

ANALYTICAL REPORT

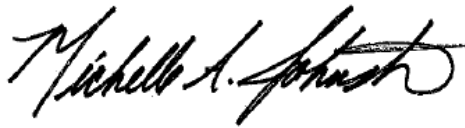
Job Number: 280-76475-2

Job Description: Fort Wingate, New Mexico

For:

Sundance Consulting, Inc
6700 Jefferson Blvd NE
Albuquerque, NM 87109

Attention: JohnDavid Nance



Approved for release.
Michelle A Johnston
Project Manager II
11/28/2015 12:13 PM

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11/28/2015

cc: Elizabeth Farias
Jim Lockhart
Ben Moayyad
Mr. Doug Scott

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

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CASE NARRATIVE
Client: Sundance Consulting, Inc.
Project: Fort Wingate, New Mexico
Report Number: 280-76475-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

Sample Receipt

Eight samples were received on 11/6/2015 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were 0.1°C, 1.1°C, 1.2°C, 1.3°C, 1.7°C, 2.1°C, 2.1°C, 3.3°C and 3.4°C.

One of nine coolers was received without tape or custody seals present. It can be noted that it appears the tape and seals were stripped off during transit. The samples within the cooler appeared to be uncompromised and not tampered with. Another one of nine coolers was received with custody seals on the hinge side of the cooler lid with shipping tape in tact. The samples within the cooler appeared to be uncompromised and not tampered with. The client was notified on 11/6/2015.

Additional samples/analyses requested on the chain-of-custody are reported under separate cover (280-76475-1).

No other anomalies were encountered during sample receipt.

GC/MS Semivolatiles - 8270D

Samples TMW49102015 (280-76475-3), TMW31D102015 (280-76475-4), DTW31D102015 (280-76475-5), MW24102015 (280-76475-7), TMW32102015 (280-76475-8), BGMW01102015 (280-76475-9), BGMW02102015 (280-76475-10) and TMW47102015 (280-76475-12) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 11/07/2015 and analyzed on 11/17/2015 and 11/18/2015.

Please note the Caprolactam data are reported under separate cover, as the laboratory does not hold DOD ELAP certification for this compound. The laboratory does not maintain quarterly QC requirements for precision, accuracy and detections.

Reporting limits and method detection limits have been adjusted accordingly for the initial volumes extracted.

MS/MSD analyses for prep batch 280-303850 were not requested.

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

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Instrument ID: SMS_D Analysis Batch Number: 304451Lab Sample ID: STD120 280-304451/8 IC Client Sample ID: _____Date Analyzed: 11/14/15 10:44 Lab File ID: D13299.D GC Column: Vf-5MS (30.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.17	Split Peak	kiekeld	11/17/15 09:13

Lab Sample ID: STD160 280-304451/9 IC Client Sample ID: _____Date Analyzed: 11/14/15 11:11 Lab File ID: D13300.D GC Column: Vf-5MS (30.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.18	Split Peak	kiekeld	11/17/15 09:15
Indeno[1,2,3-cd]pyrene	19.94	Shouldering	kiekeld	11/17/15 09:15

Lab Sample ID: STD200 280-304451/10 IC Client Sample ID: _____Date Analyzed: 11/14/15 11:38 Lab File ID: D13301.D GC Column: Vf-5MS (30.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.20	Split Peak	kiekeld	11/17/15 09:16
Indeno[1,2,3-cd]pyrene	19.94	Shouldering	kiekeld	11/17/15 09:16

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Instrument ID: SMS_D Analysis Batch Number: 304623Lab Sample ID: LCS 280-303850/2-A Client Sample ID: _____Date Analyzed: 11/17/15 20:19 Lab File ID: D13382.D GC Column: Vf-5MS (30.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.16	Split Peak	kiekeld	11/18/15 11:39

Lab Sample ID: LCSD 280-303850/3-A Client Sample ID: _____Date Analyzed: 11/17/15 20:46 Lab File ID: D13383.D GC Column: Vf-5MS (30.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.16	Split Peak	kiekeld	11/18/15 11:40

SAMPLE SUMMARY

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-76475-3	TMW49102015	Water	11/05/2015 0910	11/06/2015 0935
280-76475-4	TMW31D102015	Water	11/05/2015 1125	11/06/2015 0935
280-76475-5	DTW31D102015	Water	11/05/2015 1125	11/06/2015 0935
280-76475-7	MW24102015	Water	11/05/2015 1140	11/06/2015 0935
280-76475-8	TMW32102015	Water	11/05/2015 1500	11/06/2015 0935
280-76475-9	BGMW01102015	Water	11/05/2015 0900	11/06/2015 0935
280-76475-10	BGMW02102015	Water	11/05/2015 1050	11/06/2015 0935
280-76475-12	TMW47102015	Water	11/05/2015 1340	11/06/2015 0935

EXECUTIVE SUMMARY - Detections

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
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No Detections

METHOD SUMMARY

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270D	
Liquid-Liquid Extraction (Continuous)	TAL DEN		SW846 3520C

Lab References:

TAL DEN = TestAmerica Denver

Method References:

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

METHOD / ANALYST SUMMARY

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Method	Analyst	Analyst ID
SW846 8270D	Kiekel, Daniel C	DCK

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: TMW49102015

Lab Sample ID: 280-76475-3

Client Matrix: Water

Date Sampled: 11/05/2015 0910

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13390.D
Dilution:	1.0			Initial Weight/Volume:	920 mL
Analysis Date:	11/17/2015 2357			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.7	U	2.7	5.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	86		42 - 131
2-Fluorobiphenyl	80		48 - 120
2-Fluorophenol (Surr)	80		41 - 120
Nitrobenzene-d5 (Surr)	81		42 - 120
Phenol-d5 (Surr)	83		45 - 124
Terphenyl-d14 (Surr)	60		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: TMW31D102015

Lab Sample ID: 280-76475-4

Client Matrix: Water

Date Sampled: 11/05/2015 1125

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13391.D
Dilution:	1.0			Initial Weight/Volume:	964.4 mL
Analysis Date:	11/17/2015 0024			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.6	U	2.6	5.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	84		42 - 131
2-Fluorobiphenyl	78		48 - 120
2-Fluorophenol (Surr)	80		41 - 120
Nitrobenzene-d5 (Surr)	78		42 - 120
Phenol-d5 (Surr)	82		45 - 124
Terphenyl-d14 (Surr)	63		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: DTW31D102015

Lab Sample ID: 280-76475-5

Client Matrix: Water

Date Sampled: 11/05/2015 1125

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13392.D
Dilution:	1.0			Initial Weight/Volume:	939.7 mL
Analysis Date:	11/17/2015 0051			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.7	U	2.7	5.3

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	83		42 - 131
2-Fluorobiphenyl	78		48 - 120
2-Fluorophenol (Surr)	78		41 - 120
Nitrobenzene-d5 (Surr)	78		42 - 120
Phenol-d5 (Surr)	78		45 - 124
Terphenyl-d14 (Surr)	64		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: MW24102015

Lab Sample ID: 280-76475-7

Client Matrix: Water

Date Sampled: 11/05/2015 1140

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13393.D
Dilution:	1.0			Initial Weight/Volume:	1013.3 mL
Analysis Date:	11/18/2015 0119			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.5	U	2.5	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	81		42 - 131
2-Fluorobiphenyl	71		48 - 120
2-Fluorophenol (Surr)	70		41 - 120
Nitrobenzene-d5 (Surr)	68		42 - 120
Phenol-d5 (Surr)	72		45 - 124
Terphenyl-d14 (Surr)	52		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: TMW32102015

Lab Sample ID: 280-76475-8

Client Matrix: Water

Date Sampled: 11/05/2015 1500

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13394.D
Dilution:	1.0			Initial Weight/Volume:	845.8 mL
Analysis Date:	11/18/2015 0146			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	3.0	U	3.0	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	86		42 - 131
2-Fluorobiphenyl	83		48 - 120
2-Fluorophenol (Surr)	83		41 - 120
Nitrobenzene-d5 (Surr)	84		42 - 120
Phenol-d5 (Surr)	86		45 - 124
Terphenyl-d14 (Surr)	76		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: BGMW01102015

Lab Sample ID: 280-76475-9

Date Sampled: 11/05/2015 0900

Client Matrix: Water

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13395.D
Dilution:	1.0			Initial Weight/Volume:	962.4 mL
Analysis Date:	11/18/2015 0213			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.6	U	2.6	5.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	90		42 - 131
2-Fluorobiphenyl	85		48 - 120
2-Fluorophenol (Surr)	91		41 - 120
Nitrobenzene-d5 (Surr)	86		42 - 120
Phenol-d5 (Surr)	92		45 - 124
Terphenyl-d14 (Surr)	71		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: BGMW02102015

Lab Sample ID: 280-76475-10

Client Matrix: Water

Date Sampled: 11/05/2015 1050

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13396.D
Dilution:	1.0			Initial Weight/Volume:	1025.1 mL
Analysis Date:	11/18/2015 0240			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.4	U	2.4	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	87		42 - 131
2-Fluorobiphenyl	82		48 - 120
2-Fluorophenol (Surr)	85		41 - 120
Nitrobenzene-d5 (Surr)	83		42 - 120
Phenol-d5 (Surr)	89		45 - 124
Terphenyl-d14 (Surr)	62		20 - 130

Analytical Data

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Client Sample ID: TMW47102015

Lab Sample ID: 280-76475-12

Date Sampled: 11/05/2015 1340

Client Matrix: Water

Date Received: 11/06/2015 0935

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Prep Method:	3520C	Prep Batch:	280-303850	Lab File ID:	D13397.D
Dilution:	1.0			Initial Weight/Volume:	901.9 mL
Analysis Date:	11/18/2015 0308			Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.8	U	2.8	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	87		42 - 131
2-Fluorobiphenyl	80		48 - 120
2-Fluorophenol (Surr)	85		41 - 120
Nitrobenzene-d5 (Surr)	81		42 - 120
Phenol-d5 (Surr)	85		45 - 124
Terphenyl-d14 (Surr)	76		20 - 130

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	2FP %Rec	PHL %Rec	NBZ %Rec	FBP %Rec	TBP %Rec	TPH %Rec
280-76475-3	TMW49102015	80	83	81	80	86	60
280-76475-4	TMW31D102015	80	82	78	78	84	63
280-76475-5	DTW31D102015	78	78	78	78	83	64
280-76475-7	MW24102015	70	72	68	71	81	52
280-76475-8	TMW32102015	83	86	84	83	86	76
280-76475-9	BGMW01102015	91	92	86	85	90	71
280-76475-10	BGMW02102015	85	89	83	82	87	62
280-76475-12	TMW47102015	85	85	81	80	87	76
MB 280-303850/1-A		83	84	81	76	83	75
LCS 280-303850/2-A		79	82	79	79	87	75
LCSD 280-303850/3-A		86	88	84	83	91	77

Surrogate	Acceptance Limits
2FP = 2-Fluorophenol (Surr)	41-120
PHL = Phenol-d5 (Surr)	45-124
NBZ = Nitrobenzene-d5 (Surr)	42-120
FBP = 2-Fluorobiphenyl	48-120
TBP = 2,4,6-Tribromophenol (Surr)	42-131
TPH = Terphenyl-d14 (Surr)	20-130

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Method Blank - Batch: 280-303850

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 280-303850/1-A	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-303850	Lab File ID:	D13381.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/17/2015 1952	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Caprolactam	2.5	U	2.5	5.0
Surrogate	% Rec	Acceptance Limits		
2,4,6-Tribromophenol (Surr)	83	42 - 131		
2-Fluorobiphenyl	76	48 - 120		
2-Fluorophenol (Surr)	83	41 - 120		
Nitrobenzene-d5 (Surr)	81	42 - 120		
Phenol-d5 (Surr)	84	45 - 124		
Terphenyl-d14 (Surr)	75	20 - 130		

Lab Control Sample/

Method: 8270D

Lab Control Sample Duplicate Recovery Report - Batch: 280-303850

Preparation: 3520C

LCS Lab Sample ID:	LCS 280-303850/2-A	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-303850	Lab File ID:	D13382.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/17/2015 2019	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-303850/3-A	Analysis Batch:	280-304623	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-303850	Lab File ID:	D13383.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/17/2015 2046	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/07/2015 1408			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Caprolactam	85	90	46 - 143	6	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
2,4,6-Tribromophenol (Surr)	87		91		42 - 131		
2-Fluorobiphenyl	79		83		48 - 120		
2-Fluorophenol (Surr)	79		86		41 - 120		
Nitrobenzene-d5 (Surr)	79		84		42 - 120		
Phenol-d5 (Surr)	82		88		45 - 124		
Terphenyl-d14 (Surr)	75		77		20 - 130		

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-303850

Method: 8270D
Preparation: 3520C

LCS Lab Sample ID: LCS 280-303850/2-A Units: ug/L
Client Matrix: Water
Dilution: 1.0
Analysis Date: 11/17/2015 2019
Prep Date: 11/07/2015 1408
Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-303850/3-A
Client Matrix: Water
Dilution: 1.0
Analysis Date: 11/17/2015 2046
Prep Date: 11/07/2015 1408
Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Caprolactam	80.0	80.0	68.0	71.9

DATA REPORTING QUALIFIERS

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Lab Section	Qualifier	Description
GC/MS Semi VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-303850					
LCS 280-303850/2-A	Lab Control Sample	T	Water	3520C	
LCSD 280-303850/3-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 280-303850/1-A	Method Blank	T	Water	3520C	
280-76475-3	TMW49102015	T	Water	3520C	
280-76475-4	TMW31D102015	T	Water	3520C	
280-76475-5	DTW31D102015	T	Water	3520C	
280-76475-7	MW24102015	T	Water	3520C	
280-76475-8	TMW32102015	T	Water	3520C	
280-76475-9	BGMW01102015	T	Water	3520C	
280-76475-10	BGMW02102015	T	Water	3520C	
280-76475-12	TMW47102015	T	Water	3520C	
Analysis Batch:280-304623					
LCS 280-303850/2-A	Lab Control Sample	T	Water	8270D	280-303850
LCSD 280-303850/3-A	Lab Control Sample Duplicate	T	Water	8270D	280-303850
MB 280-303850/1-A	Method Blank	T	Water	8270D	280-303850
280-76475-3	TMW49102015	T	Water	8270D	280-303850
280-76475-4	TMW31D102015	T	Water	8270D	280-303850
280-76475-5	DTW31D102015	T	Water	8270D	280-303850
280-76475-7	MW24102015	T	Water	8270D	280-303850
280-76475-8	TMW32102015	T	Water	8270D	280-303850
280-76475-9	BGMW01102015	T	Water	8270D	280-303850
280-76475-10	BGMW02102015	T	Water	8270D	280-303850
280-76475-12	TMW47102015	T	Water	8270D	280-303850

Report Basis

T = Total

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Laboratory Chronicle

Lab ID: 280-76475-3

Client ID: TMW49102015

Sample Date/Time: 11/05/2015 09:10 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-A-3-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-A-3-C		280-304623	280-303850	11/17/2015 23:57	1	TAL DEN	DCK

Lab ID: 280-76475-4

Client ID: TMW31D102015

Sample Date/Time: 11/05/2015 11:25 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-A-4-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-A-4-C		280-304623	280-303850	11/17/2015 00:24	1	TAL DEN	DCK

Lab ID: 280-76475-5

Client ID: DTW31D102015

Sample Date/Time: 11/05/2015 11:25 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-D-5-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-D-5-C		280-304623	280-303850	11/17/2015 00:51	1	TAL DEN	DCK

Lab ID: 280-76475-7

Client ID: MW24102015

Sample Date/Time: 11/05/2015 11:40 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-C-7-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-C-7-C		280-304623	280-303850	11/18/2015 01:19	1	TAL DEN	DCK

Lab ID: 280-76475-8

Client ID: TMW32102015

Sample Date/Time: 11/05/2015 15:00 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-A-8-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-A-8-C		280-304623	280-303850	11/18/2015 01:46	1	TAL DEN	DCK

Lab ID: 280-76475-9

Client ID: BGMW01102015

Sample Date/Time: 11/05/2015 09:00 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-A-9-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-A-9-C		280-304623	280-303850	11/18/2015 02:13	1	TAL DEN	DCK

Quality Control Results

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Laboratory Chronicle

Lab ID: 280-76475-10

Client ID: BGMW02102015

Sample Date/Time: 11/05/2015 10:50 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-B-10-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-B-10-C		280-304623	280-303850	11/18/2015 02:40	1	TAL DEN	DCK

Lab ID: 280-76475-12

Client ID: TMW47102015

Sample Date/Time: 11/05/2015 13:40 Received Date/Time: 11/06/2015 09:35

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76475-A-12-C		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	280-76475-A-12-C		280-304623	280-303850	11/18/2015 03:08	1	TAL DEN	DCK

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	MB 280-303850/1-A		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	MB 280-303850/1-A		280-304623	280-303850	11/17/2015 19:52	1	TAL DEN	DCK

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	LCS 280-303850/2-A		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	LCS 280-303850/2-A		280-304623	280-303850	11/17/2015 20:19	1	TAL DEN	DCK

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	LCSD 280-303850/3-A		280-304623	280-303850	11/07/2015 14:08	1	TAL DEN	JRA
A:8270D	LCSD 280-303850/3-A		280-304623	280-303850	11/17/2015 20:46	1	TAL DEN	DCK

Lab References:

TAL DEN = TestAmerica Denver

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8270_LCS_Main_00026	08/31/16	09/25/15	P&T Methanol, Lot MethanolP&T_001122	500 mL	MS-569729_00035	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00036	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00037	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00038	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
					n-Octadecane	80 ug/mL		
					Naphthalene	80 ug/mL		
					Nitrobenzene	80 ug/mL		
					Pentachlorophenol	160 ug/mL		
					Phenanthrene	80 ug/mL		
					Phenol	80 ug/mL		
					Pyrene	80 ug/mL		
					Pyridine	80 ug/mL		
					MS-569729_00039	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl) ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00044	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00045	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569729_00046	5 mL	1,1'-Biphenyl	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl) ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
					MS-569731_00015	5 mL	Benzoic acid	80 ug/mL
					MS-569731_00016	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00017	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00018	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					.MS-569729_00035	12/31/16	Restek, Lot A0111934	(Purchased Reagent)
1,2,4,5-Tetrachlorobenzene	1000 ug/mL							
1,2,4-Trichlorobenzene	1000 ug/mL							
1,2-Dichlorobenzene	1000 ug/mL							
1,2-Diphenylhydrazine	1010.97 ug/mL							
1,3-Dichlorobenzene	1000 ug/mL							
1,3-Dinitrobenzene	1000 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
.MS-569729_00036	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
							1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
.MS-569729_00037	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		Pyridine	1000 ug/mL
							1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569729_00038	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis (2-chloroethoxy)methane	1000 ug/mL
							Bis (2-chloroethyl) ether	1000 ug/mL
							Bis (2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569729_00039	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
.MS-569729_00044	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		Pyridine	1000 ug/mL
							1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569729_00045	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569729_00046	12/31/16		Restek, Lot A0111934		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz (a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569731_00015	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00016	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00017	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00018	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
8270_LCS_Supp_00136	11/13/15	11/06/15	P&T Methanol, Lot MethanolP&T_00124	50 mL	MS-569730_00023	2 mL	3,3'-Dichlorobenzidine	80 ug/mL
							Benidine	80 ug/mL
					MS-569732_00023	2 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
.MS-569730_00023	11/06/16		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benidine	2000 ug/mL
.MS-569732_00023	08/28/16		Restek, Lot A0108989		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
8270Surrogate_00086	10/16/16	10/16/15	ACETONE, Lot Acetone_000137	1000 mL	8270SurStkHL_00117	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
					8270SurStkHL_00118	5 mL	Terphenyl-d14 (Surr)	100 ug/mL
							2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
					8270SurStkHL_00131	5 mL	Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00133	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
.8270SurStkHL_00117	05/31/19	Restek, Lot A0103615			(Purchased Reagent)		Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
							2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
.8270SurStkHL_00118	05/31/19	Restek, Lot A0103615			(Purchased Reagent)		Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
							2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
.8270SurStkHL_00131	05/31/19	Restek, Lot A0103615			(Purchased Reagent)		2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
							2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL_00133	05/31/19		Restek, Lot A0103615		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
MS-FAMSSV_100_00013	12/08/15	03/13/15	Methylene Chloride, Lot 87975	0.5 mL	MS-IS_00007	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00007	12/08/15	12/08/14	Methylene Chloride, Lot 71006	250 mL	MS-567684_00016	35 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00017	15 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00016	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00017	12/31/17		Restek, Lot A092546		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA004_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	10 uL	Benzoic acid	8 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Tribromophenol (Surr)	4 ug/mL
							2-Fluorobiphenyl	4 ug/mL
							2-Fluorophenol (Surr)	4 ug/mL
							Nitrobenzene-d5 (Surr)	4 ug/mL
							Phenol-d5 (Surr)	4 ug/mL
							Terphenyl-d14 (Surr)	4 ug/mL
							Famphur	4 ug/mL
							1,1'-Biphenyl	4 ug/mL
							1,2,4,5-Tetrachlorobenzene	4 ug/mL
							1,2,4-Trichlorobenzene	4 ug/mL
							1,2-Dichlorobenzene	4 ug/mL
							1,2-Diphenylhydrazine	4.0439 ug/mL
							1,3-Dichlorobenzene	4 ug/mL
							1,3-Dinitrobenzene	4 ug/mL
							1,4-Dichlorobenzene	4 ug/mL
							1,4-Dioxane	4 ug/mL
							1-Methylnaphthalene	4 ug/mL
							2,2'-oxybis[1-chloropropane]	4 ug/mL
							2,3,4,6-Tetrachlorophenol	4 ug/mL
							2,4,5-Trichlorophenol	4 ug/mL
							2,4,6-Trichlorophenol	4 ug/mL
							2,4-Dichlorophenol	4 ug/mL
							2,4-Dimethylphenol	4 ug/mL
							2,4-Dinitrophenol	8 ug/mL
							2,4-Dinitrotoluene	4 ug/mL
							2,6-Dichlorophenol	4 ug/mL
							2,6-Dinitrotoluene	4 ug/mL
							2-Chloronaphthalene	4 ug/mL
							2-Chlorophenol	4 ug/mL
							2-Methylnaphthalene	4 ug/mL
							2-Methylphenol	4 ug/mL
							2-Nitroaniline	4 ug/mL
							2-Nitrophenol	4 ug/mL
							3 & 4 Methylphenol	4 ug/mL
							3-Methylphenol	4 ug/mL
							3-Nitroaniline	4 ug/mL
							4,6-Dinitro-2-methylphenol	8 ug/mL
							4-Bromophenyl phenyl ether	4 ug/mL
							4-Chloro-3-methylphenol	4 ug/mL
							4-Chloroaniline	4 ug/mL
							4-Chlorophenyl phenyl ether	4 ug/mL
							4-Methylphenol	4 ug/mL
							4-Nitroaniline	4 ug/mL
							4-Nitrophenol	8 ug/mL
							Acenaphthene	4 ug/mL
							Acenaphthylene	4 ug/mL
							Acetophenone	4 ug/mL
							Aniline	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	4 ug/mL
							Azobenzene	4 ug/mL
							Benzo[a]anthracene	4 ug/mL
							Benzo[a]pyrene	4 ug/mL
							Benzo[b]fluoranthene	4 ug/mL
							Benzo[g,h,i]perylene	4 ug/mL
							Benzo[k]fluoranthene	4 ug/mL
							Benzyl alcohol	4 ug/mL
							Bis (2-chloroethoxy)methane	4 ug/mL
							Bis (2-chloroethyl) ether	4 ug/mL
							Bis (2-ethylhexyl) phthalate	4 ug/mL
							Butyl benzyl phthalate	4 ug/mL
							Carbazole	4 ug/mL
							Chrysene	4 ug/mL
							Di-n-butyl phthalate	4 ug/mL
							Di-n-octyl phthalate	4 ug/mL
							Dibenz (a, h) anthracene	4 ug/mL
							Dibenzofuran	4 ug/mL
							Diethyl phthalate	4 ug/mL
							Dimethyl phthalate	4 ug/mL
							Fluoranthene	4 ug/mL
							Fluorene	4 ug/mL
							Hexachlorobenzene	4 ug/mL
							Hexachlorobutadiene	4 ug/mL
							Hexachlorocyclopentadiene	4 ug/mL
							Hexachloroethane	4 ug/mL
							Indeno[1,2,3-cd]pyrene	4 ug/mL
							Isophorone	4 ug/mL
							N-Nitrosodi-n-propylamine	4 ug/mL
							N-Nitrosodimethylamine	4 ug/mL
							N-Nitrosodiphenylamine	8 ug/mL
							Naphthalene	4 ug/mL
							Nitrobenzene	4 ug/mL
							Pentachlorophenol	8 ug/mL
							Phenanthrene	4 ug/mL
							Phenol	4 ug/mL
							Pyrene	4 ug/mL
							Pyridine	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Caprolactam	4 ug/mL
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl) ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
..MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-HSLA010_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	25 uL	Benzoic acid	20 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
							Famphur	10 ug/mL
							1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10.1097 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Methylphenol	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
					Pyrene	10 ug/mL		
					Pyridine	10 ug/mL		
					3,3'-Dichlorobenzidine	10 ug/mL		
					Caprolactam	10 ug/mL		
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA020_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	50 uL	Benzoic acid	40 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
							Famphur	20 ug/mL
							1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20.2195 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Methylphenol	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis (2-chloroethoxy)methane	20 ug/mL
							Bis (2-chloroethyl) ether	20 ug/mL
							Bis (2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz (a,h) anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							Naphthalene	20 ug/mL
					Nitrobenzene	20 ug/mL		
					Pentachlorophenol	40 ug/mL		
					Phenanthrene	20 ug/mL		
					Phenol	20 ug/mL		
					Pyrene	20 ug/mL		
					Pyridine	20 ug/mL		
					3,3'-Dichlorobenzidine	20 ug/mL		
					Caprolactam	20 ug/mL		
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
..MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA050_00021	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	125 uL	Benzoic acid	100 ug/mL
							2,4,6-Tribromophenol (Surr)	50 ug/mL
							2-Fluorobiphenyl	50 ug/mL
							2-Fluorophenol (Surr)	50 ug/mL
							Nitrobenzene-d5 (Surr)	50 ug/mL
							Phenol-d5 (Surr)	50 ug/mL
							Terphenyl-d14 (Surr)	50 ug/mL
							Famphur	50 ug/mL
							1,1'-Biphenyl	50 ug/mL
							1,2,4,5-Tetrachlorobenzene	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Diphenylhydrazine	50.5487 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	50 ug/mL
							1-Methylnaphthalene	50 ug/mL
							2,2'-oxybis[1-chloropropane]	50 ug/mL
							2,3,4,6-Tetrachlorophenol	50 ug/mL
							2,4,5-Trichlorophenol	50 ug/mL
							2,4,6-Trichlorophenol	50 ug/mL
							2,4-Dichlorophenol	50 ug/mL
							2,4-Dimethylphenol	50 ug/mL
							2,4-Dinitrophenol	100 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dichlorophenol	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Chloronaphthalene	50 ug/mL
							2-Chlorophenol	50 ug/mL
							2-Methylnaphthalene	50 ug/mL
							2-Methylphenol	50 ug/mL
							2-Nitroaniline	50 ug/mL
							2-Nitrophenol	50 ug/mL
							3 & 4 Methylphenol	50 ug/mL
							3-Methylphenol	50 ug/mL
							3-Nitroaniline	50 ug/mL
							4,6-Dinitro-2-methylphenol	100 ug/mL
							4-Bromophenyl phenyl ether	50 ug/mL
							4-Chloro-3-methylphenol	50 ug/mL
							4-Chloroaniline	50 ug/mL
							4-Chlorophenyl phenyl ether	50 ug/mL
							4-Methylphenol	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	50 ug/mL
							4-Nitrophenol	100 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Acetophenone	50 ug/mL
							Aniline	50 ug/mL
							Anthracene	50 ug/mL
							Azobenzene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Benzyl alcohol	50 ug/mL
							Bis (2-chloroethoxy)methane	50 ug/mL
							Bis (2-chloroethyl) ether	50 ug/mL
							Bis (2-ethylhexyl) phthalate	50 ug/mL
							Butyl benzyl phthalate	50 ug/mL
							Carbazole	50 ug/mL
							Chrysene	50 ug/mL
							Di-n-butyl phthalate	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz (a,h) anthracene	50 ug/mL
							Dibenzofuran	50 ug/mL
							Diethyl phthalate	50 ug/mL
							Dimethyl phthalate	50 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Hexachlorobenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexachlorocyclopentadiene	50 ug/mL
							Hexachloroethane	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Isophorone	50 ug/mL
							N-Nitrosodi-n-propylamine	50 ug/mL
							N-Nitrosodimethylamine	50 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							Naphthalene	50 ug/mL
							Nitrobenzene	50 ug/mL
							Pentachlorophenol	100 ug/mL
							Phenanthrene	50 ug/mL
							Phenol	50 ug/mL
							Pyrene	50 ug/mL
							Pyridine	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Caprolactam	50 ug/mL
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
					MS-567685_00001	0.4 mL	Benzoic acid	400 ug/mL
							2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567684_00018	11/30/19	Restek, Lot A0107273			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA080_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	200 uL	Benzoic acid	160 ug/mL
							2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5 (Surr)	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14 (Surr)	80 ug/mL
							Famphur	80 ug/mL
							1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis (2-chloroethoxy)methane	80 ug/mL
							Bis (2-chloroethyl) ether	80 ug/mL
							Bis (2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz (a,h) anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Caprolactam	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00013	1 mL	Benzoic acid	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567674_00048	02/29/16		Restek, Lot A093441		MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		Benzoic acid	2000 ug/mL
					(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
							1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
MS-HSLA120_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	300 uL	Phenanthrene-d10	2000 ug/mL
							Benzoic acid	240 ug/mL
							2,4,6-Tribromophenol (Surr)	120 ug/mL
							2-Fluorobiphenyl	120 ug/mL
							2-Fluorophenol (Surr)	120 ug/mL
							Nitrobenzene-d5 (Surr)	120 ug/mL
							Phenol-d5 (Surr)	120 ug/mL
							Terphenyl-d14 (Surr)	120 ug/mL
							Famphur	120 ug/mL
							1,1'-Biphenyl	120 ug/mL
							1,2,4,5-Tetrachlorobenzene	120 ug/mL
							1,2,4-Trichlorobenzene	120 ug/mL
							1,2-Dichlorobenzene	120 ug/mL
							1,2-Diphenylhydrazine	121.317 ug/mL
							1,3-Dichlorobenzene	120 ug/mL
							1,3-Dinitrobenzene	120 ug/mL
							1,4-Dichlorobenzene	120 ug/mL
							1,4-Dioxane	120 ug/mL
							1-Methylnaphthalene	120 ug/mL
							2,2'-oxybis[1-chloropropane]	120 ug/mL
							2,3,4,6-Tetrachlorophenol	120 ug/mL
							2,4,5-Trichlorophenol	120 ug/mL
							2,4,6-Trichlorophenol	120 ug/mL
							2,4-Dichlorophenol	120 ug/mL
							2,4-Dimethylphenol	120 ug/mL
							2,4-Dinitrophenol	240 ug/mL
							2,4-Dinitrotoluene	120 ug/mL
							2,6-Dichlorophenol	120 ug/mL
							2,6-Dinitrotoluene	120 ug/mL
							2-Chloronaphthalene	120 ug/mL
							2-Chlorophenol	120 ug/mL
							2-Methylnaphthalene	120 ug/mL
							2-Methylphenol	120 ug/mL
							2-Nitroaniline	120 ug/mL
							2-Nitrophenol	120 ug/mL
							3 & 4 Methylphenol	120 ug/mL
							3-Methylphenol	120 ug/mL
							3-Nitroaniline	120 ug/mL
							4,6-Dinitro-2-methylphenol	240 ug/mL
							4-Bromophenyl phenyl ether	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	120 ug/mL
							4-Chloroaniline	120 ug/mL
							4-Chlorophenyl phenyl ether	120 ug/mL
							4-Methylphenol	120 ug/mL
							4-Nitroaniline	120 ug/mL
							4-Nitrophenol	240 ug/mL
							Acenaphthene	120 ug/mL
							Acenaphthylene	120 ug/mL
							Acetophenone	120 ug/mL
							Aniline	120 ug/mL
							Anthracene	120 ug/mL
							Azobenzene	120 ug/mL
							Benzo[a]anthracene	120 ug/mL
							Benzo[a]pyrene	120 ug/mL
							Benzo[b]fluoranthene	120 ug/mL
							Benzo[g,h,i]perylene	120 ug/mL
							Benzo[k]fluoranthene	120 ug/mL
							Benzyl alcohol	120 ug/mL
							Bis (2-chloroethoxy)methane	120 ug/mL
							Bis (2-chloroethyl) ether	120 ug/mL
							Bis (2-ethylhexyl) phthalate	120 ug/mL
							Butyl benzyl phthalate	120 ug/mL
							Carbazole	120 ug/mL
							Chrysene	120 ug/mL
							Di-n-butyl phthalate	120 ug/mL
							Di-n-octyl phthalate	120 ug/mL
							Dibenz (a,h) anthracene	120 ug/mL
							Dibenzofuran	120 ug/mL
							Diethyl phthalate	120 ug/mL
							Dimethyl phthalate	120 ug/mL
							Fluoranthene	120 ug/mL
							Fluorene	120 ug/mL
							Hexachlorobenzene	120 ug/mL
							Hexachlorobutadiene	120 ug/mL
							Hexachlorocyclopentadiene	120 ug/mL
							Hexachloroethane	120 ug/mL
							Indeno[1,2,3-cd]pyrene	120 ug/mL
							Isophorone	120 ug/mL
							N-Nitrosodi-n-propylamine	120 ug/mL
							N-Nitrosodimethylamine	120 ug/mL
							N-Nitrosodiphenylamine	240 ug/mL
							Naphthalene	120 ug/mL
							Nitrobenzene	120 ug/mL
							Pentachlorophenol	240 ug/mL
							Phenanthrene	120 ug/mL
							Phenol	120 ug/mL
							Pyrene	120 ug/mL
							Pyridine	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-IS_00008	50 uL	3,3'-Dichlorobenzidine	120 ug/mL
							Caprolactam	120 ug/mL
							1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA160_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	400 uL	Benzoic acid	320 ug/mL
							2,4,6-Tribromophenol (Surr)	160 ug/mL
							2-Fluorobiphenyl	160 ug/mL
							2-Fluorophenol (Surr)	160 ug/mL
							Nitrobenzene-d5 (Surr)	160 ug/mL
							Phenol-d5 (Surr)	160 ug/mL
							Terphenyl-d14 (Surr)	160 ug/mL
							Famphur	160 ug/mL
							1,1'-Biphenyl	160 ug/mL
							1,2,4,5-Tetrachlorobenzene	160 ug/mL
							1,2,4-Trichlorobenzene	160 ug/mL
							1,2-Dichlorobenzene	160 ug/mL
							1,2-Diphenylhydrazine	161.756 ug/mL
							1,3-Dichlorobenzene	160 ug/mL
							1,3-Dinitrobenzene	160 ug/mL
							1,4-Dichlorobenzene	160 ug/mL
							1,4-Dioxane	160 ug/mL
							1-Methylnaphthalene	160 ug/mL
							2,2'-oxybis[1-chloropropane]	160 ug/mL
							2,3,4,6-Tetrachlorophenol	160 ug/mL
							2,4,5-Trichlorophenol	160 ug/mL
							2,4,6-Trichlorophenol	160 ug/mL
							2,4-Dichlorophenol	160 ug/mL
							2,4-Dimethylphenol	160 ug/mL
							2,4-Dinitrophenol	320 ug/mL
							2,4-Dinitrotoluene	160 ug/mL
							2,6-Dichlorophenol	160 ug/mL
							2,6-Dinitrotoluene	160 ug/mL
							2-Chloronaphthalene	160 ug/mL
							2-Chlorophenol	160 ug/mL
							2-Methylnaphthalene	160 ug/mL
							2-Methylphenol	160 ug/mL
							2-Nitroaniline	160 ug/mL
							2-Nitrophenol	160 ug/mL
							3 & 4 Methylphenol	160 ug/mL
							3-Methylphenol	160 ug/mL
							3-Nitroaniline	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	320 ug/mL
							4-Bromophenyl phenyl ether	160 ug/mL
							4-Chloro-3-methylphenol	160 ug/mL
							4-Chloroaniline	160 ug/mL
							4-Chlorophenyl phenyl ether	160 ug/mL
							4-Methylphenol	160 ug/mL
							4-Nitroaniline	160 ug/mL
							4-Nitrophenol	320 ug/mL
							Acenaphthene	160 ug/mL
							Acenaphthylene	160 ug/mL
							Acetophenone	160 ug/mL
							Aniline	160 ug/mL
							Anthracene	160 ug/mL
							Azobenzene	160 ug/mL
							Benzo[a]anthracene	160 ug/mL
							Benzo[a]pyrene	160 ug/mL
							Benzo[b]fluoranthene	160 ug/mL
							Benzo[g,h,i]perylene	160 ug/mL
							Benzo[k]fluoranthene	160 ug/mL
							Benzyl alcohol	160 ug/mL
							Bis (2-chloroethoxy)methane	160 ug/mL
							Bis (2-chloroethyl) ether	160 ug/mL
							Bis (2-ethylhexyl) phthalate	160 ug/mL
							Butyl benzyl phthalate	160 ug/mL
							Carbazole	160 ug/mL
							Chrysene	160 ug/mL
							Di-n-butyl phthalate	160 ug/mL
							Di-n-octyl phthalate	160 ug/mL
							Dibenz (a,h) anthracene	160 ug/mL
							Dibenzofuran	160 ug/mL
							Diethyl phthalate	160 ug/mL
							Dimethyl phthalate	160 ug/mL
							Fluoranthene	160 ug/mL
							Fluorene	160 ug/mL
							Hexachlorobenzene	160 ug/mL
							Hexachlorobutadiene	160 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	160 ug/mL
							Indeno[1,2,3-cd]pyrene	160 ug/mL
							Isophorone	160 ug/mL
							N-Nitrosodi-n-propylamine	160 ug/mL
							N-Nitrosodimethylamine	160 ug/mL
							N-Nitrosodiphenylamine	320 ug/mL
							Naphthalene	160 ug/mL
							Nitrobenzene	160 ug/mL
							Pentachlorophenol	320 ug/mL
							Phenanthrene	160 ug/mL
							Phenol	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	160 ug/mL
							Pyridine	160 ug/mL
							3,3'-Dichlorobenzidine	160 ug/mL
							Caprolactam	160 ug/mL
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL 00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis (2-chloroethoxy)methane	1000 ug/mL
							Bis (2-chloroethyl) ether	1000 ug/mL
							Bis (2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..MS-569730 HSL 00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731 00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19	Restek, Lot A0107273			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
							MS-HSLA200_00020	11/20/15
2,4,6-Tribromophenol (Surr)	200 ug/mL							
2-Fluorobiphenyl	200 ug/mL							
2-Fluorophenol (Surr)	200 ug/mL							
Nitrobenzene-d5 (Surr)	200 ug/mL							
Phenol-d5 (Surr)	200 ug/mL							
Terphenyl-d14 (Surr)	200 ug/mL							
Famphur	200 ug/mL							
1,1'-Biphenyl	200 ug/mL							
1,2,4,5-Tetrachlorobenzene	200 ug/mL							
1,2,4-Trichlorobenzene	200 ug/mL							
1,2-Dichlorobenzene	200 ug/mL							
1,2-Diphenylhydrazine	202.195 ug/mL							
1,3-Dichlorobenzene	200 ug/mL							
1,3-Dinitrobenzene	200 ug/mL							
1,4-Dichlorobenzene	200 ug/mL							
1,4-Dioxane	200 ug/mL							
1-Methylnaphthalene	200 ug/mL							
2,2'-oxybis[1-chloropropane]	200 ug/mL							
2,3,4,6-Tetrachlorophenol	200 ug/mL							
2,4,5-Trichlorophenol	200 ug/mL							
2,4,6-Trichlorophenol	200 ug/mL							
2,4-Dichlorophenol	200 ug/mL							
2,4-Dimethylphenol	200 ug/mL							
2,4-Dinitrophenol	400 ug/mL							
2,4-Dinitrotoluene	200 ug/mL							
2,6-Dichlorophenol	200 ug/mL							
2,6-Dinitrotoluene	200 ug/mL							
2-Chloronaphthalene	200 ug/mL							
2-Chlorophenol	200 ug/mL							
2-Methylnaphthalene	200 ug/mL							
2-Methylphenol	200 ug/mL							
2-Nitroaniline	200 ug/mL							
2-Nitrophenol	200 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
							3,3'-Dichlorobenzidine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-IS_00008	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00017	11/20/15	09/01/15	Methylene Chloride, Lot 108136	10 mL	MS-567674_00048	1 mL	Benzoic acid	400 ug/mL
					MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00010	1 mL	Famphur	200 ug/mL
					MS-569729_00025	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	200 ug/mL
							3-Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis (2-chloroethoxy)methane	200 ug/mL
							Bis (2-chloroethyl) ether	200 ug/mL
							Bis (2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	400 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
					MS-569730 HSL_00001	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00013	1 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL_00001	1 mL	Caprolactam	200 ug/mL
..MS-567674_00048	02/29/16		Restek, Lot A093441		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00010	12/31/16		Restek, Lot A0107887		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-569729_00025	09/30/16		Restek, Lot A0109703		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-569730 HSL_00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis (2-chloroethoxy)methane	1000 ug/mL
							Bis (2-chloroethyl) ether	1000 ug/mL
							Bis (2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	2000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
							3,3'-Dichlorobenzidine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-569731_00013	07/31/16		Restek, Lot A0107943		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Caprolactam	2000 ug/mL
.MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00018	11/30/19		Restek, Lot A0107273		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00048	11/20/15	05/16/15	Methylene Chloride, Lot 91740	0.5 mL	MS-IS_00007	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00007	12/08/15	12/08/14	Methylene Chloride, Lot 71006	250 mL	MS-567684_00016	35 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00017	15 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00016	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00017	12/31/17		Restek, Lot A092546		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-HSLACV080_00048	11/20/15	05/16/15	Methylene Chloride, Lot 91740	0.5 mL	MS-HSLA_STK_00015	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5 (Surr)	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14 (Surr)	80 ug/mL
.MS-HSLA_STK_00015	11/20/15	04/30/15	Methylene Chloride, Lot 87975	10 mL	MS-567685_00001	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
..MS-567685_00001	11/20/15		Restek, Lot A092712		MS-569732 HSL 00001	1 mL	Caprolactam	200 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
..MS-569732 HSL 00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		Terphenyl-d14 (Surr)	5000 ug/mL
							Caprolactam	2000 ug/mL
MS-HSLB1B3SSV_00028	12/08/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-IS_00007	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00007	12/08/15	12/08/14	Methylene Chloride, Lot 71006	250 mL	MS-567684_00016	35 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00017	15 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00016	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567684_00017	12/31/17		Restek, Lot A092546		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
							1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
MS-HSLB2SSV_00025	12/08/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-IS_00007	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00007	12/08/15	12/08/14	Methylene Chloride, Lot 71006	250 mL	MS-567684_00016	35 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00017	15 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00016	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00017	12/31/17		Restek, Lot A092546		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLB2SSV_00025	12/08/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLB2_STK_00005	250 uL	Caprolactam	100 ug/mL
.MS-HSLB2_STK_00005	04/30/16	04/30/15	Methylene Chloride, Lot 87975	10 mL	MS-569732SEC_00001	1 mL	Caprolactam	200 ug/mL
..MS-569732SEC_00001	06/30/16		Restek, Lot A0108042		(Purchased Reagent)		Caprolactam	2000 ug/mL
MS-IS_00008	08/06/16	08/06/15	Methylene Chloride, Lot 91740	200 mL	MS-567684_00018	40 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
.MS-567684_00018	11/30/19	Restek, Lot A0107273			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL



Reagent ID: 8270Surrogate_00086

Description:	8270 Surrogate 100ug/ml	Expiration Date:	10/16/2016
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Stevenson, Michael D
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	10/16/2015	Solvent Lot:	Acetone_000137
Open Date:			
Container(s):	3554524, 3554525, 3554526, 3554527		
Comment:	Take 20mL of 8270SurHL and dilute to 1000mL in acetone. One year expiration date. Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification.		

standards fridge

Reagent Analyte Information

mecl2 cycl -00243

Pip 100µl/ml

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6 - Tribromophenol	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00117	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00118	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL



Reagent ID: 8270Surrogate_00086

Description:	8270 Surrogate 100ug/ml	Expiration Date:	10/16/2016
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Stevenson, Michael D
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	10/16/2015	Solvent Lot:	Acetone_000137
Open Date:			
Container(s):	3554524, 3554525, 3554526, 3554527		
Comment:	Take 20mL of 8270SurHL and dilute to 1000mL in acetone. One year expiration date. Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2-Fluorobiphenyl	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00131	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00133	05/31/2019	5000.00000	ug/mL	100.00000	ug/mL



Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8270SurStkHL_0011 7	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_0011 8	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_0013 1	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_0013 3	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL

Preliminary Report

TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_G6\20151022-40647.b\G6_20682.D
 Lims ID: 8270Surrogate_00086 Lab Sample ID: Client 280-300564/34-A
 Client ID:
 Sample Type: Client
 Inject. Date: 22-Oct-2015 14:57:30 ALS Bottle#: 7 Worklist Smp#: 34
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 8270Surrogate_00086
 Operator ID: KIEKELD Instrument ID: SMS_G6
 Method: \\ChromNA\Denver\ChromData\SMS_G6\20151022-40647.b\MSG6_8270C.m
 Limit Group: MSSV - 8270C_625
 Method Label: 8270C / 625
 Last Update: 23-Oct-2015 05:57:29 Calib Date: 15-Oct-2015 13:43:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_G6\20151015-40387.b\G6_20552.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK028

Compound	Amount Added	Amount Recovered	% Rec.
\$ 7 2-Fluorophenol	100.0	90.7	90.71
\$ 8 Phenol-d5	100.0	88.8	88.85
\$ 9 Nitrobenzene-d5	100.0	87.1	87.10
\$ 11 2-Fluorobiphenyl	100.0	89.4	89.43
\$ 12 2,4,6-Tribromophenol	100.0	90.5	90.49
\$ 13 Terphenyl-d14	100.0	81.8	81.82



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568727 Lot No.: A0103685
Description : 8270 List 2/ Std #8 Dibenz(a,j)acridine
8270 List 2/ Std #8 Dibenz(a,j)acridine 2,000 µg/ml, Methylene Chloride,
1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : May 31, 2017 Storage: 10°C or colder
Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dibenz(a,j)acridine CAS # 224-42-0 Purity 99% (Lot ER081407-01)	2,014.0 µg/mL	+/- 11.9625 µg/mL Gravimetric +/- 89.5165 µg/mL Unstressed +/- 98.3442 µg/mL Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

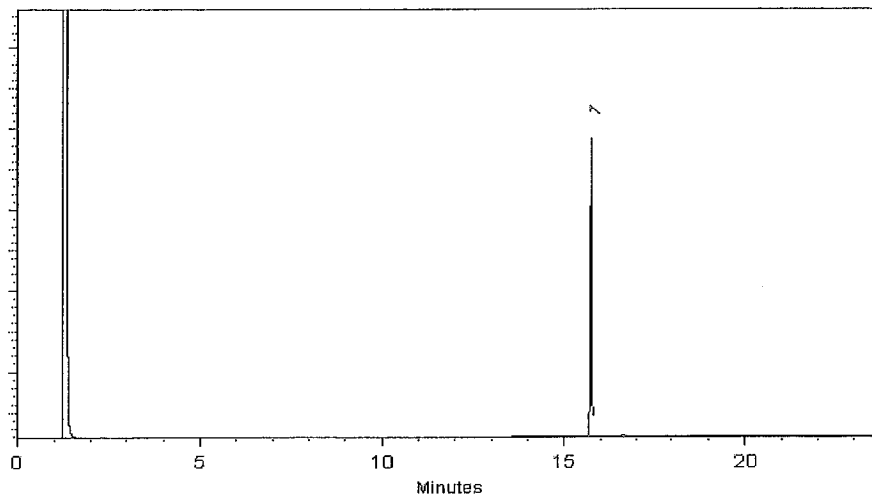
250°C

Det. Temp:

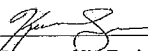
330°C

Det. Type:

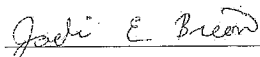
FID



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


Kendra Swope - Mix Technician

Date Mixed: 30-May-2014 Balance: 1128342313


Jodi E. Breon - QA Analyst

Date Passed: 04-Jun-2014

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567685 Lot No.: A0103615
Description : 8270 Surrogate Standard
8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : May 31, 2019 Storage: 10°C or colder
Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	2-Fluorophenol	5,003.5 µg/mL	+/-	29.0892	µg/mL	Gravimetric
	CAS # 367-12-4 (Lot STBC5591V)		+/-	124.6713	µg/mL	Unstressed
	Purity 99%		+/-	156.7818	µg/mL	Stressed
2	Phenol-d5	5,002.9 µg/mL	+/-	29.0860	µg/mL	Gravimetric
	CAS # 4165-62-2 (Lot M387P4)		+/-	124.6575	µg/mL	Unstressed
	Purity 99%		+/-	156.7644	µg/mL	Stressed
3	Nitrobenzene-d5	5,001.4 µg/mL	+/-	29.0773	µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-20474)		+/-	124.6201	µg/mL	Unstressed
	Purity 99%		+/-	156.7174	µg/mL	Stressed
4	2-Fluorobiphenyl	5,004.4 µg/mL	+/-	29.0947	µg/mL	Gravimetric
	CAS # 321-60-8 (Lot E11Y047)		+/-	124.6949	µg/mL	Unstressed
	Purity 99%		+/-	156.8114	µg/mL	Stressed
5	2,4,6-Tribromophenol	5,003.9 µg/mL	+/-	29.0914	µg/mL	Gravimetric
	CAS # 118-79-6 (Lot 29699MJV)		+/-	124.6805	µg/mL	Unstressed
	Purity 99%		+/-	156.7934	µg/mL	Stressed
6	p-Terphenyl-d14	5,007.1 µg/mL	+/-	29.1100	µg/mL	Gravimetric
	CAS # 1718-51-0 (Lot PR-20577)		+/-	124.7604	µg/mL	Unstressed
	Purity 99%		+/-	156.8938	µg/mL	Stressed

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567685 **Lot No.:** A0103615

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Fluorophenol CAS # 367-12-4 Purity 99% (Lot STBC5591V)	5,003.5 µg/mL	+/- 29.0892 µg/mL +/- 124.6713 µg/mL +/- 156.7818 µg/mL Gravimetric Unstressed Stressed
2	Phenol-d5 CAS # 4165-62-2 Purity 99% (Lot M387P4)	5,002.9 µg/mL	+/- 29.0860 µg/mL +/- 124.6575 µg/mL +/- 156.7644 µg/mL Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 CAS # 4165-60-0 Purity 99% (Lot PR-20474)	5,001.4 µg/mL	+/- 29.0773 µg/mL +/- 124.6201 µg/mL +/- 156.7174 µg/mL Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl CAS # 321-60-8 Purity 99% (Lot E11Y047)	5,004.4 µg/mL	+/- 29.0947 µg/mL +/- 124.6949 µg/mL +/- 156.8114 µg/mL Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol CAS # 118-79-6 Purity 99% (Lot 29699MJV)	5,003.9 µg/mL	+/- 29.0914 µg/mL +/- 124.6805 µg/mL +/- 156.7934 µg/mL Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 CAS # 1718-51-0 Purity 99% (Lot PR-20577)	5,007.1 µg/mL	+/- 29.1100 µg/mL +/- 124.7604 µg/mL +/- 156.8938 µg/mL Gravimetric Unstressed Stressed

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

Tech Tips:

Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

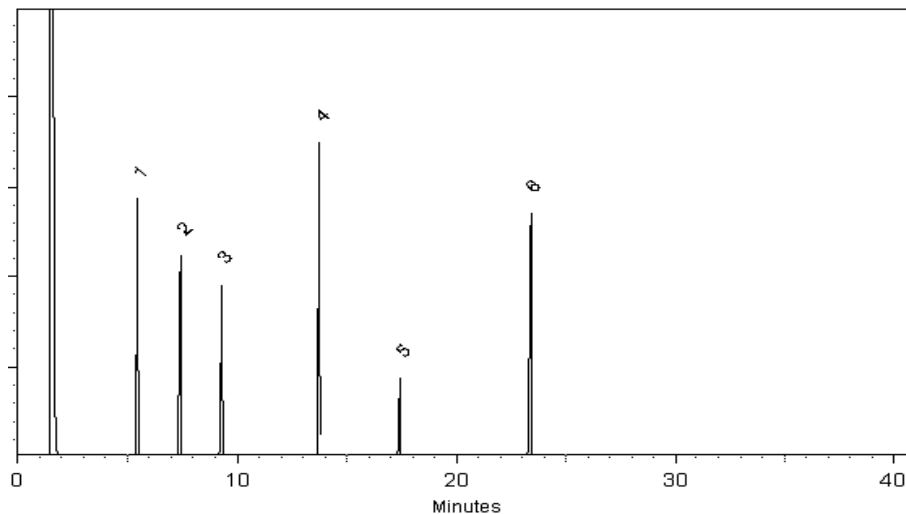
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Cheryl Graham
Cheryl Graham - Mix Technician

Date Mixed: 27-May-2014 **Balance:** 1128342313

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 23-Jun-2014

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0103615

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Fluorophenol CAS # 367-12-4 (Lot STBC5591V) Purity 99%	5,003.5 µg/mL	+/- 29.0892 µg/mL Gravimetric +/- 124.6713 µg/mL Unstressed +/- 156.7818 µg/mL Stressed
2	Phenol-d5 CAS # 4165-62-2 (Lot M387P4) Purity 99%	5,002.9 µg/mL	+/- 29.0860 µg/mL Gravimetric +/- 124.6575 µg/mL Unstressed +/- 156.7644 µg/mL Stressed
3	Nitrobenzene-d5 CAS # 4165-60-0 (Lot PR-20474) Purity 99%	5,001.4 µg/mL	+/- 29.0773 µg/mL Gravimetric +/- 124.6201 µg/mL Unstressed +/- 156.7174 µg/mL Stressed
4	2-Fluorobiphenyl CAS # 321-60-8 (Lot E11Y047) Purity 99%	5,004.4 µg/mL	+/- 29.0947 µg/mL Gravimetric +/- 124.6949 µg/mL Unstressed +/- 156.8114 µg/mL Stressed
5	2,4,6-Tribromophenol CAS # 118-79-6 (Lot 29699MJV) Purity 99%	5,003.9 µg/mL	+/- 29.0914 µg/mL Gravimetric +/- 124.6805 µg/mL Unstressed +/- 156.7934 µg/mL Stressed
6	p-Terphenyl-d14 CAS # 1718-51-0 (Lot PR-20577) Purity 99%	5,007.1 µg/mL	+/- 29.1100 µg/mL Gravimetric +/- 124.7604 µg/mL Unstressed +/- 156.8938 µg/mL Stressed

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

Tech Tips:

Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

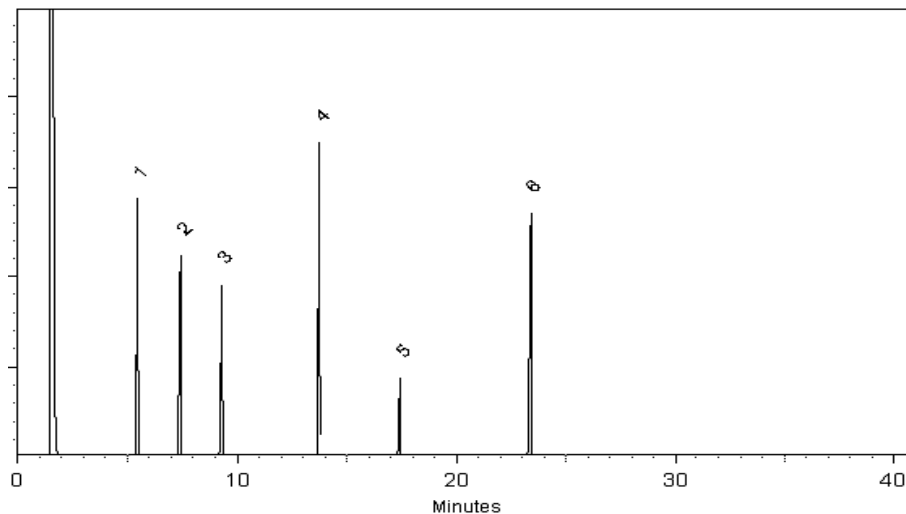
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Cheryl Graham
Cheryl Graham - Mix Technician

Date Mixed: 27-May-2014 **Balance:** 1128342313

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 23-Jun-2014

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



Analytical Reference Materials
8270 List 1 / Std #3 Benzoic Acid

Catalog # 567674.sec

Lot # A093654 & A093441

110 Benner Circle Bellefonte, PA 16823-8812

(814) 353-1300

FOR LABORATORY USE ONLY. READ MSDS PRIOR TO USE.

RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

MANUFACTURED UNDER RESTEK'S ISO 9001 REGISTERED QUALITY SYSTEM



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Certificate of Analysis

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Catalog No. : 567674.sec **Lot No.:** A093654

Description : 8270 List 1 / Std #3 Benzoic Acid

8270 List 1 / Std #3 Benzoic Acid 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : February 2016 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Benzoic acid		2,000.0 μg/mL	+/-	11.6284	μg/mL	Gravimetric
	CAS #	65-85-0.SEC		+/-	96.5270	μg/mL	Unstressed
	Purity	97%		+/-	96.6098	μg/mL	Stressed
Solvent:	Methylene Chloride						
	CAS #	75-09-2					
	Purity	99%					

Column:
30m x .25mm x .25um
Rtx-5 (cat.#10223)

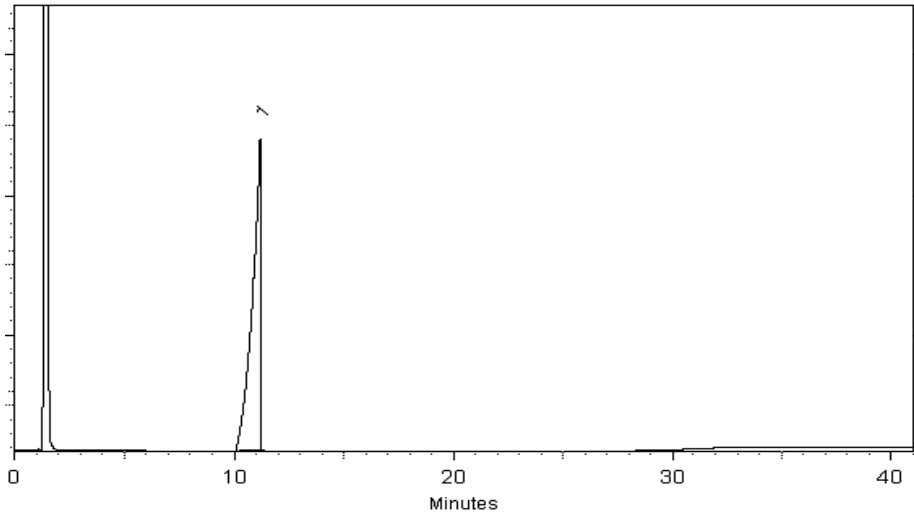
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 22-Feb-2013 Balance: 1128353505

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
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Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
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Manufacturing Notes:

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Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



Chemical Standard Batch Sheet

Lot #: A093654

Catalog #: 567674.sec	Target: 2000 ug/mL		
Description: 8270 List 1 / Std #3 Benzoic Acid			
Solvent: Methylene Chloride	Solvent Lot: 126244		Final Volume: 1,000 ml

Made by: Mary Ellen Wood	Date: 2/19/2013 3:12:24PM	
Tested by: Jennifer Pollino	Date: 2/21/2013 11:48:51AM	
Pass	By: Jodi Breon	Date: 2/22/2013 12:34:09PM
Packaged by: Alexandria Pavkovich / Alexandria Pavkov	Date: 2/21/2013 8:30:06AM	No. Units: 161 Pkg Size: 5 mL
Balance Used: BEDEARMBALPC2 XP205	Serial #: 1128353505	

<u>Compound</u>	<u>CAS</u>	<u>Storage Location</u>	<u>Lot #</u>	<u>Purity</u>	<u>Target Conc(ug/mL)</u>	<u>Target</u>	<u>Actual</u>	<u>Calc Conc(ug/mL)</u>
Benzoic acid	65-85-0.SEC	RS063	QD3UO	0.97	2,000.00	2,061.86 mg	2,061.90 mg	2,000.0



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Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

Catalog No. : 567674 **Lot No.:** A093441

Description : 8270 List 1 / Std #3 Benzoic Acid

8270 List 1 / Std #3 Benzoic Acid 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : February 2016 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Benzoic acid		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS #	65-85-0			+/-	96.5249	µg/mL	Unstressed
	Purity	99%			+/-	96.6077	µg/mL	Stressed
Solvent:	Methylene Chloride							
	CAS #	75-09-2						
	Purity	99%						

Column:
30m x .25mm x .25um
Rtx-5 (cat.#10223)

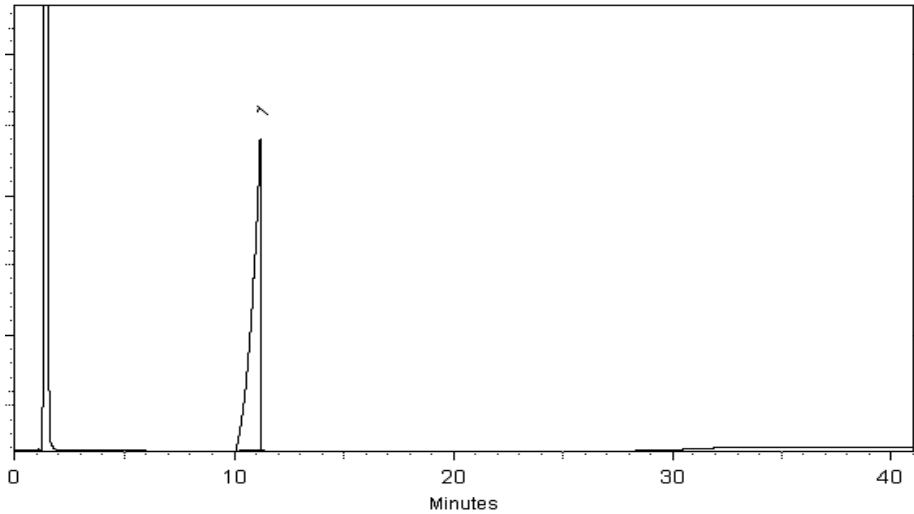
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 22-Feb-2013 Balance: 1128342313

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



Chemical Standard Batch Sheet

Lot #: A093441

Catalog #: 567674	Target: 2000 ug/mL		
Description: 8270 List 1 / Std #3 Benzoic Acid			
Solvent: Methylene Chloride	Solvent Lot: 127438	Final Volume:	4,000 ml

Made by: Matt Hepfer	Date: 2/7/2013 1:17:18PM		
Tested by: Jodi Breon	Date: 2/8/2013 3:42:28PM		
Pass	By: Jodi Breon	Date: 2/22/2013 12:33:55PM	
Packaged by: Kendra Swope / Alexandria Pavkovich	Date: 2/8/2013 10:02:22AM	No. Units: 615	Pkg Size: 5 mL
Balance Used: BEDEARMBALPC1 XP205	Serial #: 1128342313		

<u>Compound</u>	<u>CAS</u>	<u>Storage Location</u>	<u>Lot #</u>	<u>Purity</u>	<u>Target Conc(ug/mL)</u>	<u>Target</u>	<u>Actual</u>	<u>Calc Conc(ug/mL)</u>
Benzoic acid	65-85-0	R0472	MKBG9391V	0.99	2,000.00	8,000.00 mg	8,000.00 mg	2,000.0

QA Report: 8270 List 1/ Std. #3 Benzoic Acid (Cat.#567674)

<u>COMPONENT</u>	Runs of Lot # A093441						Runs of Lot # A093654						%D MEAN	P/F
	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD		
Benzoic acid	5123644	5100875	5144322	5122947	21732	0.42	5288104	5295526	5370045	5317892	45318	0.85	-3.81	PASS



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Catalog No.: 567684 - 00016 **Lot No.:** A093676
Description: 8270 Internal Standard
8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul
Container Size: 5 mL **Pkg Amt:** > 5 mL
Expiration Date: February 2018 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1,4-Dichlorobenzene-d4	2,000.0 μg/mL	+/-	11.6282	μg/mL	Gravimetric
	+/-		92.7158	μg/mL	Unstressed	
	+/-		101.3766	μg/mL	Stressed	
2	Naphthalene-d8	2,000.0 μg/mL	+/-	11.6282	μg/mL	Gravimetric
	+/-		92.7158	μg/mL	Unstressed	
	+/-		101.3766	μg/mL	Stressed	
3	Acenaphthene-d10	2,000.0 μg/mL	+/-	11.6282	μg/mL	Gravimetric
	+/-		92.7163	μg/mL	Unstressed	
	+/-		101.3771	μg/mL	Stressed	
4	Phenanthrene-d10	2,000.0 μg/mL	+/-	11.6282	μg/mL	Gravimetric
	+/-		92.7158	μg/mL	Unstressed	
	+/-		101.3766	μg/mL	Stressed	
5	Chrysene-d12	2,000.0 μg/mL	+/-	11.6281	μg/mL	Gravimetric
	+/-		92.7150	μg/mL	Unstressed	
	+/-		101.3758	μg/mL	Stressed	
6	Perylene-d12	2,000.0 μg/mL	+/-	11.6282	μg/mL	Gravimetric
	+/-		92.7158	μg/mL	Unstressed	
	+/-		101.3766	μg/mL	Stressed	
Solvent:	Methylene Chloride					
	CAS # 75-09-2					
	Purity 99%					



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Catalog No. : 567684 — 00017 Lot No.: A092546
Description : 8270 SV Internal Standard Mix
8270 SV Internal Standard Mix 2000µg/mL, Methylene Chloride, 5mL/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : December 2017 Storage: 10°C or colder
Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99%	2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
			+/- 92.7295	µg/mL	Unstressed
			+/- 101.3892	µg/mL	Stressed
2	Naphthalene-d8 CAS # 1146-65-2 Purity 99%	2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
			+/- 92.7295	µg/mL	Unstressed
			+/- 101.3892	µg/mL	Stressed
3	Acenaphthene-d10 CAS # 15067-26-2 Purity 97%	2,000.1 µg/mL	+/- 11.7379	µg/mL	Gravimetric
			+/- 92.7360	µg/mL	Unstressed
			+/- 101.3962	µg/mL	Stressed
4	Phenanthrene-d10 CAS # 1517-22-2 Purity 99%	2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
			+/- 92.7295	µg/mL	Unstressed
			+/- 101.3892	µg/mL	Stressed
5	Chrysene-d12 CAS # 1719-03-5 Purity 98%	2,000.2 µg/mL	+/- 11.7382	µg/mL	Gravimetric
			+/- 92.7378	µg/mL	Unstressed
			+/- 101.3983	µg/mL	Stressed
6	Perylene-d12 CAS # 1520-96-3 Purity 99%	2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
			+/- 92.7295	µg/mL	Unstressed
			+/- 101.3892	µg/mL	Stressed

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



CERTIFIED REFERENCE MATERIAL

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MS



3043056

ID: MS-567684_00018

Exp: 11/30/19 Ppdt: DCK

RES 8270 Internal Std Mix

Catalog No. : 567684 Lot No.: A0107273

Description : 8270 Internal Standard

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

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : November 30, 2019 Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 (Lot PR-18488) Purity 99%	2,017.6 µg/mL	+/- 11.7305 µg/mL Gravimetric +/- 89.6430 µg/mL Unstressed +/- 98.4895 µg/mL Stressed
2	Naphthalene-d8 CAS # 1146-65-2 (Lot PR-20449) Purity 99%	2,003.8 µg/mL	+/- 11.6503 µg/mL Gravimetric +/- 89.0299 µg/mL Unstressed +/- 97.8158 µg/mL Stressed
3	Acenaphthene-d10 CAS # 15067-26-2 (Lot PR-21070) Purity 97%	2,016.8 µg/mL	+/- 11.7260 µg/mL Gravimetric +/- 89.6085 µg/mL Unstressed +/- 98.4516 µg/mL Stressed
4	Phenanthrene-d10 CAS # 1517-22-2 (Lot PR-23065) Purity 99%	2,013.6 µg/mL	+/- 11.7072 µg/mL Gravimetric +/- 89.4653 µg/mL Unstressed +/- 98.2942 µg/mL Stressed
5	Chrysene-d12 CAS # 1719-03-5 (Lot PR-25081) Purity 99%	2,011.8 µg/mL	+/- 11.6968 µg/mL Gravimetric +/- 89.3853 µg/mL Unstressed +/- 98.2063 µg/mL Stressed
6	Perylene-d12 CAS # 1520-96-3 (Lot PR-24113) Purity 99%	2,017.8 µg/mL	+/- 11.7317 µg/mL Gravimetric +/- 89.6519 µg/mL Unstressed +/- 98.4992 µg/mL Stressed

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

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

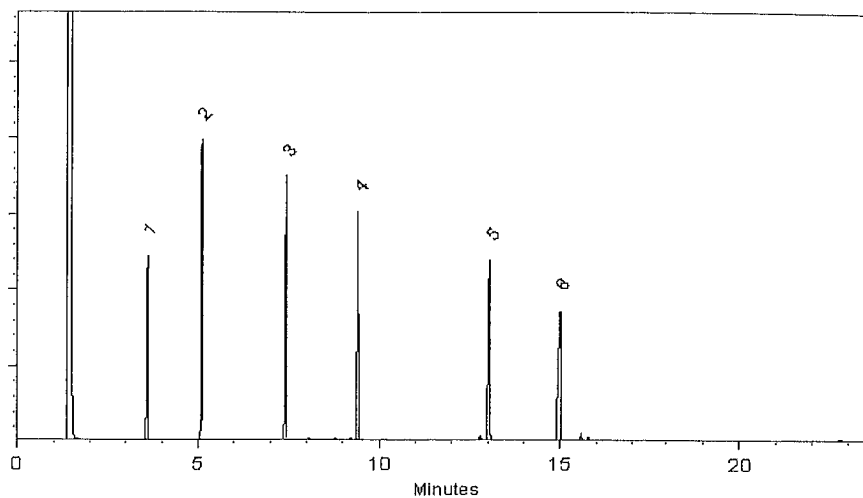
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Cheryl Graham
Cheryl Graham - Mix Technician

Date Mixed: 17-Nov-2014

Balance: 1128342313

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 19-Nov-2014

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



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Catalog No.: 567685 - 00001 Lot No.: A092712
Description: 8270 Surrogate Standard
8270 Surrogate Standard 5000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size: 5 mL Pkg Amt: > 5 mL
Expiration Date: January 2018 Storage: 10°C or colder
Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	2-Fluorophenol	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 367-12-4		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
2	Phenol-d5	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 4165-62-2		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
3	Nitrobenzene-d5	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 4165-60-0		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
4	2-Fluorobiphenyl	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 321-60-8		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
5	2,4,6-Tribromophenol	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 118-79-6		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
6	p-Terphenyl-d14	5,000.0 μg/mL	+/-	29.2761	μg/mL	Gravimetric
	CAS # 1718-51-0		+/-	132.9947	μg/mL	Unstressed
	Purity 99%		+/-	163.4399	μg/mL	Stressed
Solvent:	Methylene Chloride					
	CAS # 75-09-2					
	Purity 99%					

Tech Tips:

Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.



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CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate



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3049651

ID: MS-568023_00010

Exp: 12/31/16 Pripd: DCK

RES HSLA Famphur 2000ug/m

Catalog No.: 568023 Lot No.: A0107887
Description: 8270 Famphur Standard
8270 Famphur Standard 2,000 µg/ml, Methylene Chloride, 1 ml/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: December 31, 2016 Storage: 10°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Famphur	2,000.0 µg/mL	+/- 20.1475 µg/mL Gravimetric
	CAS # 52-85-7 (Lot 2451100)		+/- 73.8678 µg/mL Unstressed
	Purity 99%		+/- 73.8702 µg/mL Stressed

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

Michael Maje

Date Mixed: 18-Dec-2014

Balance: 1128353505

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



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Certificate of Analysis



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Catalog No. : 569729 Lot No.: A0109703

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL Pkg Amt: > 5 mL

Expiration Date : September 30, 2016 Storage: 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.



3223427
ID: MS-569729_00025
Exp: 09/30/16 Prp'd: DCK
RES HSLA Mega Mix 1000ug/

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1,4-Dioxane	1,001.8 µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBF2002V)		+/-	10.9684	µg/mL	Unstressed
	Purity 99%		+/-	18.6042	µg/mL	Stressed
2	Pyridine	1,004.7 µg/mL	+/-	5.8414	µg/mL	Gravimetric
	CAS # 110-86-1 (Lot SHBC7174V)		+/-	11.0002	µg/mL	Unstressed
	Purity 99%		+/-	18.6581	µg/mL	Stressed
3	N-Nitrosodimethylamine	1,000.0 µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 62-75-9 (Lot 3498100)		+/-	10.9487	µg/mL	Unstressed
	Purity 99%		+/-	18.5708	µg/mL	Stressed
4	Aniline	1,000.9 µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 62-53-3 (Lot K22Z462)		+/-	10.9586	µg/mL	Unstressed
	Purity 99%		+/-	18.5875	µg/mL	Stressed
5	Bis(2-chloroethyl)ether	1,001.9 µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 111-44-4 (Lot 45296HKV)		+/-	10.9695	µg/mL	Unstressed
	Purity 99%		+/-	18.6061	µg/mL	Stressed
6	2-Chlorophenol	1,001.4 µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 95-57-8 (Lot MKBD3900V)		+/-	10.9640	µg/mL	Unstressed
	Purity 99%		+/-	18.5968	µg/mL	Stressed
7	Phenol	1,000.3 µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 108-95-2 (Lot SHBC6998V)		+/-	10.9520	µg/mL	Unstressed
	Purity 99%		+/-	18.5764	µg/mL	Stressed

8	n-Decane (C10)		1,002.1	µg/mL	+/-	5.8263	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBF1587V)			+/-	10.9717	µg/mL	Unstressed
	Purity 99%				+/-	18.6098	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBL3891V)			+/-	10.9607	µg/mL	Unstressed
	Purity 99%				+/-	18.5912	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBC1891V)			+/-	10.9662	µg/mL	Unstressed
	Purity 99%				+/-	18.6005	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)			+/-	10.9640	µg/mL	Unstressed
	Purity 99%				+/-	18.5968	µg/mL	Stressed
12	Benzyl alcohol		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	10.9629	µg/mL	Unstressed
	Purity 99%				+/-	18.5949	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	10.9575	µg/mL	Unstressed
	Purity 99%				+/-	18.5856	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,002.9	µg/mL	+/-	5.8309	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	10.9804	µg/mL	Unstressed
	Purity 99%				+/-	18.6246	µg/mL	Stressed
15	Hexachloroethane		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	10.9586	µg/mL	Unstressed
	Purity 99%				+/-	18.5875	µg/mL	Stressed
16	Acetophenone		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	10.9881	µg/mL	Unstressed
	Purity 99%				+/-	18.6376	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	10.9684	µg/mL	Unstressed
	Purity 99%				+/-	18.6042	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		501.2	µg/mL	+/-	2.9208	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.4911	µg/mL	Unstressed
	Purity 99%				+/-	9.3098	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		500.2	µg/mL	+/-	2.9149	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.4801	µg/mL	Unstressed
	Purity 99%				+/-	9.2912	µg/mL	Stressed
20	Nitrobenzene		1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBB0246V)			+/-	10.9673	µg/mL	Unstressed
	Purity 99%				+/-	18.6024	µg/mL	Stressed
21	Isophorone		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	10.9607	µg/mL	Unstressed
	Purity 99%				+/-	18.5912	µg/mL	Stressed
22	2-Nitrophenol		1,003.1	µg/mL	+/-	5.8321	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	10.9826	µg/mL	Unstressed
	Purity 99%				+/-	18.6284	µg/mL	Stressed
23	2,4-Dimethylphenol		1,003.0	µg/mL	+/-	5.8315	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	10.9815	µg/mL	Unstressed
	Purity 99%				+/-	18.6265	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,002.1 µg/mL	+/- +/- +/-	5.8263 10.9717 18.6098	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,002.8 µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	1,000.4 µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,002.5 µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,001.7 µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 98%	(Lot 12528PH)	1,000.3 µg/mL	+/- +/- +/-	5.8157 10.9518 18.5761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,002.1 µg/mL	+/- +/- +/-	5.8260 10.9711 18.6089	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	1,000.2 µg/mL	+/- +/- +/-	5.8154 10.9512 18.5749	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,000.9 µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	990.0 µg/mL	+/- +/- +/-	5.7692 10.8463 18.3892	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,000.2 µg/mL	+/- +/- +/-	5.8152 10.9509 18.5745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,000.2 µg/mL	+/- +/- +/-	5.8152 10.9509 18.5745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	999.9 µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,002.2 µg/mL	+/- +/- +/-	5.8269 10.9728 18.6116	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot FIJ01)	1,000.3 µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.7 µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,003.4 µg/mL	+/- 5.8339 +/- 10.9859 +/- 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.3 µg/mL	+/- 5.8333 +/- 10.9848 +/- 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,001.2 µg/mL	+/- 5.8211 +/- 10.9618 +/- 18.5931	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,000.5 µg/mL	+/- 5.8170 +/- 10.9542 +/- 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.9 µg/mL	+/- 5.8193 +/- 10.9586 +/- 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBH3748V)	1,003.3 µg/mL	+/- 5.8333 +/- 10.9848 +/- 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,000.1 µg/mL	+/- 11.6288 +/- 21.8985 +/- 37.1434	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,003.0 µg/mL	+/- 5.8315 +/- 10.9815 +/- 18.6265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,000.8 µg/mL	+/- 5.8190 +/- 10.9580 +/- 18.5865	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,001.8 µg/mL	+/- 5.8246 +/- 10.9684 +/- 18.6042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.4 µg/mL	+/- 11.6479 +/- 21.9346 +/- 37.2047	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 99%	(Lot FN10221307)	1,003.5 µg/mL	+/- 5.8344 +/- 10.9870 +/- 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	999.6 µg/mL	+/- 5.8118 +/- 10.9443 +/- 18.5634	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,000.1 µg/mL	+/- 5.8147 +/- 10.9498 +/- 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBD4570V)	1,003.0 µg/mL	+/- 5.8315 +/- 10.9815 +/- 18.6265	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,001.1 µg/mL	+/- 5.8205 +/- 10.9607 +/- 18.5912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,000.9 µg/mL	+/- 5.8193 +/- 10.9586 +/- 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,701.0 µg/mL	+/- 9.8898 +/- 18.6237 +/- 31.5889	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,002.6 µg/mL	+/- 5.8292 +/- 10.9772 +/- 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC06195V)	2,000.8 µg/mL	+/- 11.6328 +/- 21.9062 +/- 37.1564	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	999.5 µg/mL	+/- 5.8112 +/- 10.9432 +/- 18.5615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LC04221V)	1,002.7 µg/mL	+/- 5.8300 +/- 10.9787 +/- 18.6216	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,006.0 µg/mL	+/- 11.6631 +/- 21.9631 +/- 37.2530	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,001.9 µg/mL	+/- 5.8249 +/- 10.9690 +/- 18.6052	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,000.3 µg/mL	+/- 5.8158 +/- 10.9520 +/- 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBR2268V)	1,001.2 µg/mL	+/- 5.8211 +/- 10.9618 +/- 18.5931	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,002.9 µg/mL	+/- 5.8311 +/- 10.9808 +/- 18.6252	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,001.5 µg/mL	+/- 5.8228 +/- 10.9651 +/- 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	999.8 µg/mL	+/- 5.8129 +/- 10.9465 +/- 18.5670	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 99%	(Lot BCBL6786V)	1,001.3 µg/mL	+/- 5.8216 +/- 10.9629 +/- 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.2 µg/mL	+/- 5.8152 +/- 10.9509 +/- 18.5745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,000.0 µg/mL	+/- 5.8141 +/- 10.9487 +/- 18.5708	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,004.7 µg/mL	+/- 5.8414 +/- 11.0002 +/- 18.6581	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,002.2 µg/mL	+/- 5.8269 +/- 10.9728 +/- 18.6116	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,001.9 µg/mL	+/- 5.8251 +/- 10.9695 +/- 18.6061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,001.3 µg/mL	+/- 5.8216 +/- 10.9629 +/- 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,000.5 µg/mL	+/- 5.8170 +/- 10.9542 +/- 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,002.5 µg/mL	+/- 5.8286 +/- 10.9761 +/- 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,003.3 µg/mL	+/- 5.8333 +/- 10.9848 +/- 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,000.7 µg/mL	+/- 5.8182 +/- 10.9564 +/- 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.0 µg/mL	+/- 5.8199 +/- 10.9596 +/- 18.5894	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%						

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL. N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine. N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

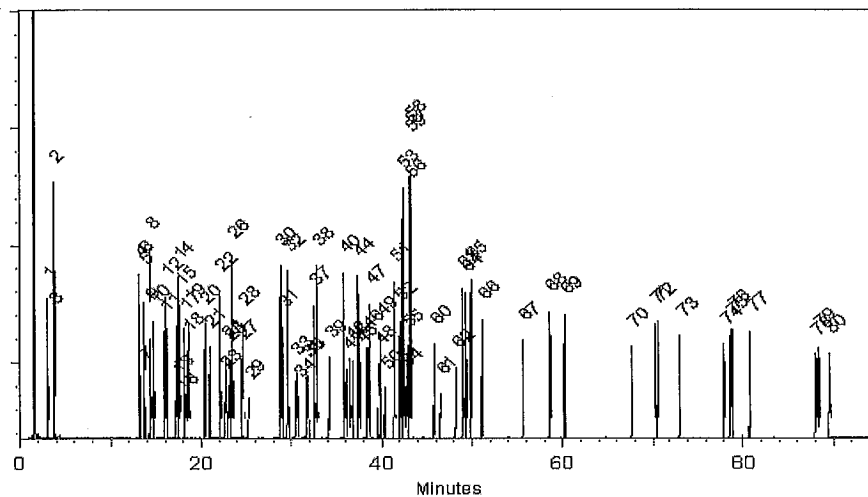
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

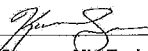
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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


Kendra Swope - Mix Technician

Date Mixed: 16-Mar-2015

Balance: B442140311


Tyler Brown - QA Analyst

Date Passed: 23-Mar-2015

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



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/- +/- +/-	5.8548 11.0253 18.7008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/- +/- +/-	5.8664 11.0472 18.7379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/- +/- +/-	5.8484 11.0133 18.6804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/- +/- +/-	5.8589 11.0330 18.7138	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/- +/- +/-	2.9272 5.5031 9.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- +/- +/-	2.9196 5.4889 9.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/- +/- +/-	5.8344 10.9870 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/- +/- +/-	5.8507 11.0177 18.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

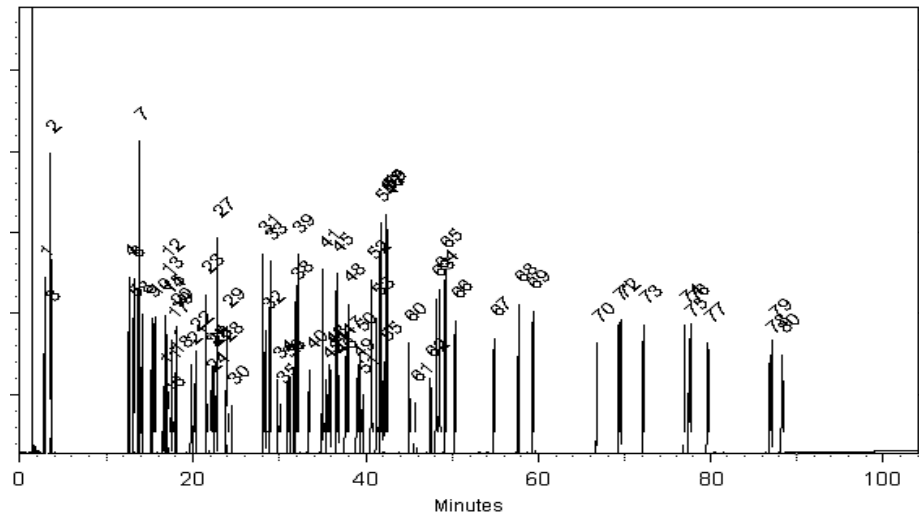
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound			Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	1,4-Dioxane			1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS #	123-91-1	(Lot SHBF7514V)			+/-	10.9607	µg/mL	Unstressed
	Purity	99%				+/-	18.5912	µg/mL	Stressed
2	Pyridine			1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS #	110-86-1	(Lot SHBC7174V)			+/-	11.0166	µg/mL	Unstressed
	Purity	99%				+/-	18.6859	µg/mL	Stressed
3	N-Nitrosodimethylamine			1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS #	62-75-9	(Lot 3498100)			+/-	11.0472	µg/mL	Unstressed
	Purity	99%				+/-	18.7379	µg/mL	Stressed
4	Aniline			1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS #	62-53-3	(Lot K22Z462)			+/-	11.0483	µg/mL	Unstressed
	Purity	99%				+/-	18.7398	µg/mL	Stressed
5	Bis(2-chloroethyl)ether			1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS #	111-44-4	(Lot 45296HKV)			+/-	11.0067	µg/mL	Unstressed
	Purity	99%				+/-	18.6692	µg/mL	Stressed
6	2-Chlorophenol			1,002.5	µg/mL	+/-	5.8286	µg/mL	Gravimetric
	CAS #	95-57-8	(Lot MKBD3900V)			+/-	10.9761	µg/mL	Unstressed
	Purity	99%				+/-	18.6172	µg/mL	Stressed
7	Phenol			1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS #	108-95-2	(Lot SHBF1351V)			+/-	10.9969	µg/mL	Unstressed
	Purity	99%				+/-	18.6525	µg/mL	Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/- +/- +/-	5.8548 11.0253 18.7008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/- +/- +/-	5.8664 11.0472 18.7379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/- +/- +/-	5.8484 11.0133 18.6804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/- +/- +/-	5.8589 11.0330 18.7138	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/- +/- +/-	2.9272 5.5031 9.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- +/- +/-	2.9196 5.4889 9.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/- +/- +/-	5.8344 10.9870 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/- +/- +/-	5.8507 11.0177 18.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

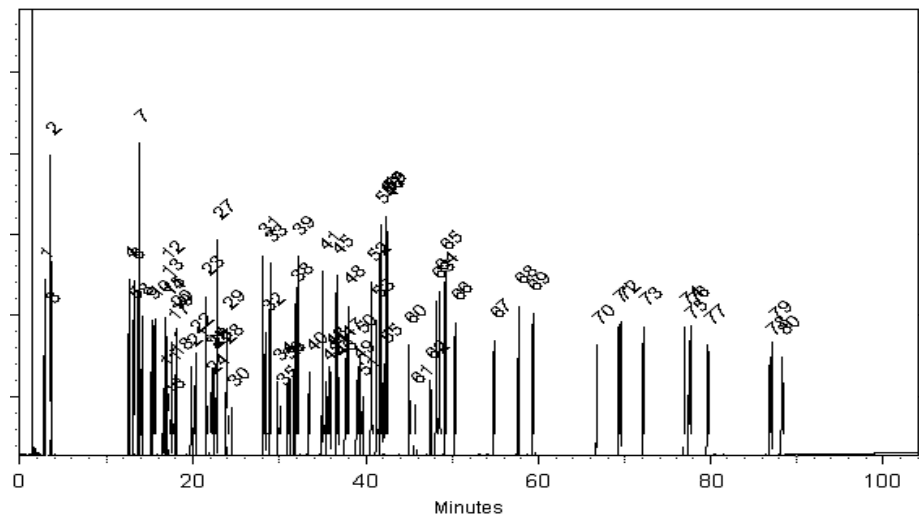
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/- +/- +/-	5.8548 11.0253 18.7008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/- +/- +/-	5.8664 11.0472 18.7379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/- +/- +/-	5.8484 11.0133 18.6804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/- +/- +/-	5.8589 11.0330 18.7138	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/- +/- +/-	2.9272 5.5031 9.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- +/- +/-	2.9196 5.4889 9.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/- +/- +/-	5.8344 10.9870 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/- +/- +/-	5.8507 11.0177 18.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

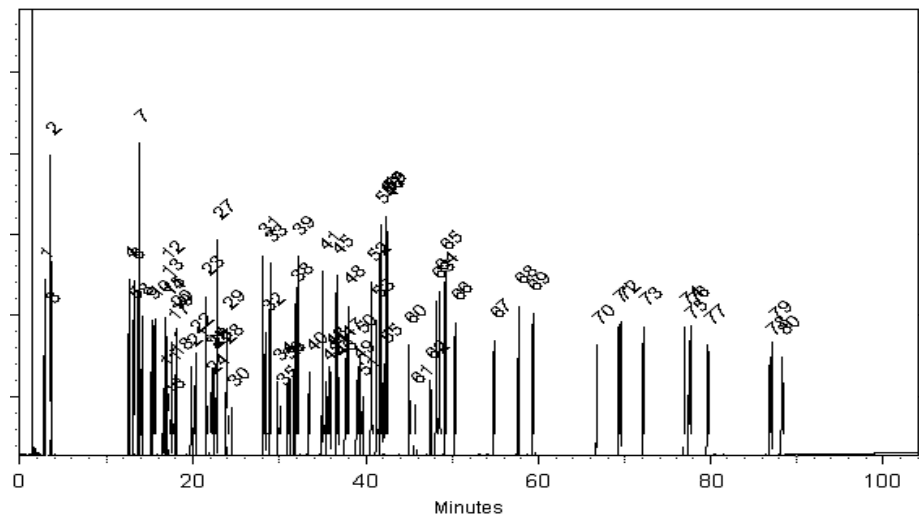
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
					+/-	11.0253	µg/mL	Unstressed
					+/-	18.7008	µg/mL	Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/-	5.8426	µg/mL	Gravimetric
					+/-	11.0023	µg/mL	Unstressed
					+/-	18.6618	µg/mL	Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
					+/-	11.0210	µg/mL	Unstressed
					+/-	18.6934	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
					+/-	11.0472	µg/mL	Unstressed
					+/-	18.7379	µg/mL	Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
					+/-	11.0133	µg/mL	Unstressed
					+/-	18.6804	µg/mL	Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
					+/-	11.0078	µg/mL	Unstressed
					+/-	18.6711	µg/mL	Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
					+/-	10.9673	µg/mL	Unstressed
					+/-	18.6024	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
					+/-	11.0330	µg/mL	Unstressed
					+/-	18.7138	µg/mL	Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/-	2.9272	µg/mL	Gravimetric
					+/-	5.5031	µg/mL	Unstressed
					+/-	9.3302	µg/mL	Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
					+/-	5.4889	µg/mL	Unstressed
					+/-	9.3061	µg/mL	Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
					+/-	10.9498	µg/mL	Unstressed
					+/-	18.5726	µg/mL	Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/-	5.8344	µg/mL	Gravimetric
					+/-	10.9870	µg/mL	Unstressed
					+/-	18.6358	µg/mL	Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
					+/-	11.0177	µg/mL	Unstressed
					+/-	18.6878	µg/mL	Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
					+/-	10.9706	µg/mL	Unstressed
					+/-	18.6079	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

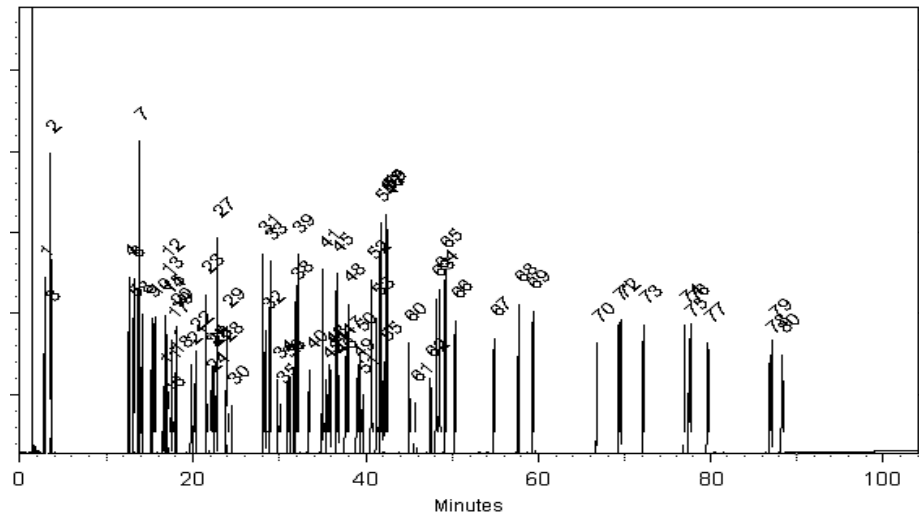
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
					+/-	11.0253	µg/mL	Unstressed
					+/-	18.7008	µg/mL	Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/-	5.8426	µg/mL	Gravimetric
					+/-	11.0023	µg/mL	Unstressed
					+/-	18.6618	µg/mL	Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
					+/-	11.0210	µg/mL	Unstressed
					+/-	18.6934	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
					+/-	11.0472	µg/mL	Unstressed
					+/-	18.7379	µg/mL	Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
					+/-	11.0133	µg/mL	Unstressed
					+/-	18.6804	µg/mL	Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
					+/-	11.0078	µg/mL	Unstressed
					+/-	18.6711	µg/mL	Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
					+/-	10.9673	µg/mL	Unstressed
					+/-	18.6024	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
					+/-	11.0330	µg/mL	Unstressed
					+/-	18.7138	µg/mL	Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/-	2.9272	µg/mL	Gravimetric
					+/-	5.5031	µg/mL	Unstressed
					+/-	9.3302	µg/mL	Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
					+/-	5.4889	µg/mL	Unstressed
					+/-	9.3061	µg/mL	Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
					+/-	10.9498	µg/mL	Unstressed
					+/-	18.5726	µg/mL	Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/-	5.8344	µg/mL	Gravimetric
					+/-	10.9870	µg/mL	Unstressed
					+/-	18.6358	µg/mL	Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
					+/-	11.0177	µg/mL	Unstressed
					+/-	18.6878	µg/mL	Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
					+/-	10.9706	µg/mL	Unstressed
					+/-	18.6079	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

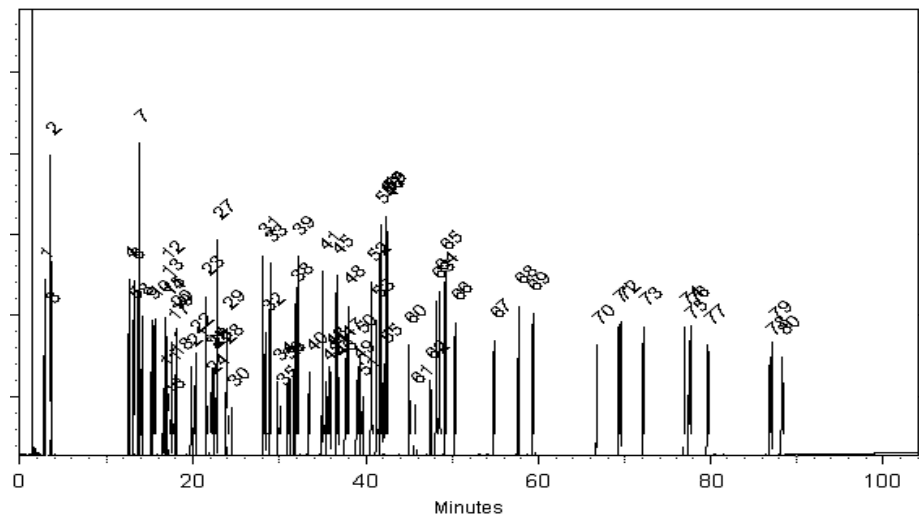
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
					+/-	11.0253	µg/mL	Unstressed
					+/-	18.7008	µg/mL	Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/-	5.8426	µg/mL	Gravimetric
					+/-	11.0023	µg/mL	Unstressed
					+/-	18.6618	µg/mL	Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
					+/-	10.9936	µg/mL	Unstressed
					+/-	18.6469	µg/mL	Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
					+/-	11.0210	µg/mL	Unstressed
					+/-	18.6934	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
					+/-	11.0472	µg/mL	Unstressed
					+/-	18.7379	µg/mL	Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
					+/-	11.0133	µg/mL	Unstressed
					+/-	18.6804	µg/mL	Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
					+/-	11.0078	µg/mL	Unstressed
					+/-	18.6711	µg/mL	Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
					+/-	10.9673	µg/mL	Unstressed
					+/-	18.6024	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
					+/-	11.0330	µg/mL	Unstressed
					+/-	18.7138	µg/mL	Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/-	2.9272	µg/mL	Gravimetric
					+/-	5.5031	µg/mL	Unstressed
					+/-	9.3302	µg/mL	Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
					+/-	5.4889	µg/mL	Unstressed
					+/-	9.3061	µg/mL	Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
					+/-	10.9498	µg/mL	Unstressed
					+/-	18.5726	µg/mL	Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/-	5.8344	µg/mL	Gravimetric
					+/-	10.9870	µg/mL	Unstressed
					+/-	18.6358	µg/mL	Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
					+/-	11.0177	µg/mL	Unstressed
					+/-	18.6878	µg/mL	Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
					+/-	10.9706	µg/mL	Unstressed
					+/-	18.6079	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

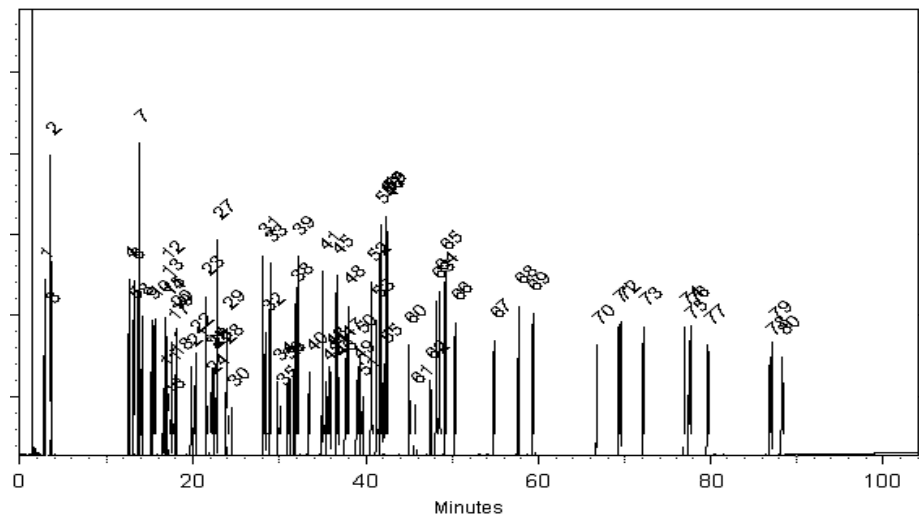
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)

8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dioxane CAS # 123-91-1 (Lot SHBF7514V) Purity 99%	1,001.1 µg/mL	+/- 5.8205 µg/mL Gravimetric +/- 10.9607 µg/mL Unstressed +/- 18.5912 µg/mL Stressed
2	Pyridine CAS # 110-86-1 (Lot SHBC7174V) Purity 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL Gravimetric +/- 11.0166 µg/mL Unstressed +/- 18.6859 µg/mL Stressed
3	N-Nitrosodimethylamine CAS # 62-75-9 (Lot 3498100) Purity 99%	1,009.0 µg/mL	+/- 5.8664 µg/mL Gravimetric +/- 11.0472 µg/mL Unstressed +/- 18.7379 µg/mL Stressed
4	Aniline CAS # 62-53-3 (Lot K22Z462) Purity 99%	1,009.1 µg/mL	+/- 5.8670 µg/mL Gravimetric +/- 11.0483 µg/mL Unstressed +/- 18.7398 µg/mL Stressed
5	Bis(2-chloroethyl)ether CAS # 111-44-4 (Lot 45296HKV) Purity 99%	1,005.3 µg/mL	+/- 5.8449 µg/mL Gravimetric +/- 11.0067 µg/mL Unstressed +/- 18.6692 µg/mL Stressed
6	2-Chlorophenol CAS # 95-57-8 (Lot MKBD3900V) Purity 99%	1,002.5 µg/mL	+/- 5.8286 µg/mL Gravimetric +/- 10.9761 µg/mL Unstressed +/- 18.6172 µg/mL Stressed
7	Phenol CAS # 108-95-2 (Lot SHBF1351V) Purity 99%	1,004.4 µg/mL	+/- 5.8397 µg/mL Gravimetric +/- 10.9969 µg/mL Unstressed +/- 18.6525 µg/mL Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/- +/- +/-	5.8548 11.0253 18.7008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/- +/- +/-	5.8664 11.0472 18.7379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/- +/- +/-	5.8484 11.0133 18.6804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/- +/- +/-	5.8589 11.0330 18.7138	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/- +/- +/-	2.9272 5.5031 9.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- +/- +/-	2.9196 5.4889 9.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/- +/- +/-	5.8344 10.9870 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/- +/- +/-	5.8507 11.0177 18.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

