1.00	0.6332	
35 Indeno[1,2,3-cd]pyrene	276	13.151	13.150	0.001	97	415633	1.00	0.7826	
36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	89	344461	1.00	0.7641	
37 Benzo[g,h,i]perylene	276	13.509	13.508	0.001	99	362193	1.00	0.7287	

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

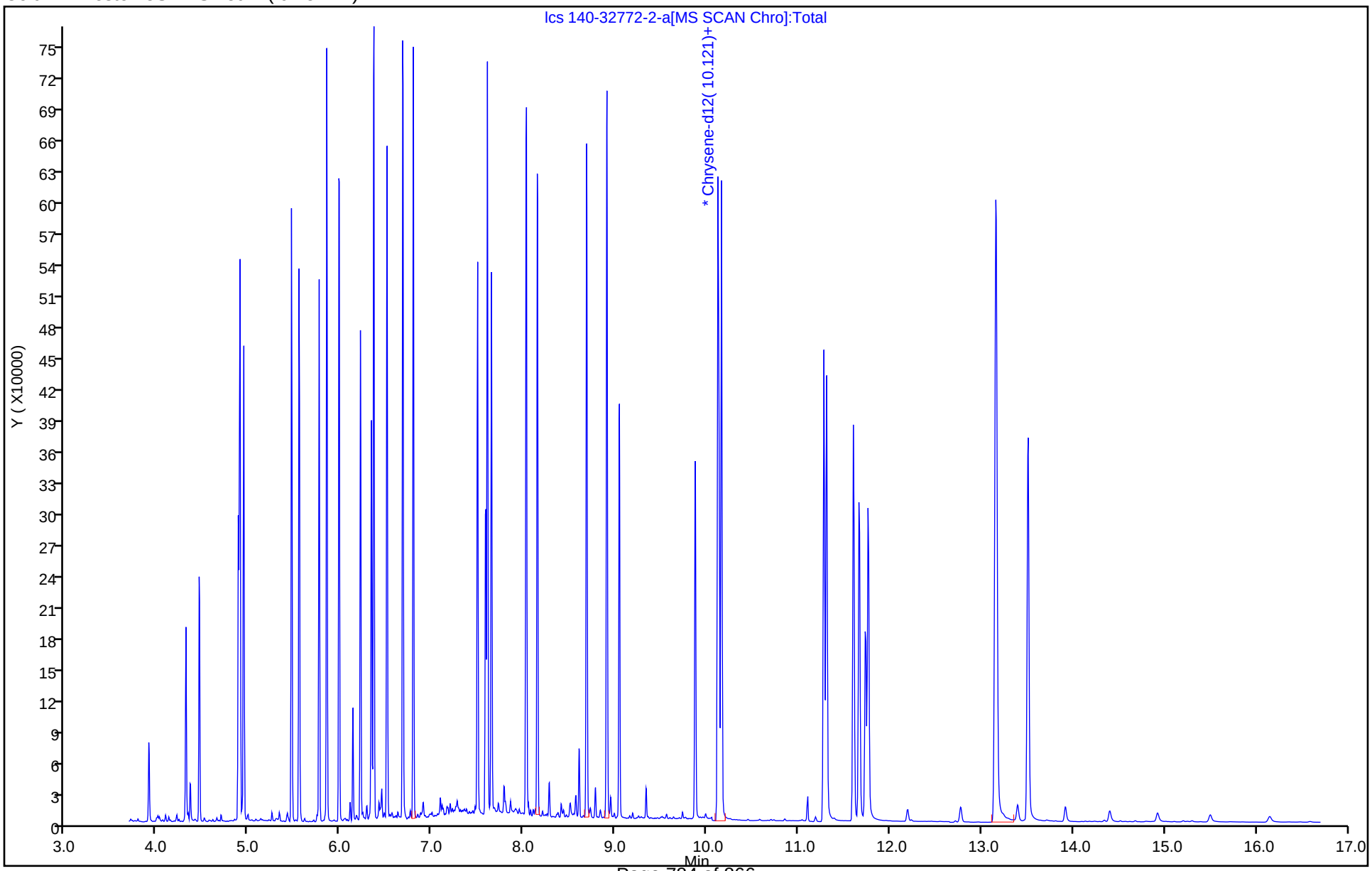
Report Date: 31-Aug-2019 11:01:14 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\lcs 140-32772-2-a.D

Injection Date:	29-Aug-2019 15:27:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	LCS 140-32772/2-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



Eurofins TestAmerica, Knoxville
Recovery Report

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\lcs 140-32772-2-a.D				
Lims ID:	LCS 140-32772/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	29-Aug-2019 15:27:30	ALS Bottle#:	2	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	140-0012890-010				
Misc. Info.:	P082919(8270)				
Operator ID:	11211	Instrument ID:	MP		
Method:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m				
Limit Group:	MSS - 8270D_SIM ICAL				
Last Update:	31-Aug-2019 11:01:00	Calib Date:	21-Jul-2019 14:26:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D				
Column 1 :	Restek-5Sil MS 25um (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0318				

First Level Reviewer: cochranj Date: 29-Aug-2019 15:57:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 1 Nitrobenzene-d5	1.00	0.7766	77.66
$ 8 2-Fluorobiphenyl (Surr)	1.00	0.7357	73.57
$ 24 Terphenyl-d14	1.00	0.8333	83.33

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 MS Lab Sample ID: 580-87761-21 MS

Matrix: Solid Lab File ID: 580-87761-b-21-b ms.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.05(g) Date Analyzed: 08/29/2019 20:05

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	172		150	21
91-57-6	2-Methylnaphthalene	277	J	310	31
83-32-9	Acenaphthene	1140		31	14
208-96-8	Acenaphthylene	160		31	7.6
120-12-7	Anthracene	415		31	25
56-55-3	Benzo[a]anthracene	969		31	12
50-32-8	Benzo[a]pyrene	1120		31	11
205-99-2	Benzo[b]fluoranthene	1050		31	16
192-97-2	Benzo[e]pyrene	673		31	10
191-24-2	Benzo[g,h,i]perylene	852		31	18
207-08-9	Benzo[k]fluoranthene	363		31	14
STL00905	C1-Chrysenes	ND		31	7.9
STL00909	C1-Dibenzothiophenes	ND		31	20
STL00912	C1-Fluoranthenes/pyrene	ND		31	16
STL00913	C1-Fluorenes	ND		31	17
STL00916	C1-Naphthalenes	ND		310	24
STL00901	C1-Phenanthrenes/Anthracenes	ND		61	34
STL00906	C2-Chrysenes	ND		31	9.5
STL00910	C2-Dibenzothiophenes	ND		31	28
STL00968	C2-Fluoranthenes/Pyrene	ND		31	14
STL00914	C2-Fluorenes	ND		61	37
STL00917	C2-Naphthalenes	ND		61	23
STL00902	C2-Phenanthrenes/Anthracenes	ND		120	75
STL00907	C3-Chrysenes	ND		31	9.2
STL00911	C3-Dibenzothiophenes	ND		61	34
STL00969	C3-Fluoranthenes/Pyrene	ND		31	17
STL00915	C3-Fluorenes	ND		61	33
STL00918	C3-Naphthalenes	ND		61	30
STL00903	C3-Phenanthrenes/Anthracenes	ND		61	48
STL00908	C4-Chrysenes	ND		31	10
STL00967	C4-Dibenzothiophenes	ND		31	29
STL01791	C4-Fluoranthenes/Pyrene	ND		31	12
STL00919	C4-Naphthalenes	ND		120	63
STL00904	C4-Phenanthrenes/Anthracenes	ND		61	57

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 MS Lab Sample ID: 580-87761-21 MS

Matrix: Solid Lab File ID: 580-87761-b-21-b ms.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.05(g) Date Analyzed: 08/29/2019 20:05

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	1060		31	12
53-70-3	Dibenz(a,h)anthracene	135		31	17
132-65-0	Dibenzothiophene	497		31	10
206-44-0	Fluoranthene	3240		31	28
86-73-7	Fluorene	701		31	15
193-39-5	Indeno[1,2,3-cd]pyrene	632		31	21
91-20-3	Naphthalene	551	J	610	56
198-55-0	Perylene	310		31	6.1
85-01-8	Phenanthrene	3360		61	54
129-00-0	Pyrene	3190		61	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D
Lims ID: 580-87761-B-21-B MS
Client ID: 22T-SG-04_20190718
Sample Type: MS
Inject. Date: 29-Aug-2019 20:05:30 ALS Bottle#: 13 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-021
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 03-Sep-2019 18:02:38 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0340

First Level Reviewer: cochranj Date: 03-Sep-2019 18:02:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 cis-Decalin	138	4.460	4.455	0.005	93	1740	0.0333	0.0252	M
* 3 Naphthalene-d8	136	4.882	4.882	0.000	95	210421	0.0167	0.5000	
4 Naphthalene	128	4.902	4.896	0.006	93	167047	0.0333	0.3607	
5 Benzo(b)thiophene	134	4.943	4.936	0.007	100	13957	0.0333	0.0359	
6 2-Methylnaphthalene	142	5.463	5.463	0.000	97	54971	0.0333	0.1812	
7 1-Methylnaphthalene	142	5.551	5.545	0.006	98	32502	0.0333	0.1124	
9 1,1'-Biphenyl	154	5.849	5.849	0.000	99	28069	0.0333	0.0702	
10 2,6-Dimethylnaphthalene	156	5.985	5.981	0.004	98	33058	0.0333	0.1243	
11 Acenaphthylene	152	6.216	6.216	0.000	99	39945	0.0333	0.1046	
* 12 Acenaphthene-d10	164	6.337	6.337	0.000	99	110988	0.0167	0.5000	
13 Acenaphthene	153	6.364	6.360	0.004	100	220406	0.0333	0.7463	
14 Dibenzofuran	168	6.507	6.507	0.000	87	27798	0.0333	0.0625	
15 2,3,5-Trimethylnaphthalene	170	6.682	6.678	0.004	85	48623	0.0333	0.2061	
16 Fluorene	166	6.796	6.793	0.003	100	149829	0.0333	0.4587	
17 Dibenzothiophene	184	7.497	7.497	0.000	100	153493	0.0333	0.3253	
* 18 Phenanthrene-d10	188	7.586	7.581	0.005	98	197703	0.0167	0.5000	
19 Phenanthrene	178	7.603	7.603	0.000	100	1118754	0.0333	2.20	
20 Anthracene	178	7.648	7.648	0.000	99	115408	0.0333	0.2717	
21 1-Methylphenanthrene	192	8.151	8.148	0.003	96	89156	0.0333	0.2674	
22 Fluoranthene	202	8.690	8.687	0.003	100	1049086	0.0333	2.12	
23 Pyrene	202	8.909	8.906	0.003	99	1157006	0.0333	2.09	
25 Naphthobenzothiophene	234	9.873	9.873	0.000	100	72650	0.0333	0.2241	
26 Benzo[a]anthracene	228	10.121	10.121	0.000	63	276264	0.0333	0.6340	
* 27 Chrysene-d12	240	10.137	10.129	0.008	77	183259	0.0167	0.5000	
28 Chrysene	228	10.161	10.161	0.000	99	359852	0.0333	0.6906	
29 Benzo[b]fluoranthene	252	11.278	11.286	0.000	100	367036	0.0333	0.6867	
30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	100	144054	0.0333	0.2376	Ma
31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	221107	0.0333	0.4405	
32 Benzo[a]pyrene	252	11.668	11.668	0.008	100	336112	0.0333	0.7309	a
* 33 Perylene-d12	264	11.737	11.729	0.008	100	195761	0.0167	0.5000	
34 Perylene	252	11.760	11.760	0.000	100	105360	0.0333	0.2029	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
35 Indeno[1,2,3-cd]pyrene	276	13.151	13.150	0.001	86	233958	0.0333	0.4138	
36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	45	42430	0.0333	0.0884	
37 Benzo[g,h,i]perylene	276	13.509	13.508	0.001	99	294955	0.0333	0.5574	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

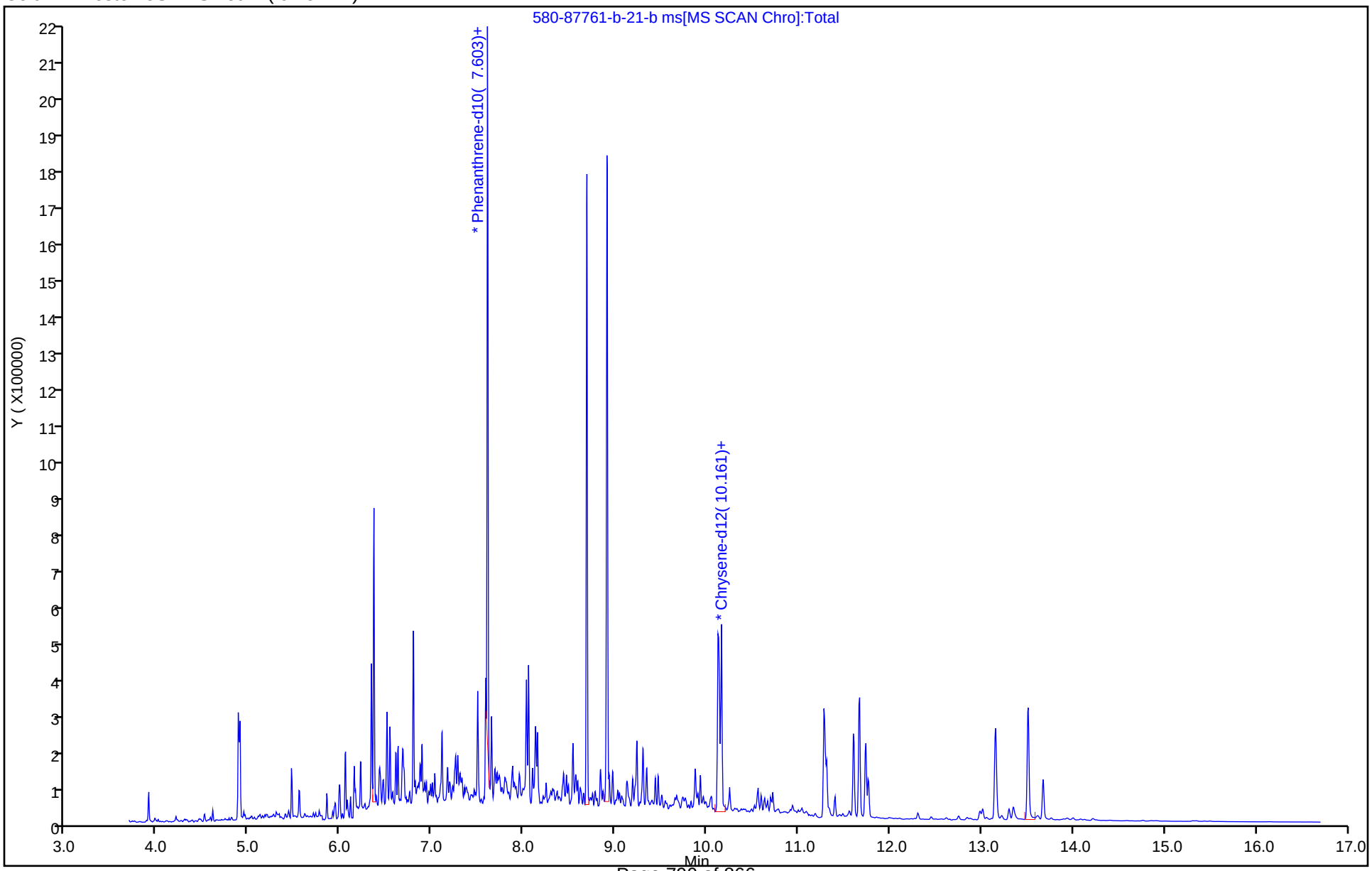
Report Date: 03-Sep-2019 18:02:57 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D

Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-21-B MS			Worklist Smp#:	21
Client ID:	22T-SG-04_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	13
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



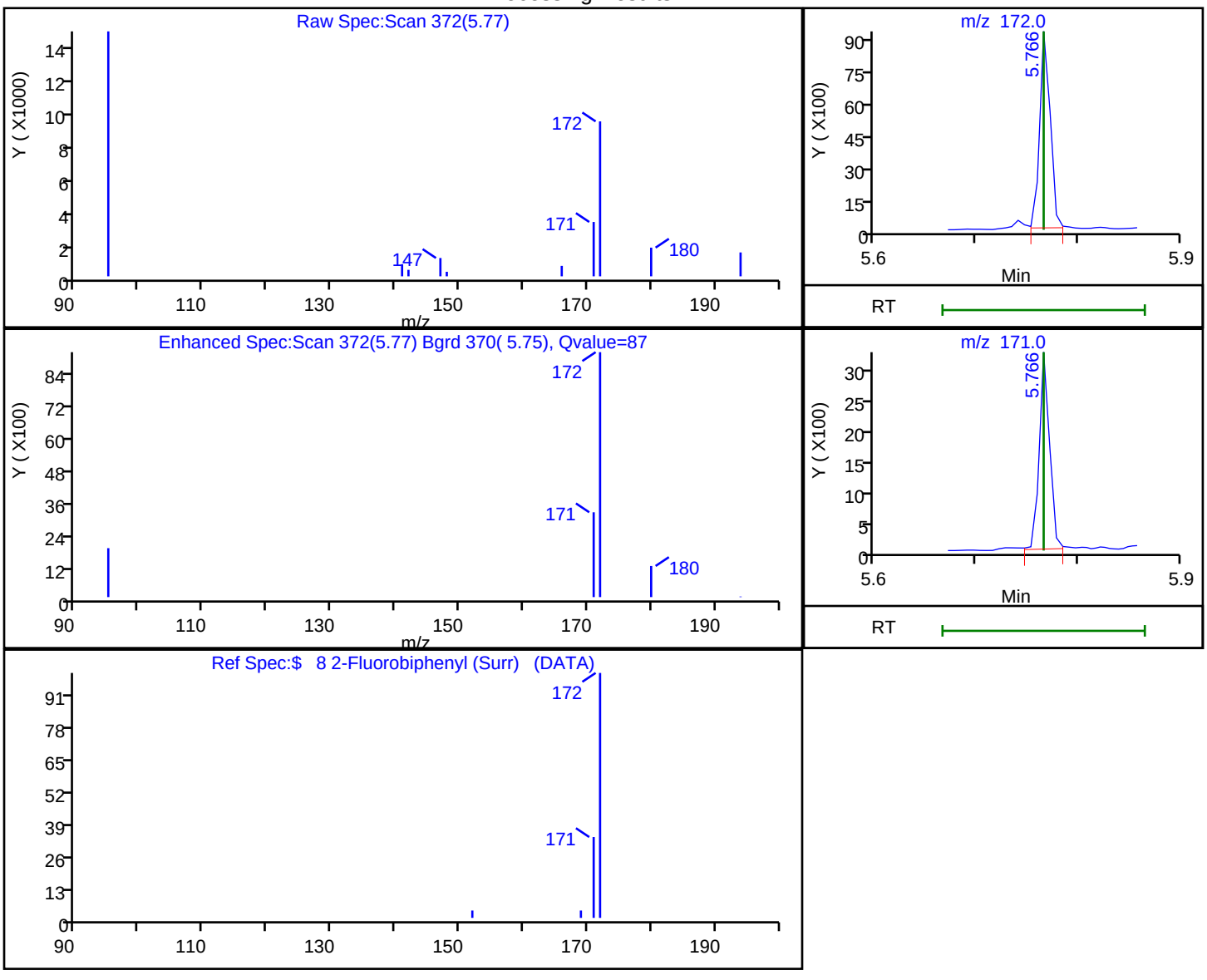
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	6670	0.018585
5.77	171.00	2259	

Reviewer: cochranj, 31-Aug-2019 10:58:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

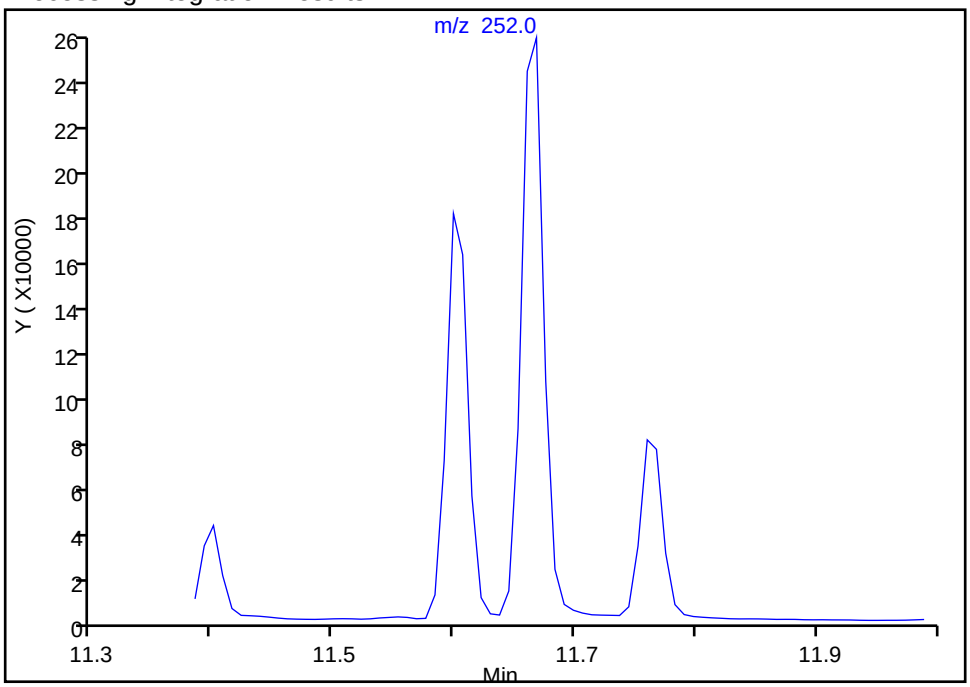
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

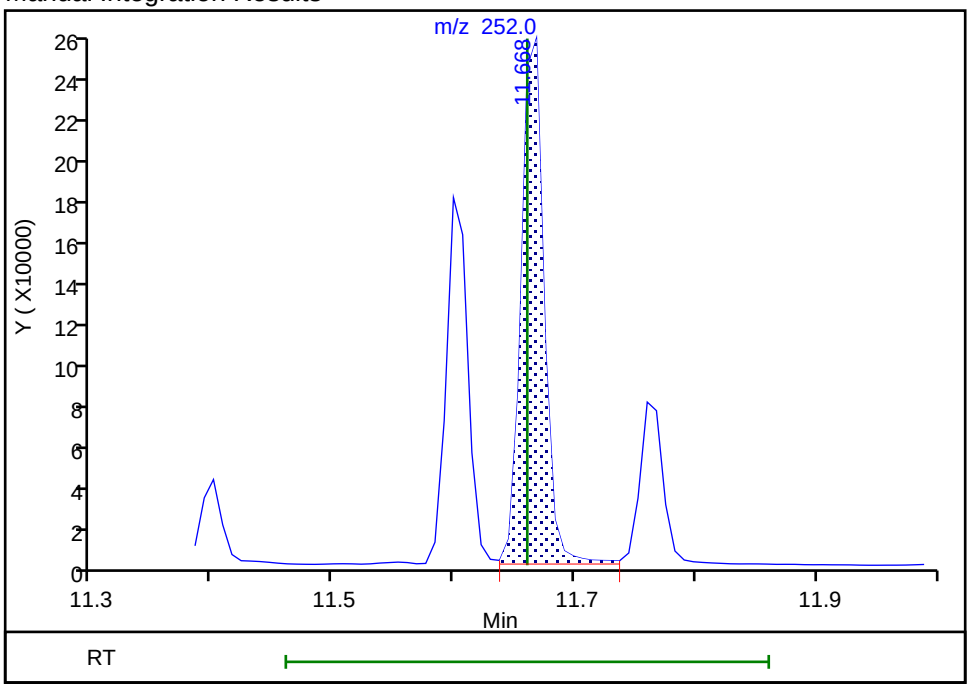
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 336112
Amount: 0.730896
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:31:29
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

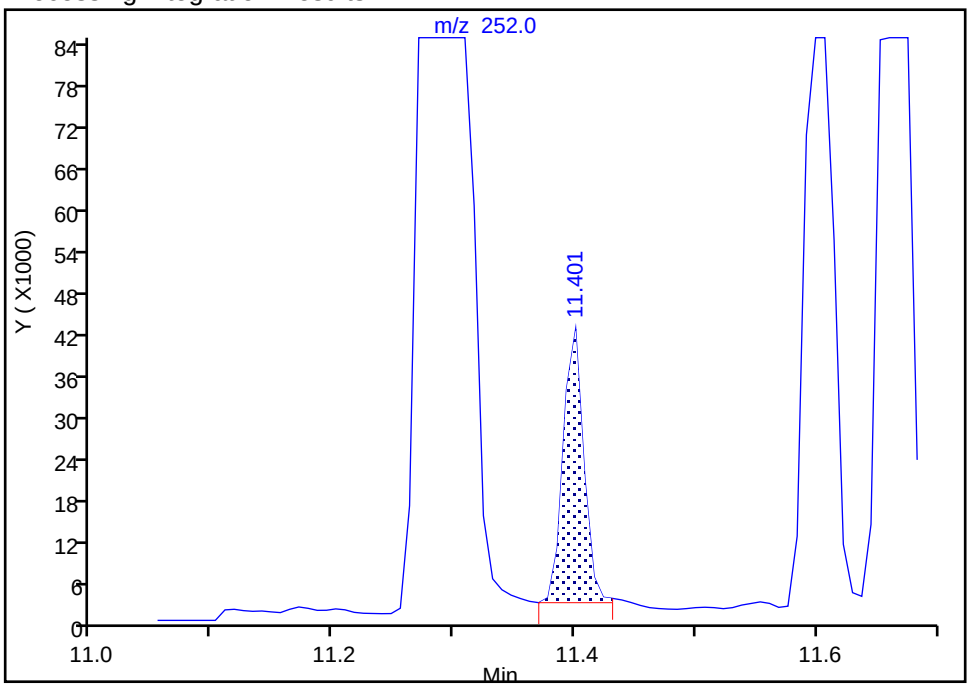
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

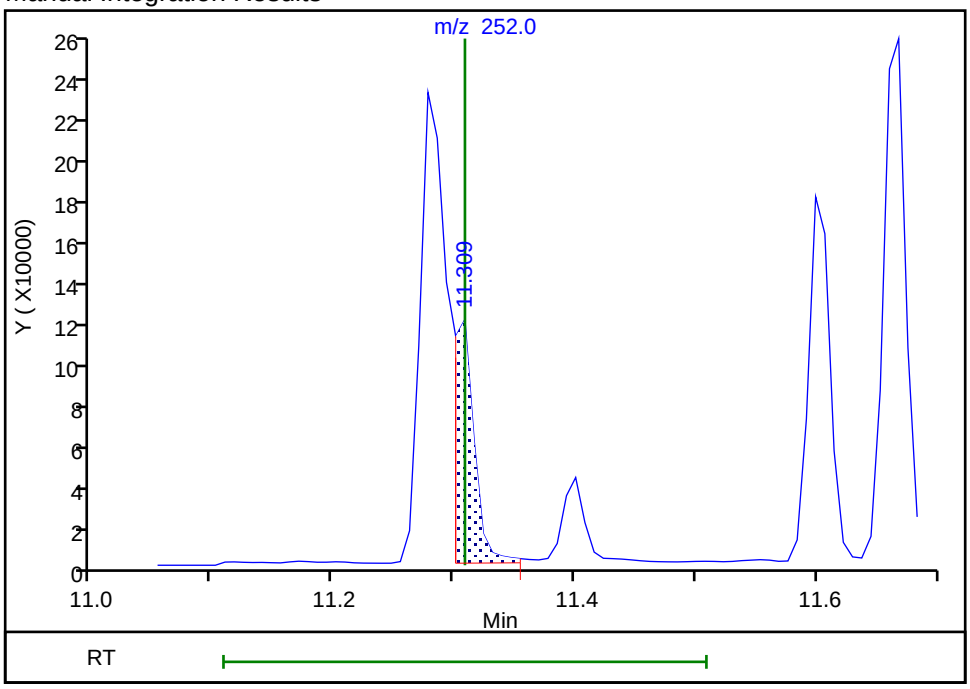
Processing Integration Results

RT: 11.40
Area: 47198
Amount: 0.077859
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 144054
Amount: 0.237636
Amount Units: ug/ml



Reviewer: cochranj, 03-Sep-2019 18:02:31

Audit Action: Manually Integrated Audit Reason: Missed Peak

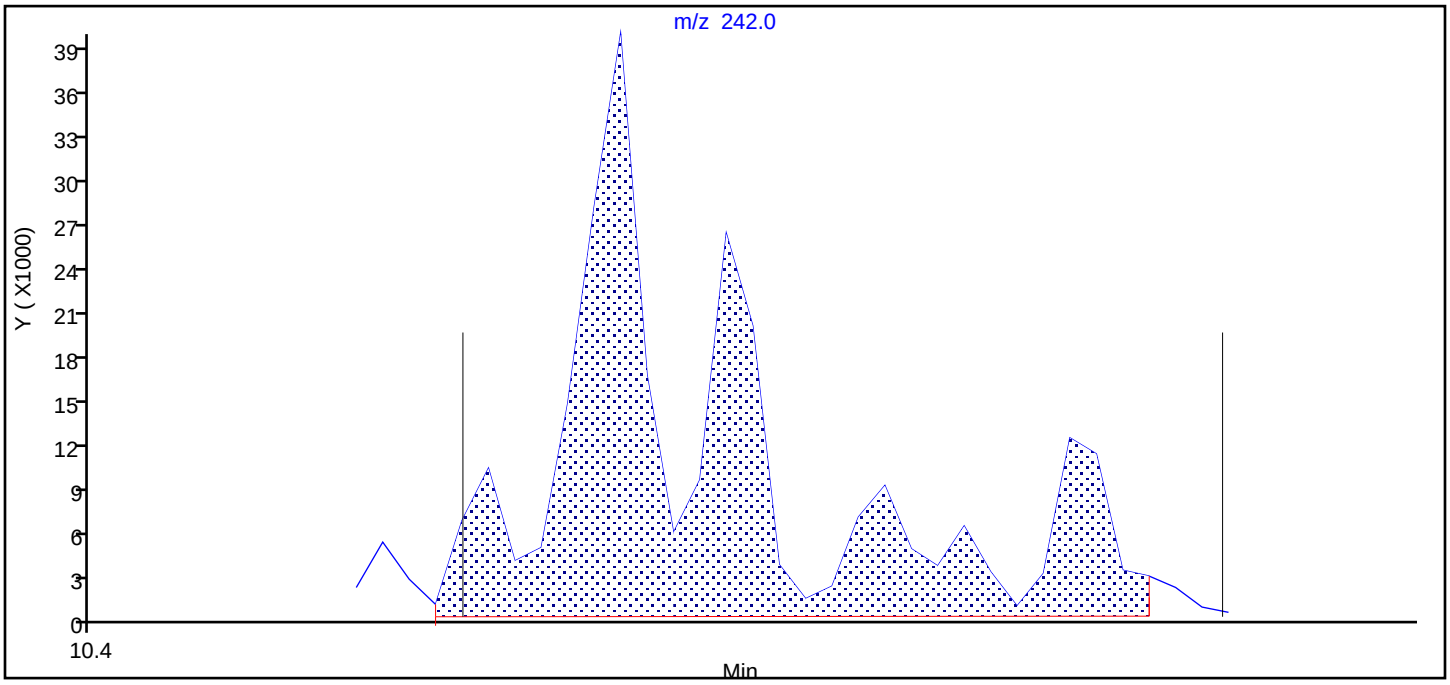
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Processing Results



Exp RT	RT	Response	Amount
10.63	10.61	120400	0.231047
10.63	10.62	42786	0

Reviewer: cochranj, 30-Aug-2019 11:33:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

