



August 17, 2018

Service Request No:R1806022

Mr. Darik Jordan  
Barton & Loguidice, PC  
11 Centre Park  
Suite 203  
Rochester, NY 14614

**Laboratory Results for: GFIM LF**

Dear Mr.Jordan,

Enclosed are the results of the sample(s) submitted to our laboratory June 27, 2018  
For your reference, these analyses have been assigned our service request number **R1806022**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Brady Kalkman  
Project Manager

**ADDRESS** 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
**PHONE** +1 585 288 5380 | **FAX** +1 585 288 8475  
ALS Group USA, Corp.  
dba ALS Environmental



---

ALS Environmental  
ALS Group USA, Corp  
1565 Jefferson Road, Building 300, Suite 360  
Rochester, NY 14623  
T : +1 585 288 5380  
F : +1 585 288 8475  
[www.alsglobal.com](http://www.alsglobal.com)

## Table of Contents

CoverLetter	1
Table of Contents	2
Narrative Documents	4
Case Narrative	5
Hit Summary List	6
Sample Receipt Information	7
Sample Cross-Reference	8
Chain Of Custody	9
Internal Chain of Custody	11
Miscellaneous Forms	13
Qualifiers	14
Acronyms	15
Non-Certified Analytes	16
Analyst Summary	17
Prep Method Inorganic	19
Sample Results	20
Semivolatile Organic Compounds by GCMS	21
8270D SIM - 1,4-Dioxane by GC/MS	
MW-1D - Semivoa GCMS	22
MW-3S - Semivoa GCMS	23
MW-13D - Semivoa GCMS	24
MW-11D - Semivoa GCMS	25

## Table of Contents (continued)

FB - Semivoa GCMS	26
DUPE-X - Semivoa GCMS	27
QC Summary Forms	28
Semivolatiles Organic Compounds by GCMS	29
8270D SIM - 1,4-Dioxane by GC/MS	
Semivoa GCMS Surrogate Summary	30
RQ1806684-05 MW-3S - DMS Semivoa GCMS	31
MB Summary Semivoa GCMS	32
Method Blank - Semivoa GCMS	33
LCS Summary Semivoa GCMS	34
RQ1806684-03 - DLCS Semivoa GCMS	35
Tune Summary 8270D SIM	36
IS Summary Semivoa GCMS	37
Raw Data	38
Semivolatiles Organic Compounds by GCMS	39
8270D SIM - 1,4-Dioxane	
Form 1s	
MW-1D - Semivoa GCMS	40
MW-3S - Semivoa GCMS	41
MW-13D - Semivoa GCMS	42
MW-11D - Semivoa GCMS	43
FB - Semivoa GCMS	44
DUPE-X - Semivoa GCMS	45
Raw Data	46
ICAL Summary	115
ICV Summary	117
RQ1806739-02 - CCV Semivoa GCMS	118
Run Log	119
Run Log Sheets	120
Prep Summary Semivoa GCMS	122
Prep Sheets	123



# Narrative Documents

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Received:** 06/27/2018

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

#### Sample Receipt:

Six water samples were received for analysis at ALS Environmental on 06/27/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Semivolatiles by GC/MS:

Method 8270D SIM, 07/03/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

A handwritten signature in black ink, appearing to read "Brady Kuller".

Approved by \_\_\_\_\_

Date 07/05/2018



### SAMPLE DETECTION SUMMARY

<b>CLIENT ID: MW-1D</b>		<b>Lab ID: R1806022-001</b>				
<b>Analyte</b>	<b>Results</b>	<b>Flag</b>	<b>MDL</b>	<b>MRL</b>	<b>Units</b>	<b>Method</b>
1,4-Dioxane	0.034	J	0.027	0.040	ug/L	8270D SIM

<b>CLIENT ID: MW-13D</b>		<b>Lab ID: R1806022-003</b>				
<b>Analyte</b>	<b>Results</b>	<b>Flag</b>	<b>MDL</b>	<b>MRL</b>	<b>Units</b>	<b>Method</b>
1,4-Dioxane	0.065		0.027	0.040	ug/L	8270D SIM

<b>CLIENT ID: DUPE-X</b>		<b>Lab ID: R1806022-006</b>				
<b>Analyte</b>	<b>Results</b>	<b>Flag</b>	<b>MDL</b>	<b>MRL</b>	<b>Units</b>	<b>Method</b>
1,4-Dioxane	0.077		0.027	0.040	ug/L	8270D SIM



## Sample Receipt Information

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:**R1806022

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1806022-001	MW-1D	6/27/2018	0900
R1806022-002	MW-3S	6/27/2018	0936
R1806022-003	MW-13D	6/27/2018	0913
R1806022-004	MW-11D	6/27/2018	0950
R1806022-005	FB	6/27/2018	0856
R1806022-006	DUPE-X	6/27/2018	





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 52135

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name <b>GFIM</b>		Project Number <b>1068.004.004</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)															
Project Manager <b>Darik Jordan</b>		Report CC <b>Brian Vibert L</b>		PRESERVATIVE															
Company/Address <b>Barton &amp; Loguidice 11 Center Park Suite 205 Rochester, NY 14614</b>				NUMBER OF CONTAINERS	/											Preservative Key 0. NONE 1. HCL 2. HNO <sub>3</sub> 3. H <sub>2</sub> SO <sub>4</sub> 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO <sub>4</sub> 8. Other			
Phone # <b>(585) 325-7140</b>		Email <b>d.jordan@bartonandloguidice.com</b>			/														
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Brian T. Vibert</b>			/														
GC/MS VOAs • 8260 • 824 • CLP		GC/MS SVVOAs • 8270 • 825			/														
				GC VOAs • 8021 • 801/802		PESTICIDES • 8081 • 808		PCBs • 8092 • 808		METALS TOTAL (List in comments below)		METALS DISSOLVED (List in comments below)		<b>14-Norape</b>					
				REMARKS/ ALTERNATE DESCRIPTION															
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	DATE	SAMPLING TIME	MATRIX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Mbr-10		6/27/19	09:00	water	1														
Mbr-35 MS/MSD			09:36	water	2														
Mbr-13D			09:13	water	1														
Mbr-11D			09:50	water	1														
FB		6/27/19	08:56	water	1														
Dupe-X		6/27/19		water	1														
SPECIAL INSTRUCTIONS/COMMENTS Metals					TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ <input checked="" type="checkbox"/> Standard (10 business days-No Surcharge) REQUESTED REPORT DATE _____					REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data Edata ___ Yes ___ No					INVOICE INFORMATION PO # <b>1068.004.004</b> BILL TO: <b>BL</b>				
See QAPP <input type="checkbox"/>					STATE WHERE SAMPLES WERE COLLECTED <b>NY</b>														
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY	
<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>	
Printed Name <b>B-T-L</b>		Printed Name <b>Brian T. Vibert</b>		Printed Name <b>B-T-L</b>		Printed Name <b>Brian T. Vibert</b>		Printed Name <b>B-T-L</b>		Printed Name <b>B-T-L</b>		Printed Name <b>B-T-L</b>		Printed Name <b>B-T-L</b>		Printed Name <b>B-T-L</b>		Printed Name <b>B-T-L</b>	
Firm <b>6/27/19 15:20</b>		Firm <b>1570</b>		Firm <b>6/27/19</b>		Firm <b>1570</b>		Firm <b>6/27/19</b>		Firm <b>1570</b>		Firm <b>6/27/19</b>		Firm <b>1570</b>		Firm <b>6/27/19</b>		Firm <b>1570</b>	
Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time	

**R1806022** **5**  
 Barton & Loguidice, PC  
 GFIM LF



# Cooler Receipt and Preservation Check Form

R1806022

Barton & Loguidice, PC  
GFIM LP

5

Project/Client GFIM

Folder Number \_\_\_\_\_



Cooler received on 6/27/18

by: Q/A

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <input checked="" type="radio"/> N <input type="radio"/>
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y <input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y <input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y <input type="radio"/> N

5a	Perchlorate samples have required headspace?	Y N <input checked="" type="radio"/> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035 set	<input checked="" type="radio"/> NA

8. Temperature Readings Date: 6/27/18 Time: 1525 ID: IR#7 IR#9 From: Temp Blank Sample Bottle KE 6-7

Observed Temp (°C)	<u>6.8</u>	<u>5.0</u>	<u>4.9</u>				
Correction Factor (°C)	<u>+1.3</u>	<u>+0.8</u>	<u>+0.8</u>				
Corrected Temp (°C)	<u>5.1</u>	<u>5.8</u>	<u>5.7</u>				
Temp from: Type of bottle	<u>Cent tube</u>	<u>Cent tube</u>	<u>Cent tube</u>				
Within 0-6°C?	<input checked="" type="radio"/> Y <input type="radio"/> N	<input checked="" type="radio"/> Y <input type="radio"/> N	<input checked="" type="radio"/> Y <input type="radio"/> N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: \_\_\_\_\_ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: \_\_\_\_\_ Standing Approval Client aware at drop-off Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by KE on 6/27/18 at 15:35  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

Cooler Breakdown/Preservation Check\*\*: Date: 6/28/18 Time: 1820 by: Q

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO NO date/time missing on MW-111
- 10. Did all bottle labels and tags agree with custody papers?  YES  NO
- 11. Were correct containers used for the tests indicated?  YES  NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO <sub>3</sub>								
≤2		H <sub>2</sub> SO <sub>4</sub>								
<4		NaHSO <sub>4</sub>								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (625, 608, CN), ascorbic (phenol).					
		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>								
		ZnAcetate	-	-						
		HCl	**	**						

\*\*VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 043018-1BMC

Explain all Discrepancies/ Other Comments:

\*Alk for North trench has sig. headspace.

Trip Blank: All 3 vials

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: Q

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

**ALS Group USA, Corp.**  
dba ALS Environmental

**Internal Chain of Custody Report**

**Client:** Barton & Loguidice, PC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022

<b>Bottle ID</b>	<b>Methods</b>	<b>Date</b>	<b>Time</b>	<b>Sample Location / User</b>	<b>Disposed On</b>
<b>R1806022-001.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1629	R-002 / JMISIUREWICZ	
<b>R1806022-002.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1629	R-002 / JMISIUREWICZ	
<b>R1806022-002.02</b>					
		6/28/2018	1321	R-002 / DWARD	
		6/28/2018	1321	SMO / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1629	R-002 / JMISIUREWICZ	
<b>R1806022-003.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1629	R-002 / JMISIUREWICZ	
<b>R1806022-004.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1629	R-002 / JMISIUREWICZ	
<b>R1806022-005.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	
		7/3/2018	1630	R-002 / JMISIUREWICZ	
<b>R1806022-006.01</b>					
	8270D SIM				
		6/28/2018	1321	SMO / DWARD	
		6/28/2018	1321	R-002 / DWARD	
		7/3/2018	1113	In Lab / JMISIUREWICZ	

ALS Group USA, Corp.  
dba ALS Environmental

Internal Chain of Custody Report

**Client:** Barton & Loguidice, PC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022

<b>Bottle ID</b>	<b>Methods</b>	<b>Date</b>	<b>Time</b>	<b>Sample Location / User</b>	<b>Disposed On</b>
	8270D SIM	7/3/2018	1629	R-002 / JMISIUREWICZ	



## Miscellaneous Forms

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

## REPORT QUALIFIERS AND DEFINITIONS

<p><b>U</b> Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p><b>J</b> Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration &gt;40% difference between two GC columns (pesticides/Aroclors).</p> <p><b>B</b> Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p><b>E</b> Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p><b>E</b> Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p><b>D</b> Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p><b>*</b> Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p><b>H</b> Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p><b>#</b> Spike was diluted out.</p>	<p><b>+</b> Correlation coefficient for MSA is &lt;0.995.</p> <p><b>N</b> Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p><b>N</b> Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p><b>S</b> Concentration has been determined using Method of Standard Additions (MSA).</p> <p><b>W</b> Post-Digestion Spike recovery is outside control limits and the sample absorbance is &lt;50% of the spike absorbance.</p> <p><b>P</b> Concentration &gt;40% difference between the two GC columns.</p> <p><b>C</b> Confirmed by GC/MS</p> <p><b>Q</b> DoD reports: indicates a pesticide/Aroclor is not confirmed (&gt;100% Difference between two GC columns).</p> <p><b>X</b> See Case Narrative for discussion.</p> <p><b>MRL</b> Method Reporting Limit. Also known as:</p> <p><b>LOQ</b> Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p><b>MDL</b> Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p><b>LOD</b> Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p><b>ND</b> Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
---	---



### Rochester Lab ID # for State Certifications<sup>1</sup>

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID #
Delaware Approved	New Jersey ID # NY004	294100 A/B
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

# ALS Laboratory Group

---

## Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022

**Non-Certified Analytes**

**Certifying Agency:** New York Department of Health

<b>Method</b>	<b>Matrix</b>	<b>Analyte</b>
8270D SIM	Water	1,4-Dioxane



ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022

**Sample Name:** MW-1D  
**Lab Code:** R1806022-001  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ

**Sample Name:** MW-3S  
**Lab Code:** R1806022-002  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ

**Sample Name:** MW-13D  
**Lab Code:** R1806022-003  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ

**Sample Name:** MW-11D  
**Lab Code:** R1806022-004  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ

**Sample Name:** FB  
**Lab Code:** R1806022-005  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ

**ALS Group USA, Corp.**

dba ALS Environmental

Analyst Summary report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022

**Sample Name:** DUPE-X  
**Lab Code:** R1806022-006  
**Sample Matrix:** Water

**Date Collected:** 06/27/18  
**Date Received:** 06/27/18

**Analysis Method**  
8270D SIM

**Extracted/Digested By**  
JMISIUREWICZ

**Analyzed By**  
JMISIUREWICZ



## INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

### Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

### Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



## Sample Results

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)



## Semivolatile Organic Compounds by GC/MS

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:00  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-1D  
**Lab Code:** R1806022-001

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.034 J	0.040	0.027	1	07/03/18 15:02	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	99	64 - 124	07/03/18 15:02	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:36  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-3S  
**Lab Code:** R1806022-002

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 15:21	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	102	64 - 124	07/03/18 15:21	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:13  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-13D  
**Lab Code:** R1806022-003

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.065	0.040	0.027	1	07/03/18 16:17	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	106	64 - 124	07/03/18 16:17	



ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:50  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-11D  
**Lab Code:** R1806022-004

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 16:36	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	94	64 - 124	07/03/18 16:36	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 08:56  
**Date Received:** 06/27/18 15:20

**Sample Name:** FB  
**Lab Code:** R1806022-005

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 16:54	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	103	64 - 124	07/03/18 16:54	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18  
**Date Received:** 06/27/18 15:20

**Sample Name:** DUPE-X  
**Lab Code:** R1806022-006

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.077	0.040	0.027	1	07/03/18 17:12	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	103	64 - 124	07/03/18 17:12	



## QC Summary Forms

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)



## Semivolatile Organic Compounds by GC/MS

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022

**SURROGATE RECOVERY SUMMARY**

**1,4-Dioxane by GC/MS**

**Analysis Method:** 8270D SIM

**Extraction Method:** EPA 3535A

Sample Name	Lab Code	1,4-Dioxane-d8
		64-124
MW-1D	R1806022-001	99
MW-3S	R1806022-002	102
MW-13D	R1806022-003	106
MW-11D	R1806022-004	94
FB	R1806022-005	103
DUPE-X	R1806022-006	103
Method Blank	RQ1806684-01	101
Lab Control Sample	RQ1806684-02	103
Duplicate Lab Control Sample	RQ1806684-03	104
MW-3S MS	RQ1806684-04	105
MW-3S DMS	RQ1806684-05	111

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18  
**Date Received:** 06/27/18  
**Date Analyzed:** 07/3/18  
**Date Extracted:** 07/3/18

**Duplicate Matrix Spike Summary**  
**1,4-Dioxane by GC/MS**

**Sample Name:** MW-3S  
**Lab Code:** R1806022-002  
**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

**Units:** ug/L  
**Basis:** NA

Analyte Name	Sample Result	Result	Matrix Spike RQ1806684-04		Result	Duplicate Matrix Spike RQ1806684-05		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
1,4-Dioxane	0.027 U	11.6	10.2	113	11.9	10.2	117	33-146	3	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Analyzed:** 07/03/18 13:46  
**Date Extracted:** 07/03/18

**Method Blank Summary**  
**1,4-Dioxane by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** RQ1806684-01  
**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

**Instrument ID:** R-MS-56  
**File ID:** I:\ACQUADATA\5975E\data\070318\AQ164.D\  
**Analysis Lot:** 597367  
**Extraction Lot:** 317062

This Method Blank applies to the following analyses.

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>
Lab Control Sample	RQ1806684-02	I:\ACQUADATA\5975E\data\070318\AQ165.D\	07/03/18 14:05
Duplicate Lab Control Sample	RQ1806684-03	I:\ACQUADATA\5975E\data\070318\AQ166.D\	07/03/18 14:24
MW-1D	R1806022-001	I:\ACQUADATA\5975E\data\070318\AQ168.D\	07/03/18 15:02
MW-3S	R1806022-002	I:\ACQUADATA\5975E\data\070318\AQ169.D\	07/03/18 15:21
MW-3SMS	RQ1806684-04	I:\ACQUADATA\5975E\data\070318\AQ170.D\	07/03/18 15:40
MW-3SDMS	RQ1806684-05	I:\ACQUADATA\5975E\data\070318\AQ171.D\	07/03/18 15:59
MW-13D	R1806022-003	I:\ACQUADATA\5975E\data\070318\AQ172.D\	07/03/18 16:17
MW-11D	R1806022-004	I:\ACQUADATA\5975E\data\070318\AQ173.D\	07/03/18 16:36
FB	R1806022-005	I:\ACQUADATA\5975E\data\070318\AQ174.D\	07/03/18 16:54
DUPE-X	R1806022-006	I:\ACQUADATA\5975E\data\070318\AQ175.D\	07/03/18 17:12



ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1806684-01

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 13:46	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	101	64 - 124	07/03/18 13:46	

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Analyzed:** 07/03/18 14:05  
**Date Extracted:** 07/03/18

**Lab Control Sample Summary**  
**1,4-Dioxane by GC/MS**

**Sample Name:** Lab Control Sample  
**Lab Code:** RQ1806684-02  
**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

**Instrument ID:** R-MS-56  
**File ID:** I:\ACQUADATA\5975E\data\070318\AQ165.D\  
**Analysis Lot:** 597367  
**Extraction Lot:** 317062

This Lab Control Sample applies to the following analyses.

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>
Method Blank	RQ1806684-01	I:\ACQUADATA\5975E\data\070318\AQ164.D\	07/03/18 13:46
Duplicate Lab Control Sample	RQ1806684-03	I:\ACQUADATA\5975E\data\070318\AQ166.D\	07/03/18 14:24
MW-1D	R1806022-001	I:\ACQUADATA\5975E\data\070318\AQ168.D\	07/03/18 15:02
MW-3S	R1806022-002	I:\ACQUADATA\5975E\data\070318\AQ169.D\	07/03/18 15:21
MW-3SMS	RQ1806684-04	I:\ACQUADATA\5975E\data\070318\AQ170.D\	07/03/18 15:40
MW-3SDMS	RQ1806684-05	I:\ACQUADATA\5975E\data\070318\AQ171.D\	07/03/18 15:59
MW-13D	R1806022-003	I:\ACQUADATA\5975E\data\070318\AQ172.D\	07/03/18 16:17
MW-11D	R1806022-004	I:\ACQUADATA\5975E\data\070318\AQ173.D\	07/03/18 16:36
FB	R1806022-005	I:\ACQUADATA\5975E\data\070318\AQ174.D\	07/03/18 16:54
DUPE-X	R1806022-006	I:\ACQUADATA\5975E\data\070318\AQ175.D\	07/03/18 17:12

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Analyzed:** 07/03/18

**Duplicate Lab Control Sample Summary**  
**1,4-Dioxane by GC/MS**

**Units:**ug/L  
**Basis:**NA

Analyte Name	Analytical Method	Result	Lab Control Sample		Duplicate Lab Control Sample		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
1,4-Dioxane	8270D SIM	11.4	10.2	112	11.0	10.2	108	60-119	3	30

ALS Group USA, Corp.  
dba ALS Environmental

QC/QC Report

Client: Barton & Loguidice, DPC  
Project: GFIM LF/1068.004.004

Service Request: R1806022  
Date Analyzed: 07/03/18 12:42

Tune Summary  
1,4-Dioxane by GC/MS

File ID: I:\ACQUADATA\5975E\data\070318\AQ162.D\  
Instrument ID: R-MS-56

Analytical Method: 8270D SIM  
Analysis Lot: 597367

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	43.91	552428	Pass
68	69	0.00	2	1.44	8852	Pass
69	198	0.00	100	48.90	615114	Pass
70	69	0.00	2	0.53	3260	Pass
127	198	10	80	57.61	724740	Pass
197	198	0.00	2	0.00	0	Pass
198	198	100	100	100.00	1257984	Pass
199	198	5	9	6.70	84285	Pass
275	198	10	60	18.10	227712	Pass
365	198	1	100	1.59	19992	Pass
441	442	0.01	24	17.57	121440	Pass
442	442	100	100	100.00	690987	Pass
443	442	15	24	19.99	138155	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1806739-02	I:\ACQUADATA\5975E\data\070318\AQ163.D\	07/03/18 13:06	
Method Blank	RQ1806684-01	I:\ACQUADATA\5975E\data\070318\AQ164.D\	07/03/18 13:46	
Lab Control Sample	RQ1806684-02	I:\ACQUADATA\5975E\data\070318\AQ165.D\	07/03/18 14:05	
Duplicate Lab Control Sample	RQ1806684-03	I:\ACQUADATA\5975E\data\070318\AQ166.D\	07/03/18 14:24	
MW-1D	R1806022-001	I:\ACQUADATA\5975E\data\070318\AQ168.D\	07/03/18 15:02	
MW-3S	R1806022-002	I:\ACQUADATA\5975E\data\070318\AQ169.D\	07/03/18 15:21	
MW-3S	RQ1806684-04	I:\ACQUADATA\5975E\data\070318\AQ170.D\	07/03/18 15:40	
MW-3S	RQ1806684-05	I:\ACQUADATA\5975E\data\070318\AQ171.D\	07/03/18 15:59	
MW-13D	R1806022-003	I:\ACQUADATA\5975E\data\070318\AQ172.D\	07/03/18 16:17	
MW-11D	R1806022-004	I:\ACQUADATA\5975E\data\070318\AQ173.D\	07/03/18 16:36	
FB	R1806022-005	I:\ACQUADATA\5975E\data\070318\AQ174.D\	07/03/18 16:54	
DUPE-X	R1806022-006	I:\ACQUADATA\5975E\data\070318\AQ175.D\	07/03/18 17:12	

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:**R1806022  
**Date Analyzed:**07/03/18 13:06

**Internal Standard Area and RT SUMMARY**  
**1,4-Dioxane by GC/MS**

**File ID:** I:\ACQUADATA\5975E\data\070318\AQ163.D\  
**Instrument ID:** R-MS-56  
**Analysis Method:** 8270D SIM

**Lab Code:**RQ1806739-02  
**Analysis Lot:**597367  
**Signal ID:**1

		Tetrahydrofuran-d8	
		Area	RT
<b>ICAL Result ==&gt;</b>		74,150	3.24
<b>Upper Limit ==&gt;</b>		148,300	3.74
<b>Lower Limit ==&gt;</b>		37,075	2.74

**Associated Analyses**

		Area	RT
Continuing Calibration Verification	RQ1806739-02	74150	3.24
Method Blank	RQ1806684-01	80022	3.19
Lab Control Sample	RQ1806684-02	80400	3.21
Duplicate Lab Control Sample	RQ1806684-03	82021	3.19
MW-1D	R1806022-001	81096	3.18
MW-3S	R1806022-002	89015	3.24
MW-3SMS	RQ1806684-04	89475	3.23
MW-3SDMS	RQ1806684-05	84829	3.23
MW-13D	R1806022-003	86850	3.21
MW-11D	R1806022-004	91145	3.26
FB	R1806022-005	86203	3.21
DUPE-X	R1806022-006	77509	3.17



## Raw Data

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)



## Semivolatile Organic Compounds by GC/MS

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:00  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-1D  
**Lab Code:** R1806022-001

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.034 J	0.040	0.027	1	07/03/18 15:02	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	99	64 - 124	07/03/18 15:02	



ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:36  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-3S  
**Lab Code:** R1806022-002

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 15:21	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	102	64 - 124	07/03/18 15:21	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:13  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-13D  
**Lab Code:** R1806022-003

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.065	0.040	0.027	1	07/03/18 16:17	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	106	64 - 124	07/03/18 16:17	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 09:50  
**Date Received:** 06/27/18 15:20

**Sample Name:** MW-11D  
**Lab Code:** R1806022-004

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 16:36	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	94	64 - 124	07/03/18 16:36	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18 08:56  
**Date Received:** 06/27/18 15:20

**Sample Name:** FB  
**Lab Code:** R1806022-005

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.027 U	0.040	0.027	1	07/03/18 16:54	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	103	64 - 124	07/03/18 16:54	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:** R1806022  
**Date Collected:** 06/27/18  
**Date Received:** 06/27/18 15:20

**Sample Name:** DUPE-X  
**Lab Code:** R1806022-006

**Units:** ug/L  
**Basis:** NA

1,4-Dioxane by GC/MS

**Analysis Method:** 8270D SIM  
**Prep Method:** EPA 3535A

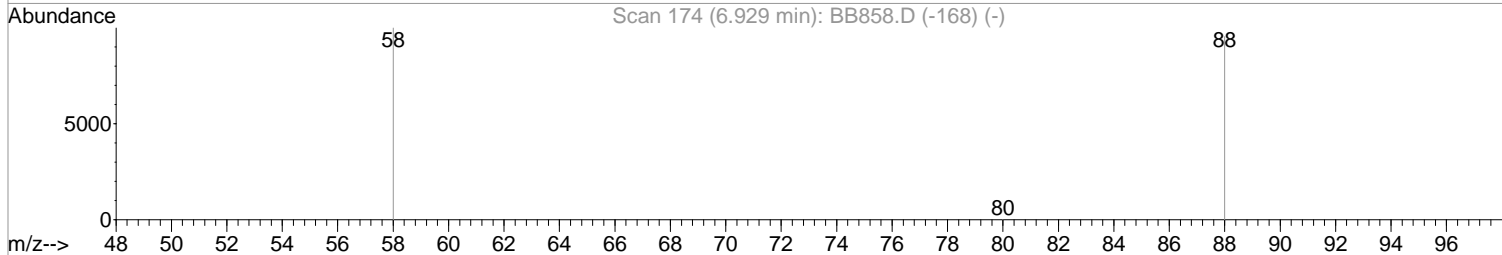
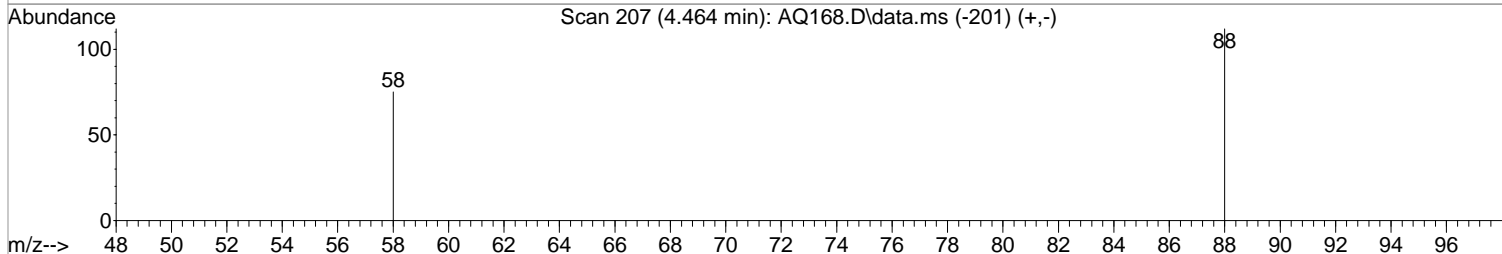
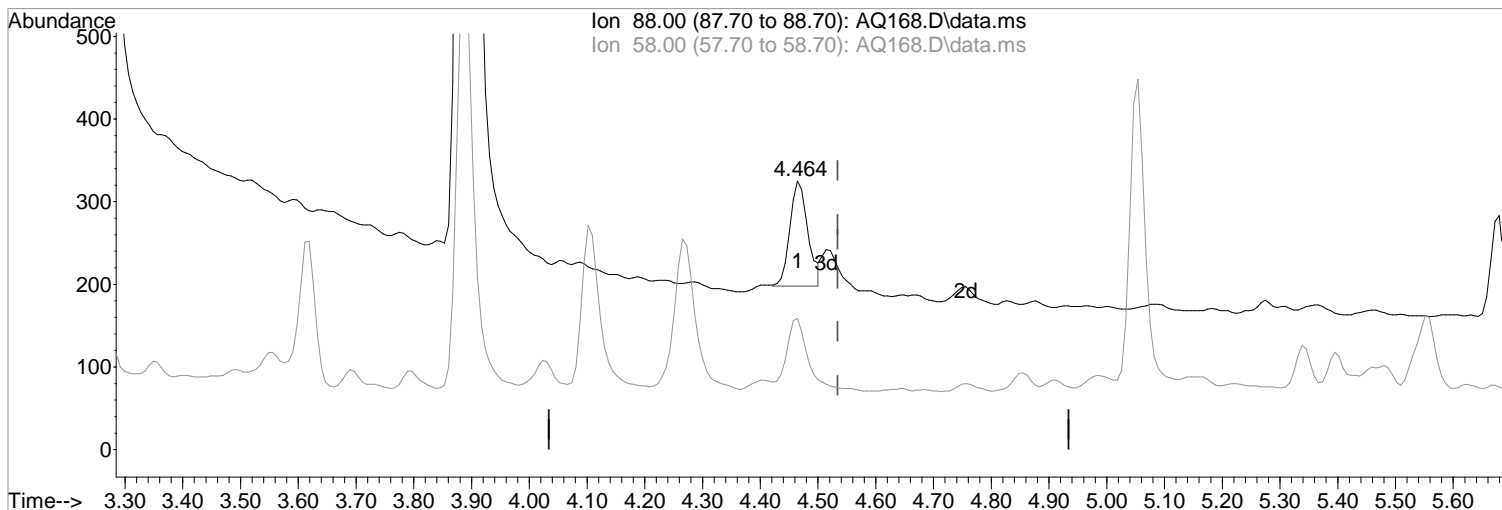
Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.077	0.040	0.027	1	07/03/18 17:12	7/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	103	64 - 124	07/03/18 17:12	