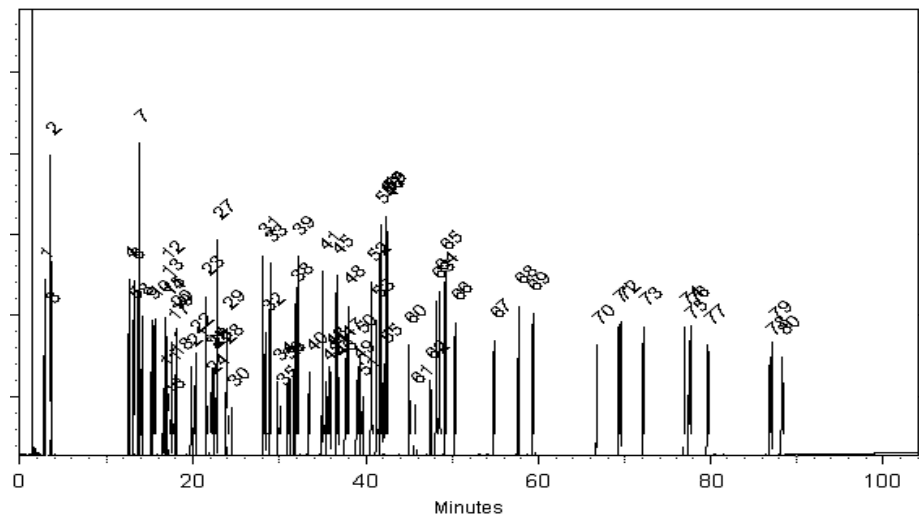
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569729 **Lot No.:** A0111934

Description : 8270 List 1 / Std #1 MegaMix (2015)
8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound			Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	1,4-Dioxane			1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS #	123-91-1	(Lot SHBF7514V)			+/-	10.9607	µg/mL	Unstressed
	Purity	99%				+/-	18.5912	µg/mL	Stressed
2	Pyridine			1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS #	110-86-1	(Lot SHBC7174V)			+/-	11.0166	µg/mL	Unstressed
	Purity	99%				+/-	18.6859	µg/mL	Stressed
3	N-Nitrosodimethylamine			1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS #	62-75-9	(Lot 3498100)			+/-	11.0472	µg/mL	Unstressed
	Purity	99%				+/-	18.7379	µg/mL	Stressed
4	Aniline			1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS #	62-53-3	(Lot K22Z462)			+/-	11.0483	µg/mL	Unstressed
	Purity	99%				+/-	18.7398	µg/mL	Stressed
5	Bis(2-chloroethyl)ether			1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS #	111-44-4	(Lot 45296HKV)			+/-	11.0067	µg/mL	Unstressed
	Purity	99%				+/-	18.6692	µg/mL	Stressed
6	2-Chlorophenol			1,002.5	µg/mL	+/-	5.8286	µg/mL	Gravimetric
	CAS #	95-57-8	(Lot MKBD3900V)			+/-	10.9761	µg/mL	Unstressed
	Purity	99%				+/-	18.6172	µg/mL	Stressed
7	Phenol			1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS #	108-95-2	(Lot SHBF1351V)			+/-	10.9969	µg/mL	Unstressed
	Purity	99%				+/-	18.6525	µg/mL	Stressed

8	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBF1587V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	1,007.0	µg/mL	+/- +/- +/-	5.8548 11.0253 18.7008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	1,004.1	µg/mL	+/- +/- +/-	5.8379 10.9936 18.6469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 99%	(Lot 2-KMW-57-8)	1,009.0	µg/mL	+/- +/- +/-	5.8664 11.0472 18.7379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBC1479V)	1,005.9	µg/mL	+/- +/- +/-	5.8484 11.0133 18.6804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone CAS # 98-86-2 Purity 99%	(Lot MKBR7156V)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot OPAGF)	1,007.7	µg/mL	+/- +/- +/-	5.8589 11.0330 18.7138	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	502.3	µg/mL	+/- +/- +/-	2.9272 5.5031 9.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- +/- +/-	2.9196 5.4889 9.3061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBF2348V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 99%	(Lot MKBG2442V)	1,003.5	µg/mL	+/- +/- +/-	5.8344 10.9870 18.6358	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,006.3	µg/mL	+/- +/- +/-	5.8507 11.0177 18.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane CAS # 111-91-1 Purity 99%	(Lot 2238100)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol CAS # 120-83-2 Purity 99%	(Lot BCBH1617V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 98%	(Lot SHBC5541V)	999.9	µg/mL	+/- +/- +/-	5.8135 10.9475 18.5688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	1,006.6	µg/mL	+/- +/- +/-	5.8525 11.0210 18.6934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol CAS # 87-65-0 Purity 99%	(Lot MKBN2776V)	1,000.4	µg/mL	+/- +/- +/-	5.8164 10.9531 18.5782	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline CAS # 106-47-8 Purity 99%	(Lot 12528PH)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	1,001.2	µg/mL	+/- +/- +/-	5.8209 10.9615 18.5925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot 19399MJV)	999.3	µg/mL	+/- +/- +/-	5.8098 10.9406 18.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol CAS # 59-50-7 Purity 99%	(Lot STBC0769V)	1,002.5	µg/mL	+/- +/- +/-	5.8286 10.9761 18.6172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene CAS # 90-12-0 Purity 99%	(Lot 525000-10)	1,001.7	µg/mL	+/- +/- +/-	5.8240 10.9673 18.6024	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene CAS # 95-94-3 Purity 99%	(Lot 06024AIV)	1,002.3	µg/mL	+/- +/- +/-	5.8275 10.9739 18.6135	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene CAS # 77-47-4 Purity 99%	(Lot 3691100)	1,008.9	µg/mL	+/- +/- +/-	5.8658 11.0461 18.7361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol CAS # 88-06-2 Purity 98%	(Lot MKBL4698V)	1,000.4	µg/mL	+/- +/- +/-	5.8163 10.9529 18.5779	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol CAS # 95-95-4 Purity 99%	(Lot FHM01)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene CAS # 91-58-7 Purity 99%	(Lot AJ2UI-TE)	1,001.5	µg/mL	+/- +/- +/-	5.8228 10.9651 18.5986	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl CAS # 92-52-4 Purity 99%	(Lot 1277976)	1,002.0	µg/mL	+/- +/- +/-	5.8257 10.9706 18.6079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,008.4	µg/mL	+/- +/- +/-	5.8629 11.0407 18.7268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 99%	(Lot ER030707-01)	1,003.4	µg/mL	+/- +/- +/-	5.8339 10.9859 18.6339	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBB1436V)	1,000.3	µg/mL	+/- +/- +/-	5.8158 10.9520 18.5764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,002.6	µg/mL	+/- +/- +/-	5.8292 10.9772 18.6191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot 1437483V)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKBP0384V)	1,001.6	µg/mL	+/- +/- +/-	5.8234 10.9662 18.6005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBD8351V)	2,001.6	µg/mL	+/- +/- +/-	11.6375 21.9149 37.1713	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBH8392V)	1,000.5	µg/mL	+/- +/- +/-	5.8170 10.9542 18.5801	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline CAS # 99-09-2 Purity 97%	(Lot MKBH5131V)	1,002.7	µg/mL	+/- +/- +/-	5.8297 10.9781 18.6207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,002.7	µg/mL	+/- +/- +/-	5.8298 10.9783 18.6209	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBK1842V)	2,003.0	µg/mL	+/- +/- +/-	11.6456 21.9302 37.1973	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 98%	(Lot B15W0428)	1,000.2	µg/mL	+/- +/- +/-	5.8152 10.9508 18.5743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 98%	(Lot 10174662)	996.0	µg/mL	+/- +/- +/-	5.7907 10.9046 18.4960	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBS2248V)	1,003.3	µg/mL	+/- +/- +/-	5.8333 10.9848 18.6321	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG1026V)	1,005.6	µg/mL	+/- +/- +/-	5.8466 11.0100 18.6748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBJ3578V)	1,004.9	µg/mL	+/- +/- +/-	5.8426 11.0023 18.6618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene CAS # 103-33-3 Purity 99%	(Lot MKBS2559V)	1,007.5	µg/mL	+/- +/- +/-	5.8577 11.0308 18.7101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	Diphenylamine CAS # 122-39-4 Purity 99%	(Lot MKBN8295V)	1,708.5	µg/mL	+/- +/- +/-	9.9334 18.7059 31.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	4-Nitroaniline CAS # 100-01-6 Purity 99%	(Lot BCBG4702V)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) CAS # 534-52-1 Purity 99%	(Lot LC12394V)	2,007.9	µg/mL	+/- +/- +/-	11.6741 21.9839 37.2883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	4-Bromophenyl phenyl ether CAS # 101-55-3 Purity 98%	(Lot STBB9729V)	1,009.7	µg/mL	+/- +/- +/-	5.8704 11.0548 18.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	Hexachlorobenzene CAS # 118-74-1 Purity 98%	(Lot LB98981V)	1,002.5	µg/mL	+/- +/- +/-	5.8289 10.9765 18.6180	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	Pentachlorophenol CAS # 87-86-5 Purity 99%	(Lot 150212JLM)	2,005.1	µg/mL	+/- +/- +/-	11.6578 21.9532 37.2363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	Phenanthrene CAS # 85-01-8 Purity 98%	(Lot MKBQ8219V)	1,006.1	µg/mL	+/- +/- +/-	5.8494 11.0151 18.6835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot OGCDK)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKBK5208V)	1,000.9	µg/mL	+/- +/- +/-	5.8193 10.9586 18.5875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	Carbazole CAS # 86-74-8 Purity 98%	(Lot S42950-417)	1,003.4	µg/mL	+/- +/- +/-	5.8340 10.9862 18.6343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	Di-n-butylphthalate CAS # 84-74-2 Purity 99%	(Lot MKBL8501V)	1,005.8	µg/mL	+/- +/- +/-	5.8478 11.0122 18.6785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	Fluoranthene CAS # 206-44-0 Purity 98%	(Lot MKBQ6360V)	996.1	µg/mL	+/- +/- +/-	5.7912 10.9057 18.4978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	Pyrene CAS # 129-00-0 Purity 98%	(Lot BCBJ0984V)	1,000.6	µg/mL	+/- +/- +/-	5.8175 10.9550 18.5816	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Benzyl butyl phthalate CAS # 85-68-7 Purity 99%	(Lot 03027HV)	1,000.7	µg/mL	+/- +/- +/-	5.8182 10.9564 18.5838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Benz(a)anthracene CAS # 56-55-3 Purity 99%	(Lot ER031412-01)	1,003.6	µg/mL	+/- +/- +/-	5.8350 10.9881 18.6376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	Chrysene CAS # 218-01-9 Purity 99%	(Lot PR121912-01)	1,000.1	µg/mL	+/- +/- +/-	5.8147 10.9498 18.5726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate CAS # 117-81-7 Purity 99%	(Lot MKBK2695V)	1,008.5	µg/mL	+/- +/- +/-	5.8635 11.0418 18.7286	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate CAS # 117-84-0 Purity 99%	(Lot 3589500)	1,007.8	µg/mL	+/- +/- +/-	5.8594 11.0341 18.7156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot ER03101401)	1,005.4	µg/mL	+/- +/- +/-	5.8455 11.0078 18.6711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012012k)	1,006.0	µg/mL	+/- +/- +/-	5.8490 11.0144 18.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot ER071309-02)	1,006.1	µg/mL	+/- +/- +/-	5.8496 11.0155 18.6841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot ER082107-02)	1,002.8	µg/mL	+/- +/- +/-	5.8304 10.9794 18.6228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	1,008.0	µg/mL	+/- +/- +/-	5.8606 11.0363 18.7193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot ER020708-08)	1,001.3	µg/mL	+/- +/- +/-	5.8216 10.9629 18.5949	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Methylene Chloride CAS # 75-09-2 Purity 99%								

Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.

N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

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

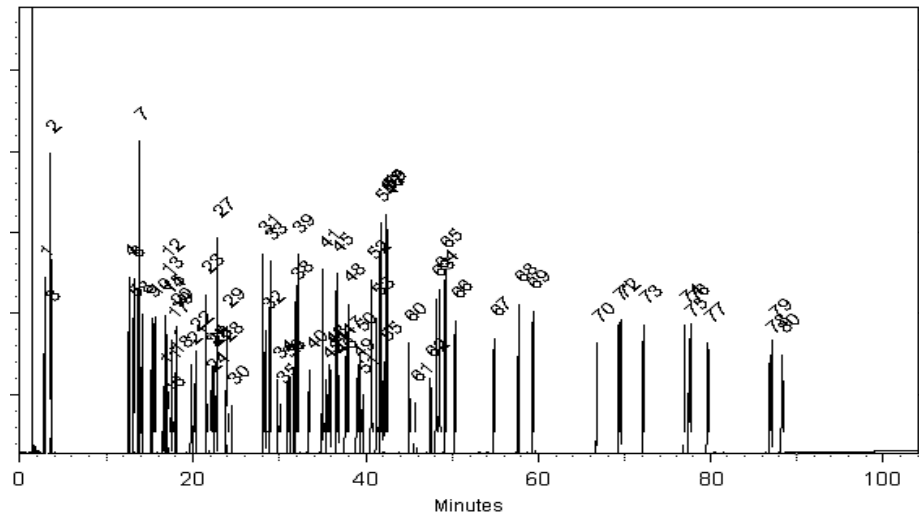
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



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

Rebecca Jauer

Date Mixed: 22-Jun-2015 **Balance:** 1128360905

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 26-Jun-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
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Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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



3223477
ID: MS-569730 HSL_00001
Exp: 07/31/16 Pripd: DCK
HSLA Amine Mix (2015) 200

Catalog No. : 569730 Lot No.: A0108709
Description : 8270 List 1 / Std #9
8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 10 mL Pkg Amt: > 5 mL
Expiration Date : July 31, 2016 Storage: 10°C or colder
Handling: Contains carcinogen/reproductive toxin.



3223479
ID: MS-569730 AFC_00001
Exp: 07/31/16 Pripd: DCK
HSLA Amine Mix (2015) 200

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Benzidine	2,006.6 µg/mL	+/- 11.6665 µg/mL Gravimetric
	CAS # 92-87-5 (Lot 141208JLM)		+/- 21.9697 µg/mL Unstressed
	Purity 99%		+/- 37.2641 µg/mL Stressed
2	3,3'-Dichlorobenzidine	2,001.0 µg/mL	+/- 11.6340 µg/mL Gravimetric
	CAS # 91-94-1 (Lot 141205JLM)		+/- 21.9083 µg/mL Unstressed
	Purity 99%		+/- 37.1601 µg/mL Stressed

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



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

Catalog No. : 569730 Lot No.: A0112567
Description : 8270 List 1 / Std #9
8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 10 mL Pkg Amt: > 5 mL
Expiration Date : January 31, 2017 Storage: 10°C or colder
Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Benzidine CAS # 92-87-5 (Lot 150701JLMB) Purity 99%	2,001.0 µg/mL	+/- 11.6337 µg/mL Gravimetric +/- 21.9078 µg/mL Unstressed +/- 37.1592 µg/mL Stressed
2	3,3'-Dichlorobenzidine CAS # 91-94-1 (Lot 150701JLMA) Purity 99%	2,001.5 µg/mL	+/- 11.6369 µg/mL Gravimetric +/- 21.9138 µg/mL Unstressed +/- 37.1694 µg/mL Stressed
Solvent:	Methylene Chloride CAS # 75-09-2 Purity 99%		

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Catalog No. : 569731

Lot No.: A0107943



3231000

Description : 8270 List 1 / Std #10

ID: MS-569731_00013

Exp: 07/31/16 Prep: DCK

HSLA Benzoic Acid (2015)

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL

Pkg Amt: > 5 mL

Expiration Date : June 30, 2016

Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Indene CAS # 95-13-6 Purity 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL Gravimetric +/- 22.5687 µg/mL Unstressed +/- 25.9700 µg/mL Stressed
2	Benzoic acid CAS # 65-85-0 Purity 99% (Lot MKBL6689V)	2,005.8 µg/mL	+/- 11.6619 µg/mL Gravimetric +/- 22.6183 µg/mL Unstressed +/- 26.0271 µg/mL Stressed

Solvent: Methylene Chloride

CAS # 75-09-2

Purity 99%



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Catalog No. : 569731 Lot No.: A0108988
Description : 8270 List 1 / Std #10
8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : August 31, 2016 Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Indene CAS # 95-13-6 Purity 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL Gravimetric +/- 22.5687 µg/mL Unstressed +/- 25.9700 µg/mL Stressed
2	Benzoic acid CAS # 65-85-0 Purity 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL Gravimetric +/- 22.5540 µg/mL Unstressed +/- 25.9531 µg/mL Stressed

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Catalog No. : 569731 Lot No.: A0108988
Description : 8270 List 1 / Std #10
8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : August 31, 2016 Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Indene CAS # 95-13-6 Purity 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL Gravimetric +/- 22.5687 µg/mL Unstressed +/- 25.9700 µg/mL Stressed
2	Benzoic acid CAS # 65-85-0 Purity 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL Gravimetric +/- 22.5540 µg/mL Unstressed +/- 25.9531 µg/mL Stressed

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569731 Lot No.: A0108988
Description : 8270 List 1 / Std #10
8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : August 31, 2016 Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Indene CAS # 95-13-6 Purity 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL Gravimetric +/- 22.5687 µg/mL Unstressed +/- 25.9700 µg/mL Stressed
2	Benzoic acid CAS # 65-85-0 Purity 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL Gravimetric +/- 22.5540 µg/mL Unstressed +/- 25.9531 µg/mL Stressed

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 Lot No.: A0108988
Description : 8270 List 1 / Std #10
8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : August 31, 2016 Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Indene CAS # 95-13-6 Purity 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL Gravimetric +/- 22.5687 µg/mL Unstressed +/- 25.9700 µg/mL Stressed
2	Benzoic acid CAS # 65-85-0 Purity 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL Gravimetric +/- 22.5540 µg/mL Unstressed +/- 25.9531 µg/mL Stressed

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569732 Lot No.: A0108989

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : August 31, 2016 Storage: 10°C or colder

Handling: This product is photosensitive.



3230998

ID: MS-569732 HSL_00001

Exp: 08/31/16 Prpd: DCK

8270 List 1/ Std 11 (2015)

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Benzaldehyde CAS # 100-52-7 Purity 99% (Lot SHBD3510V)	2,011.6 µg/mL	+/- 11.6956 µg/mL Gravimetric +/- 64.4832 µg/mL Unstressed +/- 74.9592 µg/mL Stressed
2	epsilon-Caprolactam CAS # 105-60-2 Purity 99% (Lot I16X016)	2,009.2 µg/mL	+/- 11.6817 µg/mL Gravimetric +/- 64.4062 µg/mL Unstressed +/- 74.8697 µg/mL Stressed
3	Atrazine CAS # 1912-24-9 Purity 98% (Lot TZ8ED)	2,001.6 µg/mL	+/- 11.6372 µg/mL Gravimetric +/- 64.1611 µg/mL Unstressed +/- 74.5847 µg/mL Stressed

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



CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569732 **Lot No.:** A0108989

Description : 8270 List 1 / Std #11
8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Benzaldehyde CAS # 100-52-7 Purity 99% (Lot SHBD3510V)	2,011.6 µg/mL	+/- 11.6956 µg/mL Gravimetric +/- 64.4832 µg/mL Unstressed +/- 74.9592 µg/mL Stressed
2	epsilon-Caprolactam CAS # 105-60-2 Purity 99% (Lot I16X016)	2,009.2 µg/mL	+/- 11.6817 µg/mL Gravimetric +/- 64.4062 µg/mL Unstressed +/- 74.8697 µg/mL Stressed
3	Atrazine CAS # 1912-24-9 Purity 98% (Lot TZ8ED)	2,001.6 µg/mL	+/- 11.6372 µg/mL Gravimetric +/- 64.1611 µg/mL Unstressed +/- 74.5847 µg/mL Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

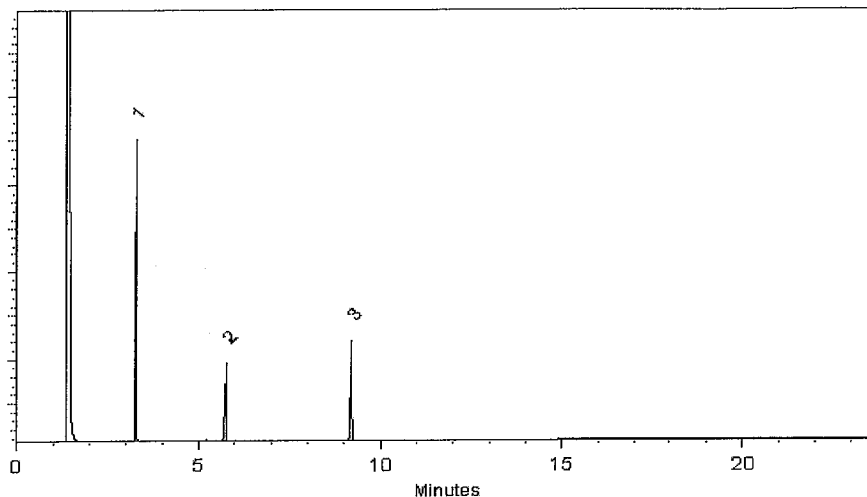
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Cheryl Graham

Cheryl Graham - Mix Technician

Date Mixed: 10-Feb-2015

Balance: 1128360905

Jennifer L. Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 12-Feb-2015

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569732.sec Lot No.: A0108042

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : June 30, 2016 Storage: 10°C or colder

Handling: This product is photosensitive.



3231454

ID: MS-569732SEC_00001

Exp: 06/30/16 Pp'd: DCK

RES 8270 List 1 / Std# 11

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Benzaldehyde CAS # 100-52-7.SEC (Lot E7DWH) Purity 99% <i>Remove</i>	2,002.0 µg/mL	+/- 11.6398 µg/mL Gravimetric +/- 64.1754 µg/mL Unstressed +/- 74.6014 µg/mL Stressed
2	epsilon-Caprolactam CAS # 105-60-2.SEC (Lot BLJTB) Purity 99%	2,001.2 µg/mL	+/- 11.6351 µg/mL Gravimetric +/- 64.1498 µg/mL Unstressed +/- 74.5716 µg/mL Stressed
3	Atrazine CAS # 1912-24-9.SEC (Lot 2887600) Purity 99%	2,000.2 µg/mL	+/- 11.6293 µg/mL Gravimetric +/- 64.1177 µg/mL Unstressed +/- 74.5344 µg/mL Stressed

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

Certification Summary

Client: Sundance Consulting, Inc
Project/Site: Fort Wingate, New Mexico

TestAmerica Job ID: 280-76475-2

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAP	4	E87667
TestAmerica Denver	Georgia	State Program	4	N/A
TestAmerica Denver	Illinois	NELAP	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAP	7	E-10166
TestAmerica Denver	Louisiana	NELAP	6	02096
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Minnesota	NELAP	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAP	1	205310
TestAmerica Denver	New Jersey	NELAP	2	CO004
TestAmerica Denver	New York	NELAP	2	11964
TestAmerica Denver	North Carolina (WW/SW)	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAP	10	4025
TestAmerica Denver	Pennsylvania	NELAP	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002001
TestAmerica Denver	Texas	NELAP	6	T104704183-15-11
TestAmerica Denver	USDA	Federal		P330-13-00202
TestAmerica Denver	Utah	NELAP	8	CO00026
TestAmerica Denver	Virginia	NELAP	3	460232
TestAmerica Denver	Washington	State Program	10	C583
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430
TestAmerica Denver	Wyoming (UST)	A2LA	8	2907.01

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method 8270D

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

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Matrix: Water Level: Low
 GC Column (1): Vf-5MS (30. ID: 0.25 (mm))

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
TMW49102015	280-76475-3	80	83	81	80	86	60
TMW31D102015	280-76475-4	80	82	78	78	84	63
DTW31D102015	280-76475-5	78	78	78	78	83	64
MW24102015	280-76475-7	70	72	68	71	81	52
TMW32102015	280-76475-8	83	86	84	83	86	76
BGMW01102015	280-76475-9	91	92	86	85	90	71
BGMW02102015	280-76475-10	85	89	83	82	87	62
TMW47102015	280-76475-12	85	85	81	80	87	76
	MB 280-303850/1-A	83	84	81	76	83	75
	LCS 280-303850/2-A	79	82	79	79	87	75
	LCSD 280-303850/3-A	86	88	84	83	91	77

	<u>QC LIMITS</u>
2FP = 2-Fluorophenol (Surr)	41-120
PHL = Phenol-d5 (Surr)	45-124
NBZ = Nitrobenzene-d5 (Surr)	42-120
FBP = 2-Fluorobiphenyl	48-120
TBP = 2,4,6-Tribromophenol (Surr)	42-131
TPH = Terphenyl-d14 (Surr)	20-130

Column to be used to flag recovery values

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Matrix: Water Level: Low Lab File ID: D13382.D
Lab ID: LCS 280-303850/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Caprolactam	80.0	68.0	85	46-143	

Column to be used to flag recovery and RPD values

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Matrix: Water Level: Low Lab File ID: D13383.D
Lab ID: LCSD 280-303850/3-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Caprolactam	80.0	71.9	90	6	30	46-143	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Lab File ID: D13381.D Lab Sample ID: MB 280-303850/1-A
Matrix: Water Date Extracted: 11/07/2015 14:08
Instrument ID: SMS_D Date Analyzed: 11/17/2015 19:52
Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TMW31D102015	280-76475-4	D13391.D	11/17/2015 00:24
DTW31D102015	280-76475-5	D13392.D	11/17/2015 00:51
	LCS 280-303850/2-A	D13382.D	11/17/2015 20:19
	LCSD 280-303850/3-A	D13383.D	11/17/2015 20:46
TMW49102015	280-76475-3	D13390.D	11/17/2015 23:57
MW24102015	280-76475-7	D13393.D	11/18/2015 01:19
TMW32102015	280-76475-8	D13394.D	11/18/2015 01:46
BGMW01102015	280-76475-9	D13395.D	11/18/2015 02:13
BGMW02102015	280-76475-10	D13396.D	11/18/2015 02:40
TMW47102015	280-76475-12	D13397.D	11/18/2015 03:08

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Lab File ID: D13293.D DFTPP Injection Date: 11/14/2015
Instrument ID: SMS_D DFTPP Injection Time: 08:15
Analysis Batch No.: 304451

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	44.0
68	Less than 2% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	54.0
70	Less than 2% of mass 69	0.3 (0.6)1
127	10-80% of Base Peak	52.2
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	6.7
275	10-60% of Base Peak	19.0
365	Greater than 1% of mass 198	2.2
441	present but less than 24% of mass 442	8.7 (15.1)2
442	Greater than 50% of mass 198	57.2
443	15-24% of mass 442	11.2 (19.6)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-304451/3	D13294.D	11/14/2015	08:27
	STD004 280-304451/4	D13295.D	11/14/2015	08:56
	STD010 280-304451/5	D13296.D	11/14/2015	09:23
	STD020 280-304451/6	D13297.D	11/14/2015	09:50
	STD050 280-304451/7	D13298.D	11/14/2015	10:17
	STD120 280-304451/8	D13299.D	11/14/2015	10:44
	STD160 280-304451/9	D13300.D	11/14/2015	11:11
	STD200 280-304451/10	D13301.D	11/14/2015	11:38
	ICV 280-304451/11	D13302.D	11/14/2015	12:06
	ICV 280-304451/12	D13303.D	11/14/2015	12:33
	ICV 280-304451/13	D13304.D	11/14/2015	13:00

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Lab File ID: D13375.D DFTPP Injection Date: 11/17/2015
Instrument ID: SMS_D DFTPP Injection Time: 17:37
Analysis Batch No.: 304623

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	43.1
68	Less than 2% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.8
70	Less than 2% of mass 69	0.3 (0.5)1
127	10-80% of Base Peak	51.8
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	7.1
275	10-60% of Base Peak	18.0
365	Greater than 1% of mass 198	2.3
441	present but less than 24% of mass 442	7.9 (14.8)2
442	Greater than 50% of mass 198	53.6
443	15-24% of mass 442	11.1 (20.7)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
TMW31D102015	280-76475-4	D13391.D	11/17/2015	00:24
DTW31D102015	280-76475-5	D13392.D	11/17/2015	00:51
	CCV 280-304623/3	D13376.D	11/17/2015	17:49
	MB 280-303850/1-A	D13381.D	11/17/2015	19:52
	LCS 280-303850/2-A	D13382.D	11/17/2015	20:19
	LCSD 280-303850/3-A	D13383.D	11/17/2015	20:46
TMW49102015	280-76475-3	D13390.D	11/17/2015	23:57
MW24102015	280-76475-7	D13393.D	11/18/2015	01:19
TMW32102015	280-76475-8	D13394.D	11/18/2015	01:46
BGMW01102015	280-76475-9	D13395.D	11/18/2015	02:13
BGMW02102015	280-76475-10	D13396.D	11/18/2015	02:40
TMW47102015	280-76475-12	D13397.D	11/18/2015	03:08

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

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Sample No.: ICIS 280-304451/3 Date Analyzed: 11/14/2015 08:27
 Instrument ID: SMS_D GC Column: Vf-5MS (30.25) ID: 0.25 (mm)
 Lab File ID (Standard): D13294.D Heated Purge: (Y/N) N
 Calibration ID: 24440

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		207090	4.52	792353	5.76	500679	7.51
UPPER LIMIT		414180	5.02	1584706	6.26	1001358	8.01
LOWER LIMIT		103545	4.02	396177	5.26	250340	7.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-304451/11		207619	4.52	794597	5.76	504212	7.51
ICV 280-304451/12		195547	4.52	732730	5.76	470191	7.50
ICV 280-304451/13		268776	4.52	1010825	5.76	654332	7.50
280-76475-4	TMW31D102015	191335	4.54	732368	5.77	472270	7.52
280-76475-5	DTW31D102015	186303	4.53	710104	5.77	464000	7.52
CCV 280-304623/3		179014	4.53	682112	5.77	442617	7.52
MB 280-303850/1-A		176098	4.53	664589	5.77	433863	7.52
LCS 280-303850/2-A		181334	4.54	706414	5.77	456133	7.52
LCSD 280-303850/3-A		183750	4.53	713921	5.77	469761	7.52
280-76475-3	TMW49102015	198488	4.54	760767	5.77	505339	7.52
280-76475-7	MW24102015	188894	4.53	724633	5.77	473152	7.52
280-76475-8	TMW32102015	190631	4.53	734659	5.77	480649	7.52
280-76475-9	BGMW01102015	187611	4.53	734224	5.77	479698	7.53
280-76475-10	BGMW02102015	191655	4.54	749245	5.77	492696	7.52
280-76475-12	TMW47102015	183685	4.53	717469	5.77	472793	7.53

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Sample No.: ICIS 280-304451/3 Date Analyzed: 11/14/2015 08:27
 Instrument ID: SMS_D GC Column: Vf-5MS (30.25) ID: 0.25 (mm)
 Lab File ID (Standard): D13294.D Heated Purge: (Y/N) N
 Calibration ID: 24440

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		872188	8.99	835505	12.95	768083	16.80
UPPER LIMIT		1744376	9.49	1671010	13.45	1536166	17.30
LOWER LIMIT		436094	8.49	417753	12.45	384042	16.30
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-304451/11		892855	8.99	848547	12.95	785790	16.80
ICV 280-304451/12		839156	8.99	811474	12.94	788929	16.80
ICV 280-304451/13		1153524	8.99	1290029	12.94	1183125	16.80
280-76475-4	TMW31D102015	863707	9.01	867679	12.99	799615	16.87
280-76475-5	DTW31D102015	842856	9.01	848485	12.99	786230	16.87
CCV 280-304623/3		792285	9.01	797153	13.00	719128	16.88
MB 280-303850/1-A		793171	9.01	808130	12.99	774477	16.87
LCS 280-303850/2-A		836684	9.01	845932	13.00	785257	16.87
LCSD 280-303850/3-A		829778	9.01	843926	13.00	778840	16.87
280-76475-3	TMW49102015	912119	9.01	893505	12.99	814829	16.87
280-76475-7	MW24102015	857974	9.01	862374	12.99	813893	16.87
280-76475-8	TMW32102015	877822	9.01	884206	12.99	830968	16.87
280-76475-9	BGMW01102015	883048	9.01	883784	12.99	831135	16.87
280-76475-10	BGMW02102015	892797	9.01	883013	12.99	834557	16.87
280-76475-12	TMW47102015	864895	9.02	879350	12.99	830193	16.87

PHN = Phenanthrene-d10
 CRY = Chrysene-d12
 PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>TMW49102015</u>	Lab Sample ID: <u>280-76475-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13390.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 09:10</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>920 (mL)</u>	Date Analyzed: <u>11/17/2015 23:57</u>
Con. Extract Vol.: <u>1 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5 (uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.7	U	5.4	2.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	86		42-131
321-60-8	2-Fluorobiphenyl	80		48-120
367-12-4	2-Fluorophenol (Surr)	80		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	81		42-120
4165-62-2	Phenol-d5 (Surr)	83		45-124
1718-51-0	Terphenyl-d14 (Surr)	60		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13390.D
 Lims ID: 280-76475-A-3-C Lab Sample ID: 280-76475-3
 Client ID: TMW49102015
 Sample Type: Client
 Inject. Date: 17-Nov-2015 23:57:30 ALS Bottle#: 16 Worklist Smp#: 27
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-A-3-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:43:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.536	4.532	0.004	96	198488	40.0	
* 2 Naphthalene-d8	136	5.770	5.772	-0.002	99	760767	40.0	
* 3 Acenaphthene-d10	164	7.522	7.524	-0.002	90	505339	40.0	
* 4 Phenanthrene-d10	188	9.013	9.014	-0.001	97	912119	40.0	
* 5 Chrysene-d12	240	12.987	13.000	-0.013	98	893505	40.0	
* 6 Perylene-d12	264	16.871	16.878	-0.007	97	814829	40.0	
\$ 7 2-Fluorophenol	112	3.339	3.336	0.003	92	601865	80.0	
\$ 8 Phenol-d5	99	4.183	4.174	0.009	98	836585	82.8	
\$ 9 Nitrobenzene-d5	82	5.054	5.056	-0.002	87	742837	81.2	
\$ 10 2-Fluorobiphenyl	172	6.838	6.840	-0.002	99	1306399	79.7	
\$ 11 2,4,6-Tribromophenol	330	8.313	8.320	-0.007	92	165498	85.9	
\$ 12 Terphenyl-d14	244	10.925	10.927	-0.002	99	1126274	59.7	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13390.D

Injection Date: 17-Nov-2015 23:57:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-A-3-C

Lab Sample ID: 280-76475-3

Worklist Smp#: 27

Client ID: TMW49102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

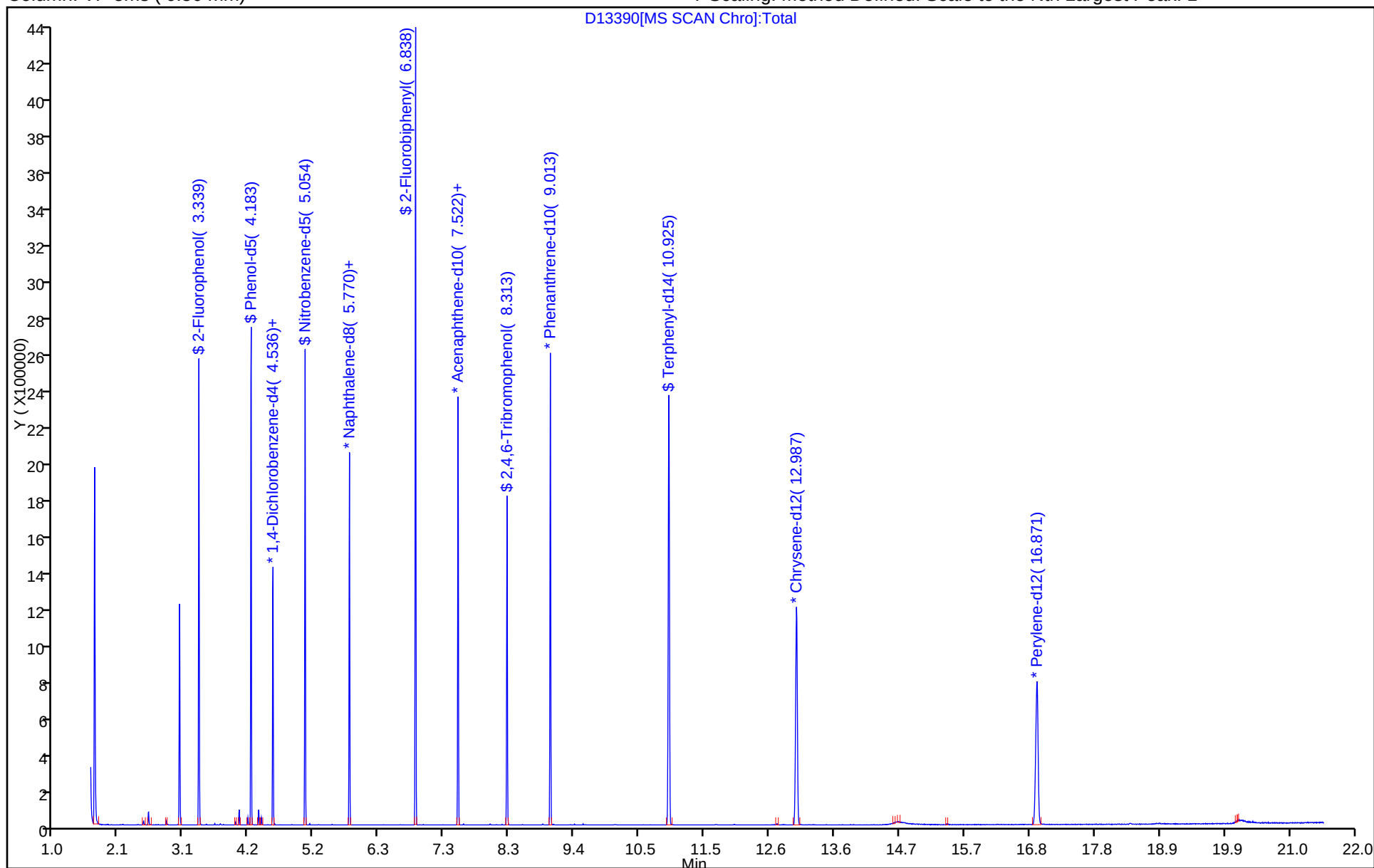
ALS Bottle#: 16

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>TMW31D102015</u>	Lab Sample ID: <u>280-76475-4</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13391.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 11:25</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>964.4(mL)</u>	Date Analyzed: <u>11/17/2015 00:24</u>
Con. Extract Vol.: <u>1(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5(uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.6	U	5.2	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		42-131
321-60-8	2-Fluorobiphenyl	78		48-120
367-12-4	2-Fluorophenol (Surr)	80		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	78		42-120
4165-62-2	Phenol-d5 (Surr)	82		45-124
1718-51-0	Terphenyl-d14 (Surr)	63		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13391.D
 Lims ID: 280-76475-A-4-C Lab Sample ID: 280-76475-4
 Client ID: TMW31D102015
 Sample Type: Client
 Inject. Date: 17-Nov-2015 00:24:30 ALS Bottle#: 17 Worklist Smp#: 28
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-A-4-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:43:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.536	4.532	0.004	97	191335	40.0	
* 2 Naphthalene-d8	136	5.770	5.772	-0.002	100	732368	40.0	
* 3 Acenaphthene-d10	164	7.523	7.524	-0.001	90	472270	40.0	
* 4 Phenanthrene-d10	188	9.013	9.014	-0.001	97	863707	40.0	
* 5 Chrysene-d12	240	12.988	13.000	-0.012	98	867679	40.0	
* 6 Perylene-d12	264	16.871	16.878	-0.007	98	799615	40.0	
\$ 7 2-Fluorophenol	112	3.340	3.336	0.004	92	580463	80.1	
\$ 8 Phenol-d5	99	4.178	4.174	0.004	98	800274	82.2	
\$ 9 Nitrobenzene-d5	82	5.055	5.056	-0.002	87	688566	78.2	
\$ 10 2-Fluorobiphenyl	172	6.839	6.840	-0.001	99	1194772	78.0	
\$ 11 2,4,6-Tribromophenol	330	8.313	8.320	-0.007	91	150753	83.8	
\$ 12 Terphenyl-d14	244	10.926	10.927	-0.001	99	1160999	63.3	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13391.D

Injection Date: 17-Nov-2015 00:24:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-A-4-C

Lab Sample ID: 280-76475-4

Worklist Smp#: 28

Client ID: TMW31D102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

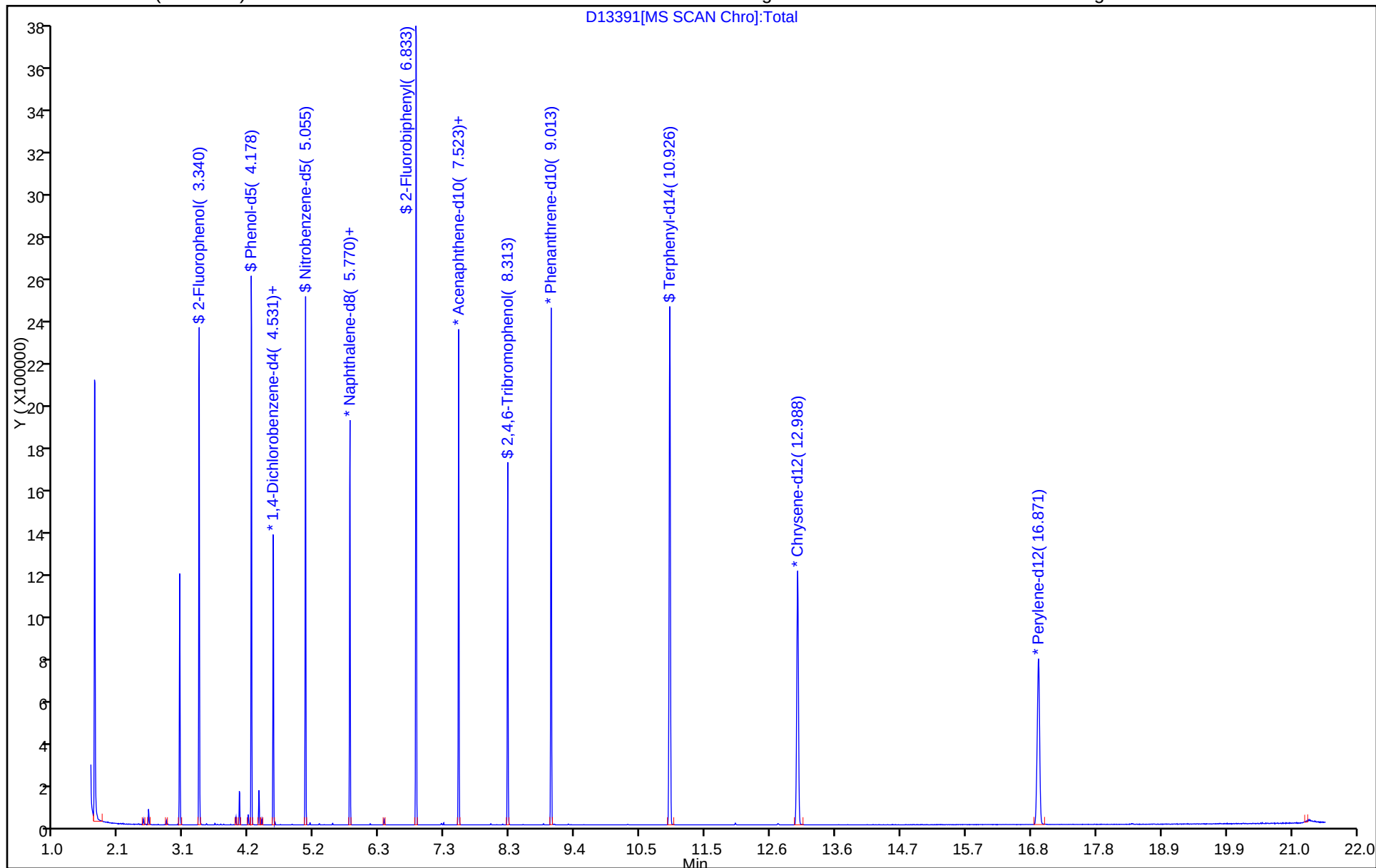
ALS Bottle#: 17

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>DTW31D102015</u>	Lab Sample ID: <u>280-76475-5</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13392.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 11:25</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>939.7(mL)</u>	Date Analyzed: <u>11/17/2015 00:51</u>
Con. Extract Vol.: <u>1(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5(uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.7	U	5.3	2.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	83		42-131
321-60-8	2-Fluorobiphenyl	78		48-120
367-12-4	2-Fluorophenol (Surr)	78		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	78		42-120
4165-62-2	Phenol-d5 (Surr)	78		45-124
1718-51-0	Terphenyl-d14 (Surr)	64		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13392.D
 Lims ID: 280-76475-D-5-C Lab Sample ID: 280-76475-5
 Client ID: DTW31D102015
 Sample Type: Client
 Inject. Date: 17-Nov-2015 00:51:30 ALS Bottle#: 18 Worklist Smp#: 29
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-D-5-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:44:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	97	186303	40.0	
* 2 Naphthalene-d8	136	5.771	5.772	-0.001	100	710104	40.0	
* 3 Acenaphthene-d10	164	7.523	7.524	-0.001	90	464000	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	842856	40.0	
* 5 Chrysene-d12	240	12.988	13.000	-0.012	98	848485	40.0	
* 6 Perylene-d12	264	16.867	16.878	-0.011	97	786230	40.0	
\$ 7 2-Fluorophenol	112	3.340	3.336	0.004	92	548580	77.7	
\$ 8 Phenol-d5	99	4.179	4.174	0.005	98	743823	78.4	
\$ 9 Nitrobenzene-d5	82	5.055	5.056	-0.001	86	668586	78.3	
\$ 10 2-Fluorobiphenyl	172	6.839	6.840	-0.001	99	1173078	77.9	
\$ 11 2,4,6-Tribromophenol	330	8.314	8.320	-0.006	91	146010	82.6	
\$ 12 Terphenyl-d14	244	10.926	10.927	-0.001	99	1152625	64.3	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13392.D

Injection Date: 17-Nov-2015 00:51:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-D-5-C

Lab Sample ID: 280-76475-5

Worklist Smp#: 29

Client ID: DTW31D102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

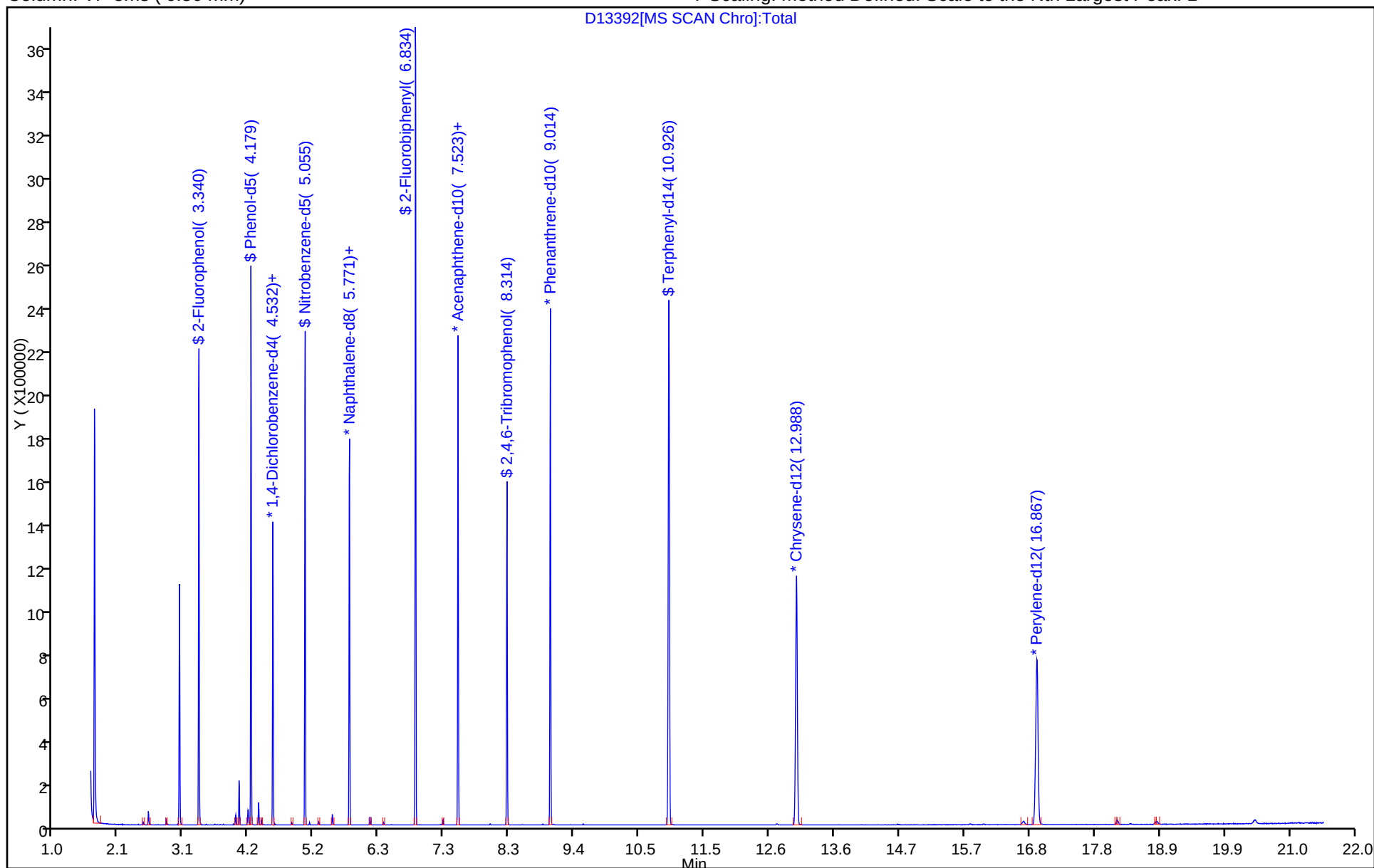
ALS Bottle#: 18

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>MW24102015</u>	Lab Sample ID: <u>280-76475-7</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13393.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 11:40</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>1013.3 (mL)</u>	Date Analyzed: <u>11/18/2015 01:19</u>
Con. Extract Vol.: <u>1 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5 (uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.5	U	4.9	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	81		42-131
321-60-8	2-Fluorobiphenyl	71		48-120
367-12-4	2-Fluorophenol (Surr)	70		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	68		42-120
4165-62-2	Phenol-d5 (Surr)	72		45-124
1718-51-0	Terphenyl-d14 (Surr)	52		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13393.D
 Lims ID: 280-76475-C-7-C Lab Sample ID: 280-76475-7
 Client ID: MW24102015
 Sample Type: Client
 Inject. Date: 18-Nov-2015 01:19:30 ALS Bottle#: 19 Worklist Smp#: 30
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-C-7-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:44:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	96	188894	40.0	
* 2 Naphthalene-d8	136	5.766	5.772	-0.006	100	724633	40.0	
* 3 Acenaphthene-d10	164	7.524	7.524	0.000	90	473152	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	857974	40.0	
* 5 Chrysene-d12	240	12.989	13.000	-0.011	98	862374	40.0	
* 6 Perylene-d12	264	16.867	16.878	-0.011	97	813893	40.0	
\$ 7 2-Fluorophenol	112	3.336	3.336	0.000	91	497533	69.5	
\$ 8 Phenol-d5	99	4.180	4.174	0.006	98	696334	72.4	
\$ 9 Nitrobenzene-d5	82	5.050	5.056	-0.006	86	596481	68.5	
\$ 10 2-Fluorobiphenyl	172	6.835	6.840	-0.005	99	1095523	71.4	
\$ 11 2,4,6-Tribromophenol	330	8.314	8.320	-0.006	92	145963	80.9	
\$ 12 Terphenyl-d14	244	10.927	10.927	0.000	99	938376	51.5	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13393.D