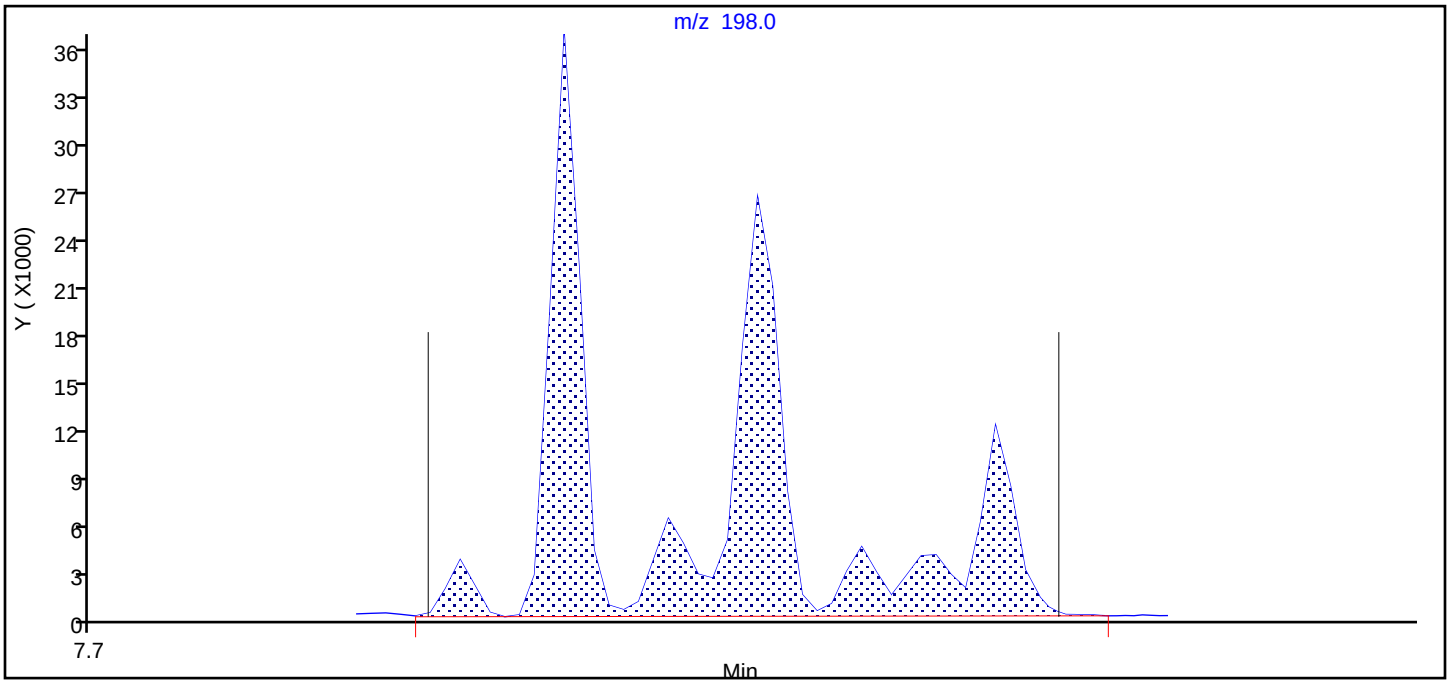
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Processing Results



Exp RT	RT	Response	Amount
7.95	7.95	82703	0.175262
7.95	7.96	60422	0

Reviewer: cochranj, 30-Aug-2019 11:32:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

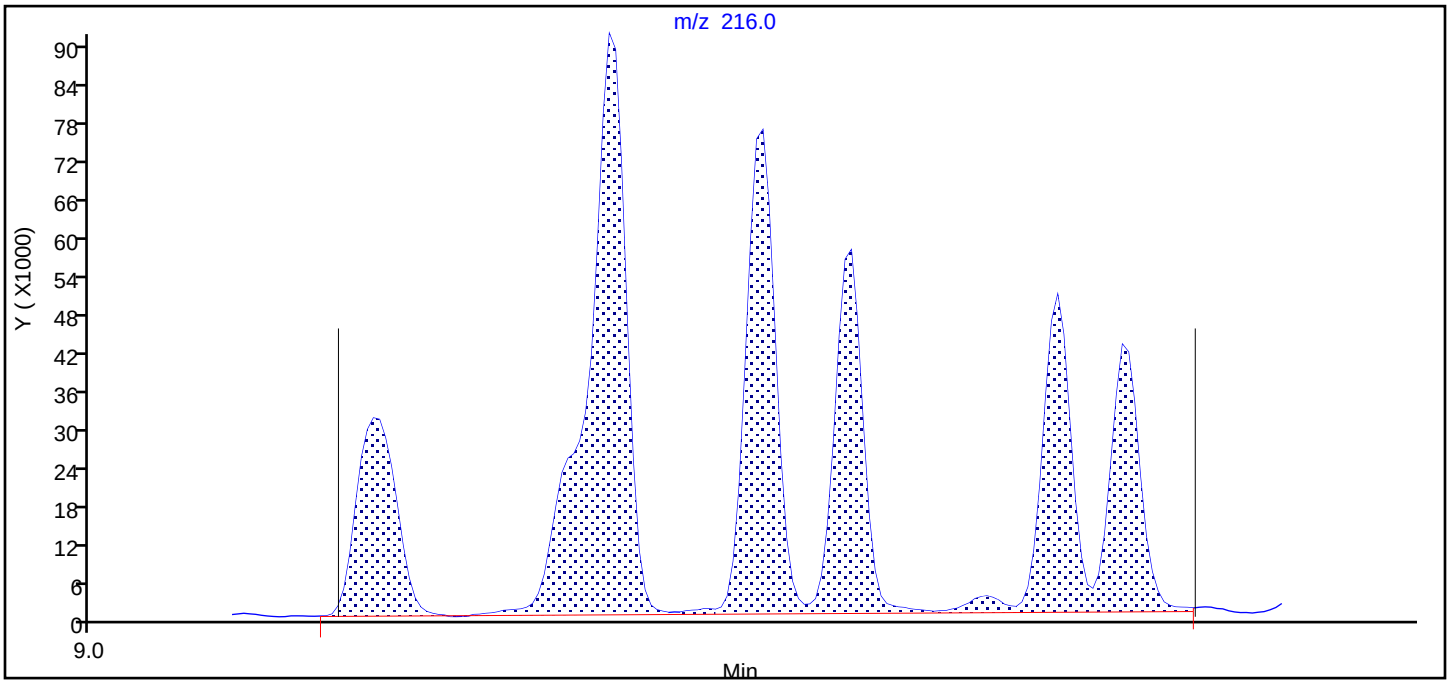
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Processing Results



Exp RT	RT	Response	Amount
9.31	9.30	351445	0.633708
9.31	9.30	270758	0

Reviewer: cochranj, 30-Aug-2019 11:33:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

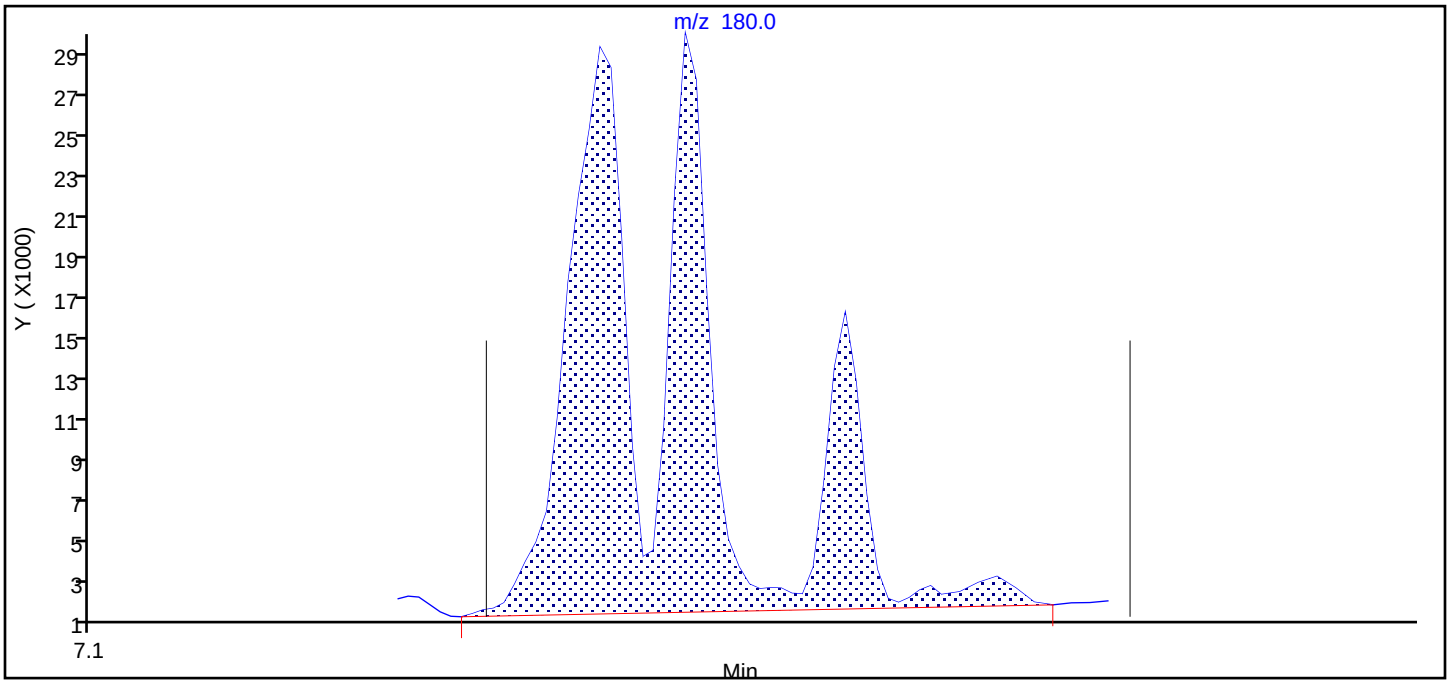
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Processing Results



Exp RT	RT	Response	Amount
7.32	7.30	66623	0.203958
7.32	7.31	128472	0

Reviewer: cochranj, 30-Aug-2019 11:32:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

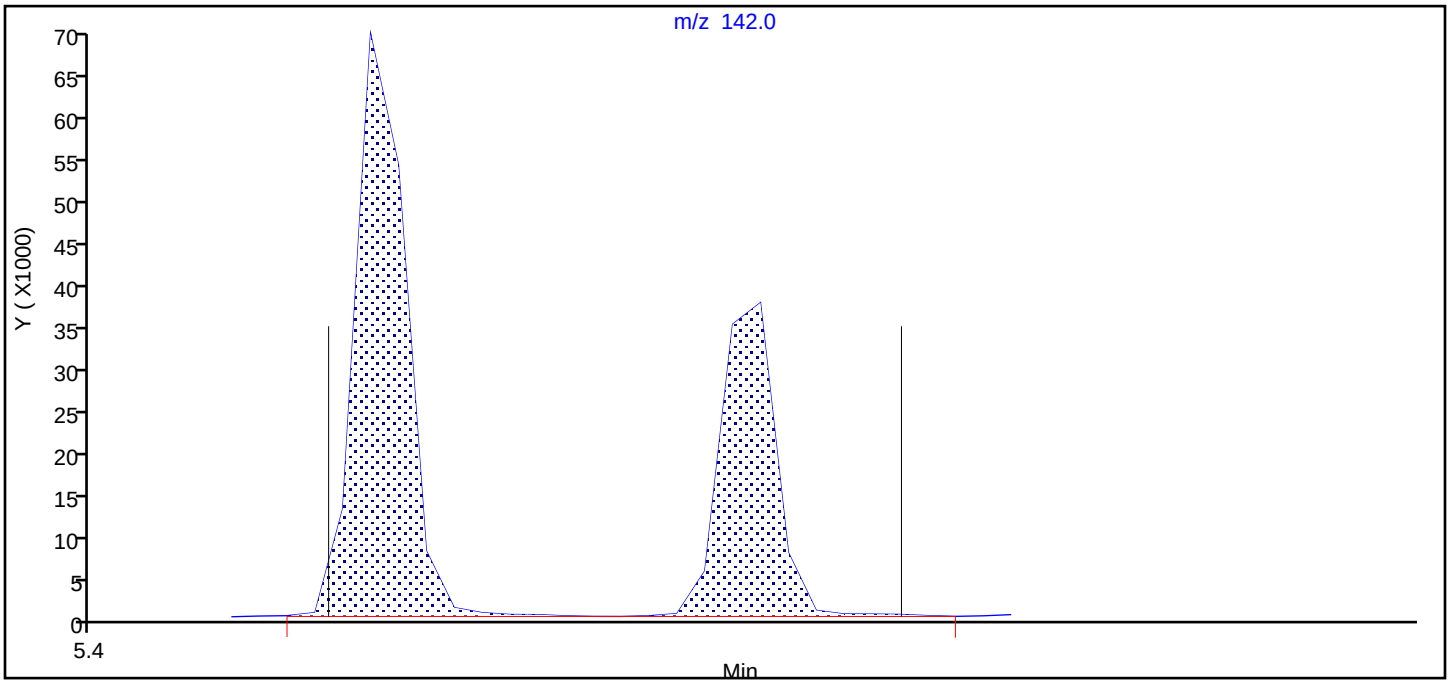
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Processing Results



Exp RT	RT	Response	Amount
5.52	5.52	87649	0.189249
5.52	5.52	77200	0

Reviewer: cochranj, 30-Aug-2019 11:32:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

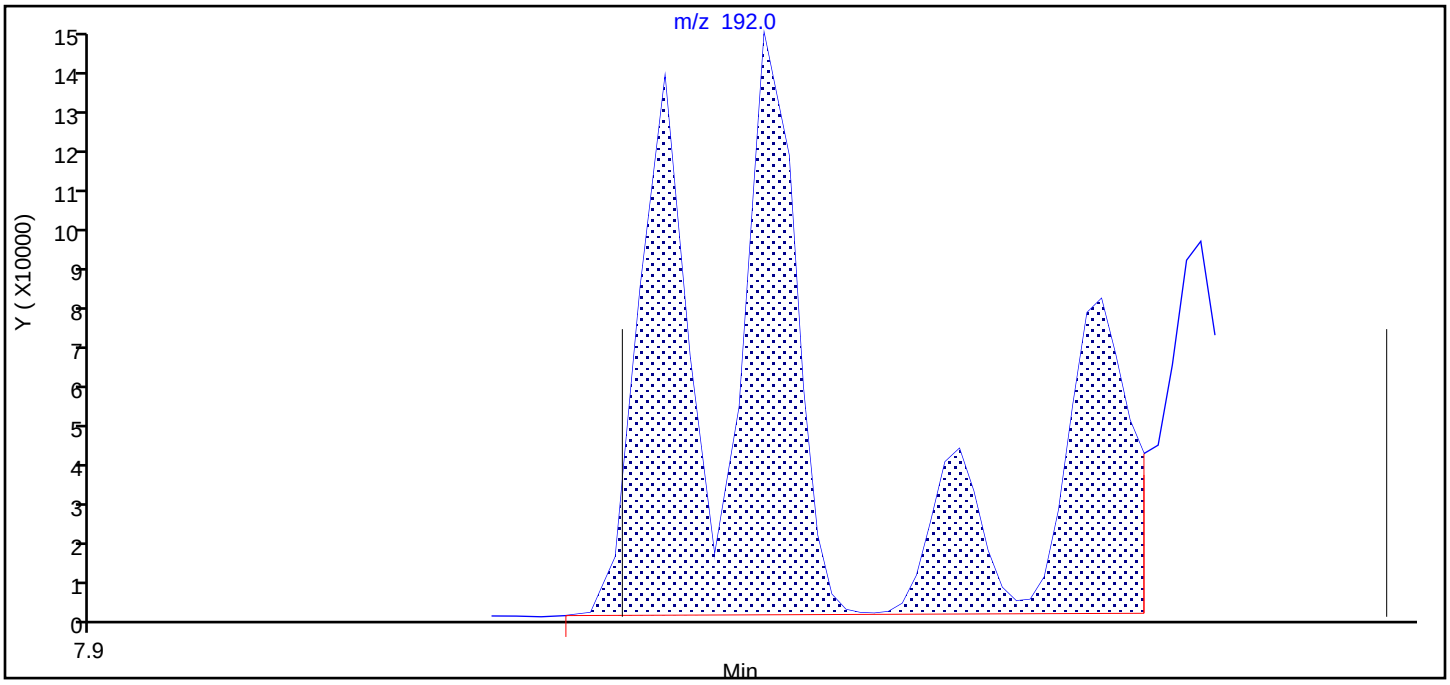
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Processing Results



Exp RT	RT	Response	Amount
8.11	8.07	326352	0.640882
8.11	8.10	241506	0

Reviewer: cochranj, 30-Aug-2019 11:32:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

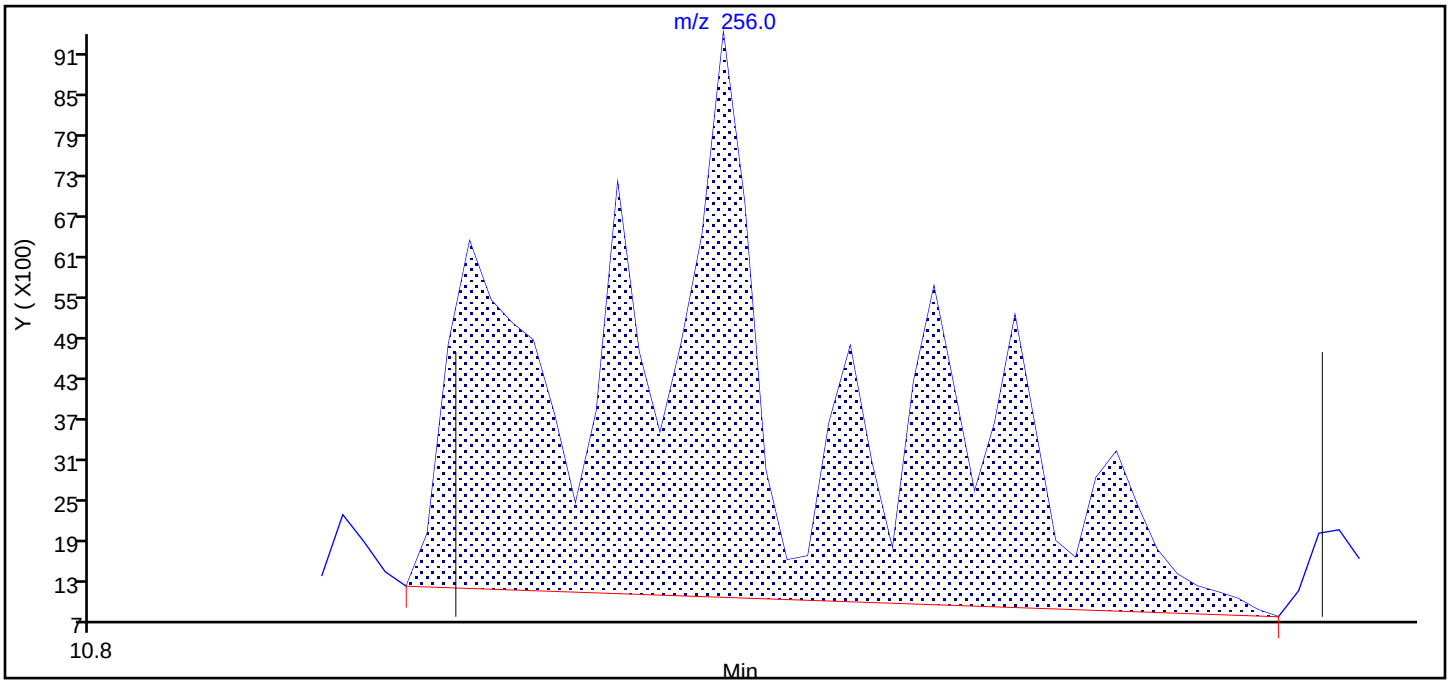
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Processing Results



Exp RT	RT	Response	Amount
11.10	11.08	50716	0.097324
11.10	11.12	8860	0

Reviewer: cochranj, 30-Aug-2019 11:33:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

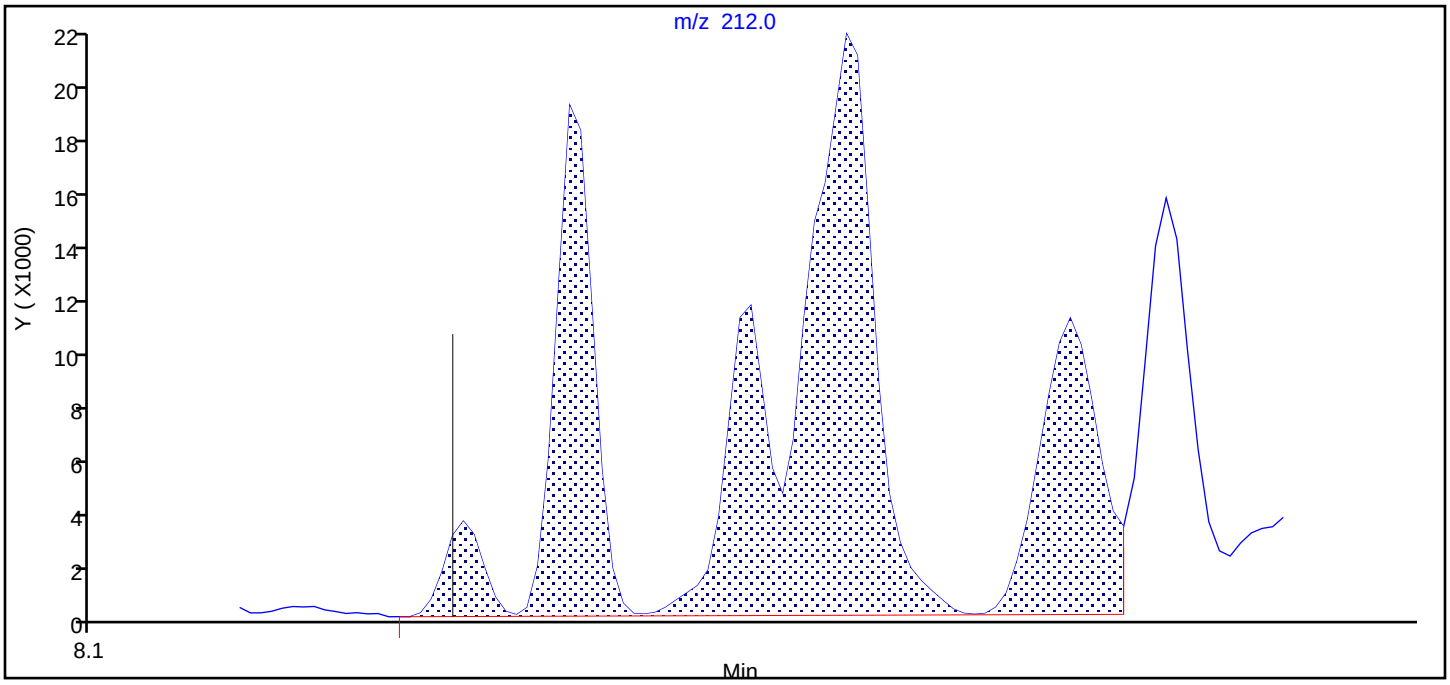
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Processing Results



Exp RT	RT	Response	Amount
8.46	8.30	66736	0.141425
8.46	8.58	89491	0

Reviewer: cochranj, 30-Aug-2019 11:32:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

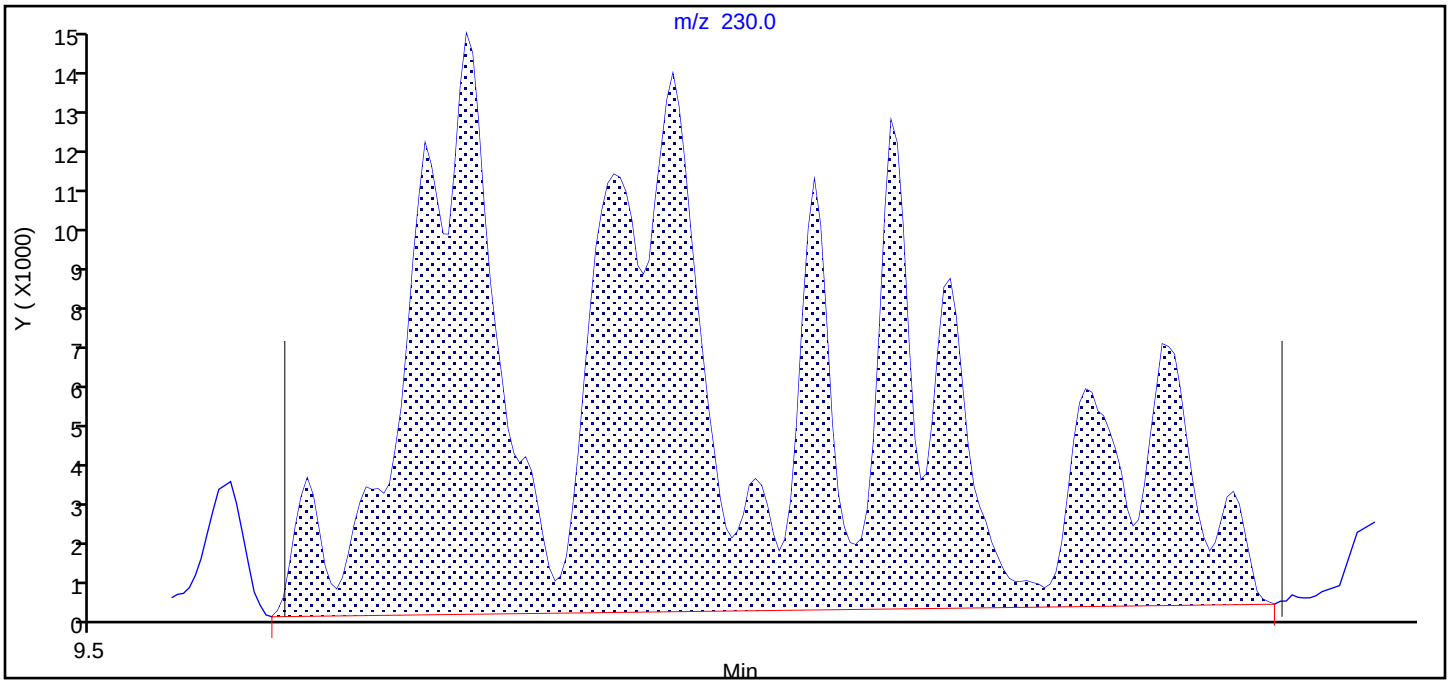
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Processing Results



Exp RT	RT	Response	Amount
9.81	9.81	128660	0.231993
9.81	9.81	81162	0

Reviewer: cochranj, 30-Aug-2019 11:33:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

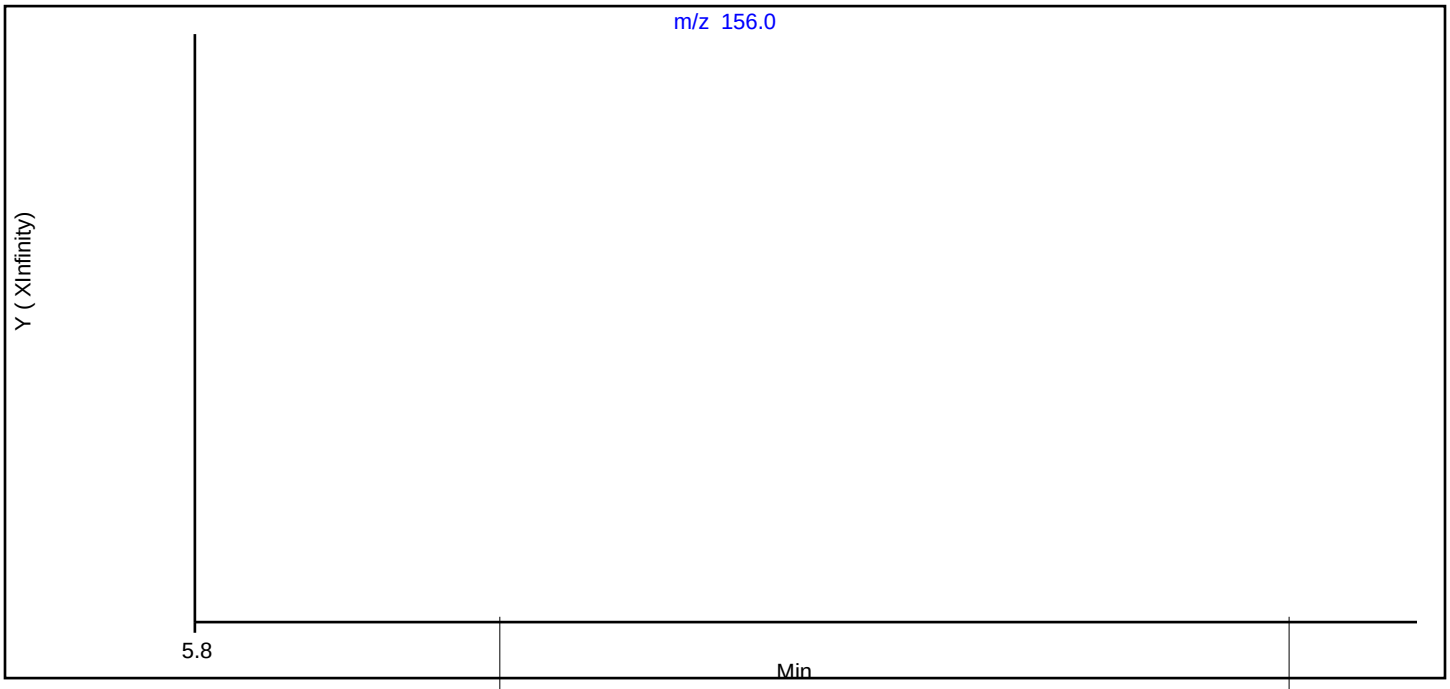
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

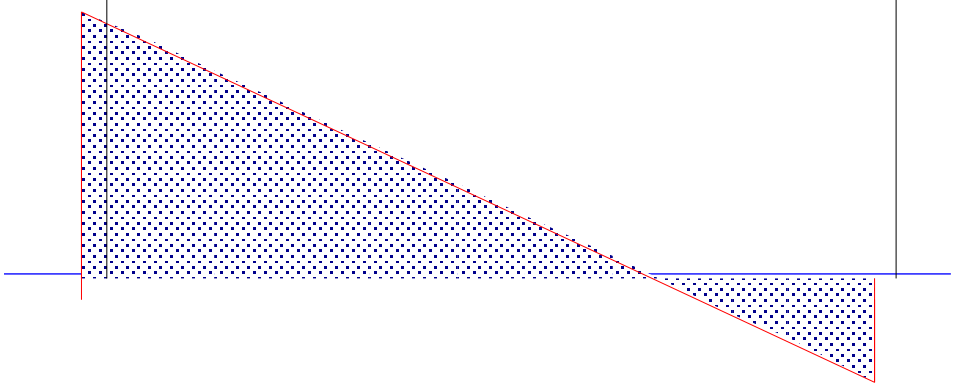
Processing Results



Exp RT	RT	Response	Amount
6.09	6.08	175326	0.378558
6.09	6.08	206995	0

Reviewer: cochranj, 30-Aug-2019 11:32:47

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID



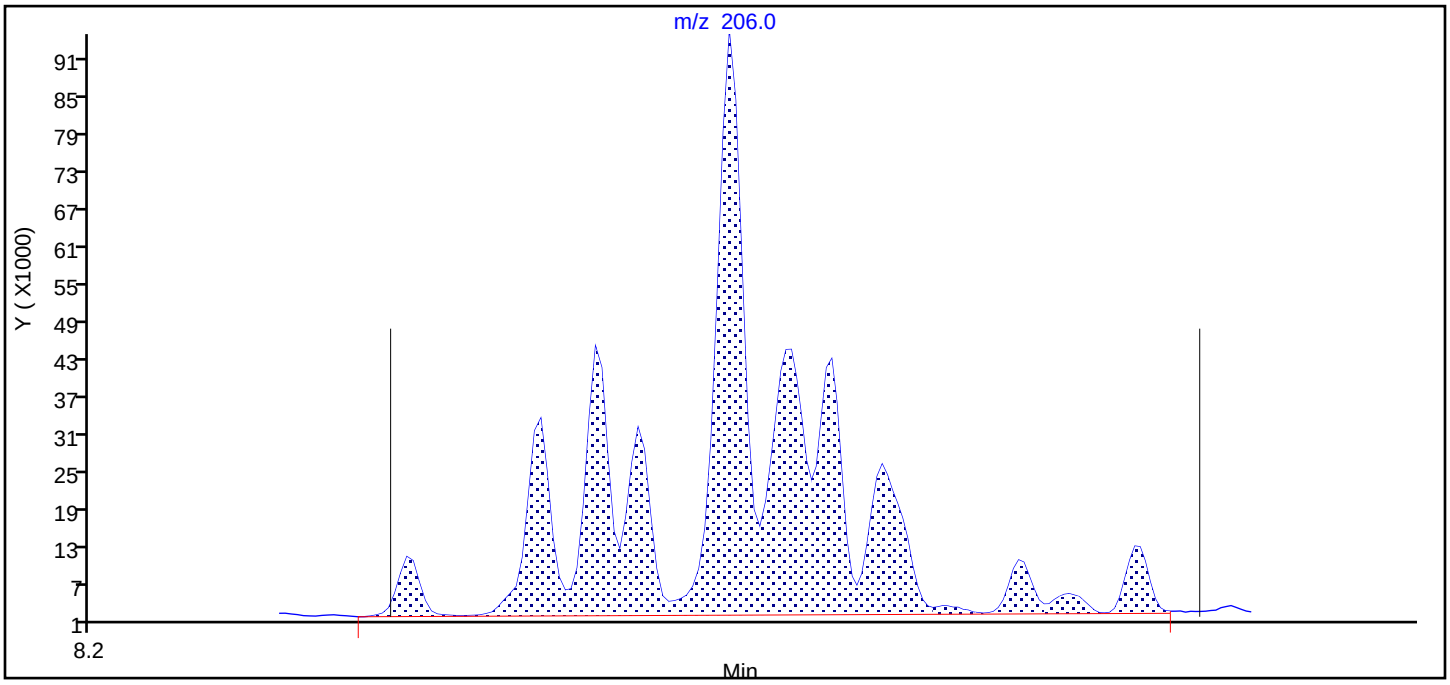
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Processing Results