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ168.D  
Acq On : 3 Jul 2018 3:02 pm  
Operator : J.Misiurewicz  
Sample : R1806022-001  
Misc : 317062 8270D DIOX  
ALS Vial : 8 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Jul 03 16:32:59 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



TIC: AQ168.D\data.ms

(2) 1,4-Dioxane (T)

4.464min (-0.070) 1.72 PPB m

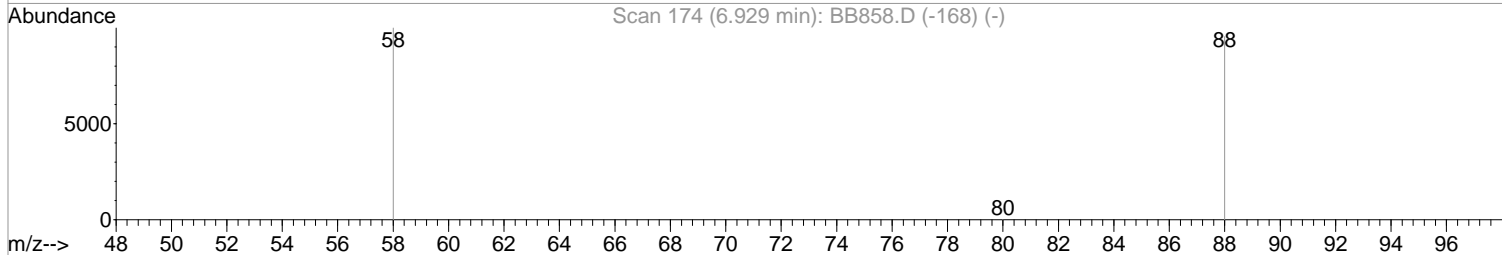
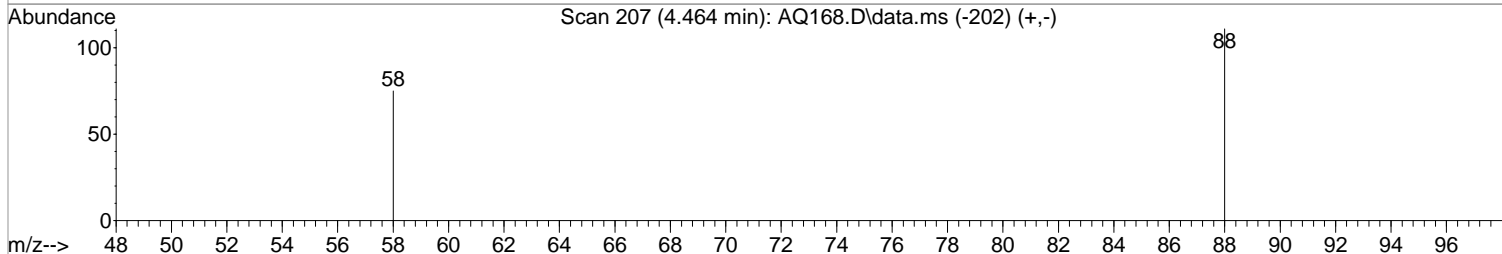
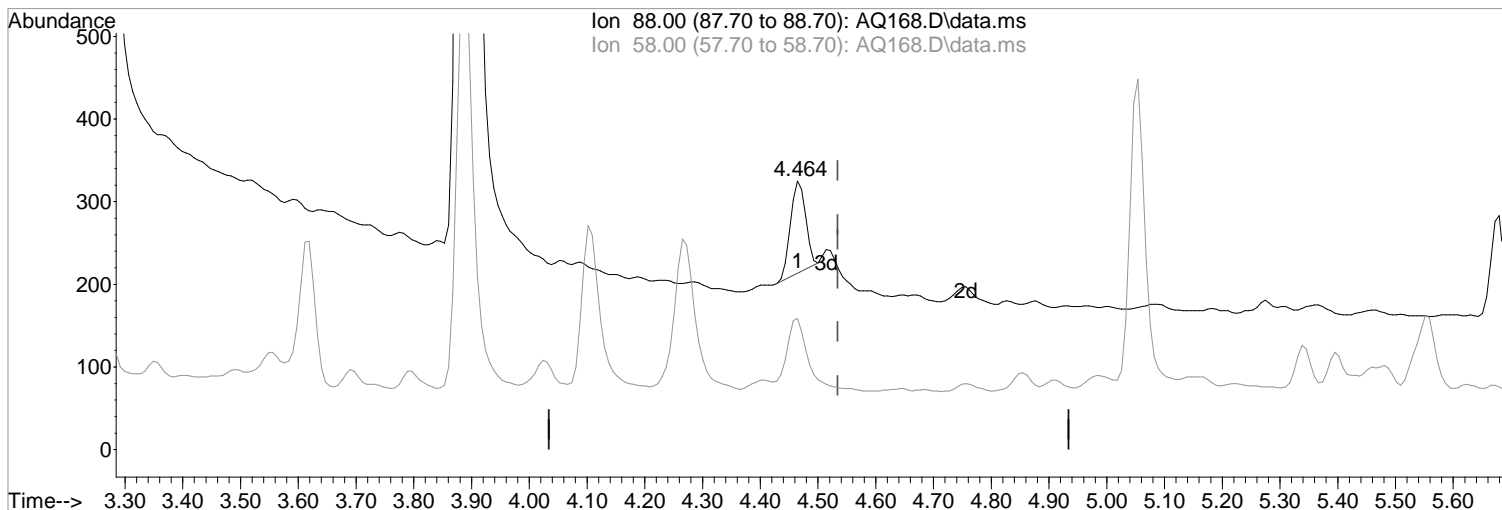
response	275
Ion	Exp% Act%
88.00	100.00 100.00
58.00	57.00 48.92
0.00	0.00 0.00
0.00	0.00 0.00

Manual Integration:  
After  
Poor integration.  
07/03/18

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ168.D  
Acq On : 3 Jul 2018 3:02 pm  
Operator : J.Misiurewicz  
Sample : R1806022-001  
Misc : 317062 8270D DIOX  
ALS Vial : 8 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Jul 03 16:32:59 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



TIC: AQ168.D\data.ms

(2) 1,4-Dioxane (T)

4.464min (-0.070) 1.30 PPB

response 208

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	67.26
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

07/03/18

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ168.D  
Acq On : 3 Jul 2018 3:02 pm  
Operator : J.Misiurewicz  
Sample : R1806022-001 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 16:33:10 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

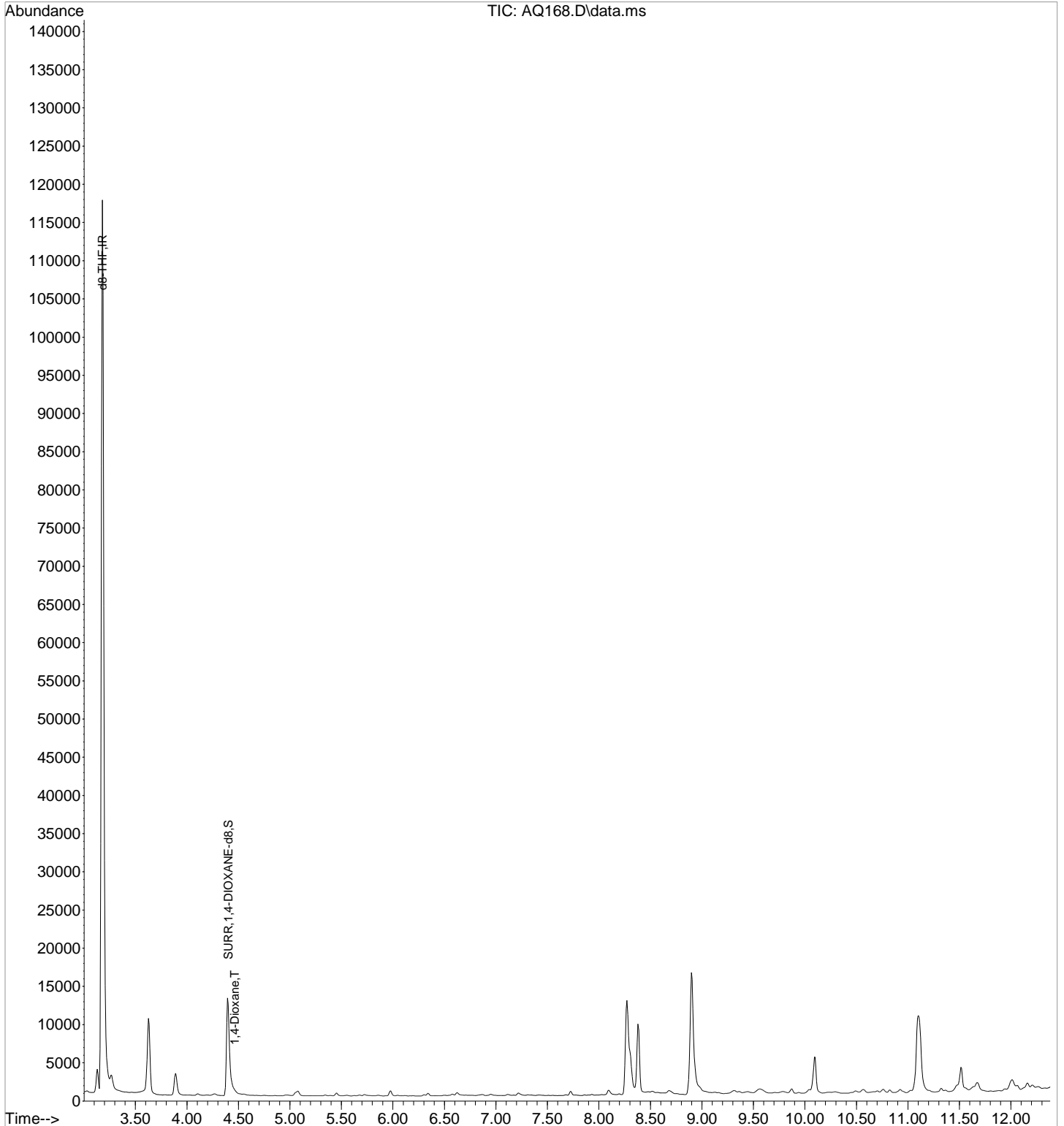
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.178	46	81096	500.00	PPB	-0.09
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.400	96	14389	98.94	PPB	-0.08
Spiked Amount	100.000	Range	70 - 130	Recovery	=	98.94%
Target Compounds						
2) 1,4-Dioxane	4.464	88	275m	1.72	PPB	Qvalue

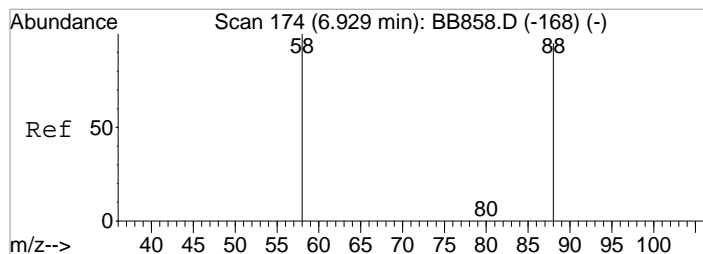
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ168.D  
Acq On : 3 Jul 2018 3:02 pm  
Operator : J.Misiurewicz  
Sample : R1806022-001 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 8 Sample Multiplier: 1

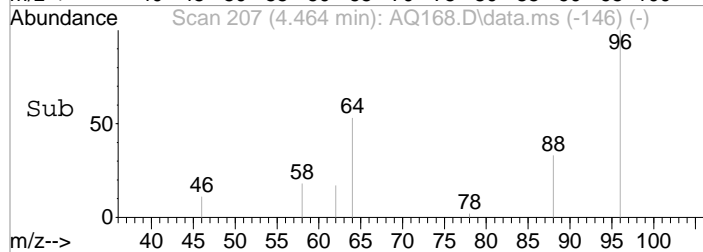
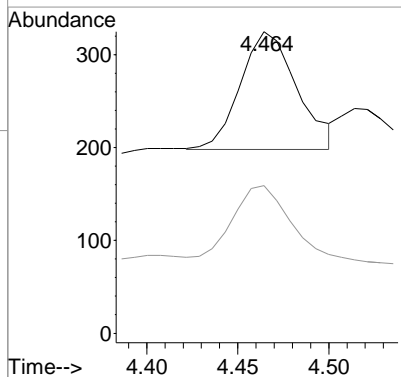
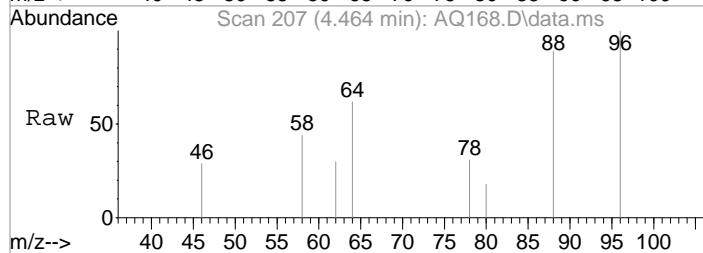
Quant Time: Jul 03 16:33:10 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration





#2  
1,4-Dioxane  
Concen: 1.72 PPB m  
RT: 4.464 min Scan# 207  
Delta R.T. -0.070 min  
Lab File: AQ168.D  
Acq: 3 Jul 2018 3:02 pm

Tgt Ion	88	Resp	275
Ion Ratio	Lower	Upper	
88	100		
58	48.9	37.0	77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ169.D  
 Acq On : 3 Jul 2018 3:21 pm  
 Operator : J.Misiurewicz  
 Sample : R1806022-002 Inst : 5975 E  
 Misc : 317062 8270D DIOX  
 ALS Vial : 9 Sample Multiplier: 1

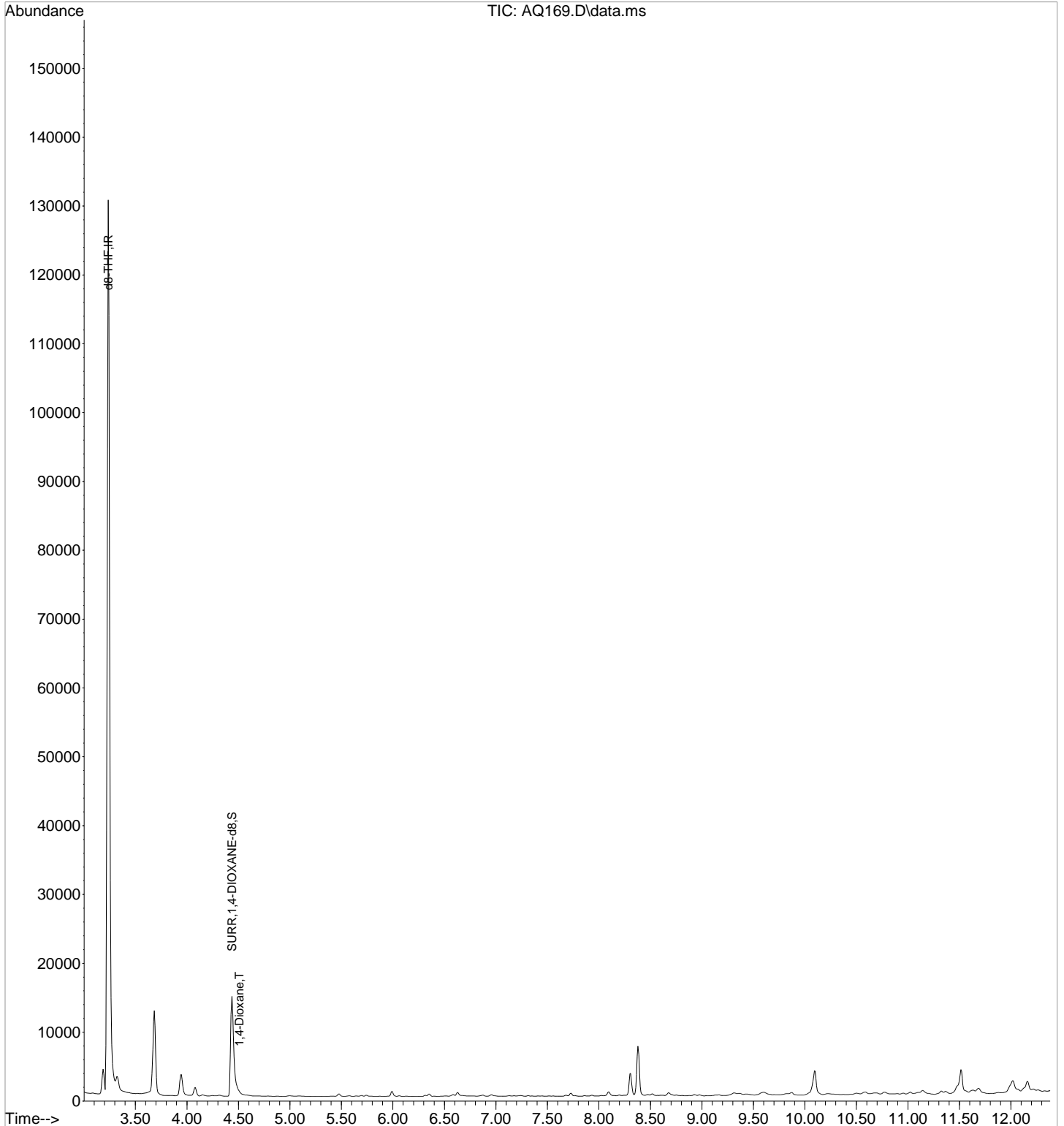
Quant Time: Jul 03 16:33:24 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

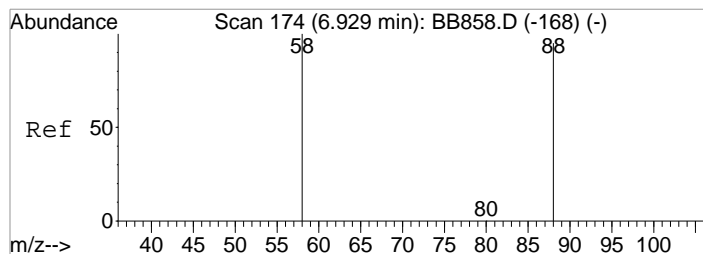
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.235	46	89015	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.436	96	16280	101.98	PPB	-0.05
Spiked Amount	100.000	Range	70 - 130	Recovery	=	101.98%
Target Compounds						
2) 1,4-Dioxane	4.507	88	175	1.00	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ169.D  
Acq On : 3 Jul 2018 3:21 pm  
Operator : J.Misiurewicz  
Sample : R1806022-002 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 9 Sample Multiplier: 1

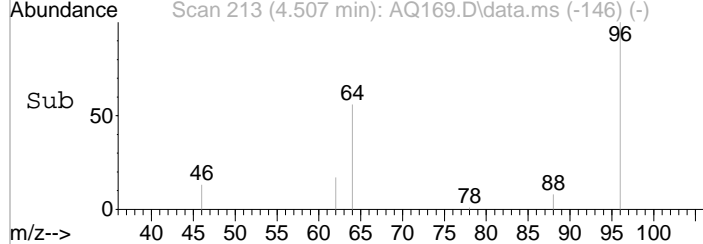
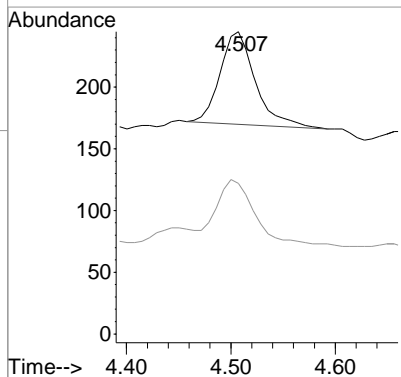
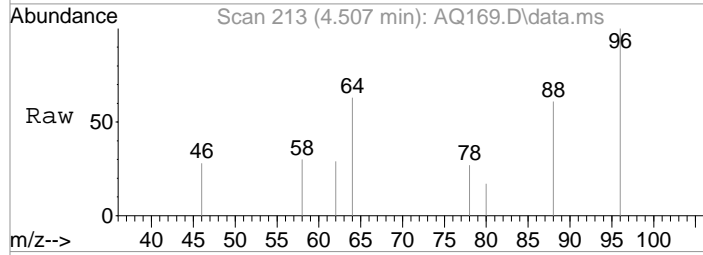
Quant Time: Jul 03 16:33:24 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration





#2  
1,4-Dioxane  
Concen: 1.00 PPB  
RT: 4.507 min Scan# 213  
Delta R.T. -0.027 min  
Lab File: AQ169.D  
Acq: 3 Jul 2018 3:21 pm

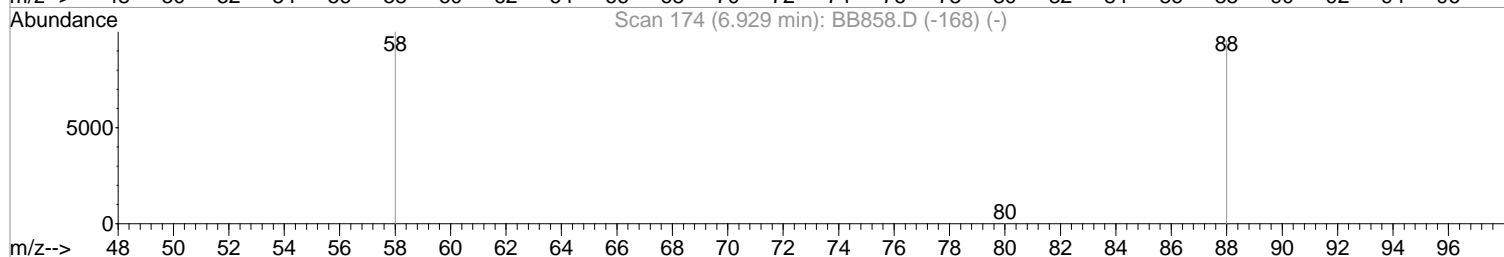
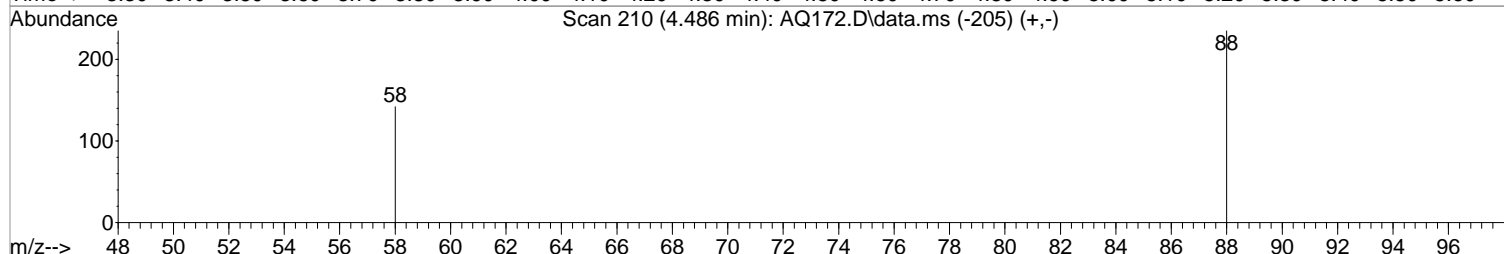
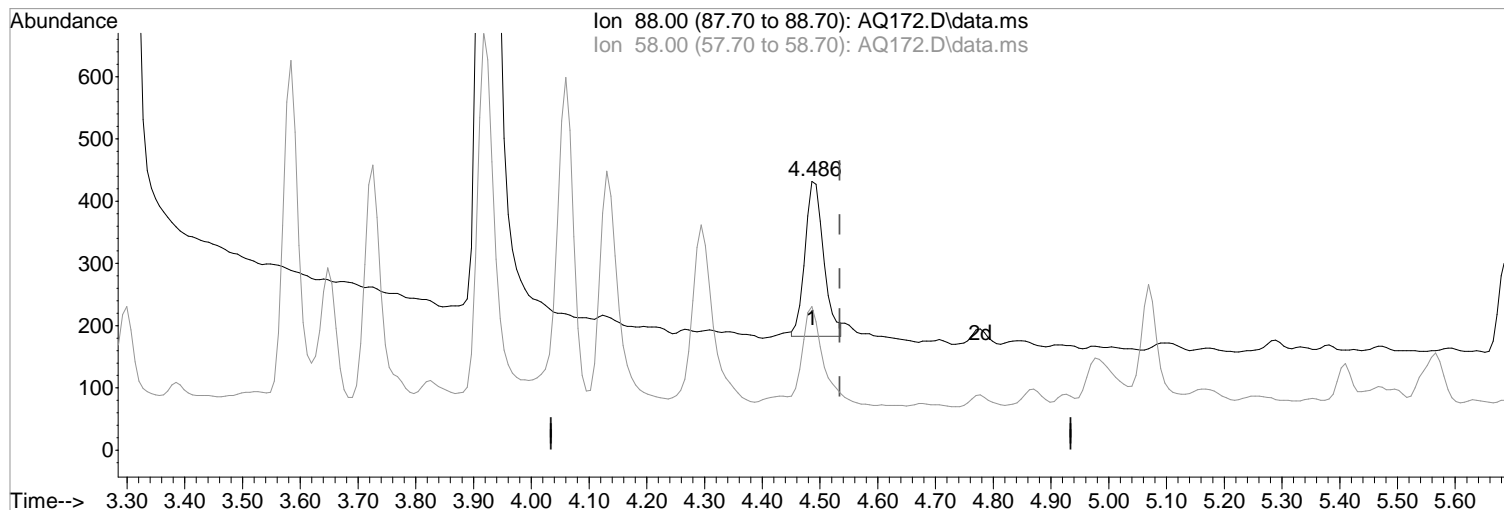
Tgt Ion: 88 Resp: 175  
Ion Ratio Lower Upper  
88 100  
58 56.6 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ172.D  
Acq On : 3 Jul 2018 4:17 pm  
Operator : J.Misiurewicz  
Sample : R1806022-003  
Misc : 317062 8270D DIOX  
ALS Vial : 12 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Jul 03 16:34:06 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



TIC: AQ172.D\data.ms

(2) 1,4-Dioxane (T)

4.486min (-0.048) 3.24 PPB m

response 560

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	53.47
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

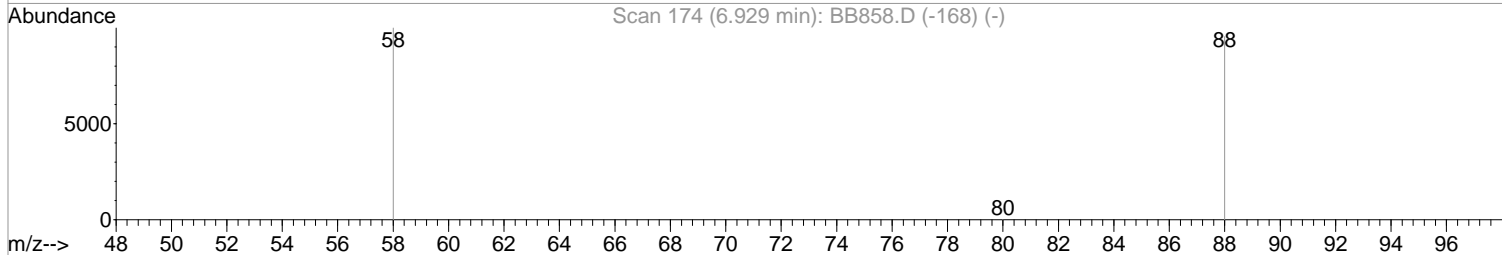
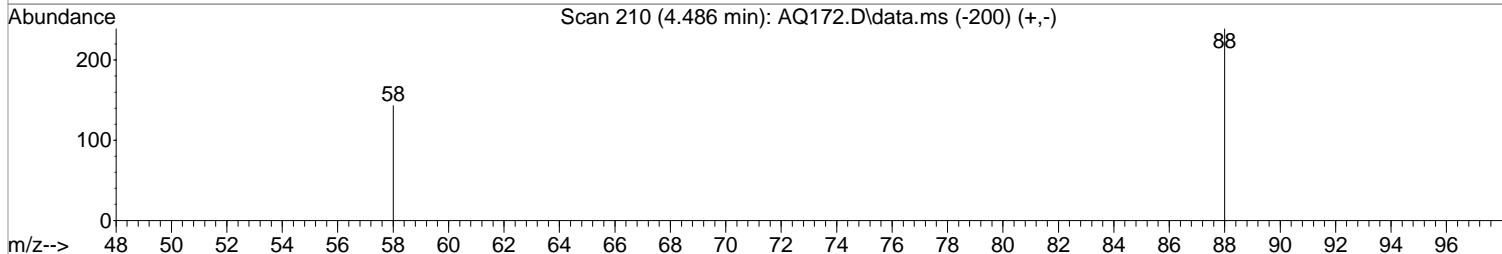
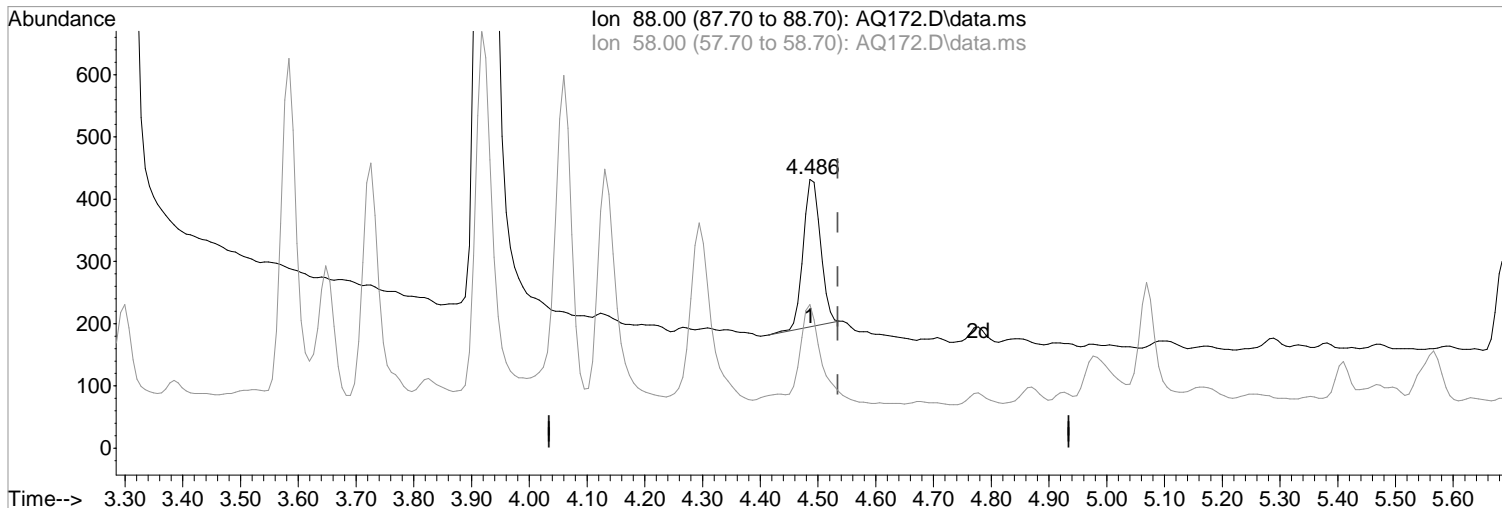
Poor integration.