Injection Date: 18-Nov-2015 01:19:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-C-7-C

Lab Sample ID: 280-76475-7

Worklist Smp#: 30

Client ID: MW24102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

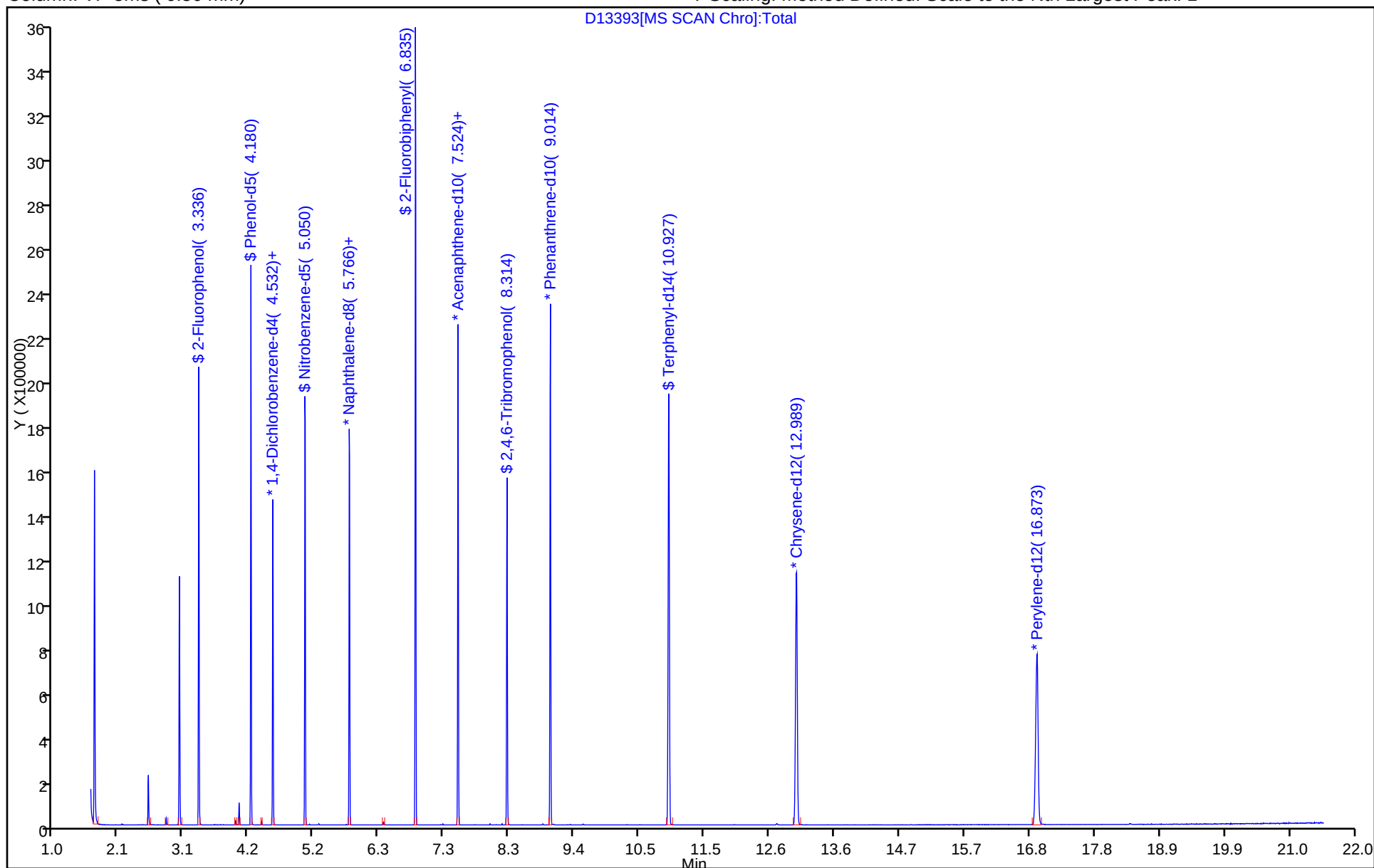
ALS Bottle#: 19

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Client Sample ID: TMW32102015 Lab Sample ID: 280-76475-8
 Matrix: Water Lab File ID: D13394.D
 Analysis Method: 8270D Date Collected: 11/05/2015 15:00
 Extract. Method: 3520C Date Extracted: 11/07/2015 14:08
 Sample wt/vol: 845.8(mL) Date Analyzed: 11/18/2015 01:46
 Con. Extract Vol.: 1(mL) Dilution Factor: 1
 Injection Volume: 0.5(uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 304623 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	3.0	U	5.9	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	86		42-131
321-60-8	2-Fluorobiphenyl	83		48-120
367-12-4	2-Fluorophenol (Surr)	83		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	84		42-120
4165-62-2	Phenol-d5 (Surr)	86		45-124
1718-51-0	Terphenyl-d14 (Surr)	76		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13394.D
 Lims ID: 280-76475-A-8-C Lab Sample ID: 280-76475-8
 Client ID: TMW32102015
 Sample Type: Client
 Inject. Date: 18-Nov-2015 01:46:30 ALS Bottle#: 20 Worklist Smp#: 31
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-A-8-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:44:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	96	190631	40.0	
* 2 Naphthalene-d8	136	5.771	5.772	-0.001	100	734659	40.0	
* 3 Acenaphthene-d10	164	7.523	7.524	-0.001	90	480649	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	877822	40.0	
* 5 Chrysene-d12	240	12.988	13.000	-0.012	98	884206	40.0	
* 6 Perylene-d12	264	16.867	16.878	-0.011	97	830968	40.0	
\$ 7 2-Fluorophenol	112	3.340	3.336	0.004	92	602925	83.5	
\$ 8 Phenol-d5	99	4.179	4.174	0.005	98	839245	86.5	
\$ 9 Nitrobenzene-d5	82	5.055	5.056	-0.001	87	740355	83.8	
\$ 10 2-Fluorobiphenyl	172	6.840	6.840	0.000	99	1287656	82.6	
\$ 11 2,4,6-Tribromophenol	330	8.314	8.320	-0.006	91	156658	85.5	
\$ 12 Terphenyl-d14	244	10.926	10.927	-0.001	99	1426512	76.4	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13394.D

Injection Date: 18-Nov-2015 01:46:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-A-8-C

Lab Sample ID: 280-76475-8

Worklist Smp#: 31

Client ID: TMW32102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

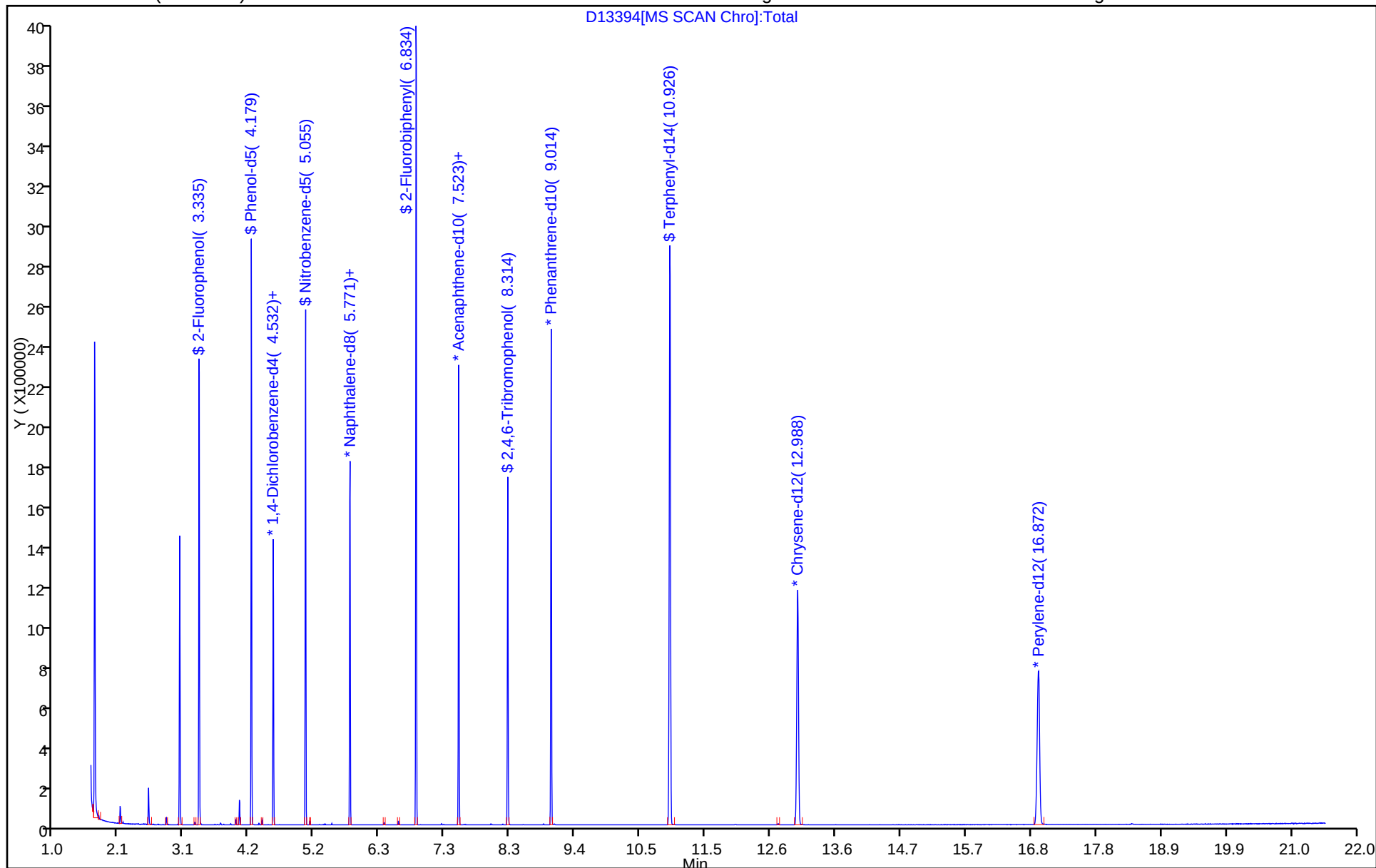
ALS Bottle#: 20

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>BGMW01102015</u>	Lab Sample ID: <u>280-76475-9</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13395.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 09:00</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>962.4(mL)</u>	Date Analyzed: <u>11/18/2015 02:13</u>
Con. Extract Vol.: <u>1(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5(uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.6	U	5.2	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	90		42-131
321-60-8	2-Fluorobiphenyl	85		48-120
367-12-4	2-Fluorophenol (Surr)	91		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	86		42-120
4165-62-2	Phenol-d5 (Surr)	92		45-124
1718-51-0	Terphenyl-d14 (Surr)	71		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13395.D
 Lims ID: 280-76475-A-9-C Lab Sample ID: 280-76475-9
 Client ID: BGMW01102015
 Sample Type: Client
 Inject. Date: 18-Nov-2015 02:13:30 ALS Bottle#: 21 Worklist Smp#: 32
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-A-9-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:44:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.534	4.532	0.002	97	187611	40.0	
* 2 Naphthalene-d8	136	5.768	5.772	-0.004	100	734224	40.0	
* 3 Acenaphthene-d10	164	7.525	7.524	0.001	91	479698	40.0	
* 4 Phenanthrene-d10	188	9.011	9.014	-0.003	97	883048	40.0	
* 5 Chrysene-d12	240	12.990	13.000	-0.010	98	883784	40.0	
* 6 Perylene-d12	264	16.869	16.878	-0.009	97	831135	40.0	
\$ 7 2-Fluorophenol	112	3.337	3.336	0.001	92	645339	90.8	
\$ 8 Phenol-d5	99	4.181	4.174	0.007	98	881655	92.3	
\$ 9 Nitrobenzene-d5	82	5.052	5.056	-0.004	86	762920	86.4	
\$ 10 2-Fluorobiphenyl	172	6.836	6.840	-0.004	99	1327721	85.3	
\$ 11 2,4,6-Tribromophenol	330	8.316	8.320	-0.004	93	163949	89.7	
\$ 12 Terphenyl-d14	244	10.928	10.927	0.001	99	1328976	71.2	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13395.D

Injection Date: 18-Nov-2015 02:13:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-A-9-C

Lab Sample ID: 280-76475-9

Worklist Smp#: 32

Client ID: BGMW01102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

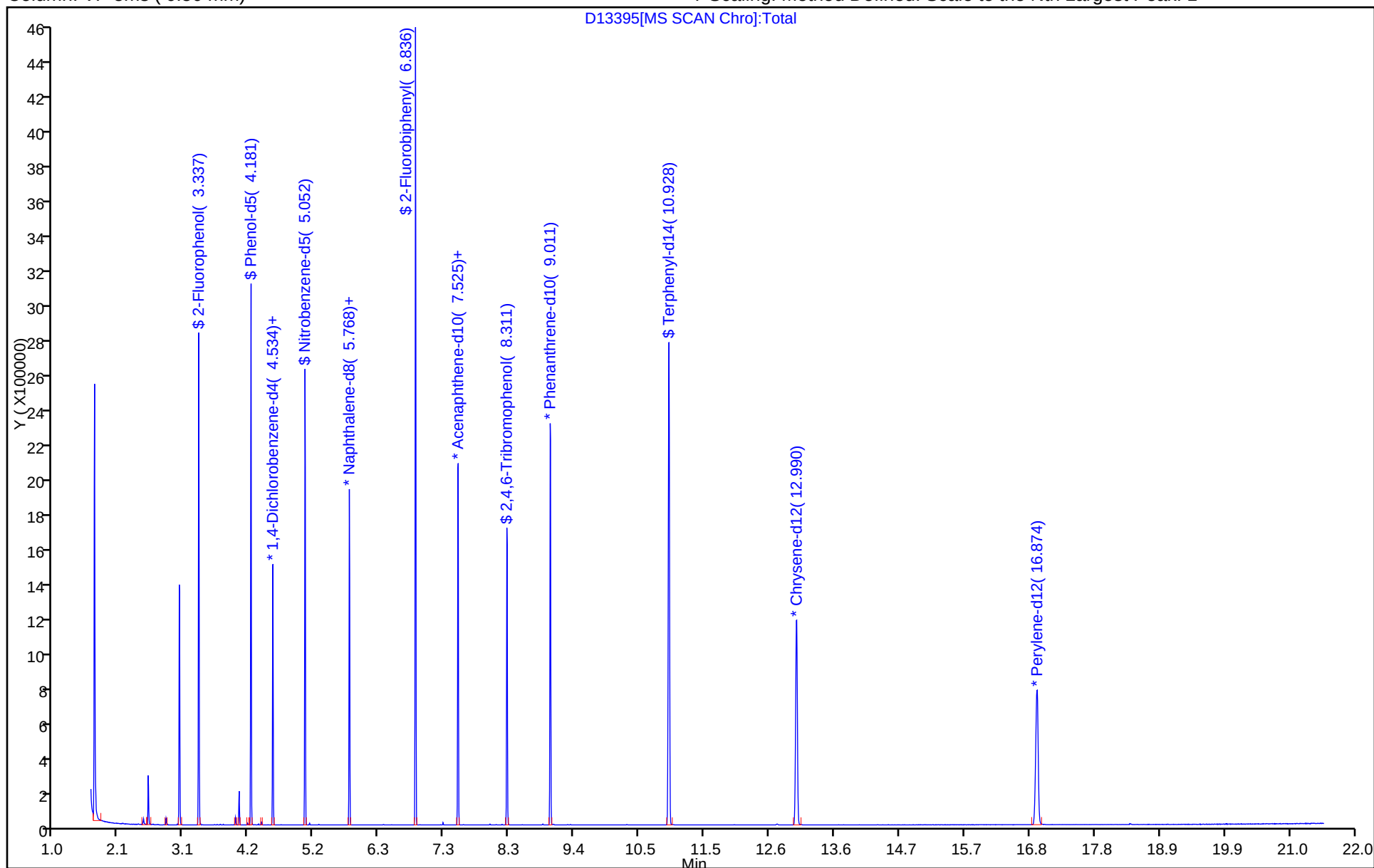
ALS Bottle#: 21

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-76475-2</u>
SDG No.: _____	
Client Sample ID: <u>BGMW02102015</u>	Lab Sample ID: <u>280-76475-10</u>
Matrix: <u>Water</u>	Lab File ID: <u>D13396.D</u>
Analysis Method: <u>8270D</u>	Date Collected: <u>11/05/2015 10:50</u>
Extract. Method: <u>3520C</u>	Date Extracted: <u>11/07/2015 14:08</u>
Sample wt/vol: <u>1025.1 (mL)</u>	Date Analyzed: <u>11/18/2015 02:40</u>
Con. Extract Vol.: <u>1 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>0.5 (uL)</u>	Level: (low/med) <u>Low</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>304623</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.4	U	4.9	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	87		42-131
321-60-8	2-Fluorobiphenyl	82		48-120
367-12-4	2-Fluorophenol (Surr)	85		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		42-120
4165-62-2	Phenol-d5 (Surr)	89		45-124
1718-51-0	Terphenyl-d14 (Surr)	62		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13396.D
 Lims ID: 280-76475-B-10-C Lab Sample ID: 280-76475-10
 Client ID: BGMW02102015
 Sample Type: Client
 Inject. Date: 18-Nov-2015 02:40:30 ALS Bottle#: 22 Worklist Smp#: 33
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-B-10-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:44:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.535	4.532	0.003	96	191655	40.0	
* 2 Naphthalene-d8	136	5.769	5.772	-0.003	99	749245	40.0	
* 3 Acenaphthene-d10	164	7.521	7.524	-0.003	90	492696	40.0	
* 4 Phenanthrene-d10	188	9.011	9.014	-0.003	97	892797	40.0	
* 5 Chrysene-d12	240	12.986	13.000	-0.014	98	883013	40.0	
* 6 Perylene-d12	264	16.870	16.878	-0.008	97	834557	40.0	
\$ 7 2-Fluorophenol	112	3.338	3.336	0.002	92	620569	85.5	
\$ 8 Phenol-d5	99	4.182	4.174	0.008	97	868735	89.0	
\$ 9 Nitrobenzene-d5	82	5.053	5.056	-0.003	86	748978	83.1	
\$ 10 2-Fluorobiphenyl	172	6.837	6.840	-0.003	99	1308923	81.9	
\$ 11 2,4,6-Tribromophenol	330	8.317	8.320	-0.003	92	163629	87.1	
\$ 12 Terphenyl-d14	244	10.924	10.927	-0.003	99	1163379	62.4	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13396.D

Injection Date: 18-Nov-2015 02:40:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-B-10-C

Lab Sample ID: 280-76475-10

Worklist Smp#: 33

Client ID: BGMW02102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

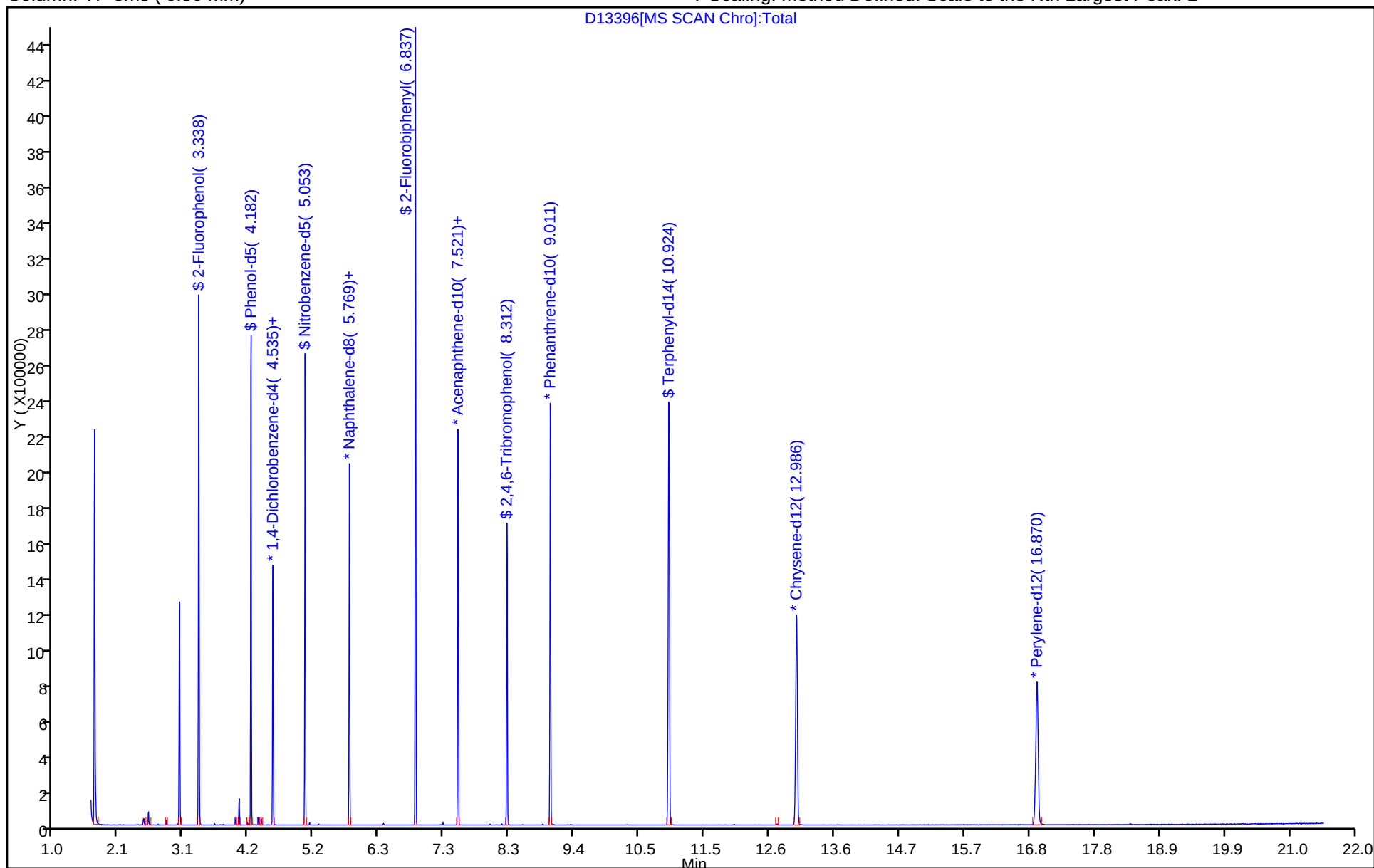
ALS Bottle#: 22

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Client Sample ID: TMW47102015 Lab Sample ID: 280-76475-12
 Matrix: Water Lab File ID: D13397.D
 Analysis Method: 8270D Date Collected: 11/05/2015 13:40
 Extract. Method: 3520C Date Extracted: 11/07/2015 14:08
 Sample wt/vol: 901.9(mL) Date Analyzed: 11/18/2015 03:08
 Con. Extract Vol.: 1(mL) Dilution Factor: 1
 Injection Volume: 0.5(uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 304623 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.8	U	5.5	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	87		42-131
321-60-8	2-Fluorobiphenyl	80		48-120
367-12-4	2-Fluorophenol (Surr)	85		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	81		42-120
4165-62-2	Phenol-d5 (Surr)	85		45-124
1718-51-0	Terphenyl-d14 (Surr)	76		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13397.D
 Lims ID: 280-76475-A-12-C Lab Sample ID: 280-76475-12
 Client ID: TMW47102015
 Sample Type: Client
 Inject. Date: 18-Nov-2015 03:08:30 ALS Bottle#: 23 Worklist Smp#: 34
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: 280-76475-A-12-C
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:45:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.533	4.532	0.001	97	183685	40.0	
* 2 Naphthalene-d8	136	5.767	5.772	-0.005	100	717469	40.0	
* 3 Acenaphthene-d10	164	7.525	7.524	0.001	90	472793	40.0	
* 4 Phenanthrene-d10	188	9.015	9.014	0.001	97	864895	40.0	
* 5 Chrysene-d12	240	12.990	13.000	-0.010	98	879350	40.0	
* 6 Perylene-d12	264	16.873	16.878	-0.005	97	830193	40.0	
\$ 7 2-Fluorophenol	112	3.336	3.336	0.000	92	592756	85.2	
\$ 8 Phenol-d5	99	4.181	4.174	0.006	98	797503	85.3	
\$ 9 Nitrobenzene-d5	82	5.051	5.056	-0.005	86	697955	80.9	
\$ 10 2-Fluorobiphenyl	172	6.836	6.840	-0.004	99	1230121	80.2	
\$ 11 2,4,6-Tribromophenol	330	8.315	8.320	-0.005	91	157152	87.2	
\$ 12 Terphenyl-d14	244	10.928	10.927	0.001	99	1413768	76.1	
66 Caprolactam	55		6.172				ND	

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13397.D

Injection Date: 18-Nov-2015 03:08:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: 280-76475-A-12-C

Lab Sample ID: 280-76475-12

Worklist Smp#: 34

Client ID: TMW47102015

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

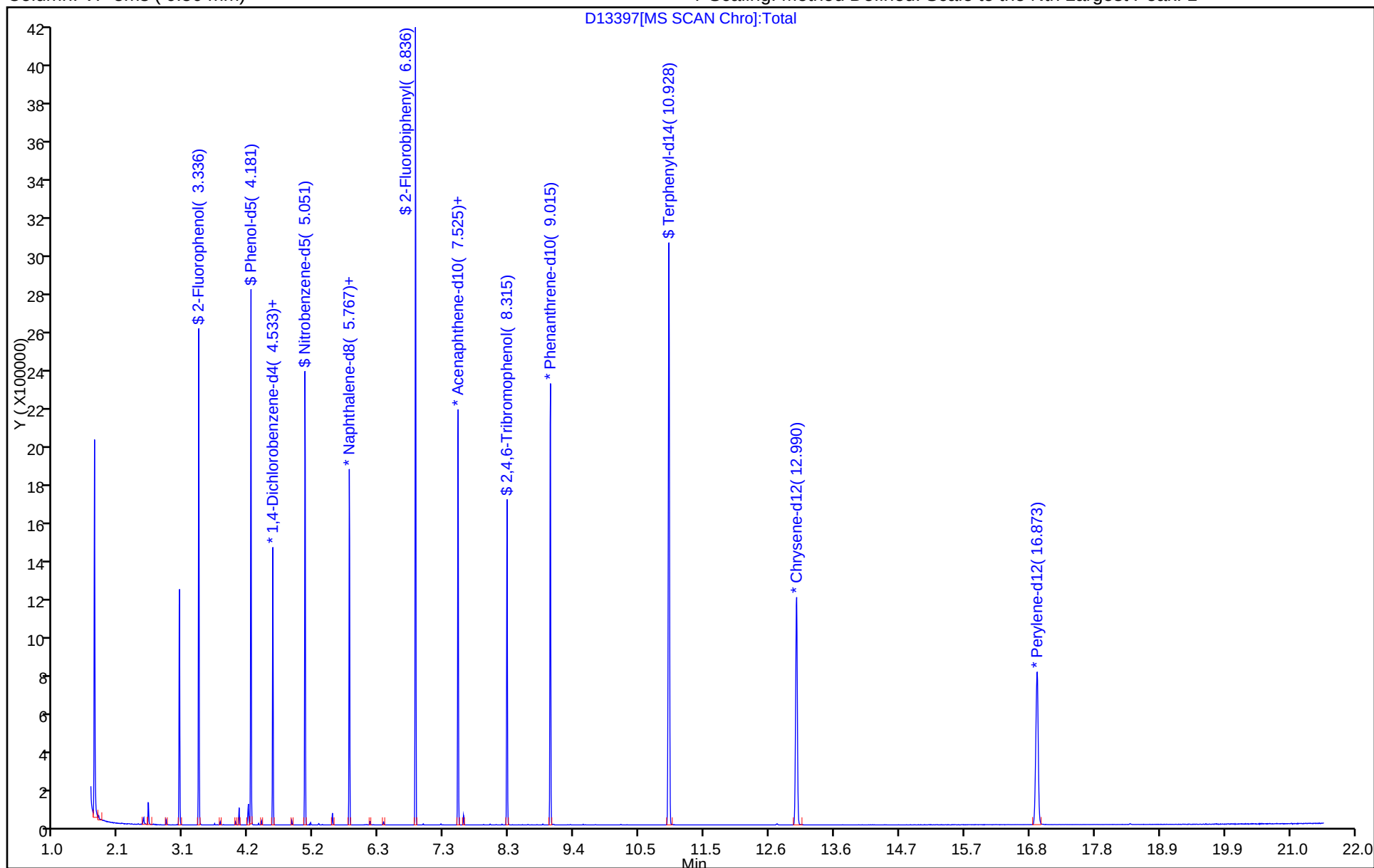
ALS Bottle#: 23

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-304451/4	D13295.D
Level 2	STD010 280-304451/5	D13296.D
Level 3	STD020 280-304451/6	D13297.D
Level 4	STD050 280-304451/7	D13298.D
Level 5	ICIS 280-304451/3	D13294.D
Level 6	STD120 280-304451/8	D13299.D
Level 7	STD160 280-304451/9	D13300.D
Level 8	STD200 280-304451/10	D13301.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
1,4-Dioxane	0.8428 0.6963	0.7344 0.6765	0.7362 0.6662	0.7227	0.7277	Ave		0.7253				7.5		20.0			
N-Nitrosodimethylamine	1.1403 1.1214	1.1321 1.1101	1.1534 1.0954	1.1494	1.1792	Ave		1.1352				2.3		20.0			
Pyridine	2.0357 1.9657	1.9880 1.9314	1.9805 1.8926	2.0106	2.0435	Ave		1.9810				2.6		20.0			
Phenol	2.2487 2.0612	2.1846 2.0054	2.1666 1.9438	2.1520	2.1611	Ave		2.1154			0.8000	4.8		20.0			
Aniline	2.6878 2.6556	2.8026 2.5218	2.7622 2.5536	2.7662	2.7755	Ave		2.6907				4.0		20.0			
Bis(2-chloroethyl)ether	1.7486 1.4577	1.6604 1.3567	1.6423 1.2905	1.5964	1.5710	Ave		1.5405			0.7000	10.3		20.0			
2-Chlorophenol	1.5332 1.4114	1.4838 1.3480	1.5021 1.3126	1.5098	1.5037	Ave		1.4506			0.8000	5.7		20.0			
1,3-Dichlorobenzene	1.6367 1.4587	1.5881 1.3790	1.5966 1.3336	1.5601	1.5599	Ave		1.5141				7.3		20.0			
1,4-Dichlorobenzene	1.7094 1.4595	1.6642 1.3874	1.6262 1.3214	1.5674	1.5779	Ave		1.5392				8.9		20.0			
Benzyl alcohol	1.1180 1.0962	1.1086 1.0640	1.1292 1.0433	1.1387	1.1316	Ave		1.1037				3.1		20.0			
1,2-Dichlorobenzene	1.6597 1.4211	1.5833 1.3540	1.5399 1.2958	1.5434	1.5114	Ave		1.4886				8.2		20.0			
2-Methylphenol	1.6354 1.5108	1.5915 1.4369	1.5819 1.4083	1.5868	1.5768	Ave		1.5410			0.7000	5.3		20.0			
bis (2-chloroisopropyl) ether	2.0271 1.6810	1.9237 1.5554	1.8877 1.4715	1.8564	1.8178	Ave		1.7776			0.0100	10.8		20.0			
N-Nitrosodi-n-propylamine	1.2559 1.0616	1.2524 0.9751	1.2167 0.9386	1.1914	1.1460	Ave		1.1297			0.5000	11.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451
SDG No.: _____
Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Acetophenone	2.3988 1.8327	2.2758 1.6845	2.2482 1.5890	2.1134	2.0334	Ave		2.0220			0.0100	14.5		20.0			
3 & 4 Methylphenol	1.7197 1.3601	1.6487 1.2371	1.6423 1.1713	1.5612	1.5162	Ave		1.4821				13.7		20.0			
3-Methylphenol	1.7197 1.3601	1.6487 1.2371	1.6423 1.1713	1.5612	1.5162	Ave		1.4821				13.7		20.0			
4-Methylphenol	1.7197 1.3601	1.6487 1.2371	1.6423 1.1713	1.5612	1.5162	Ave		1.4821			0.6000	13.7		20.0			
Hexachloroethane	0.6417 0.5980	0.6365 0.5842	0.6451 0.5595	0.6525	0.6388	Ave		0.6196			0.3000	5.5		20.0			
Nitrobenzene	0.5002 0.4501	0.4768 0.4289	0.4785 0.4268	0.4830	0.4750	Ave		0.4649				5.7		20.0			
Isophorone	0.9206 0.8337	0.9027 0.8030	0.8771 0.7985	0.8923	0.8804	Ave		0.8635			0.4000	5.3		20.0			
2-Nitrophenol	0.1926 0.2021	0.1943 0.1959	0.2054 0.1939	0.2117	0.2079	Ave		0.2005			0.1000	3.6		20.0			
2,4-Dimethylphenol	0.4343 0.3921	0.4250 0.3712	0.4200 0.3666	0.4223	0.4096	Ave		0.4051			0.2000	6.3		20.0			
Bis(2-chloroethoxy)methane	0.5417 0.4785	0.5333 0.4586	0.5219 0.4514	0.5171	0.5035	Ave		0.5008			0.3000	6.8		20.0			
Benzoic acid	++++ 0.3511	0.2642 0.3444	0.2873 0.3461	0.3442	0.3366	Lin2	-1.893	0.3522							0.9990		0.9900
2,4-Dichlorophenol	0.3412 0.3076	0.3221 0.2938	0.3214 0.2866	0.3264	0.3232	Ave		0.3153			0.2000	5.7		20.0			
1,2,4-Trichlorobenzene	0.3795 0.3331	0.3750 0.3176	0.3667 0.3075	0.3589	0.3533	Ave		0.3489				7.7		20.0			
Naphthalene	1.2197 1.0149	1.1726 0.9338	1.1464 0.9085	1.1196	1.0849	Ave		1.0750			0.7000	10.5		20.0			
4-Chloroaniline	0.4881 0.4815	0.5179 0.4474	0.5143 0.4365	0.5108	0.5084	Ave		0.4881			0.0100	6.4		20.0			
2,6-Dichlorophenol	0.3417 0.3026	0.3266 0.2870	0.3231 0.2776	0.3246	0.3208	Ave		0.3130				7.0		20.0			
Hexachlorobutadiene	0.2089 0.1795	0.2064 0.1703	0.1934 0.1658	0.1918	0.1897	Ave		0.1882			0.0100	8.3		20.0			
Caprolactam	0.1821 0.1886	0.1828 0.1845	0.1847 0.1929	0.1969	0.1950	Ave		0.1884				3.1		20.0			
4-Chloro-3-methylphenol	0.3650 0.3459	0.3657 0.3262	0.3685 0.3222	0.3661	0.3614	Ave		0.3526			0.2000	5.4		20.0			
2-Methylnaphthalene	0.8511 0.6907	0.8132 0.6406	0.7882 0.6180	0.7767	0.7522	Ave		0.7413			0.4000	11.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451
SDG No.: _____
Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1-Methylnaphthalene	0.7407 0.6261	0.7153 0.5799	0.7013 0.5586	0.6910	0.6694	Ave		0.6603				9.9		20.0			
Hexachlorocyclopentadiene	0.2133 0.2877	0.2450 0.2798	0.2720 0.2731	0.2976	0.3085	Ave		0.2721			0.0500	11.2		20.0			
1,2,4,5-Tetrachlorobenzene	0.3895 0.3110	0.3707 0.2862	0.3623 0.2749	0.3478	0.3351	Ave		0.3347			0.0100	12.2		20.0			
2,4,6-Trichlorophenol	0.3765 0.3441	0.3835 0.3284	0.3775 0.3140	0.3800	0.3730	Ave		0.3596			0.2000	7.5		20.0			
2,4,5-Trichlorophenol	0.4042 0.3926	0.3907 0.3852	0.4021 0.3725	0.4104	0.4125	Ave		0.3963			0.2000	3.4		20.0			
1,1'-Biphenyl	1.5853 1.2636	1.4573 1.1859	1.4377 1.1252	1.4082	1.3759	Ave		1.3549				11.3		20.0			
2-Chloronaphthalene	1.1870 1.0061	1.1343 0.9568	1.1155 0.9290	1.0978	1.0800	Ave		1.0633			0.8000	8.5		20.0			
2-Nitroaniline	0.3960 0.3920	0.3913 0.3822	0.3913 0.3710	0.4076	0.4089	Ave		0.3925			0.0100	3.2		20.0			
Dimethyl phthalate	1.3089 1.1386	1.2614 1.0897	1.2595 1.0594	1.2451	1.2193	Ave		1.1977			0.0100	7.5		20.0			
1,3-Dinitrobenzene	0.1846 0.2247	0.2005 0.2205	0.2158 0.2187	0.2301	0.2282	Ave		0.2154				7.2		20.0			
2,6-Dinitrotoluene	0.3181 0.2997	0.3017 0.2916	0.3102 0.2822	0.3147	0.3191	Ave		0.3046			0.2000	4.3		20.0			
Acenaphthylene	1.9215 1.6905	1.8826 1.5956	1.8975 1.5291	1.8565	1.8262	Ave		1.7749			0.9000	8.4		20.0			
3-Nitroaniline	0.3579 0.3641	0.3752 0.3551	0.3743 0.3476	0.3752	0.3809	Ave		0.3663			0.0100	3.2		20.0			
Acenaphthene	1.2252 0.9608	1.1613 0.9018	1.1341 0.8641	1.0736	1.0459	Ave		1.0459			0.9000	12.3		20.0			
2,4-Dinitrophenol	++++ 0.1977	0.1311 0.1919	0.1597 0.1860	0.1909	0.1979	Ave		0.1793			0.0100	13.9		20.0			
4-Nitrophenol	0.1695 0.1852	0.1874 0.1837	0.1890 0.1759	0.1957	0.1971	Ave		0.1854			0.0100	5.0		20.0			
2,4-Dinitrotoluene	0.4135 0.4043	0.4109 0.3899	0.4180 0.3780	0.4230	0.4221	Ave		0.4075			0.2000	3.9		20.0			
Dibenzofuran	1.7907 1.4998	1.7024 1.4095	1.6857 1.3536	1.6410	1.5919	Ave		1.5843			0.8000	9.6		20.0			
2,3,4,6-Tetrachlorophenol	0.2879 0.3185	0.3035 0.3036	0.3099 0.2952	0.3301	0.3307	Ave		0.3099			0.0100	5.0		20.0			
Diethyl phthalate	1.3348 1.1499	1.2954 1.0785	1.2798 1.0186	1.2430	1.2344	Ave		1.2043			0.0100	9.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451
SDG No.: _____
Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Chlorophenyl phenyl ether	0.6958 0.5639	0.6297 0.5409	0.6354 0.5174	0.6218	0.6095	Ave		0.6018			0.4000	9.6		20.0			
Fluorene	1.4738 1.1598	1.3944 1.0896	1.3667 1.0426	1.2951	1.2516	Ave		1.2592			0.9000	12.1		20.0			
4-Nitroaniline	0.3816 0.3556	0.3594 0.3516	0.3699 0.3494	0.3667	0.3702	Ave		0.3630			0.0100	3.0		20.0			
4,6-Dinitro-2-methylphenol	++++ 0.1476	0.1251 0.1411	0.1393 0.1394	0.1493	0.1503	Lin2	-0.406	0.1476			0.0100				0.9980		0.9900
N-Nitrosodiphenylamine	0.5980 0.4706	0.5702 0.4275	0.5641 0.4118	0.5296	0.5090	Ave		0.5101			0.0100	13.4		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	1.5839 1.3965	1.5184 1.3334	1.5375 1.2899	1.5099	1.4927	Ave		1.4578				7.2		20.0			
Azobenzene	1.6013 1.4118	1.5350 1.3481	1.5544 1.3040	1.5265	1.5090	Ave		1.4738				7.2		20.0			
4-Bromophenyl phenyl ether	0.2197 0.2036	0.2121 0.1934	0.2162 0.1871	0.2131	0.2099	Ave		0.2069			0.1000	5.5		20.0			
Hexachlorobenzene	0.2304 0.1984	0.2136 0.1861	0.2157 0.1805	0.2086	0.2048	Ave		0.2048			0.1000	7.9		20.0			
Pentachlorophenol	++++ 0.1224	0.0976 0.1168	0.1048 0.1163	0.1210	0.1249	Lin2	-0.516	0.1223			0.0500				0.9980		0.9900
Phenanthrene	1.2628 1.0076	1.1608 0.9371	1.1543 0.9020	1.0996	1.0811	Ave		1.0757			0.7000	11.3		20.0			
Anthracene	1.2300 1.0340	1.1708 0.9637	1.1599 0.9168	1.1337	1.0983	Ave		1.0884			0.7000	9.9		20.0			
Carbazole	1.2105 1.0113	1.1489 0.9408	1.1327 0.9092	1.0993	1.0817	Ave		1.0668			0.0100	9.8		20.0			
Di-n-butyl phthalate	1.2562 1.1451	1.2461 1.0721	1.2583 1.0201	1.2347	1.2139	Ave		1.1808			0.0100	7.8		20.0			
Fluoranthene	1.3124 1.1647	1.2431 1.0920	1.2656 1.0706	1.2432	1.2257	Ave		1.2022			0.6000	7.1		20.0			
Pyrene	1.3858 1.2697	1.3596 1.2413	1.3344 1.2108	1.3371	1.3361	Ave		1.3093			0.6000	4.7		20.0			
Famphur	0.4576 0.3999	0.4637 0.3827	0.4588 0.3535	0.4451	0.4338	Ave		0.4244				9.6		20.0			
Butyl benzyl phthalate	0.5442 0.5850	0.5718 0.5936	0.5747 0.5749	0.6033	0.6105	Ave		0.5823			0.0100	3.6		20.0			
3,3'-Dichlorobenzidine	0.4474 0.4269	0.3959 0.4144	0.4105 0.3945	0.4398	0.4513	Ave		0.4226			0.0100	5.3		20.0			
Benzo[a]anthracene	1.3861 1.2519	1.3005 1.2328	1.2663 1.2222	1.2876	1.2970	Ave		1.2806			0.8000	4.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451
SDG No.: _____
Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Chrysene	1.3055 1.2046	1.2389 1.1854	1.2360 1.1648	1.2367	1.2340	Ave		1.2258			0.7000	3.5		20.0			
Bis(2-ethylhexyl) phthalate	0.8380 0.7985	0.7631 0.8153	0.7719 0.7978	0.8130	0.8397	Ave		0.8047			0.0100	3.5		20.0			
Di-n-octyl phthalate	1.2936 1.4332	1.2625 1.4546	1.3186 1.4380	1.4201	1.4854	Ave		1.3883			0.0100	6.0		20.0			
Benzo[b]fluoranthene	1.2469 1.2611	1.2191 1.2751	1.2339 1.2604	1.2844	1.3199	Ave		1.2626			0.7000	2.5		20.0			
Benzo[k]fluoranthene	1.2757 1.2501	1.2726 1.1901	1.2879 1.1645	1.3068	1.3199	Ave		1.2585			0.7000	4.4		20.0			
Benzo[a]pyrene	1.1462 1.1252	1.1341 1.1059	1.1236 1.0970	1.1651	1.1926	Ave		1.1362			0.7000	2.8		20.0			
Indeno[1,2,3-cd]pyrene	1.0101 1.0316	0.9601 1.0411	0.9672 1.0796	0.9959	1.0367	Ave		1.0153			0.5000	4.0		20.0			
Dibenz(a,h)anthracene	1.0382 1.0760	1.0285 1.0351	1.0013 1.0520	1.0606	1.1011	Ave		1.0491			0.4000	2.9		20.0			
Benzo[g,h,i]perylene	1.1179 1.1216	1.0777 1.1109	1.0919 1.1133	1.1265	1.1735	Ave		1.1167			0.5000	2.5		20.0			
2-Fluorophenol (Surr)	1.6544 1.4899	1.5292 1.4393	1.5196 1.3822	1.5530	1.5579	Ave		1.5157				5.4		20.0			
Phenol-d5 (Surr)	2.1527 1.9983	2.1062 1.9240	2.0734 1.8692	2.0859	2.0798	Ave		2.0362				4.8		20.0			
Nitrobenzene-d5 (Surr)	0.5160 0.4708	0.4922 0.4556	0.4850 0.4505	0.4879	0.4896	Ave		0.4810				4.4		20.0			
2-Fluorobiphenyl	1.4844 1.2105	1.3923 1.1462	1.3790 1.1064	1.3421	1.3202	Ave		1.2976				10.1		20.0			
2,4,6-Tribromophenol (Surr)	0.1452 0.1531	0.1482 0.1517	0.1562 0.1482	0.1589	0.1581	Ave		0.1524				3.3		20.0			
Terphenyl-d14 (Surr)	0.9137 0.8167	0.8778 0.8033	0.8501 0.7823	0.8616	0.8539	Ave		0.8449				5.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-304451/4	D13295.D
Level 2	STD010 280-304451/5	D13296.D
Level 3	STD020 280-304451/6	D13297.D
Level 4	STD050 280-304451/7	D13298.D
Level 5	ICIS 280-304451/3	D13294.D
Level 6	STD120 280-304451/8	D13299.D
Level 7	STD160 280-304451/9	D13300.D
Level 8	STD200 280-304451/10	D13301.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCB	Ave	18310 429919	39596 589155	77087 703766	195705	301404	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCB	Ave	24774 692357	61036 966808	120777 1157216	311257	488421	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCB	Ave	44229 1213589	107184 1682038	207392 1999325	544493	846382	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol	DCB	Ave	48855 1272578	117780 1746492	226871 2053459	582795	895072	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCB	Ave	58395 1639573	151099 2196168	289244 2697675	749108	1149574	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCB	Ave	37991 900006	89519 1181523	171975 1363299	432323	650663	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCB	Ave	33311 871414	79996 1173910	157289 1386659	408866	622821	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCB	Ave	35559 900567	85619 1200922	167185 1408847	422485	646068	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCB	Ave	37138 901117	89724 1208275	170290 1395925	424457	653518	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCB	Ave	24290 676784	59767 926646	118246 1102145	308376	468674	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCB	Ave	36058 877375	85361 1179178	161251 1368898	417978	626004	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCB	Ave	35530 932748	85806 1251379	165647 1487765	429715	653092	4.00 120	10.0 160	20.0 200	50.0	80.0
bis (2-chloroisopropyl) ether	DCB	Ave	44042 1037873	103718 1354557	197670 1554488	502723	752879	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCB	Ave	27287 655439	67524 849208	127403 991518	322635	474661	4.00 120	10.0 160	20.0 200	50.0	80.0
Acetophenone	DCB	Ave	52116 1131518	122697 1467041	235417 1678636	572335	842181	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3 & 4 Methylphenol	DCB	Ave	37363 839740	88891 1077350	171977 1237383	422787	627976	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Methylphenol	DCB	Ave	37363 839740	88891 1077350	171977 1237383	422787	627976	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Methylphenol	DCB	Ave	37363 839740	88891 1077350	171977 1237383	422787	627976	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCB	Ave	13942 369187	34318 508795	67554 591081	176711	264595	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	40967 1068601	97739 1444767	191418 1725651	498829	752808	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	75400 1979340	185057 2705239	350878 3228887	921477	1395218	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	15777 479803	39842 659918	82164 784099	218608	329463	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	35570 931036	87121 1250429	167992 1482206	436062	649094	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	44368 1136179	109327 1545100	208766 1825345	533953	797972	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	++++ 1667324	108321 2320763	229816 2798953	710790	1066790	++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	27945 730275	66036 989822	128556 1158715	337076	512100	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	31084 790916	76870 1069813	146701 1243352	370634	559798	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	99898 2409566	240389 3145819	458585 3673763	1156147	1719293	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	39976 1143140	106173 1507198	205714 1764973	527450	805598	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	27990 718321	66951 967009	129240 1122531	335168	508372	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	17111 426113	42314 573670	77367 670268	198109	300597	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Ave	14912 447696	37482 621446	73881 780069	203284	308987	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	29895 821314	74977 1098805	147394 1302849	378041	572655	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	69712 1639848	166709 2157986	315319 2498818	802055	1192036	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	60671 1486484	146641 1953505	280536 2258828	713550	1060794	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	11080 436414	32517 590840	69690 695766	198083	308885	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,2,4,5-Tetrachlorobenzene	NPT	Ave	31905 738463	75995 964126	144942 1111801	359165	530976	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	19564 521854	50906 693366	96697 800083	252921	373508	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,5-Trichlorophenol	ANT	Ave	21000 595523	51857 813265	103016 949099	273140	413039	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	82368 1916541	193442 2504014	368299 2866989	937272	1377773	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	61672 1525979	150565 2020205	285743 2367146	730665	1081436	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Ave	20574 594551	51938 806969	100228 945373	271266	409408	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	68005 1726915	167438 2300784	322641 2699558	828716	1220956	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Ave	9589 340770	26614 465489	55286 557185	153140	228500	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	16525 454527	40044 615748	79454 719017	209435	319574	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	99838 2564045	249891 3369122	486088 3896191	1235685	1828663	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	18594 552310	49809 749840	95874 885600	249756	381407	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	63659 1457208	154147 1904181	290522 2201826	714617	1047347	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Ave	+++++ 599606	34792 810168	81834 947772	254141	396406	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	17614 561820	49747 775821	96831 896361	260551	394712	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Ave	21485 613277	54543 823251	107069 963112	281521	422681	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	93042 2274795	225977 2976003	431812 3449119	1092256	1594102	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	14959 483103	40282 640957	79394 752124	219733	331113	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	69352 1744049	171948 2277202	327848 2595537	827308	1236097	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	36151 855352	83585 1142120	162781 1318326	413836	610334	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	76572 1759105	185088 2300631	350097 2656619	862037	1253250	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	19825 539393	47706 742399	94753 890305	244054	370739	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 766258	58388 1036854	123619 1222306	347354	524262	+++++ 240	20.0 320	40.0 400	100	160
N-Nitrosodiphenylamine	PHN	Ave	108486 2443557	266165 3140790	500745 3610433	1231758	1775717	8.00 240	20.0 320	40.0 400	100	160
1,2-Diphenylhydrazine(as Azobenzene)	ANT	Ave	83199 2141329	203760 2846388	398181 3322765	1016039	1511087	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	83199 2141329	203760 2846388	398181 3322765	1016039	1511087	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	19931 528606	49497 710316	95953 820080	247856	366188	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	20897 514949	49860 683501	95761 791112	242638	357301	4.00 120	10.0 160	20.0 200	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 635637	45535 858389	93014 1019419	281430	435776	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	114546 2615687	270919 3442279	512356 3954113	1278840	1885788	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	111571 2684187	273261 3539803	514858 4018991	1318530	1915827	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	109800 2625258	268132 3455891	502771 3985572	1278540	1886831	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	113951 2972709	290818 3938020	558499 4471675	1435989	2117475	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	119042 3023450	290132 4011027	561738 4693015	1445909	2138098	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	123291 3146915	306077 4230564	588926 4912484	1492433	2232659	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Ave	40707 991137	104399 1304370	202496 1434157	496868	724813	4.00 120	10.0 160	20.0 200	50.0	80.0
Butyl benzyl phthalate	CRY	Ave	48414 1450009	128724 2022980	253661 2332479	673463	1020113	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Ave	39801 1058121	89136 1412337	181186 1600423	490944	754065	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	123320 3102751	292771 4201783	558900 4958579	1437211	2167256	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	116150 2985642	278905 4040261	545523 4725711	1380461	2062102	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	74551 1979010	171801 2778878	340701 3236906	907503	1403179	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Ave	115086 3552079	284223 4957832	581961 5834302	1585111	2482114	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[b]fluoranthene	PRY	Ave	105315 2934013	253158 4142519	501596 4941904	1320338	2027512	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76475-2 Analy Batch No.: 304451