Exp RT	RT	Response	Amount
8.57	8.56	323326	0.634940
8.57	8.56	187552	0

Reviewer: cochranj, 30-Aug-2019 11:33:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

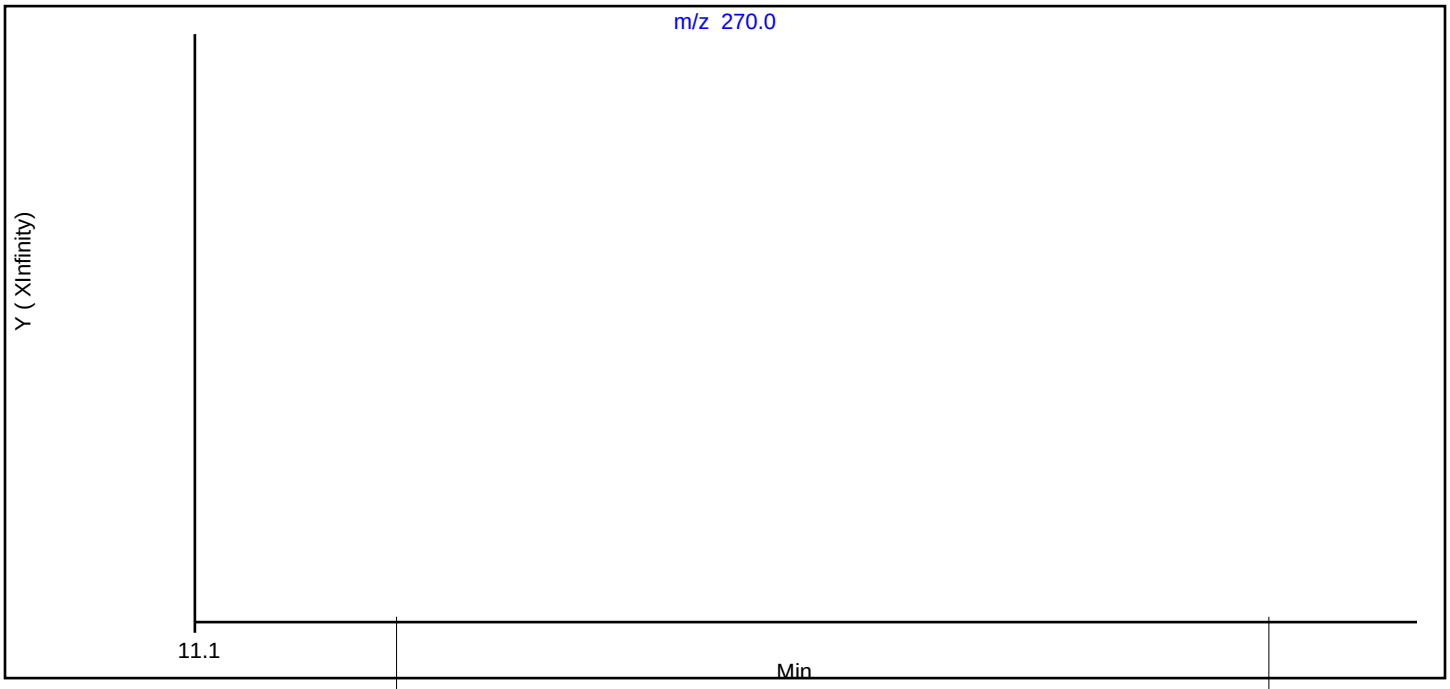
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

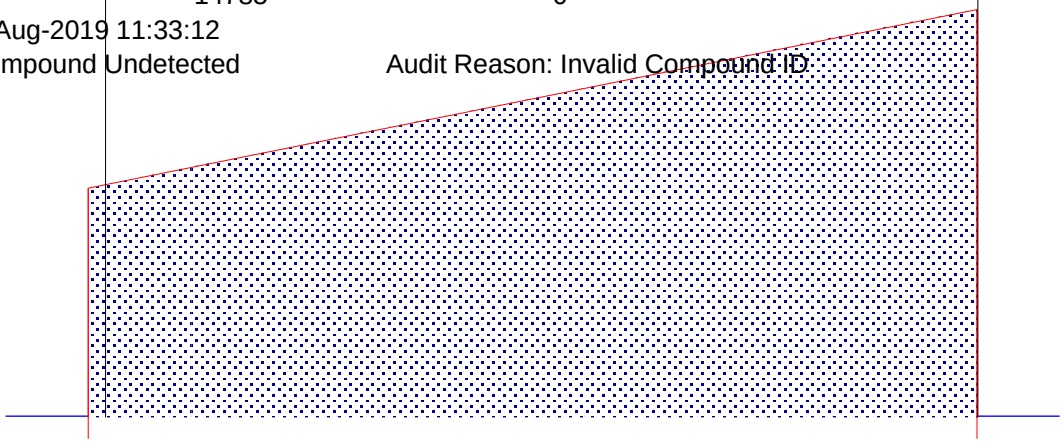
Processing Results



Exp RT	RT	Response	Amount
11.57	11.56	28791	0.055250
11.57	11.57	14785	0

Reviewer: cochranj, 30-Aug-2019 11:33:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID



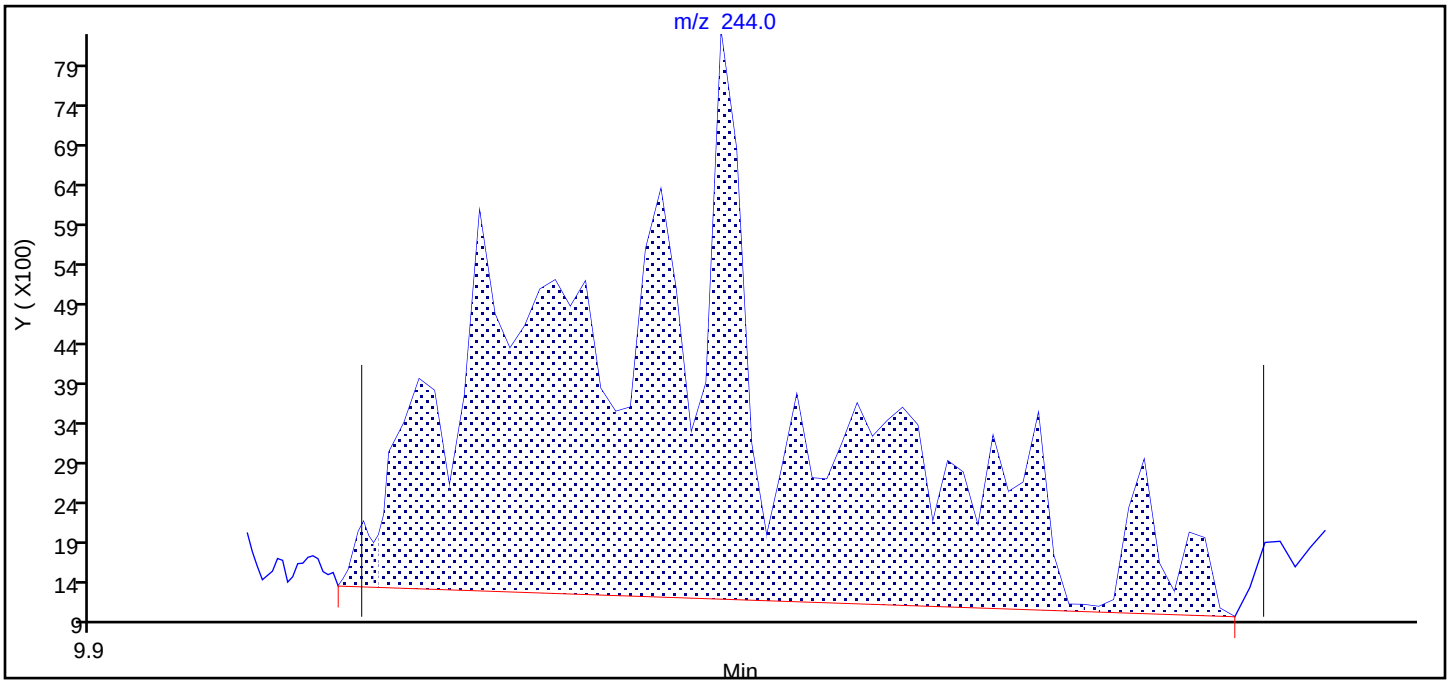
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Processing Results



Exp RT	RT	Response	Amount
10.28	10.27	60315	0.108757
10.28	10.26	170519	0

Reviewer: cochranj, 30-Aug-2019 11:33:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

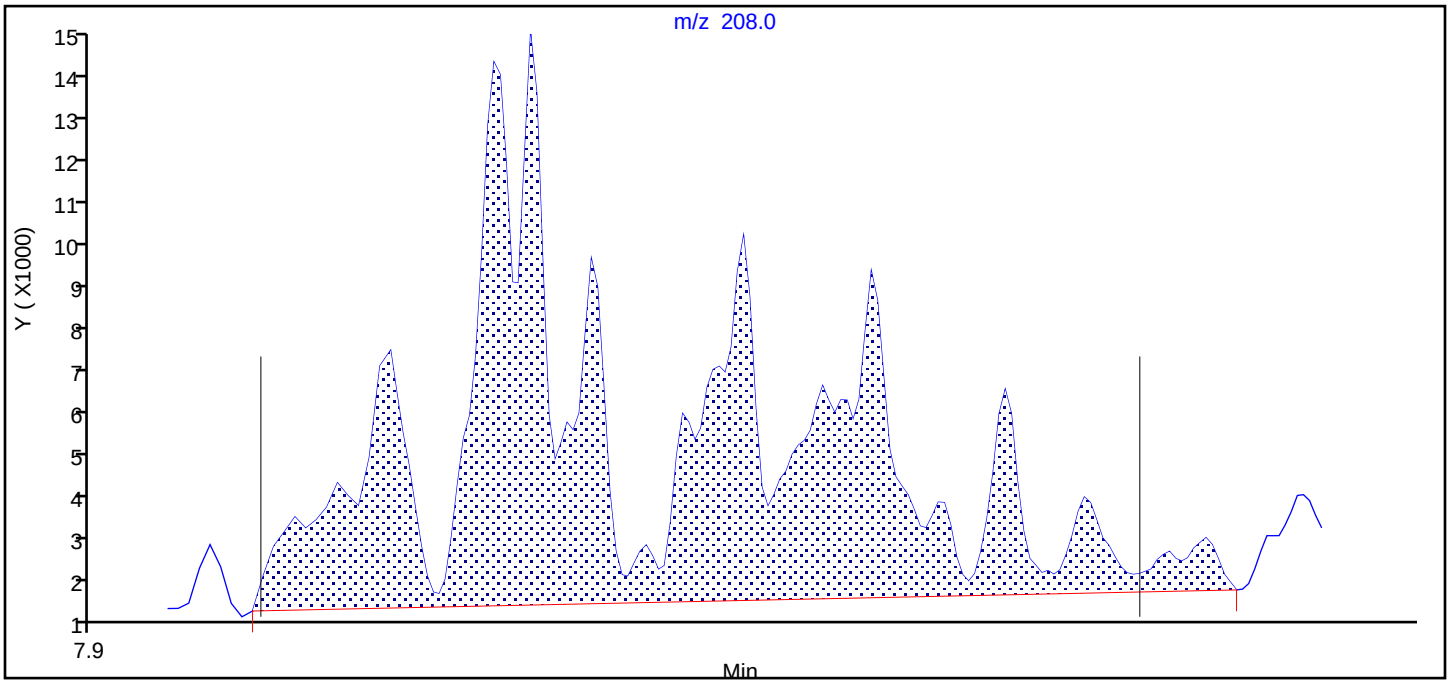
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Processing Results



Exp RT	RT	Response	Amount
8.22	8.24	96229	0.294594
8.22	8.29	104596	0

Reviewer: cochranj, 30-Aug-2019 11:32:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

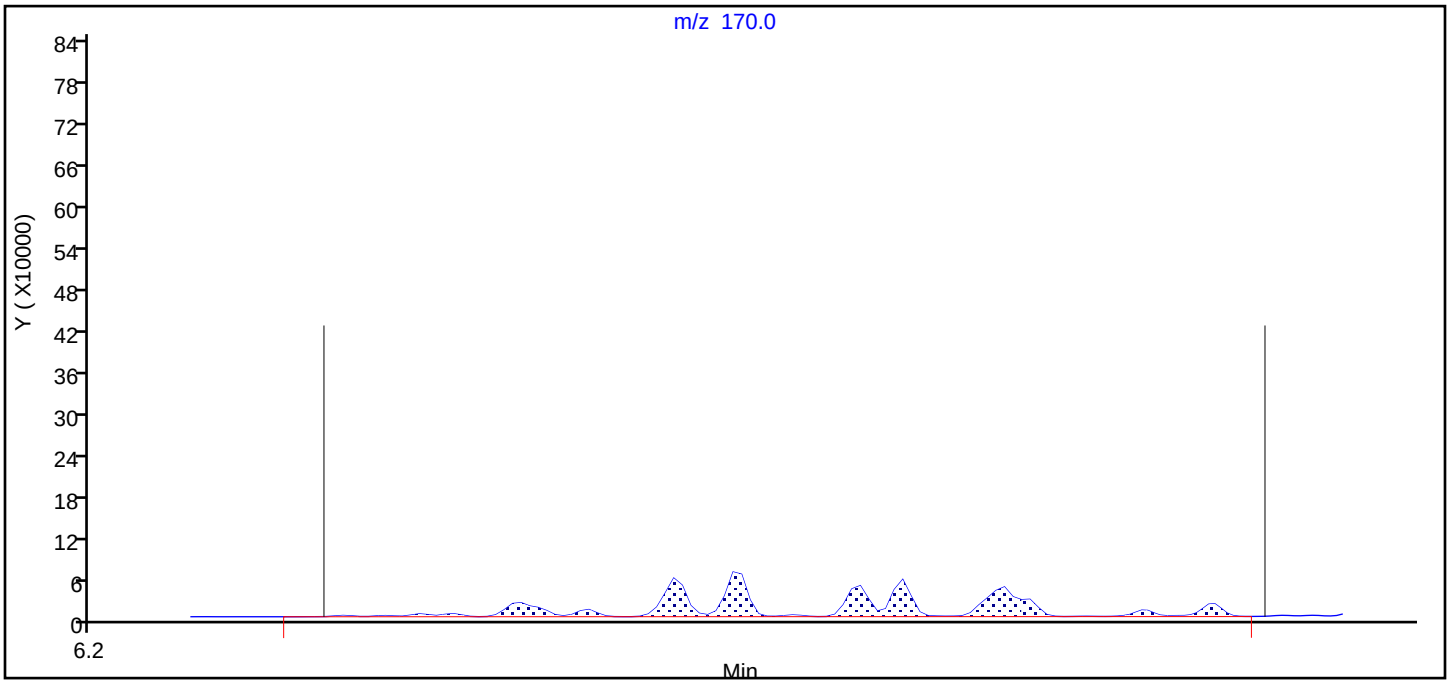
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Processing Results



Exp RT	RT	Response	Amount
6.57	6.56	293948	0.634682
6.57	6.58	414413	0

Reviewer: cochranj, 30-Aug-2019 11:32:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

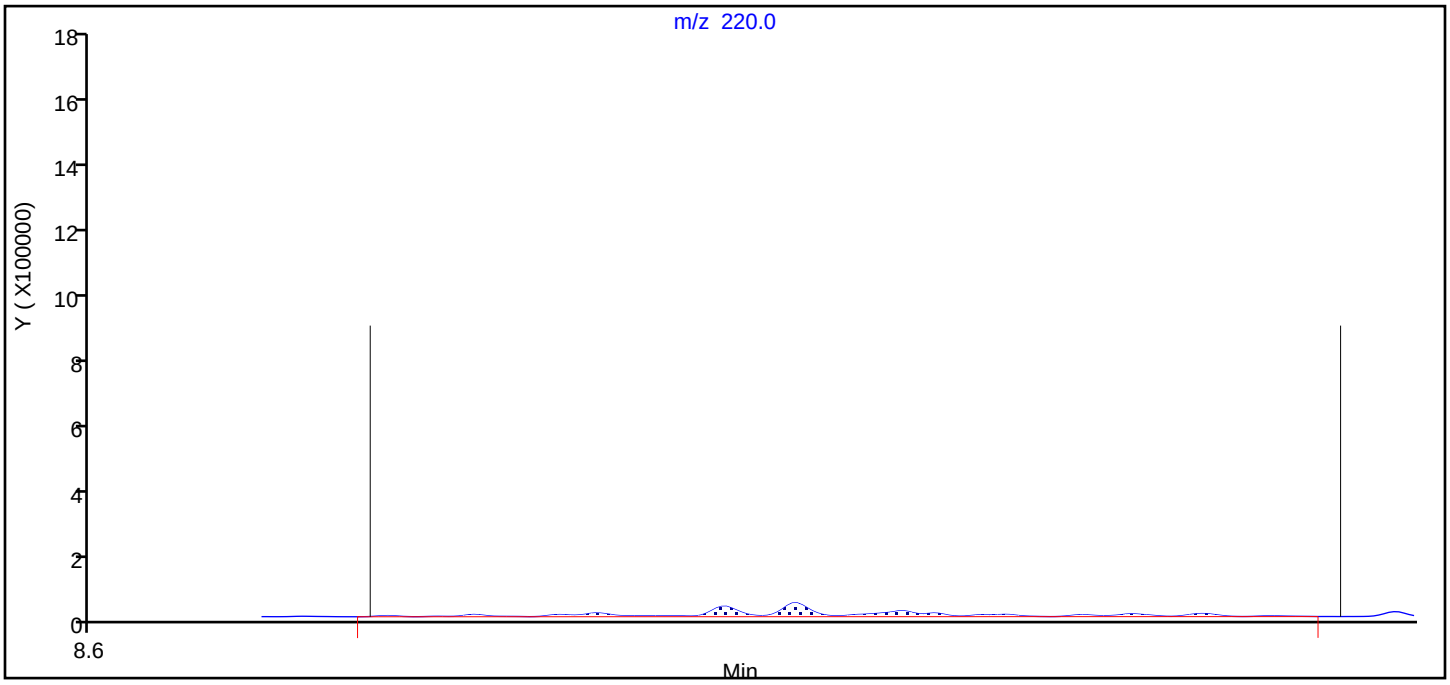
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Processing Results



Exp RT	RT	Response	Amount
9.00	8.99	184756	0.362820
9.00	8.97	125337	0

Reviewer: cochranj, 30-Aug-2019 11:33:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

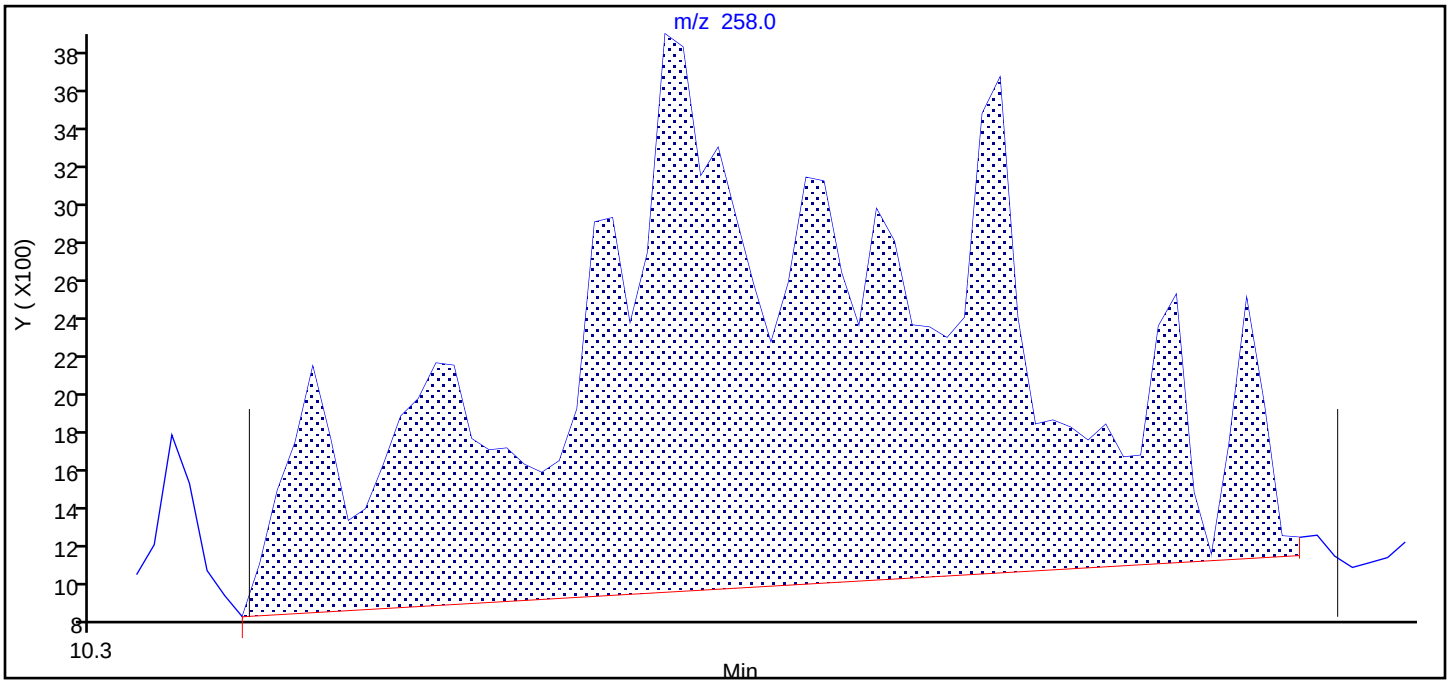
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Processing Results



Exp RT	RT	Response	Amount
10.62	10.61	34365	0.061965

Reviewer: cochranj, 30-Aug-2019 11:33:06

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

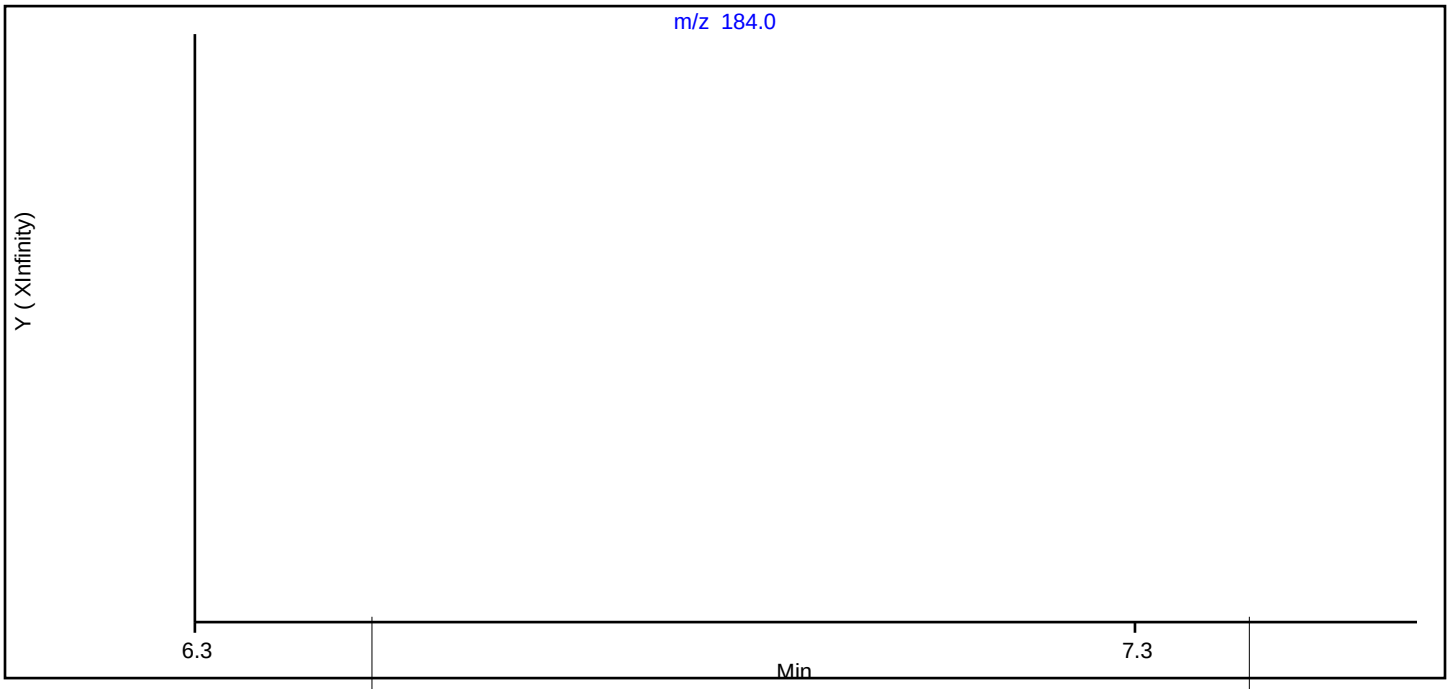
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

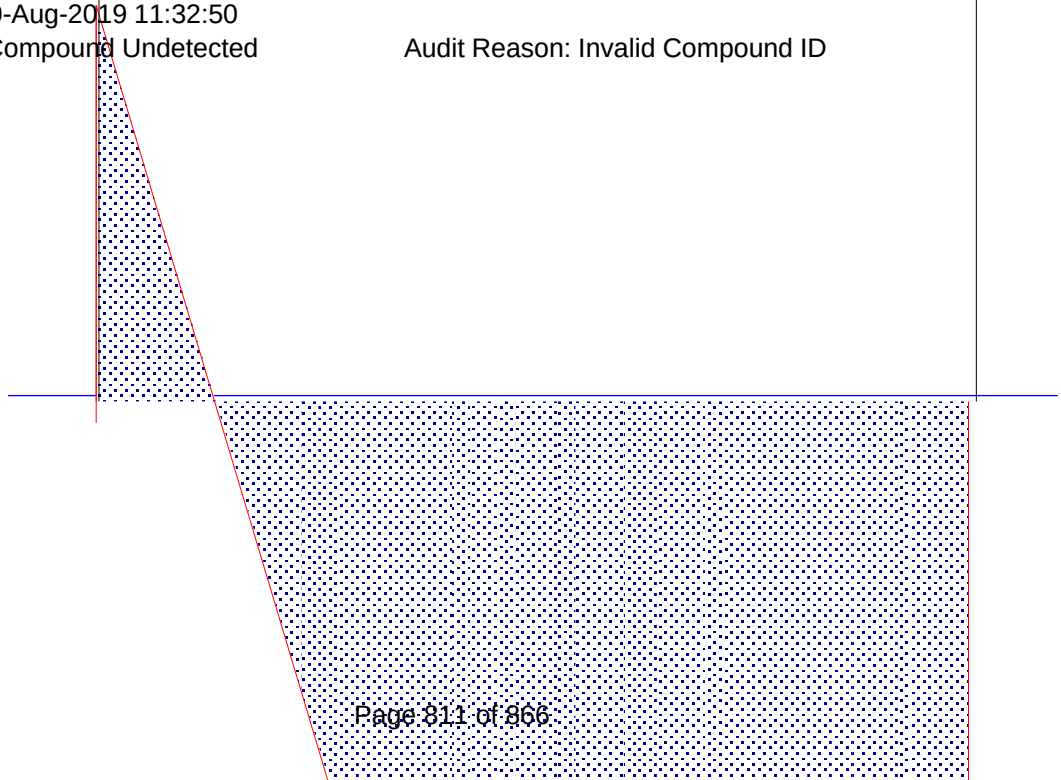
Processing Results



Exp RT	RT	Response	Amount
6.95	6.95	259556	0.560424
6.95	6.95	520518	0

Reviewer: cochranj, 30-Aug-2019 11:32:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID



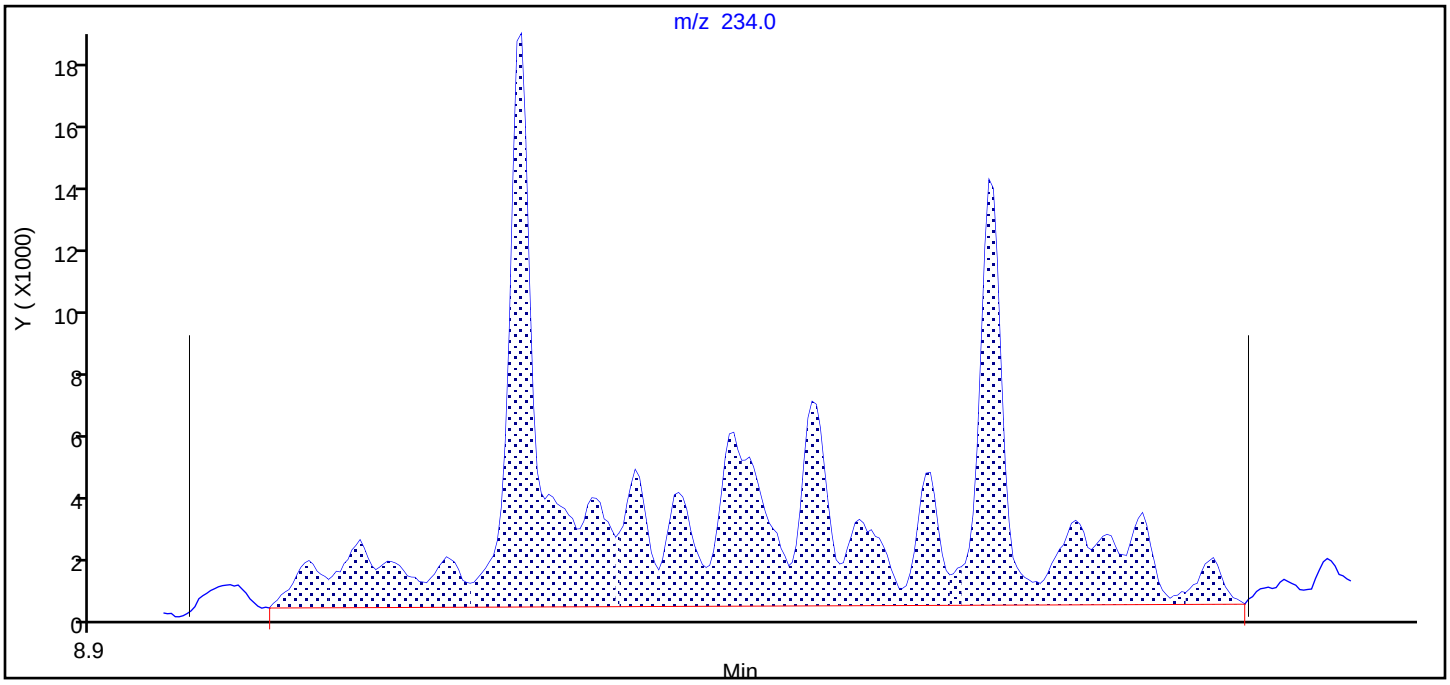
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Processing Results