07/03/18

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ172.D  
Acq On : 3 Jul 2018 4:17 pm  
Operator : J.Misiurewicz  
Sample : R1806022-003  
Misc : 317062 8270D DIOX  
ALS Vial : 12 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Jul 03 16:34:06 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



TIC: AQ172.D\data.ms

(2) 1,4-Dioxane (T)

Manual Integration:

4.486min (-0.048) 2.88 PPB

Before

response 497

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	59.83
0.00	0.00	0.00
0.00	0.00	0.00

07/03/18

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ172.D  
Acq On : 3 Jul 2018 4:17 pm  
Operator : J.Misiurewicz  
Sample : R1806022-003 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 16:34:17 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

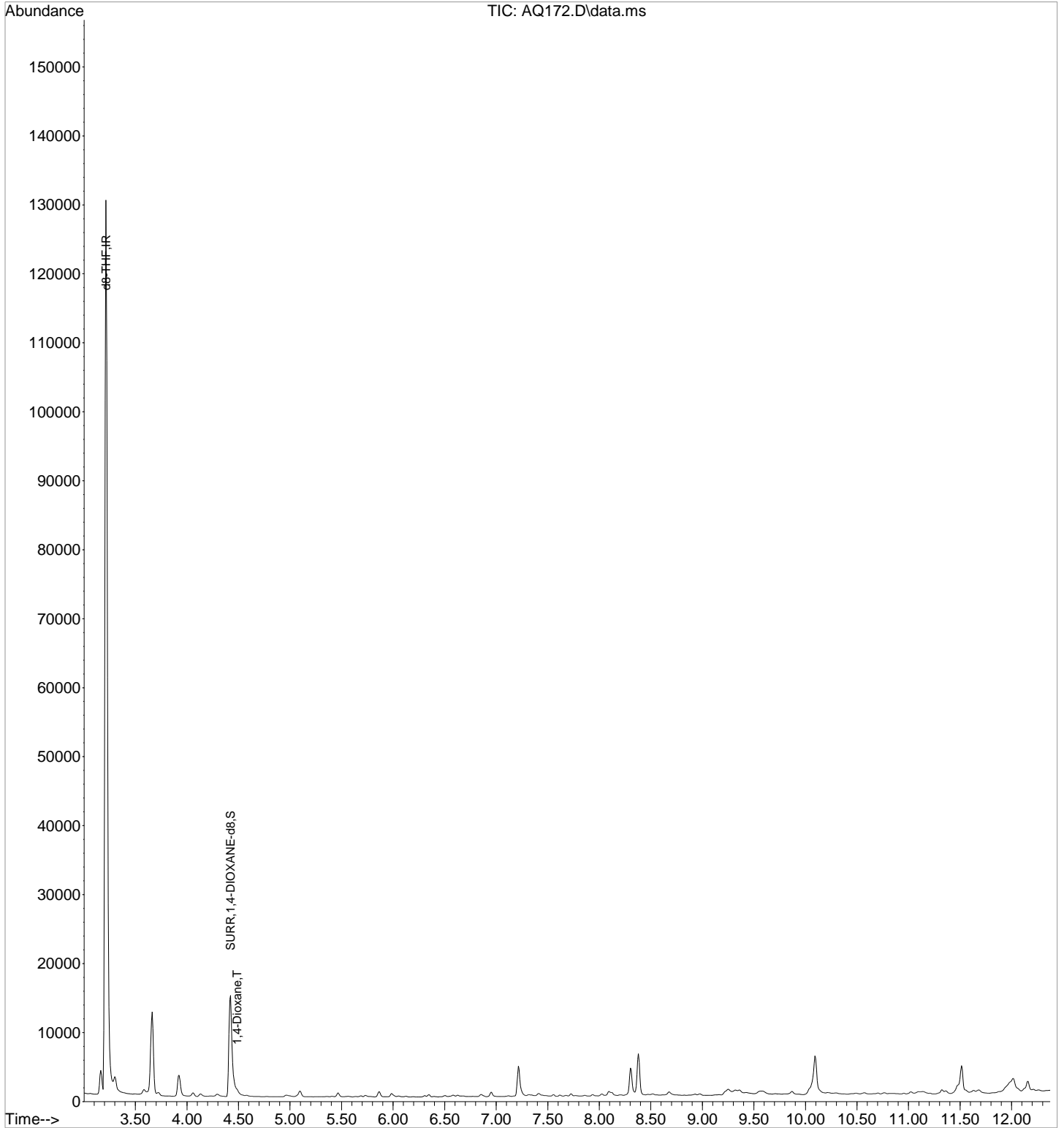
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.214	46	86850	500.00	PPB	-0.05
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.422	96	16512	106.00	PPB	-0.06
Spiked Amount	100.000	Range	70 - 130	Recovery	=	106.00%
Target Compounds						
2) 1,4-Dioxane	4.486	88	560m	3.24	PPB	Qvalue

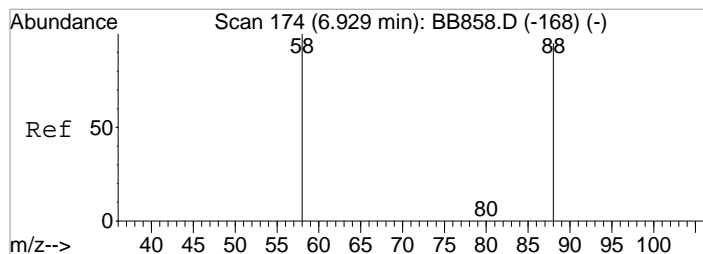
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ172.D  
Acq On : 3 Jul 2018 4:17 pm  
Operator : J.Misiurewicz  
Sample : R1806022-003 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 12 Sample Multiplier: 1

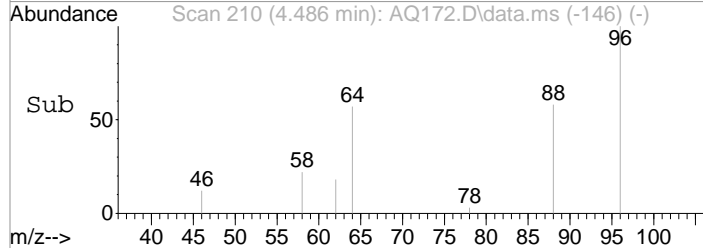
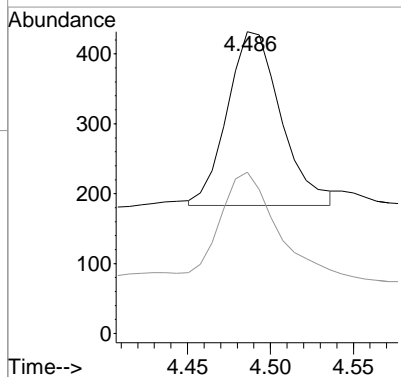
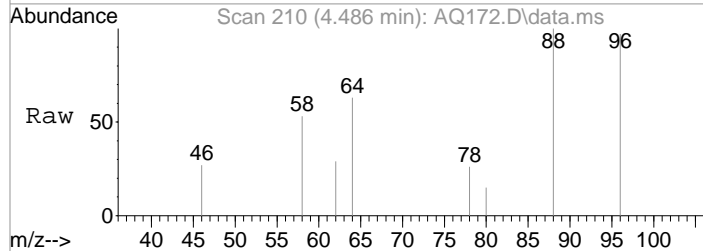
Quant Time: Jul 03 16:34:17 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration





#2  
1,4-Dioxane  
Concen: 3.24 PPB m  
RT: 4.486 min Scan# 210  
Delta R.T. -0.048 min  
Lab File: AQ172.D  
Acq: 3 Jul 2018 4:17 pm

Tgt Ion: 88 Resp: 560  
Ion Ratio Lower Upper  
88 100  
58 53.5 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ173.D  
 Acq On : 3 Jul 2018 4:36 pm  
 Operator : J.Misiurewicz  
 Sample : R1806022-004 Inst : 5975 E  
 Misc : 317062 8270D DIOX  
 ALS Vial : 13 Sample Multiplier: 1

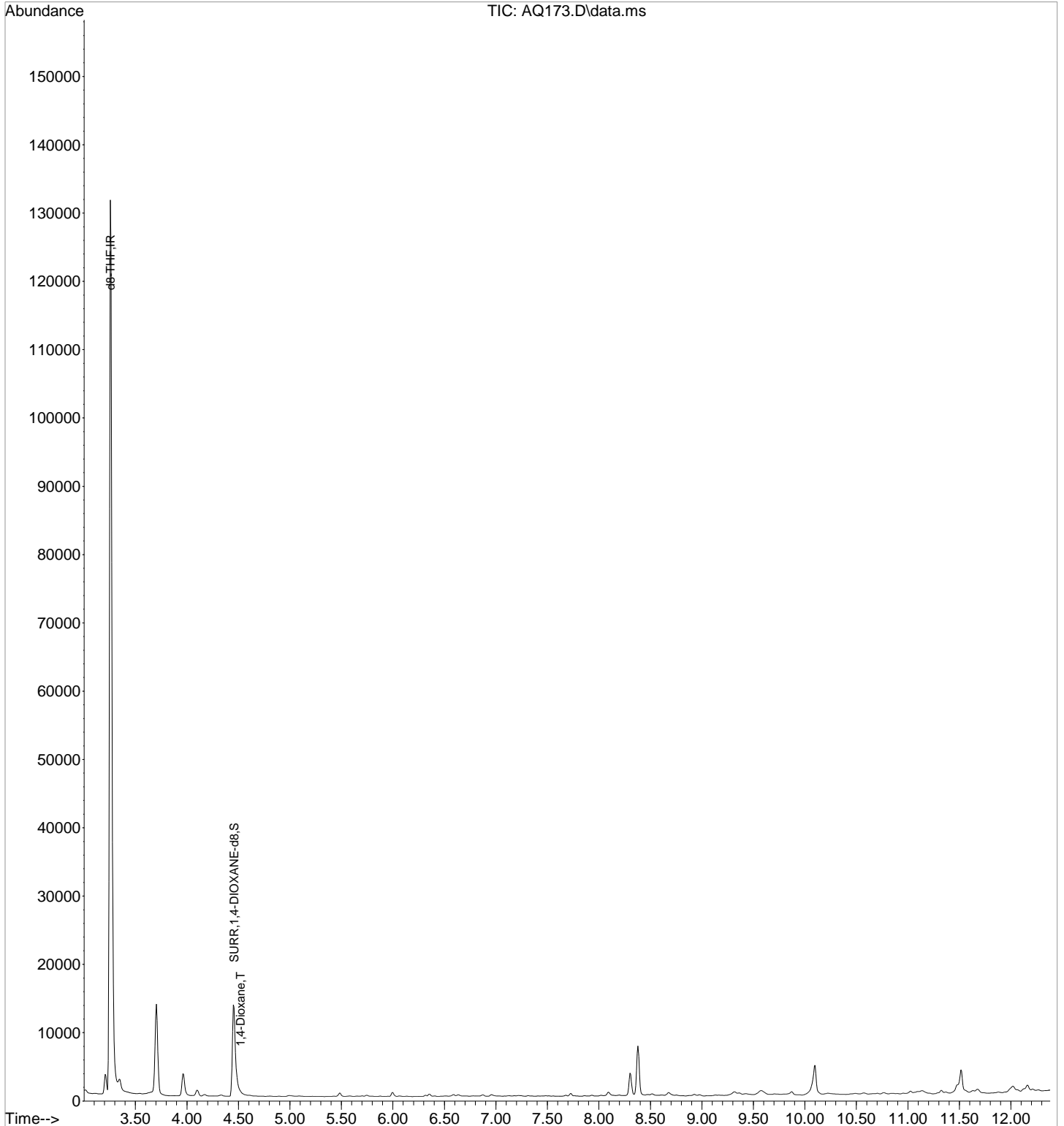
Quant Time: Jul 05 07:34:28 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.257	46	91145	500.00	PPB	-0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.457	96	15303	93.63	PPB	-0.03
Spiked Amount	100.000	Range	70 - 130	Recovery	=	93.63%
Target Compounds						
2) 1,4-Dioxane	4.521	88	160	0.90	PPB	Qvalue 95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ173.D  
Acq On : 3 Jul 2018 4:36 pm  
Operator : J.Misiurewicz  
Sample : R1806022-004 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 05 07:34:28 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ174.D  
Acq On : 3 Jul 2018 4:54 pm  
Operator : J.Misiurewicz  
Sample : R1806022-005 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 14 Sample Multiplier: 1

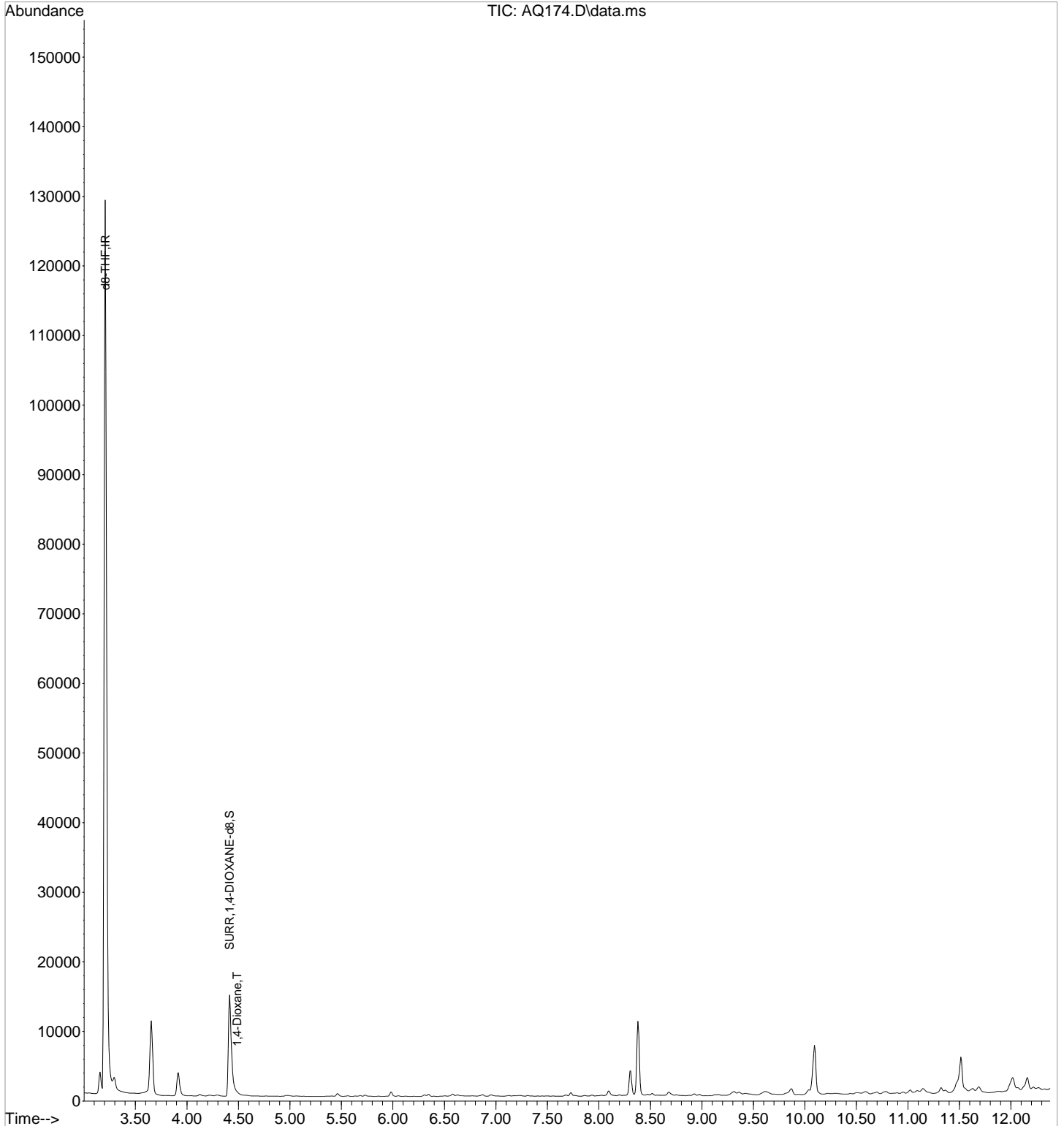
Quant Time: Jul 05 07:34:30 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.207	46	86203	500.00	PPB	-0.06
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.415	96	15987	103.40	PPB	-0.07
Spiked Amount	100.000	Range	70 - 130	Recovery	=	103.40%
Target Compounds						
2) 1,4-Dioxane	4.486	88	184	1.09	PPB	Qvalue 89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ174.D  
Acq On : 3 Jul 2018 4:54 pm  
Operator : J.Misiurewicz  
Sample : R1806022-005 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 05 07:34:30 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ175.D  
 Acq On : 3 Jul 2018 5:12 pm  
 Operator : J.Misiurewicz  
 Sample : R1806022-006 Inst : 5975 E  
 Misc : 317062 8270D DIOX  
 ALS Vial : 15 Sample Multiplier: 1

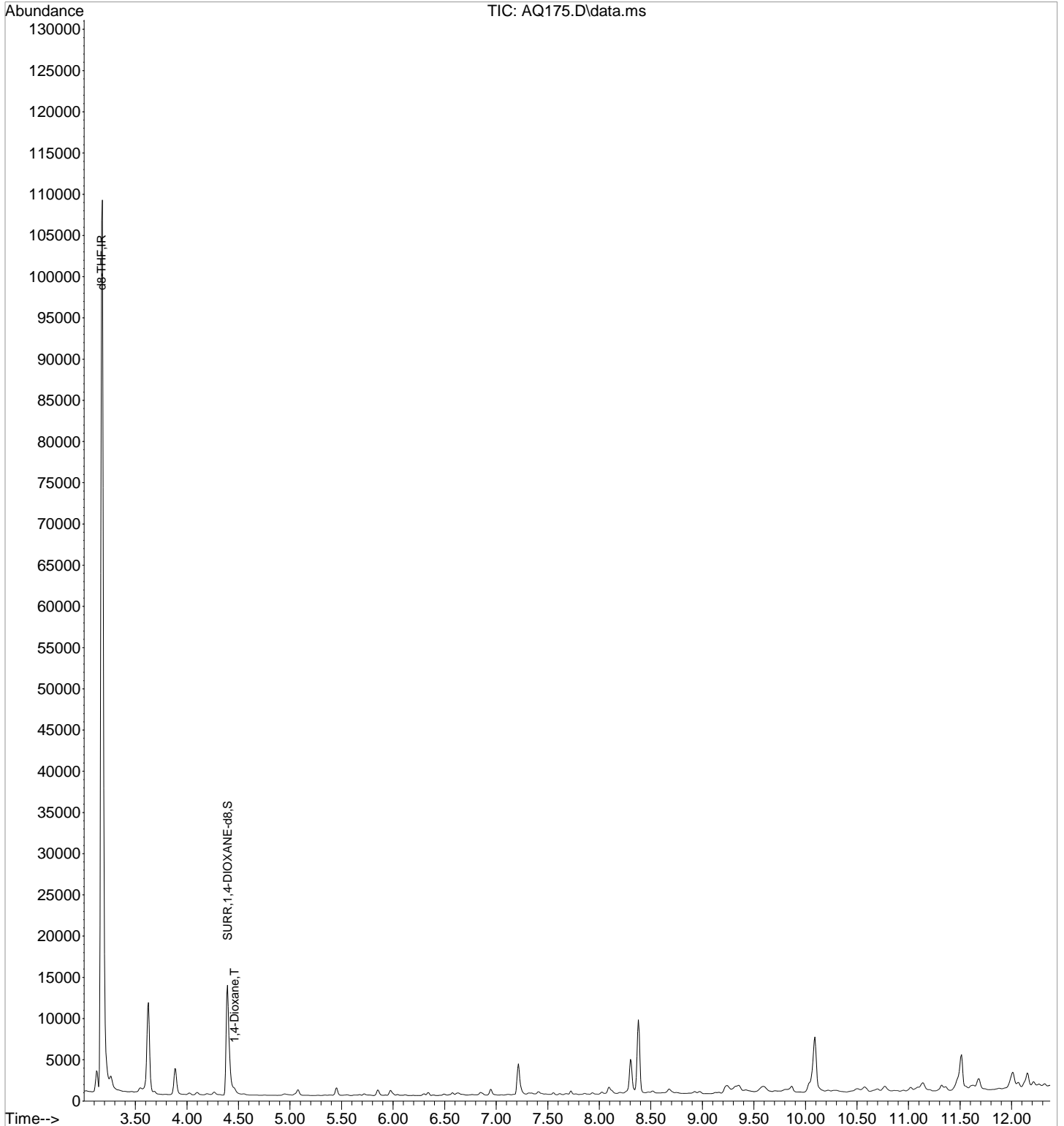
Quant Time: Jul 05 07:34:32 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.172	46	77509	500.00	PPB	-0.10
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.394	96	14365	103.34	PPB	-0.09
Spiked Amount	100.000	Range	70 - 130	Recovery	=	103.34%
Target Compounds						
2) 1,4-Dioxane	4.458	88	595	3.86	PPB	Qvalue 92

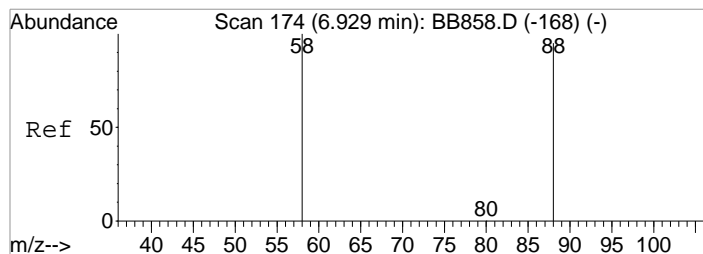
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ175.D  
Acq On : 3 Jul 2018 5:12 pm  
Operator : J.Misiurewicz  
Sample : R1806022-006 Inst : 5975 E  
Misc : 317062 8270D DIOX  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 05 07:34:32 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

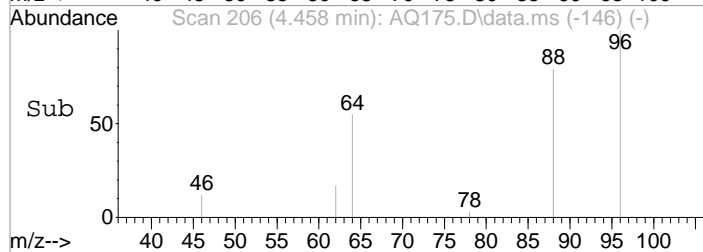
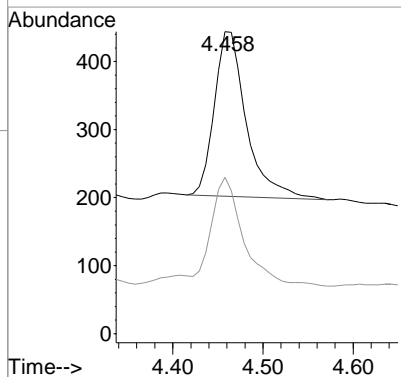
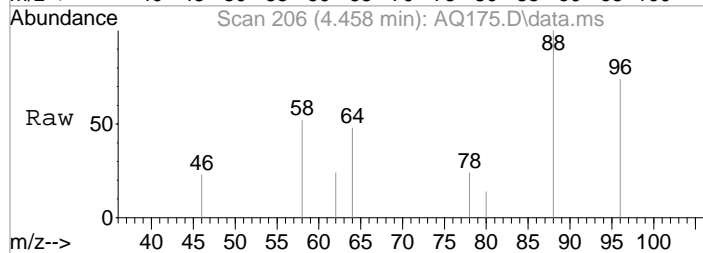






#2  
1,4-Dioxane  
Concen: 3.86 PPB  
RT: 4.458 min Scan# 206  
Delta R.T. -0.076 min  
Lab File: AQ175.D  
Acq: 3 Jul 2018 5:12 pm

Tgt Ion: 88 Resp: 595  
Ion Ratio Lower Upper  
88 100  
58 62.6 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ164.D  
Acq On : 3 Jul 2018 1:46 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-01 Inst : 5975 E  
Misc : 317062 8270D DIOX BLK  
ALS Vial : 4 Sample Multiplier: 1