SDG No.: _____

Instrument ID: SMS_D GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 08:27 Calibration End Date: 11/14/2015 11:38 Calibration ID: 24440

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzo[k]fluoranthene	PRY	Ave	107744 2908368	264260 3866328	523521 4566066	1343442	2027598	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	96807 2617710	235513 3592590	456745 4301169	1197772	1832040	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	CRY	Ave	89865 2556722	216135 3548466	426867 4380160	1111659	1732373	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Ave	87685 2503372	213569 3362881	407030 4124624	1090304	1691414	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	94419 2609391	223788 3609019	443877 4365155	1158063	1802686	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCB	Ave	35944 919881	82446 1253451	159128 1460183	420572	645242	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCB	Ave	46771 1233740	113557 1675616	217116 1974612	564887	861396	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	42264 1117835	100912 1534706	194013 1821493	503876	775907	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	77125 1835934	184811 2420223	353249 2819323	893275	1322012	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	7543 232177	19675 320272	40006 377651	105759	158284	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	81286 2024214	197607 2737865	375210 3173762	961705	1426819	4.00 120	10.0 160	20.0 200	50.0	80.0

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13294.D
 Lims ID: ICIS HSL
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 14-Nov-2015 08:27:30 ALS Bottle#: 2 Worklist Smp#: 3
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: ICIS HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:36 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:06:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.521	4.521	0.000	96	207090	40.0	40.0	
* 2 Naphthalene-d8	136	5.760	5.760	0.000	100	792353	40.0	40.0	
* 3 Acenaphthene-d10	164	7.507	7.507	0.000	91	500679	40.0	40.0	
* 4 Phenanthrene-d10	188	8.992	8.992	0.000	97	872188	40.0	40.0	
* 5 Chrysene-d12	240	12.951	12.951	0.000	98	835505	40.0	40.0	
* 6 Perylene-d12	264	16.802	16.802	0.000	97	768083	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.319	3.319	0.000	92	645242	80.0	82.2	
\$ 8 Phenol-d5	99	4.168	4.168	0.000	98	861396	80.0	81.7	
\$ 9 Nitrobenzene-d5	82	5.044	5.044	0.000	86	775907	80.0	81.4	
\$ 10 2-Fluorobiphenyl	172	6.823	6.823	0.000	99	1322012	80.0	81.4	
\$ 11 2,4,6-Tribromophenol	330	8.298	8.298	0.000	92	158284	80.0	83.0	
\$ 12 Terphenyl-d14	244	10.894	10.894	0.000	99	1426819	80.0	80.8	
13 1,4-Dioxane	88	1.866	1.866	0.000	91	301404	80.0	80.3	
14 N-Nitrosodimethylamine	74	2.106	2.106	0.000	92	488421	80.0	83.1	
15 Pyridine	79	2.160	2.160	0.000	97	846382	80.0	82.5	
24 Phenol	94	4.179	4.179	0.000	97	895072	80.0	81.7	
25 Aniline	93	4.206	4.206	0.000	99	1149574	80.0	82.5	
26 Bis(2-chloroethyl)ether	93	4.248	4.248	0.000	97	650663	80.0	81.6	
27 2-Chlorophenol	128	4.328	4.328	0.000	97	622821	80.0	82.9	
31 1,3-Dichlorobenzene	146	4.473	4.473	0.000	96	646068	80.0	82.4	
32 1,4-Dichlorobenzene	146	4.537	4.537	0.000	92	653518	80.0	82.0	
34 Benzyl alcohol	108	4.638	4.638	0.000	94	468674	80.0	82.0	
35 1,2-Dichlorobenzene	146	4.692	4.692	0.000	95	626004	80.0	81.2	
36 2-Methylphenol	108	4.750	4.750	0.000	93	653092	80.0	81.9	
38 2,2'-oxybis[1-chloropropan	45	4.772	4.772	0.000	92	752879	80.0	81.8	
40 3 & 4 Methylphenol	108	4.895	4.895	0.000	78	627976	80.0	81.8	
41 3-Methylphenol	108	4.895	4.895	0.000	73	627976	80.0	81.8	
42 4-Methylphenol	108	4.895	4.895	0.000	69	627976	80.0	81.8	
43 N-Nitrosodi-n-propylamine	70	4.895	4.895	0.000	83	474661	80.0	81.2	
44 Acetophenone	105	4.895	4.895	0.000	87	842181	80.0	80.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.018	5.018	0.000	95	264595	80.0	82.5	
47 Nitrobenzene	77	5.060	5.060	0.000	86	752808	80.0	81.7	
48 2,6-Dichlorophenol	162	5.835	5.835	0.000	97	508372	80.0	82.0	
50 Isophorone	82	5.295	5.295	0.000	99	1395218	80.0	81.6	
51 2,4-Dimethylphenol	107	5.413	5.413	0.000	95	649094	80.0	80.9	
52 2-Nitrophenol	139	5.376	5.376	0.000	97	329463	80.0	83.0	
55 Bis(2-chloroethoxy)methane	93	5.493	5.493	0.000	98	797972	80.0	80.4	
56 Benzoic acid	105	5.546	5.546	0.000	78	1066790	160.0	158.3	
58 2,4-Dichlorophenol	162	5.616	5.616	0.000	96	512100	80.0	82.0	
59 1,2,4-Trichlorobenzene	180	5.701	5.701	0.000	93	559798	80.0	81.0	
60 Naphthalene	128	5.782	5.782	0.000	97	1719293	80.0	80.7	
61 4-Chloroaniline	127	5.819	5.819	0.000	96	805598	80.0	83.3	
63 Hexachlorobutadiene	225	5.910	5.910	0.000	96	300597	80.0	80.6	
66 Caprolactam	55	6.161	6.161	0.000	84	308987	80.0	82.8	
68 4-Chloro-3-methylphenol	107	6.305	6.305	0.000	96	572655	80.0	82.0	
70 2-Methylnaphthalene	142	6.465	6.465	0.000	93	1192036	80.0	81.2	
71 1-Methylnaphthalene	142	6.561	6.561	0.000	94	1060794	80.0	81.1	
72 Hexachlorocyclopentadiene	237	6.636	6.636	0.000	96	308885	80.0	90.7	
73 1,2,4,5-Tetrachlorobenzene	216	6.636	6.636	0.000	97	530976	80.0	80.1	
75 2,4,6-Trichlorophenol	196	6.743	6.743	0.000	95	373508	80.0	83.0	
76 2,4,5-Trichlorophenol	196	6.786	6.786	0.000	95	413039	80.0	83.3	
79 1,1'-Biphenyl	154	6.925	6.925	0.000	95	1377773	80.0	81.2	
81 2-Chloronaphthalene	162	6.951	6.951	0.000	96	1081436	80.0	81.3	
83 2-Nitroaniline	65	7.037	7.037	0.000	82	409408	80.0	83.3	
86 Dimethyl phthalate	163	7.213	7.213	0.000	98	1220956	80.0	81.4	
87 1,3-Dinitrobenzene	168	7.240	7.240	0.000	86	228500	80.0	84.8	
88 2,6-Dinitrotoluene	165	7.272	7.272	0.000	96	319574	80.0	83.8	
93 Acenaphthylene	152	7.368	7.368	0.000	99	1828663	80.0	82.3	
95 3-Nitroaniline	138	7.443	7.443	0.000	95	381407	80.0	83.2	
97 Acenaphthene	153	7.539	7.539	0.000	94	1047347	80.0	80.0	
98 2,4-Dinitrophenol	184	7.550	7.550	0.000	84	396406	160.0	176.6	
99 4-Nitrophenol	109	7.625	7.625	0.000	94	394712	160.0	170.1	
103 2,4-Dinitrotoluene	165	7.678	7.678	0.000	92	422681	80.0	82.9	
104 Dibenzofuran	168	7.710	7.710	0.000	98	1594102	80.0	80.4	
107 2,3,4,6-Tetrachlorophenol	232	7.838	7.838	0.000	72	331113	80.0	85.4	
108 Diethyl phthalate	149	7.918	7.918	0.000	98	1236097	80.0	82.0	
109 4-Chlorophenyl phenyl ethe	204	8.041	8.041	0.000	92	610334	80.0	81.0	
110 Fluorene	166	8.057	8.057	0.000	94	1253250	80.0	79.5	
112 4-Nitroaniline	138	8.063	8.063	0.000	87	370739	80.0	81.6	
113 4,6-Dinitro-2-methylphenol	198	8.100	8.100	0.000	86	524262	160.0	165.7	
114 N-Nitrosodiphenylamine	169	8.159	8.159	0.000	61	1775717	160.0	159.6	
115 Azobenzene	77	8.202	8.202	0.000	97	1511087	80.0	81.9	
116 1,2-Diphenylhydrazine	77	8.202	8.202	0.000	97	1511087	80.9	82.8	
118 4-Bromophenyl phenyl ether	248	8.533	8.533	0.000	67	366188	80.0	81.2	
121 Hexachlorobenzene	284	8.624	8.624	0.000	94	357301	80.0	80.0	
122 Pentachlorophenol	266	8.811	8.811	0.000	92	435776	160.0	167.7	
124 Phenanthrene	178	9.019	9.019	0.000	98	1885788	80.0	80.4	
125 Anthracene	178	9.072	9.072	0.000	98	1915827	80.0	80.7	
126 Carbazole	167	9.222	9.222	0.000	95	1886831	80.0	81.1	
130 Di-n-butyl phthalate	149	9.558	9.558	0.000	100	2117475	80.0	82.2	
134 Fluoranthene	202	10.349	10.349	0.000	99	2138098	80.0	81.6	
136 Pyrene	202	10.670	10.670	0.000	97	2232659	80.0	81.6	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13294.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.636	11.636	0.000	98	724813	80.0	81.8	
139 Butyl benzyl phthalate	149	11.754	11.754	0.000	97	1020113	80.0	83.9	
140 3,3'-Dichlorobenzidine	252	12.881	12.881	0.000	74	754065	80.0	85.4	
141 Benzo[a]anthracene	228	12.929	12.929	0.000	99	2167256	80.0	81.0	
142 Bis(2-ethylhexyl) phthalat	149	13.100	13.100	0.000	98	1403179	80.0	83.5	
143 Chrysene	228	13.009	13.009	0.000	98	2062102	80.0	80.5	
145 Di-n-octyl phthalate	149	14.863	14.863	0.000	99	2482114	80.0	85.6	
147 Benzo[b]fluoranthene	252	15.739	15.739	0.000	98	2027512	80.0	83.6	
148 Benzo[k]fluoranthene	252	15.814	15.814	0.000	99	2027598	80.0	83.9	
149 Benzo[a]pyrene	252	16.509	16.509	0.000	85	1832040	80.0	84.0	
151 Indeno[1,2,3-cd]pyrene	276	19.901	19.901	0.000	99	1732373	80.0	81.7	
152 Dibenz(a,h)anthracene	278	19.992	19.992	0.000	93	1691414	80.0	84.0	
153 Benzo[g,h,i]perylene	276	20.633	20.633	0.000	98	1802686	80.0	84.1	

Reagents:

MS-HSLA080_00020

Amount Added: 200.00

Units: uL

Report Date: 17-Nov-2015 09:25:37

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13294.D

Injection Date: 14-Nov-2015 08:27:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: ICIS HSL

Worklist Smp#: 3

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

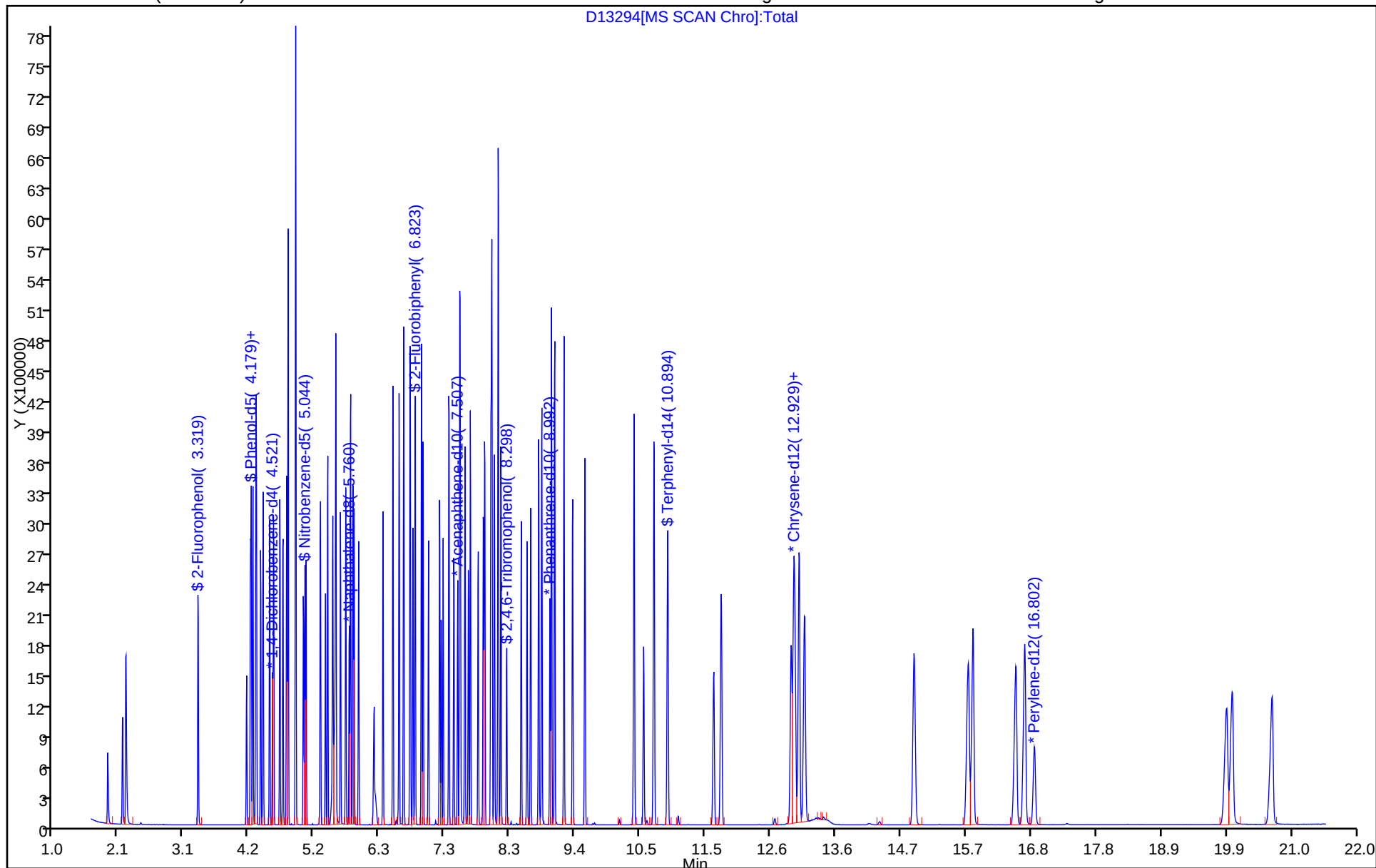
ALS Bottle#: 2

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13295.D
 Lims ID: STD004 HSL
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 14-Nov-2015 08:56:30 ALS Bottle#: 3 Worklist Smp#: 4
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD004 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:39 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:08:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.520	4.521	-0.001	96	217262	40.0	40.0	
* 2 Naphthalene-d8	136	5.754	5.760	-0.006	100	819058	40.0	40.0	
* 3 Acenaphthene-d10	164	7.507	7.507	0.000	90	519572	40.0	40.0	
* 4 Phenanthrene-d10	188	8.992	8.992	0.000	97	907089	40.0	40.0	
* 5 Chrysene-d12	240	12.934	12.951	-0.017	98	889668	40.0	40.0	
* 6 Perylene-d12	264	16.797	16.802	-0.005	97	844614	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.318	3.319	-0.001	91	35944	4.00	4.37	
\$ 8 Phenol-d5	99	4.162	4.168	-0.006	97	46771	4.00	4.23	
\$ 9 Nitrobenzene-d5	82	5.038	5.044	-0.006	86	42264	4.00	4.29	
\$ 10 2-Fluorobiphenyl	172	6.817	6.823	-0.006	99	77125	4.00	4.58	
\$ 11 2,4,6-Tribromophenol	330	8.292	8.298	-0.006	83	7543	4.00	3.81	
\$ 12 Terphenyl-d14	244	10.888	10.894	-0.006	98	81286	4.00	4.33	
13 1,4-Dioxane	88	1.865	1.866	-0.001	90	18310	4.00	4.65	
14 N-Nitrosodimethylamine	74	2.100	2.106	-0.006	94	24774	4.00	4.02	
15 Pyridine	79	2.159	2.160	-0.001	97	44229	4.00	4.11	
24 Phenol	94	4.173	4.179	-0.006	97	48855	4.00	4.25	
25 Aniline	93	4.200	4.206	-0.006	98	58395	4.00	4.00	
26 Bis(2-chloroethyl)ether	93	4.248	4.248	0.000	97	37991	4.00	4.54	
27 2-Chlorophenol	128	4.328	4.328	0.000	97	33311	4.00	4.23	
31 1,3-Dichlorobenzene	146	4.472	4.473	-0.001	96	35559	4.00	4.32	
32 1,4-Dichlorobenzene	146	4.536	4.537	-0.001	93	37138	4.00	4.44	
34 Benzyl alcohol	108	4.632	4.638	-0.006	94	24290	4.00	4.05	
35 1,2-Dichlorobenzene	146	4.686	4.692	-0.006	96	36058	4.00	4.46	
36 2-Methylphenol	108	4.745	4.750	-0.005	92	35530	4.00	4.24	
38 2,2'-oxybis[1-chloropropan	45	4.766	4.772	-0.006	94	44042	4.00	4.56	
40 3 & 4 Methylphenol	108	4.889	4.895	-0.006	72	37363	4.00	4.64	
41 3-Methylphenol	108	4.889	4.895	-0.006	68	37363	4.00	4.64	
42 4-Methylphenol	108	4.889	4.895	-0.006	64	37363	4.00	4.64	
43 N-Nitrosodi-n-propylamine	70	4.884	4.895	-0.011	86	27287	4.00	4.45	
44 Acetophenone	105	4.889	4.895	-0.006	88	52116	4.00	4.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.017	5.018	-0.001	91	13942	4.00	4.14	
47 Nitrobenzene	77	5.055	5.060	-0.005	86	40967	4.00	4.30	
48 2,6-Dichlorophenol	162	5.834	5.835	-0.001	97	27990	4.00	4.37	
50 Isophorone	82	5.284	5.295	-0.011	98	75400	4.00	4.26	
51 2,4-Dimethylphenol	107	5.407	5.413	-0.006	95	35570	4.00	4.29	
52 2-Nitrophenol	139	5.375	5.376	-0.001	95	15777	4.00	3.84	
55 Bis(2-chloroethoxy)methane	93	5.487	5.493	-0.006	98	44368	4.00	4.33	
56 Benzoic acid	105	5.461	5.546	-0.085	86	39012	8.00	10.8	
58 2,4-Dichlorophenol	162	5.615	5.616	-0.001	94	27945	4.00	4.33	
59 1,2,4-Trichlorobenzene	180	5.701	5.701	0.000	93	31084	4.00	4.35	
60 Naphthalene	128	5.776	5.782	-0.006	97	99898	4.00	4.54	
61 4-Chloroaniline	127	5.813	5.819	-0.006	96	39976	4.00	4.00	
63 Hexachlorobutadiene	225	5.909	5.910	-0.001	94	17111	4.00	4.44	
66 Caprolactam	55	6.112	6.161	-0.049	83	14912	4.00	3.87	
68 4-Chloro-3-methylphenol	107	6.294	6.305	-0.011	96	29895	4.00	4.14	
70 2-Methylnaphthalene	142	6.460	6.465	-0.005	93	69712	4.00	4.59	
71 1-Methylnaphthalene	142	6.561	6.561	0.000	93	60671	4.00	4.49	
72 Hexachlorocyclopentadiene	237	6.630	6.636	-0.006	92	11080	4.00	3.13	
73 1,2,4,5-Tetrachlorobenzene	216	6.636	6.636	0.000	96	31905	4.00	4.66	
75 2,4,6-Trichlorophenol	196	6.743	6.743	0.000	93	19564	4.00	4.19	
76 2,4,5-Trichlorophenol	196	6.780	6.786	-0.006	95	21000	4.00	4.08	
79 1,1'-Biphenyl	154	6.919	6.925	-0.006	94	82368	4.00	4.68	
81 2-Chloronaphthalene	162	6.946	6.951	-0.005	96	61672	4.00	4.47	
83 2-Nitroaniline	65	7.031	7.037	-0.006	80	20574	4.00	4.04	
86 Dimethyl phthalate	163	7.207	7.213	-0.006	98	68005	4.00	4.37	
87 1,3-Dinitrobenzene	168	7.234	7.240	-0.006	85	9589	4.00	3.43	
88 2,6-Dinitrotoluene	165	7.266	7.272	-0.006	94	16525	4.00	4.18	
93 Acenaphthylene	152	7.362	7.368	-0.006	99	99838	4.00	4.33	
95 3-Nitroaniline	138	7.437	7.443	-0.006	75	18594	4.00	3.91	
97 Acenaphthene	153	7.533	7.539	-0.006	94	63659	4.00	4.69	
98 2,4-Dinitrophenol	184	7.544	7.550	-0.006	81	9987	8.00	4.29	
99 4-Nitrophenol	109	7.613	7.625	-0.012	93	17614	8.00	7.31	
103 2,4-Dinitrotoluene	165	7.672	7.678	-0.006	92	21485	4.00	4.06	
104 Dibenzofuran	168	7.704	7.710	-0.006	98	93042	4.00	4.52	
107 2,3,4,6-Tetrachlorophenol	232	7.832	7.838	-0.006	71	14959	4.00	3.72	
108 Diethyl phthalate	149	7.913	7.918	-0.005	98	69352	4.00	4.43	
109 4-Chlorophenyl phenyl ethe	204	8.035	8.041	-0.006	91	36151	4.00	4.62	
110 Fluorene	166	8.051	8.057	-0.006	95	76572	4.00	4.68	
112 4-Nitroaniline	138	8.041	8.063	-0.022	84	19825	4.00	4.20	
113 4,6-Dinitro-2-methylphenol	198	8.089	8.100	-0.011	84	19088	8.00	8.46	
114 N-Nitrosodiphenylamine	169	8.153	8.159	-0.006	62	108486	8.00	9.38	
115 Azobenzene	77	8.196	8.202	-0.006	97	83199	4.00	4.35	
116 1,2-Diphenylhydrazine	77	8.196	8.202	-0.006	97	83199	4.04	4.39	
118 4-Bromophenyl phenyl ether	248	8.527	8.533	-0.006	65	19931	4.00	4.25	
121 Hexachlorobenzene	284	8.623	8.624	-0.001	93	20897	4.00	4.50	
122 Pentachlorophenol	266	8.810	8.811	0.000	90	14054	8.00	9.29	
124 Phenanthrene	178	9.013	9.019	-0.006	97	114546	4.00	4.70	
125 Anthracene	178	9.066	9.072	-0.006	97	111571	4.00	4.52	
126 Carbazole	167	9.216	9.222	-0.006	95	109800	4.00	4.54	
130 Di-n-butyl phthalate	149	9.553	9.558	-0.005	100	113951	4.00	4.26	
134 Fluoranthene	202	10.343	10.349	-0.006	98	119042	4.00	4.37	
136 Pyrene	202	10.664	10.670	-0.006	97	123291	4.00	4.23	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13295.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.625	11.636	-0.011	96	40707	4.00	4.31	
139 Butyl benzyl phthalate	149	11.748	11.754	-0.006	95	48414	4.00	3.74	
140 3,3'-Dichlorobenzidine	252	12.865	12.881	-0.016	73	39801	4.00	4.23	
141 Benzo[a]anthracene	228	12.913	12.929	-0.016	99	123320	4.00	4.33	
142 Bis(2-ethylhexyl) phthalat	149	13.094	13.100	-0.006	97	74551	4.00	4.17	
143 Chrysene	228	12.993	13.009	-0.016	97	116150	4.00	4.26	
145 Di-n-octyl phthalate	149	14.857	14.863	-0.006	99	115086	4.00	3.73	
147 Benzo[b]fluoranthene	252	15.712	15.739	-0.027	98	105315	4.00	3.95	
148 Benzo[k]fluoranthene	252	15.782	15.814	-0.032	98	107744	4.00	4.05	
149 Benzo[a]pyrene	252	16.471	16.509	-0.038	78	96807	4.00	4.04	
151 Indeno[1,2,3-cd]pyrene	276	19.858	19.901	-0.043	97	89865	4.00	3.98	
152 Dibenz(a,h)anthracene	278	19.959	19.992	-0.033	93	87685	4.00	3.96	
153 Benzo[g,h,i]perylene	276	20.579	20.633	-0.054	97	94419	4.00	4.00	

Reagents:

MS-HSLA004_00020

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13295.D

Injection Date: 14-Nov-2015 08:56:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD004 HSL

Worklist Smp#: 4

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

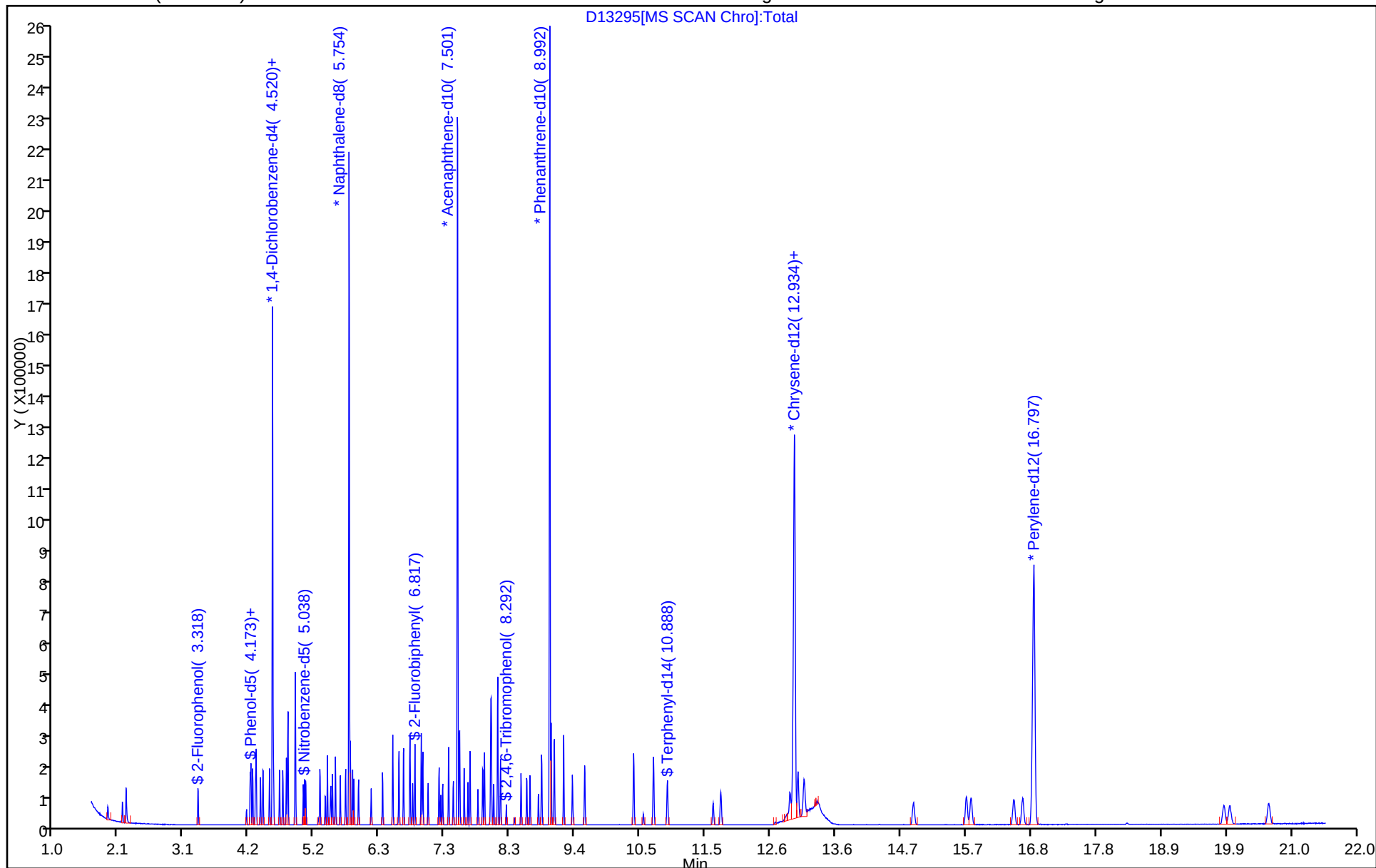
ALS Bottle#: 3

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13296.D
 Lims ID: STD010 HSL
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 14-Nov-2015 09:23:30 ALS Bottle#: 4 Worklist Smp#: 5
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD010 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:41 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:10:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.522	4.521	0.001	97	215658	40.0	40.0	
* 2 Naphthalene-d8	136	5.756	5.760	-0.004	99	820018	40.0	40.0	
* 3 Acenaphthene-d10	164	7.503	7.507	-0.004	90	530962	40.0	40.0	
* 4 Phenanthrene-d10	188	8.993	8.992	0.001	97	933550	40.0	40.0	
* 5 Chrysene-d12	240	12.936	12.951	-0.015	98	900490	40.0	40.0	
* 6 Perylene-d12	264	16.793	16.802	-0.009	97	830632	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.320	3.319	0.001	92	82446	10.0	10.1	
\$ 8 Phenol-d5	99	4.164	4.168	-0.004	98	113557	10.0	10.3	
\$ 9 Nitrobenzene-d5	82	5.040	5.044	-0.004	87	100912	10.0	10.2	
\$ 10 2-Fluorobiphenyl	172	6.819	6.823	-0.004	99	184811	10.0	10.7	
\$ 11 2,4,6-Tribromophenol	330	8.293	8.298	-0.005	90	19675	10.0	9.72	
\$ 12 Terphenyl-d14	244	10.884	10.894	-0.010	99	197607	10.0	10.4	
13 1,4-Dioxane	88	1.867	1.866	0.001	92	39596	10.0	10.1	
14 N-Nitrosodimethylamine	74	2.102	2.106	-0.004	93	61036	10.0	9.97	
15 Pyridine	79	2.161	2.160	0.001	97	107184	10.0	10.0	
24 Phenol	94	4.175	4.179	-0.004	97	117780	10.0	10.3	
25 Aniline	93	4.201	4.206	-0.005	99	151099	10.0	10.4	
26 Bis(2-chloroethyl)ether	93	4.244	4.248	-0.004	99	89519	10.0	10.8	
27 2-Chlorophenol	128	4.330	4.328	0.002	97	79996	10.0	10.2	
31 1,3-Dichlorobenzene	146	4.474	4.473	0.001	96	85619	10.0	10.5	
32 1,4-Dichlorobenzene	146	4.538	4.537	0.001	94	89724	10.0	10.8	
34 Benzyl alcohol	108	4.634	4.638	-0.004	93	59767	10.0	10.0	
35 1,2-Dichlorobenzene	146	4.687	4.692	-0.005	96	85361	10.0	10.6	
36 2-Methylphenol	108	4.746	4.750	-0.004	91	85806	10.0	10.3	
38 2,2'-oxybis[1-chloropropan	45	4.768	4.772	-0.004	94	103718	10.0	10.8	
40 3 & 4 Methylphenol	108	4.890	4.895	-0.005	73	88891	10.0	11.1	
41 3-Methylphenol	108	4.890	4.895	-0.005	71	88891	10.0	11.1	
42 4-Methylphenol	108	4.890	4.895	-0.005	67	88891	10.0	11.1	
43 N-Nitrosodi-n-propylamine	70	4.885	4.895	-0.010	86	67524	10.0	11.1	
44 Acetophenone	105	4.890	4.895	-0.005	87	122697	10.0	11.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.019	5.018	0.001	96	34318	10.0	10.3	
47 Nitrobenzene	77	5.056	5.060	-0.004	85	97739	10.0	10.3	
48 2,6-Dichlorophenol	162	5.831	5.835	-0.004	97	66951	10.0	10.4	
50 Isophorone	82	5.286	5.295	-0.009	99	185057	10.0	10.5	
51 2,4-Dimethylphenol	107	5.409	5.413	-0.004	95	87121	10.0	10.5	
52 2-Nitrophenol	139	5.371	5.376	-0.005	97	39842	10.0	9.69	
55 Bis(2-chloroethoxy)methane	93	5.489	5.493	-0.004	97	109327	10.0	10.6	
56 Benzoic acid	105	5.473	5.546	-0.073	88	108321	20.0	20.4	
58 2,4-Dichlorophenol	162	5.612	5.616	-0.004	94	66036	10.0	10.2	
59 1,2,4-Trichlorobenzene	180	5.702	5.701	0.001	93	76870	10.0	10.7	
60 Naphthalene	128	5.777	5.782	-0.005	97	240389	10.0	10.9	
61 4-Chloroaniline	127	5.815	5.819	-0.004	96	106173	10.0	10.6	
63 Hexachlorobutadiene	225	5.911	5.910	0.001	96	42314	10.0	11.0	
66 Caprolactam	55	6.114	6.161	-0.047	83	37482	10.0	9.70	
68 4-Chloro-3-methylphenol	107	6.295	6.305	-0.010	96	74977	10.0	10.4	
70 2-Methylnaphthalene	142	6.461	6.465	-0.004	93	166709	10.0	11.0	
71 1-Methylnaphthalene	142	6.557	6.561	-0.004	94	146641	10.0	10.8	
72 Hexachlorocyclopentadiene	237	6.632	6.636	-0.004	94	32517	10.0	9.00	
73 1,2,4,5-Tetrachlorobenzene	216	6.637	6.636	0.001	97	75995	10.0	11.1	
75 2,4,6-Trichlorophenol	196	6.739	6.743	-0.004	95	50906	10.0	10.7	
76 2,4,5-Trichlorophenol	196	6.782	6.786	-0.004	94	51857	10.0	9.86	
79 1,1'-Biphenyl	154	6.920	6.925	-0.005	95	193442	10.0	10.8	
81 2-Chloronaphthalene	162	6.947	6.951	-0.004	96	150565	10.0	10.7	
83 2-Nitroaniline	65	7.027	7.037	-0.010	83	51938	10.0	9.97	
86 Dimethyl phthalate	163	7.209	7.213	-0.004	98	167438	10.0	10.5	
87 1,3-Dinitrobenzene	168	7.236	7.240	-0.004	85	26614	10.0	9.31	
88 2,6-Dinitrotoluene	165	7.268	7.272	-0.004	95	40044	10.0	9.90	
93 Acenaphthylene	152	7.359	7.368	-0.010	99	249891	10.0	10.6	
95 3-Nitroaniline	138	7.433	7.443	-0.010	95	49809	10.0	10.2	
97 Acenaphthene	153	7.535	7.539	-0.004	94	154147	10.0	11.1	
98 2,4-Dinitrophenol	184	7.545	7.550	-0.005	83	34792	20.0	14.6	
99 4-Nitrophenol	109	7.610	7.625	-0.015	93	49747	20.0	20.2	
103 2,4-Dinitrotoluene	165	7.674	7.678	-0.004	91	54543	10.0	10.1	
104 Dibenzofuran	168	7.706	7.710	-0.004	98	225977	10.0	10.7	
107 2,3,4,6-Tetrachlorophenol	232	7.834	7.838	-0.004	72	40282	10.0	9.79	
108 Diethyl phthalate	149	7.909	7.918	-0.009	97	171948	10.0	10.8	
109 4-Chlorophenyl phenyl ethe	204	8.037	8.041	-0.004	92	83585	10.0	10.5	
110 Fluorene	166	8.048	8.057	-0.009	95	185088	10.0	11.1	
112 4-Nitroaniline	138	8.042	8.063	-0.021	84	47706	10.0	9.90	
113 4,6-Dinitro-2-methylphenol	198	8.085	8.100	-0.015	86	58388	20.0	19.7	
114 N-Nitrosodiphenylamine	169	8.149	8.159	-0.010	61	266165	20.0	22.4	
115 Azobenzene	77	8.197	8.202	-0.005	97	203760	10.0	10.4	
116 1,2-Diphenylhydrazine	77	8.197	8.202	-0.005	98	203760	10.1	10.5	
118 4-Bromophenyl phenyl ether	248	8.528	8.533	-0.005	67	49497	10.0	10.3	
121 Hexachlorobenzene	284	8.619	8.624	-0.005	94	49860	10.0	10.4	
122 Pentachlorophenol	266	8.806	8.811	-0.004	92	45535	20.0	20.2	
124 Phenanthrene	178	9.015	9.019	-0.004	97	270919	10.0	10.8	
125 Anthracene	178	9.063	9.072	-0.009	97	273261	10.0	10.8	
126 Carbazole	167	9.218	9.222	-0.004	95	268132	10.0	10.8	
130 Di-n-butyl phthalate	149	9.554	9.558	-0.004	100	290818	10.0	10.6	
134 Fluoranthene	202	10.345	10.349	-0.004	98	290132	10.0	10.3	
136 Pyrene	202	10.665	10.670	-0.005	97	306077	10.0	10.4	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13296.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.627	11.636	-0.009	97	104399	10.0	10.9	
139 Butyl benzyl phthalate	149	11.744	11.754	-0.010	97	128724	10.0	9.82	
140 3,3'-Dichlorobenzidine	252	12.866	12.881	-0.015	74	89136	10.0	9.37	
141 Benzo[a]anthracene	228	12.909	12.929	-0.020	98	292771	10.0	10.2	
142 Bis(2-ethylhexyl) phthalat	149	13.096	13.100	-0.004	98	171801	10.0	9.48	
143 Chrysene	228	12.994	13.009	-0.015	98	278905	10.0	10.1	
145 Di-n-octyl phthalate	149	14.854	14.863	-0.009	99	284223	10.0	9.09	
147 Benzo[b]fluoranthene	252	15.708	15.739	-0.031	98	253158	10.0	9.66	
148 Benzo[k]fluoranthene	252	15.783	15.814	-0.031	99	264260	10.0	10.1	
149 Benzo[a]pyrene	252	16.472	16.509	-0.037	79	235513	10.0	9.98	
151 Indeno[1,2,3-cd]pyrene	276	19.864	19.901	-0.037	98	216135	10.0	9.46	
152 Dibenz(a,h)anthracene	278	19.955	19.992	-0.037	93	213569	10.0	9.80	
153 Benzo[g,h,i]perylene	276	20.586	20.633	-0.047	98	223788	10.0	9.65	

Reagents:

MS-HSLA010_00020

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13296.D

Injection Date: 14-Nov-2015 09:23:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD010 HSL

Worklist Smp#: 5

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

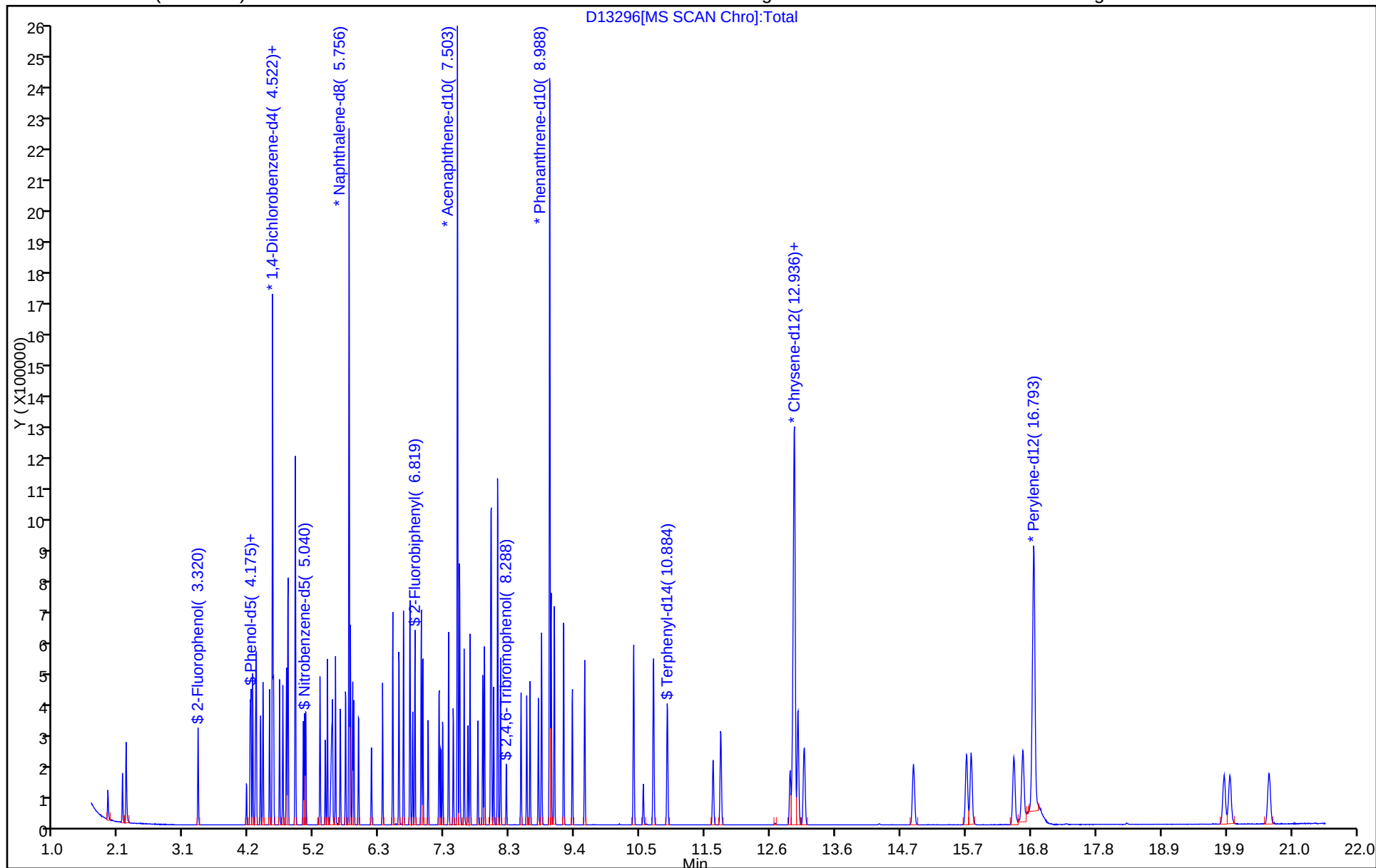
ALS Bottle#: 4

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13297.D
 Lims ID: STD020 HSL
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 14-Nov-2015 09:50:30 ALS Bottle#: 5 Worklist Smp#: 6
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD020 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:45 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:11:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.525	4.521	0.004	96	209430	40.0	40.0	
* 2 Naphthalene-d8	136	5.759	5.760	-0.001	100	800052	40.0	40.0	
* 3 Acenaphthene-d10	164	7.506	7.507	-0.001	91	512333	40.0	40.0	
* 4 Phenanthrene-d10	188	8.991	8.992	-0.001	97	887734	40.0	40.0	
* 5 Chrysene-d12	240	12.939	12.951	-0.012	98	882712	40.0	40.0	
* 6 Perylene-d12	264	16.796	16.802	-0.006	97	813009	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.323	3.319	0.004	92	159128	20.0	20.1	
\$ 8 Phenol-d5	99	4.161	4.168	-0.007	98	217116	20.0	20.4	
\$ 9 Nitrobenzene-d5	82	5.038	5.044	-0.006	86	194013	20.0	20.2	
\$ 10 2-Fluorobiphenyl	172	6.817	6.823	-0.007	99	353249	20.0	21.3	
\$ 11 2,4,6-Tribromophenol	330	8.291	8.298	-0.007	91	40006	20.0	20.5	
\$ 12 Terphenyl-d14	244	10.887	10.894	-0.007	98	375210	20.0	20.1	
13 1,4-Dioxane	88	1.864	1.866	-0.002	91	77087	20.0	20.3	
14 N-Nitrosodimethylamine	74	2.099	2.106	-0.007	91	120777	20.0	20.3	
15 Pyridine	79	2.158	2.160	-0.002	97	207392	20.0	20.0	
24 Phenol	94	4.172	4.179	-0.007	98	226871	20.0	20.5	
25 Aniline	93	4.204	4.206	-0.002	99	289244	20.0	20.5	
26 Bis(2-chloroethyl)ether	93	4.247	4.248	-0.001	98	171975	20.0	21.3	
27 2-Chlorophenol	128	4.327	4.328	-0.001	96	157289	20.0	20.7	
31 1,3-Dichlorobenzene	146	4.471	4.473	-0.002	97	167185	20.0	21.1	
32 1,4-Dichlorobenzene	146	4.541	4.537	0.004	94	170290	20.0	21.1	
34 Benzyl alcohol	108	4.637	4.638	-0.001	93	118246	20.0	20.5	
35 1,2-Dichlorobenzene	146	4.690	4.692	-0.002	95	161251	20.0	20.7	
36 2-Methylphenol	108	4.744	4.750	-0.006	94	165647	20.0	20.5	
38 2,2'-oxybis[1-chloropropan	45	4.770	4.772	-0.002	92	197670	20.0	21.2	
40 3 & 4 Methylphenol	108	4.893	4.895	-0.002	72	171977	20.0	22.2	
41 3-Methylphenol	108	4.893	4.895	-0.002	72	171977	20.0	22.2	
42 4-Methylphenol	108	4.893	4.895	-0.002	68	171977	20.0	22.2	
43 N-Nitrosodi-n-propylamine	70	4.888	4.895	-0.007	85	127403	20.0	21.5	
44 Acetophenone	105	4.893	4.895	-0.002	89	235417	20.0	22.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.016	5.018	-0.002	95	67554	20.0	20.8	
47 Nitrobenzene	77	5.059	5.060	-0.001	85	191418	20.0	20.6	
48 2,6-Dichlorophenol	162	5.834	5.835	-0.001	97	129240	20.0	20.6	
50 Isophorone	82	5.289	5.295	-0.006	99	350878	20.0	20.3	
51 2,4-Dimethylphenol	107	5.406	5.413	-0.007	96	167992	20.0	20.7	
52 2-Nitrophenol	139	5.374	5.376	-0.002	95	82164	20.0	20.5	
55 Bis(2-chloroethoxy)methane	93	5.486	5.493	-0.007	98	208766	20.0	20.8	
56 Benzoic acid	105	5.492	5.546	-0.054	61	229816	40.0	38.0	
58 2,4-Dichlorophenol	162	5.615	5.616	-0.001	94	128556	20.0	20.4	
59 1,2,4-Trichlorobenzene	180	5.700	5.701	-0.001	93	146701	20.0	21.0	
60 Naphthalene	128	5.775	5.782	-0.007	97	458585	20.0	21.3	
61 4-Chloroaniline	127	5.812	5.819	-0.007	96	205714	20.0	21.1	
63 Hexachlorobutadiene	225	5.908	5.910	-0.002	96	77367	20.0	20.6	
66 Caprolactam	55	6.122	6.161	-0.039	84	73881	20.0	19.6	
68 4-Chloro-3-methylphenol	107	6.298	6.305	-0.007	96	147394	20.0	20.9	
70 2-Methylnaphthalene	142	6.459	6.465	-0.006	94	315319	20.0	21.3	
71 1-Methylnaphthalene	142	6.560	6.561	-0.001	94	280536	20.0	21.2	
72 Hexachlorocyclopentadiene	237	6.635	6.636	-0.001	96	69690	20.0	20.0	
73 1,2,4,5-Tetrachlorobenzene	216	6.635	6.636	-0.001	97	144942	20.0	21.7	
75 2,4,6-Trichlorophenol	196	6.742	6.743	-0.001	95	96697	20.0	21.0	
76 2,4,5-Trichlorophenol	196	6.784	6.786	-0.002	94	103016	20.0	20.3	
79 1,1'-Biphenyl	154	6.918	6.925	-0.007	95	368299	20.0	21.2	
81 2-Chloronaphthalene	162	6.945	6.951	-0.006	96	285743	20.0	21.0	
83 2-Nitroaniline	65	7.030	7.037	-0.007	82	100228	20.0	19.9	
86 Dimethyl phthalate	163	7.206	7.213	-0.007	98	322641	20.0	21.0	
87 1,3-Dinitrobenzene	168	7.233	7.240	-0.007	86	55286	20.0	20.0	
88 2,6-Dinitrotoluene	165	7.265	7.272	-0.007	96	79454	20.0	20.4	
93 Acenaphthylene	152	7.361	7.368	-0.007	99	486088	20.0	21.4	
95 3-Nitroaniline	138	7.436	7.443	-0.007	94	95874	20.0	20.4	
97 Acenaphthene	153	7.538	7.539	-0.001	93	290522	20.0	21.7	
98 2,4-Dinitrophenol	184	7.543	7.550	-0.007	81	81834	40.0	35.6	
99 4-Nitrophenol	109	7.612	7.625	-0.013	94	96831	40.0	40.8	
103 2,4-Dinitrotoluene	165	7.671	7.678	-0.007	92	107069	20.0	20.5	
104 Dibenzofuran	168	7.709	7.710	-0.001	98	431812	20.0	21.3	
107 2,3,4,6-Tetrachlorophenol	232	7.832	7.838	-0.006	73	79394	20.0	20.0	
108 Diethyl phthalate	149	7.912	7.918	-0.006	98	327848	20.0	21.3	
109 4-Chlorophenyl phenyl ethe	204	8.040	8.041	-0.001	92	162781	20.0	21.1	
110 Fluorene	166	8.051	8.057	-0.006	94	350097	20.0	21.7	
112 4-Nitroaniline	138	8.045	8.063	-0.018	84	94753	20.0	20.4	
113 4,6-Dinitro-2-methylphenol	198	8.088	8.100	-0.012	85	123619	40.0	40.5	
114 N-Nitrosodiphenylamine	169	8.152	8.159	-0.007	61	500745	40.0	44.2	
115 Azobenzene	77	8.200	8.202	-0.002	97	398181	20.0	21.1	
116 1,2-Diphenylhydrazine	77	8.200	8.202	-0.002	97	398181	20.2	21.3	
118 4-Bromophenyl phenyl ether	248	8.526	8.533	-0.007	67	95953	20.0	20.9	
121 Hexachlorobenzene	284	8.622	8.624	-0.002	94	95761	20.0	21.1	
122 Pentachlorophenol	266	8.809	8.811	-0.001	92	93014	40.0	38.5	
124 Phenanthrene	178	9.012	9.019	-0.007	98	512356	20.0	21.5	
125 Anthracene	178	9.066	9.072	-0.006	98	514858	20.0	21.3	
126 Carbazole	167	9.215	9.222	-0.007	95	502771	20.0	21.2	
130 Di-n-butyl phthalate	149	9.552	9.558	-0.006	100	558499	20.0	21.3	
134 Fluoranthene	202	10.342	10.349	-0.007	98	561738	20.0	21.1	
136 Pyrene	202	10.663	10.670	-0.007	97	588926	20.0	20.4	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13297.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.624	11.636	-0.012	98	202496	20.0	21.6	
139 Butyl benzyl phthalate	149	11.747	11.754	-0.007	96	253661	20.0	19.7	
140 3,3'-Dichlorobenzidine	252	12.869	12.881	-0.012	74	181186	20.0	19.4	
141 Benzo[a]anthracene	228	12.912	12.929	-0.017	99	558900	20.0	19.8	
142 Bis(2-ethylhexyl) phthalat	149	13.094	13.100	-0.006	98	340701	20.0	19.2	
143 Chrysene	228	12.992	13.009	-0.017	98	545523	20.0	20.2	
145 Di-n-octyl phthalate	149	14.856	14.863	-0.007	99	581961	20.0	19.0	
147 Benzo[b]fluoranthene	252	15.711	15.739	-0.028	98	501596	20.0	19.5	
148 Benzo[k]fluoranthene	252	15.791	15.814	-0.023	99	523521	20.0	20.5	
149 Benzo[a]pyrene	252	16.480	16.509	-0.029	79	456745	20.0	19.8	
151 Indeno[1,2,3-cd]pyrene	276	19.873	19.901	-0.028	99	426867	20.0	19.1	
152 Dibenz(a,h)anthracene	278	19.958	19.992	-0.034	93	407030	20.0	19.1	
153 Benzo[g,h,i]perylene	276	20.599	20.633	-0.034	98	443877	20.0	19.6	