Exp RT	RT	Response	Amount
9.33	9.35	96864	0.190219
9.33	9.26	94870	0

Reviewer: cochranj, 30-Aug-2019 11:33:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

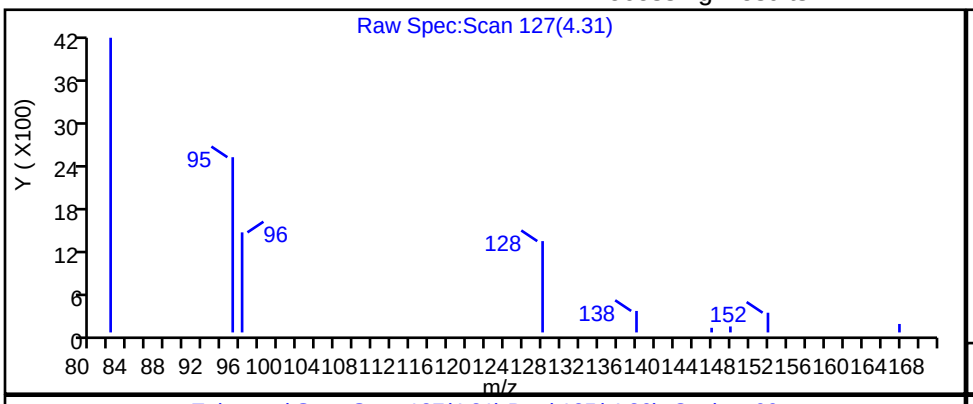
User Disabled Compound Report

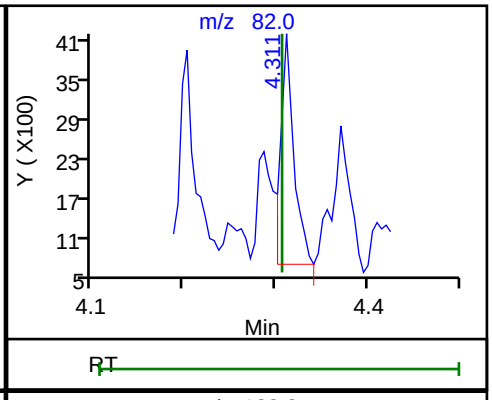
Eurofins TestAmerica, Knoxville

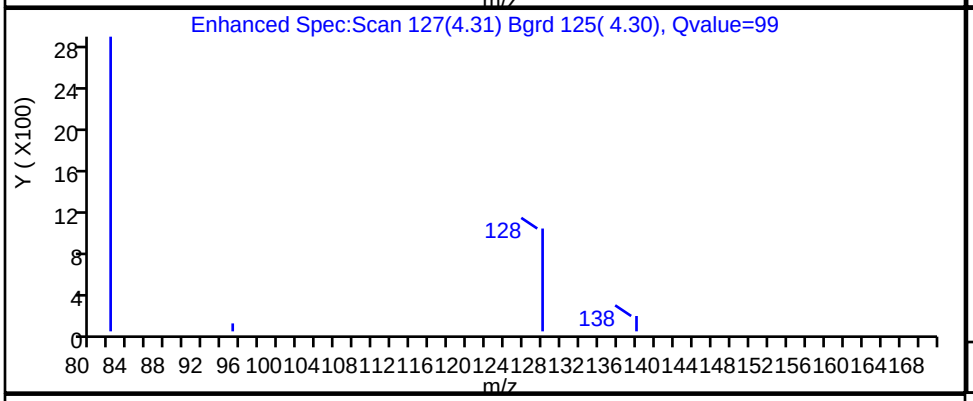
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

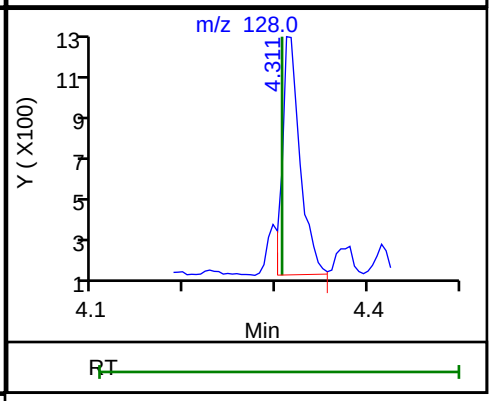
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

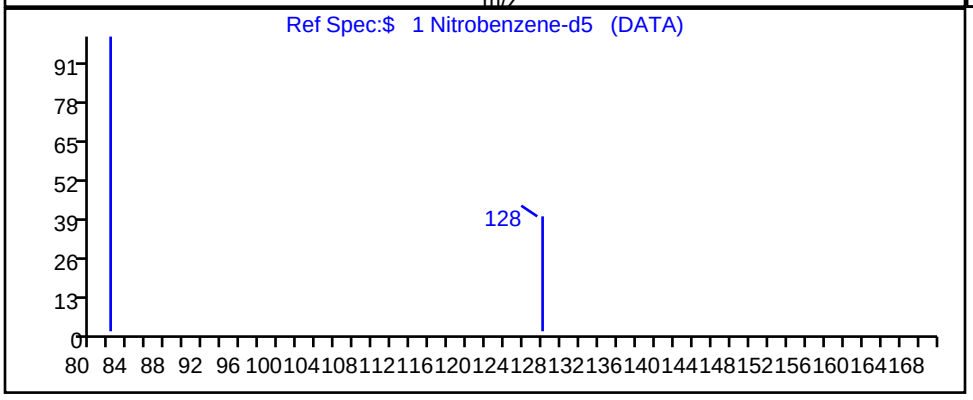
Processing Results











RT	Mass	Response	Amount
4.31	82.00	3414	0.027790
4.31	128.00	1510	

Reviewer: cochranj, 31-Aug-2019 10:58:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

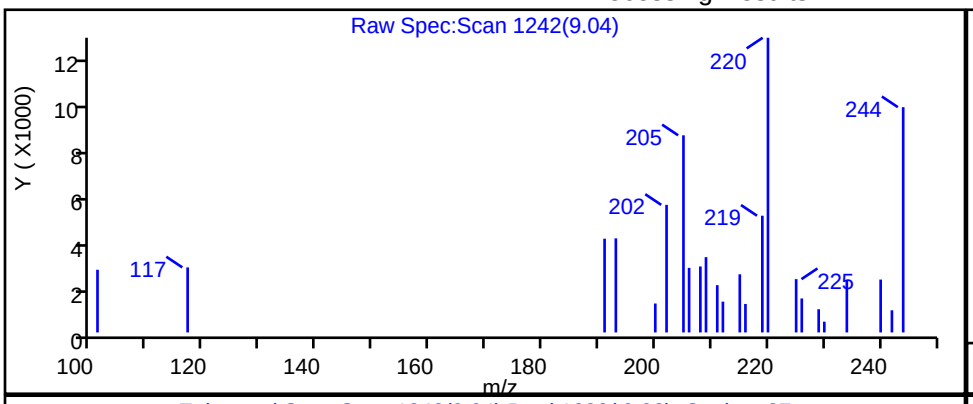
User Disabled Compound Report

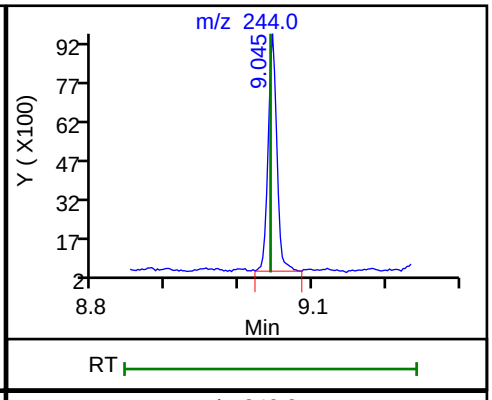
Eurofins TestAmerica, Knoxville

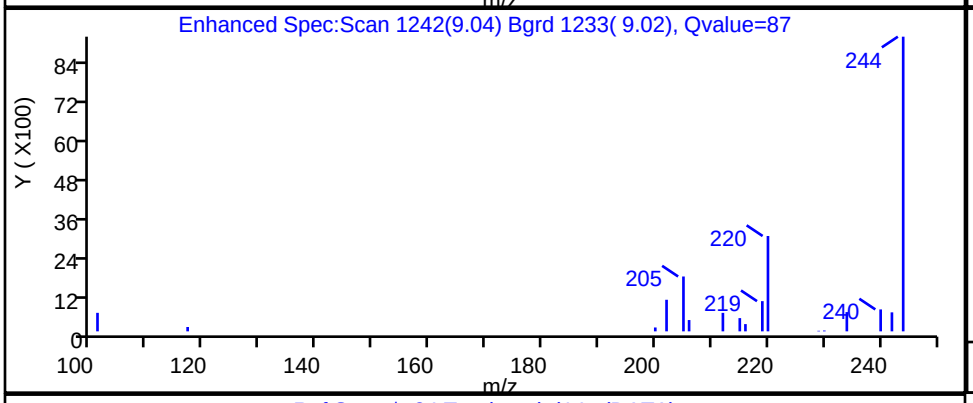
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-b ms.D				
Injection Date:	29-Aug-2019 20:05:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-B MS				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	13	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

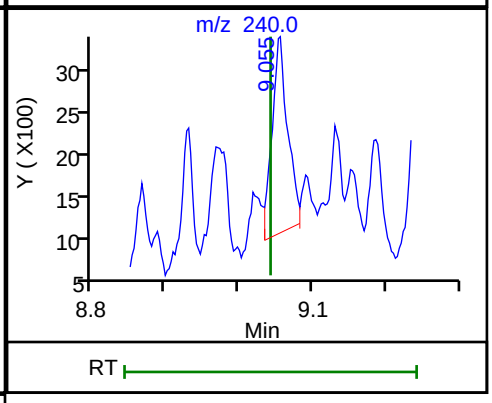
$ 24 Terphenyl-d14, CAS: 1718-51-0

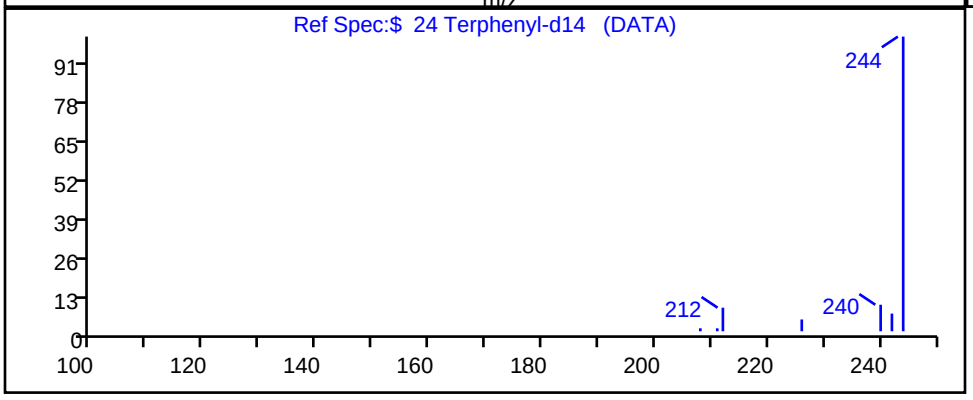
Processing Results











RT	Mass	Response	Amount
9.04	244.00	7611	0.025394
9.06	240.00	3388	

Reviewer: cochranj, 31-Aug-2019 10:58:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 MSD Lab Sample ID: 580-87761-21 MSD

Matrix: Solid Lab File ID: 580-87761-b-21-c msd.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.07(g) Date Analyzed: 08/29/2019 20:30

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
90-12-0	1-Methylnaphthalene	172		150	21
91-57-6	2-Methylnaphthalene	314		310	31
83-32-9	Acenaphthene	1340		31	14
208-96-8	Acenaphthylene	133		31	7.6
120-12-7	Anthracene	460		31	25
56-55-3	Benzo[a]anthracene	991		31	12
50-32-8	Benzo[a]pyrene	970		31	11
205-99-2	Benzo[b]fluoranthene	928		31	16
192-97-2	Benzo[e]pyrene	597		31	10
191-24-2	Benzo[g,h,i]perylene	705		31	18
207-08-9	Benzo[k]fluoranthene	349		31	14
STL00905	C1-Chrysenes	ND		31	7.9
STL00909	C1-Dibenzothiophenes	ND		31	20
STL00912	C1-Fluoranthenes/pyrene	ND		31	16
STL00913	C1-Fluorenes	ND		31	17
STL00916	C1-Naphthalenes	ND		310	24
STL00901	C1-Phenanthrenes/Anthracenes	ND		61	34
STL00906	C2-Chrysenes	ND		31	9.5
STL00910	C2-Dibenzothiophenes	ND		31	28
STL00968	C2-Fluoranthenes/Pyrene	ND		31	14
STL00914	C2-Fluorenes	ND		61	37
STL00917	C2-Naphthalenes	ND		61	23
STL00902	C2-Phenanthrenes/Anthracenes	ND		120	75
STL00907	C3-Chrysenes	ND		31	9.2
STL00911	C3-Dibenzothiophenes	ND		61	34
STL00969	C3-Fluoranthenes/Pyrene	ND		31	17
STL00915	C3-Fluorenes	ND		61	33
STL00918	C3-Naphthalenes	ND		61	30
STL00903	C3-Phenanthrenes/Anthracenes	ND		61	48
STL00908	C4-Chrysenes	ND		31	10
STL00967	C4-Dibenzothiophenes	ND		31	29
STL01791	C4-Fluoranthenes/Pyrene	ND		31	12
STL00919	C4-Naphthalenes	ND		120	63
STL00904	C4-Phenanthrenes/Anthracenes	ND		61	57

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Client Sample ID: 22T-SG-04_20190718 MSD Lab Sample ID: 580-87761-21 MSD

Matrix: Solid Lab File ID: 580-87761-b-21-c msd.D

Analysis Method: 8270D SIM Date Collected: 07/18/2019 08:36

Extract. Method: 3540C Date Extracted: 08/26/2019 13:35

Sample wt/vol: 20.07(g) Date Analyzed: 08/29/2019 20:30

Con. Extract Vol.: 0.5(mL) Dilution Factor: 30

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: 51.0 GPC Cleanup:(Y/N) N

Analysis Batch No.: 33099 Units: ng/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
218-01-9	Chrysene	1060		31	12
53-70-3	Dibenz(a,h)anthracene	125		31	17
132-65-0	Dibenzothiophene	593		31	10
206-44-0	Fluoranthene	3360		31	28
86-73-7	Fluorene	860		31	15
193-39-5	Indeno[1,2,3-cd]pyrene	525		31	21
91-20-3	Naphthalene	580	J	610	56
198-55-0	Perylene	279		31	6.1
85-01-8	Phenanthrene	4010		61	54
129-00-0	Pyrene	3470		61	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	0	X	20-142
4165-60-0	Nitrobenzene-d5	0	X	20-121
1718-51-0	Terphenyl-d14	0	X	35-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D
Lims ID: 580-87761-B-21-C MSD
Client ID: 22T-SG-04_20190718
Sample Type: MSD
Inject. Date: 29-Aug-2019 20:30:30 ALS Bottle#: 14 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 30.0000
Sample Info: 140-0012890-022
Misc. Info.: P082919(8270)
Operator ID: 11211 Instrument ID: MP

Method: \\chromna\Knoxville\ChromData\MP\20190828-12890.b\8270D_SIM_MP.m
Limit Group: MSS - 8270D_SIM ICAL
Last Update: 31-Aug-2019 11:48:08 Calib Date: 21-Jul-2019 14:26:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MP\20190729-12531.b\ic 7X.D

Column 1 : Restek-5Sil MS 25um (0.25 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: cochranj Date: 30-Aug-2019 11:36:24

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	2 cis-Decalin	138	4.460	4.455	0.005	76	1657	0.0333	0.0244	
*	3 Naphthalene-d8	136	4.882	4.882	0.000	95	206292	0.0167	0.5000	
	4 Naphthalene	128	4.902	4.896	0.006	93	172639	0.0333	0.3802	
	5 Benzo(b)thiophene	134	4.943	4.936	0.007	100	16802	0.0333	0.0440	
	6 2-Methylnaphthalene	142	5.463	5.463	0.000	96	61181	0.0333	0.2057	
	7 1-Methylnaphthalene	142	5.551	5.545	0.006	97	31862	0.0333	0.1124	
	9 1,1'-Biphenyl	154	5.849	5.849	0.000	99	31639	0.0333	0.0810	
	10 2,6-Dimethylnaphthalene	156	5.985	5.981	0.004	97	35042	0.0333	0.1348	
	11 Acenaphthylene	152	6.221	6.216	0.005	98	32631	0.0333	0.0874	
*	12 Acenaphthene-d10	164	6.337	6.337	0.000	100	108504	0.0167	0.5000	
	13 Acenaphthene	153	6.364	6.360	0.004	100	253617	0.0333	0.8785	
	14 Dibenzofuran	168	6.507	6.507	0.000	84	31862	0.0333	0.0733	
	15 2,3,5-Trimethylnaphthalene	170	6.682	6.678	0.004	86	57837	0.0333	0.2508	
	16 Fluorene	166	6.796	6.793	0.003	100	179983	0.0333	0.5636	
	17 Dibenzothiophene	184	7.497	7.497	0.000	100	183806	0.0333	0.3883	
*	18 Phenanthrene-d10	188	7.586	7.581	0.005	100	198297	0.0167	0.5000	
	19 Phenanthrene	178	7.603	7.603	0.000	100	1341442	0.0333	2.63	
	20 Anthracene	178	7.648	7.648	0.000	100	128265	0.0333	0.3011	
	21 1-Methylphenanthrene	192	8.151	8.148	0.003	97	91264	0.0333	0.2729	
	22 Fluoranthene	202	8.690	8.687	0.003	99	1092323	0.0333	2.20	
	23 Pyrene	202	8.911	8.906	0.005	99	1269470	0.0333	2.27	
	25 Naphthobenzothiophene	234	9.873	9.873	0.000	100	72514	0.0333	0.2219	
	26 Benzo[a]anthracene	228	10.121	10.121	0.000	64	285250	0.0333	0.6494	
*	27 Chrysene-d12	240	10.137	10.129	0.008	77	184720	0.0167	0.5000	
	28 Chrysene	228	10.161	10.161	0.000	99	364065	0.0333	0.6931	
	29 Benzo[b]fluoranthene	252	11.278	11.278	0.000	100	332220	0.0333	0.6075	M
	30 Benzo[k]fluoranthene	252	11.309	11.309	0.000	99	141610	0.0333	0.2283	Ma
	31 Benzo[e]pyrene	252	11.599	11.599	0.000	100	200874	0.0333	0.3911	
	32 Benzo[a]pyrene	252	11.668	11.660	0.008	100	298865	0.0333	0.6353	a
*	33 Perylene-d12	264	11.737	11.729	0.008	100	200274	0.0167	0.5000	
	34 Perylene	252	11.767	11.760	0.007	100	97159	0.0333	0.1829	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
35 Indeno[1,2,3-cd]pyrene	276	13.151	13.150	0.001	85	198849	0.0333	0.3437	
36 Dibenz(a,h)anthracene	278	13.161	13.159	0.002	46	40061	0.0333	0.0816	
37 Benzo[g,h,i]perylene	276	13.509	13.508	0.001	99	249861	0.0333	0.4615	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

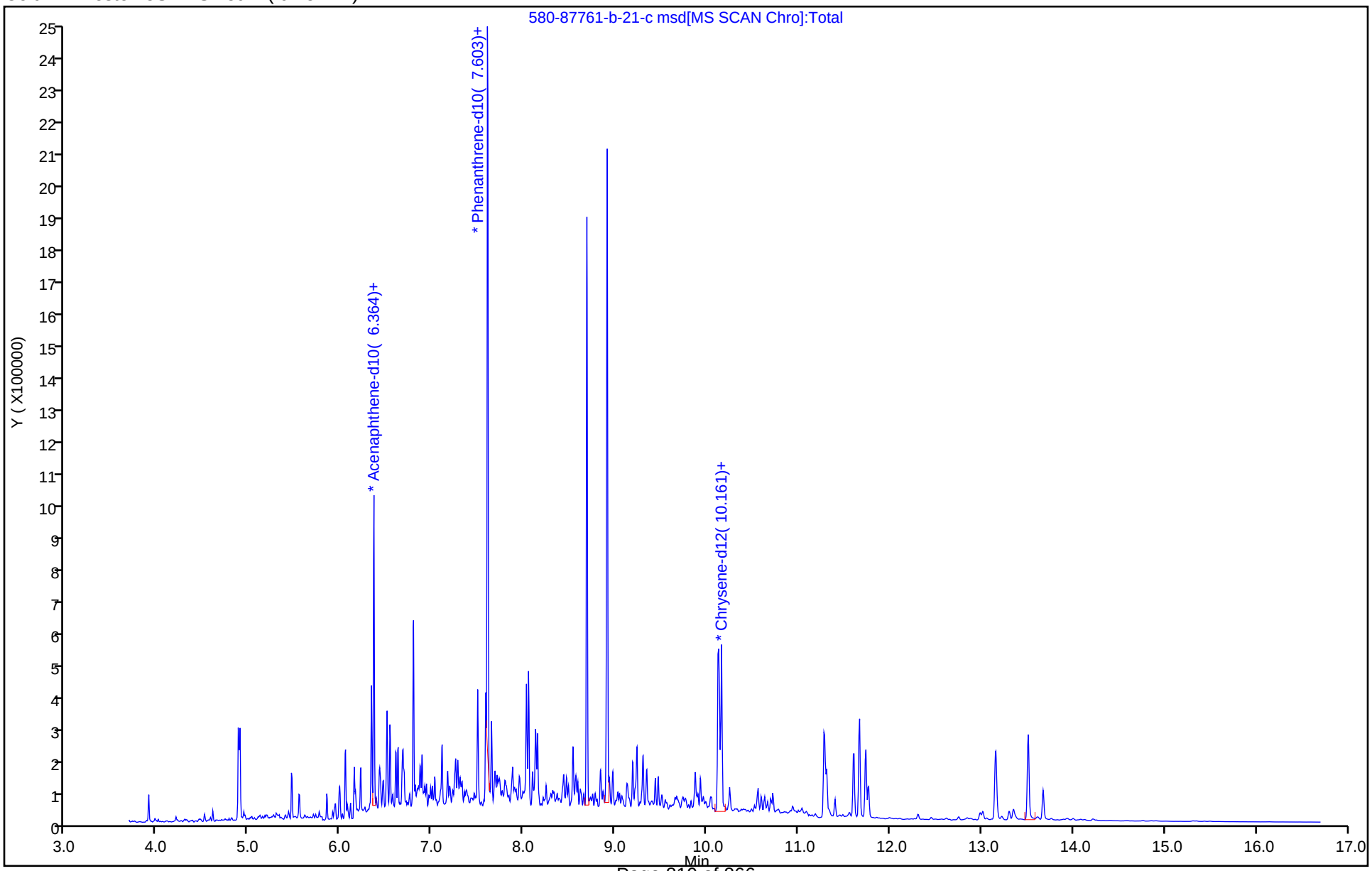
60xx8270simis_00003 Amount Added: 0.01 Units: mL Run Reagent

Report Date: 31-Aug-2019 11:49:29 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP	Operator ID:	11211
Lims ID:	580-87761-B-21-C MSD			Worklist Smp#:	22
Client ID:	22T-SG-04_20190718				
Injection Vol:	1.0 ul	Dil. Factor:	30.0000	ALS Bottle#:	14
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		

Column: Restek-5Sil MS 25um (0.25 mm)



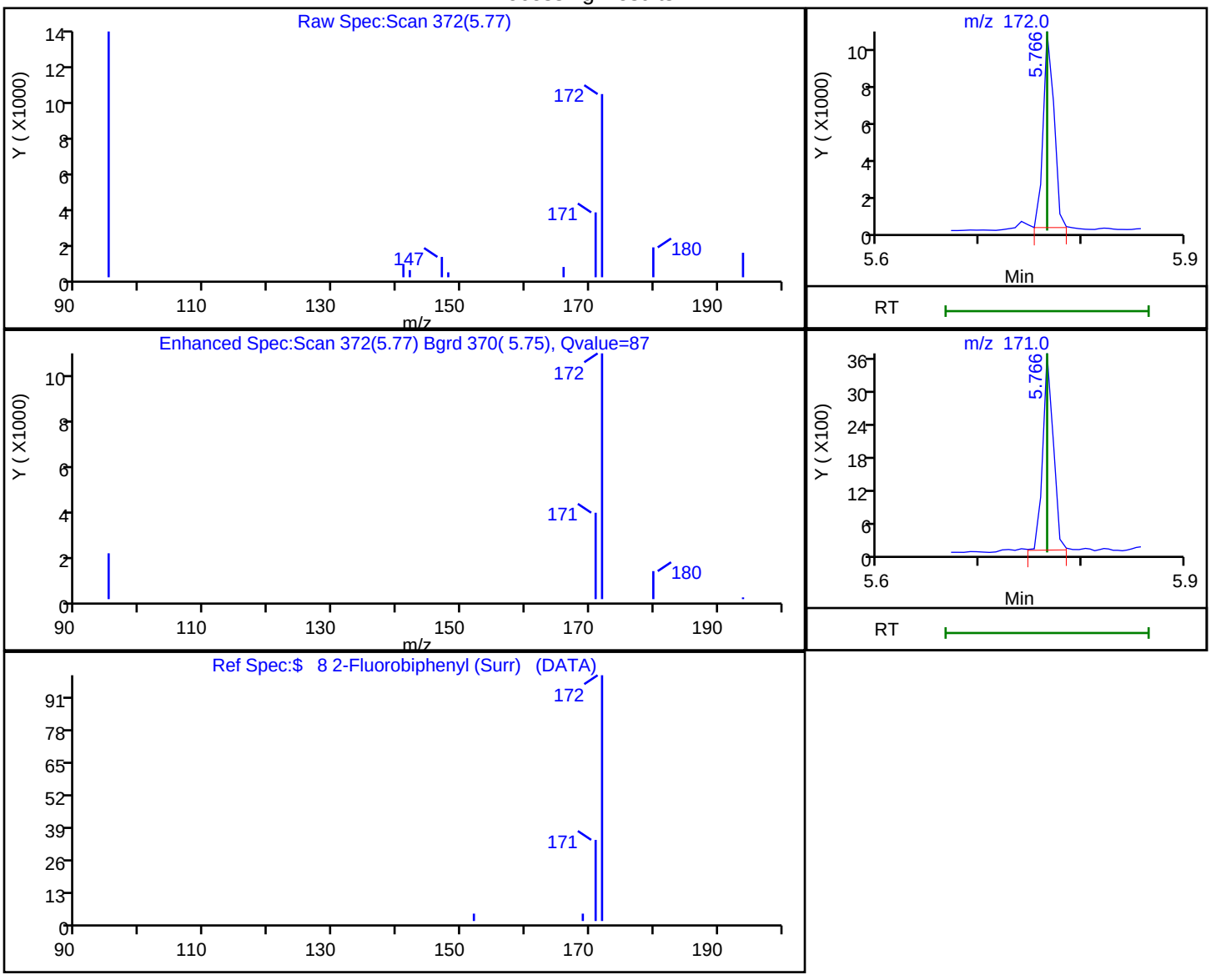
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

$ 8 2-Fluorobiphenyl (Surr), CAS: 321-60-8

Processing Results



RT	Mass	Response	Amount
5.77	172.00	7487	0.021339
5.77	171.00	2558	

Reviewer: cochranj, 31-Aug-2019 10:59:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

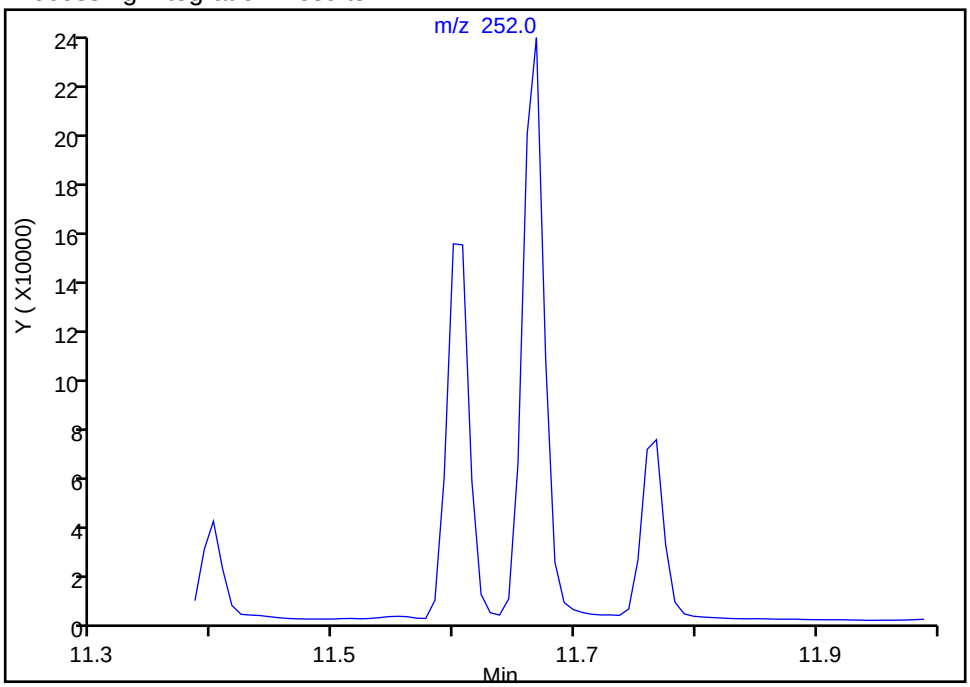
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

32 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

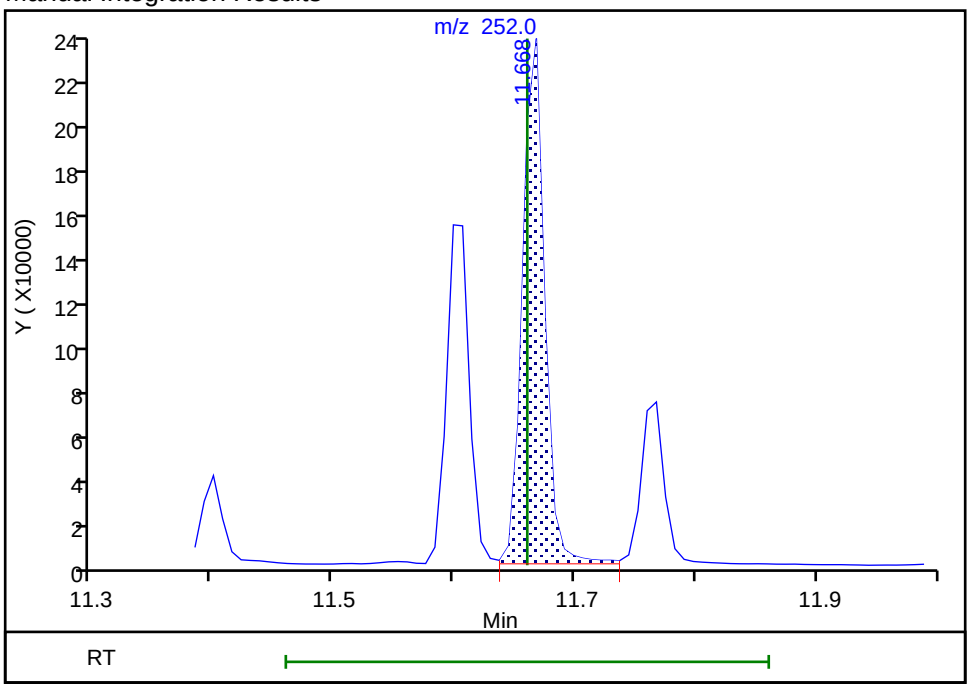
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.67
Area: 298865
Amount: 0.635255
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:35:15
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