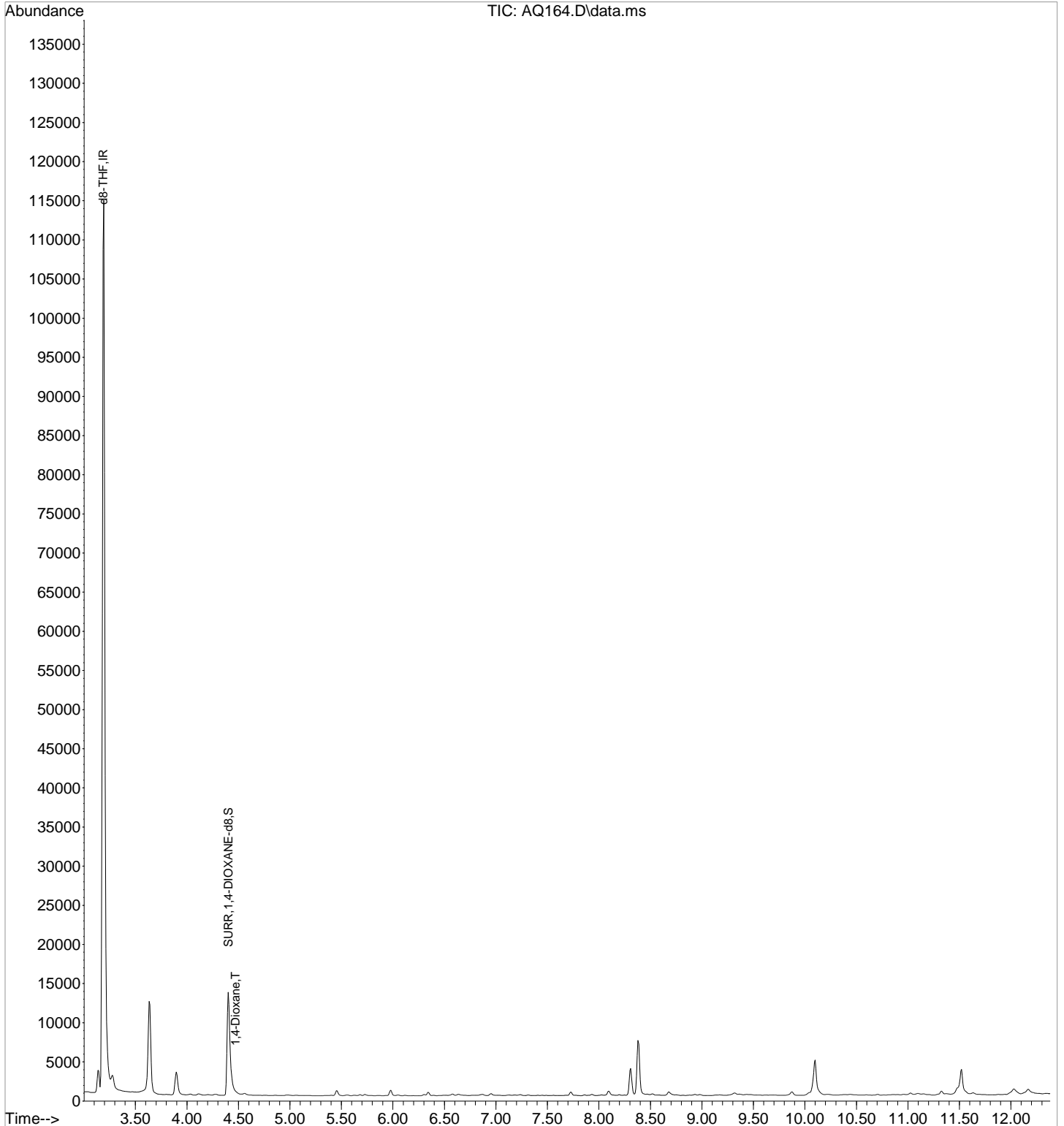
Quant Time: Jul 03 14:54:02 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.185	46	80022	500.00	PPB	-0.08
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.400	96	14466	100.80	PPB	-0.08
Spiked Amount	100.000	Range	70 - 130	Recovery	=	100.80%
Target Compounds						
2) 1,4-Dioxane	4.471	88	119	0.76	PPB	Qvalue 82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ164.D  
Acq On : 3 Jul 2018 1:46 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-01 Inst : 5975 E  
Misc : 317062 8270D DIOX BLK  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 14:54:02 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ165.D  
 Acq On : 3 Jul 2018 2:05 pm  
 Operator : J.Misiurewicz  
 Sample : RQ1806684-02 Inst : 5975 E  
 Misc : 317062 8270D DIOX LCS  
 ALS Vial : 5 Sample Multiplier: 1

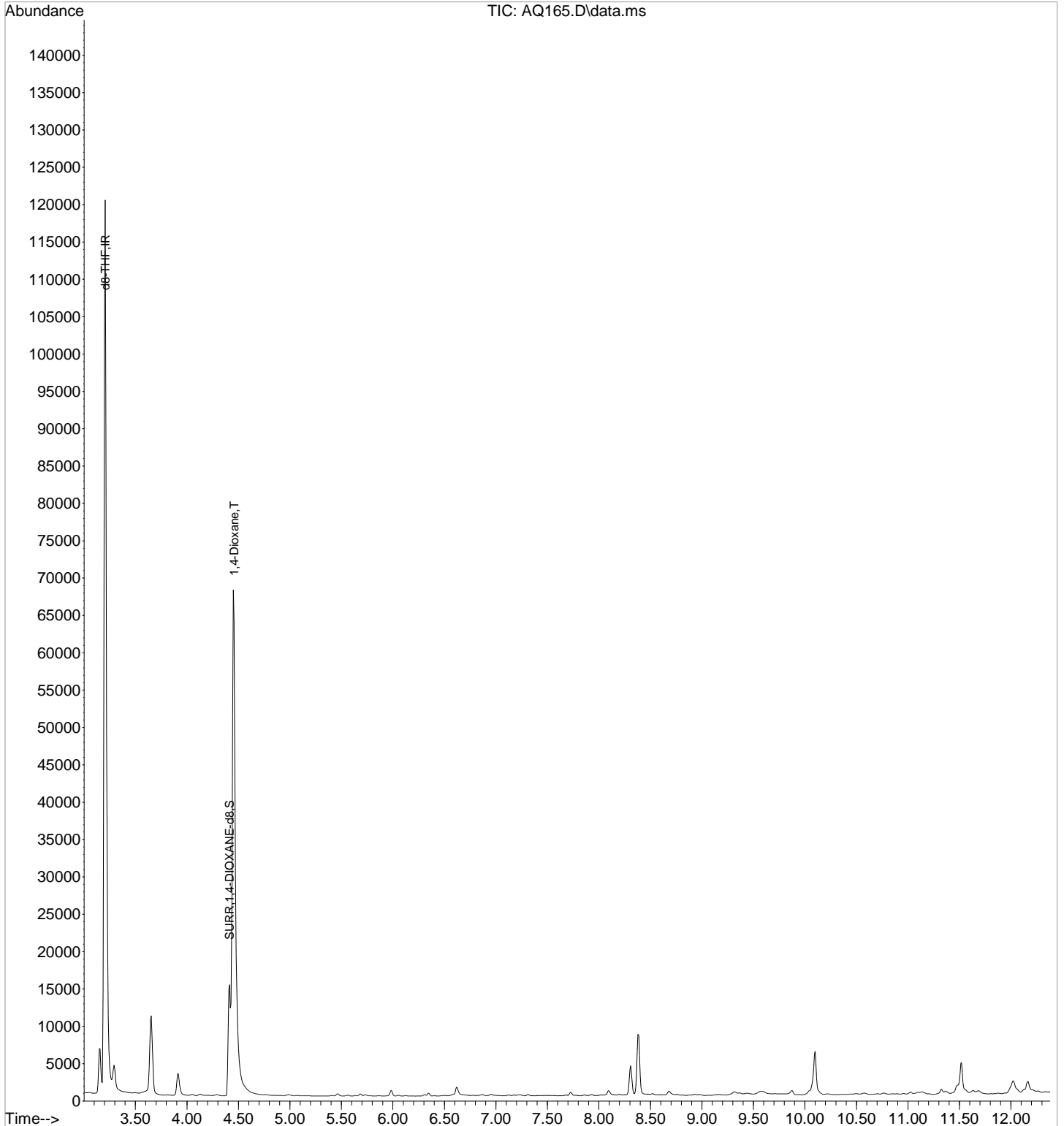
Quant Time: Jul 03 14:54:14 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.207	46	80400	500.00	PPB	-0.06
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.415	96	14898	103.32	PPB	-0.07
Spiked Amount	100.000	Range	70 - 130	Recovery	=	103.32%
Target Compounds						
2) 1,4-Dioxane	4.457	88	92294	570.48	PPB	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ165.D  
Acq On : 3 Jul 2018 2:05 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-02 Inst : 5975 E  
Misc : 317062 8270D DIOX LCS  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 14:54:14 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ166.D  
 Acq On : 3 Jul 2018 2:24 pm  
 Operator : J.Misiurewicz  
 Sample : RQ1806684-03 Inst : 5975 E  
 Misc : 317062 8270D DIOX LCSD  
 ALS Vial : 6 Sample Multiplier: 1

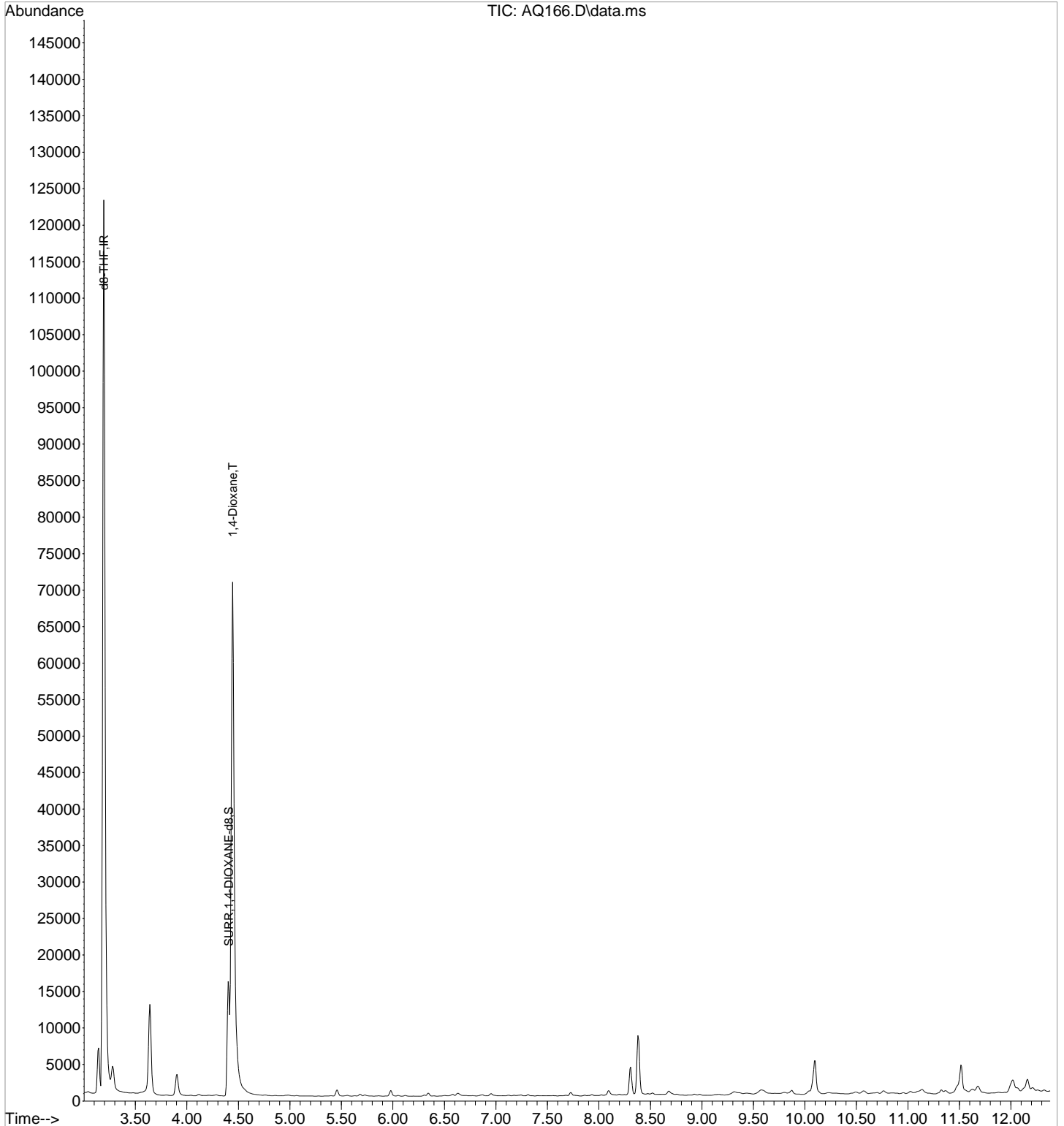
Quant Time: Jul 03 14:54:26 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.193	46	82021	500.00	PPB	-0.07
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.408	96	15332	104.22	PPB	-0.08
Spiked Amount	100.000	Range	70 - 130	Recovery	=	104.22%
Target Compounds						
2) 1,4-Dioxane	4.443	88	90912	550.92	PPB	Qvalue 94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ166.D  
Acq On : 3 Jul 2018 2:24 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-03 Inst : 5975 E  
Misc : 317062 8270D DIOX LCSD  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 14:54:26 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ170.D  
Acq On : 3 Jul 2018 3:40 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-04 Inst : 5975 E  
Misc : 317062 8270D DIOX R6022-002MS  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 16:33:39 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

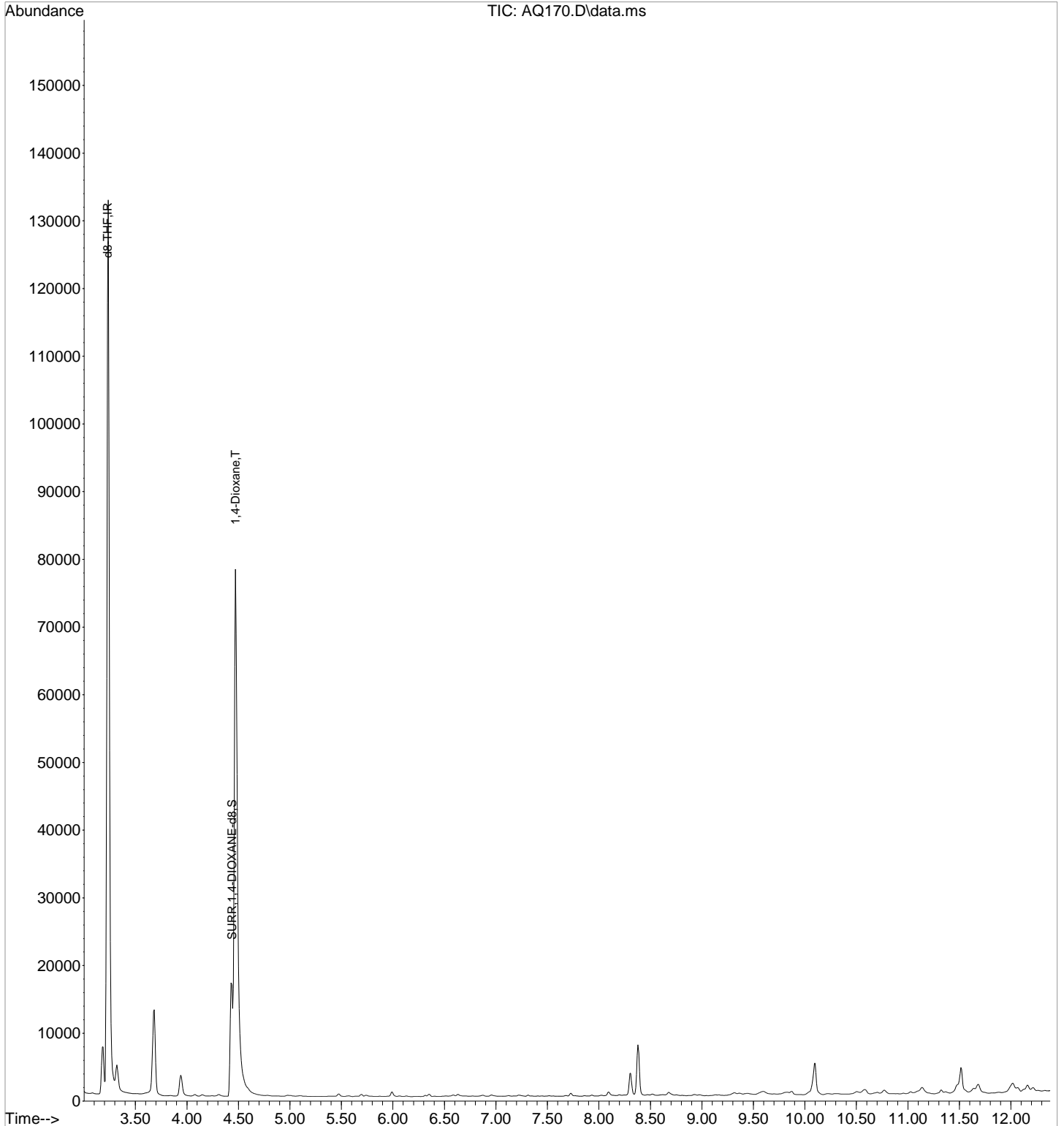
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.228	46	89475	500.00	PPB	-0.04
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.436	96	16885	105.22	PPB	-0.05
Spiked Amount	100.000	Range	70 - 130	Recovery	=	105.22%
Target Compounds						
2) 1,4-Dioxane	4.472	88	104124	578.29	PPB	Qvalue 92

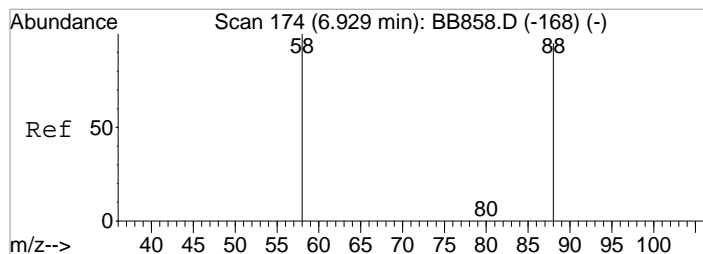
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ170.D  
Acq On : 3 Jul 2018 3:40 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-04 Inst : 5975 E  
Misc : 317062 8270D DIOX R6022-002MS  
ALS Vial : 10 Sample Multiplier: 1

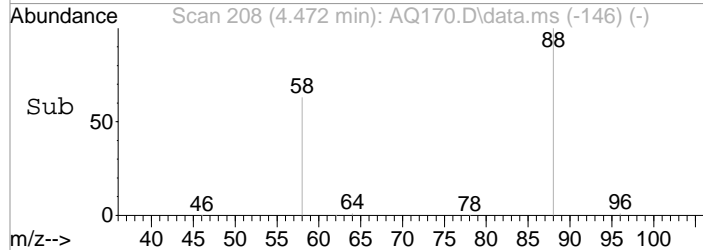
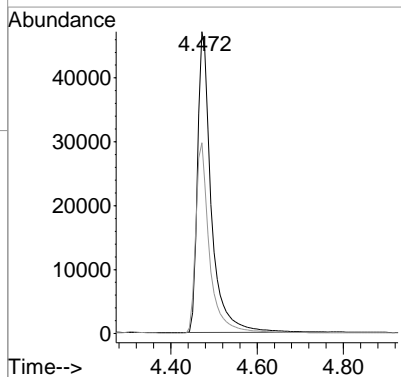
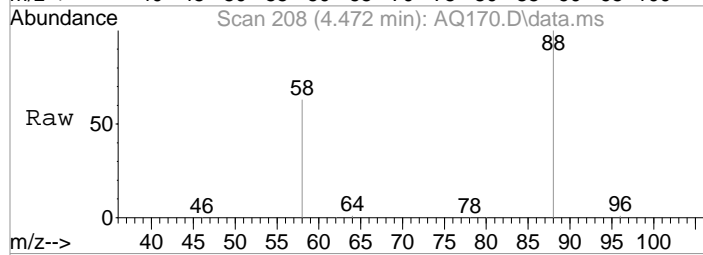
Quant Time: Jul 03 16:33:39 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration





#2  
1,4-Dioxane  
Concen: 578.29 PPB  
RT: 4.472 min Scan# 208  
Delta R.T. -0.063 min  
Lab File: AQ170.D  
Acq: 3 Jul 2018 3:40 pm

Tgt Ion	Resp	Lower	Upper
88	104124		
88	100		
58	63.2	37.0	77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ171.D  
 Acq On : 3 Jul 2018 3:59 pm  
 Operator : J.Misiurewicz  
 Sample : RQ1806684-05 Inst : 5975 E  
 Misc : 317062 8270D DIOX R6022-002MSD  
 ALS Vial : 11 Sample Multiplier: 1

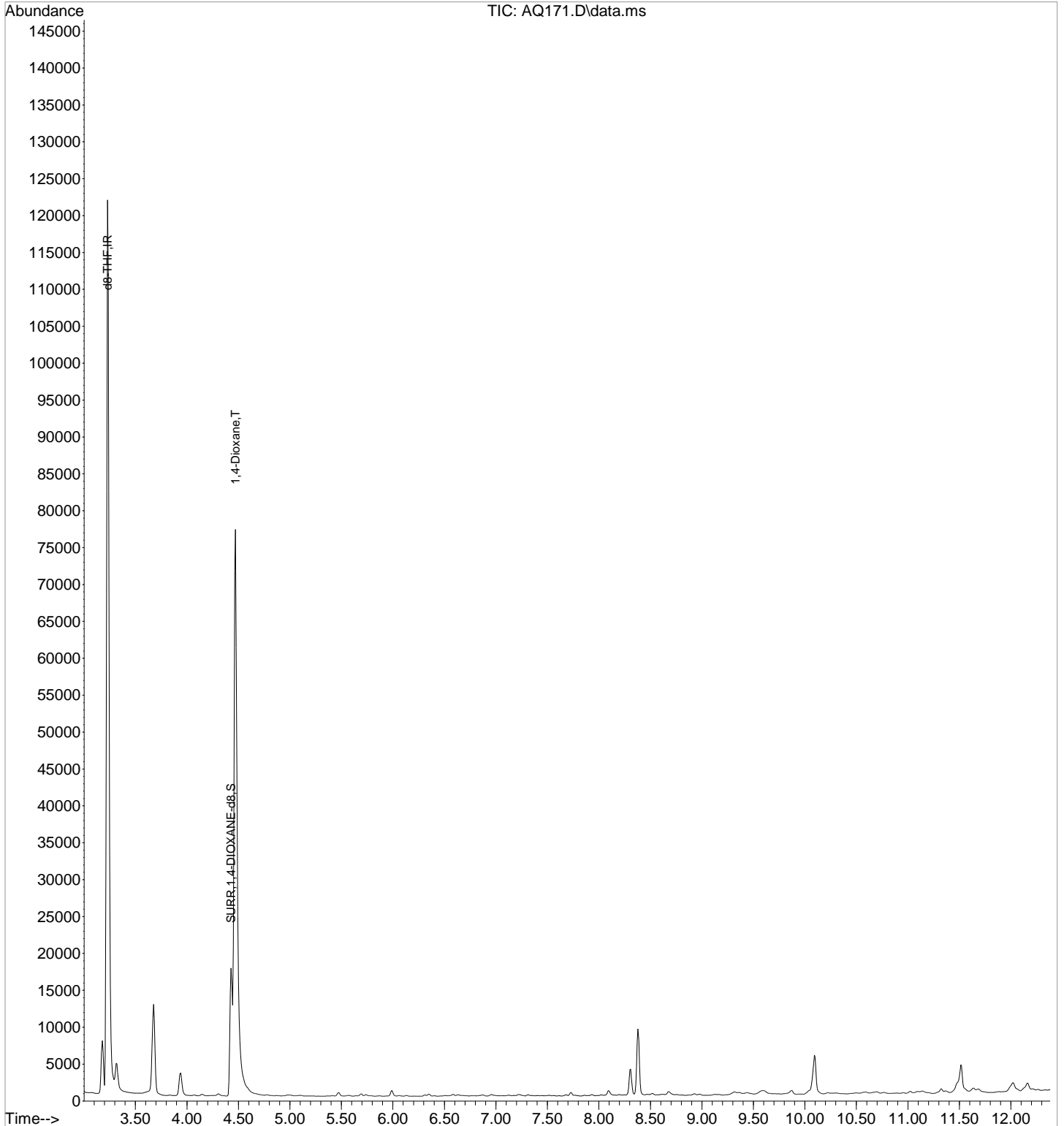
Quant Time: Jul 03 16:33:53 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

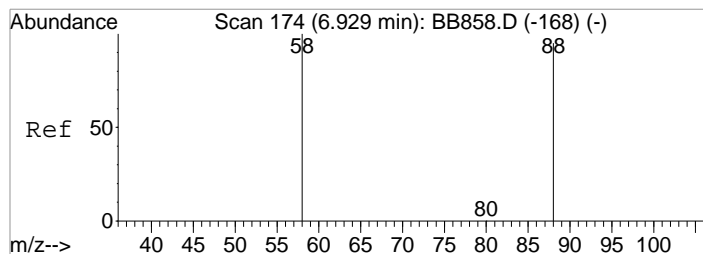
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.228	46	84829	500.00	PPB	-0.04
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.429	96	16859	110.79	PPB	-0.06
Spiked Amount	100.000	Range	70 - 130	Recovery	=	110.79%
Target Compounds						
2) 1,4-Dioxane	4.472	88	101882	596.73	PPB	Qvalue 98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ171.D  
Acq On : 3 Jul 2018 3:59 pm  
Operator : J.Misiurewicz  
Sample : RQ1806684-05 Inst : 5975 E  
Misc : 317062 8270D DIOX R6022-002MSD  
ALS Vial : 11 Sample Multiplier: 1

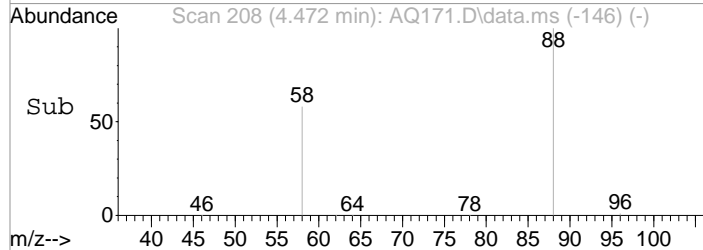
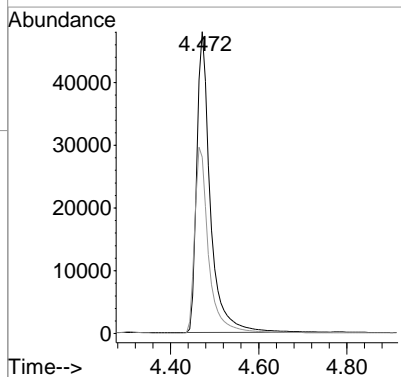
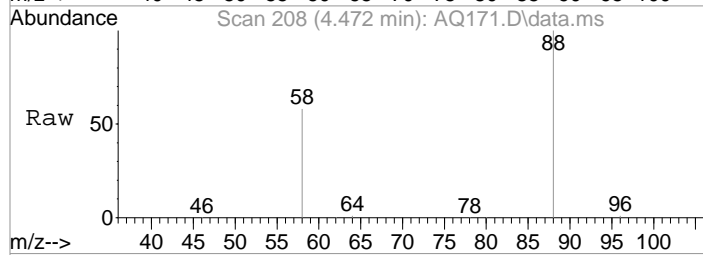
Quant Time: Jul 03 16:33:53 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration





#2  
1,4-Dioxane  
Concen: 596.73 PPB  
RT: 4.472 min Scan# 208  
Delta R.T. -0.063 min  
Lab File: AQ171.D  
Acq: 3 Jul 2018 3:59 pm

Tgt Ion: 88 Resp: 101882  
Ion Ratio Lower Upper  
88 100  
58 58.4 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ163.D  
Acq On : 3 Jul 2018 1:06 pm  
Operator : J.Misiurewicz  
Sample : CCV Inst : 5975 E  
Misc : 200 ppb STD 8270D DIOX  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 03 13:42:58 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR d8-THF	500.000	500.000	0.0	110	-0.03
2 T 1,4-Dioxane	200.000	232.398	-16.2	117	-0.05
3 S SURR,1,4-DIOXANE-d8	200.000	243.910	-22.0#	124	-0.05

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ163.D  
 Acq On : 3 Jul 2018 1:06 pm  
 Operator : J.Misiurewicz  
 Sample : CCV Inst : 5975 E  
 Misc : 200 ppb STD 8270D DIOX  
 ALS Vial : 3 Sample Multiplier: 1