Reagents:

MS-HSLA020_00020

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13297.D

Injection Date: 14-Nov-2015 09:50:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD020 HSL

Worklist Smp#: 6

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

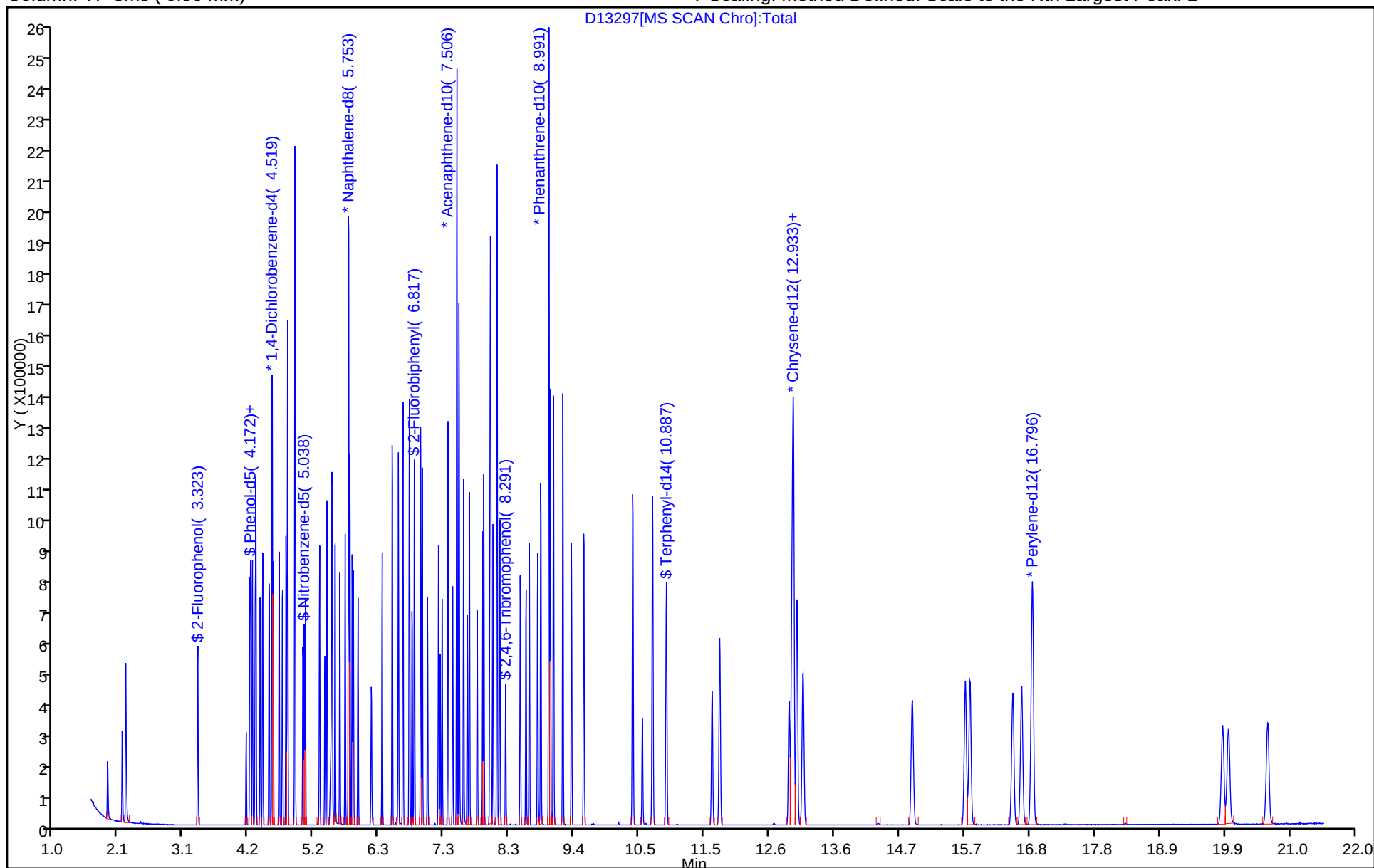
ALS Bottle#: 5

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13298.D
 Lims ID: STD050 HSL
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 14-Nov-2015 10:17:30 ALS Bottle#: 6 Worklist Smp#: 7
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD050 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:47 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:12:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.521	4.521	0.000	96	216648	40.0	40.0	
* 2 Naphthalene-d8	136	5.755	5.760	-0.005	99	826134	40.0	40.0	
* 3 Acenaphthene-d10	164	7.507	7.507	0.000	90	532477	40.0	40.0	
* 4 Phenanthrene-d10	188	8.993	8.992	0.001	97	930418	40.0	40.0	
* 5 Chrysene-d12	240	12.946	12.951	-0.005	98	892966	40.0	40.0	
* 6 Perylene-d12	264	16.803	16.802	0.001	97	822405	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.325	3.319	0.006	92	420572	50.0	51.2	
\$ 8 Phenol-d5	99	4.163	4.168	-0.005	98	564887	50.0	51.2	
\$ 9 Nitrobenzene-d5	82	5.045	5.044	0.001	87	503876	50.0	50.7	
\$ 10 2-Fluorobiphenyl	172	6.818	6.823	-0.005	99	893275	50.0	51.7	
\$ 11 2,4,6-Tribromophenol	330	8.293	8.298	-0.005	90	105759	50.0	52.1	
\$ 12 Terphenyl-d14	244	10.889	10.894	-0.005	99	961705	50.0	51.0	
13 1,4-Dioxane	88	1.866	1.866	0.000	92	195705	50.0	49.8	
14 N-Nitrosodimethylamine	74	2.107	2.106	0.001	92	311257	50.0	50.6	
15 Pyridine	79	2.160	2.160	0.000	97	544493	50.0	50.7	
24 Phenol	94	4.179	4.179	0.000	98	582795	50.0	50.9	
25 Aniline	93	4.206	4.206	0.000	99	749108	50.0	51.4	
26 Bis(2-chloroethyl)ether	93	4.249	4.248	0.001	98	432323	50.0	51.8	
27 2-Chlorophenol	128	4.329	4.328	0.001	97	408866	50.0	52.0	
31 1,3-Dichlorobenzene	146	4.473	4.473	0.000	97	422485	50.0	51.5	
32 1,4-Dichlorobenzene	146	4.537	4.537	0.000	92	424457	50.0	50.9	
34 Benzyl alcohol	108	4.639	4.638	0.001	94	308376	50.0	51.6	
35 1,2-Dichlorobenzene	146	4.692	4.692	0.000	96	417978	50.0	51.8	
36 2-Methylphenol	108	4.751	4.750	0.001	93	429715	50.0	51.5	
38 2,2'-oxybis[1-chloropropan	45	4.772	4.772	0.000	92	502723	50.0	52.2	
40 3 & 4 Methylphenol	108	4.895	4.895	0.000	69	422787	50.0	52.7	
41 3-Methylphenol	108	4.895	4.895	0.000	72	422787	50.0	52.7	
42 4-Methylphenol	108	4.895	4.895	0.000	68	422787	50.0	52.7	
43 N-Nitrosodi-n-propylamine	70	4.890	4.895	-0.005	84	322635	50.0	52.7	
44 Acetophenone	105	4.895	4.895	0.000	87	572335	50.0	52.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.018	5.018	0.000	96	176711	50.0	52.7	
47 Nitrobenzene	77	5.061	5.060	0.001	85	498829	50.0	52.0	
48 2,6-Dichlorophenol	162	5.835	5.835	0.000	97	335168	50.0	51.8	
50 Isophorone	82	5.291	5.295	-0.005	99	921477	50.0	51.7	
51 2,4-Dimethylphenol	107	5.408	5.413	-0.005	96	436062	50.0	52.1	
52 2-Nitrophenol	139	5.376	5.376	0.000	96	218608	50.0	52.8	
55 Bis(2-chloroethoxy)methane	93	5.488	5.493	-0.005	99	533953	50.0	51.6	
56 Benzoic acid	105	5.526	5.546	-0.020	88	710790	100.0	103.1	
58 2,4-Dichlorophenol	162	5.616	5.616	0.000	95	337076	50.0	51.8	
59 1,2,4-Trichlorobenzene	180	5.702	5.701	0.001	93	370634	50.0	51.4	
60 Naphthalene	128	5.777	5.782	-0.005	98	1156147	50.0	52.1	
61 4-Chloroaniline	127	5.819	5.819	0.000	96	527450	50.0	52.3	
63 Hexachlorobutadiene	225	5.910	5.910	0.000	97	198109	50.0	51.0	
66 Caprolactam	55	6.145	6.161	-0.016	83	203284	50.0	52.2	
68 4-Chloro-3-methylphenol	107	6.300	6.305	-0.005	96	378041	50.0	51.9	
70 2-Methylnaphthalene	142	6.460	6.465	-0.005	93	802055	50.0	52.4	
71 1-Methylnaphthalene	142	6.562	6.561	0.001	94	713550	50.0	52.3	
72 Hexachlorocyclopentadiene	237	6.631	6.636	-0.005	95	198083	50.0	54.7	
73 1,2,4,5-Tetrachlorobenzene	216	6.637	6.636	0.001	97	359165	50.0	52.0	
75 2,4,6-Trichlorophenol	196	6.744	6.743	0.001	94	252921	50.0	52.8	
76 2,4,5-Trichlorophenol	196	6.786	6.786	0.000	95	273140	50.0	51.8	
79 1,1'-Biphenyl	154	6.920	6.925	-0.005	95	937272	50.0	52.0	
81 2-Chloronaphthalene	162	6.947	6.951	-0.004	96	730665	50.0	51.6	
83 2-Nitroaniline	65	7.032	7.037	-0.005	82	271266	50.0	51.9	
86 Dimethyl phthalate	163	7.214	7.213	0.001	98	828716	50.0	52.0	
87 1,3-Dinitrobenzene	168	7.240	7.240	0.000	88	153140	50.0	53.4	
88 2,6-Dinitrotoluene	165	7.272	7.272	0.000	96	209435	50.0	51.6	
93 Acenaphthylene	152	7.363	7.368	-0.005	99	1235685	50.0	52.3	
95 3-Nitroaniline	138	7.443	7.443	0.000	95	249756	50.0	51.2	
97 Acenaphthene	153	7.540	7.539	0.001	95	714617	50.0	51.3	
98 2,4-Dinitrophenol	184	7.550	7.550	0.000	85	254141	100.0	106.5	
99 4-Nitrophenol	109	7.620	7.625	-0.005	93	260551	100.0	105.5	
103 2,4-Dinitrotoluene	165	7.678	7.678	0.000	92	281521	50.0	51.9	
104 Dibenzofuran	168	7.710	7.710	0.000	98	1092256	50.0	51.8	
107 2,3,4,6-Tetrachlorophenol	232	7.833	7.838	-0.005	72	219733	50.0	53.3	
108 Diethyl phthalate	149	7.919	7.918	0.001	98	827308	50.0	51.6	
109 4-Chlorophenyl phenyl ethe	204	8.042	8.041	0.001	91	413836	50.0	51.7	
110 Fluorene	166	8.052	8.057	-0.005	95	862037	50.0	51.4	
112 4-Nitroaniline	138	8.058	8.063	-0.005	86	244054	50.0	50.5	
113 4,6-Dinitro-2-methylphenol	198	8.095	8.100	-0.005	85	347354	100.0	103.9	
114 N-Nitrosodiphenylamine	169	8.159	8.159	0.000	61	1231758	100.0	103.8	
115 Azobenzene	77	8.202	8.202	0.000	97	1016039	50.0	51.8	
116 1,2-Diphenylhydrazine	77	8.202	8.202	0.000	97	1016039	50.5	52.4	
118 4-Bromophenyl phenyl ether	248	8.533	8.533	0.000	67	247856	50.0	51.5	
121 Hexachlorobenzene	284	8.624	8.624	0.000	94	242638	50.0	50.9	
122 Pentachlorophenol	266	8.811	8.811	0.001	92	281430	100.0	103.2	
124 Phenanthrene	178	9.019	9.019	0.000	98	1278840	50.0	51.1	
125 Anthracene	178	9.067	9.072	-0.005	98	1318530	50.0	52.1	
126 Carbazole	167	9.217	9.222	-0.005	95	1278540	50.0	51.5	
130 Di-n-butyl phthalate	149	9.554	9.558	-0.004	100	1435989	50.0	52.3	
134 Fluoranthene	202	10.349	10.349	0.000	98	1445909	50.0	51.7	
136 Pyrene	202	10.670	10.670	0.000	97	1492433	50.0	51.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.632	11.636	-0.004	98	496868	50.0	52.4	
139 Butyl benzyl phthalate	149	11.749	11.754	-0.005	97	673463	50.0	51.8	
140 3,3'-Dichlorobenzidine	252	12.876	12.881	-0.005	74	490944	50.0	52.0	
141 Benzo[a]anthracene	228	12.924	12.929	-0.005	98	1437211	50.0	50.3	
142 Bis(2-ethylhexyl) phthalat	149	13.095	13.100	-0.005	98	907503	50.0	50.5	
143 Chrysene	228	13.005	13.009	-0.004	98	1380461	50.0	50.4	
145 Di-n-octyl phthalate	149	14.864	14.863	0.001	99	1585111	50.0	51.1	
147 Benzo[b]fluoranthene	252	15.724	15.739	-0.015	98	1320338	50.0	50.9	
148 Benzo[k]fluoranthene	252	15.804	15.814	-0.010	99	1343442	50.0	51.9	
149 Benzo[a]pyrene	252	16.493	16.509	-0.016	79	1197772	50.0	51.3	
151 Indeno[1,2,3-cd]pyrene	276	19.885	19.901	-0.016	98	1111659	50.0	49.0	
152 Dibenz(a,h)anthracene	278	19.981	19.992	-0.011	93	1090304	50.0	50.5	
153 Benzo[g,h,i]perylene	276	20.617	20.633	-0.016	98	1158063	50.0	50.4	

Reagents:

MS-HSLA050_00021

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13298.D

Injection Date: 14-Nov-2015 10:17:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD050 HSL

Worklist Smp#: 7

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

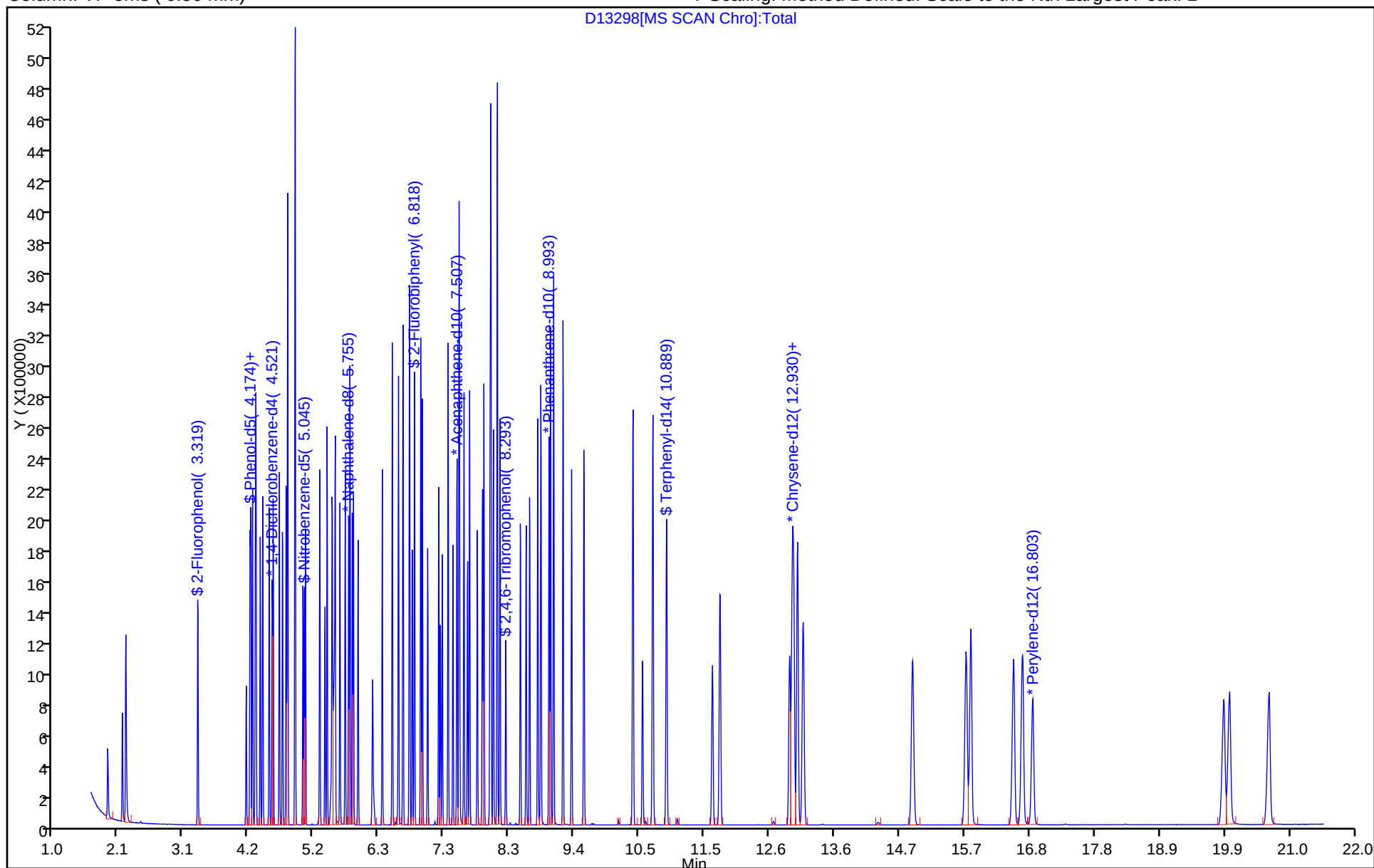
ALS Bottle#: 6

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13299.D
 Lims ID: STD120 HSL
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 14-Nov-2015 10:44:30 ALS Bottle#: 7 Worklist Smp#: 8
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD120 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:49 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:13:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.524	4.521	0.003	96	205799	40.0	40.0	
* 2 Naphthalene-d8	136	5.758	5.760	-0.002	99	791404	40.0	40.0	
* 3 Acenaphthene-d10	164	7.510	7.507	0.003	91	505578	40.0	40.0	
* 4 Phenanthrene-d10	188	8.995	8.992	0.003	97	865315	40.0	40.0	
* 5 Chrysene-d12	240	12.953	12.951	0.002	98	826161	40.0	40.0	
* 6 Perylene-d12	264	16.805	16.802	0.003	97	775498	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.322	3.319	0.003	92	919881	120.0	118.0	
\$ 8 Phenol-d5	99	4.171	4.168	0.003	98	1233740	120.0	117.8	
\$ 9 Nitrobenzene-d5	82	5.047	5.044	0.003	87	1117835	120.0	117.5	
\$ 10 2-Fluorobiphenyl	172	6.826	6.823	0.003	99	1835934	120.0	111.9	
\$ 11 2,4,6-Tribromophenol	330	8.300	8.298	0.002	93	232177	120.0	120.5	
\$ 12 Terphenyl-d14	244	10.897	10.894	0.003	99	2024214	120.0	116.0	
13 1,4-Dioxane	88	1.863	1.866	-0.003	92	429919	120.0	115.2	
14 N-Nitrosodimethylamine	74	2.109	2.106	0.003	92	692357	120.0	118.5	
15 Pyridine	79	2.157	2.160	-0.003	97	1213589	120.0	119.1	
24 Phenol	94	4.182	4.179	0.003	98	1272578	120.0	116.9	
25 Aniline	93	4.208	4.206	0.002	99	1639573	120.0	118.4	
26 Bis(2-chloroethyl)ether	93	4.256	4.248	0.008	96	900006	120.0	113.6	
27 2-Chlorophenol	128	4.331	4.328	0.003	97	871414	120.0	116.8	
31 1,3-Dichlorobenzene	146	4.475	4.473	0.002	97	900567	120.0	115.6	
32 1,4-Dichlorobenzene	146	4.540	4.537	0.003	92	901117	120.0	113.8	
34 Benzyl alcohol	108	4.641	4.638	0.003	94	676784	120.0	119.2	
35 1,2-Dichlorobenzene	146	4.689	4.692	-0.003	95	877375	120.0	114.6	
36 2-Methylphenol	108	4.753	4.750	0.003	93	932748	120.0	117.6	
38 2,2'-oxybis[1-chloropropan	45	4.775	4.772	0.003	92	1037873	120.0	113.5	
40 3 & 4 Methylphenol	108	4.903	4.895	0.008	78	839740	120.0	110.1	
41 3-Methylphenol	108	4.903	4.895	0.008	76	839740	120.0	110.1	
42 4-Methylphenol	108	4.903	4.895	0.008	71	839740	120.0	110.1	
43 N-Nitrosodi-n-propylamine	70	4.897	4.895	0.002	81	655439	120.0	112.8	
44 Acetophenone	105	4.897	4.895	0.002	85	1131518	120.0	108.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.020	5.018	0.002	94	369187	120.0	115.8	
47 Nitrobenzene	77	5.068	5.060	0.008	85	1068601	120.0	116.2	
48 2,6-Dichlorophenol	162	5.838	5.835	0.003	97	718321	120.0	116.0	
50 Isophorone	82	5.298	5.295	0.003	99	1979340	120.0	115.9	
51 2,4-Dimethylphenol	107	5.416	5.413	0.003	96	931036	120.0	116.2	
52 2-Nitrophenol	139	5.378	5.376	0.002	97	479803	120.0	121.0	
55 Bis(2-chloroethoxy)methane	93	5.496	5.493	0.003	98	1136179	120.0	114.7	
56 Benzoic acid	105	5.571	5.546	0.025	87	1667324	240.0	244.7	
58 2,4-Dichlorophenol	162	5.619	5.616	0.003	96	730275	120.0	117.1	
59 1,2,4-Trichlorobenzene	180	5.704	5.701	0.003	93	790916	120.0	114.6	
60 Naphthalene	128	5.784	5.782	0.002	97	2409566	120.0	113.3	
61 4-Chloroaniline	127	5.822	5.819	0.003	95	1143140	120.0	118.4	
63 Hexachlorobutadiene	225	5.912	5.910	0.002	95	426113	120.0	114.4	
66 Caprolactam	55	6.174	6.161	0.013	84	447696	120.0	120.1	M
68 4-Chloro-3-methylphenol	107	6.308	6.305	0.003	96	821314	120.0	117.7	
70 2-Methylnaphthalene	142	6.463	6.465	-0.002	93	1639848	120.0	111.8	
71 1-Methylnaphthalene	142	6.564	6.561	0.003	94	1486484	120.0	113.8	
72 Hexachlorocyclopentadiene	237	6.634	6.636	-0.002	95	436414	120.0	126.9	
73 1,2,4,5-Tetrachlorobenzene	216	6.639	6.636	0.003	97	738463	120.0	111.5	
75 2,4,6-Trichlorophenol	196	6.746	6.743	0.003	94	521854	120.0	114.8	
76 2,4,5-Trichlorophenol	196	6.789	6.786	0.003	95	595523	120.0	118.9	
79 1,1'-Biphenyl	154	6.927	6.925	0.002	95	1916541	120.0	111.9	
81 2-Chloronaphthalene	162	6.949	6.951	-0.002	97	1525979	120.0	113.5	
83 2-Nitroaniline	65	7.040	7.037	0.003	82	594551	120.0	119.8	
86 Dimethyl phthalate	163	7.221	7.213	0.008	98	1726915	120.0	114.1	
87 1,3-Dinitrobenzene	168	7.243	7.240	0.003	88	340770	120.0	125.2	
88 2,6-Dinitrotoluene	165	7.275	7.272	0.003	95	454527	120.0	118.0	
93 Acenaphthylene	152	7.366	7.368	-0.002	99	2564045	120.0	114.3	
95 3-Nitroaniline	138	7.451	7.443	0.008	95	552310	120.0	119.3	
97 Acenaphthene	153	7.542	7.539	0.003	95	1457208	120.0	110.2	
98 2,4-Dinitrophenol	184	7.558	7.550	0.008	83	599606	240.0	264.6	
99 4-Nitrophenol	109	7.633	7.625	0.008	93	561820	240.0	239.7	
103 2,4-Dinitrotoluene	165	7.686	7.678	0.008	92	613277	120.0	119.1	
104 Dibenzofuran	168	7.713	7.710	0.003	98	2274795	120.0	113.6	
107 2,3,4,6-Tetrachlorophenol	232	7.841	7.838	0.003	72	483103	120.0	123.3	
108 Diethyl phthalate	149	7.921	7.918	0.003	98	1744049	120.0	114.6	
109 4-Chlorophenyl phenyl ethe	204	8.044	8.041	0.003	91	855352	120.0	112.5	
110 Fluorene	166	8.055	8.057	-0.002	94	1759105	120.0	110.5	
112 4-Nitroaniline	138	8.071	8.063	0.008	84	539393	120.0	117.5	
113 4,6-Dinitro-2-methylphenol	198	8.108	8.100	0.008	89	766258	240.0	242.7	
114 N-Nitrosodiphenylamine	169	8.167	8.159	0.008	62	2443557	240.0	221.4	
115 Azobenzene	77	8.204	8.202	0.002	97	2141329	120.0	115.0	
116 1,2-Diphenylhydrazine	77	8.204	8.202	0.002	97	2141329	121.3	116.2	
118 4-Bromophenyl phenyl ether	248	8.535	8.533	0.002	66	528606	120.0	118.1	
121 Hexachlorobenzene	284	8.626	8.624	0.002	94	514949	120.0	116.3	
122 Pentachlorophenol	266	8.813	8.811	0.003	93	635637	240.0	244.5	
124 Phenanthrene	178	9.022	9.019	0.003	98	2615687	120.0	112.4	
125 Anthracene	178	9.075	9.072	0.003	98	2684187	120.0	114.0	
126 Carbazole	167	9.225	9.222	0.003	95	2625258	120.0	113.8	
130 Di-n-butyl phthalate	149	9.561	9.558	0.003	100	2972709	120.0	116.4	
134 Fluoranthene	202	10.352	10.349	0.003	99	3023450	120.0	116.3	
136 Pyrene	202	10.678	10.670	0.008	97	3146915	120.0	116.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.639	11.636	0.003	97	991137	120.0	113.1	
139 Butyl benzyl phthalate	149	11.757	11.754	0.003	97	1450009	120.0	120.6	
140 3,3'-Dichlorobenzidine	252	12.889	12.881	0.008	74	1058121	120.0	121.2	
141 Benzo[a]anthracene	228	12.932	12.929	0.003	99	3102751	120.0	117.3	
142 Bis(2-ethylhexyl) phthalat	149	13.098	13.100	-0.002	98	1979010	120.0	119.1	
143 Chrysene	228	13.018	13.009	0.009	98	2985642	120.0	117.9	
145 Di-n-octyl phthalate	149	14.871	14.863	0.008	99	3552079	120.0	123.9	
147 Benzo[b]fluoranthene	252	15.747	15.739	0.008	98	2934013	120.0	119.9	
148 Benzo[k]fluoranthene	252	15.827	15.814	0.013	99	2908368	120.0	119.2	
149 Benzo[a]pyrene	252	16.517	16.509	0.008	79	2617710	120.0	118.8	
151 Indeno[1,2,3-cd]pyrene	276	19.920	19.901	0.019	99	2556722	120.0	121.9	
152 Dibenz(a,h)anthracene	278	20.010	19.992	0.018	93	2503372	120.0	123.1	
153 Benzo[g,h,i]perylene	276	20.651	20.633	0.018	98	2609391	120.0	120.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA120_00020

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13299.D

Injection Date: 14-Nov-2015 10:44:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD120 HSL

Worklist Smp#: 8

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

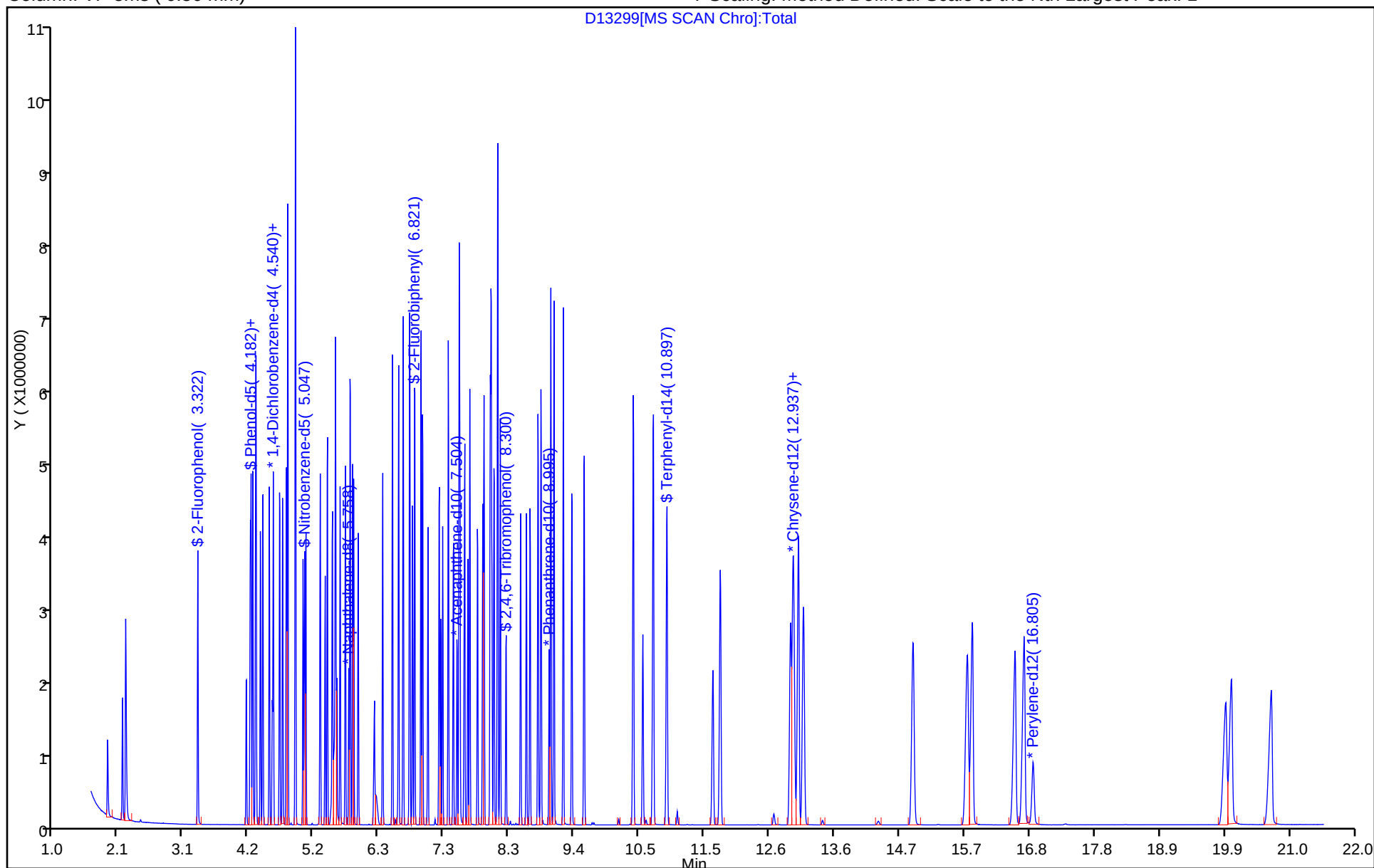
ALS Bottle#: 7

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



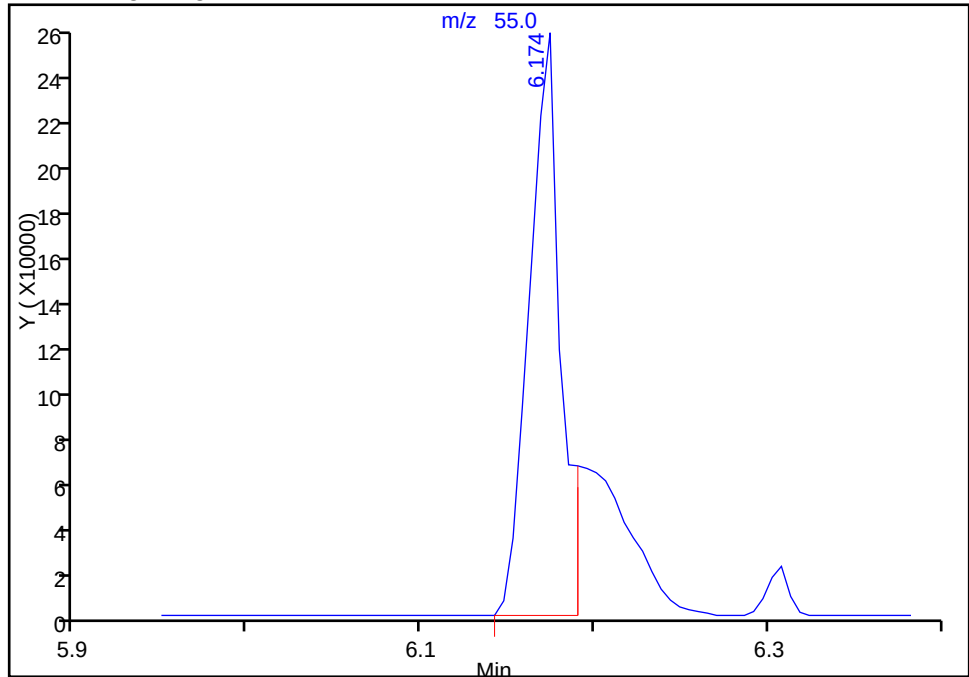
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13299.D
Injection Date: 14-Nov-2015 10:44:30 Instrument ID: SMS_D
Lims ID: STD120 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

66 Caprolactam, CAS: 105-60-2

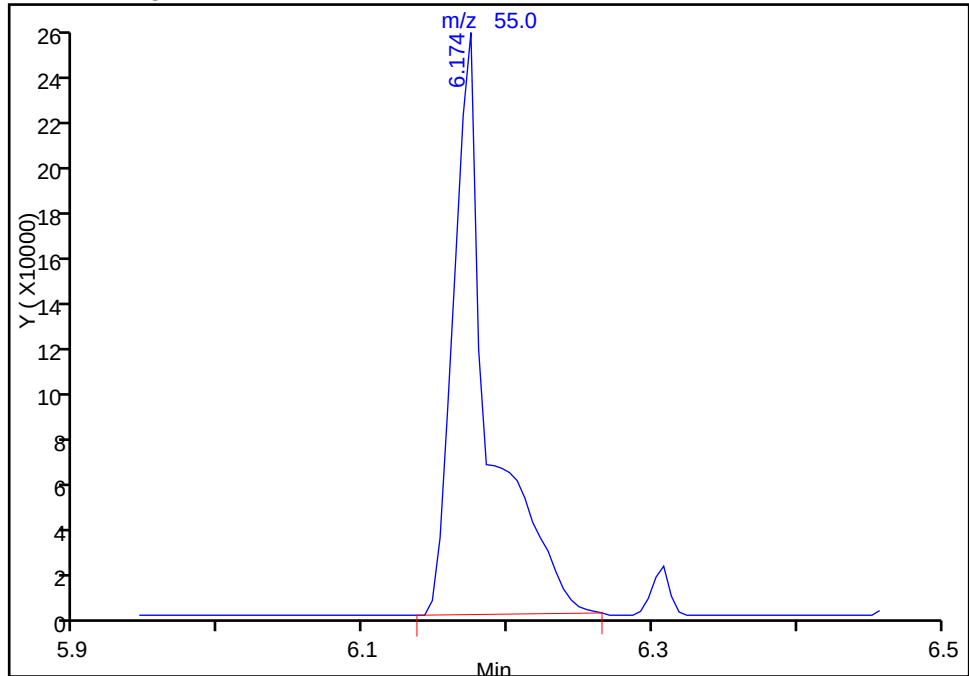
RT: 6.17
Area: 326529
Amount: 101.2080
Amount Units: ug/ml

Processing Integration Results



RT: 6.17
Area: 447696
Amount: 120.0926
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 17-Nov-2015 09:13:52
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13300.D
 Lims ID: STD160 HSL
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 14-Nov-2015 11:11:30 ALS Bottle#: 8 Worklist Smp#: 9
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD160 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:52 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:15:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.523	4.521	0.002	97	217721	40.0	40.0	
* 2 Naphthalene-d8	136	5.762	5.760	0.002	100	842224	40.0	40.0	
* 3 Acenaphthene-d10	164	7.509	7.507	0.002	90	527863	40.0	40.0	
* 4 Phenanthrene-d10	188	8.994	8.992	0.002	97	918299	40.0	40.0	
* 5 Chrysene-d12	240	12.964	12.951	0.013	98	852068	40.0	40.0	
* 6 Perylene-d12	264	16.815	16.802	0.013	97	812178	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.321	3.319	0.002	92	1253451	160.0	151.9	
\$ 8 Phenol-d5	99	4.170	4.168	0.002	98	1675616	160.0	151.2	
\$ 9 Nitrobenzene-d5	82	5.052	5.044	0.008	86	1534706	160.0	151.5	
\$ 10 2-Fluorobiphenyl	172	6.825	6.823	0.002	99	2420223	160.0	141.3	
\$ 11 2,4,6-Tribromophenol	330	8.305	8.298	0.007	93	320272	160.0	159.2	
\$ 12 Terphenyl-d14	244	10.896	10.894	0.002	99	2737865	160.0	152.1	
13 1,4-Dioxane	88	1.868	1.866	0.002	91	589155	160.0	149.2	
14 N-Nitrosodimethylamine	74	2.108	2.106	0.002	92	966808	160.0	156.5	
15 Pyridine	79	2.156	2.160	-0.004	97	1682038	160.0	156.0	
24 Phenol	94	4.186	4.179	0.007	97	1746492	160.0	151.7	
25 Aniline	93	4.213	4.206	0.007	98	2196168	160.0	150.0	
26 Bis(2-chloroethyl)ether	93	4.256	4.248	0.008	95	1181523	160.0	140.9	
27 2-Chlorophenol	128	4.336	4.328	0.008	97	1173910	160.0	148.7	
31 1,3-Dichlorobenzene	146	4.480	4.473	0.007	96	1200922	160.0	145.7	
32 1,4-Dichlorobenzene	146	4.544	4.537	0.007	92	1208275	160.0	144.2	
34 Benzyl alcohol	108	4.646	4.638	0.008	94	926646	160.0	154.2	
35 1,2-Dichlorobenzene	146	4.694	4.692	0.002	95	1179178	160.0	145.5	
36 2-Methylphenol	108	4.753	4.750	0.003	94	1251379	160.0	149.2	
38 2,2'-oxybis[1-chloropropan	45	4.774	4.772	0.002	95	1354557	160.0	140.0	
40 3 & 4 Methylphenol	108	4.902	4.895	0.007	76	1077350	160.0	133.5	
41 3-Methylphenol	108	4.902	4.895	0.007	76	1077350	160.0	133.5	
42 4-Methylphenol	108	4.902	4.895	0.007	71	1077350	160.0	133.5	
43 N-Nitrosodi-n-propylamine	70	4.902	4.895	0.007	82	849208	160.0	138.1	
44 Acetophenone	105	4.902	4.895	0.007	82	1467041	160.0	133.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.020	5.018	0.002	96	508795	160.0	150.9	
47 Nitrobenzene	77	5.068	5.060	0.008	86	1444767	160.0	147.6	
48 2,6-Dichlorophenol	162	5.843	5.835	0.008	96	967009	160.0	146.7	
50 Isophorone	82	5.303	5.295	0.008	99	2705239	160.0	148.8	
51 2,4-Dimethylphenol	107	5.415	5.413	0.002	97	1250429	160.0	146.6	
52 2-Nitrophenol	139	5.378	5.376	0.002	97	659918	160.0	156.3	
55 Bis(2-chloroethoxy)methane	93	5.495	5.493	0.002	99	1545100	160.0	146.5	
56 Benzoic acid	105	5.591	5.546	0.045	88	2320763	320.0	318.4	
58 2,4-Dichlorophenol	162	5.624	5.616	0.008	95	989822	160.0	149.1	
59 1,2,4-Trichlorobenzene	180	5.704	5.701	0.003	93	1069813	160.0	145.6	
60 Naphthalene	128	5.784	5.782	0.002	98	3145819	160.0	139.0	
61 4-Chloroaniline	127	5.827	5.819	0.007	95	1507198	160.0	146.7	
63 Hexachlorobutadiene	225	5.912	5.910	0.002	96	573670	160.0	144.8	
66 Caprolactam	55	6.184	6.161	0.023	84	621446	160.0	156.6	M
68 4-Chloro-3-methylphenol	107	6.313	6.305	0.008	96	1098805	160.0	148.0	
70 2-Methylnaphthalene	142	6.468	6.465	0.003	93	2157986	160.0	138.3	
71 1-Methylnaphthalene	142	6.564	6.561	0.003	94	1953505	160.0	140.5	
72 Hexachlorocyclopentadiene	237	6.639	6.636	0.002	96	590840	160.0	164.5	
73 1,2,4,5-Tetrachlorobenzene	216	6.644	6.636	0.008	97	964126	160.0	136.8	
75 2,4,6-Trichlorophenol	196	6.751	6.743	0.008	94	693366	160.0	146.1	
76 2,4,5-Trichlorophenol	196	6.793	6.786	0.007	95	813265	160.0	155.5	
79 1,1'-Biphenyl	154	6.927	6.925	0.002	96	2504014	160.0	140.0	
81 2-Chloronaphthalene	162	6.954	6.951	0.003	96	2020205	160.0	144.0	
83 2-Nitroaniline	65	7.045	7.037	0.007	81	806969	160.0	155.8	
86 Dimethyl phthalate	163	7.226	7.213	0.013	98	2300784	160.0	145.6	
87 1,3-Dinitrobenzene	168	7.248	7.240	0.008	87	465489	160.0	163.8	
88 2,6-Dinitrotoluene	165	7.280	7.272	0.008	96	615748	160.0	153.2	
93 Acenaphthylene	152	7.370	7.368	0.002	99	3369122	160.0	143.8	
95 3-Nitroaniline	138	7.456	7.443	0.013	95	749840	160.0	155.1	
97 Acenaphthene	153	7.547	7.539	0.008	95	1904181	160.0	138.0	
98 2,4-Dinitrophenol	184	7.563	7.550	0.013	83	810168	320.0	342.4	
99 4-Nitrophenol	109	7.637	7.625	0.012	94	775821	320.0	317.0	
103 2,4-Dinitrotoluene	165	7.691	7.678	0.013	92	823251	160.0	153.1	
104 Dibenzofuran	168	7.718	7.710	0.008	98	2976003	160.0	142.3	
107 2,3,4,6-Tetrachlorophenol	232	7.840	7.838	0.002	72	640957	160.0	156.7	
108 Diethyl phthalate	149	7.926	7.918	0.008	98	2277202	160.0	143.3	
109 4-Chlorophenyl phenyl ethe	204	8.043	8.041	0.002	92	1142120	160.0	143.8	
110 Fluorene	166	8.060	8.057	0.003	95	2300631	160.0	138.5	
112 4-Nitroaniline	138	8.081	8.063	0.018	83	742399	160.0	155.0	
113 4,6-Dinitro-2-methylphenol	198	8.113	8.100	0.013	85	1036854	320.0	308.8	
114 N-Nitrosodiphenylamine	169	8.172	8.159	0.013	62	3140790	320.0	268.2	
115 Azobenzene	77	8.209	8.202	0.007	98	2846388	160.0	146.4	
116 1,2-Diphenylhydrazine	77	8.209	8.202	0.007	98	2846388	161.8	148.0	
118 4-Bromophenyl phenyl ether	248	8.535	8.533	0.002	66	710316	160.0	149.6	
121 Hexachlorobenzene	284	8.631	8.624	0.007	95	683501	160.0	145.4	
122 Pentachlorophenol	266	8.818	8.811	0.008	93	858389	320.0	310.0	
124 Phenanthrene	178	9.026	9.019	0.007	98	3442279	160.0	139.4	
125 Anthracene	178	9.075	9.072	0.003	98	3539803	160.0	141.7	
126 Carbazole	167	9.229	9.222	0.007	95	3455891	160.0	141.1	
130 Di-n-butyl phthalate	149	9.561	9.558	0.003	100	3938020	160.0	145.3	
134 Fluoranthene	202	10.357	10.349	0.008	99	4011027	160.0	145.3	
136 Pyrene	202	10.683	10.670	0.012	97	4230564	160.0	151.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.644	11.636	0.008	98	1304370	160.0	144.3	
139 Butyl benzyl phthalate	149	11.762	11.754	0.008	97	2022980	160.0	163.1	
140 3,3'-Dichlorobenzidine	252	12.899	12.881	0.018	74	1412337	160.0	156.9	
141 Benzo[a]anthracene	228	12.942	12.929	0.013	99	4201783	160.0	154.0	
142 Bis(2-ethylhexyl) phthalat	149	13.102	13.100	0.002	98	2778878	160.0	162.1	
143 Chrysene	228	13.028	13.009	0.019	98	4040261	160.0	154.7	
145 Di-n-octyl phthalate	149	14.871	14.863	0.008	99	4957832	160.0	167.7	
147 Benzo[b]fluoranthene	252	15.752	15.739	0.013	98	4142519	160.0	161.6	
148 Benzo[k]fluoranthene	252	15.843	15.814	0.029	99	3866328	160.0	151.3	
149 Benzo[a]pyrene	252	16.527	16.509	0.018	79	3592590	160.0	155.7	
151 Indeno[1,2,3-cd]pyrene	276	19.935	19.901	0.034	99	3548466	160.0	164.1	M
152 Dibenz(a,h)anthracene	278	20.031	19.992	0.039	93	3362881	160.0	157.9	
153 Benzo[g,h,i]perylene	276	20.678	20.633	0.045	98	3609019	160.0	159.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA160_00020