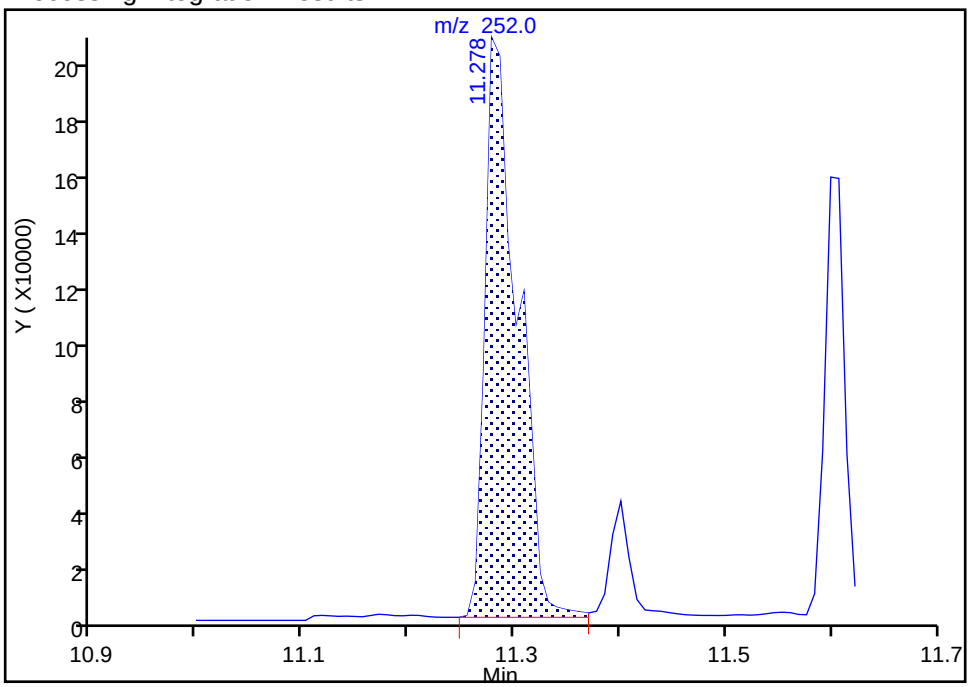
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

29 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

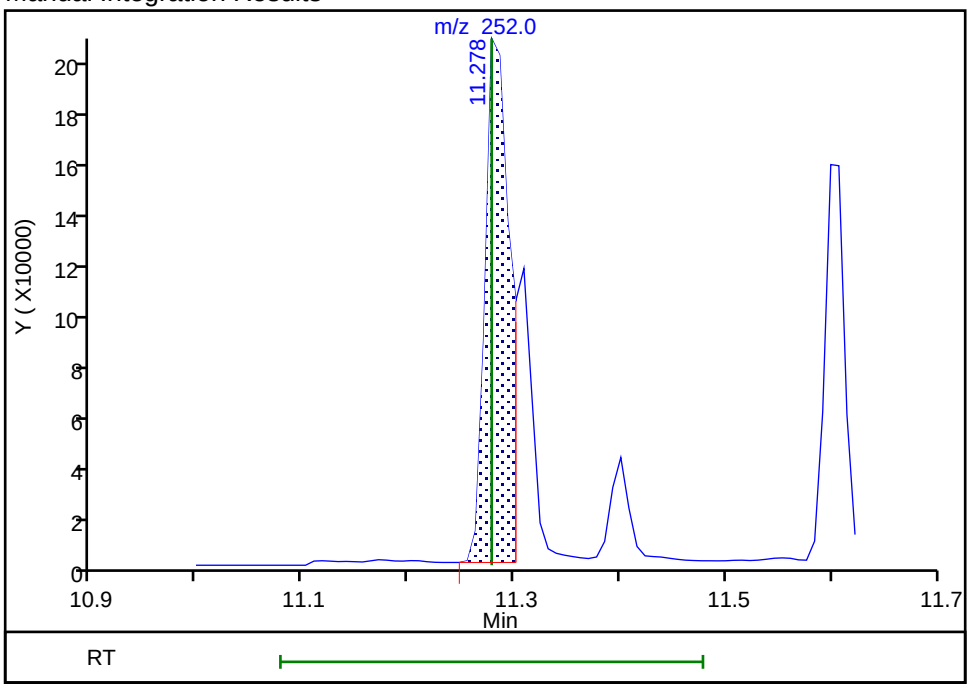
Processing Integration Results

RT: 11.28
Area: 427812
Amount: 0.782341
Amount Units: ug/ml



Manual Integration Results

RT: 11.28
Area: 332220
Amount: 0.607531
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:34:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Knoxville

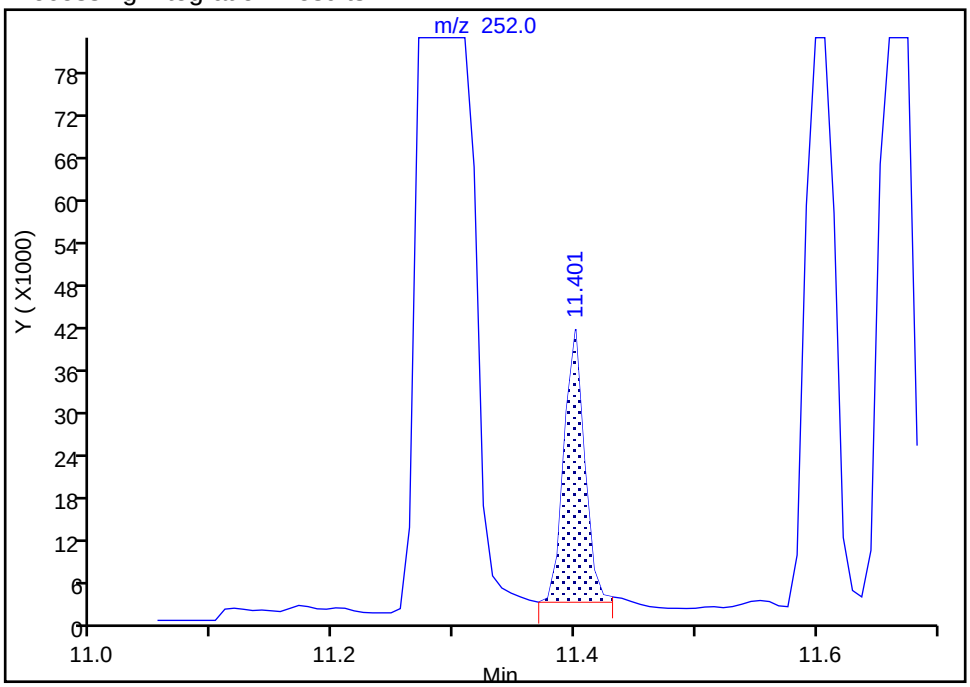
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

30 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

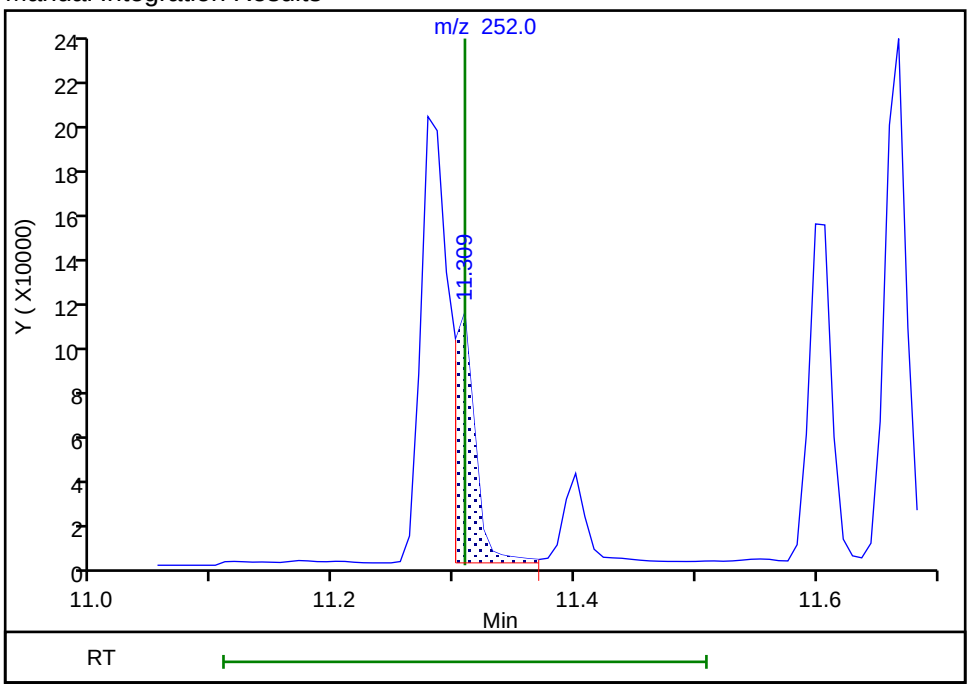
Processing Integration Results

RT: 11.40
Area: 45391
Amount: 0.073191
Amount Units: ug/ml



Manual Integration Results

RT: 11.31
Area: 141610
Amount: 0.228340
Amount Units: ug/ml



Reviewer: cochranj, 30-Aug-2019 11:35:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

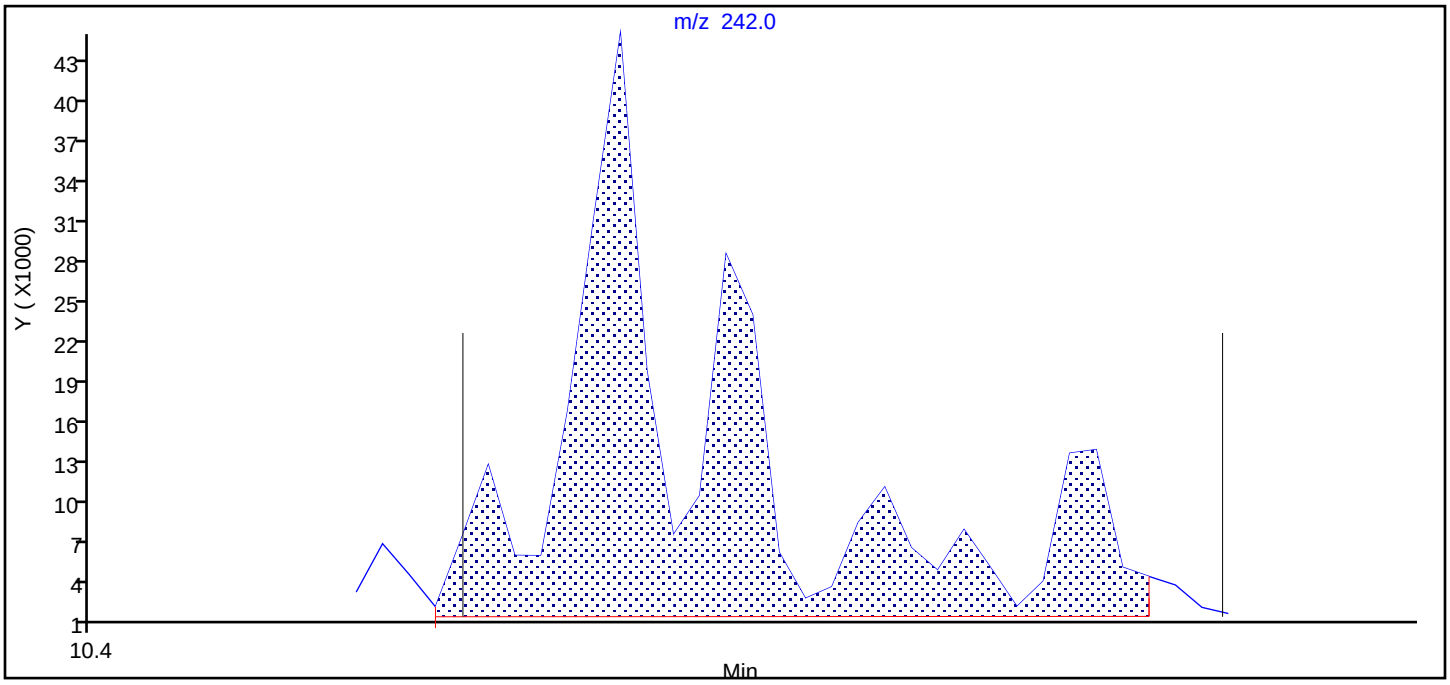
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 57 C1-Chrysenes, CAS: STL00905

Processing Results



Exp RT	RT	Response	Amount
10.63	10.61	132174	0.251635
10.63	10.62	46886	0

Reviewer: cochranj, 30-Aug-2019 11:35:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

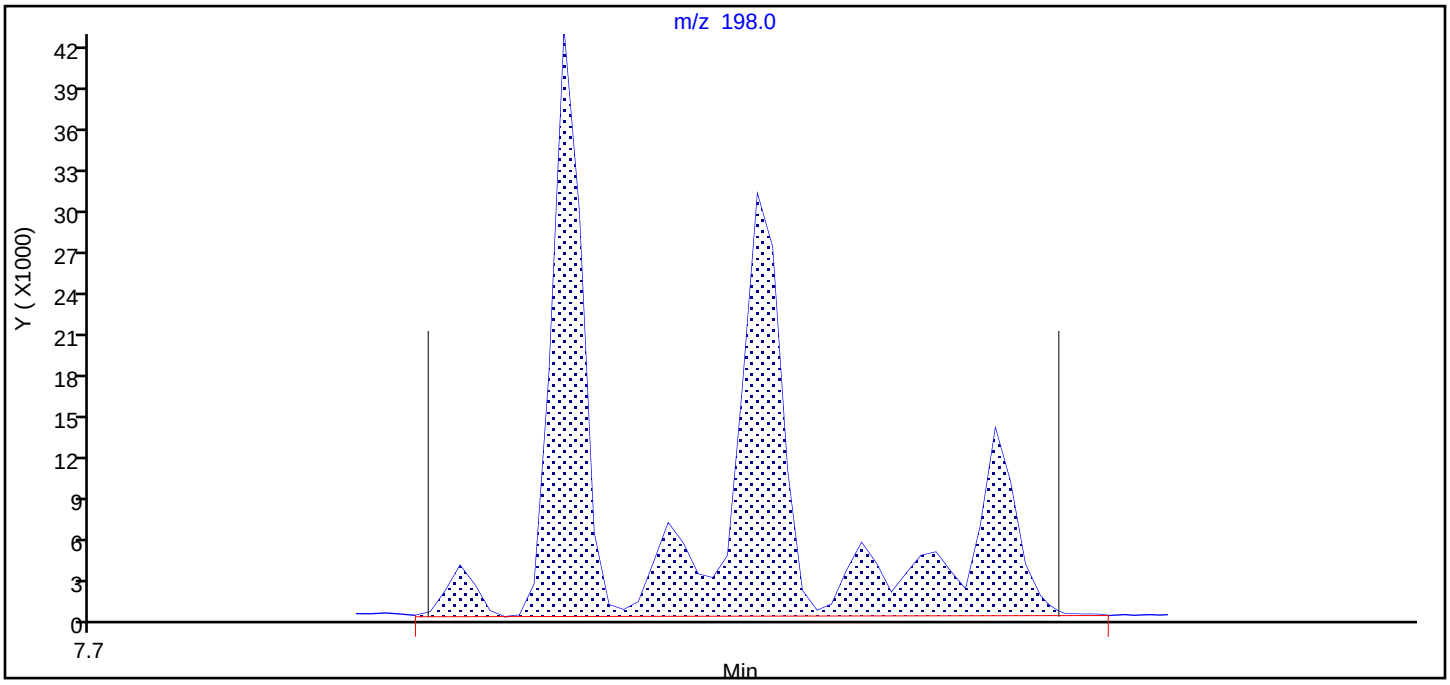
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 45 C1-Dibenzothiophenes, CAS: STL00909

Processing Results



Exp RT	RT	Response	Amount
7.95	7.95	96204	0.203262
7.95	7.96	69307	0

Reviewer: cochranj, 30-Aug-2019 11:35:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

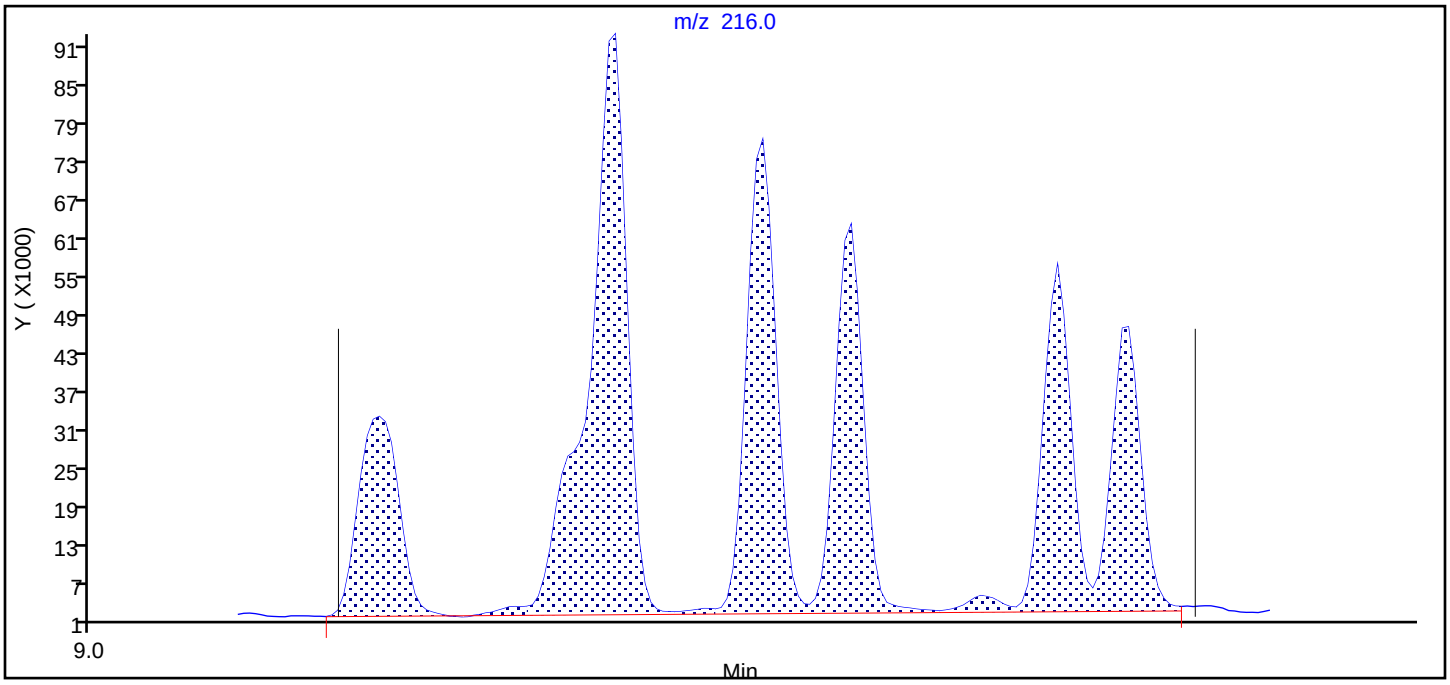
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 53 C1-Fluoranthenes/pyrene, CAS: STL00912

Processing Results



Exp RT	RT	Response	Amount
9.31	9.30	366577	0.655765
9.31	9.31	293289	0

Reviewer: cochranj, 30-Aug-2019 11:35:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

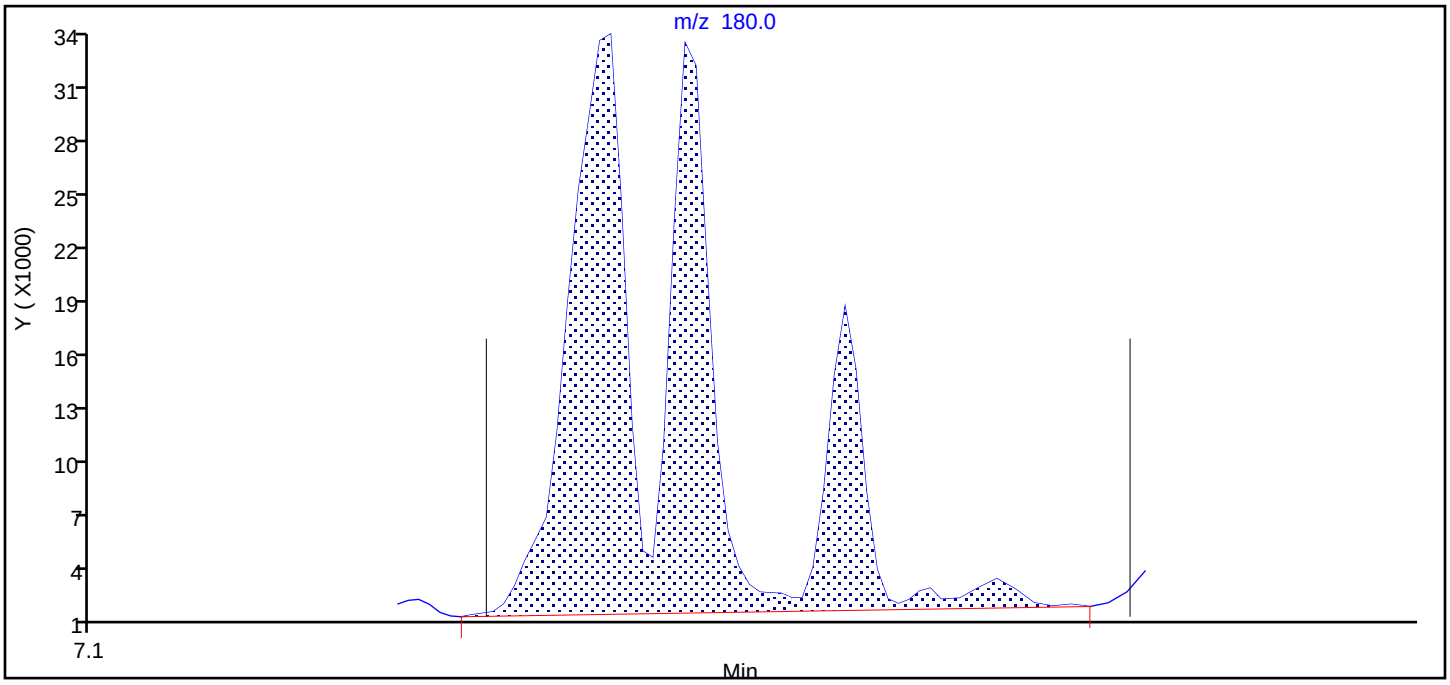
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 42 C1-Fluorenes, CAS: STL00913

Processing Results



Exp RT	RT	Response	Amount
7.32	7.31	77306	0.242081
7.32	7.31	146638	0

Reviewer: cochranj, 30-Aug-2019 11:35:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

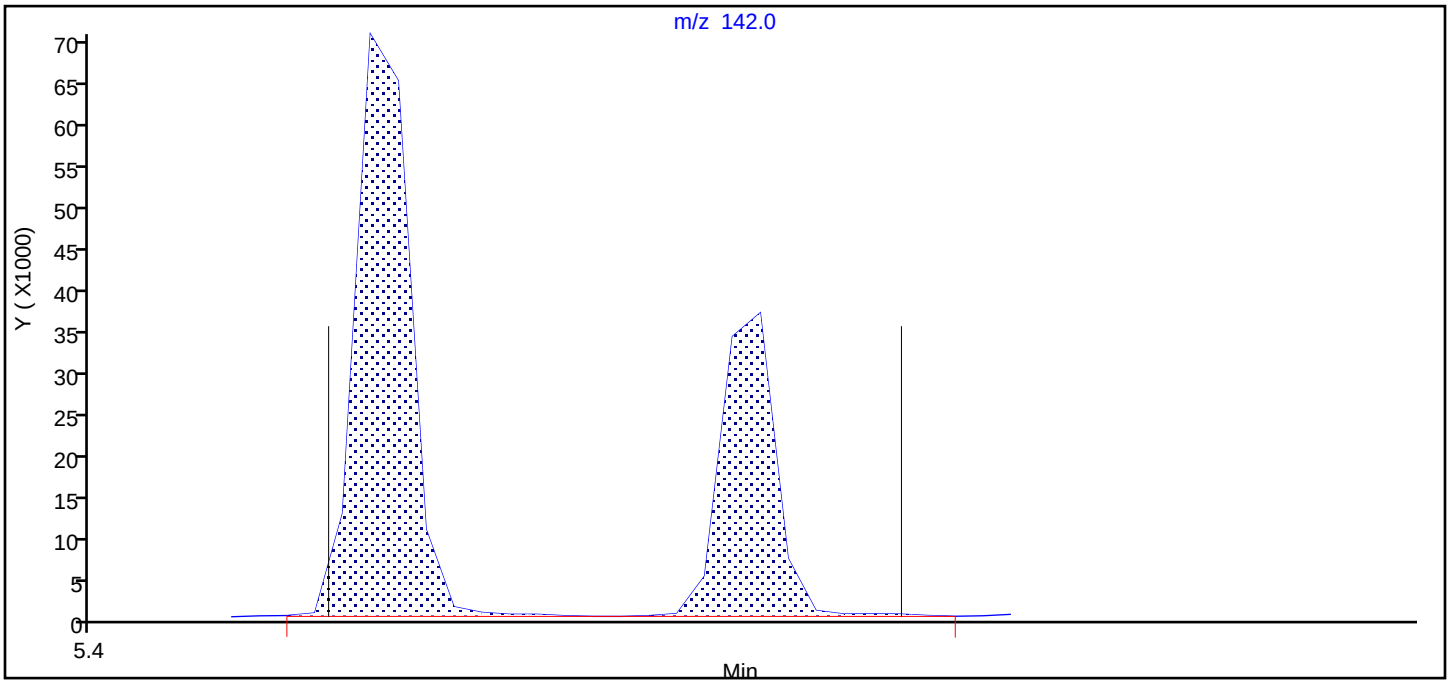
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 38 C1-Naphthalenes, CAS: STL00916

Processing Results



Exp RT	RT	Response	Amount
5.52	5.52	93310	0.205504
5.52	5.52	82179	0

Reviewer: cochranj, 30-Aug-2019 11:35:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

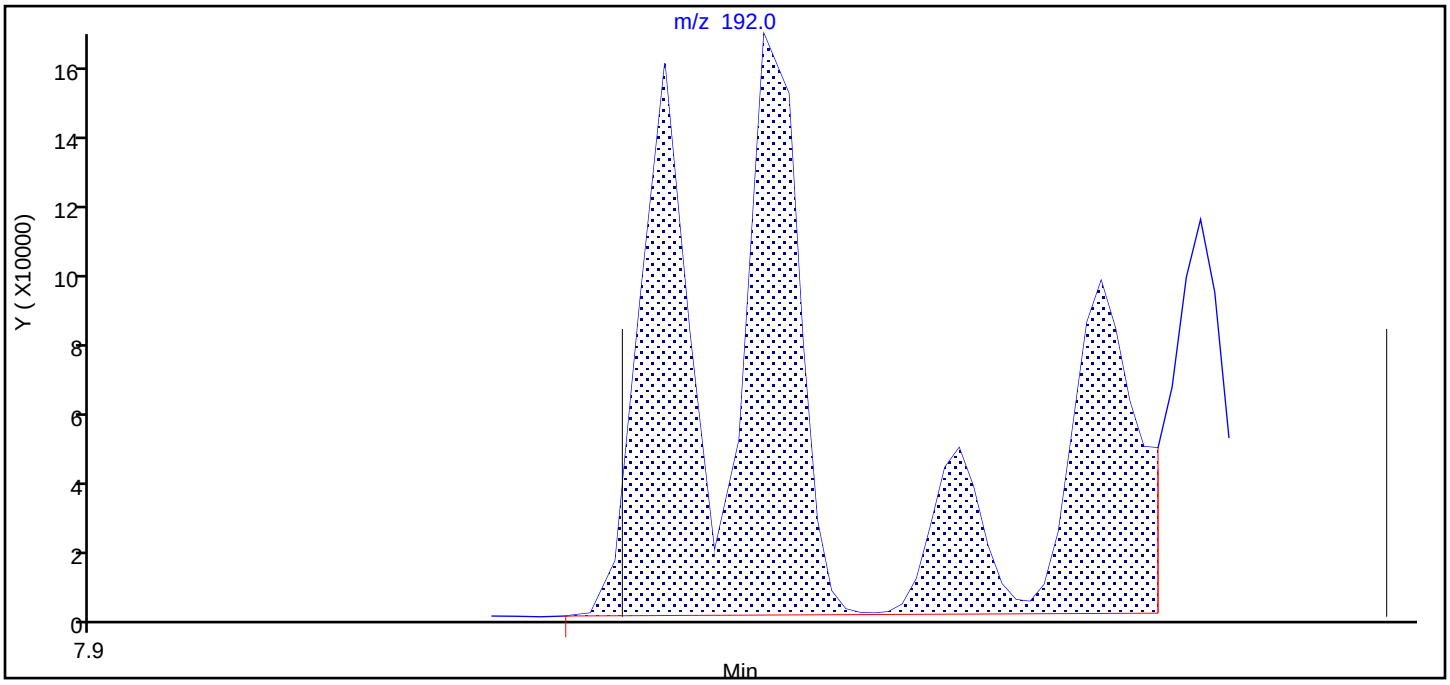
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 49 C1-Phenanthrenes/Anthracenes, CAS: STL00901

Processing Results



Exp RT	RT	Response	Amount
8.11	8.07	371219	0.726808
8.11	8.10	268406	0

Reviewer: cochranj, 30-Aug-2019 11:35:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

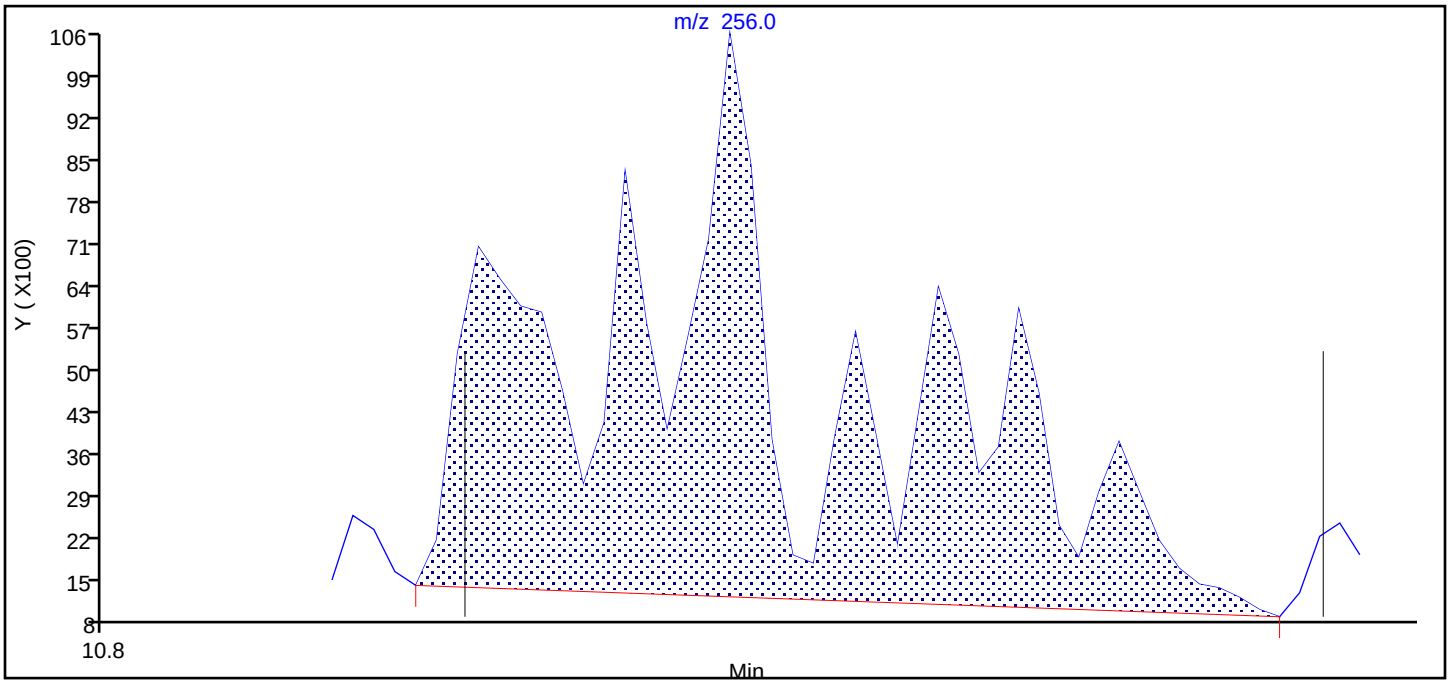
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 58 C2-Chrysenes, CAS: STL00906