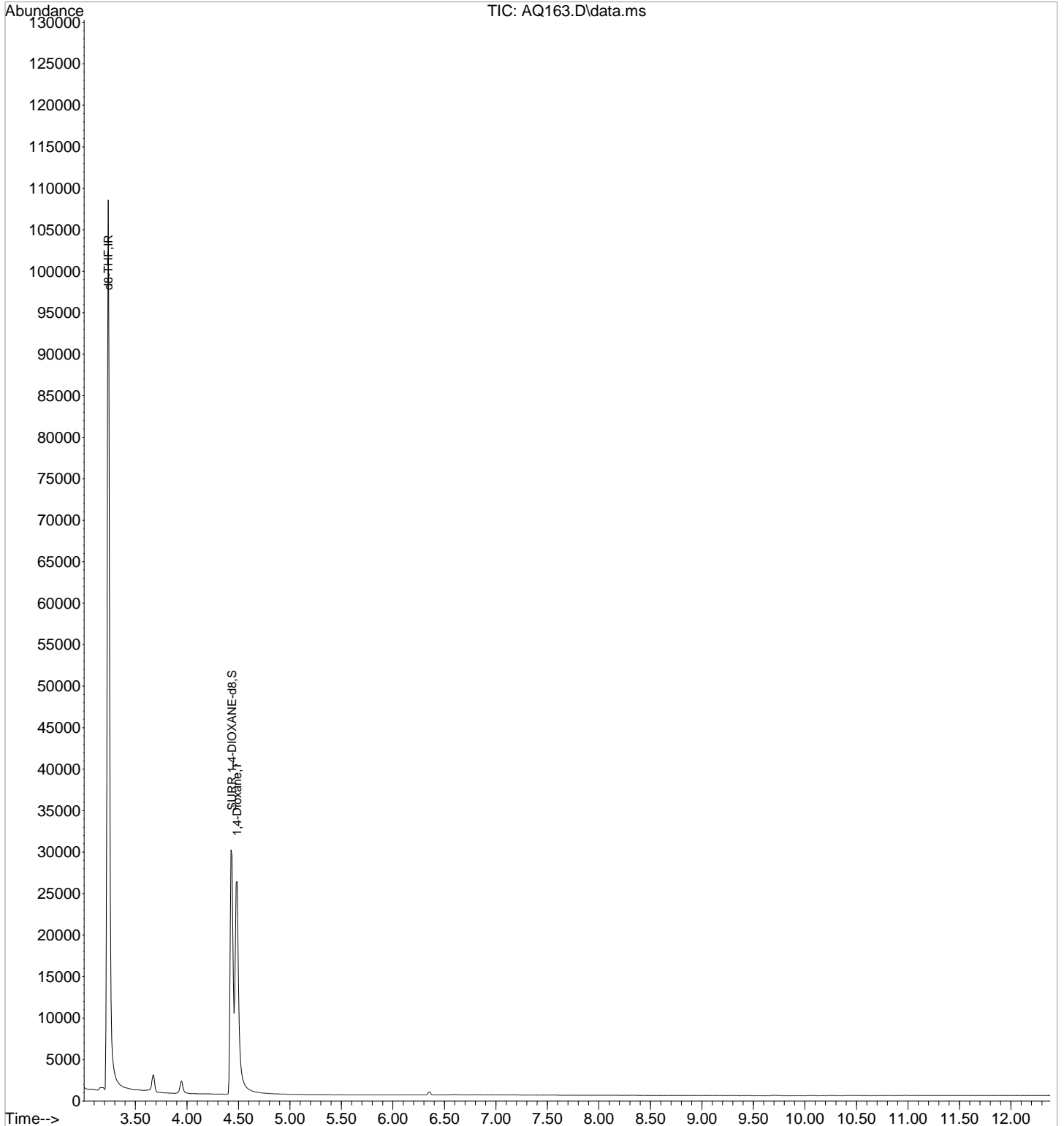
Quant Time: Jul 03 13:42:58 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.235	46	74150	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.436	96	32522	243.91	PPB	-0.05
Spiked Amount	100.000	Range	70 - 130	Recovery	=	243.91%#
Target Compounds						
2) 1,4-Dioxane	4.486	88	34574	232.40	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ163.D  
Acq On : 3 Jul 2018 1:06 pm  
Operator : J.Misiurewicz  
Sample : CCV Inst : 5975 E  
Misc : 200 ppb STD 8270D DIOX  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 03 13:42:58 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

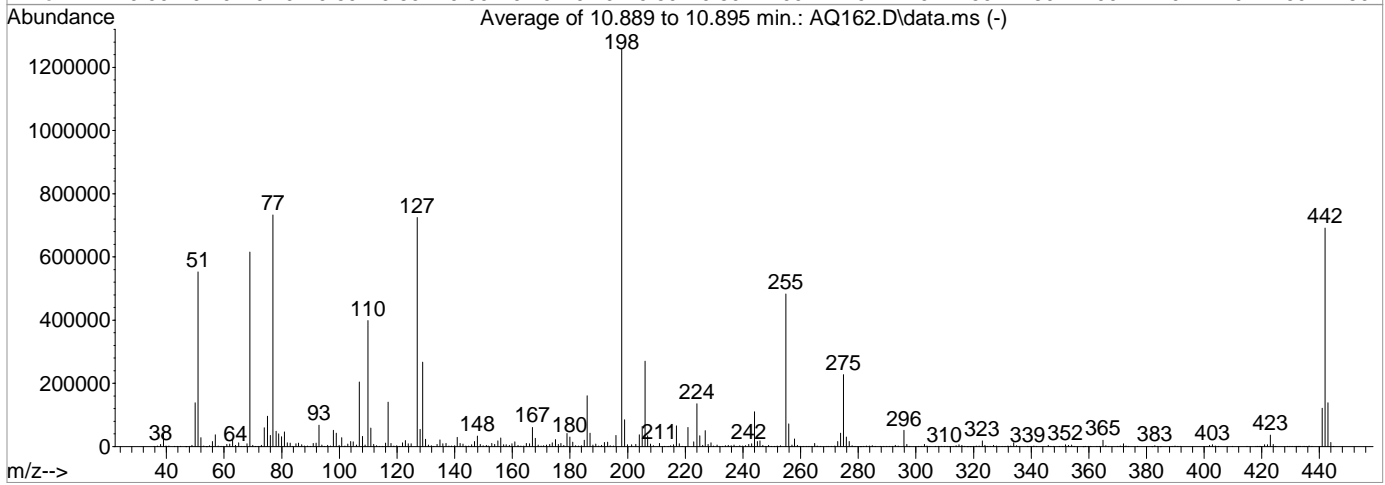
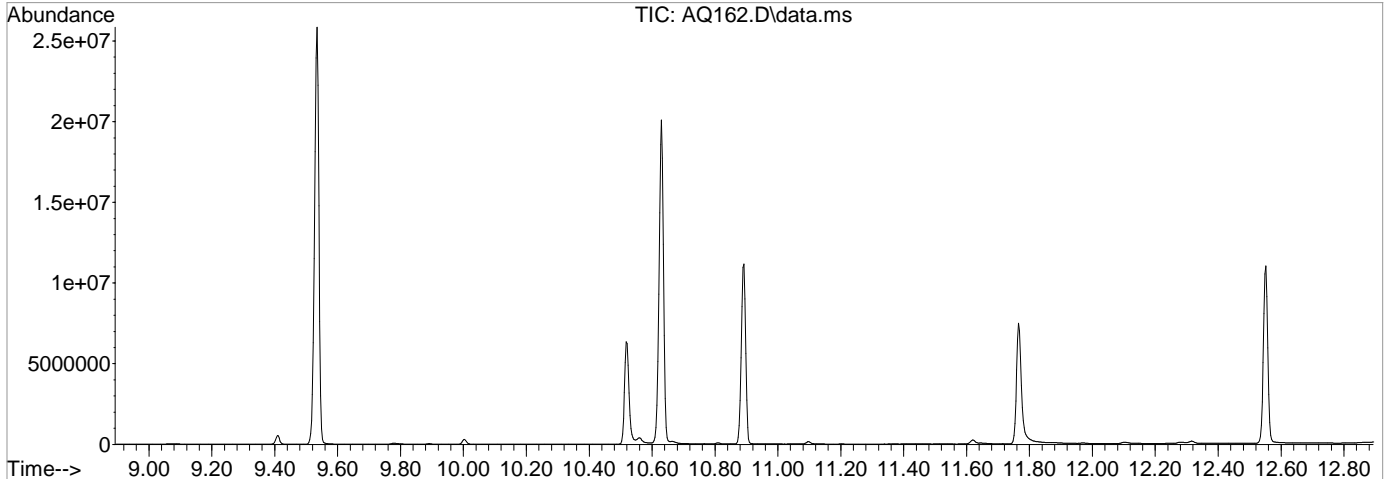




Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ162.D  
Acq On : 3 Jul 2018 12:42 pm  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 2 Sample Multiplier: 1  
Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Title :  
Last Update : Tue Feb 13 10:58:46 2018

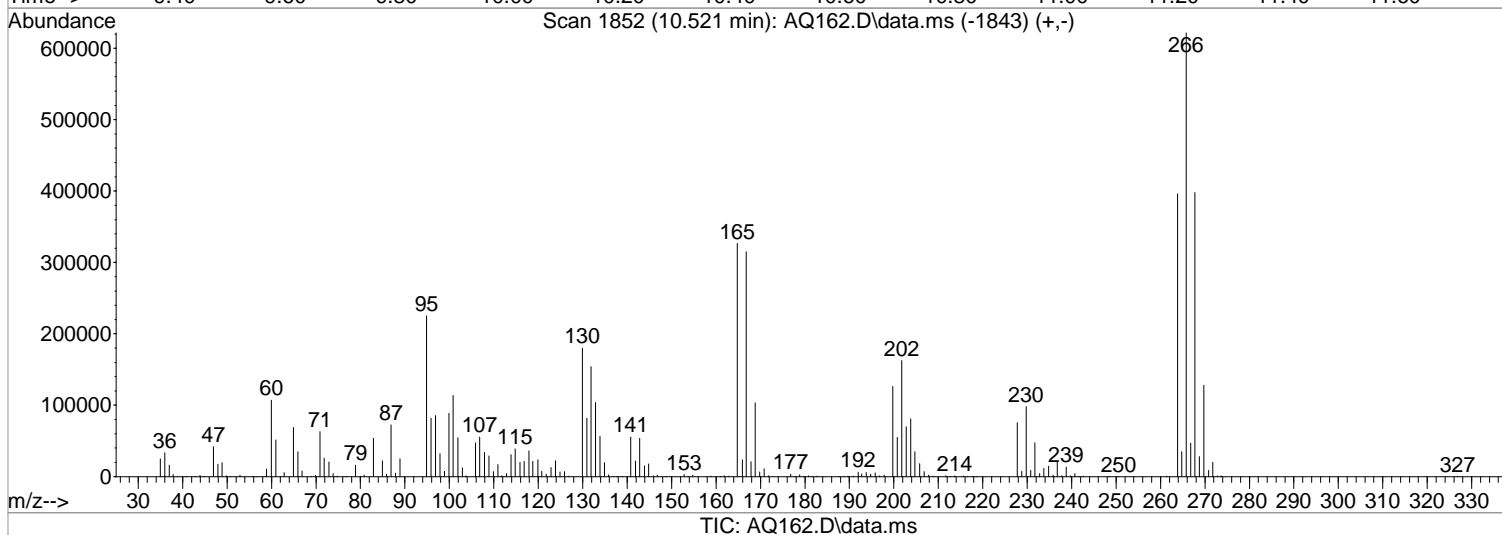
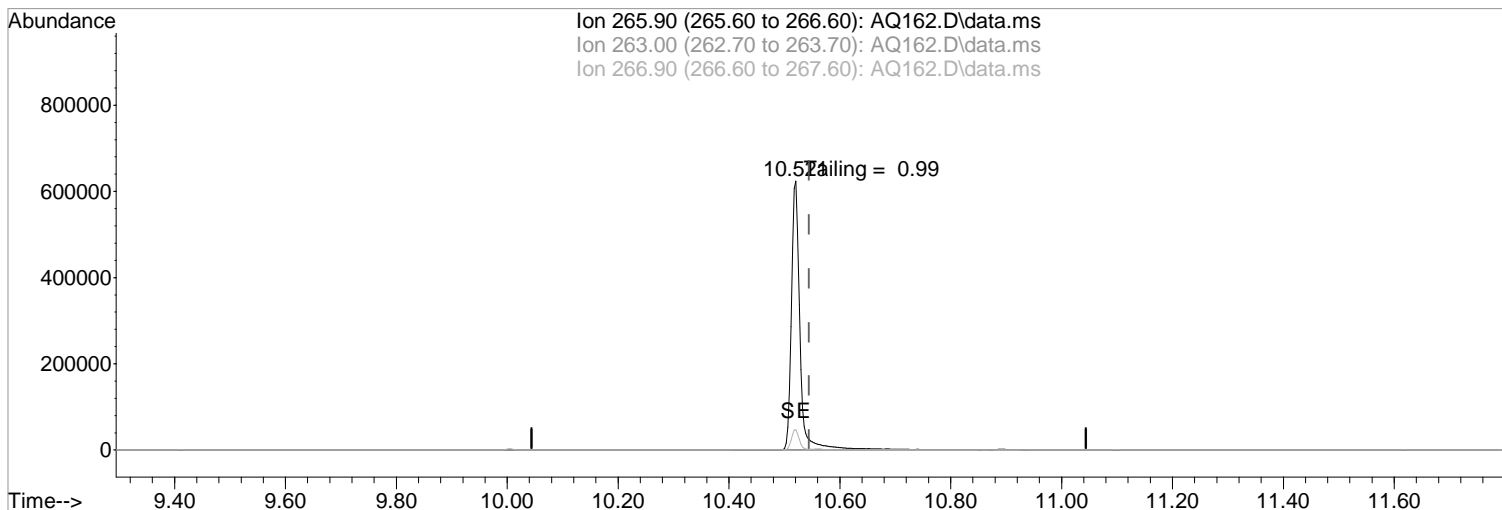


AutoFind: Scans 1977, 1978, 1979; Background Corrected with Scan 1964

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	43.9	552428	PASS
68	69	0.00	2	1.4	8852	PASS
70	69	0.00	2	0.5	3260	PASS
127	198	10	80	57.6	724740	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1257984	PASS
199	198	5	9	6.7	84285	PASS
275	198	10	60	18.1	227712	PASS
365	198	1	500	1.6	19992	PASS
441	442	0.01	24	17.6	121440	PASS
442	442	100	100	100.0	690987	PASS
443	442	15	24	20.0	138155	PASS

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ162.D  
Acq On : 3 Jul 2018 12:42 pm  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 2 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Jul 03 13:42:14 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Quant Title :  
QLast Update : Tue Feb 13 10:58:46 2018  
Response via : Initial Calibration

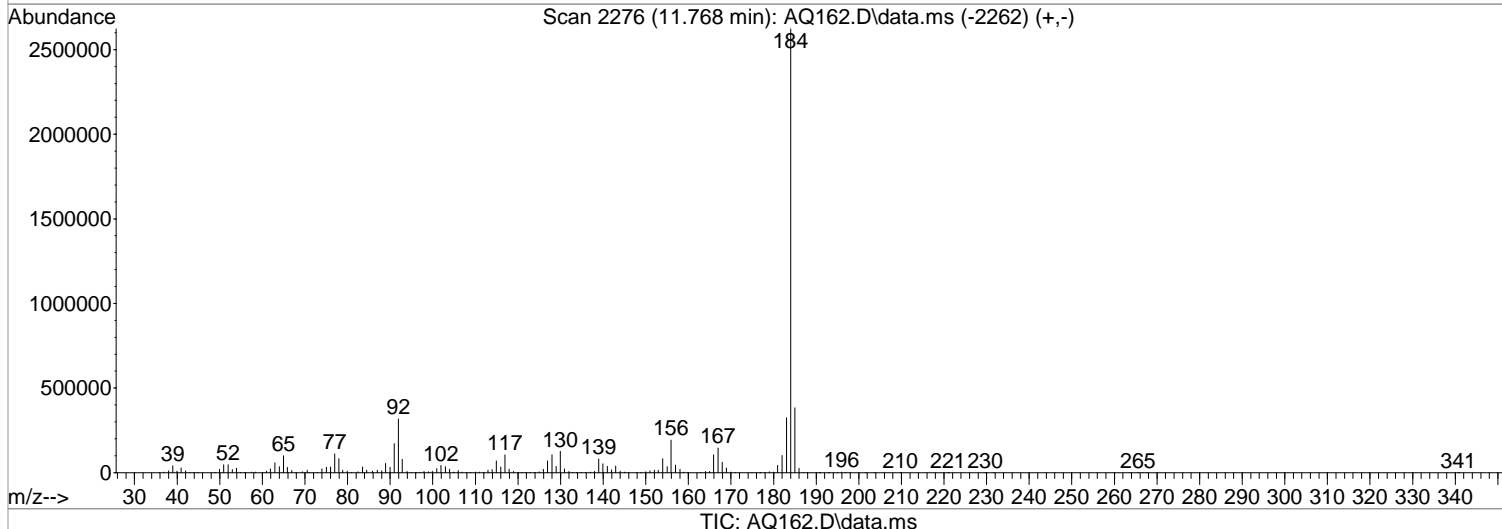
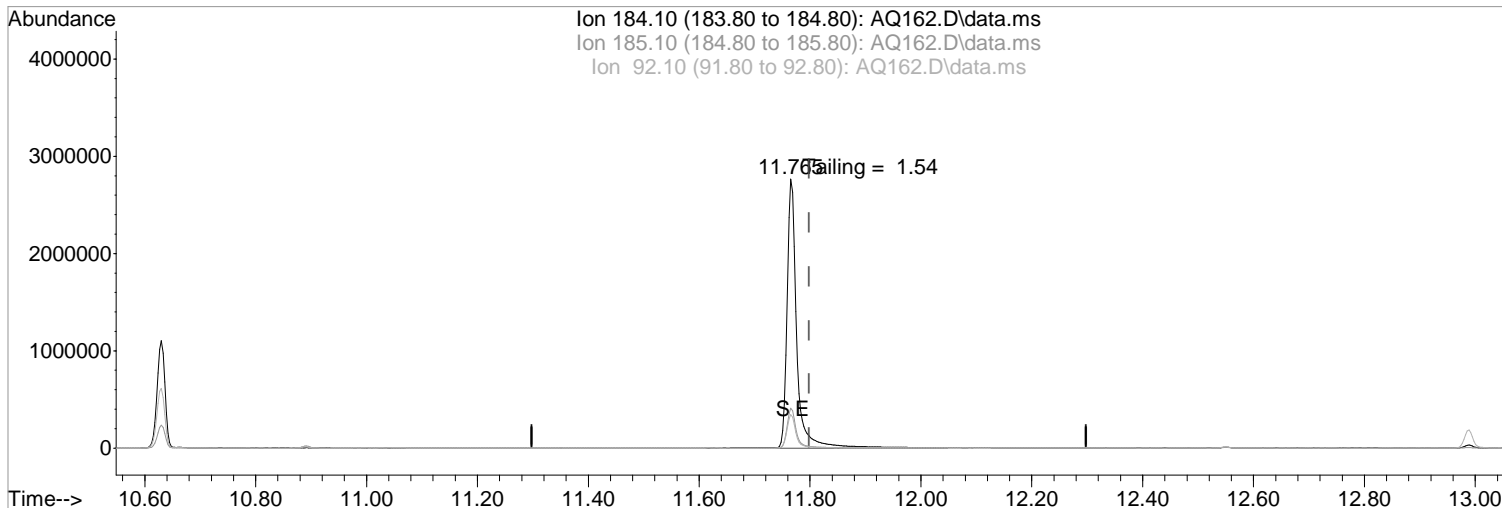


(5) Pentachlorophenol (T)  
10.521min (-0.023) 54.71 ppm  
response 6378642  
Ion Exp% Act%  
265.90 100.00 100.00  
263.00 0.00 0.00  
266.90 7.70 7.56  
0.00 0.00 0.00

Manual Integration:  
After  
Other - Tailing  
07/03/18

Data Path : I:\ACQUDATA\5975E\data\070318\  
Data File : AQ162.D  
Acq On : 3 Jul 2018 12:42 pm  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 2 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Jul 03 13:42:14 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Quant Title :  
QLast Update : Tue Feb 13 10:58:46 2018  
Response via : Initial Calibration



(8) Benzidine (T)

Manual Integration:

11.767min (-0.031) 89.22 ppm

After

response 32173826

Other - Tailing

07/03/18

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.60
92.10	10.70	12.10
0.00	0.00	0.00

Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ162.D  
 Acq On : 3 Jul 2018 12:42 pm  
 Operator : J.Misiurewicz  
 Sample : TUNE Inst : 5975 E  
 Misc : DFTPP  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 03 13:42:14 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
 Quant Title :  
 QLast Update : Tue Feb 13 10:58:46 2018  
 Response via : Initial Calibration

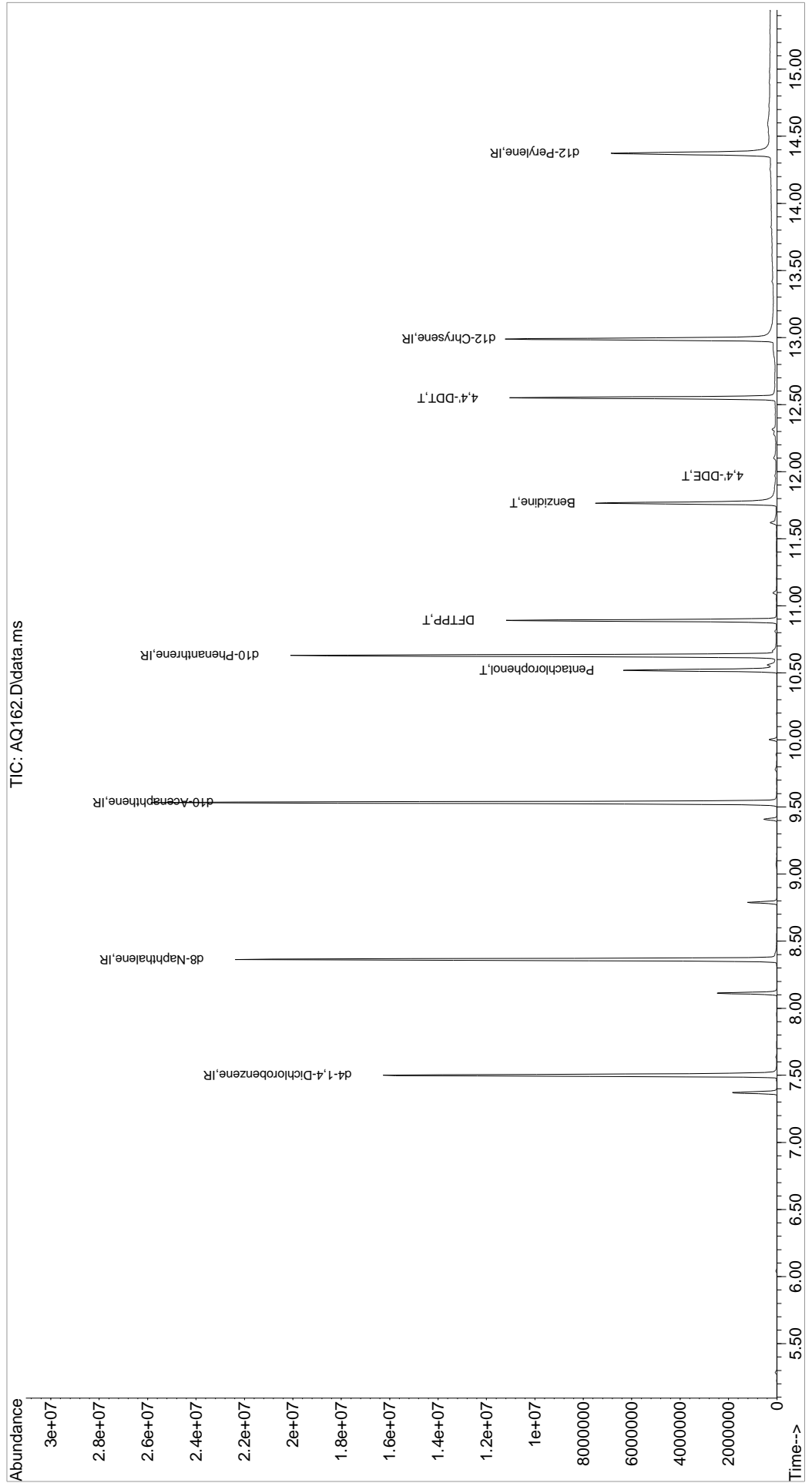
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) d4-1,4-Dichlorobenzene	7.501	152	27112161	20.00	ppm	-0.03	
2) d8-Naphthalene	8.364	136	89957571	20.00	ppm	-0.03	
3) d10-Acenaphthene	9.535	164	50457846	20.00	ppm	-0.02	
4) d10-Phenanthrene	10.631	188	67455826	20.00	ppm	-0.03	
7) d12-Chrysene	12.990	240	36531756	20.00	ppm	-0.04	
12) d12-Perylene	14.374	264	27953710	20.00	ppm	-0.04	
Target Compounds							
5) Pentachlorophenol	10.521	266	6378642	54.71	ppm		Qvalue 100
6) DFTPP	10.892	198	12608883	56.27	ppm	#	67
8) Benzidine	11.767	184	32173826	89.22	ppm		97
9) 4,4'-DDE	11.970	246	36381	0.10	ppm	#	65
10) 4,4'-DDD	0.000		0		N.D.		
11) 4,4'-DDT	12.553	235	17362656	48.19	ppm		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\070318\  
 Data File : AQ162.D  
 Acq On : 3 Jul 2018 12:42 pm  
 Operator : J.Misiurewicz  
 Sample : TUNE  
 Misc : DFTPP  
 ALS Vial : 2 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Jul 03 13:42:14 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
 Quant Title :  
 QLast Update : Tue Feb 13 10:58:46 2018  
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP482.D  
Acq On : 20 Feb 2018 12:28 pm  
Operator : J.Misiurewicz  
Sample : ICV Inst : 5975 E  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 14 Sample Multiplier: 1

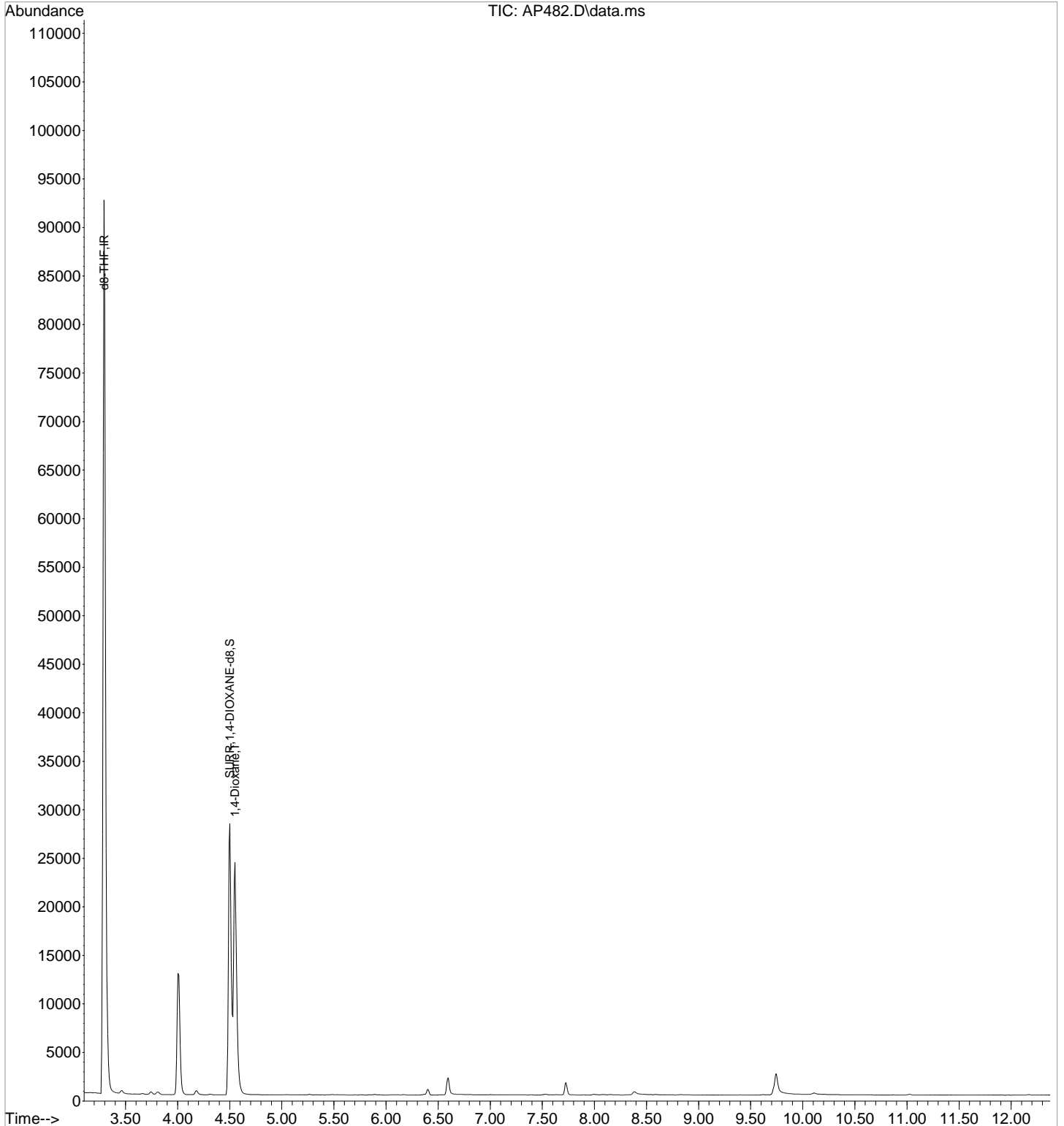
Quant Time: Feb 20 13:43:18 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.293	46	67752	500.00	PPB	0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.501	96	26327	216.20	PPB	0.02
Spiked Amount	100.000	Range	70 - 130	Recovery	=	216.20%#
Target Compounds						
2) 1,4-Dioxane	4.550	88	29017	213.50	PPB	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP482.D  
Acq On : 20 Feb 2018 12:28 pm  
Operator : J.Misiurewicz  
Sample : ICV  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 14 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:43:18 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP482.D  
Acq On : 20 Feb 2018 12:28 pm  
Operator : J.Misiurewicz  
Sample : ICV Inst : 5975 E  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 13:43:18 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR d8-THF	500.000	500.000	0.0	100	0.03
2 T 1,4-Dioxane	200.000	213.500	-6.8	98	0.02
3 S SURR,1,4-DIOXANE-d8	200.000	216.197	-8.1	101	0.02

(#) = Out of Range

SPCC's out = 0 CCC's out = 0



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP480.D  
Acq On : 20 Feb 2018 11:49 am  
Operator : J.Misiurewicz  
Sample : 1000 ppb STD Inst : 5975 E  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 12 Sample Multiplier: 1