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13300.D

Injection Date: 14-Nov-2015 11:11:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD160 HSL

Worklist Smp#: 9

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

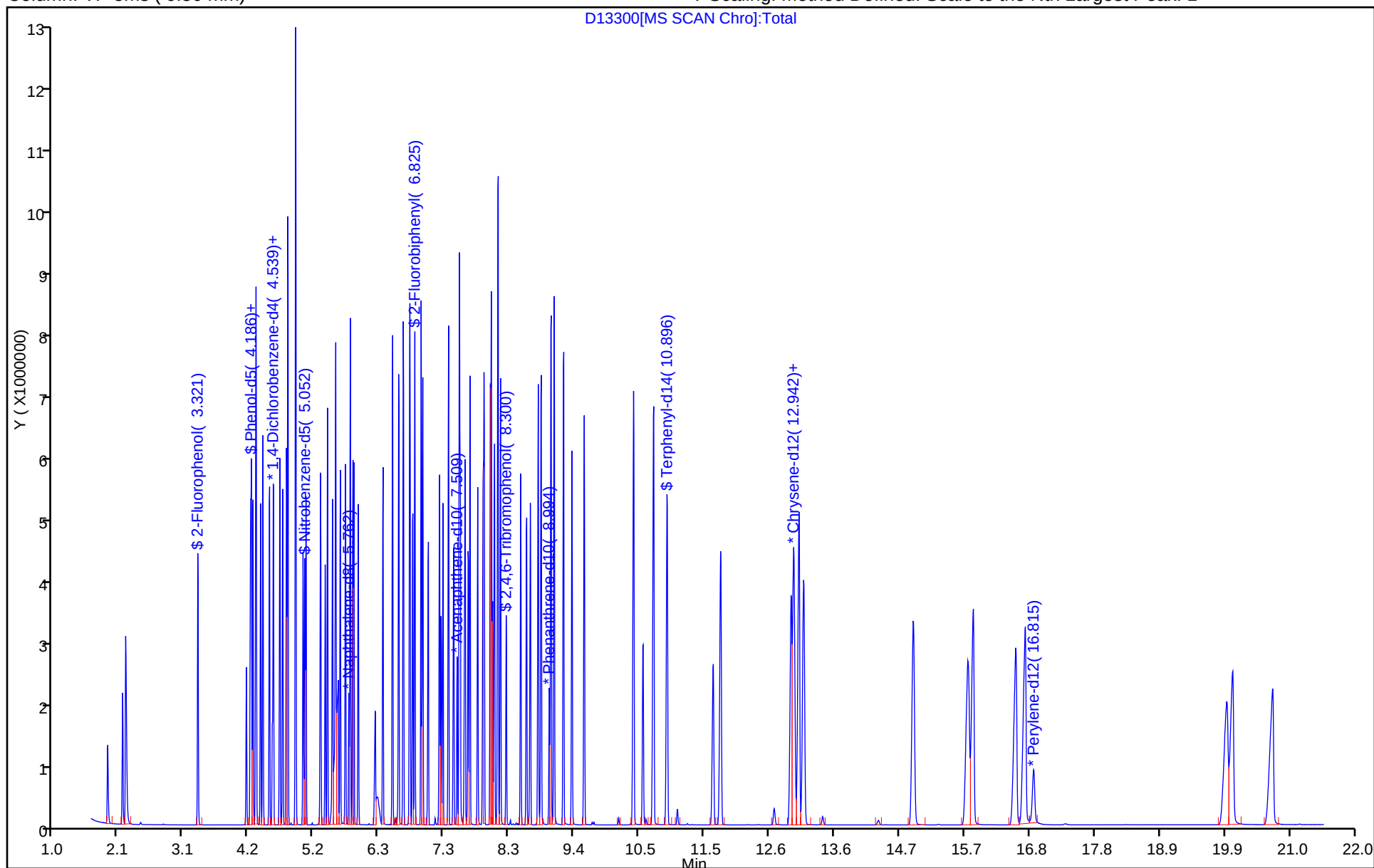
ALS Bottle#: 8

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



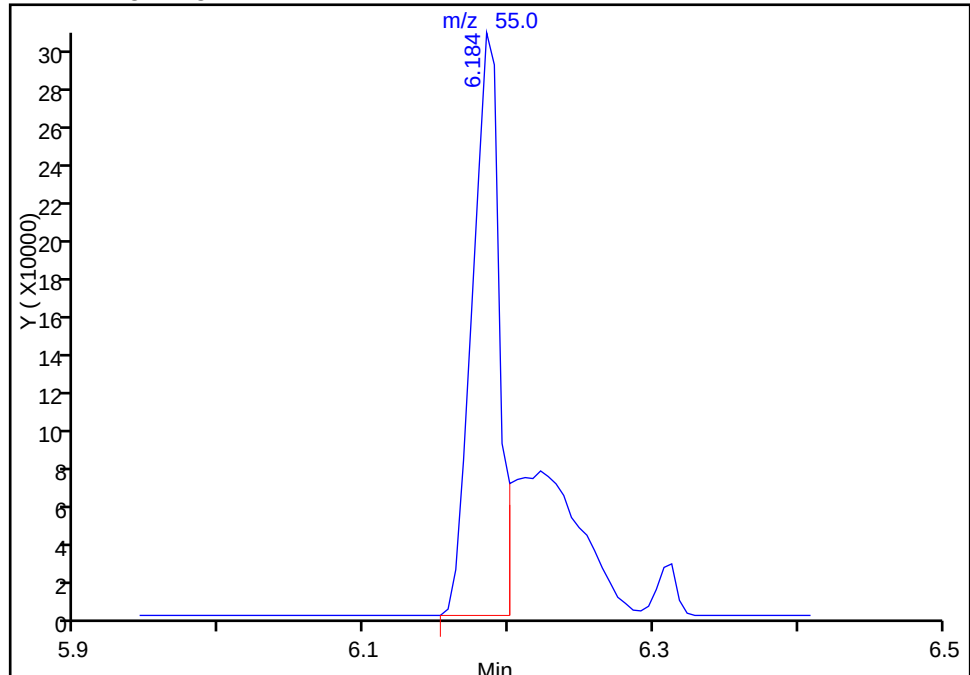
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13300.D
Injection Date: 14-Nov-2015 11:11:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

66 Caprolactam, CAS: 105-60-2

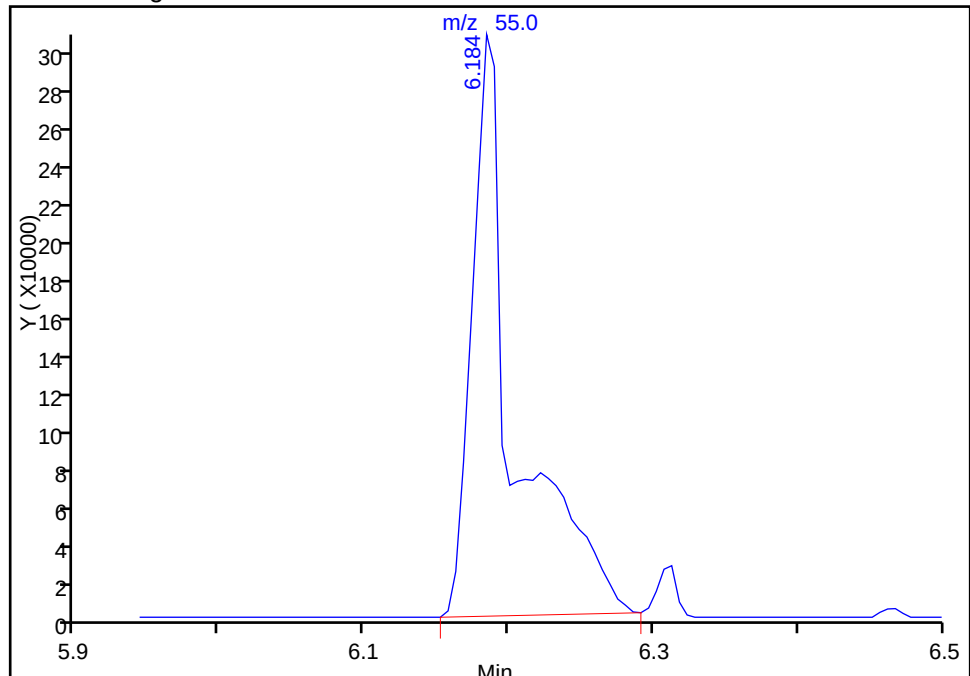
RT: 6.18
Area: 398359
Amount: 111.6535
Amount Units: ug/ml

Processing Integration Results



RT: 6.18
Area: 621446
Amount: 156.6416
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 17-Nov-2015 09:15:17
Audit Action: Manually Integrated
Audit Reason: Split Peak

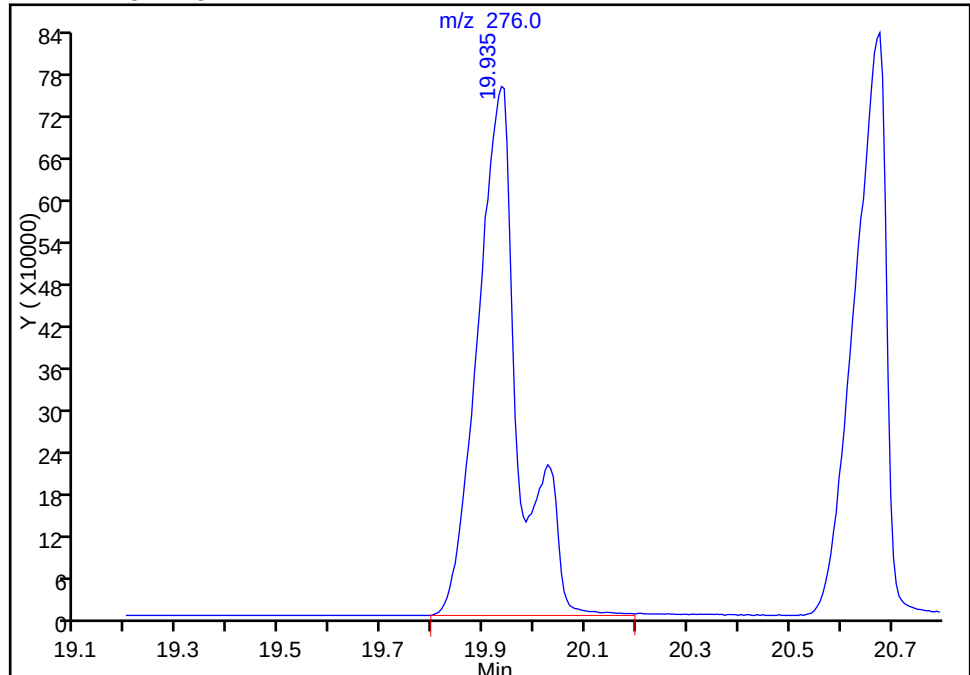
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13300.D
Injection Date: 14-Nov-2015 11:11:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

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

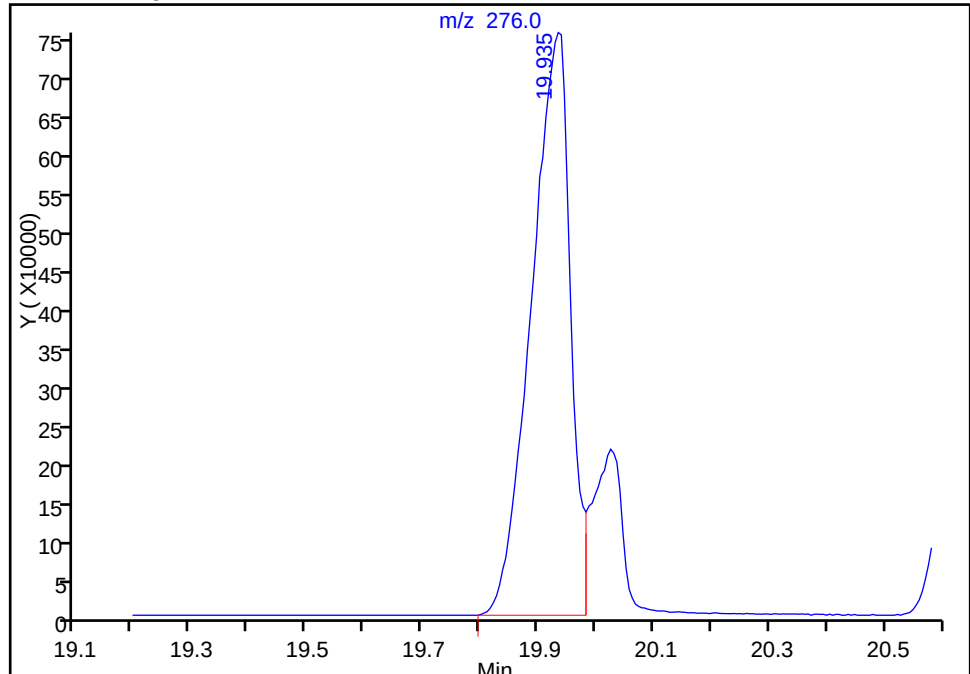
RT: 19.94
Area: 4295713
Amount: 192.6876
Amount Units: ug/ml

Processing Integration Results



RT: 19.94
Area: 3548466
Amount: 164.0727
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 17-Nov-2015 09:15:17
Audit Action: Split an Integrated Peak
Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Lims ID: STD200 HSL
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 14-Nov-2015 11:38:30 ALS Bottle#: 9 Worklist Smp#: 10
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: STD200 HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:54 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:16:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.524	4.521	0.003	96	211283	40.0	40.0	
* 2 Naphthalene-d8	136	5.764	5.760	0.004	99	808732	40.0	40.0	
* 3 Acenaphthene-d10	164	7.510	7.507	0.003	91	509618	40.0	40.0	
* 4 Phenanthrene-d10	188	9.001	8.992	0.009	97	876726	40.0	40.0	
* 5 Chrysene-d12	240	12.965	12.951	0.014	98	811423	40.0	40.0	
* 6 Perylene-d12	264	16.822	16.802	0.020	97	784184	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.322	3.319	0.003	93	1460183	200.0	182.4	
\$ 8 Phenol-d5	99	4.177	4.168	0.009	98	1974612	200.0	183.6	
\$ 9 Nitrobenzene-d5	82	5.053	5.044	0.009	87	1821493	200.0	187.3	
\$ 10 2-Fluorobiphenyl	172	6.827	6.823	0.004	99	2819323	200.0	170.5	
\$ 11 2,4,6-Tribromophenol	330	8.306	8.298	0.008	93	377651	200.0	194.5	
\$ 12 Terphenyl-d14	244	10.903	10.894	0.009	99	3173762	200.0	185.2	
13 1,4-Dioxane	88	1.864	1.866	-0.002	91	703766	200.0	183.7	
14 N-Nitrosodimethylamine	74	2.109	2.106	0.003	92	1157216	200.0	193.0	
15 Pyridine	79	2.158	2.160	-0.002	98	1999325	200.0	191.1	
24 Phenol	94	4.188	4.179	0.009	98	2053459	200.0	183.8	
25 Aniline	93	4.214	4.206	0.008	98	2697675	200.0	189.8	
26 Bis(2-chloroethyl)ether	93	4.257	4.248	0.009	95	1363299	200.0	167.5	
27 2-Chlorophenol	128	4.337	4.328	0.009	97	1386659	200.0	181.0	
31 1,3-Dichlorobenzene	146	4.476	4.473	0.003	96	1408847	200.0	176.2	
32 1,4-Dichlorobenzene	146	4.540	4.537	0.003	91	1395925	200.0	171.7	
34 Benzyl alcohol	108	4.647	4.638	0.009	94	1102145	200.0	189.1	
35 1,2-Dichlorobenzene	146	4.695	4.692	0.003	95	1368898	200.0	174.1	
36 2-Methylphenol	108	4.754	4.750	0.004	94	1487765	200.0	182.8	
38 2,2'-oxybis[1-chloropropan	45	4.775	4.772	0.003	94	1554488	200.0	165.6	
40 3 & 4 Methylphenol	108	4.909	4.895	0.014	81	1237383	200.0	158.1	
41 3-Methylphenol	108	4.909	4.895	0.014	91	1237383	200.0	158.1	
42 4-Methylphenol	108	4.909	4.895	0.014	87	1237383	200.0	158.1	
43 N-Nitrosodi-n-propylamine	70	4.903	4.895	0.008	68	991518	200.0	166.2	
44 Acetophenone	105	4.903	4.895	0.008	94	1678636	200.0	157.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.021	5.018	0.003	94	591081	200.0	180.6	
47 Nitrobenzene	77	5.069	5.060	0.009	86	1725651	200.0	183.6	
48 2,6-Dichlorophenol	162	5.844	5.835	0.009	96	1122531	200.0	177.4	
50 Isophorone	82	5.304	5.295	0.009	99	3228887	200.0	184.9	
51 2,4-Dimethylphenol	107	5.416	5.413	0.003	97	1482206	200.0	181.0	
52 2-Nitrophenol	139	5.379	5.376	0.003	97	784099	200.0	193.4	
55 Bis(2-chloroethoxy)methane	93	5.496	5.493	0.003	99	1825345	200.0	180.3	
56 Benzoic acid	105	5.603	5.546	0.057	89	2798953	400.0	398.5	
58 2,4-Dichlorophenol	162	5.625	5.616	0.009	95	1158715	200.0	181.8	
59 1,2,4-Trichlorobenzene	180	5.705	5.701	0.004	93	1243352	200.0	176.2	
60 Naphthalene	128	5.785	5.782	0.003	98	3673763	200.0	169.0	
61 4-Chloroaniline	127	5.828	5.819	0.009	95	1764973	200.0	178.9	
63 Hexachlorobutadiene	225	5.913	5.910	0.003	95	670268	200.0	176.1	
66 Caprolactam	55	6.196	6.161	0.035	84	780069	200.0	204.8	M
68 4-Chloro-3-methylphenol	107	6.314	6.305	0.009	96	1302849	200.0	182.7	
70 2-Methylnaphthalene	142	6.469	6.465	0.004	93	2498818	200.0	166.7	
71 1-Methylnaphthalene	142	6.565	6.561	0.004	94	2258828	200.0	169.2	
72 Hexachlorocyclopentadiene	237	6.640	6.636	0.004	96	695766	200.0	200.7	
73 1,2,4,5-Tetrachlorobenzene	216	6.645	6.636	0.009	97	1111801	200.0	164.3	
75 2,4,6-Trichlorophenol	196	6.752	6.743	0.009	94	800083	200.0	174.6	
76 2,4,5-Trichlorophenol	196	6.795	6.786	0.009	95	949099	200.0	188.0	
79 1,1'-Biphenyl	154	6.928	6.925	0.003	96	2866989	200.0	166.1	
81 2-Chloronaphthalene	162	6.955	6.951	0.004	97	2367146	200.0	174.7	
83 2-Nitroaniline	65	7.046	7.037	0.009	82	945373	200.0	189.0	
86 Dimethyl phthalate	163	7.227	7.213	0.014	98	2699558	200.0	176.9	
87 1,3-Dinitrobenzene	168	7.254	7.240	0.014	88	557185	200.0	203.1	
88 2,6-Dinitrotoluene	165	7.286	7.272	0.014	96	719017	200.0	185.3	
93 Acenaphthylene	152	7.371	7.368	0.003	99	3896191	200.0	172.3	
95 3-Nitroaniline	138	7.457	7.443	0.014	94	885600	200.0	189.8	
97 Acenaphthene	153	7.548	7.539	0.009	95	2201826	200.0	165.2	
98 2,4-Dinitrophenol	184	7.564	7.550	0.014	83	947772	400.0	414.9	
99 4-Nitrophenol	109	7.644	7.625	0.019	94	896361	400.0	379.4	
103 2,4-Dinitrotoluene	165	7.692	7.678	0.014	92	963112	200.0	185.5	
104 Dibenzofuran	168	7.719	7.710	0.009	98	3449119	200.0	170.9	
107 2,3,4,6-Tetrachlorophenol	232	7.842	7.838	0.004	72	752124	200.0	190.5	
108 Diethyl phthalate	149	7.932	7.918	0.014	98	2595537	200.0	169.2	
109 4-Chlorophenyl phenyl ethe	204	8.045	8.041	0.004	92	1318326	200.0	171.9	
110 Fluorene	166	8.061	8.057	0.004	94	2656619	200.0	165.6	
112 4-Nitroaniline	138	8.087	8.063	0.024	85	890305	200.0	192.5	
113 4,6-Dinitro-2-methylphenol	198	8.119	8.100	0.019	88	1222306	400.0	380.6	
114 N-Nitrosodiphenylamine	169	8.173	8.159	0.014	62	3610433	400.0	322.9	
115 Azobenzene	77	8.210	8.202	0.008	98	3322765	200.0	177.0	
116 1,2-Diphenylhydrazine	77	8.210	8.202	0.008	98	3322765	202.2	178.9	
118 4-Bromophenyl phenyl ether	248	8.536	8.533	0.003	66	820080	200.0	180.8	
121 Hexachlorobenzene	284	8.632	8.624	0.008	96	791112	200.0	176.3	
122 Pentachlorophenol	266	8.819	8.811	0.009	94	1019419	400.0	384.6	
124 Phenanthrene	178	9.028	9.019	0.009	98	3954113	200.0	167.7	
125 Anthracene	178	9.076	9.072	0.004	98	4018991	200.0	168.5	
126 Carbazole	167	9.231	9.222	0.009	95	3985572	200.0	170.5	
130 Di-n-butyl phthalate	149	9.562	9.558	0.004	100	4471675	200.0	172.8	
134 Fluoranthene	202	10.358	10.349	0.009	99	4693015	200.0	178.1	
136 Pyrene	202	10.684	10.670	0.014	96	4912484	200.0	185.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.645	11.636	0.009	98	1434157	200.0	166.6	
139 Butyl benzyl phthalate	149	11.763	11.754	0.009	97	2332479	200.0	197.5	
140 3,3'-Dichlorobenzidine	252	12.906	12.881	0.025	74	1600423	200.0	186.7	
141 Benzo[a]anthracene	228	12.943	12.929	0.014	99	4958579	200.0	190.9	
142 Bis(2-ethylhexyl) phthalat	149	13.104	13.100	0.004	98	3236906	200.0	198.3	
143 Chrysene	228	13.034	13.009	0.025	98	4725711	200.0	190.1	
145 Di-n-octyl phthalate	149	14.877	14.863	0.014	99	5834302	200.0	207.2	
147 Benzo[b]fluoranthene	252	15.764	15.739	0.025	98	4941904	200.0	199.7	
148 Benzo[k]fluoranthene	252	15.849	15.814	0.035	99	4566066	200.0	185.1	
149 Benzo[a]pyrene	252	16.539	16.509	0.030	80	4301169	200.0	193.1	
151 Indeno[1,2,3-cd]pyrene	276	19.942	19.901	0.041	99	4380160	200.0	212.7	M
152 Dibenz(a,h)anthracene	278	20.043	19.992	0.051	93	4124624	200.0	200.5	
153 Benzo[g,h,i]perylene	276	20.684	20.633	0.051	98	4365155	200.0	199.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA200_00020

Amount Added: 200.00

Units: uL

Report Date: 17-Nov-2015 09:25:55

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D

Injection Date: 14-Nov-2015 11:38:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: STD200 HSL

Worklist Smp#: 10

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

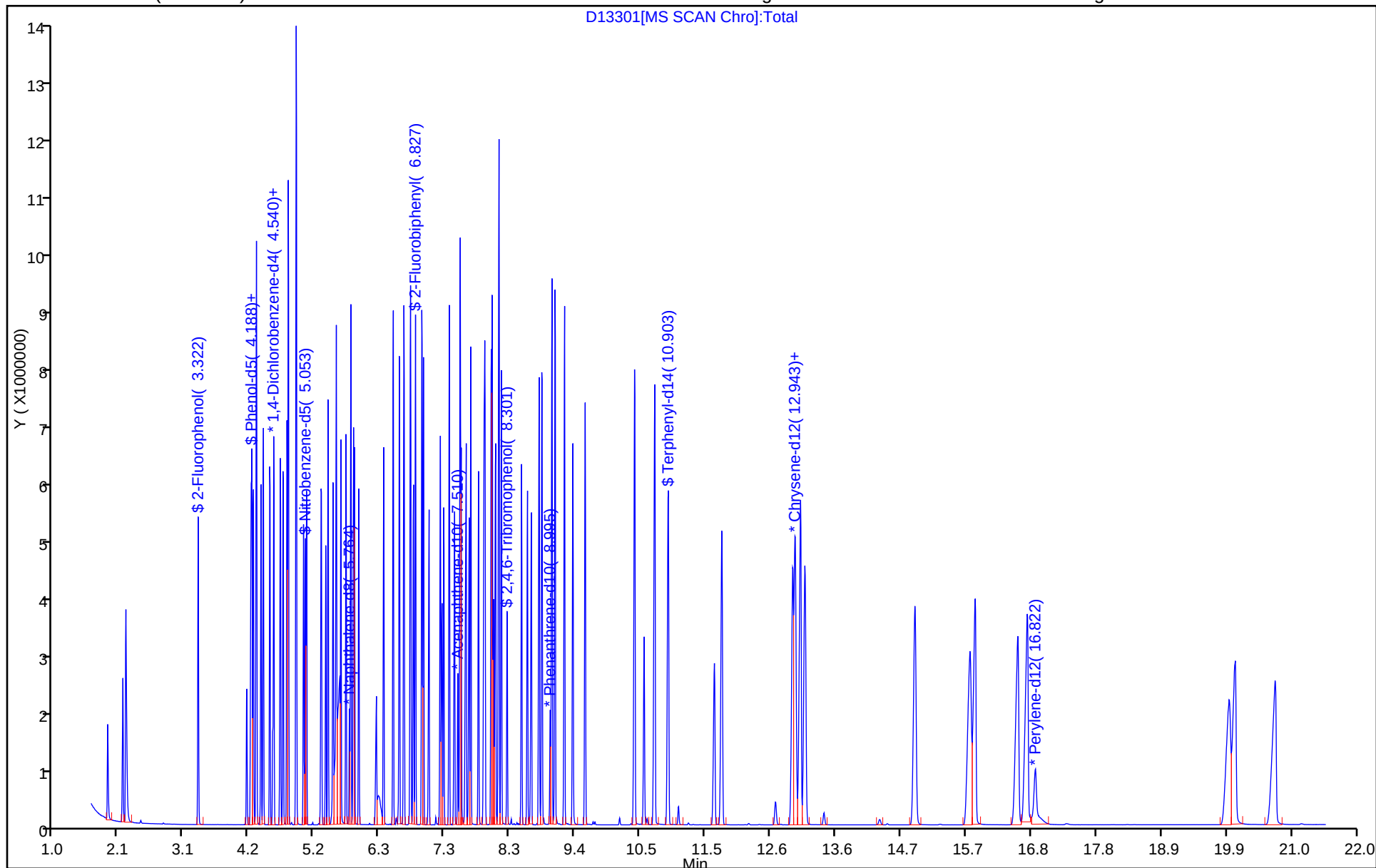
ALS Bottle#: 9

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



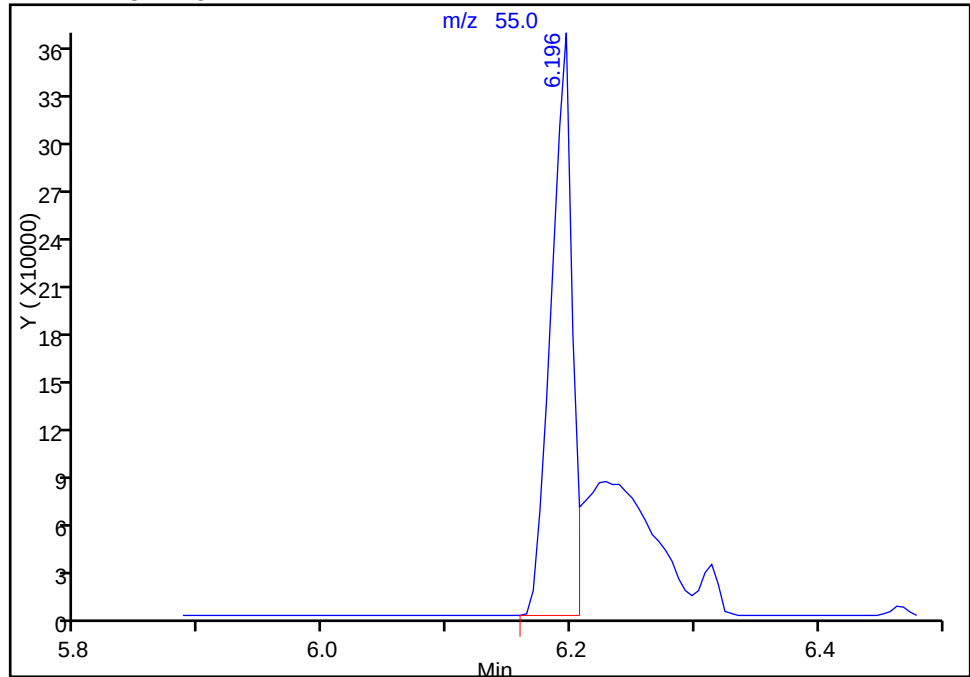
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
Injection Date: 14-Nov-2015 11:38:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

66 Caprolactam, CAS: 105-60-2

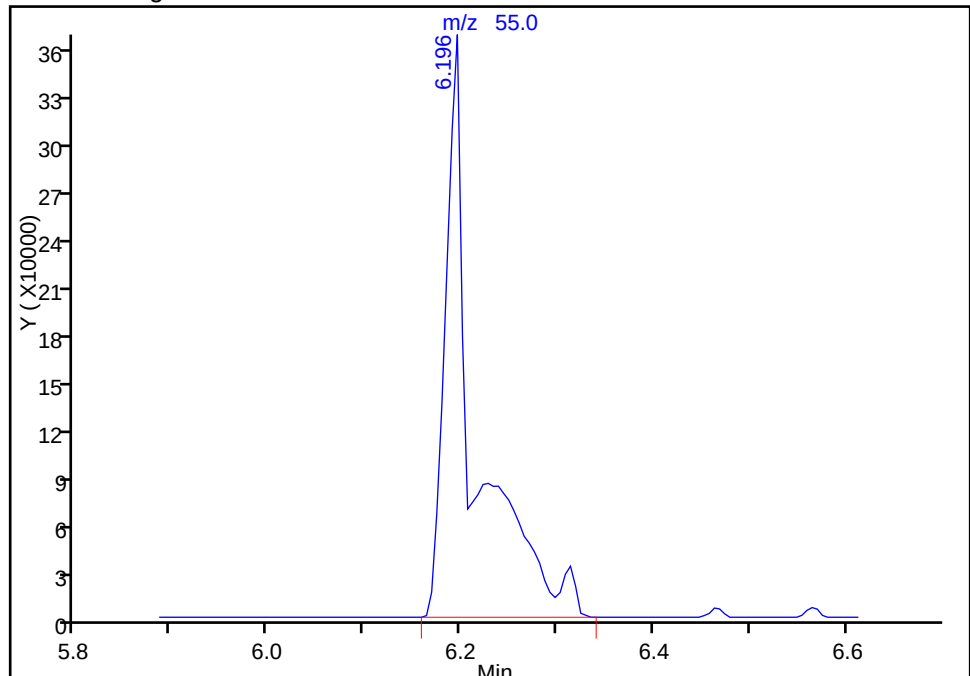
RT: 6.20
Area: 434064
Amount: 120.7984
Amount Units: ug/ml

Processing Integration Results



RT: 6.20
Area: 780069
Amount: 204.7669
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 17-Nov-2015 09:16:56
Audit Action: Manually Integrated
Audit Reason: Split Peak

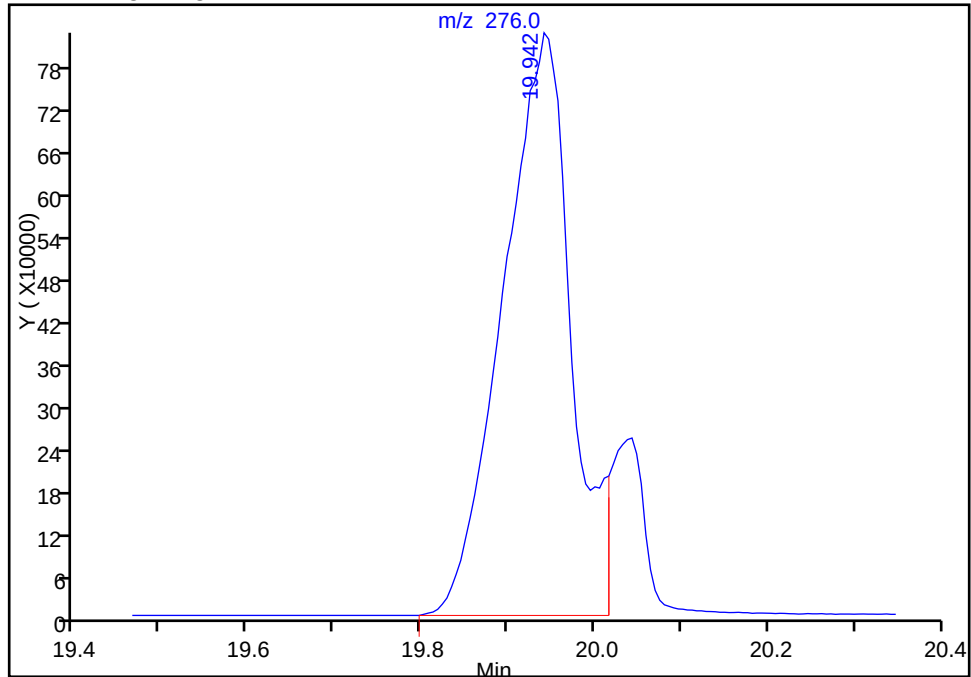
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
Injection Date: 14-Nov-2015 11:38:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

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

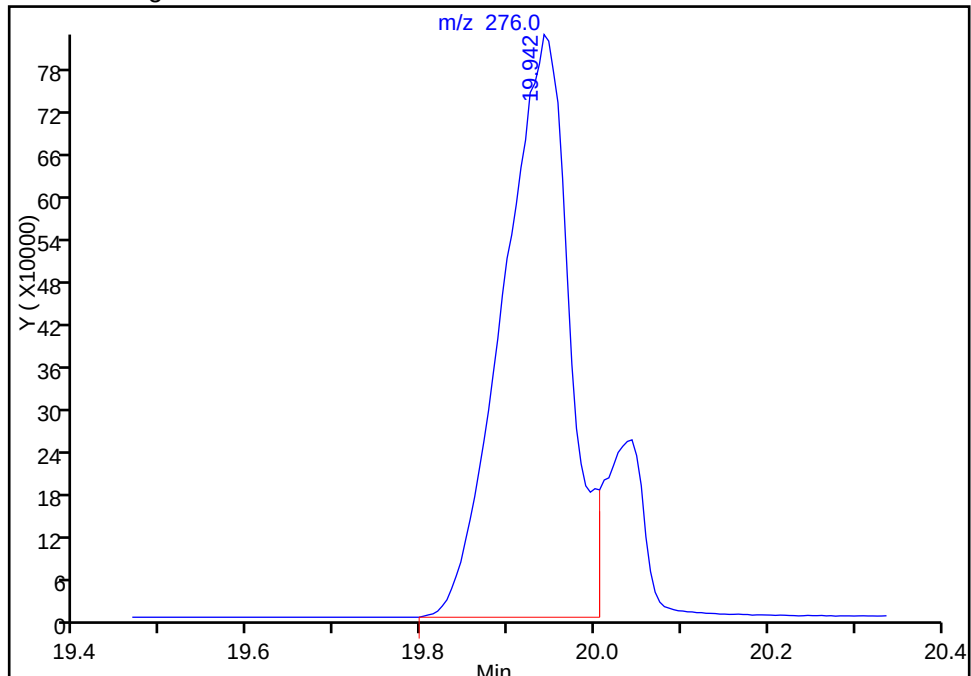
Processing Integration Results

RT: 19.94
Area: 4505847
Amount: 217.9445
Amount Units: ug/ml



Manual Integration Results

RT: 19.94
Area: 4380160
Amount: 212.6732
Amount Units: ug/ml



Reviewer: kiekeld, 17-Nov-2015 09:16:56
Audit Action: Split an Integrated Peak
Audit Reason: Shouldering

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Lab Sample ID: ICV 280-304451/11 Calibration Date: 11/14/2015 12:06

Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27

GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38

Lab File ID: D13302.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7253	0.6736		92.9	100	-7.1	30.0
N-Nitrosodimethylamine	Ave	1.135	0.9468		83.4	100	-16.6	30.0
Pyridine	Ave	1.981	1.887		95.3	100	-4.8	30.0
Phenol	Ave	2.115	2.043	0.8000	96.6	100	-3.4	30.0
Aniline	Ave	2.691	2.494		92.7	100	-7.3	30.0
Bis(2-chloroethyl)ether	Ave	1.540	1.435	0.7000	93.2	100	-6.8	30.0
2-Chlorophenol	Ave	1.451	1.383	0.8000	95.3	100	-4.7	30.0
1,3-Dichlorobenzene	Ave	1.514	1.427		94.3	100	-5.7	30.0
1,4-Dichlorobenzene	Ave	1.539	1.463		95.1	100	-4.9	30.0
Benzyl alcohol	Ave	1.104	1.069		96.8	100	-3.2	30.0
1,2-Dichlorobenzene	Ave	1.489	1.392		93.5	100	-6.5	30.0
2-Methylphenol	Ave	1.541	1.480	0.7000	96.1	100	-3.9	30.0
bis (2-chloroisopropyl) ether	Ave	1.778	1.693	0.0100	95.2	100	-4.8	30.0
3 & 4 Methylphenol	Ave	1.482	1.359		91.7	100	-8.3	30.0
3-Methylphenol	Ave	1.482	1.359		91.7	100	-8.3	30.0
4-Methylphenol	Ave	1.482	1.359	0.6000	91.7	100	-8.3	30.0
Acetophenone	Ave	2.022	1.827	0.0100	90.4	100	-9.6	30.0
N-Nitrosodi-n-propylamine	Ave	1.130	1.060	0.5000	93.8	100	-6.2	30.0
Hexachloroethane	Ave	0.6196	0.6036	0.3000	97.4	100	-2.6	30.0
Nitrobenzene	Ave	0.4649	0.4435		95.4	100	-4.6	30.0
Isophorone	Ave	0.8635	0.8241	0.4000	95.4	100	-4.6	30.0
2-Nitrophenol	Ave	0.2005	0.1973	0.1000	98.4	100	-1.6	30.0
2,4-Dimethylphenol	Ave	0.4051	0.3775	0.2000	93.2	100	-6.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.5008	0.4743	0.3000	94.7	100	-5.3	30.0
Benzoic acid	Lin2		0.3399		198	200	-0.8	30.0
2,4-Dichlorophenol	Ave	0.3153	0.3029	0.2000	96.1	100	-3.9	30.0
1,2,4-Trichlorobenzene	Ave	0.3489	0.3274		93.8	100	-6.2	30.0
Naphthalene	Ave	1.075	1.003	0.7000	93.3	100	-6.7	30.0
4-Chloroaniline	Ave	0.4881	0.4571	0.0100	93.7	100	-6.3	30.0
2,6-Dichlorophenol	Ave	0.3130	0.2990		95.5	100	-4.5	30.0
Hexachlorobutadiene	Ave	0.1882	0.1789	0.0100	95.0	100	-5.0	30.0
4-Chloro-3-methylphenol	Ave	0.3526	0.3388	0.2000	96.1	100	-3.9	30.0
2-Methylnaphthalene	Ave	0.7413	0.6717	0.4000	90.6	100	-9.4	30.0
1-Methylnaphthalene	Ave	0.6603	0.6388		96.7	100	-3.3	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3347	0.3117	0.0100	93.1	100	-6.9	30.0
Hexachlorocyclopentadiene	Ave	0.2721	0.2820	0.0500	104	100	3.6	30.0
2,4,6-Trichlorophenol	Ave	0.3596	0.3499	0.2000	97.3	100	-2.7	30.0
2,4,5-Trichlorophenol	Ave	0.3963	0.3975	0.2000	100	100	0.3	30.0
1,1'-Biphenyl	Ave	1.355	1.286		94.9	100	-5.1	30.0
2-Chloronaphthalene	Ave	1.063	1.017	0.8000	95.6	100	-4.4	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Lab Sample ID: ICV 280-304451/11 Calibration Date: 11/14/2015 12:06

Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27

GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38

Lab File ID: D13302.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3925	0.3865	0.0100	98.5	100	-1.5	30.0
Dimethyl phthalate	Ave	1.198	1.159	0.0100	96.7	100	-3.3	30.0
1,3-Dinitrobenzene	Ave	0.2154	0.2217		103	100	2.9	30.0
2,6-Dinitrotoluene	Ave	0.3046	0.2994	0.2000	98.3	100	-1.7	30.0
Acenaphthylene	Ave	1.775	1.641	0.9000	92.4	100	-7.6	30.0
3-Nitroaniline	Ave	0.3663	0.3501	0.0100	95.6	100	-4.4	30.0
Acenaphthene	Ave	1.046	0.9842	0.9000	94.1	100	-5.9	30.0
2,4-Dinitrophenol	Ave	0.1793	0.1953	0.0100	218	200	8.9	30.0
4-Nitrophenol	Ave	0.1854	0.1866	0.0100	201	200	0.6	30.0
2,4-Dinitrotoluene	Ave	0.4075	0.4026	0.2000	98.8	100	-1.2	30.0
Dibenzofuran	Ave	1.584	1.480	0.8000	93.4	100	-6.6	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.3099	0.3121	0.0100	101	100	0.7	30.0
Diethyl phthalate	Ave	1.204	1.172	0.0100	97.3	100	-2.7	30.0
4-Chlorophenyl phenyl ether	Ave	0.6018	0.5717	0.4000	95.0	100	-5.0	30.0
Fluorene	Ave	1.259	1.181	0.9000	93.8	100	-6.2	30.0
4-Nitroaniline	Ave	0.3630	0.3280	0.0100	90.3	100	-9.7	30.0
4,6-Dinitro-2-methylphenol	Lin2		0.1452	0.0100	200	200	-0.2	30.0
N-Nitrosodiphenylamine	Ave	0.5101	0.4665	0.0100	183	200	-8.5	30.0
1,2-Diphenylhydrazine (as Azobenzene)	Ave	1.458	1.455		101	101	-0.2	30.0
Azobenzene	Ave	1.474	1.471		99.8	100	-0.2	30.0
4-Bromophenyl phenyl ether	Ave	0.2069	0.1971	0.1000	95.3	100	-4.7	30.0
Hexachlorobenzene	Ave	0.2048	0.1946	0.1000	95.0	100	-5.0	30.0
Pentachlorophenol	Lin2		0.1243	0.0500	207	200	3.7	30.0
Phenanthrene	Ave	1.076	0.9837	0.7000	91.4	100	-8.6	30.0
Anthracene	Ave	1.088	1.028	0.7000	94.4	100	-5.6	30.0
Carbazole	Ave	1.067	1.003	0.0100	94.0	100	-6.0	30.0
Di-n-butyl phthalate	Ave	1.181	1.144	0.0100	96.9	100	-3.1	30.0
Fluoranthene	Ave	1.202	1.160	0.6000	96.5	100	-3.5	30.0
Pyrene	Ave	1.309	1.262	0.6000	96.4	100	-3.6	30.0
Butyl benzyl phthalate	Ave	0.5823	0.5866	0.0100	101	100	0.7	30.0
Benzo[a]anthracene	Ave	1.281	1.246	0.8000	97.3	100	-2.7	30.0
Chrysene	Ave	1.226	1.197	0.7000	97.7	100	-2.3	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.8047	0.7999	0.0100	99.4	100	-0.6	30.0
Di-n-octyl phthalate	Ave	1.388	1.452	0.0100	105	100	4.6	30.0
Benzo[b]fluoranthene	Ave	1.263	1.249	0.7000	98.9	100	-1.1	30.0
Benzo[k]fluoranthene	Ave	1.258	1.217	0.7000	96.7	100	-3.3	30.0
Benzo[a]pyrene	Ave	1.136	1.150	0.7000	101	100	1.2	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.015	0.9683	0.5000	95.4	100	-4.6	30.0
Dibenz(a,h)anthracene	Ave	1.049	1.050	0.4000	100	100	0.1	30.0
Benzo[g,h,i]perylene	Ave	1.117	1.091	0.5000	97.7	100	-2.3	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13302.D
 Lims ID: ICV HSL 1
 Client ID:
 Sample Type: ICV
 Inject. Date: 14-Nov-2015 12:06:30 ALS Bottle#: 10 Worklist Smp#: 11
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: ICV HSL 1
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist:
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:54 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:20:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.522	4.521	0.001	96	207619	40.0	40.0	
* 2 Naphthalene-d8	136	5.761	5.760	0.001	100	794597	40.0	40.0	
* 3 Acenaphthene-d10	164	7.508	7.507	0.001	91	504212	40.0	40.0	
* 4 Phenanthrene-d10	188	8.993	8.992	0.001	97	892855	40.0	40.0	
* 5 Chrysene-d12	240	12.952	12.951	0.001	98	848547	40.0	40.0	
* 6 Perylene-d12	264	16.803	16.802	0.001	97	785790	40.0	40.0	
13 1,4-Dioxane	88	1.861	1.866	-0.005	92	349646	100.0	92.9	
14 N-Nitrosodimethylamine	74	2.102	2.106	-0.004	92	491451	100.0	83.4	
15 Pyridine	79	2.155	2.160	-0.005	97	979398	100.0	95.3	
24 Phenol	94	4.180	4.179	0.001	97	1060505	100.0	96.6	
25 Aniline	93	4.207	4.206	0.001	99	1294564	100.0	92.7	
26 Bis(2-chloroethyl)ether	93	4.249	4.248	0.001	97	744985	100.0	93.2	
27 2-Chlorophenol	128	4.330	4.328	0.002	97	717612	100.0	95.3	
31 1,3-Dichlorobenzene	146	4.474	4.473	0.001	96	740858	100.0	94.3	
32 1,4-Dichlorobenzene	146	4.538	4.537	0.001	92	759494	100.0	95.1	
34 Benzyl alcohol	108	4.639	4.638	0.001	93	554692	100.0	96.8	
35 1,2-Dichlorobenzene	146	4.693	4.692	0.001	95	722664	100.0	93.5	
36 2-Methylphenol	108	4.752	4.750	0.002	94	768414	100.0	96.1	
38 2,2'-oxybis[1-chloropropan	45	4.773	4.772	0.001	92	878737	100.0	95.2	
40 3 & 4 Methylphenol	108	4.896	4.895	0.001	79	705296	100.0	91.7	
41 3-Methylphenol	108	4.896	4.895	0.001	75	705296	100.0	91.7	
42 4-Methylphenol	108	4.896	4.895	0.001	71	705296	100.0	91.7	
43 N-Nitrosodi-n-propylamine	70	4.896	4.895	0.001	82	550149	100.0	93.8	
44 Acetophenone	105	4.896	4.895	0.001	87	948521	100.0	90.4	
46 Hexachloroethane	117	5.019	5.018	0.001	96	313317	100.0	97.4	
47 Nitrobenzene	77	5.061	5.060	0.001	86	881037	100.0	95.4	
48 2,6-Dichlorophenol	162	5.836	5.835	0.001	96	593907	100.0	95.5	
50 Isophorone	82	5.296	5.295	0.001	99	1636994	100.0	95.4	
51 2,4-Dimethylphenol	107	5.414	5.413	0.001	96	749968	100.0	93.2	
52 2-Nitrophenol	139	5.377	5.376	0.001	97	391992	100.0	98.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
55 Bis(2-chloroethoxy)methane	93	5.494	5.493	0.001	98	942202	100.0	94.7	
56 Benzoic acid	105	5.558	5.546	0.012	89	1350244	200.0	198.4	
58 2,4-Dichlorophenol	162	5.617	5.616	0.001	95	601704	100.0	96.1	
59 1,2,4-Trichlorobenzene	180	5.702	5.701	0.001	93	650386	100.0	93.8	
60 Naphthalene	128	5.783	5.782	0.001	97	1991930	100.0	93.3	
61 4-Chloroaniline	127	5.820	5.819	0.001	95	908065	100.0	93.7	
63 Hexachlorobutadiene	225	5.911	5.910	0.001	96	355306	100.0	95.0	
68 4-Chloro-3-methylphenol	107	6.301	6.305	-0.004	96	672979	100.0	96.1	
70 2-Methylnaphthalene	142	6.461	6.465	-0.004	93	1334278	100.0	90.6	
71 1-Methylnaphthalene	142	6.563	6.561	0.002	94	1269001	100.0	96.7	
72 Hexachlorocyclopentadiene	237	6.637	6.636	0.001	95	355486	100.0	103.6	
73 1,2,4,5-Tetrachlorobenzene	216	6.637	6.636	0.001	97	619165	100.0	93.1	
75 2,4,6-Trichlorophenol	196	6.744	6.743	0.001	94	441089	100.0	97.3	
76 2,4,5-Trichlorophenol	196	6.782	6.786	-0.004	95	501022	100.0	100.3	
79 1,1'-Biphenyl	154	6.926	6.925	0.001	95	1621523	100.0	94.9	
81 2-Chloronaphthalene	162	6.953	6.951	0.002	96	1281592	100.0	95.6	
83 2-Nitroaniline	65	7.038	7.037	0.001	83	487139	100.0	98.5	
86 Dimethyl phthalate	163	7.220	7.213	0.007	98	1460658	100.0	96.7	
87 1,3-Dinitrobenzene	168	7.246	7.240	0.006	88	279399	100.0	102.9	
88 2,6-Dinitrotoluene	165	7.273	7.272	0.001	95	377366	100.0	98.3	
93 Acenaphthylene	152	7.364	7.368	-0.004	99	2067948	100.0	92.4	
95 3-Nitroaniline	138	7.449	7.443	0.006	95	441311	100.0	95.6	
97 Acenaphthene	153	7.540	7.539	0.001	95	1240606	100.0	94.1	
98 2,4-Dinitrophenol	184	7.556	7.550	0.006	85	492453	200.0	217.9	
99 4-Nitrophenol	109	7.626	7.625	0.001	94	470488	200.0	201.3	
103 2,4-Dinitrotoluene	165	7.684	7.678	0.006	92	507501	100.0	98.8	
104 Dibenzofuran	168	7.711	7.710	0.001	98	1865431	100.0	93.4	
107 2,3,4,6-Tetrachlorophenol	232	7.839	7.838	0.001	73	393384	100.0	100.7	
108 Diethyl phthalate	149	7.925	7.918	0.007	98	1477050	100.0	97.3	
109 4-Chlorophenyl phenyl ethe	204	8.042	8.041	0.001	92	720586	100.0	95.0	
110 Fluorene	166	8.058	8.057	0.001	94	1489095	100.0	93.8	
112 4-Nitroaniline	138	8.064	8.063	0.001	85	413468	100.0	90.3	
113 4,6-Dinitro-2-methylphenol	198	8.101	8.100	0.001	86	648315	200.0	199.5	
114 N-Nitrosodiphenylamine	169	8.165	8.159	0.006	62	2082706	200.0	182.9	
115 Azobenzene	77	8.203	8.202	0.001	97	1853760	100.0	99.8	
116 1,2-Diphenylhydrazine	77	8.203	8.202	0.001	97	1853760	101.1	100.9	
118 4-Bromophenyl phenyl ether	248	8.534	8.533	0.001	67	439968	100.0	95.3	
121 Hexachlorobenzene	284	8.625	8.624	0.001	94	434288	100.0	95.0	
122 Pentachlorophenol	266	8.812	8.811	0.002	93	554791	200.0	207.5	
124 Phenanthrene	178	9.020	9.019	0.001	98	2195706	100.0	91.4	
125 Anthracene	178	9.073	9.072	0.001	98	2293964	100.0	94.4	
126 Carbazole	167	9.223	9.222	0.001	95	2239276	100.0	94.0	
130 Di-n-butyl phthalate	149	9.560	9.558	0.002	100	2553995	100.0	96.9	
134 Fluoranthene	202	10.355	10.349	0.006	99	2588327	100.0	96.5	
136 Pyrene	202	10.676	10.670	0.006	96	2676752	100.0	96.4	
139 Butyl benzyl phthalate	149	11.755	11.754	0.001	97	1244415	100.0	100.7	
141 Benzo[a]anthracene	228	12.930	12.929	0.001	99	2643997	100.0	97.3	
142 Bis(2-ethylhexyl) phthalat	149	13.096	13.100	-0.004	98	1696840	100.0	99.4	
143 Chrysene	228	13.016	13.009	0.007	98	2539793	100.0	97.7	
145 Di-n-octyl phthalate	149	14.864	14.863	0.001	99	3080360	100.0	104.6	
147 Benzo[b]fluoranthene	252	15.740	15.739	0.001	98	2453601	100.0	98.9	
148 Benzo[k]fluoranthene	252	15.820	15.814	0.006	99	2389821	100.0	96.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
149 Benzo[a]pyrene	252	16.510	16.509	0.001	79	2258950	100.0	101.2	
151 Indeno[1,2,3-cd]pyrene	276	19.907	19.901	0.006	98	2054014	100.0	95.4	
152 Dibenz(a,h)anthracene	278	19.998	19.992	0.006	93	2063474	100.0	100.1	
153 Benzo[g,h,i]perylene	276	20.644	20.633	0.011	98	2144154	100.0	97.7	