Processing Results



Exp RT	RT	Response	Amount
11.10	11.08	59892	0.114024
11.10	11.13	10095	0

Reviewer: cochranj, 30-Aug-2019 11:35:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

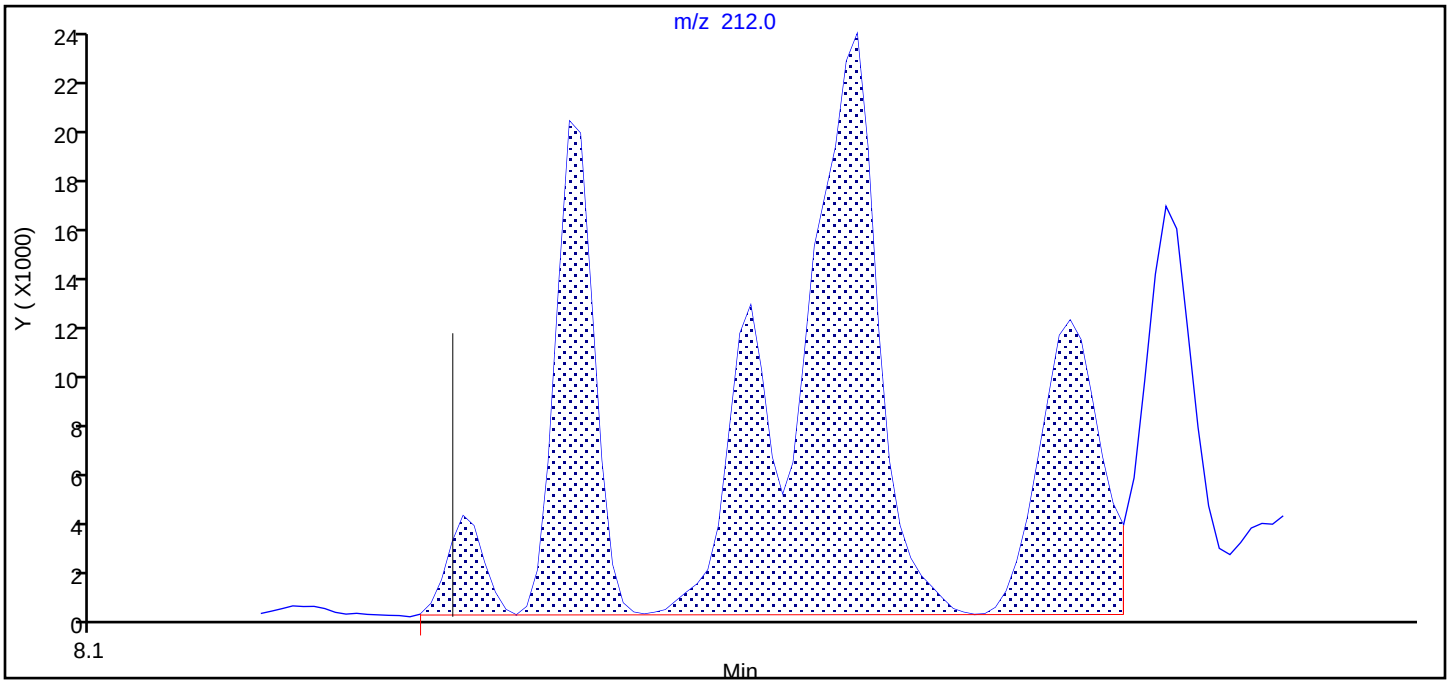
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 46 C2-Dibenzothiophenes, CAS: STL00910

Processing Results



Exp RT	RT	Response	Amount
8.46	8.31	74623	0.157665
8.46	8.58	98752	0

Reviewer: cochranj, 30-Aug-2019 11:35:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

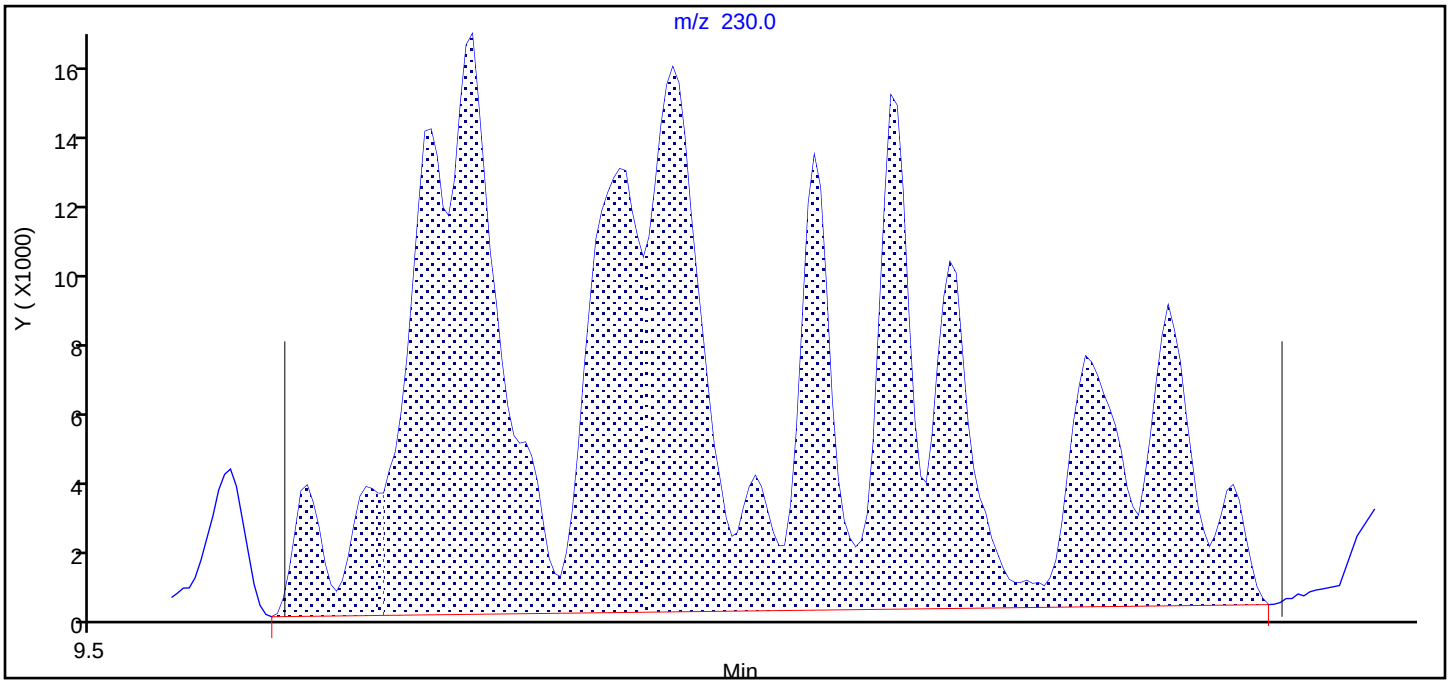
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 54 C2-Fluoranthenes/Pyrene, CAS: STL00968

Processing Results



Exp RT	RT	Response	Amount
9.81	9.81	147303	0.263509
9.81	9.81	91826	0

Reviewer: cochranj, 30-Aug-2019 11:35:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

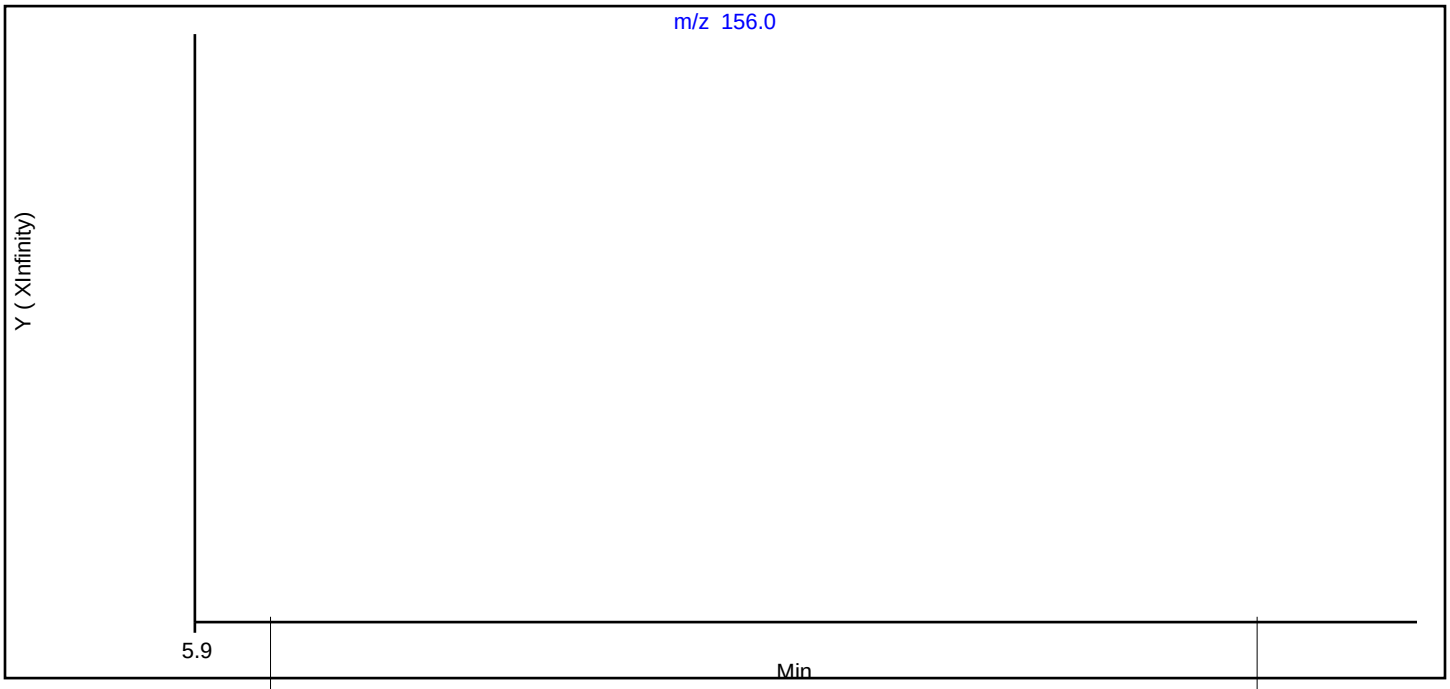
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 39 C2-Naphthalenes, CAS: STL00917

Processing Results



Exp RT	RT	Response	Amount
6.09	6.09	194345	0.428022
6.09	6.07	225963	0

Reviewer: cochranj, 30-Aug-2019 11:35:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

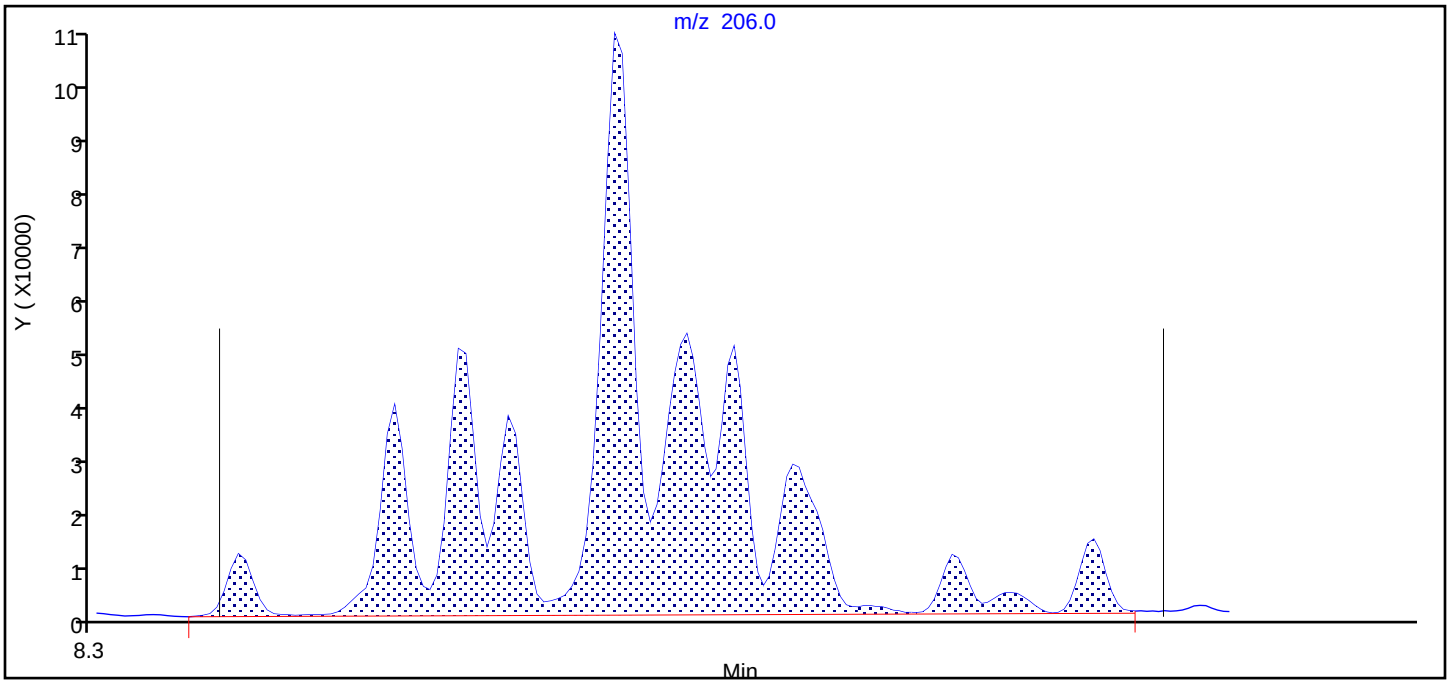
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 50 C2-Phenanthrenes/Anthracenes, CAS: STL00902

Processing Results



Exp RT	RT	Response	Amount
8.57	8.56	359286	0.703444
8.57	8.56	206393	0

Reviewer: cochranj, 30-Aug-2019 11:35:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

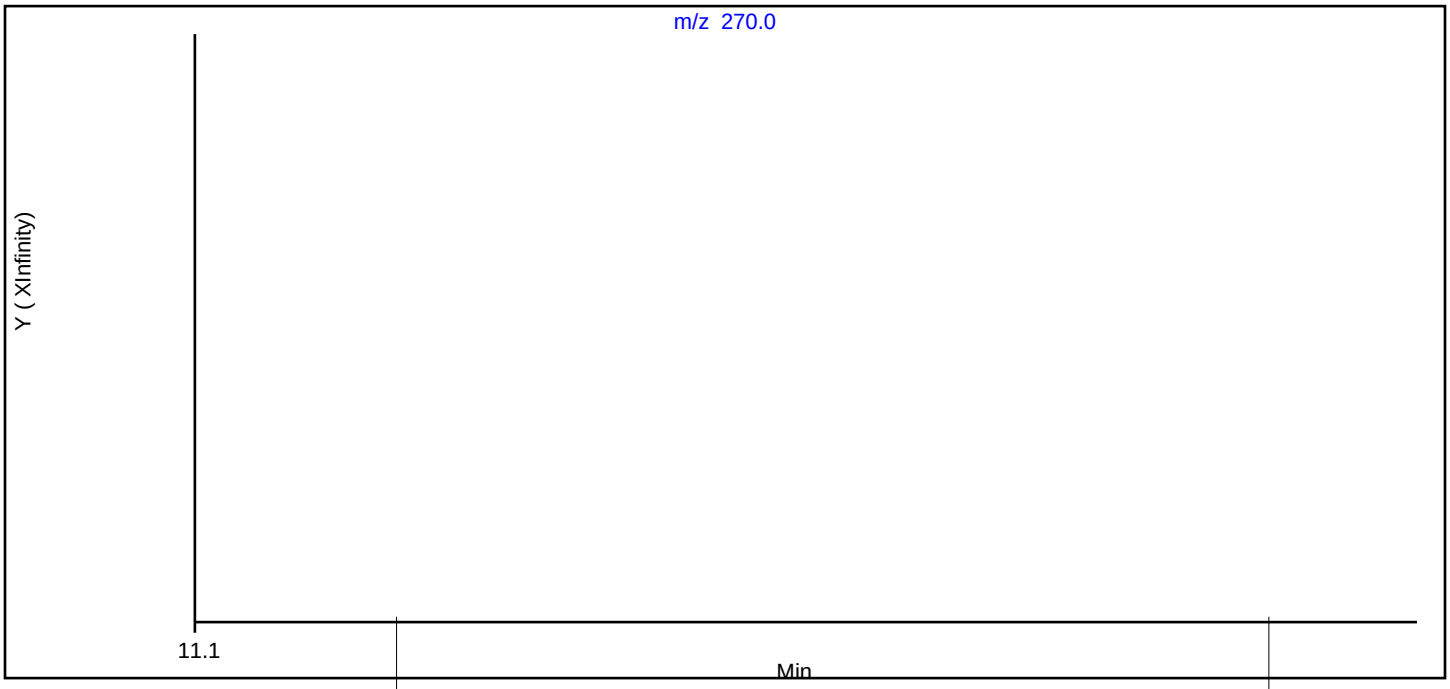
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 59 C3-Chrysenes, CAS: STL00907

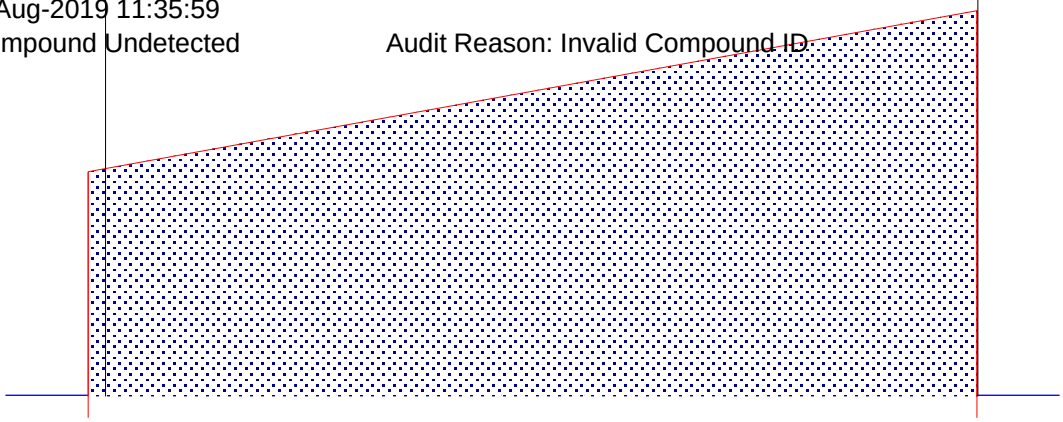
Processing Results



Exp RT	RT	Response	Amount
11.57	11.56	34251	0.065208
11.57	11.60	17232	0

Reviewer: cochranj, 30-Aug-2019 11:35:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID



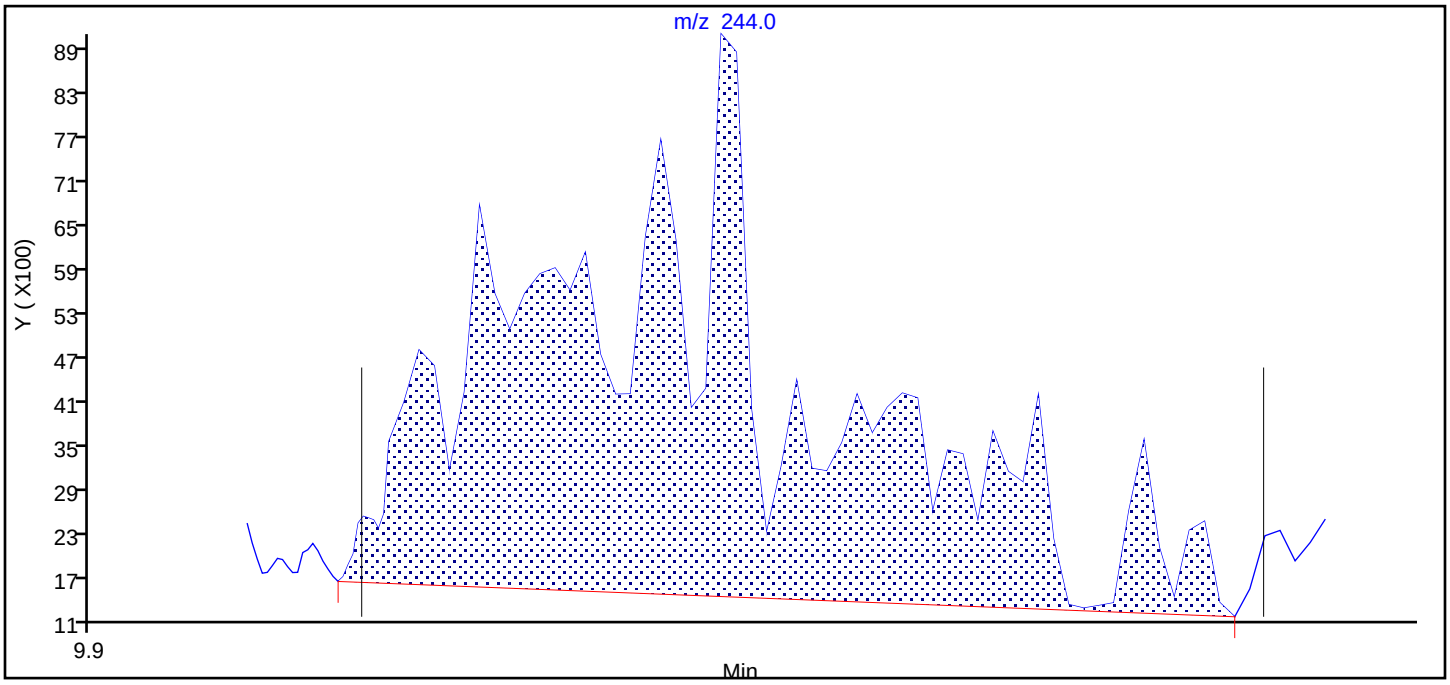
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 55 C3-Fluoranthenes/Pyrene, CAS: STL00969

Processing Results



Exp RT	RT	Response	Amount
10.28	10.27	70176	0.125537
10.28	10.26	192075	0

Reviewer: cochranj, 30-Aug-2019 11:35:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

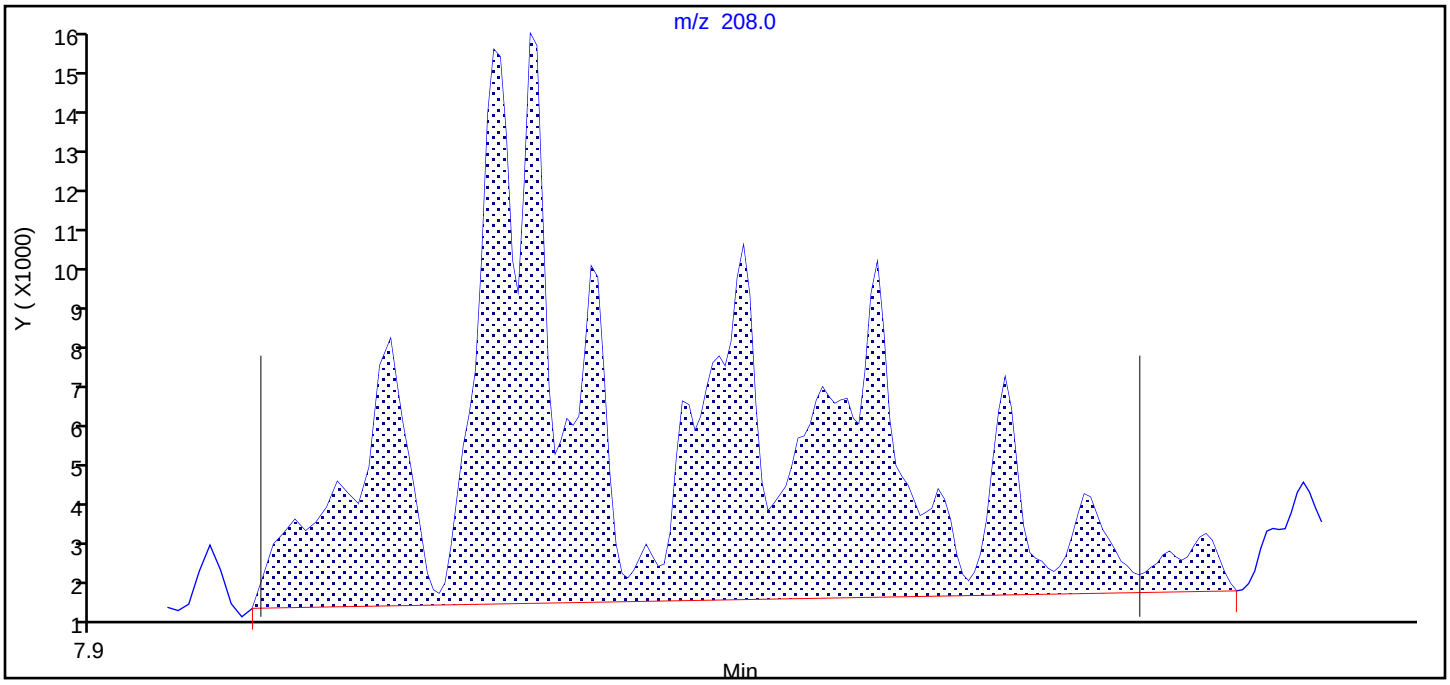
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 44 C3-Fluorenes, CAS: STL00915

Processing Results



Exp RT	RT	Response	Amount
8.22	8.24	104029	0.325763
8.22	8.29	107637	0

Reviewer: cochranj, 30-Aug-2019 11:35:34

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

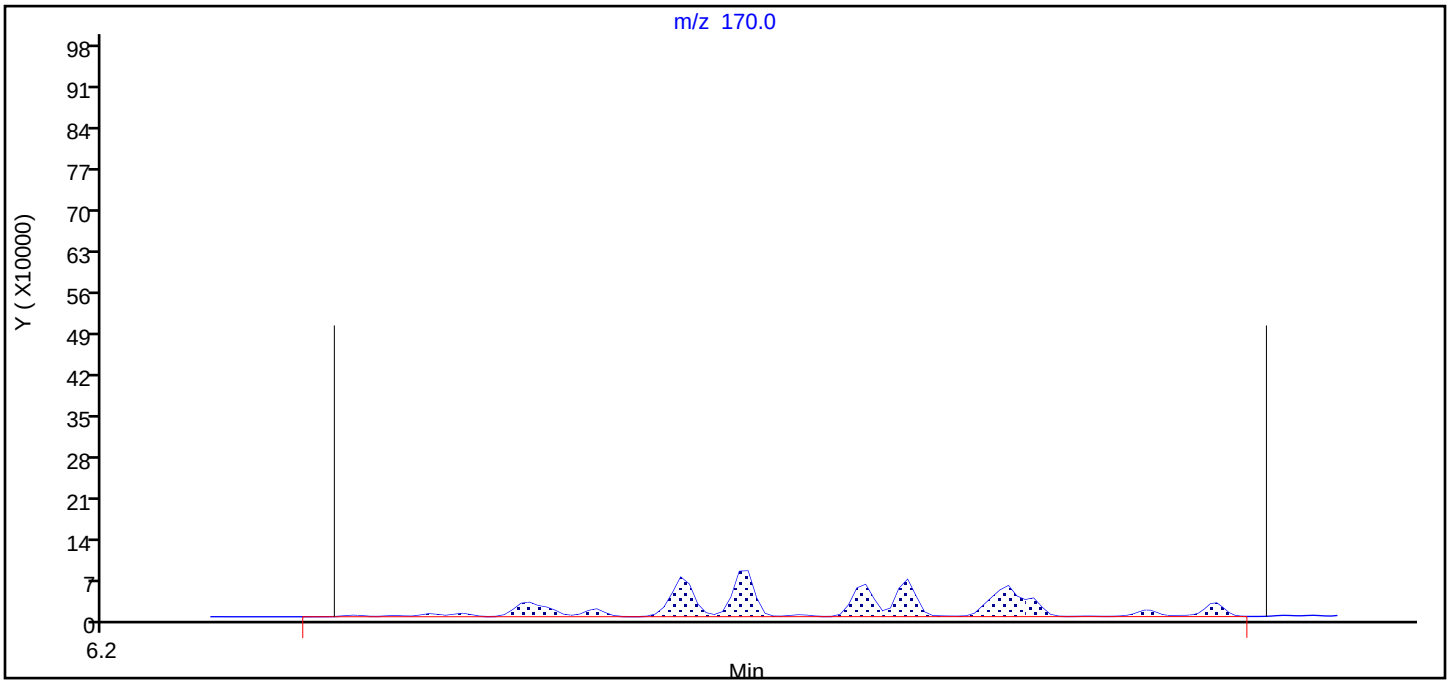
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 40 C3-Naphthalenes, CAS: STL00918

Processing Results



Exp RT	RT	Response	Amount
6.57	6.56	351448	0.774022
6.57	6.58	489572	0

Reviewer: cochranj, 30-Aug-2019 11:35:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

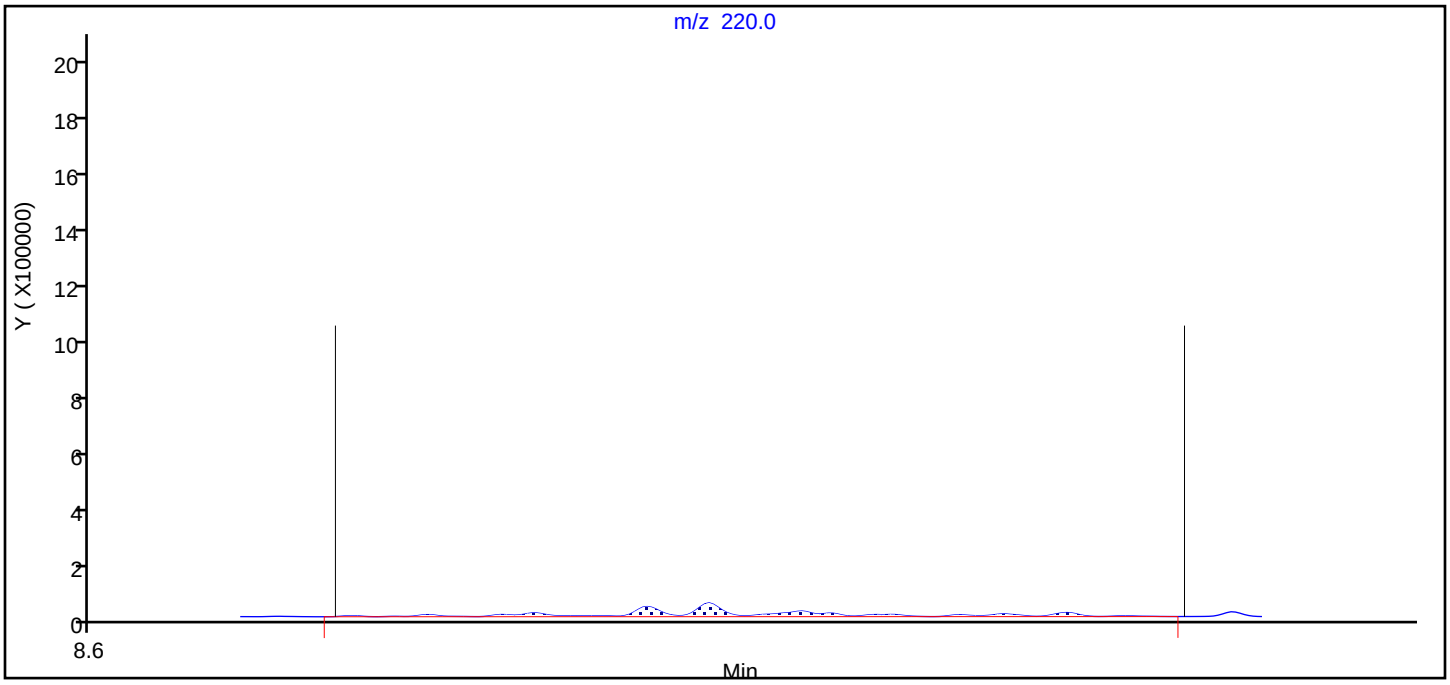
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 51 C3-Phenanthrenes/Anthracenes, CAS: STL00903