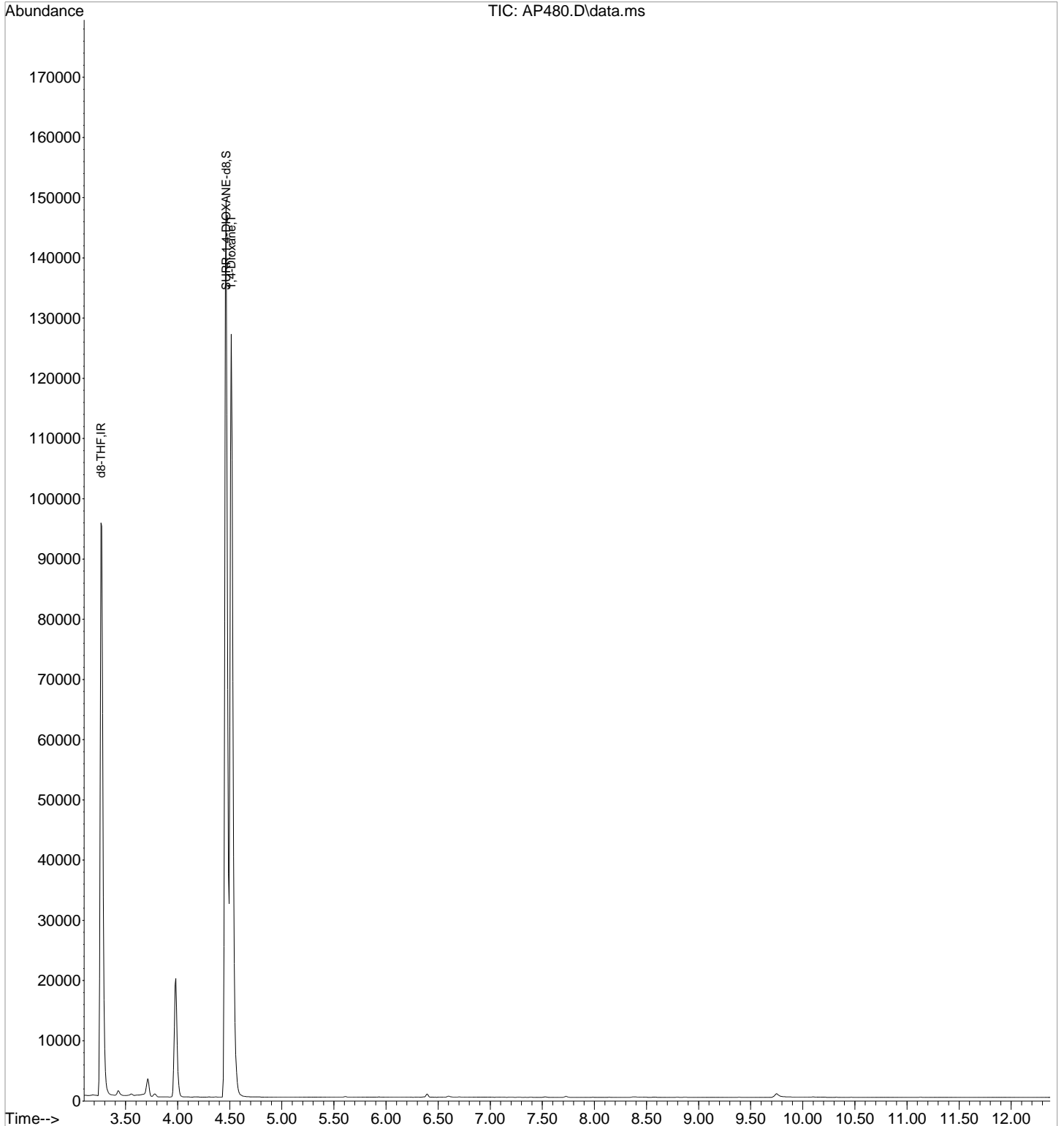
Quant Time: Feb 20 13:36:11 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.264	46	72120	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.465	96	133774	1018.80	PPB	-0.02
Spiked Amount	100.000	Range	70 - 130	Recovery	= 1018.80%#	
Target Compounds						
2) 1,4-Dioxane	4.515	88	148093	1016.61	PPB	Qvalue 94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP480.D  
Acq On : 20 Feb 2018 11:49 am  
Operator : J.Misiurewicz  
Sample : 1000 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 12 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:11 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP481.D  
 Acq On : 20 Feb 2018 12:08 pm  
 Operator : J.Misiurewicz  
 Sample : 5000 ppb STD Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 13 Sample Multiplier: 1

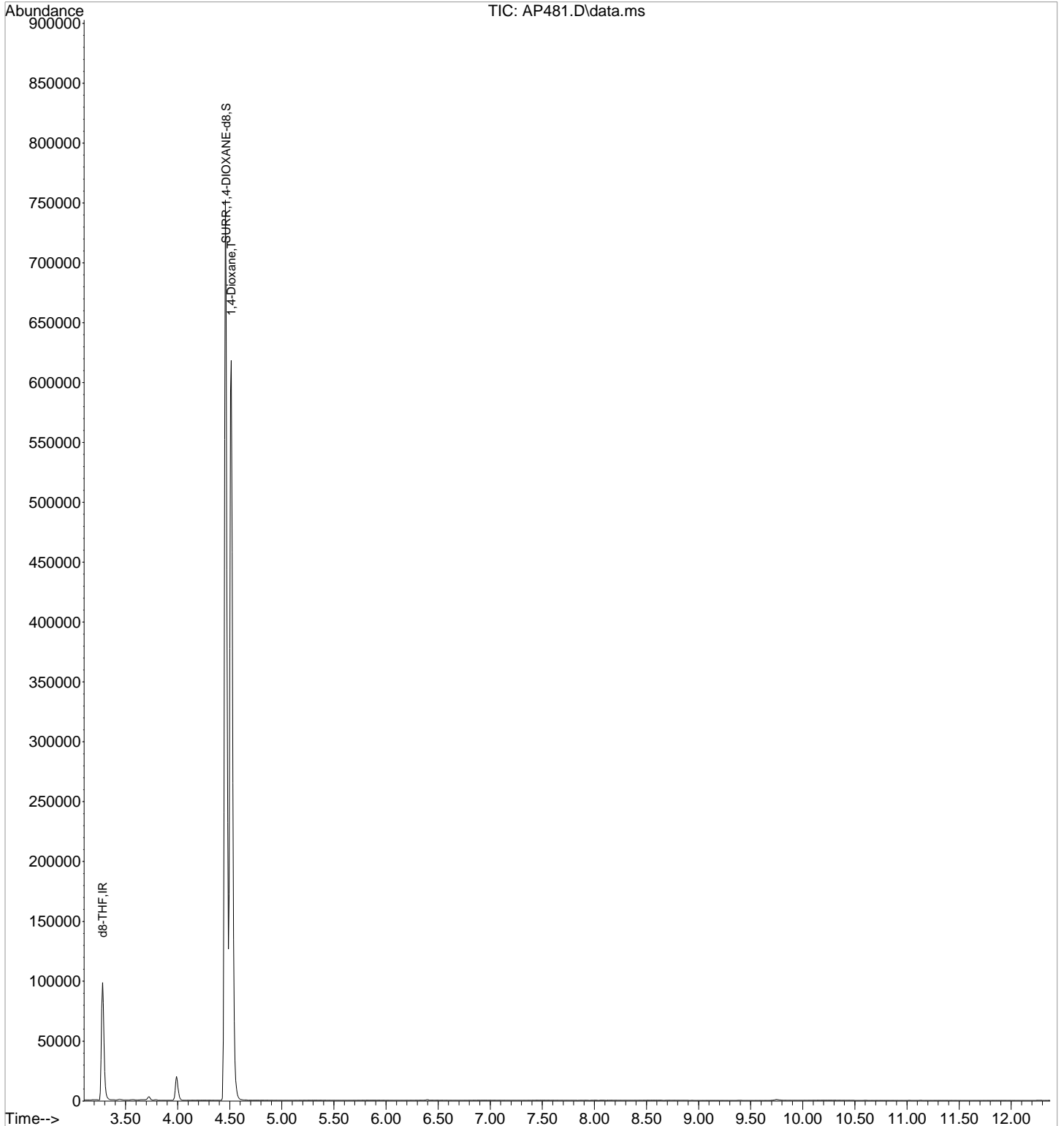
Quant Time: Feb 20 13:36:13 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	68823	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.465	96	653229	4913.43	PPB	-0.02
Spiked Amount	100.000	Range	70 - 130	Recovery	= 4913.43%#	
Target Compounds						
2) 1,4-Dioxane	4.515	88	704166	4904.15	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP481.D  
Acq On : 20 Feb 2018 12:08 pm  
Operator : J.Misiurewicz  
Sample : 5000 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 13 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:13 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP479.D  
 Acq On : 20 Feb 2018 11:30 am  
 Operator : J.Misiurewicz  
 Sample : 500 ppb STD Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 11 Sample Multiplier: 1

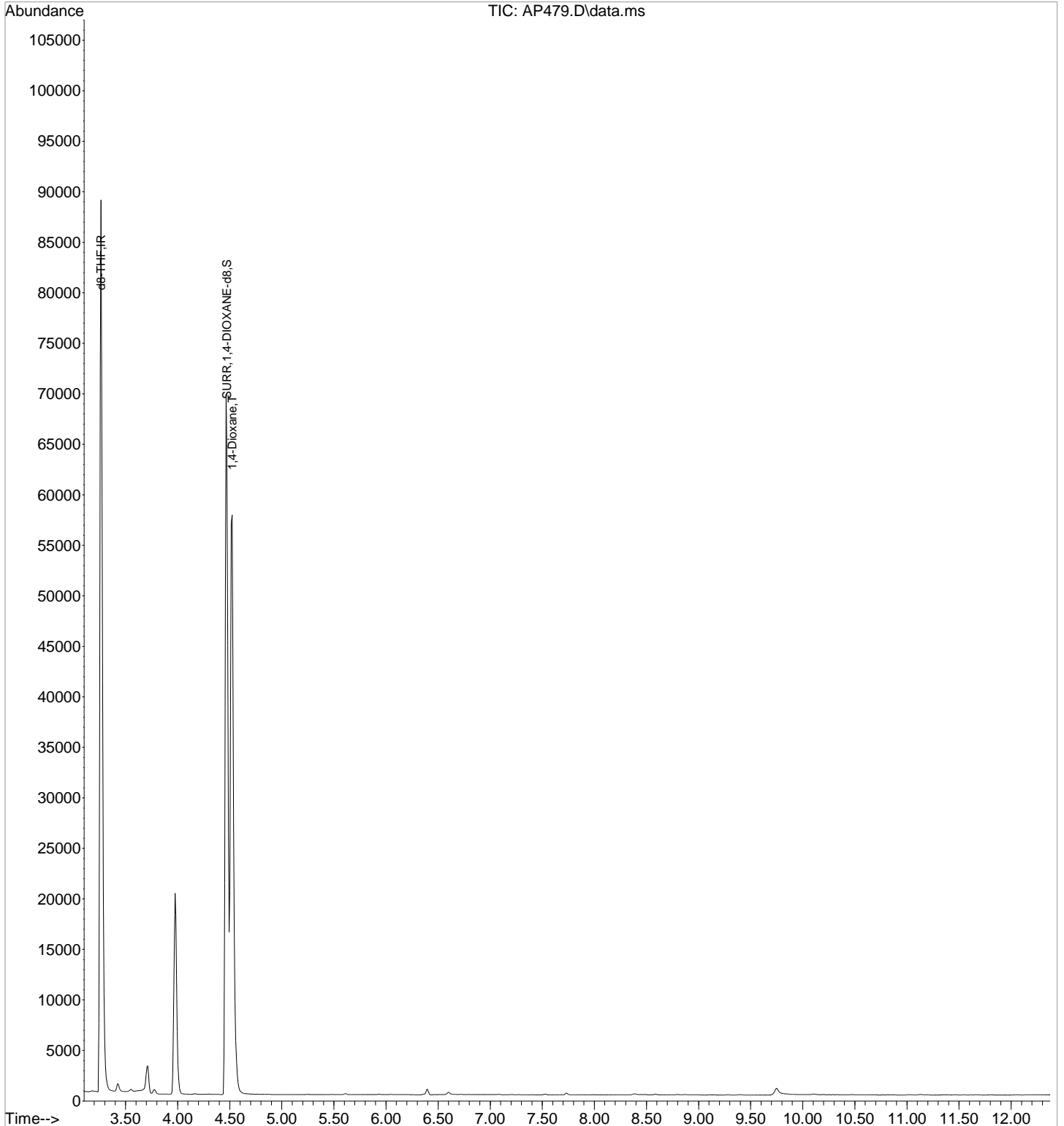
Quant Time: Feb 20 13:36:09 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.265	46	60830	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.472	96	62824	571.29	PPB	0.00
Spiked Amount	100.000	Range	70 - 130	Recovery	=	571.29%#
Target Compounds						
2) 1,4-Dioxane	4.522	88	70244	573.85	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP479.D  
Acq On : 20 Feb 2018 11:30 am  
Operator : J.Misiurewicz  
Sample : 500 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 11 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:09 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP478.D  
 Acq On : 20 Feb 2018 11:11 am  
 Operator : J.Misiurewicz  
 Sample : 200 ppb STD  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 10 Sample Multiplier: 1  
 Inst : 5975 E

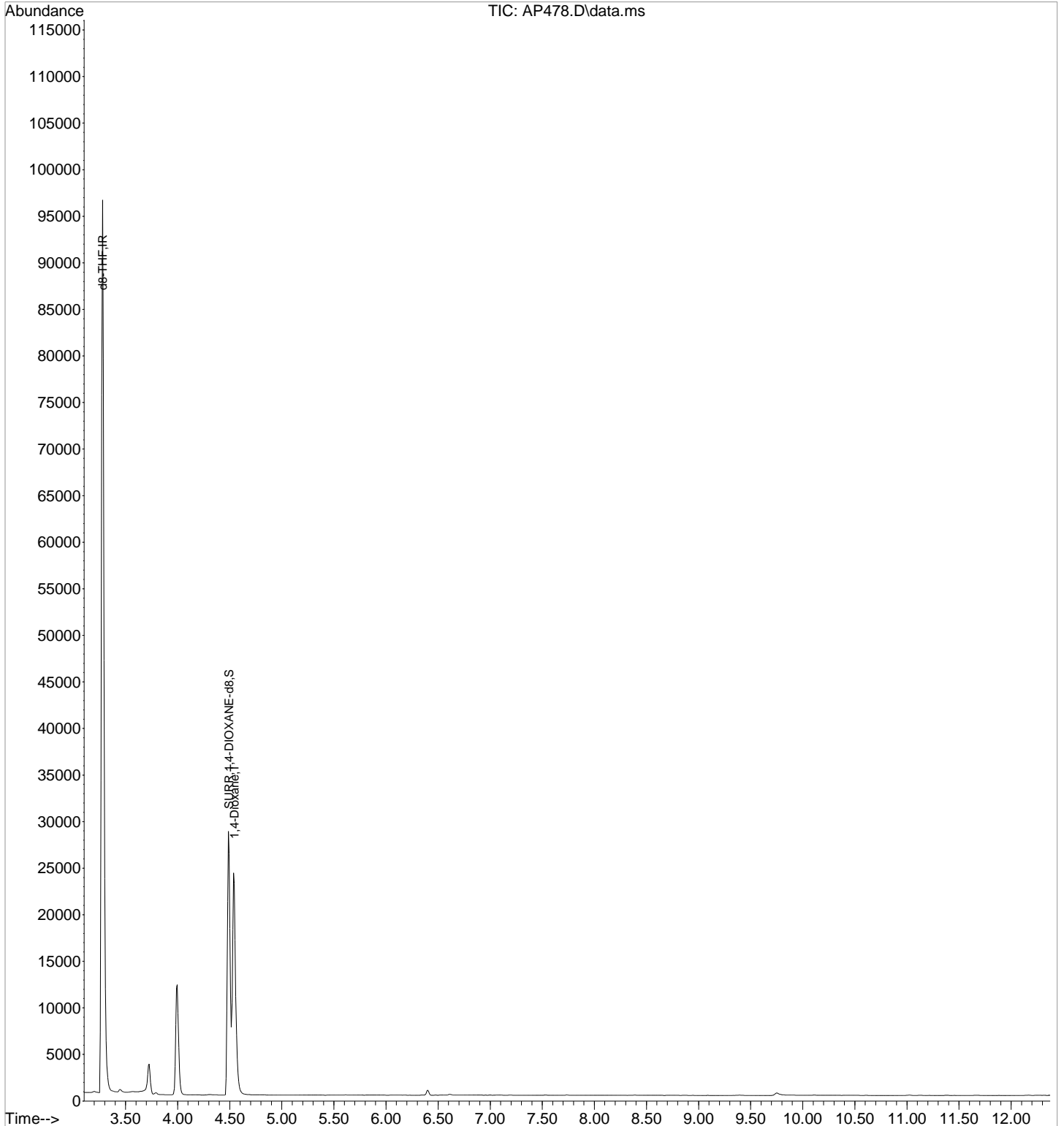
Quant Time: Feb 20 13:36:07 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	67470	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.494	96	26137	215.54	PPB	0.01
Spiked Amount	100.000	Range	70 - 130	Recovery	=	215.54%#
Target Compounds						
2) 1,4-Dioxane	4.544	88	29677	219.26	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP478.D  
Acq On : 20 Feb 2018 11:11 am  
Operator : J.Misiurewicz  
Sample : 200 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 10 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:07 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration





Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP477.D  
 Acq On : 20 Feb 2018 10:52 am  
 Operator : J.Misiurewicz  
 Sample : 100 ppb STD Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 9 Sample Multiplier: 1

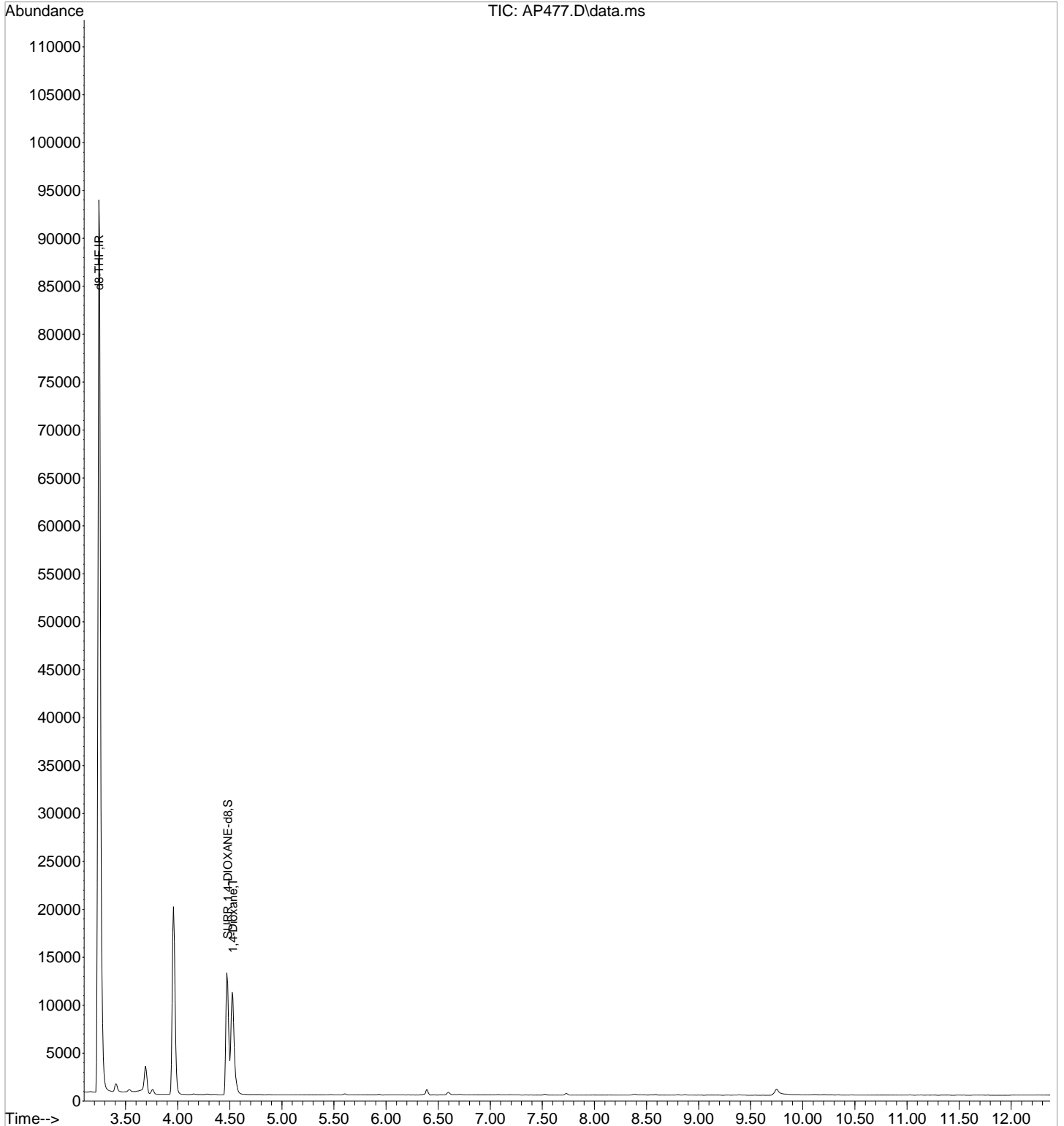
Quant Time: Feb 20 13:36:05 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.243	46	71017	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.479	96	12008	94.30	PPB	0.00
Spiked Amount	100.000	Range	70 - 130	Recovery	=	94.30%
Target Compounds						
2) 1,4-Dioxane	4.529	88	13579	95.43	PPB	Qvalue 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP477.D  
Acq On : 20 Feb 2018 10:52 am  
Operator : J.Misiurewicz  
Sample : 100 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 9 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:05 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP476.D  
 Acq On : 20 Feb 2018 10:34 am  
 Operator : J.Misiurewicz  
 Sample : 20 ppb STD Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 8 Sample Multiplier: 1

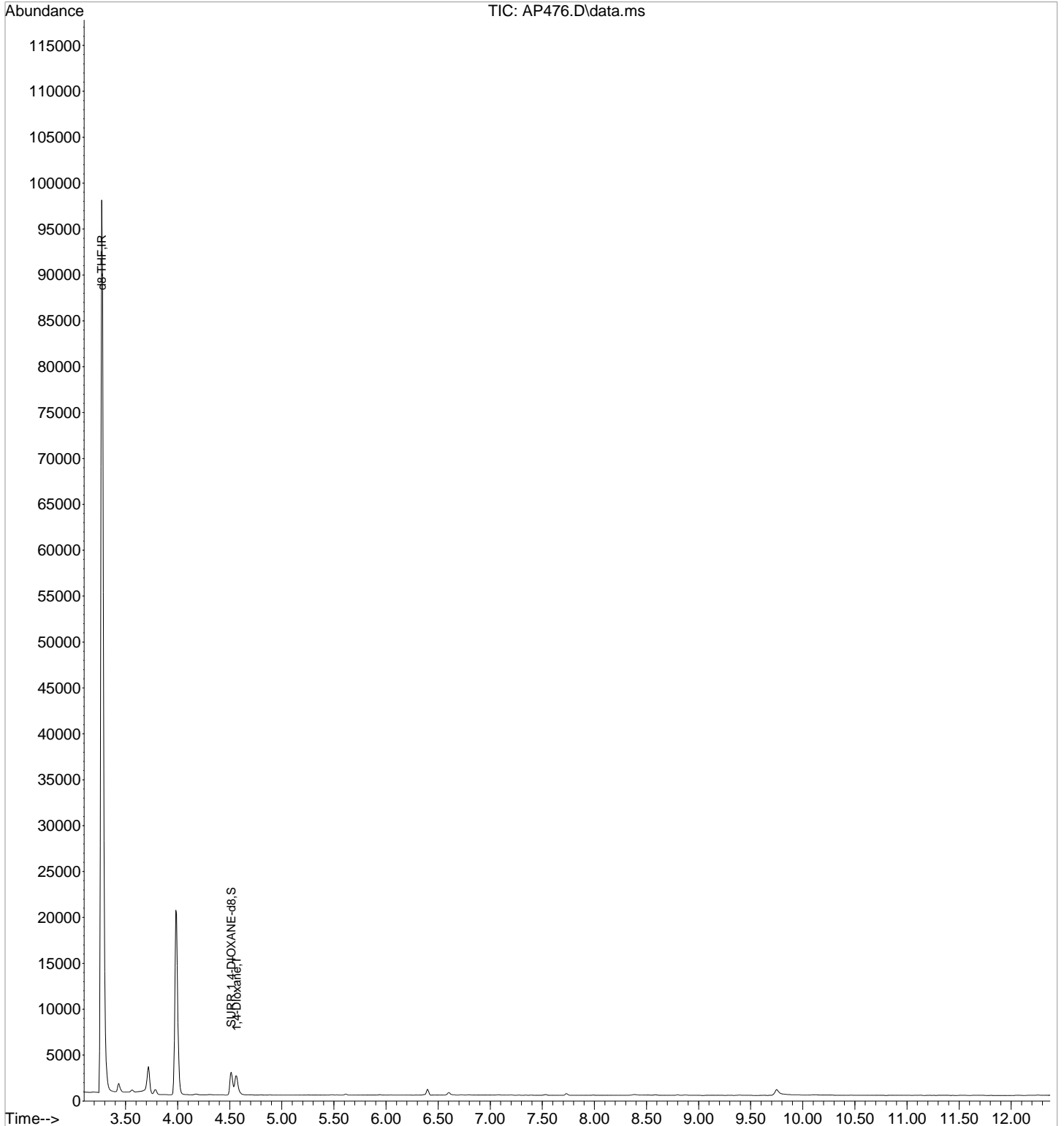
Quant Time: Feb 20 13:36:03 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.271	46	72759	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.515	96	2431	18.71	PPB	0.03
Spiked Amount	100.000	Range	70 - 130	Recovery	=	18.71%#
Target Compounds						
2) 1,4-Dioxane	4.564	88	2654	18.23	PPB	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP476.D  
Acq On : 20 Feb 2018 10:34 am  
Operator : J.Misiurewicz  
Sample : 20 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 8 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:03 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP475.D  
Acq On : 20 Feb 2018 10:15 am  
Operator : J.Misiurewicz  
Sample : 10 ppb STD Inst : 5975 E  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 7 Sample Multiplier: 1

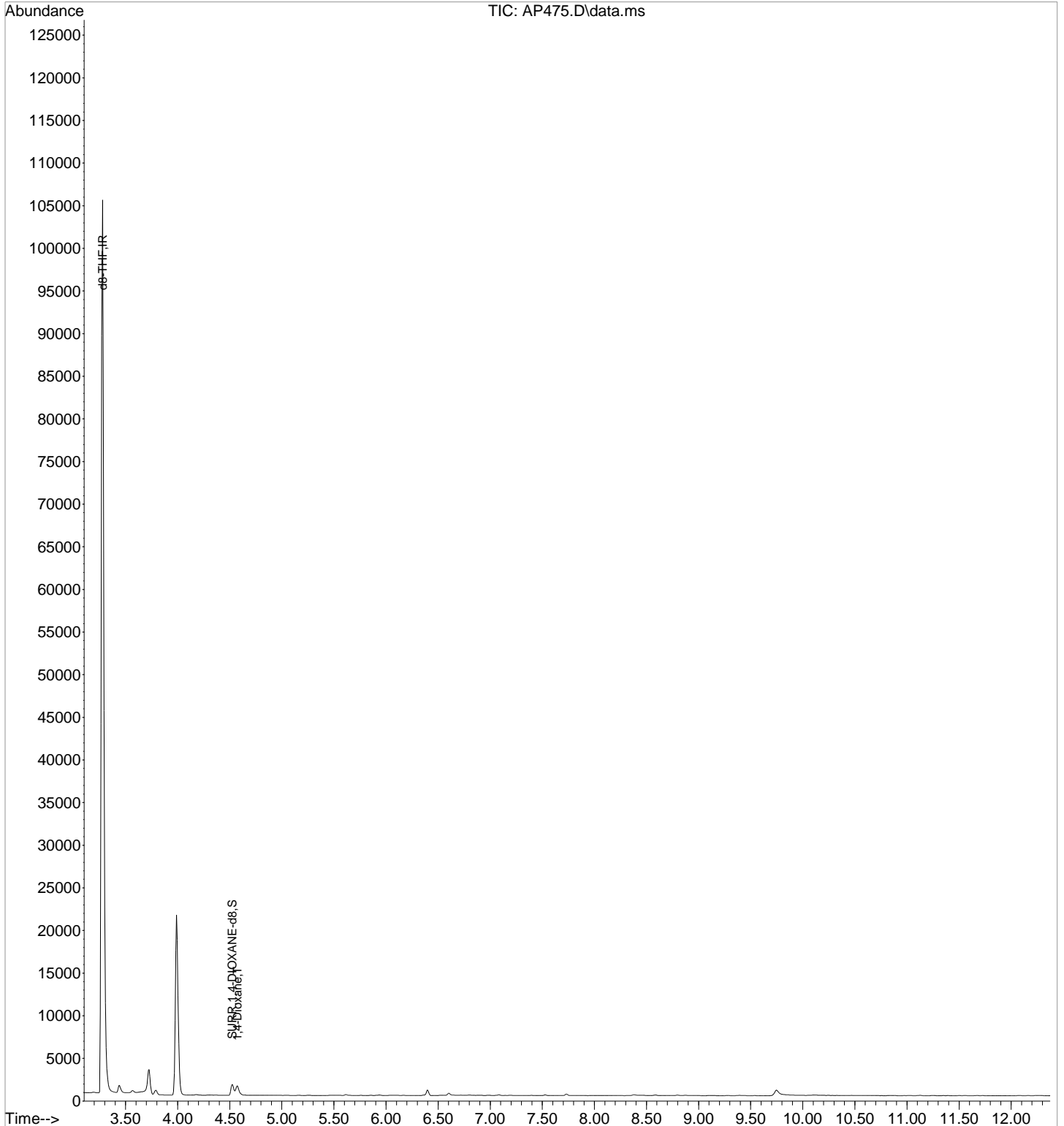
Quant Time: Feb 20 13:36:01 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	71182	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.522	96	1267	10.00	PPB	0.04
Spiked Amount	100.000	Range	70 - 130	Recovery	=	10.00%#
Target Compounds						
2) 1,4-Dioxane	4.572	88	1398	9.83	PPB	Qvalue 93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP475.D  
Acq On : 20 Feb 2018 10:15 am  
Operator : J.Misiurewicz  
Sample : 10 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 7 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:36:01 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP474.D  
Acq On : 20 Feb 2018 9:56 am  
Operator : J.Misiurewicz  
Sample : 2 ppb STD Inst : 5975 E  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 6 Sample Multiplier: 1

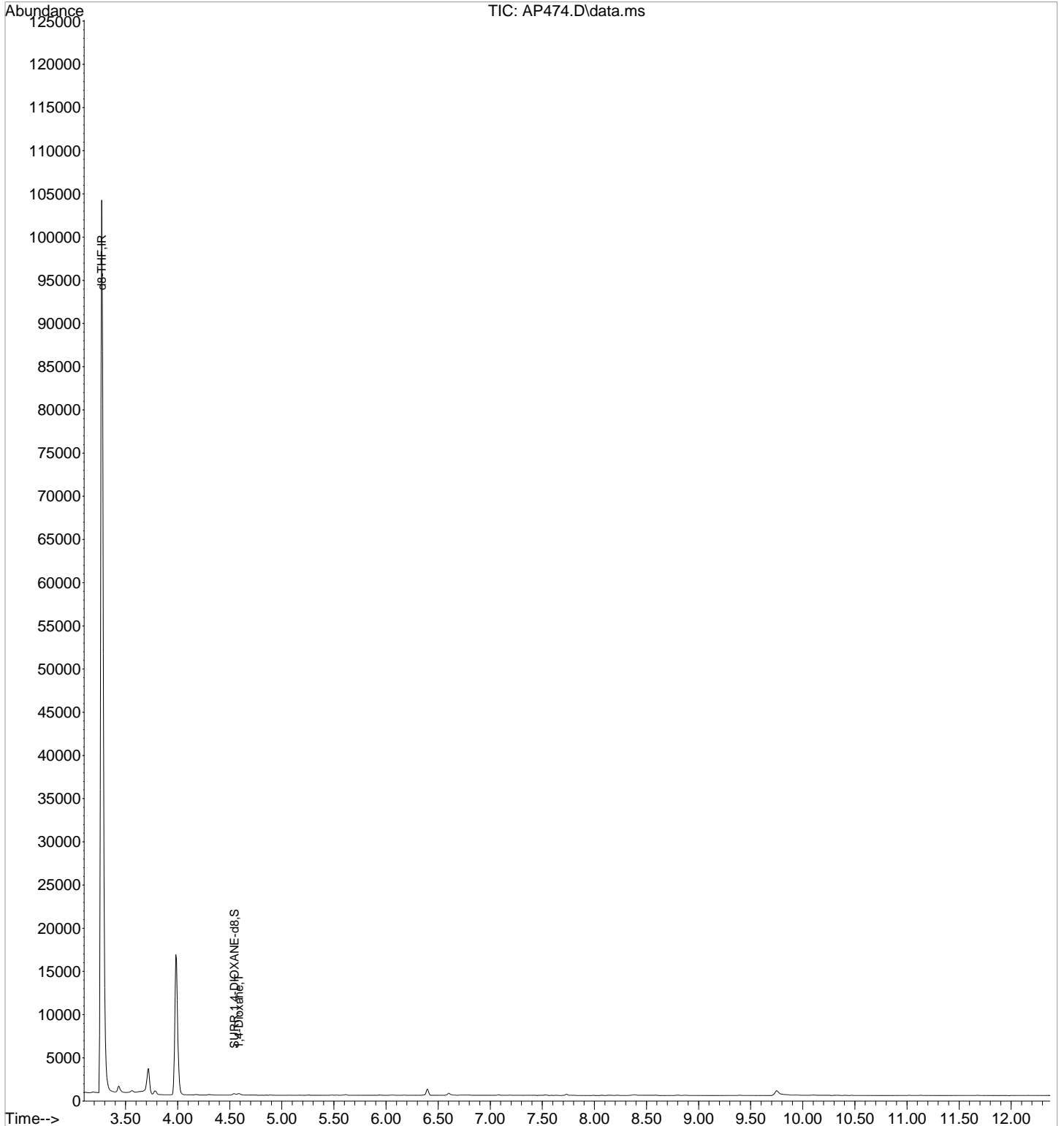
Quant Time: Feb 20 13:35:59 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.271	46	73987	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.543	96	201	1.58	PPB	0.06
Spiked Amount	100.000	Range	70 - 130	Recovery	=	1.58%#
Target Compounds						
2) 1,4-Dioxane	4.586	88	236	1.61	PPB	Qvalue 95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP474.D  
Acq On : 20 Feb 2018 9:56 am  
Operator : J.Misiurewicz  
Sample : 2 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 6 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:35:59 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration





Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP473.D  
 Acq On : 20 Feb 2018 9:38 am  
 Operator : J.Misiurewicz  
 Sample : 1 ppb STD Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 5 Sample Multiplier: 1

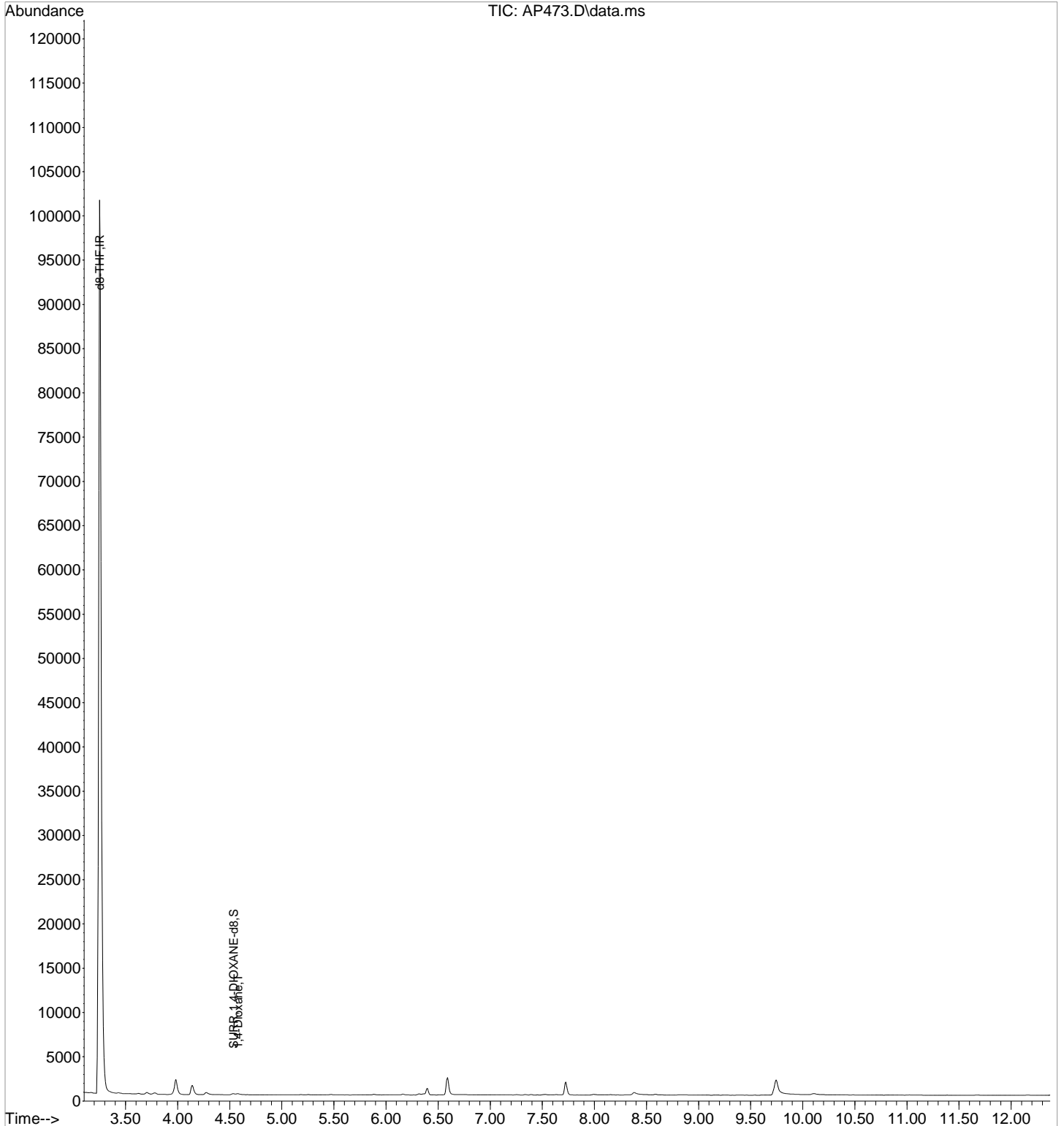
Quant Time: Feb 20 13:35:56 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:17:00 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.250	46	73049	500.00	PPB	-0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.536	96	136	1.11	PPB	0.06
Spiked Amount	100.000	Range	70 - 130	Recovery	=	1.11%#
Target Compounds						
2) 1,4-Dioxane	4.579	88	158	1.10	PPB	Qvalue 92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP473.D  
Acq On : 20 Feb 2018 9:38 am  
Operator : J.Misiurewicz  
Sample : 1 ppb STD  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 5 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:35:56 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:17:00 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP472.D  
 Acq On : 20 Feb 2018 9:19 am  
 Operator : J.Misiurewicz  
 Sample : BLK Inst : 5975 E  
 Misc : Initial Calibration 8270D/522 DIOX  
 ALS Vial : 4 Sample Multiplier: 1

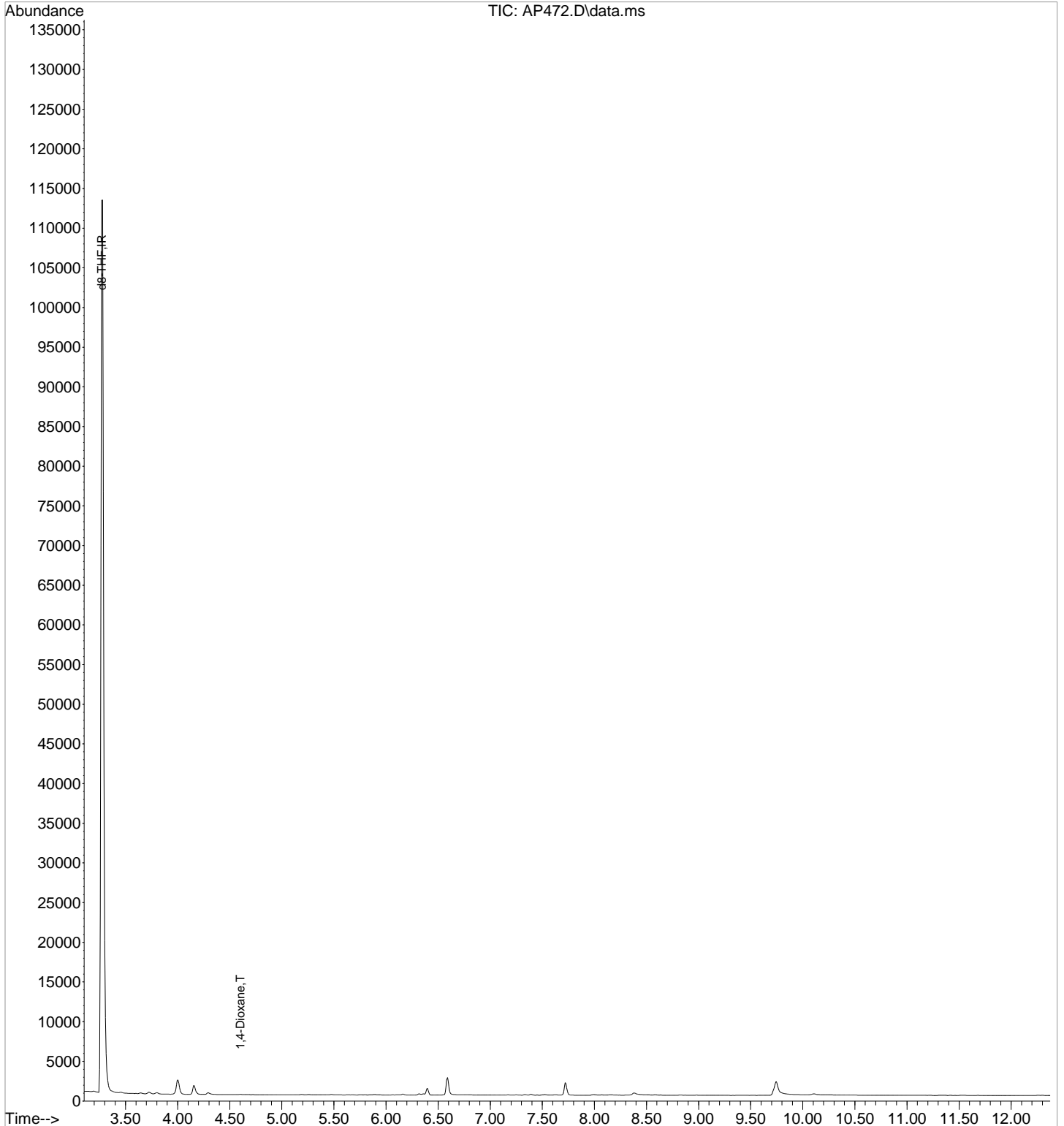
Quant Time: Feb 20 13:43:05 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
 Quant Title : 8270 BNA ANALYSIS  
 QLast Update : Tue Feb 20 13:42:37 2018  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.272	46	80292	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	0.000	96	0	0.00	PPB	
Spiked Amount	100.000	Range	70 - 130	Recovery	=	0.00%#
Target Compounds						
2) 1,4-Dioxane	4.600	88	31	0.21	PPB	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP472.D  
Acq On : 20 Feb 2018 9:19 am  
Operator : J.Misiurewicz  
Sample : BLK  
Misc : Initial Calibration 8270D/522 DIOX  
ALS Vial : 4 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 13:43:05 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M  
Quant Title : 8270 BNA ANALYSIS  
QLast Update : Tue Feb 20 13:42:37 2018  
Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP471.D  
 Acq On : 20 Feb 2018 8:40 am  
 Operator : J.Misiurewicz  
 Sample : TUNE Inst : 5975 E  
 Misc : DFTPP  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 09:10:11 2018  
 Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
 Quant Title :  
 QLast Update : Tue Feb 13 10:58:46 2018  
 Response via : Initial Calibration

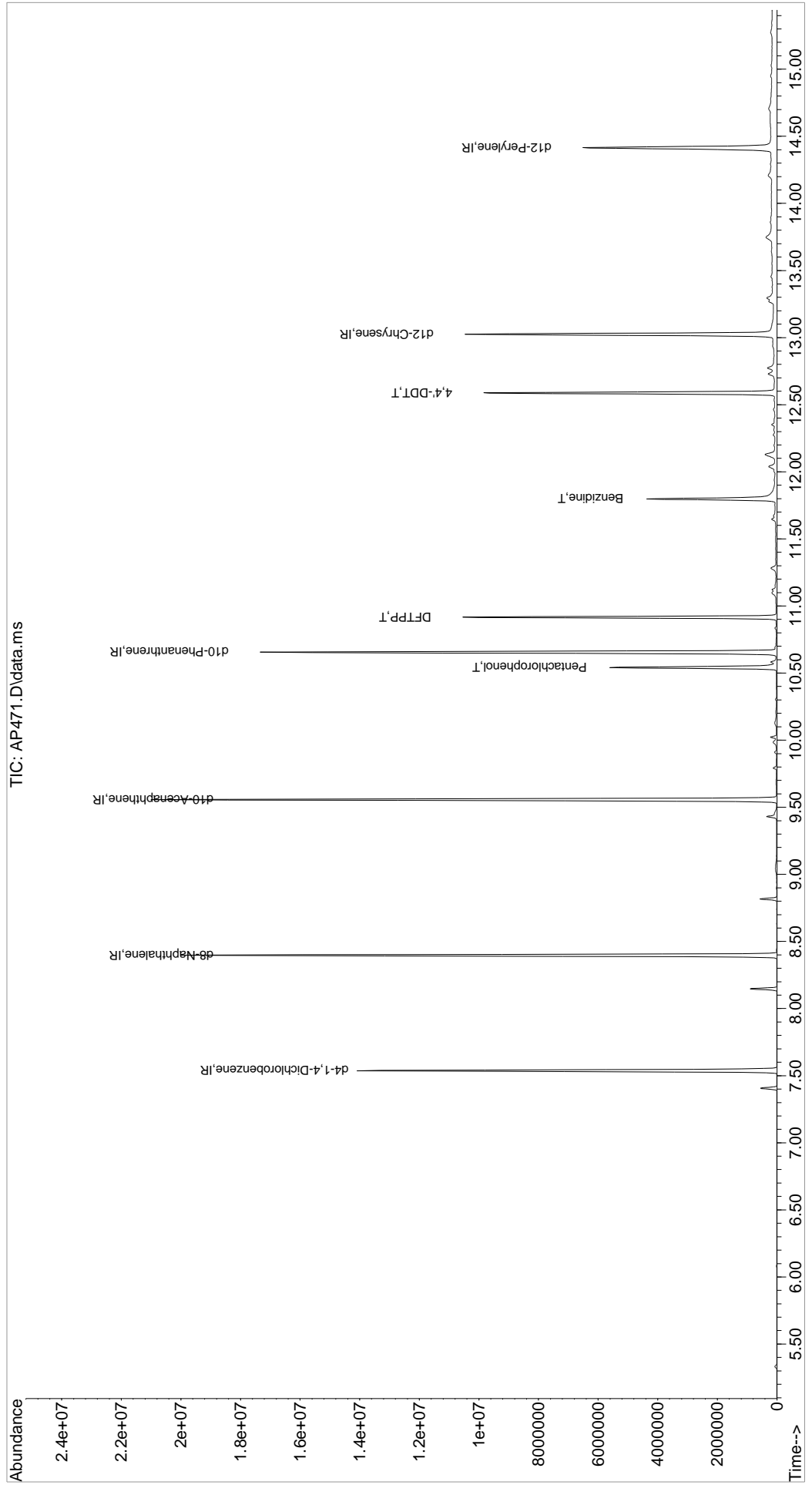
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) d4-1,4-Dichlorobenzene	7.538	152	19729043	20.00	ppm	0.00	
2) d8-Naphthalene	8.399	136	71383373	20.00	ppm	0.00	
3) d10-Acenaphthene	9.558	164	37543869	20.00	ppm	0.00	
4) d10-Phenanthrene	10.657	188	55511597	20.00	ppm	0.00	
7) d12-Chrysene	13.026	240	30655225	20.00	ppm	0.00	
12) d12-Perylene	14.416	264	23262945	20.00	ppm	0.00	
Target Compounds							
5) Pentachlorophenol	10.543	266	5157297	53.75	ppm	100	Qvalue
6) DFTPP	10.918	198	9773899	53.01	ppm	70	#
8) Benzidine	11.799	184	17633179	58.27	ppm	98	
9) 4,4'-DDE	0.000		0	N.D.			
10) 4,4'-DDD	0.000		0	N.D.			
11) 4,4'-DDT	12.589	235	14827922	49.04	ppm	95	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQDATA\5975E\data\022018\  
 Data File : AP471.D  
 Acq On : 20 Feb 2018 8:40 am  
 Operator : J.Misiurewicz  
 Sample : TUNE  
 Misc : DFTPP  
 ALS Vial : 3 Sample Multiplier: 1

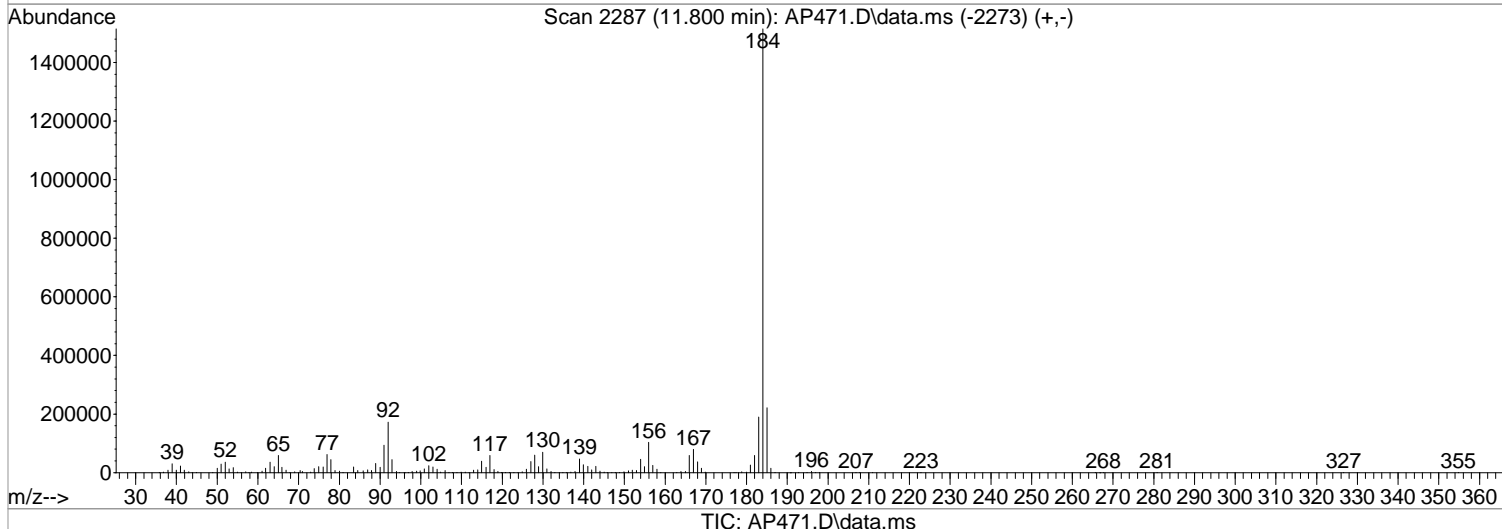
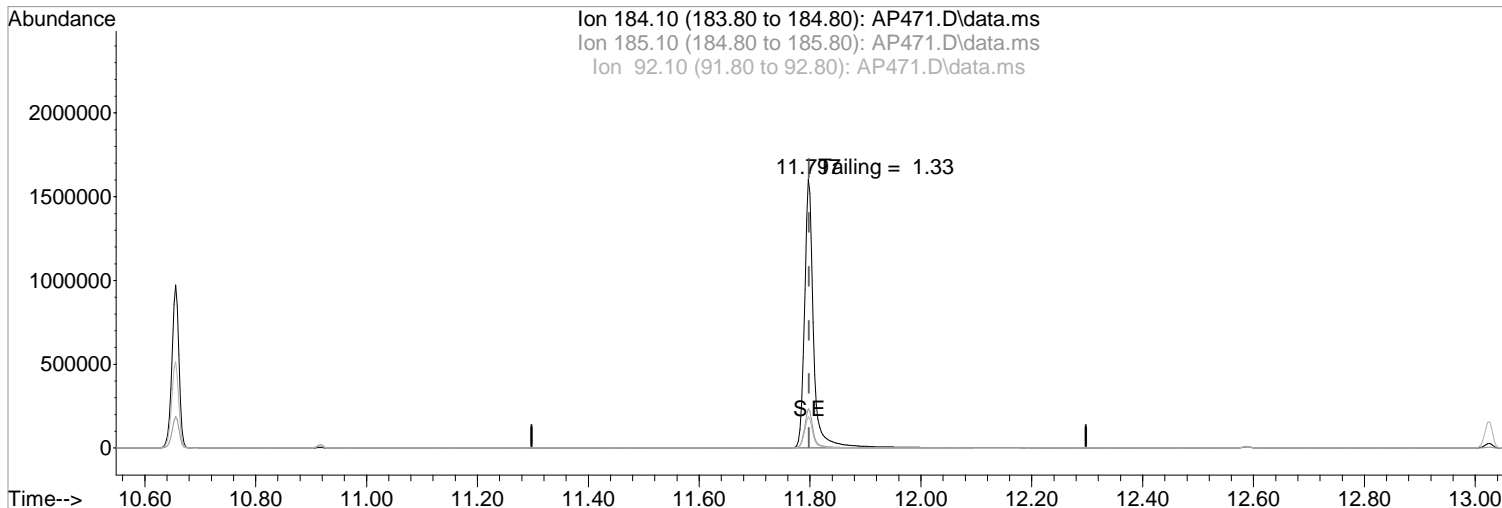
Inst : 5975 E

Quant Time: Feb 20 09:10:11 2018  
 Quant Method : I:\ACQDATA\5975E\METHODS\DFTPPDIO.M  
 Quant Title :  
 QLast Update : Tue Feb 13 10:58:46 2018  
 Response via : Initial Calibration



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP471.D  
Acq On : 20 Feb 2018 8:40 am  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 3 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 09:10:11 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Quant Title :  
QLast Update : Tue Feb 13 10:58:46 2018  
Response via : Initial Calibration



(8) Benzidine (T)

Manual Integration:

11.799min (+ 0.001) 58.27 ppm

After

response 17633179

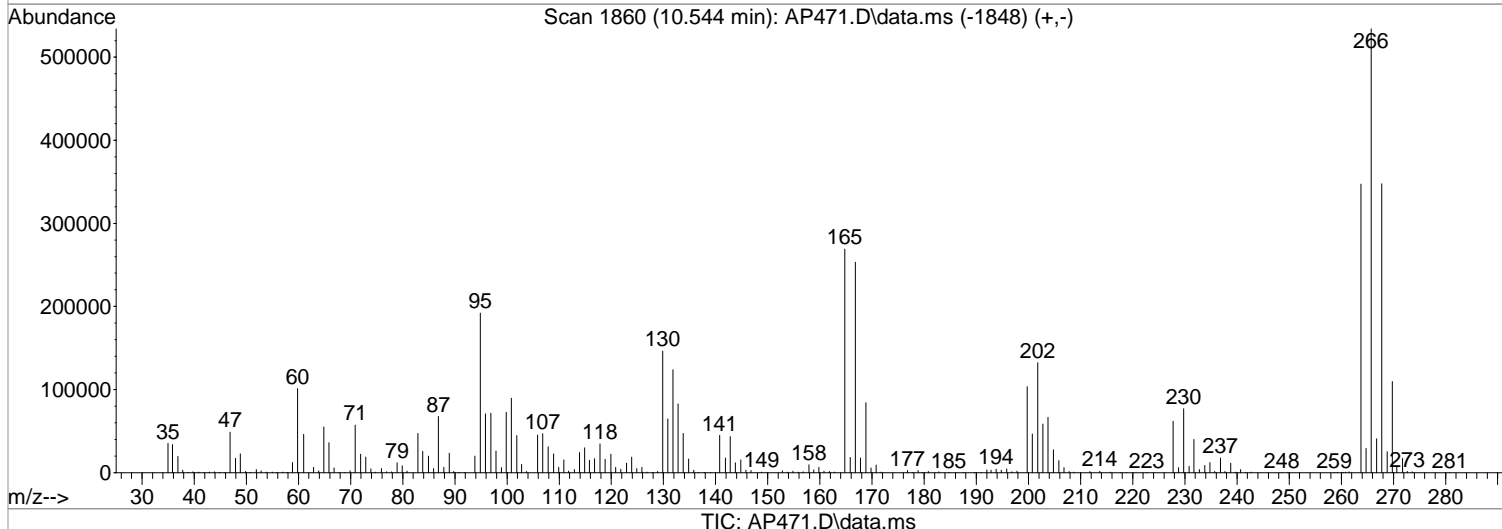
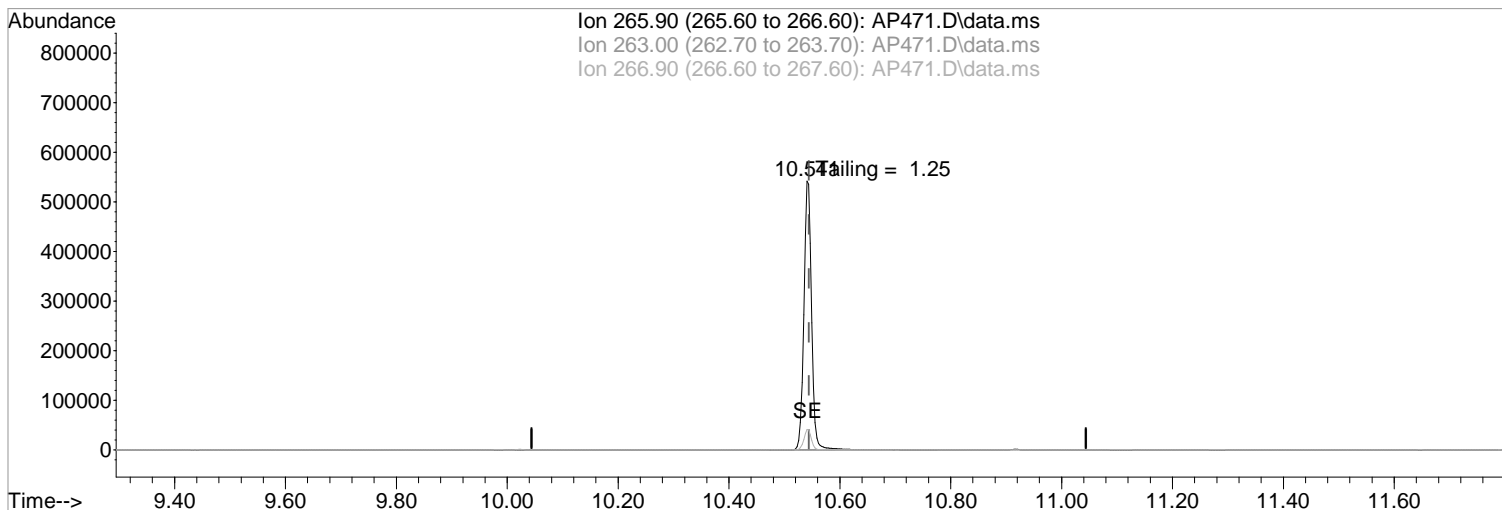
Other - Tailing