Processing Results



Exp RT	RT	Response	Amount
9.00	9.00	212343	0.415745
9.00	8.97	141928	0

Reviewer: cochranj, 30-Aug-2019 11:35:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

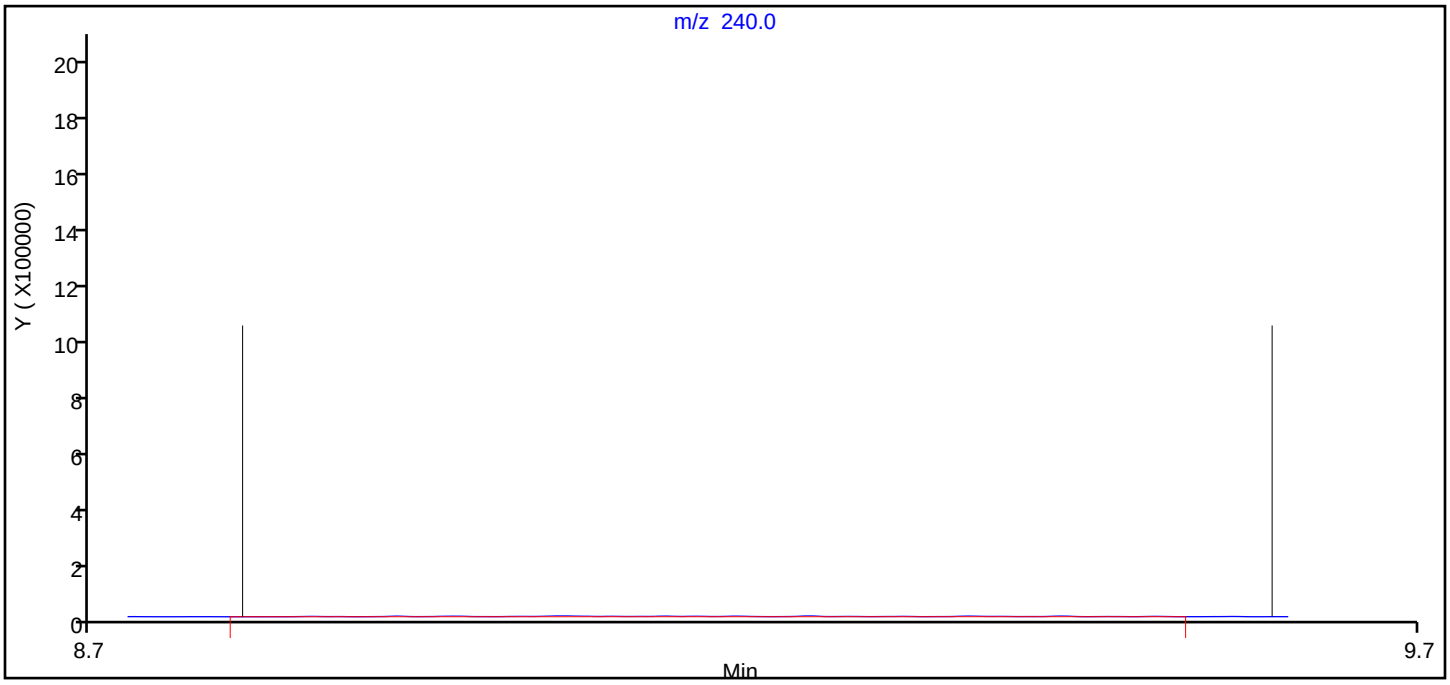
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 48 C4-Dibenzothiophenes, CAS: STL00967

Processing Results



Exp RT	RT	Response	Amount
9.20	9.16	40873	0.086357
9.20	9.17	48944	0

Reviewer: cochranj, 30-Aug-2019 11:35:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

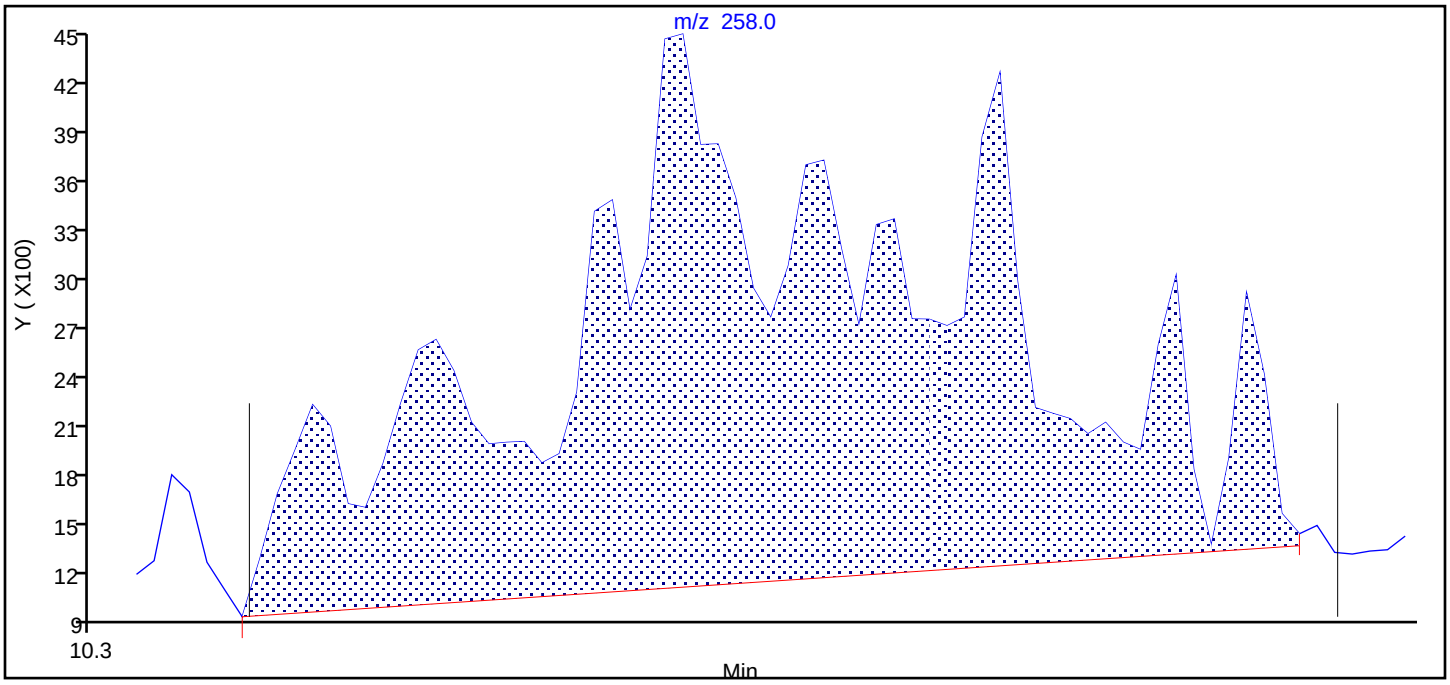
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 56 C4-Fluoranthenes/Pyrene, CAS: STL01791

Processing Results



Exp RT	RT	Response	Amount
10.62	10.61	40817	0.073017

Reviewer: cochranj, 30-Aug-2019 11:35:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

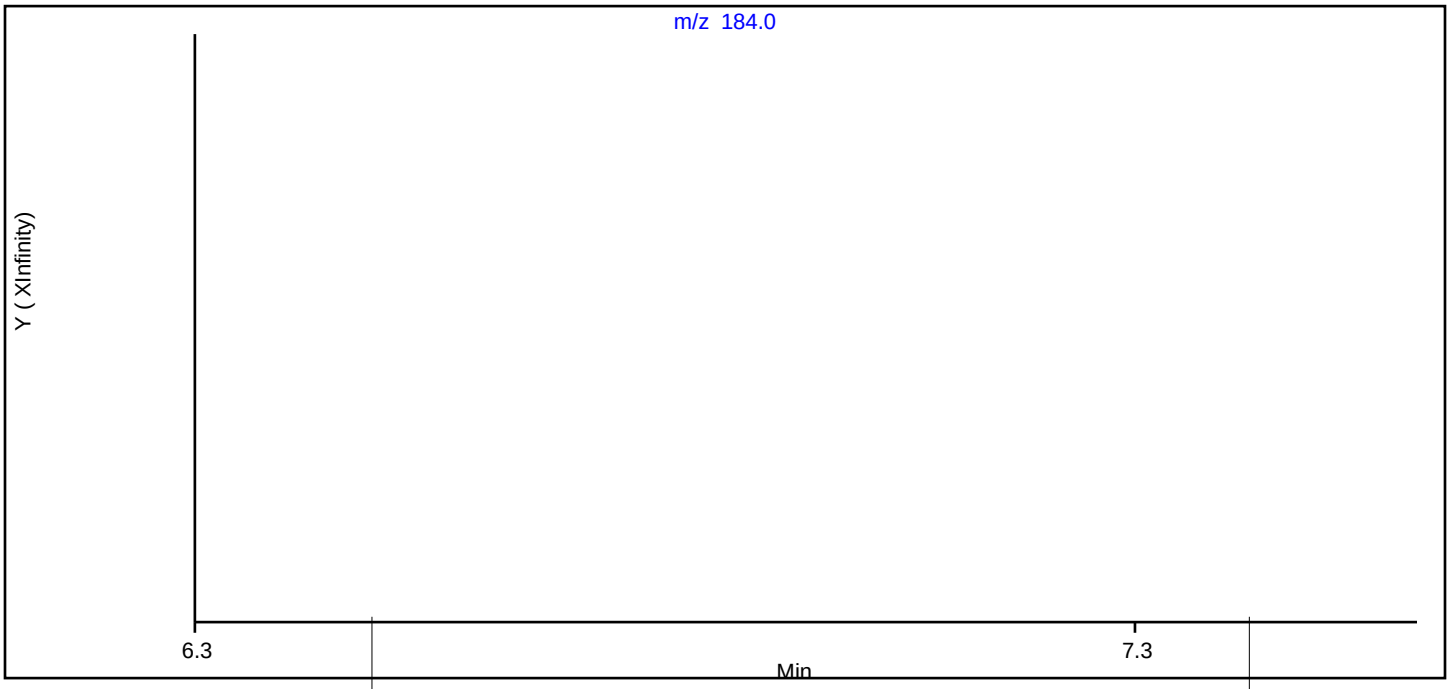
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 41 C4-Naphthalenes, CAS: STL00919

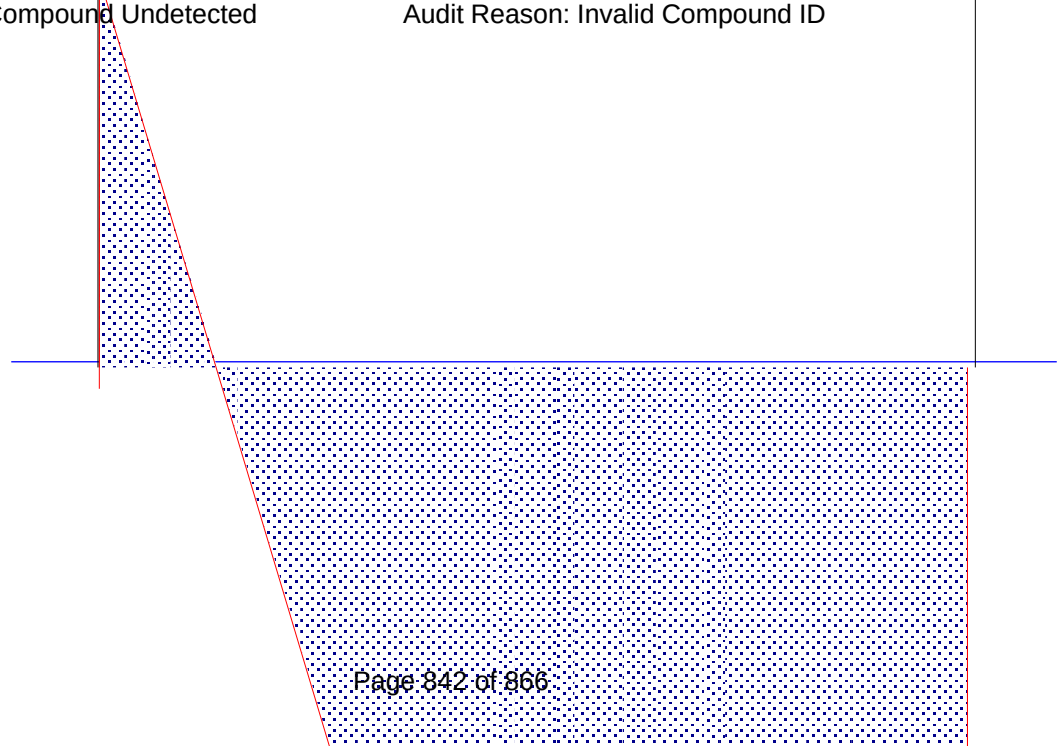
Processing Results



Exp RT	RT	Response	Amount
6.95	6.95	289974	0.638633
6.95	6.95	565215	0

Reviewer: cochranj, 30-Aug-2019 11:35:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID



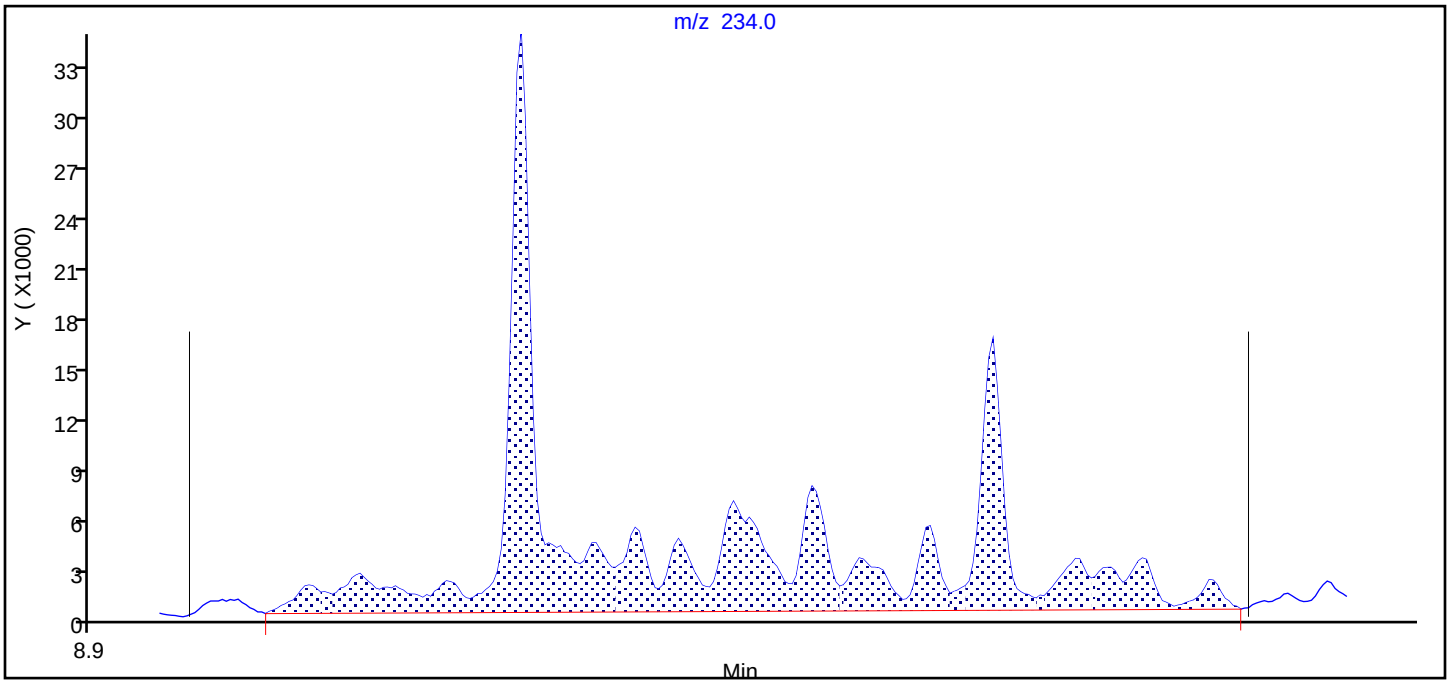
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

A 52 C4-Phenanthrenes/Anthracenes, CAS: STL00904

Processing Results



Exp RT	RT	Response	Amount
9.33	9.35	122765	0.240361
9.33	9.29	126949	0

Reviewer: cochranj, 30-Aug-2019 11:35:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

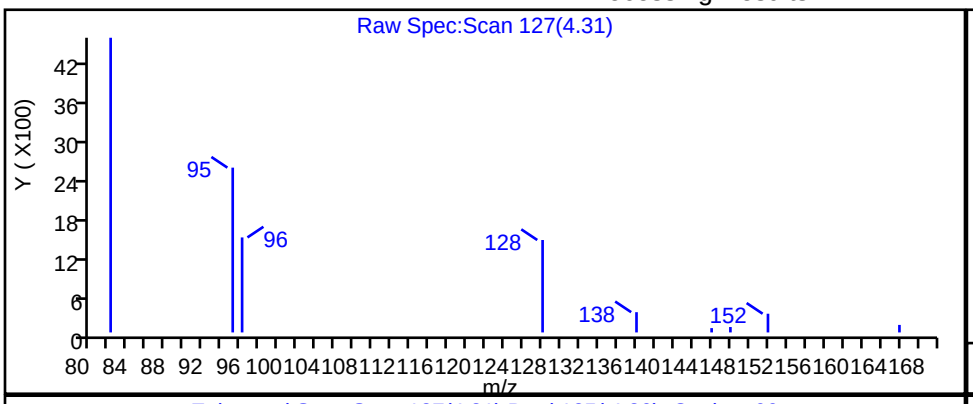
User Disabled Compound Report

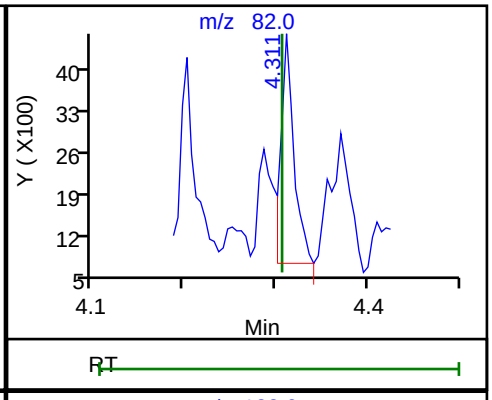
Eurofins TestAmerica, Knoxville

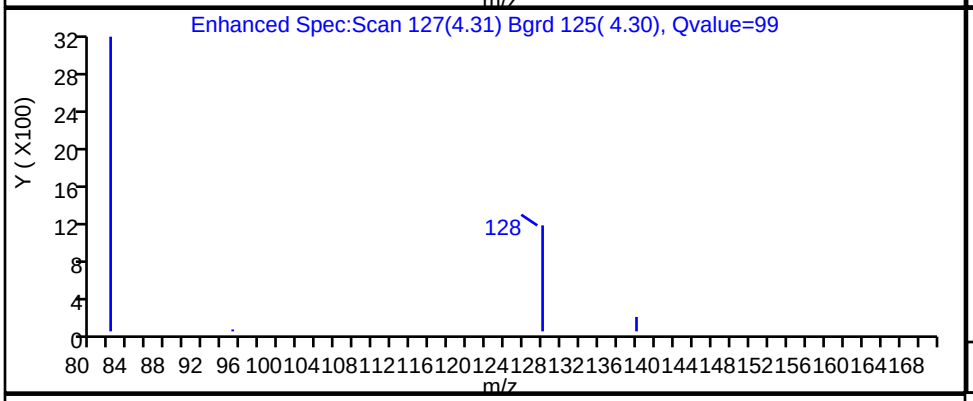
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

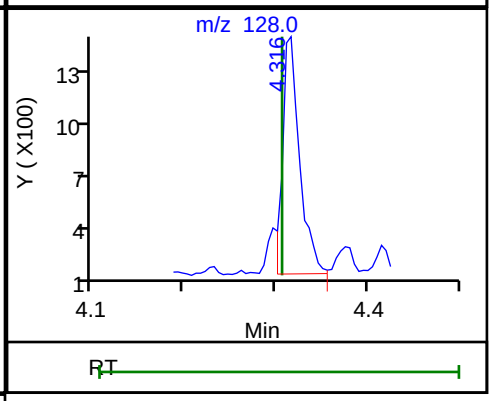
$ 1 Nitrobenzene-d5, CAS: 4165-60-0

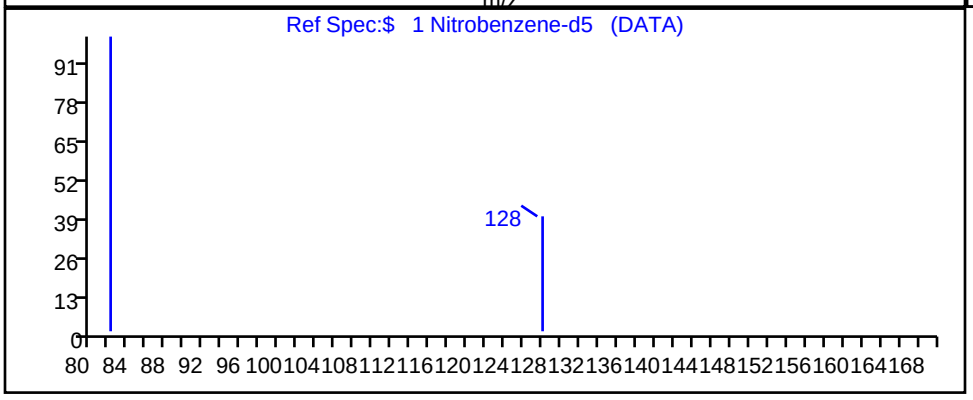
Processing Results











RT	Mass	Response	Amount
4.31	82.00	3795	0.031510
4.32	128.00	1715	

Reviewer: cochranj, 31-Aug-2019 10:59:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

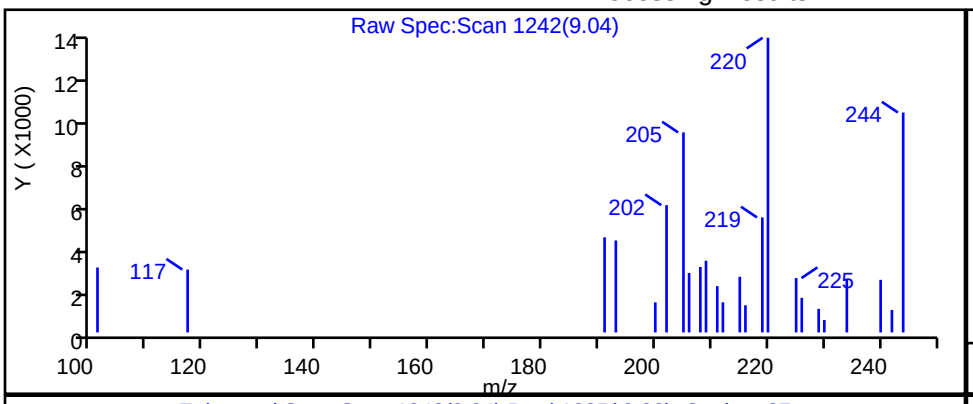
User Disabled Compound Report

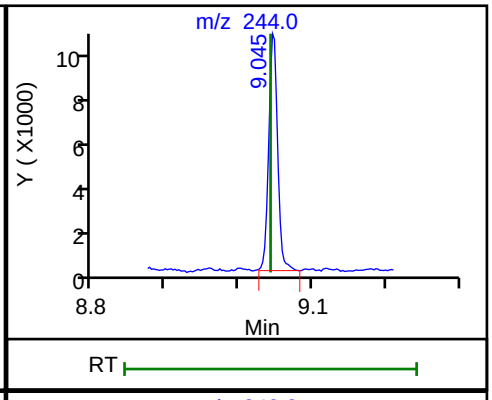
Eurofins TestAmerica, Knoxville

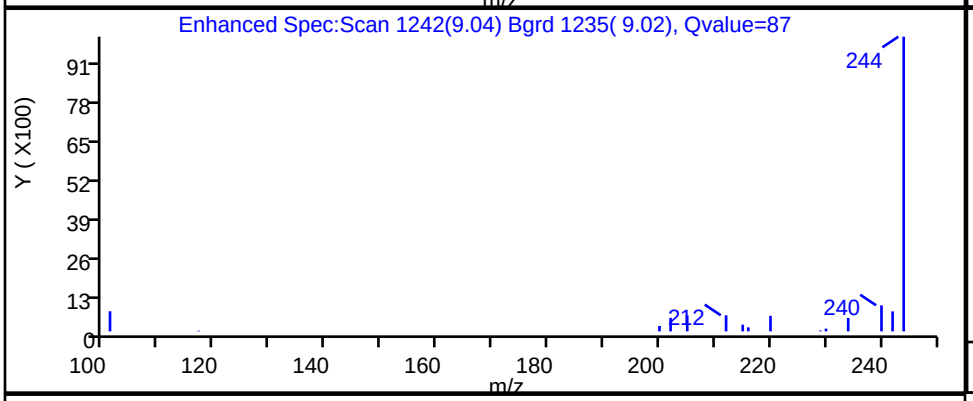
Data File:	\\chromna\Knoxville\ChromData\MP\20190828-12890.b\580-87761-b-21-c msd.D				
Injection Date:	29-Aug-2019 20:30:30	Instrument ID:	MP		
Lims ID:	580-87761-B-21-C MSD				
Client ID:	22T-SG-04_20190718				
Operator ID:	11211	ALS Bottle#:	14	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	30.0000		
Method:	8270D_SIM_MP	Limit Group:	MSS - 8270D_SIM ICAL		
Column:	Restek-5Sil MS 25um (0.25 mm)	Detector	MS SCAN		

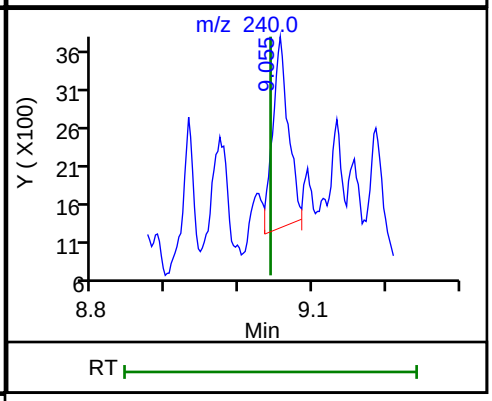
$ 24 Terphenyl-d14, CAS: 1718-51-0

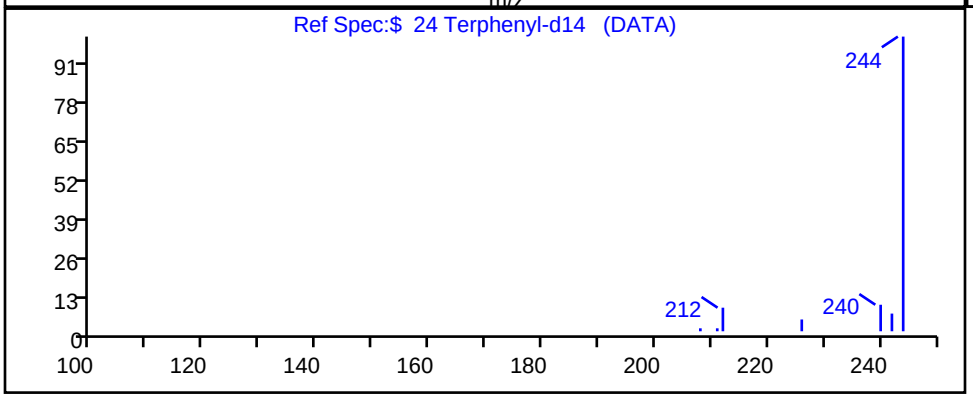
Processing Results











RT	Mass	Response	Amount
9.04	244.00	8426	0.027891
9.06	240.00	3745	

Reviewer: cochranj, 31-Aug-2019 10:59:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Start Date: 07/21/2019 11:55

Analysis Batch Number: 32163 End Date: 07/21/2019 15:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 140-32163/2		07/21/2019 11:55	1	ic 1XC.D	Rxi-5SilMS 25 0.25(mm)
IC 140-32163/3		07/21/2019 12:20	1	ic 2X.D	Rxi-5SilMS 25 0.25(mm)
IC 140-32163/4		07/21/2019 12:45	1	ic 3X.D	Rxi-5SilMS 25 0.25(mm)
ICIS 140-32163/5		07/21/2019 13:11	1	icis 4X.D	Rxi-5SilMS 25 0.25(mm)
IC 140-32163/6		07/21/2019 13:36	1	ic 5X.D	Rxi-5SilMS 25 0.25(mm)
IC 140-32163/7		07/21/2019 14:01	1	ic 6X.D	Rxi-5SilMS 25 0.25(mm)
IC 140-32163/8		07/21/2019 14:26	1	ic 7X.D	Rxi-5SilMS 25 0.25(mm)
ICV 140-32163/10		07/21/2019 15:17	1	icvX.D	Rxi-5SilMS 25 0.25(mm)

Eurofins/TestAmerica Knoxville GC/MS-SIM ICAL Review/Narrative Checklist
Method: PAHs and Selected SVOCs – KNOX-ID-0016, Revision 12

Instrument:	MP	TALS Batch / Event #	PAH	0010 PAH	Scanned ☐
Analysis Date:	7/21/19	PAH:	2060/32163	/	
Chrom WL #	12531	EU:	/	/	
		PCB:	/	/	
		Other:	/	/	

Chrom Worklist/Peak Review	1st	*Comments*	2nd
1. Re-read each limit group [method editor-limit groups]	✓		
2. Verify LOD [method editor -> edit -> MDL]	✓		
3. Are the reagents & init./final vol. correct [Sample & Run Reagents]	✓		
4. First levels "unlock/clear" or "unlock/clear by sublist" as appropriate?	✓		✓
5. Are the Cal Levels & groups correct in WL?	✓		✓
6. Were all standards injected within 12 hr of first injection? [F7]	✓		✓
7. Was the high point std checked for saturation [flags + visible inspection: $8.4x10^6$]	✓		✓
8. If manual integrations were performed, are they appropriate with proper reason given?	✓		✓
9. Were all peaks identified automatically? If not, list analytes: _____	✓	*Modify method for detection must be attempted and all points reprocessed. Any non-detected peaks must be verified in each affected sample.*	✓
10. Elution order checked on isomeric pairs?			
• 1,4 dichlorobenzene before 1,2 dichlorobenzene (& d4 isomers)	✓		✓
• 2-methylnaphthalene before 1-methylnaphthalene (& d10 isomers)	✓		✓
• acenaphthylene before acenaphthene (& d10 isomers)	✓		✓
• dibenzothiophene before phenanthrene	✓		✓
• phenanthrene before anthracene (& d10 isomers)	✓		✓
• 3-methylphenanthrene and 1-methylphenanthrene	✓		✓
• fluoranthene before pyrene (& d10 isomers)	✓		✓
• benzo(a)anthracene before chrysene (& d12 isomers)	✓		✓
• benzo(b)fluoranthene before benzo(k)fluoranthene (& d12 isomers)	✓		✓
• benzo(e)pyrene before benzo(a)pyrene before perylene (& d12 isomers)	✓		✓
• Indeno(1,2,3-cd)pyrene before benzo(g,h,i)perylene (& d12 isomers)	✓		✓

Chrom MLG Review	PAH	0010	Comments/NCM#	PAH	0010
11. Are ICAL start/end dates/times correct on summary? [F6]	✓			✓	
12. Are ≥ 5 levels of each compound/surrogate active? [F6]	✓			✓	
13. Is low level standard at or below RL & points consec? [F6]	✓			✓	
14. Are all %RSD ≤30% [F6]	✓			✓	
15. Was a linear or quadratic fit used for analytes >30 % RSD? [F6]	N/A			NA	
16. If curves were used, is correlation coefficient ≥0.990? [F6]					
17. At least 6 consecutive points used for quadratic curves? [F6]					
18. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous? [Cntrl-C, details]					
19. Is the intercept < RL for each curve? [Cntrl-C, details]					
20. Is the readback for each point within criteria? [F6-Drift] (<40% for all points, except low point < 50 %)	✓			✓	
21. Was the ICV within ± 30% recovery? [F8-icv]	✓		☐ ICV out, smp ND (NCM#)	✓	

1st level reviewer: MP/[illegible]	Date: 7/29/19	2nd level reviewer: [illegible]	Date: 7/29/19
Comments:			

* Such action must be taken in consultation with client.