02/20/18

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.57
92.10	10.70	11.36
0.00	0.00	0.00

Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP471.D  
Acq On : 20 Feb 2018 8:40 am  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 3 Sample Multiplier: 1  
Inst : 5975 E

Quant Time: Feb 20 09:10:11 2018  
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Quant Title :  
QLast Update : Tue Feb 13 10:58:46 2018  
Response via : Initial Calibration



(5) Pentachlorophenol (T)

10.543min (-0.001) 53.75 ppm

response 5157297

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.00
266.90	7.70	7.62
0.00	0.00	0.00

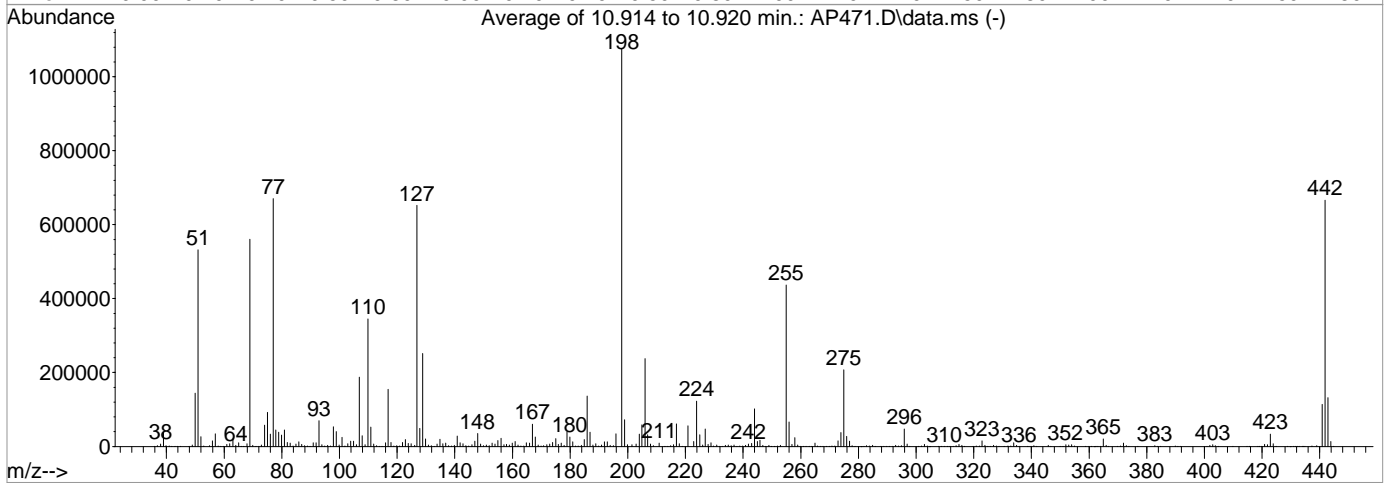
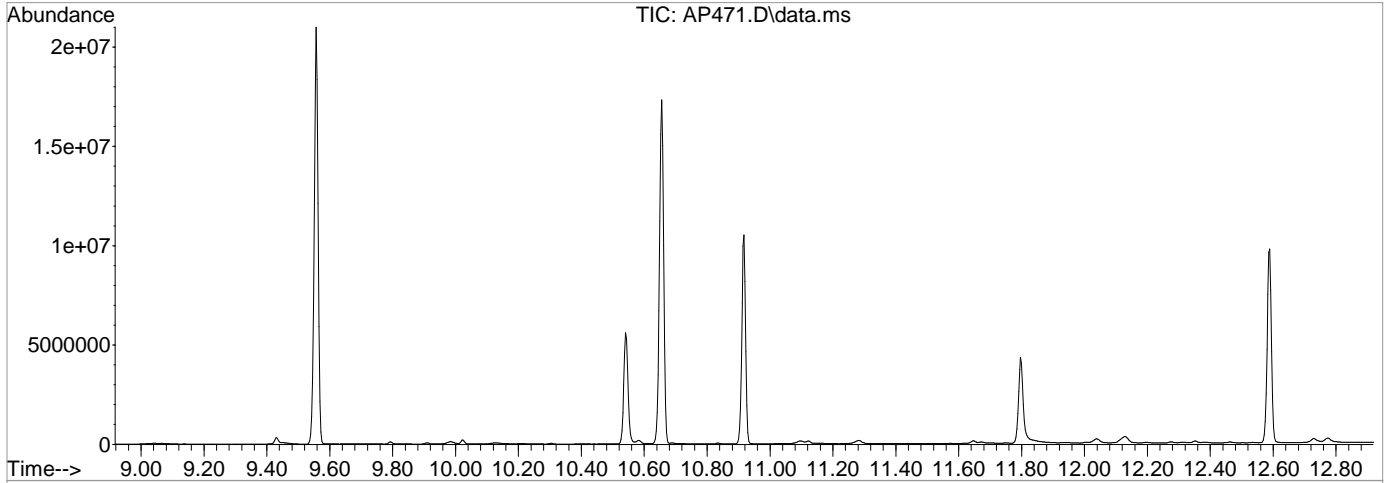
Manual Integration:  
After  
Other - Tailing  
02/20/18



Data Path : I:\ACQUDATA\5975E\data\022018\  
Data File : AP471.D  
Acq On : 20 Feb 2018 8:40 am  
Operator : J.Misiurewicz  
Sample : TUNE  
Misc : DFTPP  
ALS Vial : 3 Sample Multiplier: 1  
Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M  
Title :  
Last Update : Tue Feb 13 10:58:46 2018



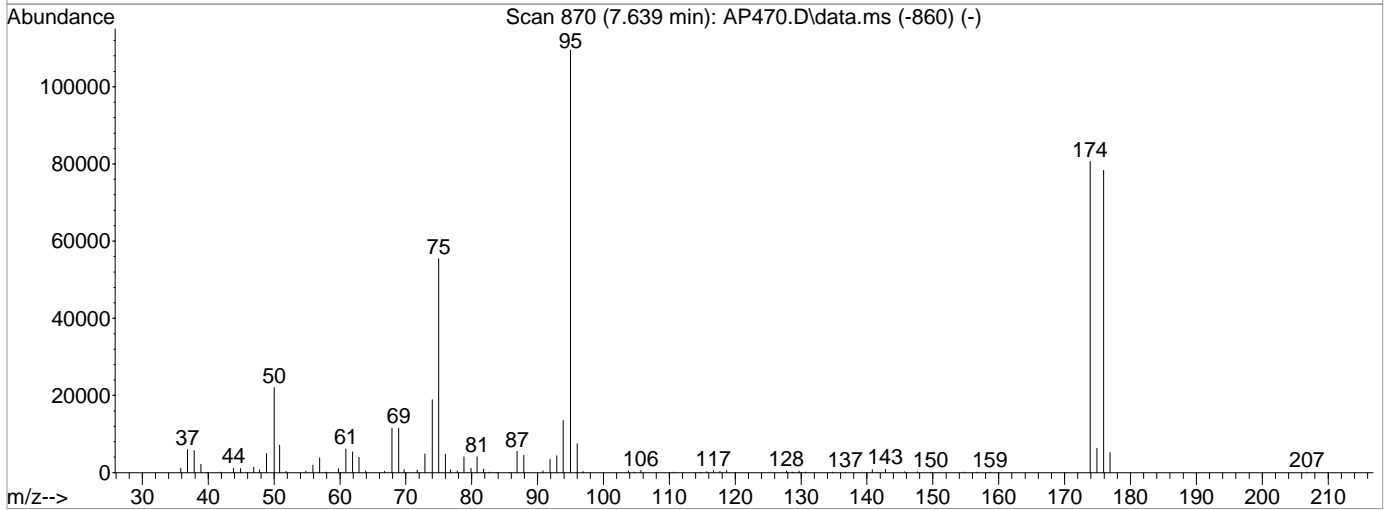
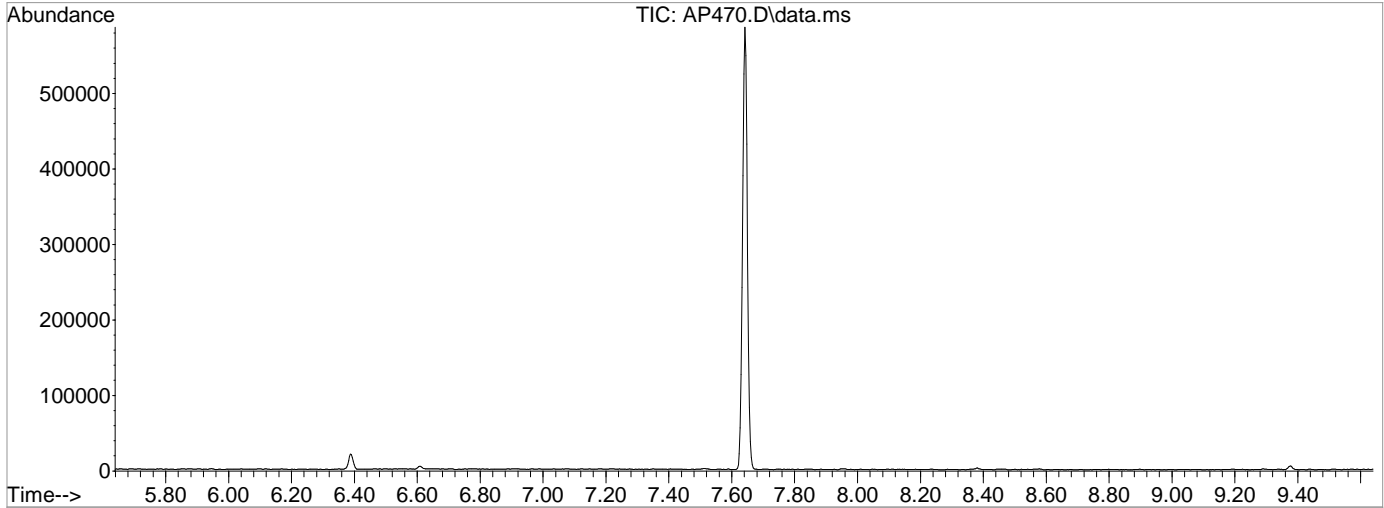
AutoFind: Scans 1986, 1987, 1988; Background Corrected with Scan 1975

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	49.5	531883	PASS
68	69	0.00	2	1.4	7857	PASS
70	69	0.00	2	0.6	3227	PASS
127	198	10	80	60.7	652153	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1074923	PASS
199	198	5	9	6.7	72459	PASS
275	198	10	60	19.3	206997	PASS
365	198	1	500	1.9	20533	PASS
441	442	0.01	24	17.0	113539	PASS
442	442	100	100	100.0	666453	PASS
443	442	15	24	19.8	132061	PASS

Data Path : I:\ACQUDATA\5975E\data\022018\  
 Data File : AP470.D  
 Acq On : 20 Feb 2018 8:17 am  
 Operator : J.Misiurewicz  
 Sample : TUNE  
 Misc : BFB  
 ALS Vial : 2 Sample Multiplier: 1  
 Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\bfbtune.M  
 Title :  
 Last Update : Wed Mar 28 08:41:26 2012



Spectrum Information: Scan 870

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.1	22032	PASS
75	95	30	60	50.6	55440	PASS
95	95	100	100	100.0	109568	PASS
96	95	5	9	6.8	7486	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.6	80656	PASS
175	174	5	9	7.7	6231	PASS
176	174	95	101	97.1	78328	PASS
177	176	5	9	6.6	5171	PASS

Client: Barton & Loguidice, DPC  
Project: GFIM LF

Service Request: R1806022  
Calibration Date: 2/20/2018

**Initial Calibration Summary**  
**1,4-Dioxane by GC/MS**

Calibration ID: RC1800025  
Instrument ID: R-MS-56

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC1800025-01	1 ppb STD	I:\ACQUADATA\5975E\data\022018\AP473.D	02/20/2018 09:38
02	RC1800025-02	2 ppb STD	I:\ACQUADATA\5975E\data\022018\AP474.D	02/20/2018 09:56
03	RC1800025-03	10 ppb STD	I:\ACQUADATA\5975E\data\022018\AP475.D	02/20/2018 10:15
04	RC1800025-04	20 ppb STD	I:\ACQUADATA\5975E\data\022018\AP476.D	02/20/2018 10:34
05	RC1800025-05	100 ppb STD	I:\ACQUADATA\5975E\data\022018\AP477.D	02/20/2018 10:52
06	RC1800025-06	200 ppb STD	I:\ACQUADATA\5975E\data\022018\AP478.D	02/20/2018 11:11
07	RC1800025-07	500 ppb STD	I:\ACQUADATA\5975E\data\022018\AP479.D	02/20/2018 11:30
08	RC1800025-08	1000 ppb STD	I:\ACQUADATA\5975E\data\022018\AP480.D	02/20/2018 11:49
09	RC1800025-09	5000 ppb STD	I:\ACQUADATA\5975E\data\022018\AP481.D	02/20/2018 12:08

**Analyte**

1,4-Dioxane											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.081	02	2.000	0.7974	03	10.000	0.982	04	20.000	0.9119
05	100.000	0.956	06	200.000	1.1	07	500.000	1.155	08	1000.000	1.027
09	5000.000	1.023									

1,4-Dioxane-d8											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.9309	02	2.000	0.6792	03	10.000	0.89	04	20.000	0.8353
05	100.000	0.8454	06	200.000	0.9685	07	500.000	1.033	08	1000.000	0.9274
09	5000.000	0.9491									

Client: Barton & Loguidice, DPC  
Project: GFIM LF

Service Request: R1806022  
Calibration Date: 2/20/2018

**Initial Calibration Summary**  
**1,4-Dioxane by GC/MS**

Calibration ID: RC1800025  
Instrument ID: R-MS-56

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,4-Dioxane	TRG	Quadratic	COD	0.9991	0.99	1.004	
1,4-Dioxane-d8	SURR	Quadratic	COD	0.9992	0.99	0.8954	

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF

**Service Request:** R1806022  
**Calibration Date:** 2/20/2018

**Initial Calibration Verification Summary**  
**1,4-Dioxane by GC/MS**

**Calibration ID:** RC1800025  
**Instrument ID:** R-MS-56

**Signal ID:** 1

#	Lab Code	Sample Name	File Location	Acquisition Date
10	RC1800025-10	ICV	I:\ACQUADATA\5975E\data\022018\AP482.D	02/20/2018 12:28

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane	200	214	1.004E0	1.071E0	6.75	±20	Quadratic

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane-d8	200	216	8.954E-1	9.714E-1	8.10	±20	Quadratic

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004

**Service Request:** R1806022  
**Date Analyzed:** 07/03/18 13:06

**Continuing Calibration Verification (CCV) Summary**  
**1,4-Dioxane by GC/MS**

**Analysis Method:** 8270D SIM  
**File ID:** I:\ACQUADATA\5975E\data\070318\AQ163.D\  
**Signal ID:** 1

**Calibration Date:** 2/20/2018  
**Calibration ID:** RC1800025  
**Analysis Lot:** 597367  
**Units:** ppb

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane	200	232	1.0037	1.1685	116	16.0	±20	Quadratic

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane-d8	200	244	0.8954	1.1009	122	22.0*	±20	Quadratic

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

Client: Barton & Loguidice, DPC  
Project: GFIM LF/1068.004.004

Service Request:R1806022

Analysis Run Log  
1,4-Dioxane by GC/MS

Analysis Method:

Analysis Lot:597367  
Instrument ID:R-MS-56

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\5975E\data\070318\AQ162.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	12:42:00	
I:\ACQUDATA\5975E\data\070318\AQ163.D	Continuing Calibration Verification	RQ1806739-02	7/3/2018	13:06:00	
I:\ACQUDATA\5975E\data\070318\AQ164.D	Method Blank	RQ1806684-01	7/3/2018	13:46:00	
I:\ACQUDATA\5975E\data\070318\AQ165.D	Lab Control Sample	RQ1806684-02	7/3/2018	14:05:00	
I:\ACQUDATA\5975E\data\070318\AQ166.D	Duplicate Lab Control Sample	RQ1806684-03	7/3/2018	14:24:00	
I:\ACQUDATA\5975E\data\070318\AQ167.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	14:43:00	
I:\ACQUDATA\5975E\data\070318\AQ168.D	MW-1D	R1806022-001	7/3/2018	15:02:00	
I:\ACQUDATA\5975E\data\070318\AQ169.D	MW-3S	R1806022-002	7/3/2018	15:21:00	
I:\ACQUDATA\5975E\data\070318\AQ170.D	MW-3S MS	RQ1806684-04	7/3/2018	15:40:00	
I:\ACQUDATA\5975E\data\070318\AQ171.D	MW-3S DMS	RQ1806684-05	7/3/2018	15:59:00	
I:\ACQUDATA\5975E\data\070318\AQ172.D	MW-13D	R1806022-003	7/3/2018	16:17:00	
I:\ACQUDATA\5975E\data\070318\AQ173.D	MW-11D	R1806022-004	7/3/2018	16:36:00	
I:\ACQUDATA\5975E\data\070318\AQ174.D	FB	R1806022-005	7/3/2018	16:54:00	
I:\ACQUDATA\5975E\data\070318\AQ175.D	DUPE-X	R1806022-006	7/3/2018	17:12:00	
I:\ACQUDATA\5975E\data\070318\AQ176.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	17:30:00	
I:\ACQUDATA\5975E\data\070318\AQ177.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	17:48:00	
I:\ACQUDATA\5975E\data\070318\AQ178.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	18:06:00	
I:\ACQUDATA\5975E\data\070318\AQ179.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	18:24:00	
I:\ACQUDATA\5975E\data\070318\AQ180.D	ZZZZZZZ	ZZZZZZZ	7/3/2018	18:41:00	

Analysis: 570 Diox

Analyst: OMISURU Run Method: SP10X2 F | DF10010

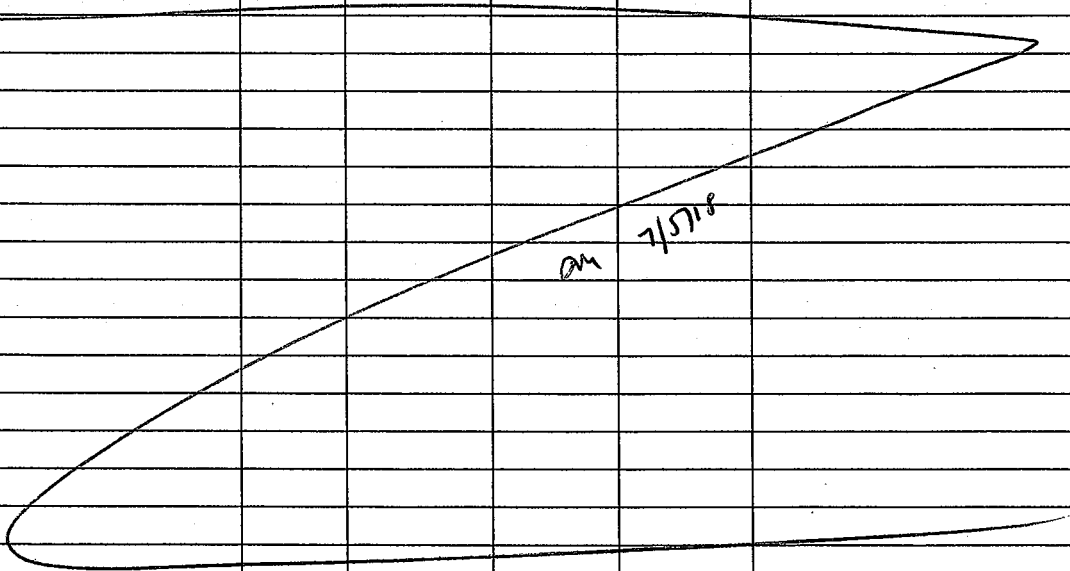
Date: 7/31/18

Instr. 5975E

Quant Method: SP10X2 2018.M

LIMS Run#: 597367

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Bik			A0160	-	
1	Bik			61	-	
2	Tune		189436	62	YT	
3	CON		189208	63	YCC	Surr 9
4	R1806084-01	Bik	312062	64	Y	
5	"    -02	LS		65	Y	
6	"    -03	LS		66	Y	
7	R1805908-003			67	Y	
8	R1806022-001			68	Y	
9	"    -002			69	Y	
10	R1806084-04			70	Y	G
11	"    -05			71	Y	6
12	R1806072-003			72	Y	
13	"    -001			73	Y	
14	"    -005			74	Y	
15	"    -006			75	Y	
16	R1806078-001			76	Y	
17	"    -002			77	Y	
18	R1806130-003			78	Y	
19	"    -006			79	Y	
20	"    -000			80	Y	



All samples = \_\_\_\_\_ mL + \_\_\_\_\_ uL Combined IS/Surr.;

Primary: \_\_\_\_\_ exp: \_\_\_\_\_  
Primary: \_\_\_\_\_ exp: \_\_\_\_\_

Secondary: \_\_\_\_\_ exp: \_\_\_\_\_  
Secondary: \_\_\_\_\_ exp: \_\_\_\_\_



Analysis: 8700/522 Analyst: ONS Wrenicz Run Method: SOLVEX-2-F | BFB-TM | DFPP-D10  
 Date: 2/20/18 Instr. 5975E Quant Method: \_\_\_\_\_  
 LIMS Run#: \_\_\_\_\_

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Blk			Ap 468	-	
1	Blk			69	-	
2	Tum BFB		184996	70	YT	
3	Tum DFPP		186559	71	YT	
4	Blk		188117	72	Y	
5	1 ppb STD		<del>187702</del> 187702	73	Y	
4	2		186494	74	Y	
7	10		95	75	Y	
8	20		96	76	Y	
9	100		97	77	Y	
10	200		186306	78	Y	
11	500		186448	79	Y	
12	1000		99	80	Y	
13	5000		186500	81	Y	
14	ICV		185021	82	YB	
15	CCV		186306	83	YCC	
16	R01801489-01	Blk	308588	84	(N)	HA > PCL re-construct
17	-02	LCS		85		
18	-03	LCS		86		
19	R1801349-001			87		
20	R1801489-04			88		
21	-05			89		
22	R1801349-002			90		
23	-003			91		
24	R1801349-001			92		
25	-002			93		
26	-003			94		

LCS 1801349-001

↓

[Large scribble]

DM 2/20/18

All samples = \_\_\_\_\_ mL + \_\_\_\_\_ uL Combined IS/Surr.;

Primary: \_\_\_\_\_ exp: \_\_\_\_\_ Secondary: \_\_\_\_\_ exp: \_\_\_\_\_  
 Primary: \_\_\_\_\_ exp: \_\_\_\_\_ Secondary: \_\_\_\_\_ exp: \_\_\_\_\_

ALS Group USA, Corp.  
dba ALS Environmental

Prep Summary Report

**Client:** Barton & Loguidice, DPC  
**Project:** GFIM LF/1068.004.004  
**Sample Matrix:** Water

**Service Request:**R1806022

**1,4-Dioxane by GC/MS**

**Prep Method:** EPA 3535A  
**Analytical Method:** 8270D SIM

**Extraction Lot:** 317062  
**Extraction Date:** 07/03/18 10:41

<b>Sample Name</b>	<b>Lab Code</b>	<b>Date Collected</b>	<b>Date Received</b>	<b>Sample Amount</b>	<b>Final Amount</b>	<b>Percent Solids</b>
MW-1D	R1806022-001	6/27/18	6/27/18	100 mL	2 mL	
MW-3S	R1806022-002	6/27/18	6/27/18	100 mL	2 mL	
MW-13D	R1806022-003	6/27/18	6/27/18	100 mL	2 mL	
MW-11D	R1806022-004	6/27/18	6/27/18	100 mL	2 mL	
FB	R1806022-005	6/27/18	6/27/18	100 mL	2 mL	
DUPE-X	R1806022-006	6/27/18	6/27/18	100 mL	2 mL	
Method Blank	RQ1806684-01MB	NA	NA	100 mL	2 mL	
Lab Control Sample	RQ1806684-02LCS	NA	NA	100 mL	2 mL	
Duplicate Lab Control Sample	RQ1806684-03DLCS	NA	NA	100 mL	2 mL	
Matrix Spike	RQ1806684-04MS	6/27/18	6/27/18	100 mL	2 mL	
Duplicate Matrix Spike	RQ1806684-05DMS	6/27/18	6/27/18	100 mL	2 mL	

# Preparation Information Benchsheet

Prep Run#: 317062

Team: Semivoa GCMS/MISUREWICZ

Prep WorkFlow: OrgExtSPEaq(7)

Prep Method: EPA 3535A

Status: Prepped

Prep Date/Time: 7/3/18 10:41 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1806684-01	MB		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
2	RQ1806684-02	LCS		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/191202; 200.0000 uL/189282	
3	RQ1806684-03	DLCS		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/191202; 200.0000 uL/189282	
4	RI1805908-003RE	TW-03	.06	10mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
5	RI1806022-001	MW-ID	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282	
6	RI1806022-002	MW-3S	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
7	RQ1806684-04	RI1806022-002 MS	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282; 200.0000 uL/191202	
8	RQ1806684-05	RI1806022-002 DMS	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 200.0000 uL/191202; 10.0000 uL/189204	
9	RI1806022-003	MW-13D	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282	
10	RI1806022-004	MW-11D	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282	
11	RI1806022-005	FB	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
12	RI1806022-006	DUPE-X	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
13	RI1806078-001	TS Effluent 062718	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
14	RI1806078-002	HIPOx Discharge 062718	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
15	RI1806130-003	1806260910B PL-11-710	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282	
16	RI1806130-006	1806260925B PL-11-820	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/189282; 10.0000 uL/189204	
17	RI1806130-020	1806270850B PL-11-980	.01	100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/189204; 200.0000 uL/189282	

### Spiking Solutions

Name: SVOA Tetrahydrofuran-D8 100ppm

Logbook Ref:

Expires On: 10/06/2018

Name: 1,4-Dioxane-d8 1ppm Surr. Std.

Logbook Ref:

Expires On: 10/08/2018

Name: EPA 522 LCS Spike 5ppm

Logbook Ref:

Expires On: 09/02/2018

# Preparation Information Benchsheet

Prep Run#: 317062      Prep WorkFlow: OrgExtSPEaq(7)      Status: Prepped  
Team: Semivoa GCMS/JMISIUREWICZ      Prep Method: EPA 3535A      Prep Date/Time: 7/3/18 10:41 AM

### Preparation Materials

Method 522 400mg charcoal filters (190852)	Eppendorf Pipette Repeater EXT #17 (175854)	Water (190038)
Dichloromethane (Methylene Chloride) 99.9% MeCl2 canister (190752)	Prepared Sodium Sulfate Na2SO4 (190532)	Methanol Purge & Trap MeOH (188509)
Sodium Bisulfate Monohydrate (173529)	pH Paper 0-14 (190432)	

### Preparation Steps

Step: Extraction  
Started: 7/3/18 10:41  
Finished: 7/3/18 16:05  
By: JMISIUREWICZ  
Comments

Comments:

Reviewed By: Mughe      Date: 7/3/18      Spike Witness: BALLGEIER      Date: \_\_\_\_\_

### Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes      No