ID028R28.doc, 4/17/19

Eurofins/TestAmerica Knoxville GC/MS-SIM ICAL Review/Narrative Checklist
Method: PAHs and Selected SVOCs – KNOX-ID-0016, Revision 12

TALS MLG Review	PAH	0010	Comments	PAH	0010
22. Upload ICAL	✓		✓		
23. Graphics uploaded? [Sample List Tab]	✓			✓	
24. All points are in the most recent active calibration event #? [Calibration ID # in the sample results tab & Calibration Events] [Calibration Events - 'Fix ICAL Linkage' if needed]	✓			✓	
25. If criteria not met, was a NCM generated?	NA			NA	
26. After review in TALS, approve the calibrations in TALS				✓	
27. After verifying TALS is correct, lock method in Chrom <resolve any error issues>				✓	
28. Checklist scanned & attached properly?					
1st level reviewer: MAP	Date: 7/30/19		2nd level reviewer: CLJ	Date: 7/29/19	
Comments:					

* Such action must be taken in consultation with client.

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Start Date: 08/29/2019 12:06

Analysis Batch Number: 33099 End Date: 08/29/2019 21:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 140-33099/2		08/29/2019 12:06	1	ccvis.D	Rxi-5SilMS 25 0.25(mm)
WDM 140-33099/3		08/29/2019 12:31	1	wdm.D	Rxi-5SilMS 25 0.25(mm)
MB 140-32772/1-A		08/29/2019 15:02	1	mb 140-32772-1-a.D	Rxi-5SilMS 25 0.25(mm)
LCS 140-32772/2-A		08/29/2019 15:27	1	lcs 140-32772-2-a.D	Rxi-5SilMS 25 0.25(mm)
140-15918-A-2-A MDLV		08/29/2019 15:52	1		Rxi-5SilMS 25 0.25(mm)
ZZZZZ		08/29/2019 16:17	30		Rxi-5SilMS 25 0.25(mm)
580-87761-5		08/29/2019 17:08	30	580-87761-b-5-a .D	Rxi-5SilMS 25 0.25(mm)
580-87761-12		08/29/2019 17:34	30	580-87761-b-12-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-13		08/29/2019 17:59	30	580-87761-b-13-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-15		08/29/2019 18:24	30	580-87761-b-15-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-17		08/29/2019 18:50	30	580-87761-b-17-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-18		08/29/2019 19:15	30	580-87761-b-18-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-21		08/29/2019 19:40	30	580-87761-b-21-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-21 MS		08/29/2019 20:05	30	580-87761-b-21-b ms.D	Rxi-5SilMS 25 0.25(mm)
580-87761-21 MSD		08/29/2019 20:30	30	580-87761-b-21-c msd.D	Rxi-5SilMS 25 0.25(mm)
580-87761-22		08/29/2019 20:55	30	580-87761-b-22-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-23		08/29/2019 21:20	30	580-87761-b-23-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-26		08/29/2019 21:45	30	580-87761-b-26-a.D	Rxi-5SilMS 25 0.25(mm)

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

	TALS Batch #:	33099	
		ICAL TALS Batch / Event #	Scanned □
Instrument:	MP	32163 / 12663	
Analysis Date:	4/25/19		
ICAL Chrom WL #	12531		
CCAL Chrom WL #	12690		

CCV Chrom/Worklist Review	1st	*Comments/NCM #*	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Are all required calibration standards in worklist?	✓		
3. Was the CCAL compared to the most recent & correct ICAL for each CCV & LG? (verify ICAL batch #, start/end Cal date & time) [F8]	✓		✓
4. Elution order checked on isomeric pairs/coeluters?			
• 2 & 1 - methylnaphthalene	✓		✓
• acenaphthylene / acenaphthene	✓		✓
• phenanthrene / anthracene	✓		✓
• 3-methylphenanthrene / 1-methylphenanthrene	✓		✓
• fluoranthene / pyrene	✓		✓
• benzo(a)anthracene / chrysene	✓		✓
• benzo(b)fluoranthene / benzo(k)fluoranthene	✓		✓
• benzo(e)pyrene / benzo(a)pyrene / perylene	✓		✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene	✓		✓
5. Manual integrations properly performed, correctly ID'd, baseline clearly identified, and correct reason given?	N/A	*Note: manual selections should be updated and all data reprocessed*	NA
6. Were all peaks identified automatically? *If not, list analytes:* _____	✓	*Note: any non-detected peaks must be verified in each affected sample.*	✓
7. Has the retention time been updated to the method?	✓		✓
8. Are the internal standard responses within limits for each CCV? (50-200% of the mid-level ICAL standard) [F8-istd]	✓		✓
9. Are the internal standard retention times within limits for each CCV? (±30 seconds of the mid-level ICAL standard) [F8-istd]	✓		✓
10. Have the alkyl groups in WDM been correctly integrated?	✓		✓
CCV Chrom/TALS MLG Review *[F8] or TALS sample tab*			
11. Do the RF's meet minimum criteria	✓		✓
12. Is the %D ≤20% for 80% of compounds?	✓		✓
13. For any compound > 20% (low), was a RL standard analyzed & detected? *	N/A	□ CCV out, EST (1) (NCM#_____)	NA
14. For any compound > 20%D (high or low), NCM generated? *	N/A	□ CCV out, EST (2) (NCM#_____)	NA
15. Benz(b & k) fluoranthene: height of the valley between < 50% of average of the two peak heights? [F8 Resolution]	✓		✓
16. Is the calibration event # correct for each CCV? *[TALS Sample Results tab]*	✓		✓

Continued on next page

* Such action must be taken in consultation with client.

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

TALS BATCH #: 33099

Batch Chrom/TALS review	1st	Comments/NCM #	2nd
1. Have the sample ID's and dilution factors been confirmed (check sequence, autosampler positions, etc.)?	✓		
2. Were all samples injected within 12 hr of CCV?	✓		
3. Method blank or instrument blank analyzed?	✓		✓
4. Are all analytes in the method blank < ½ RL	✓	□ MB CLC <5x RL (NCM#_____) □ MB Rpt ND (NCM#_____) □ MB-Rpt.10x (NCM#_____) □ MB-insuff samp (NCM#_____) □ MB-insuff samp -CONSUMED (NCM#_____) □ MB > ½ RL (explain) (NCM#_____) □ MB RX - HT out (NCM#_____)	✓
5. Method blank surrogate recoveries within QC limits? [F8] or [Batch Results SUR Tab]	✓	□ Surr-MB (1) high (NCM#_____) + (2) smp OK (NCM#_____) **or** (3) Insuff. sample (NCM#_____) **or** (4) CONSUMED (NCM#_____)	✓
6. LCS done per batch and criteria met with limited # marginal exceedences allowed (see table) and no two consecutive MEs? [Chrom-F8] [TALS-Sample Results Tab]	✓	□ LCS/D-Insuff smp (NCM#_____) □ LCS/D-Insuff smp - CONSUMED (NCM#_____) □ LCS/D %R High < RL in smp (1+2-5) (NCM#_____) □ LCS/D out-RX HT out (NCM#_____) □ Mar. Exceed. w/in ME limits & Random (NCM#_____) □ LCS/D-%RPD (%R OK) (NCM#_____) □ NCM# **140-6154**: Water wash	✓
7. All runs - peaks ID'd correctly and false positives removed? Flag or narrate analyte interferences issues > RL *NCM only needed for "cn"* **FLAGS**: K: benzo(b/k) reported as (b) k: benzo(b/k) reported as (k) a: benzo(a)anthracene/chrysene reported as b(a)a y: benzo(a)anthracene/chrysene reported as chrysene CI: chromatographic interferences – high bias cn: see case narrative	✓	□ Interf-Chrom (NCM#_____) □ "cn" (see narrative): (NCM#_____) Samples/ analytes: _____ _____ _____ _____ _____	✓
8. Manual integrations properly performed, correctly ID'd, baseline clearly identified, and correct reason given?	✓		✓
9. Are Alkyl group start/end times and patterns identified?	✓	"AP" flags applied where appropriate? (NCM not needed unless necessary)	✓
10. Are surrogates within QC limits? [Batch Results SUR Tab] If no, list samples, reason and NCM # Sample / Reason: 12 DIL; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22 Sample / Reason: 23 DIL; 24; 25	*	□ Surr-High-ND (1,8) (NCM#_____) □ Surr-Incorrect Spike amt (NCM#_____) □ Surr-Insuff Smp (1) insuff smp (NCM#_____) or (4) CONSUMED (NCM#_____) + (2) low bias (NCM#_____) or (3) high bias (NCM#_____) □ Surr-Insuff Smp - CONSUMED (NCM#_____) □ Surr-Matrix (1-5) (NCM#_____) □ Surr-rpt per client (released w/o further investigation)* (NCM#_____) □ Surr-RX concur (NCM#_____) □ Surr-RX pass (RX outside HT, but w/in limits) (NCM#_____) ☑ Dil – Surr dil out or estimated & elev RL's (opt 1-4 & 5-8): (NCM# 19429 ✓) □ NCM# **140-6154**: Water wash	✓
11. Are internal standards within QC limits? [Batch Results IS Tab] If no, list samples, reason and NCM # Sample / Reason / Sample / Reason	✓	□ ISTD- Matrix (NCM#_____) □ ISTD- Matrix DL required (NCM#_____) □ ISTD- non-targets affected (NCM#_____) □ ISTD- RX/RA concur (NCM#_____) □ NCM# **140-5757:** Samples bracketed by acceptable runs*.	✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Continued on next page

* Such action must be taken in consultation with client.

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

		TALS BATCH #: 33099	
Batch TALS Review	***1st***	***Comments/NCM #***	***2nd***
12. For initial analysis with elevated RL's, explain: *List diluted samples and reason:* Sample / Reason: 12 17 Screen; 14 18; 15 19; 16 20 Sample / Reason: 21 25 Screen; 22; 23; 24	*	□ RL – Final Vol (NCM#_____) □ RL – Init Vol (matrix) (NCM#_____) □ RL – Insuff. Smp (NCM#_____) ☑ RL – Dil Screen (NCM# 19430) □ RL – Dil Targets (NCM#_____) □ RL – Dil Non-targets (NCM#_____)	*
13. Graphics uploaded?	✓		✓
14. Sample special instructions verified?	✓		✓
15. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
16. Each job has QC created (CCV, MB, LCS)? [Sample List Tab]	✓		✓
17. Analytes over calibration range set to secondary & dilutions scheduled for analysis? [Conditions Review Tab] Sample / Reason / Sample / Reason	✓	□ ICAL-Range Exceed; Min Dil 1 – client OK'd * (NCM#_____) 2 – dil for other cmpds (NCM#_____)	✓
18. For dilutions, diluted analytes set to primary, others to "Acceptable"? [Sample Results Tab]	✓		✓
19. If MS/MSD was done on this client's sample or for reported batch QC, were the MS/MSD recoveries and RPDs within laboratory generated QC limits?	*	□ MS/MSD - %R out, LCS OK ☑ MS/MSD - high targets ☑ MS/MSD – spk/surr diluted out □ MS/MSD/Dup - % RPD	*
20. Verify reagents have not expired [Reagents Tab]	✓		✓
21. Samples not reported set to "Acceptable" or "Rejected" [Sample Results Tab]	✓		✓
22. CCV linked to all samples? [QC Links]	✓		✓
23. Samples linked to correct method blank & LCS/D & MS/D? [QC Links]	✓		✓
24. Correct ICV's linked to all samples? [QC Links]	✓		✓
25. Run Data Review Checker and acknowledge findings.	✓		✓
26. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
27. QC checker run for batch and items addressed			✓
28. Checklist scanned & attached properly?			✓

1st level: [signature] / MDP	Date 8/31/19	2nd level: [signature]	Date 8/3/19
Comments:			
* Sample were copper treated for sulfur			
NCM # 19431			
Example calculation (per prep batch):			

* Such action must be taken in consultation with client.

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 580-87761-3

SDG No.:

Instrument ID: MP Start Date: 08/30/2019 10:26

Analysis Batch Number: 33157 End Date: 08/30/2019 16:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 140-33157/2		08/30/2019 10:26	1	ccvis.D	Rxi-5SilMS 25 0.25(mm)
WDM 140-33157/3		08/30/2019 10:51	1	wdm.D	Rxi-5SilMS 25 0.25(mm)
ZZZZZ		08/30/2019 13:11	5		Rxi-5SilMS 25 0.25(mm)
580-87761-5 DL		08/30/2019 14:02	50	580-87761-b-5-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-15 DL		08/30/2019 14:27	100	580-87761-b-15-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-17 DL		08/30/2019 14:53	100	580-87761-b-17-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-18 DL		08/30/2019 15:18	100	580-87761-b-18-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-23 DL		08/30/2019 15:44	100	580-87761-b-23-a.D	Rxi-5SilMS 25 0.25(mm)
580-87761-13 DL		08/30/2019 16:09	200	580-87761-b-13-a.D	Rxi-5SilMS 25 0.25(mm)
ZZZZZ		08/30/2019 16:59	100		Rxi-5SilMS 25 0.25(mm)

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

	TALS Batch #:	33157	
		ICAL TALS Batch / Event #	Scanned □
Instrument:	MP	32463/2960	
Analysis Date:	5/30/19		
ICAL Chrom WL #	12531		
CCAL Chrom WL #	12910		

CCV Chrom/Worklist Review	1st	*Comments/NCM #*	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Are all required calibration standards in worklist?	✓		
3. Was the CCAL compared to the most recent & correct ICAL for each CCV & LG? (verify ICAL batch #, start/end Cal date & time) [F8]	✓		✓
4. Elution order checked on isomeric pairs/coeluters?			
• 2 & 1 - methylnaphthalene	✓		✓
• acenaphthylene / acenaphthene	✓		✓
• phenanthrene / anthracene	✓		✓
• 3-methylphenanthrene / 1-methylphenanthrene	✓		✓
• fluoranthene / pyrene	✓		✓
• benzo(a)anthracene / chrysene	✓		✓
• benzo(b)fluoranthene / benzo(k)fluoranthene	✓		✓
• benzo(e)pyrene / benzo(a)pyrene / perylene	✓		✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene	✓		✓
5. Manual integrations properly performed, correctly ID'd, baseline clearly identified, and correct reason given?	N/A	*Note: manual selections should be updated and all data reprocessed*	NA
6. Were all peaks identified automatically? *If not, list analytes:*	✓	*Note: any non-detected peaks must be verified in each affected sample.*	✓
7. Has the retention time been updated to the method?	✓		✓
8. Are the internal standard responses within limits for each CCV? (50-200% of the mid-level ICAL standard) [F8-istd]	✓		✓
9. Are the internal standard retention times within limits for each CCV? (±30 seconds of the mid-level ICAL standard) [F8-istd]	✓		✓
10. Have the alkyl groups in WDM been correctly integrated?	✓		✓
CCV Chrom/TALS MLG Review *[F8] or TALS sample tab*			
11. Do the RF's meet minimum criteria	✓		
12. Is the %D ≤20% for 80% of compounds?	✓		✓
13. For any compound > 20% (low), was a RL standard analyzed & detected? *	N/A	□ CCV out, EST (1) (NCM#_____)	✓
14. For any compound > 20%D (high or low), NCM generated? *	N/A	□ CCV out, EST (2) (NCM#_____)	NA
15. Benz(b & k) fluoranthene: height of the valley between < 50% of average of the two peak heights? [F8 Resolution]	✓		NA
16. Is the calibration event # correct for each CCV? *[TALS Sample Results tab]*	✓		✓

Continued on next page

* Such action must be taken in consultation with client.

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

Batch Chrom/TALS review	1st	TALS BATCH #: 33157 Comments/NCM #	2nd
1. Have the sample ID's and dilution factors been confirmed (check sequence, autosampler positions, etc.)?	✓		
2. Were all samples injected within 12 hr of CCV?	✓		
3. Method blank or instrument blank analyzed?	✓		✓
4. Are all analytes in the method blank < ½ RL	✓	□ MB CLC <5x RL (NCM#_____) □ MB Rpt ND (NCM#_____) □ MB-Rpt.10x (NCM#_____) □ MB-insuff samp (NCM#_____) □ MB-insuff samp -CONSUMED (NCM#_____) □ MB > ½ RL (explain) (NCM#_____) □ MB RX - HT out (NCM#_____)	✓
5. Method blank surrogate recoveries within QC limits? [F8] or [Batch Results SUR Tab]	NA	□ Surr-MB (1) high (NCM#_____) + (2) smp OK (NCM#_____) **or** (3) Insuff. sample (NCM#_____) **or** (4) CONSUMED (NCM#_____)	NA
6. LCS done per batch and criteria met with limited # marginal exceedences allowed (see table) and no two consecutive MEs? [Chrom-F8] [TALS-Sample Results Tab]	NA	□ LCS/D-Insuff smp (NCM#_____) □ LCS/D-Insuff smp - CONSUMED (NCM#_____) □ LCS/D %R High < RL in smp (1+2-5) (NCM#_____) □ LCS/D out-RX HT out (NCM#_____) □ Mar. Exceed. w/in ME limits & Random (NCM#_____) □ LCS/D-%RPD (%R OK) (NCM#_____) □ NCM# **140-6154**: Water wash	NA
7. All runs - peaks ID'd correctly and false positives removed? Flag or narrate analyte interferences issues > RL *NCM only needed for "cn"* **FLAGS**: K: benzo(b/k) reported as (b) k: benzo(b/k) reported as (k) a: benzo(a)anthracene/chrysene reported as b(a)a y: benzo(a)anthracene/chrysene reported as chrysene CI: chromatographic interferences – high bias cn: see case narrative	✓	□ Interf-Chrom (NCM#_____) □ "cn" (see narrative): (NCM#_____) Samples/ analytes: _____ _____ _____ _____ _____	✓
8. Manual integrations properly performed, correctly ID'd, baseline clearly identified, and correct reason given?	✓		✓
9. Are Alkyl group start/end times and patterns identified?	✓	"AP" flags applied where appropriate? (NCM not needed unless necessary)	✓
10. Are surrogates within QC limits? [Batch Results SUR Tab] If no, list samples, reason and NCM # Sample / Reason / Sample / Reason	✓	□ Surr-High-ND (1,8) (NCM#_____) □ Surr-Incorrect Spike amt (NCM#_____) □ Surr-Insuff Smp (1) insuff smp (NCM#_____) or (4) CONSUMED (NCM#_____) + (2) low bias (NCM#_____) or (3) high bias (NCM#_____) □ Surr-Insuff Smp - CONSUMED (NCM#_____) □ Surr-Matrix (1-5) (NCM#_____) □ Surr-rpt per client (released w/o further investigation)* (NCM#_____) □ Surr-RX concur (NCM#_____) □ Surr-RX pass (RX outside HT, but w/in limits) (NCM#_____) □ Dil – Surr dil out or estimated & elev RL's (opt 1-4 & 5-8): (NCM#_____) □ NCM# **140-6154**: Water wash	✓
11. Are internal standards within QC limits? [Batch Results IS Tab] If no, list samples, reason and NCM # Sample / Reason / Sample / Reason	✓	□ ISTD- Matrix (NCM#_____) □ ISTD- Matrix DL required (NCM#_____) □ ISTD- non-targets affected (NCM#_____) □ ISTD- RX/RA concur (NCM#_____) □ NCM# **140-5757:** Samples bracketed by acceptable runs*.	✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Continued on next page

* Such action must be taken in consultation with client.

Eurofins/TestAmerica Knoxville Semivolatile GC/MS Continuing Calibration Data Review / Narrative Checklist
8270D – KNOX-MS-0027, Rev 0

Batch TALS Review	1st	TALS BATCH #: 33157 Comments/NCM #	2nd
12. For initial analysis with elevated RL's, explain: *List diluted samples and reason:* Sample: B, Reason: Screen	X	☐ RL – Final Vol (NCM#_____) ☐ RL – Init Vol (matrix) (NCM#_____) ☐ RL – Insuff. Smp (NCM#_____) ☑ RL – Dil Screen (NCM# 19432) ✓ ☐ RL – Dil Targets (NCM#_____) ☐ RL – Dil Non-targets (NCM#_____)	X
13. Graphics uploaded?	✓		✓
14. Sample special instructions verified?	✓		✓
15. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
16. Each job has QC created (CCV, MB, LCS)? [Sample List Tab]	✓		✓
17. Analytes over calibration range set to secondary & dilutions scheduled for analysis? [Conditions Review Tab]	N/A	☐ ICAL-Range Exceed; Min Dil 1 – client OK'd * (NCM#_____) 2 – dil for other cmpds (NCM#_____)	✓
18. For dilutions, diluted analytes set to primary, others to "Acceptable"? [Sample Results Tab]	N/A		NA
19. If MS/MSD was done on this client's sample or for reported batch QC, were the MS/MSD recoveries and RPDs within laboratory generated QC limits?	N/A	☐ MS/MSD - %R out, LCS OK ☐ MS/MSD - high targets ☑ MS/MSD – spk/surr diluted out ✓ 9/4/19 CLG ☐ MS/MSD/Dup - % RPD	NA NA
20. Verify reagents have not expired [Reagents Tab]	✓		✓
21. Samples not reported set to "Acceptable" or "Rejected" [Sample Results Tab]	N/A		NA
22. CCV linked to all samples? [QC Links]	✓		✓
23. Samples linked to correct method blank & LCS/D & MS/D? [QC Links]	✓		✓
24. Correct ICV's linked to all samples? [QC Links]	✓		✓
25. Run Data Review Checker and acknowledge findings.	✓		✓
26. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
27. QC checker run for batch and items addressed			✓
28. Checklist scanned & attached properly?			✓

1st level: JR / MAP	Date 8/31/19	2nd level: CLG	Date 9/4/19
Comments:			
Samples were copper treated for sulfur NCM# 19433		✓	
Example calculation (per prep batch):			

* Such action must be taken in consultation with client.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxvill Job No.: 580-87761-3

SDG No.:

Batch Number: 32772 Batch Start Date: 08/26/19 13:35 Batch Analyst: Ivey, Crystal L

Batch Method: 3540C Batch End Date: 08/29/19 14:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	60SP8270SIMSR 00008	60SP8270SIMTA 00009		
MB 140-32772/1		3540C, 8270D SIM		10 g	0.5 mL	0.5 mL			
LCS 140-32772/2		3540C, 8270D SIM		10 g	0.5 mL	0.5 mL	0.5 mL		
580-87761-B-5	22T-VB-02-7.0-8.8 20190717	3540C, 8270D SIM	T	17.69 g	0.5 mL	0.5 mL			
580-87761-B-12	22T-VB-03-2.0-4.0 20190717	3540C, 8270D SIM	T	18.60 g	0.5 mL	0.5 mL			
580-87761-B-13	22T-VB-03-4.0-6.0 20190717	3540C, 8270D SIM	T	17.24 g	0.5 mL	0.5 mL			
580-87761-B-15	22T-VB-03-8.0-9.0 20190717	3540C, 8270D SIM	T	16.45 g	0.5 mL	0.5 mL			
580-87761-B-17	22T-VB-03-11.2-12 20190717	3540C, 8270D SIM	T	14.71 g	0.5 mL	0.5 mL			
580-87761-B-18	22T-VB-03-4.0-6.0-D 20190717	3540C, 8270D SIM	T	17.02 g	0.5 mL	0.5 mL			
580-87761-B-21	22T-SG-04_20190718	3540C, 8270D SIM	T	20.03 g	0.5 mL	0.5 mL			
580-87761-B-21 MS	22T-SG-04_20190718	3540C, 8270D SIM	T	20.05 g	0.5 mL	0.5 mL	0.5 mL		
580-87761-B-21 MSD	22T-SG-04_20190718	3540C, 8270D SIM	T	20.07 g	0.5 mL	0.5 mL	0.5 mL		
580-87761-B-22	22T-SG-05_20190718	3540C, 8270D SIM	T	20.31 g	0.5 mL	0.5 mL			
580-87761-B-23	22T-SG-06_20190718	3540C, 8270D SIM	T	20.29 g	0.5 mL	0.5 mL			
580-87761-B-26	22T-SG-09_20190718	3540C, 8270D SIM	T	20.01 g	0.5 mL	0.5 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxvill Job No.: 580-87761-3

SDG No.:

Batch Number: 32772 Batch Start Date: 08/26/19 13:35 Batch Analyst: Ivey, Crystal L

Batch Method: 3540C Batch End Date: 08/29/19 14:20

Batch Notes	
Balance ID	02
Batch Comment	gpc1& 2 ajr 8/27/19
Analyst ID - Concentration	VGC
Analyst ID - Clean Up	SDO
Exchange Solvent ID	248089
Analyst ID - Extraction	CI
Extraction 1 End Time	07:40
Extraction 1 Start Time	13:35
Na2SO4 ID	243619
Nominal Amount Used	10 g
Prep Solvent ID	251753
Perform Calculation (0=No, 1=Yes)	1
Silica Gel ID	243554
Analyst ID - Spike Analyst	CI
Analyst ID - Spike Witness Analyst	JPQ
Thimble Lot ID	1692078802, 1693612301

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Eurofins/TestAmerica Knoxville Prep Batch Review Checklist

Batch # 32772

Split Batch # NA

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd Level
1. Were the samples extracted within the required holding times?		✓		If No, NCM #: _____	✓
2. Are the final extracts free of water, precipitates, multiple phases, and for HRMS - color?		✓			✓
3. Were all project specific requirements met?		✓			✓
4. Were the correct start and completion dates entered into TALS?		✓			✓
5. Are the spike IDs and volumes correct in TALS for the method?		✓			✓
6. Does the prep batch paperwork package contain all required documentation which has been properly and completely filled out, including: • Extraction Benchsheet (Excel) • TALS Raw data worksheets • Batch Worksheets (ANLY) • ~~Verify Protocol #'s (compare excel sheet to TALS)~~ SDO 8/29/19 • Was the Excel Extraction Benchsheet and Prep Batch Review Checklist scanned and attached to batch in TALS?		✓			✓
7. Did extracts go through GPC cleanup? Has the following nonconformance been associated with all extracts?		✓		If Yes, NCM# 140-18550	✓
8. Are all additional nonconformances documented appropriately and copy included with deliverable?	✓			If Yes, NCM#: _____	N/A

Analyst : SDO **Date:** 8/29/19

Comments:

2nd Level Reviewer: JPQ **Date:** 8/29/19

Comments:

TestAmerica Knoxville Extraction Sheet
8270D SIM aPAH Solids by Soxhlet - KNOX-OP-0025

Batch Number: 32772
TALS Prep Method: 3540C
Soil ☐ **Sediment** ☒ **Tissue** ☐

Delivered: _____ Initials/Date/Time

Received: _____ Initials/Date/Time

Lab Sample ID	Water layer decanted? (Y,N,NA)	Mix sample with Na_2SO_4 and add to Soxhlet thimble.	Add 0.5 mL of 1.0 ug/mL 8270D_SIM Surr to all samples and QC. Record in TALS.	Add 0.5 mL of ~~1.0~~ 0.5 ug/mL 8270D_SIM aPAH native spike to LCS, LCSD, MS, MSD. Record in TALS. @ 8/24/19 MDLV	Extract 18-24 hr with $MeCl_2$/acetone	Conc to appropriate volume in KD.	Conc to ~ 2 mL by N-EVAP then bring up in MeCl2 for solvent exchange	Perform GPC cleanup.	Concentrate/solvent exchange to hexane by KD to appropriate volume.	Perform silica gel column cleanup.	Conc to >10 mL on heating mantle.	Conc to 500 µL hexane by N-EVAP.
MB 140-32772/1	NA	✓	✓	NA	✓	✓	✓	GPC1	✓	✓	✓	500 µL
LCS 140-32772/2				✓								
580-87706-B-14				NA								
580-87706-B-15												
580-87761-B-5												
580-87761-B-12												
580-87761-B-13												
580-87761-B-15												
580-87761-B-17												
580-87761-B-18												
580-87761-B-21								GPC2				
580-87761-B-21 MS				✓								
580-87761-B-21 MSD				✓								
580-87761-B-22				NA								
580-87761-B-23												
580-87761-B-26												
140-15918-A-2 MDLV				✓								
	⊘ 8/24	⊘ 8/24	⊘ 8/24	⊘ 8/24	⊘ 8/24	VGL 8/27	JDQ 8/27	AJR 8/27	VGL 8/27	SDO 8/28	SDO 8/28	SDO 8/29

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Subcontract Data

Shipping and Receiving Documents

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-68883.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nathan.lewis@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon		Job #: 580-87761-3
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/29/2019			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: Portland Harbor	Project #: 58013650			
Site:	SSOW#:			

Analysis Requested

NO CUSTODY SEALS
RECEIVED AT RT -21.8/-21.8°C
BED 8-16-19
1 COOLER FEDX#
118407543566 PO

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM/3540C PAH + aPAH Custom List	Total Number of containers	Special Instructions/Note:
			Preservation Code					
22T-VB-02-7.0-8.8_20190717 (580-87761-5)	7/17/19	14:20 Pacific		Solid		X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D
22T-VB-03-2.0-4.0_20190717 (580-87761-12)	7/17/19	16:35 Pacific		Solid		X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D
22T-VB-03-4.0-6.0_20190717 (580-87761-13)	7/17/19	16:40 Pacific		Solid		X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D
22T-VB-03-8.0-9.0_20190717 (580-87761-15)	7/17/19	16:50 Pacific		Solid		X		aMP ICOC, Analyze LCS/LCSD if no
22T-VB-03-11.2-12_20190717 (580-87761-17)	7/17/19	17:00 Pacific		Solid		X		aMP ICOC, Analyze LCS/LCSD if no
22T-VB-03-4.0-6.0-D_20190717 (580-87761-18)	7/17/19	17:05 Pacific		Solid		X		aMP ICOC, Analyze LCS/LCSD if no
22T-SG-04_20190718 (580-87761-21)	7/18/19	08:36 Pacific		Solid		X		aMP ICOC, Analyze LCS/LCSD if no
22T-SG-04_20190718 (580-87761-21MS)	7/18/19	08:36 Pacific	MS	Solid		X		aMP ICOC, Analyze LCS/LCSD if no MS/D
22T-SG-04_20190718 (580-87761-21MSD)	7/18/19	08:36 Pacific	MSD	Solid		X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D

580-87761 Chain of Custody

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: B. [signature]	Date/Time: 8.15.19 1400	Company: SIZA TA	Received by: [signature]	Date/Time: 8-16-19 10:00	Company: ETA KDX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-68883.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: nathan.lewis@testamericainc.com	State of Origin: Oregon	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon		Job #: 580-87761-3
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/29/2019			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: Portland Harbor	Project #: 58013650			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM/3540C PAH + aPAH Custom List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
22T-SG-05_20190718 (580-87761-22)	7/18/19	08:55 Pacific		Solid			X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D
22T-SG-06_20190718 (580-87761-23)	7/18/19	09:11 Pacific		Solid			X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D
22T-SG-09_20190718 (580-87761-26)	7/18/19	10:29 Pacific		Solid			X		BP LaMP ICOC, Analyze LCS/LCSD if no MS/D

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	B. Hall	8.15.19 1408	SEA TA		8-16-19 10:00	ETA KNX
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Loc: 580
87761

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SL68 Correction factor: 0.0	✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?		✓		☑ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			✓	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 8/16/19

QA026R32.doc, 062719

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 580-87761-3

Login Number: 87761
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	