Reagents:

MS-HSLB1B3SSV_00028

Amount Added: 200.00

Units: uL

Report Date: 17-Nov-2015 09:25:57

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13302.D

Injection Date: 14-Nov-2015 12:06:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: ICV_HSL_1

Worklist Smp#: 11

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

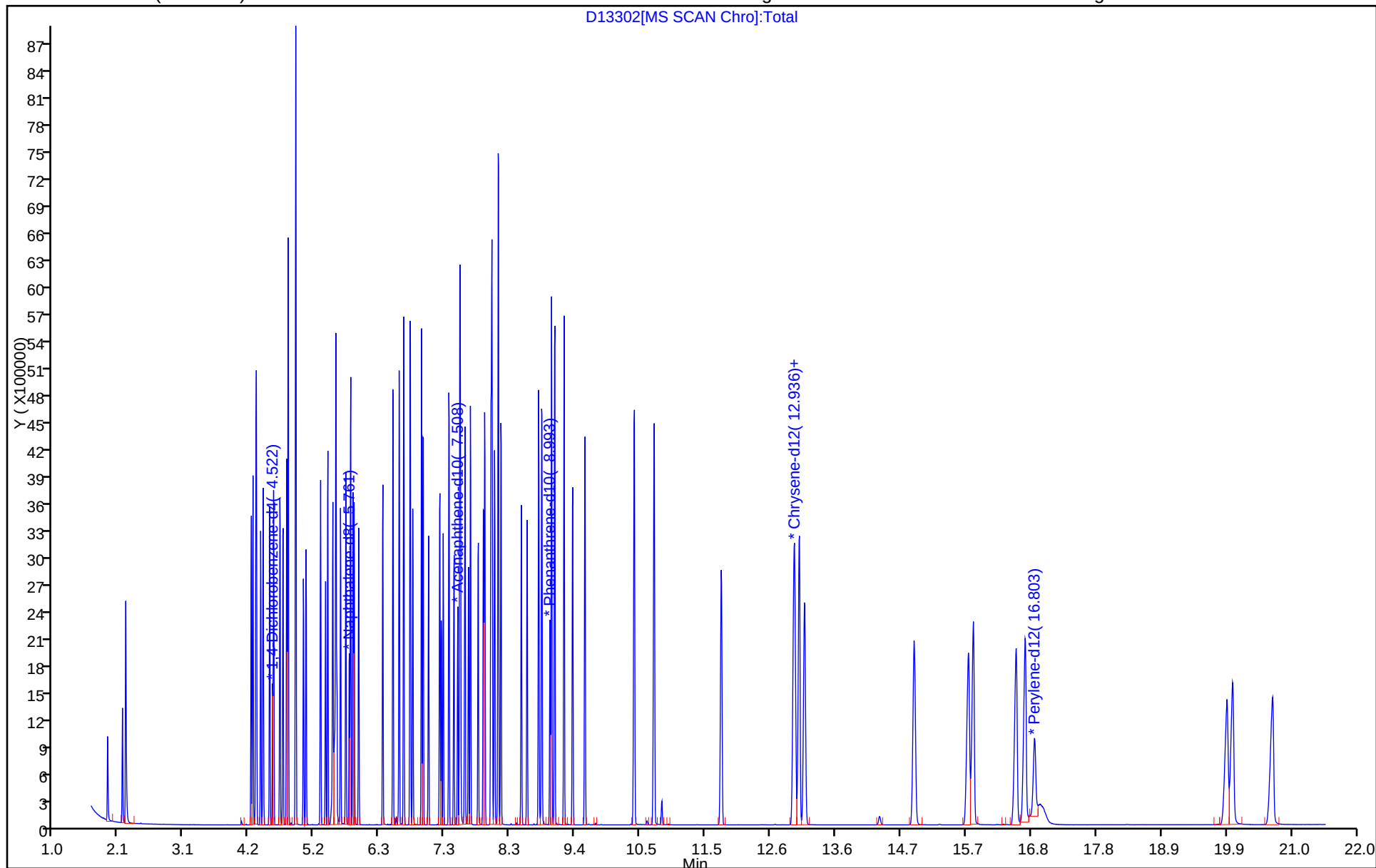
ALS Bottle#: 10

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Lab Sample ID: ICV 280-304451/12 Calibration Date: 11/14/2015 12:33
Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27
GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38
Lab File ID: D13303.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Caprolactam	Ave	0.1884	0.1713		90.9	100	-9.1	30.0
3,3'-Dichlorobenzidine	Ave	0.4226	0.4343	0.0100	103	100	2.8	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13303.D
 Lims ID: ICV HSL 2
 Client ID:
 Sample Type: ICV
 Inject. Date: 14-Nov-2015 12:33:30 ALS Bottle#: 11 Worklist Smp#: 12
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: ICV HSL 2
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist:
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:54 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:21:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.521	4.521	0.000	96	195547	40.0	40.0	
* 2 Naphthalene-d8	136	5.755	5.760	-0.005	100	732730	40.0	40.0	
* 3 Acenaphthene-d10	164	7.502	7.507	-0.005	90	470191	40.0	40.0	
* 4 Phenanthrene-d10	188	8.992	8.992	0.000	97	839156	40.0	40.0	
* 5 Chrysene-d12	240	12.935	12.951	-0.016	98	811474	40.0	40.0	
* 6 Perylene-d12	264	16.797	16.802	-0.005	97	788929	40.0	40.0	
66 Caprolactam	55	6.129	6.161	-0.032	84	313856	100.0	90.9	
140 3,3'-Dichlorobenzidine	252	12.876	12.881	-0.005	74	880977	100.0	102.8	

Reagents:

MS-HSLB2SSV_00025

Amount Added: 200.00

Units: uL

Report Date: 17-Nov-2015 09:25:59

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13303.D

Injection Date: 14-Nov-2015 12:33:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: ICV HSL 2

Worklist Smp#: 12

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

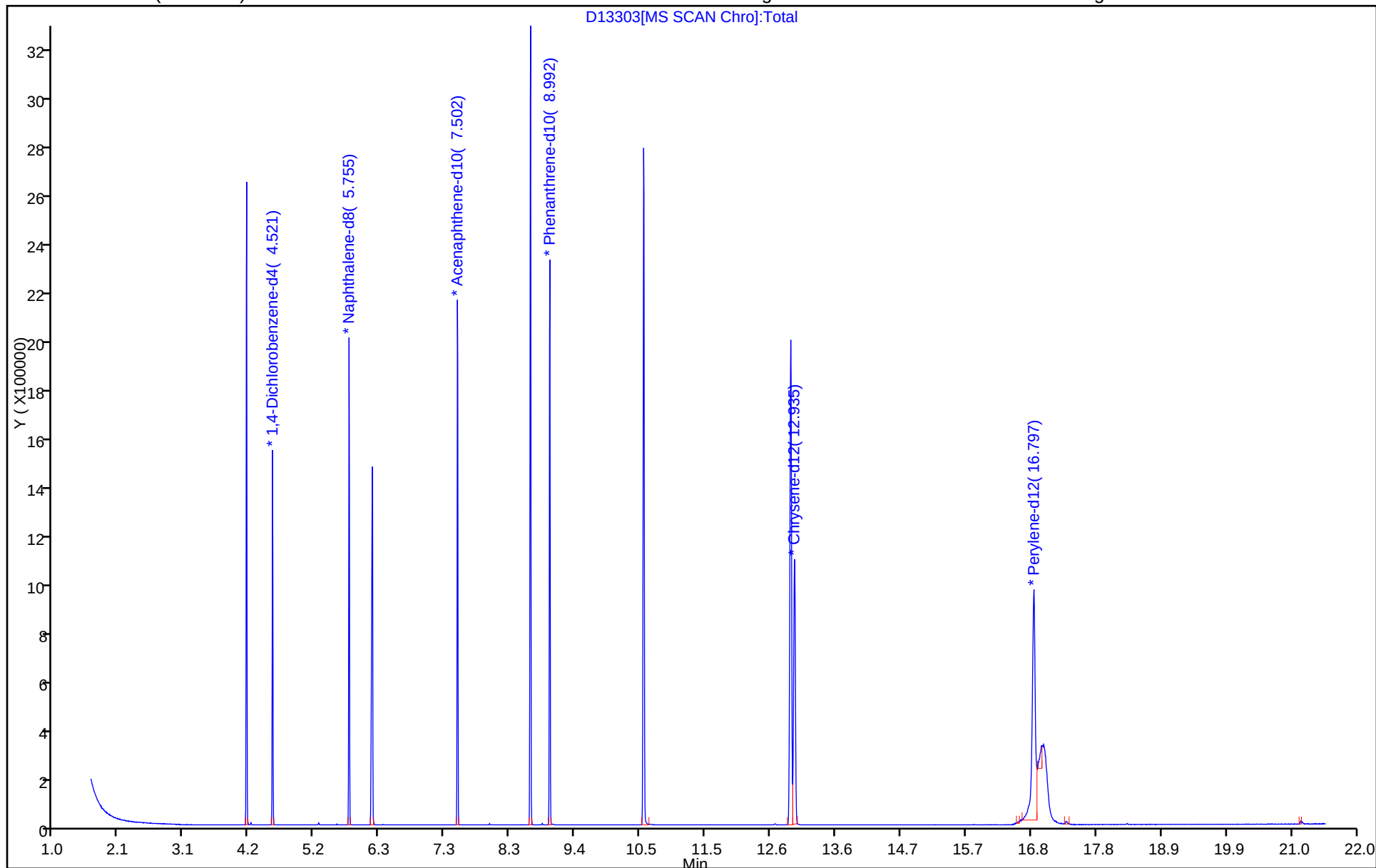
ALS Bottle#: 11

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76475-2
SDG No.: _____
Lab Sample ID: ICV 280-304451/13 Calibration Date: 11/14/2015 13:00
Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27
GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38
Lab File ID: D13304.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Famphur	Ave	0.4244	0.4151		97.8	100	-2.2	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13304.D
 Lims ID: ICV FAM
 Client ID:
 Sample Type: ICV
 Inject. Date: 14-Nov-2015 13:00:30 ALS Bottle#: 12 Worklist Smp#: 13
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: ICV FAM
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist:
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:54 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:22:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.522	4.521	0.001	97	268776	40.0	40.0	
* 2 Naphthalene-d8	136	5.756	5.760	-0.004	100	1010825	40.0	40.0	
* 3 Acenaphthene-d10	164	7.502	7.507	-0.005	90	654332	40.0	40.0	
* 4 Phenanthrene-d10	188	8.993	8.992	0.001	97	1153524	40.0	40.0	
* 5 Chrysene-d12	240	12.941	12.951	-0.010	97	1290029	40.0	40.0	
* 6 Perylene-d12	264	16.798	16.802	-0.004	97	1183125	40.0	40.0	
138 Famphur	218	11.637	11.636	0.001	98	1338680	100.0	97.8	

Reagents:

MS-FAMSSV_100_00013

Amount Added: 200.00

Units: uL

Report Date: 17-Nov-2015 09:26:01

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13304.D

Injection Date: 14-Nov-2015 13:00:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: ICV FAM

Worklist Smp#: 13

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

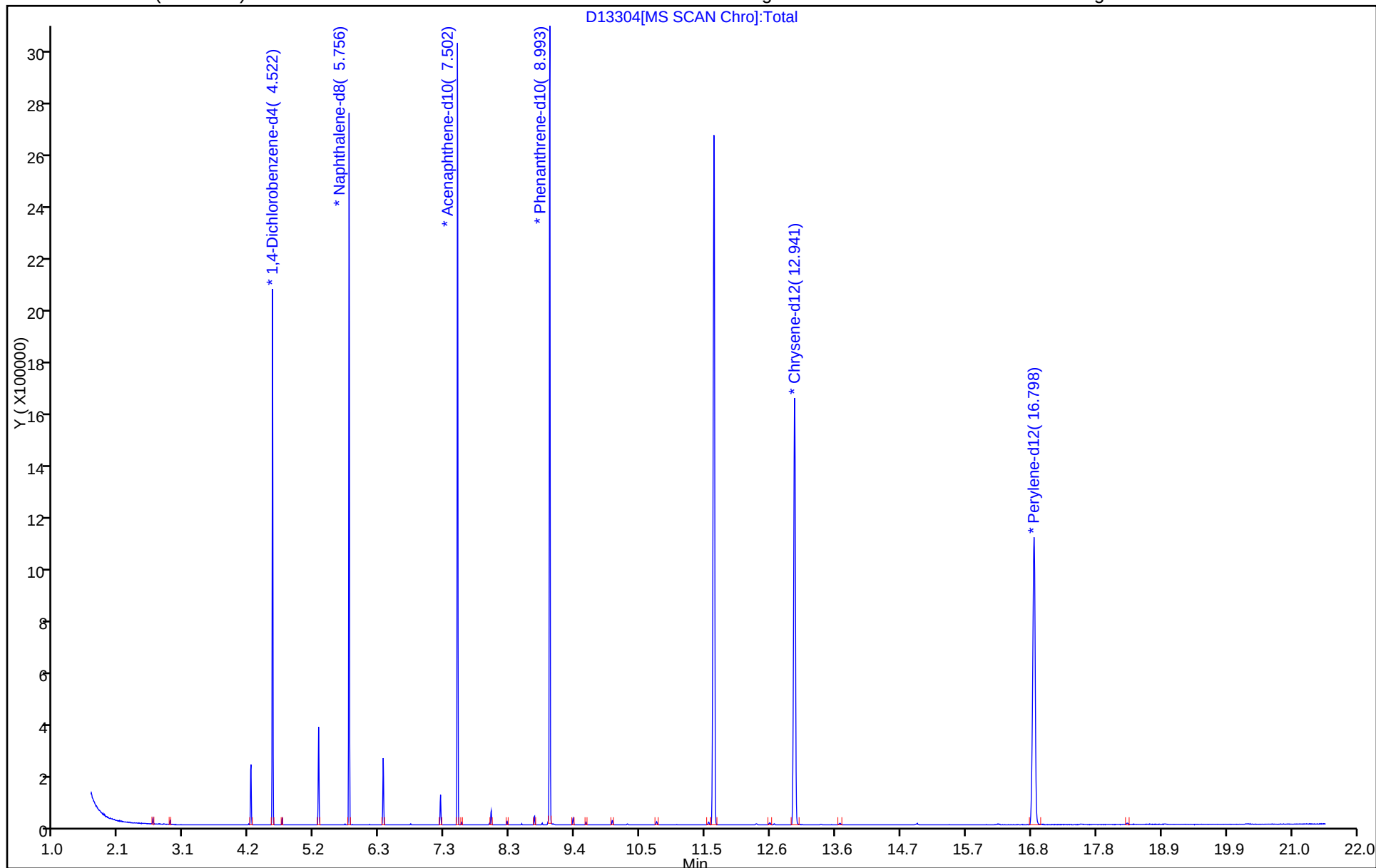
ALS Bottle#: 12

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Lab Sample ID: CCV 280-304623/3 Calibration Date: 11/17/2015 17:49

Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27

GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38

Lab File ID: D13376.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7253	0.6966		76.8	80.0	-4.0	20.0
N-Nitrosodimethylamine	Ave	1.135	1.122		79.1	80.0	-1.2	20.0
Pyridine	Ave	1.981	1.971		79.6	80.0	-0.5	20.0
Phenol	Ave	2.115	2.114	0.8000	80.0	80.0	-0.0	20.0
Aniline	Ave	2.691	2.696		80.2	80.0	0.2	20.0
Bis(2-chloroethyl)ether	Ave	1.540	1.550	0.7000	80.5	80.0	0.6	20.0
2-Chlorophenol	Ave	1.451	1.459	0.8000	80.5	80.0	0.6	20.0
1,3-Dichlorobenzene	Ave	1.514	1.527		80.7	80.0	0.9	20.0
1,4-Dichlorobenzene	Ave	1.539	1.560		81.1	80.0	1.3	20.0
Benzyl alcohol	Ave	1.104	1.099		79.7	80.0	-0.4	20.0
1,2-Dichlorobenzene	Ave	1.489	1.484		79.8	80.0	-0.3	20.0
2-Methylphenol	Ave	1.541	1.533	0.7000	79.6	80.0	-0.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.778	1.774	0.0100	79.8	80.0	-0.2	20.0
N-Nitrosodi-n-propylamine	Ave	1.130	1.166	0.5000	82.6	80.0	3.2	20.0
3 & 4 Methylphenol	Ave	1.482	1.530		82.6	80.0	3.2	20.0
3-Methylphenol	Ave	1.482	1.530		82.6	80.0	3.2	20.0
4-Methylphenol	Ave	1.482	1.530	0.6000	82.6	80.0	3.2	20.0
Acetophenone	Ave	2.022	2.052	0.0100	81.2	80.0	1.5	20.0
Hexachloroethane	Ave	0.6196	0.6304	0.3000	81.4	80.0	1.7	20.0
Nitrobenzene	Ave	0.4649	0.4674		80.4	80.0	0.5	20.0
Isophorone	Ave	0.8635	0.8717	0.4000	80.8	80.0	0.9	20.0
2-Nitrophenol	Ave	0.2005	0.2023	0.1000	80.7	80.0	0.9	20.0
2,4-Dimethylphenol	Ave	0.4051	0.4146	0.2000	81.9	80.0	2.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.5008	0.4987	0.3000	79.7	80.0	-0.4	20.0
Benzoic acid	Lin2		0.3315		156	160	-2.5	20.0
2,4-Dichlorophenol	Ave	0.3153	0.3191	0.2000	81.0	80.0	1.2	20.0
1,2,4-Trichlorobenzene	Ave	0.3489	0.3509		80.4	80.0	0.6	20.0
Naphthalene	Ave	1.075	1.090	0.7000	81.1	80.0	1.4	20.0
4-Chloroaniline	Ave	0.4881	0.5013	0.0100	82.2	80.0	2.7	20.0
2,6-Dichlorophenol	Ave	0.3130	0.3206		81.9	80.0	2.4	20.0
Hexachlorobutadiene	Ave	0.1882	0.1911	0.0100	81.2	80.0	1.5	20.0
Caprolactam	Ave	0.1884	0.1902		80.8	80.0	1.0	20.0
4-Chloro-3-methylphenol	Ave	0.3526	0.3663	0.2000	83.1	80.0	3.9	20.0
2-Methylnaphthalene	Ave	0.7413	0.7628	0.4000	82.3	80.0	2.9	20.0
1-Methylnaphthalene	Ave	0.6603	0.6781		82.2	80.0	2.7	20.0
Hexachlorocyclopentadiene	Ave	0.2721	0.3045	0.0500	89.5	80.0	11.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3347	0.3460	0.0100	82.7	80.0	3.4	20.0
2,4,6-Trichlorophenol	Ave	0.3596	0.3715	0.2000	82.6	80.0	3.3	20.0
2,4,5-Trichlorophenol	Ave	0.3963	0.4058	0.2000	81.9	80.0	2.4	20.0
1,1'-Biphenyl	Ave	1.355	1.366		80.7	80.0	0.8	20.0

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SDG No.: _____

Lab Sample ID: CCV 280-304623/3 Calibration Date: 11/17/2015 17:49

Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27

GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38

Lab File ID: D13376.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloronaphthalene	Ave	1.063	1.063	0.8000	80.0	80.0	0.0	20.0
2-Nitroaniline	Ave	0.3925	0.3980	0.0100	81.1	80.0	1.4	20.0
Dimethyl phthalate	Ave	1.198	1.222	0.0100	81.6	80.0	2.0	20.0
1,3-Dinitrobenzene	Ave	0.2154	0.2257		83.8	80.0	4.8	20.0
2,6-Dinitrotoluene	Ave	0.3046	0.3094	0.2000	81.3	80.0	1.6	20.0
Acenaphthylene	Ave	1.775	1.794	0.9000	80.8	80.0	1.0	20.0
3-Nitroaniline	Ave	0.3663	0.3698	0.0100	80.8	80.0	1.0	20.0
Acenaphthene	Ave	1.046	1.065	0.9000	81.4	80.0	1.8	20.0
2,4-Dinitrophenol	Ave	0.1793	0.1976	0.0100	176	160	10.2	20.0
4-Nitrophenol	Ave	0.1854	0.1978	0.0100	171	160	6.7	20.0
2,4-Dinitrotoluene	Ave	0.4075	0.4229	0.2000	83.0	80.0	3.8	20.0
Dibenzofuran	Ave	1.584	1.611	0.8000	81.4	80.0	1.7	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3099	0.3334	0.0100	86.1	80.0	7.6	20.0
Diethyl phthalate	Ave	1.204	1.258	0.0100	83.6	80.0	4.5	20.0
4-Chlorophenyl phenyl ether	Ave	0.6018	0.6218	0.4000	82.7	80.0	3.3	20.0
Fluorene	Ave	1.259	1.289	0.9000	81.9	80.0	2.4	20.0
4-Nitroaniline	Ave	0.3630	0.3754	0.0100	82.7	80.0	3.4	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1484	0.0100	164	160	2.3	20.0
N-Nitrosodiphenylamine	Ave	0.5101	0.5140	0.0100	161	160	0.8	20.0
1,2-Diphenylhydrazine (as Azobenzene)	Ave	1.458	1.478		82.0	80.9	1.4	20.0
Azobenzene	Ave	1.474	1.495		81.1	80.0	1.4	20.0
4-Bromophenyl phenyl ether	Ave	0.2069	0.2088	0.1000	80.8	80.0	0.9	20.0
Hexachlorobenzene	Ave	0.2048	0.2069	0.1000	80.8	80.0	1.1	20.0
Pentachlorophenol	Lin2		0.1282	0.0500	172	160	7.5	20.0
Phenanthrene	Ave	1.076	1.092	0.7000	81.2	80.0	1.5	20.0
Anthracene	Ave	1.088	1.111	0.7000	81.6	80.0	2.0	20.0
Carbazole	Ave	1.067	1.092	0.0100	81.9	80.0	2.3	20.0
Di-n-butyl phthalate	Ave	1.181	1.225	0.0100	83.0	80.0	3.7	20.0
Fluoranthene	Ave	1.202	1.258	0.6000	83.7	80.0	4.6	20.0
Pyrene	Ave	1.309	1.291	0.6000	78.9	80.0	-1.4	20.0
Famphur	Ave	0.4244	0.4545		85.7	80.0	7.1	20.0
Butyl benzyl phthalate	Ave	0.5823	0.5859	0.0100	80.5	80.0	0.6	20.0
3,3'-Dichlorobenzidine	Ave	0.4226	0.4422	0.0100	83.7	80.0	4.6	20.0
Benzo[a]anthracene	Ave	1.281	1.274	0.8000	79.6	80.0	-0.5	20.0
Chrysene	Ave	1.226	1.225	0.7000	80.0	80.0	-0.0	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8047	0.7990	0.0100	79.4	80.0	-0.7	20.0
Di-n-octyl phthalate	Ave	1.388	1.420	0.0100	81.8	80.0	2.3	20.0
Benzo[b]fluoranthene	Ave	1.263	1.301	0.7000	82.5	80.0	3.1	20.0
Benzo[k]fluoranthene	Ave	1.258	1.320	0.7000	83.9	80.0	4.9	20.0
Benzo[a]pyrene	Ave	1.136	1.265	0.7000	89.1	80.0	11.3	20.0

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Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Lab Sample ID: CCV 280-304623/3 Calibration Date: 11/17/2015 17:49
 Instrument ID: SMS_D Calib Start Date: 11/14/2015 08:27
 GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 11/14/2015 11:38
 Lab File ID: D13376.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.015	0.9888	0.5000	77.9	80.0	-2.6	20.0
Dibenz(a,h)anthracene	Ave	1.049	1.052	0.4000	80.2	80.0	0.3	20.0
Benzo[g,h,i]perylene	Ave	1.117	1.124	0.5000	80.5	80.0	0.6	20.0
2-Fluorophenol (Surr)	Ave	1.516	1.500		79.2	80.0	-1.0	20.0
Phenol-d5 (Surr)	Ave	2.036	2.052		80.6	80.0	0.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.4810	0.4752		79.0	80.0	-1.2	20.0
2-Fluorobiphenyl	Ave	1.298	1.304		80.4	80.0	0.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1524	0.1615		84.7	80.0	5.9	20.0
Terphenyl-d14 (Surr)	Ave	0.8449	0.8490		80.4	80.0	0.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13376.D
 Lims ID: CCV HSL
 Client ID:
 Sample Type: CCV
 Inject. Date: 17-Nov-2015 17:49:30 ALS Bottle#: 2 Worklist Smp#: 3
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: CCV HSL
 Operator ID: KIEKELD Instrument ID: SMS_D
 Sublist: chrom-SMS_D_8270D*sub7
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 07:14:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	96	179014	40.0	40.0	
* 2 Naphthalene-d8	136	5.772	5.772	0.000	99	682112	40.0	40.0	
* 3 Acenaphthene-d10	164	7.524	7.524	0.000	90	442617	40.0	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	792285	40.0	40.0	
* 5 Chrysene-d12	240	13.000	13.000	0.000	98	797153	40.0	40.0	
* 6 Perylene-d12	264	16.878	16.878	0.000	98	719128	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.336	3.336	0.000	92	537027	80.0	79.2	
\$ 8 Phenol-d5	99	4.174	4.174	0.000	98	734693	80.0	80.6	
\$ 9 Nitrobenzene-d5	82	5.056	5.056	0.000	86	648226	80.0	79.0	
\$ 10 2-Fluorobiphenyl	172	6.840	6.840	0.000	99	1154336	80.0	80.4	
\$ 11 2,4,6-Tribromophenol	330	8.320	8.320	0.000	91	142935	80.0	84.7	
\$ 12 Terphenyl-d14	244	10.927	10.927	0.000	99	1353574	80.0	80.4	
13 1,4-Dioxane	88	1.872	1.872	0.000	92	249384	80.0	76.8	
14 N-Nitrosodimethylamine	74	2.112	2.112	0.000	91	401663	80.0	79.1	
15 Pyridine	79	2.166	2.166	0.000	98	705550	80.0	79.6	
24 Phenol	94	4.190	4.190	0.000	98	756980	80.0	80.0	
25 Aniline	93	4.217	4.217	0.000	98	965280	80.0	80.2	
26 Bis(2-chloroethyl)ether	93	4.260	4.260	0.000	97	554973	80.0	80.5	
27 2-Chlorophenol	128	4.340	4.340	0.000	97	522306	80.0	80.5	
31 1,3-Dichlorobenzene	146	4.484	4.484	0.000	96	546726	80.0	80.7	
32 1,4-Dichlorobenzene	146	4.548	4.548	0.000	93	558452	80.0	81.1	
34 Benzyl alcohol	108	4.650	4.650	0.000	93	393644	80.0	79.7	
35 1,2-Dichlorobenzene	146	4.698	4.698	0.000	95	531415	80.0	79.8	
36 2-Methylphenol	108	4.762	4.762	0.000	93	548735	80.0	79.6	
38 2,2'-oxybis[1-chloropropan	45	4.783	4.783	0.000	92	635089	80.0	79.8	
40 3 & 4 Methylphenol	108	4.906	4.906	0.000	76	547850	80.0	82.6	
41 3-Methylphenol	108	4.906	4.906	0.000	72	547850	80.0	82.6	
42 4-Methylphenol	108	4.906	4.906	0.000	68	547850	80.0	82.6	
43 N-Nitrosodi-n-propylamine	70	4.901	4.901	0.000	83	417404	80.0	82.6	
44 Acetophenone	105	4.906	4.906	0.000	87	734669	80.0	81.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.029	5.029	0.000	95	225692	80.0	81.4	
47 Nitrobenzene	77	5.072	5.072	0.000	86	637622	80.0	80.4	
48 2,6-Dichlorophenol	162	5.852	5.852	0.000	97	437391	80.0	81.9	
50 Isophorone	82	5.307	5.307	0.000	99	1189161	80.0	80.8	
51 2,4-Dimethylphenol	107	5.424	5.424	0.000	96	565631	80.0	81.9	
52 2-Nitrophenol	139	5.387	5.387	0.000	97	275917	80.0	80.7	
55 Bis(2-chloroethoxy)methane	93	5.505	5.505	0.000	98	680350	80.0	79.7	
56 Benzoic acid	105	5.553	5.553	0.000	68	904440	160.0	156.0	
58 2,4-Dichlorophenol	162	5.633	5.633	0.000	95	435332	80.0	81.0	
59 1,2,4-Trichlorobenzene	180	5.713	5.713	0.000	93	478695	80.0	80.4	
60 Naphthalene	128	5.793	5.793	0.000	97	1486428	80.0	81.1	
61 4-Chloroaniline	127	5.830	5.830	0.000	95	683828	80.0	82.2	
63 Hexachlorobutadiene	225	5.921	5.921	0.000	96	260733	80.0	81.2	
66 Caprolactam	55	6.172	6.172	0.000	83	259507	80.0	80.8	
68 4-Chloro-3-methylphenol	107	6.317	6.317	0.000	96	499667	80.0	83.1	
70 2-Methylnaphthalene	142	6.477	6.477	0.000	93	1040611	80.0	82.3	
71 1-Methylnaphthalene	142	6.578	6.578	0.000	94	925134	80.0	82.2	
72 Hexachlorocyclopentadiene	237	6.648	6.648	0.000	96	269591	80.0	89.5	
73 1,2,4,5-Tetrachlorobenzene	216	6.653	6.653	0.000	97	472023	80.0	82.7	
75 2,4,6-Trichlorophenol	196	6.760	6.760	0.000	95	328821	80.0	82.6	
76 2,4,5-Trichlorophenol	196	6.803	6.803	0.000	95	359247	80.0	81.9	
79 1,1'-Biphenyl	154	6.942	6.942	0.000	95	1209456	80.0	80.7	
81 2-Chloronaphthalene	162	6.968	6.968	0.000	96	941271	80.0	80.0	
83 2-Nitroaniline	65	7.054	7.054	0.000	81	352313	80.0	81.1	
86 Dimethyl phthalate	163	7.230	7.230	0.000	98	1081890	80.0	81.6	
87 1,3-Dinitrobenzene	168	7.262	7.262	0.000	88	199759	80.0	83.8	
88 2,6-Dinitrotoluene	165	7.289	7.289	0.000	95	273923	80.0	81.3	
93 Acenaphthylene	152	7.385	7.385	0.000	99	1587672	80.0	80.8	
95 3-Nitroaniline	138	7.465	7.465	0.000	95	327384	80.0	80.8	
97 Acenaphthene	153	7.556	7.556	0.000	95	942542	80.0	81.4	
98 2,4-Dinitrophenol	184	7.572	7.572	0.000	83	349819	160.0	176.3	
99 4-Nitrophenol	109	7.647	7.647	0.000	93	350181	160.0	170.7	
103 2,4-Dinitrotoluene	165	7.700	7.700	0.000	92	374377	80.0	83.0	
104 Dibenzofuran	168	7.732	7.732	0.000	98	1426306	80.0	81.4	
107 2,3,4,6-Tetrachlorophenol	232	7.855	7.855	0.000	72	295157	80.0	86.1	
108 Diethyl phthalate	149	7.941	7.941	0.000	98	1113808	80.0	83.6	
109 4-Chlorophenyl phenyl ethe	204	8.063	8.063	0.000	90	550466	80.0	82.7	
110 Fluorene	166	8.074	8.074	0.000	95	1141137	80.0	81.9	
112 4-Nitroaniline	138	8.079	8.079	0.000	84	332306	80.0	82.7	
113 4,6-Dinitro-2-methylphenol	198	8.117	8.117	0.000	85	470410	160.0	163.7	
114 N-Nitrosodiphenylamine	169	8.181	8.181	0.000	62	1628801	160.0	161.2	
115 Azobenzene	77	8.224	8.224	0.000	98	1323096	80.0	81.1	
116 1,2-Diphenylhydrazine	77	8.224	8.224	0.000	98	1323096	80.9	82.0	
118 4-Bromophenyl phenyl ether	248	8.555	8.555	0.000	66	330918	80.0	80.8	
121 Hexachlorobenzene	284	8.646	8.646	0.000	94	327887	80.0	80.8	
122 Pentachlorophenol	266	8.833	8.833	0.000	92	406385	160.0	172.0	
124 Phenanthrene	178	9.041	9.041	0.000	98	1729801	80.0	81.2	
125 Anthracene	178	9.089	9.089	0.000	98	1759773	80.0	81.6	
126 Carbazole	167	9.244	9.244	0.000	95	1729717	80.0	81.9	
130 Di-n-butyl phthalate	149	9.581	9.581	0.000	100	1941193	80.0	83.0	
134 Fluoranthene	202	10.382	10.382	0.000	98	1992885	80.0	83.7	
136 Pyrene	202	10.702	10.702	0.000	97	2057915	80.0	78.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
138 Famphur	218	11.675	11.675	0.000	98	724637	80.0	85.7	
139 Butyl benzyl phthalate	149	11.798	11.798	0.000	97	934040	80.0	80.5	
140 3,3'-Dichlorobenzidine	252	12.930	12.930	0.000	74	704921	80.0	83.7	
141 Benzo[a]anthracene	228	12.978	12.978	0.000	99	2031777	80.0	79.6	
142 Bis(2-ethylhexyl) phthalat	149	13.149	13.149	0.000	97	1273921	80.0	79.4	
143 Chrysene	228	13.064	13.064	0.000	98	1953509	80.0	80.0	
145 Di-n-octyl phthalate	149	14.923	14.923	0.000	99	2264408	80.0	81.8	
147 Benzo[b]fluoranthene	252	15.804	15.804	0.000	97	1871641	80.0	82.5	
148 Benzo[k]fluoranthene	252	15.879	15.879	0.000	99	1898566	80.0	83.9	
149 Benzo[a]pyrene	252	16.723	16.723	0.000	78	1819442	80.0	89.1	
151 Indeno[1,2,3-cd]pyrene	276	19.982	19.982	0.000	98	1576502	80.0	77.9	
152 Dibenz(a,h)anthracene	278	20.078	20.078	0.000	93	1512836	80.0	80.2	
153 Benzo[g,h,i]perylene	276	20.719	20.719	0.000	98	1616083	80.0	80.5	

Reagents:

MS-HSLACCV080_00048

Amount Added: 200.00

Units: uL

Report Date: 18-Nov-2015 11:45:33

Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13376.D

Injection Date: 17-Nov-2015 17:49:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: CCV HSL

Worklist Smp#: 3

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

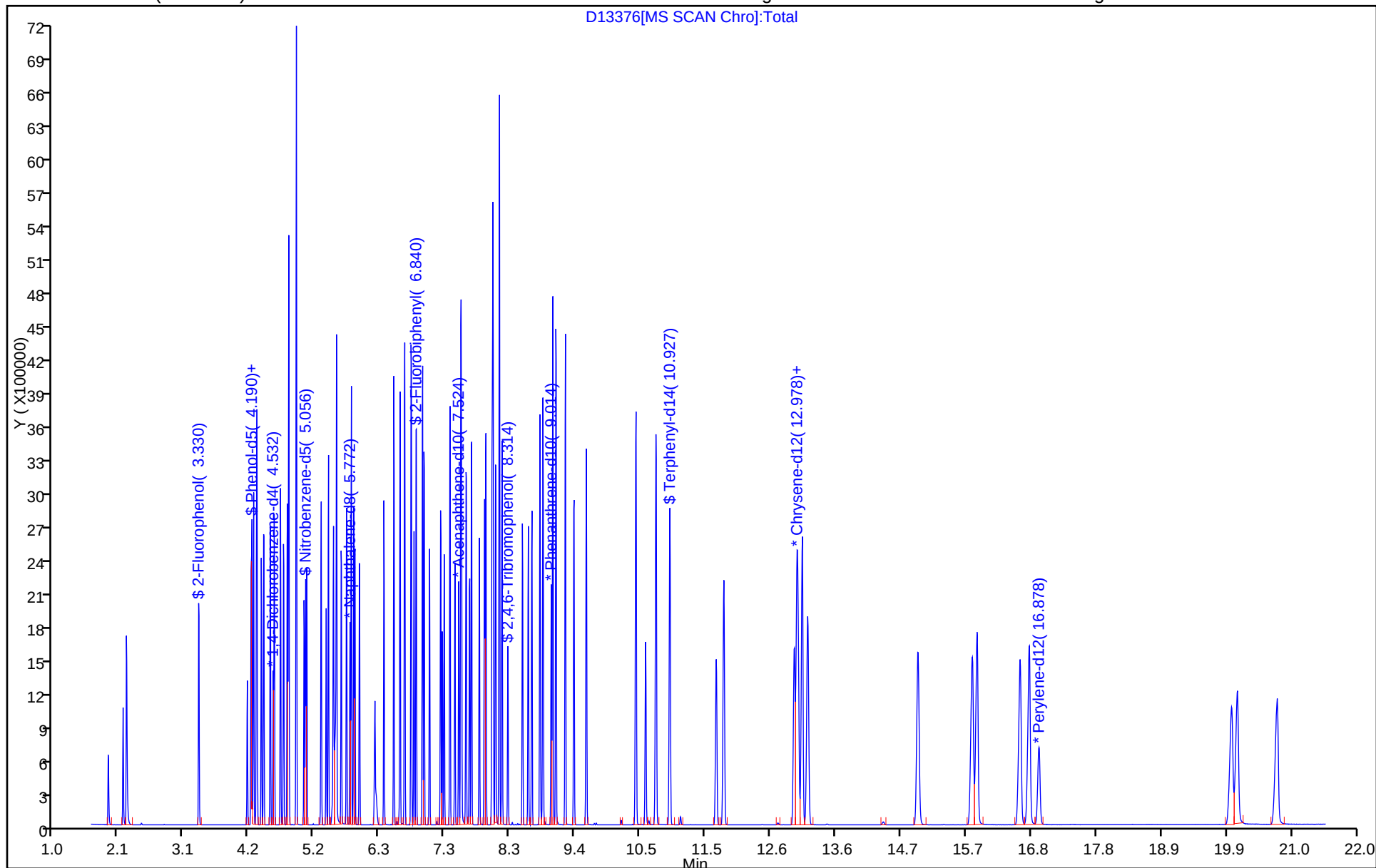
ALS Bottle#: 2

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13293.D
 Lims ID: DFTPP
 Client ID:
 Sample Type: DFTPP
 Inject. Date: 14-Nov-2015 08:15:30 ALS Bottle#: 1 Worklist Smp#: 2
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: DFTPP
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 17-Nov-2015 09:25:33 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: kiekeld

Date: 17-Nov-2015 09:02:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
21 Pentachlorophenol_T	266	3.675	3.675	0.000	90	72260	NR	NR	
37 Benzidine_T	184	4.752	4.752	0.000	100	635566	NR	NR	
156 DFTPP									
157 4,4'-DDD	235	5.175	5.175	0.000	95	5040	NR	NR	
158 4,4'-DDE	246		4.941				ND	ND	
159 4,4'-DDT	235	5.387	5.387	0.000	98	250624	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

ND - Not Detected or Marked ND

Reagents:

MS-DFTPP_00040

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13293.D

Injection Date: 14-Nov-2015 08:15:30

Instrument ID: SMS_D

Lims ID: DFTPP

Client ID:

Operator ID: KIEKELD

ALS Bottle#: 1 Worklist Smp#: 2

Injection Vol: 0.5 ul

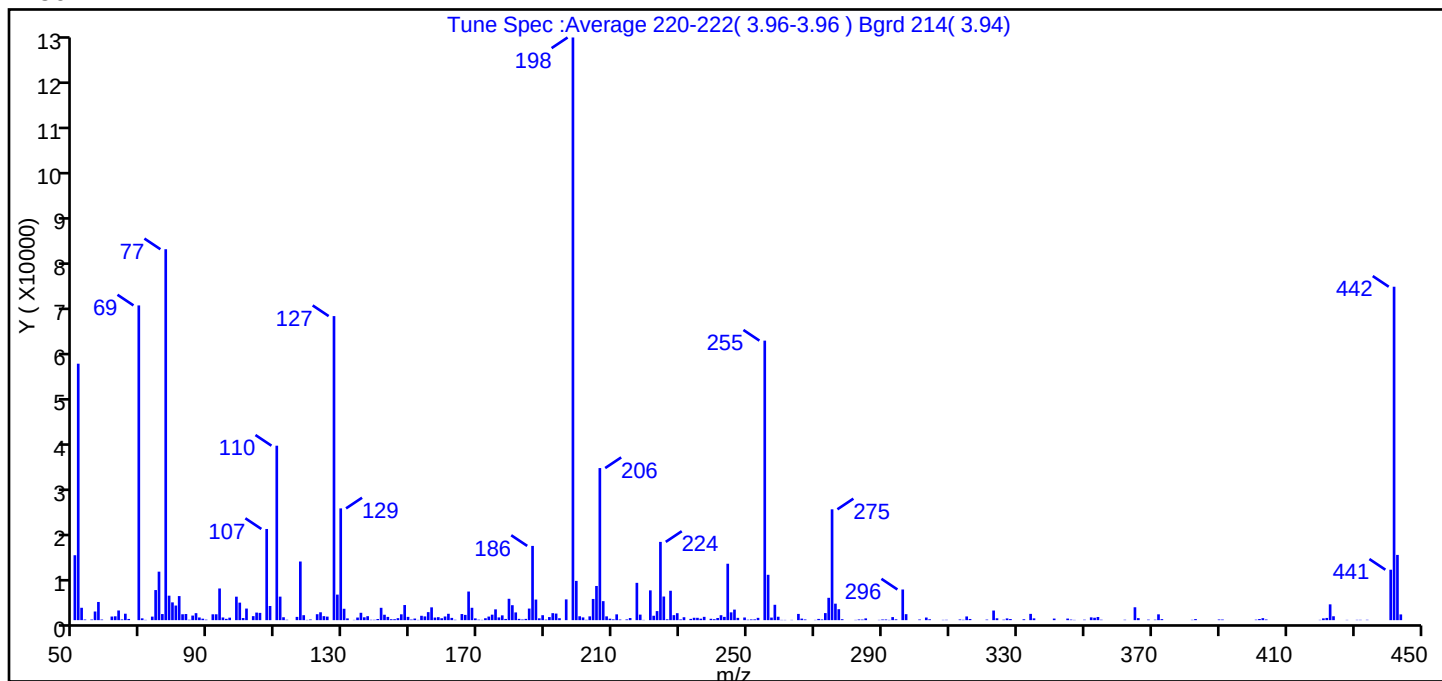
Dil. Factor: 1.0000

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Tune Method: DFTPP Method 8270

156 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	44.0
68	<2% of mass 69	0.0 (0.0)
69	Present	54.0
70	<2% of mass 69	0.3 (0.6)
127	40-60% of mass 198	52.2
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-30% of mass 198	19.0
365	>1% of mass 198	2.2
441	Present but less than mass 443	8.7 (77.3)
442	>40% of mass 198	57.2
443	17-23% of mass 442	11.2 (19.6)

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13293.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 14-Nov-2015 08:15:30
Spectrum: Tune Spec :Average 220-222(3.96-3.96) Bgrd 214(3.94)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 266

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	13420	133.00	53	203.00	783	284.00	118
51.00	53016	134.00	538	204.00	4381	285.00	360
52.00	2557	135.00	1521	205.00	7062	289.00	56
53.00	131	136.00	587	206.00	31440	290.00	137
55.00	128	137.00	819	207.00	3928	291.00	141
56.00	1786	138.00	76	208.00	782	292.00	52
57.00	3756	139.00	71	209.00	302	293.00	632
58.00	123	140.00	232	210.00	162	294.00	175
61.00	743	141.00	2552	211.00	1199	296.00	6337
62.00	794	142.00	1117	212.00	127	297.00	1237
63.00	1997	143.00	673	214.00	149	301.00	134
64.00	148	144.00	189	215.00	436	303.00	540
65.00	1330	145.00	189	217.00	7711	304.00	177
66.00	246	146.00	409	218.00	1143	308.00	57
69.00	65064	147.00	1208	219.00	51	309.00	72
70.00	370	148.00	3123	221.00	6155	313.00	141
71.00	56	149.00	677	222.00	907	314.00	74
73.00	730	150.00	123	223.00	1871	315.00	765
74.00	6220	151.00	328	224.00	16180	316.00	239
75.00	10023	152.00	53	225.00	4884	321.00	115
76.00	1259	153.00	902	226.00	177	323.00	1987
77.00	76680	154.00	775	227.00	6075	324.00	382
78.00	5059	155.00	1656	228.00	1032	326.00	92
79.00	3675	156.00	2646	229.00	1439	327.00	359
80.00	3019	157.00	536	230.00	149	328.00	227
81.00	4976	158.00	616	231.00	604	332.00	184
82.00	1217	159.00	390	233.00	260	334.00	1295
83.00	1263	160.00	758	234.00	490	335.00	365
84.00	78	161.00	1315	235.00	482	341.00	325
85.00	945	162.00	466	236.00	304	345.00	324
86.00	1443	163.00	77	237.00	681	346.00	116
87.00	551	165.00	1261	239.00	281	347.00	52
88.00	301	166.00	1086	240.00	192	350.00	96

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\13293.D\SMS_D_8270D.rslt\spectra.d

Injection Date: 14-Nov-2015 08:15:30

Spectrum: Tune Spec :Average 220-222(3.96-3.96) Bgrd 214(3.94)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 266

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	102	167.00	5914	241.00	449	352.00	576
91.00	1207	168.00	2557	242.00	1021	353.00	495
92.00	1215	169.00	360	243.00	675	354.00	651
93.00	6546	170.00	100	244.00	11662	355.00	87
94.00	553	171.00	59	245.00	1610	362.00	80
95.00	269	172.00	393	246.00	2180	365.00	2661
96.00	513	173.00	740	247.00	473	366.00	418
98.00	4852	174.00	1134	249.00	548	369.00	110
99.00	3620	175.00	2233	250.00	90	371.00	96
100.00	434	176.00	563	251.00	146	372.00	1203
101.00	2395	177.00	988	252.00	160	373.00	208
103.00	828	178.00	248	253.00	476	382.00	67
104.00	1563	179.00	4417	255.00	57784	383.00	218
105.00	1501	180.00	3090	256.00	9375	390.00	138
107.00	18848	181.00	1598	257.00	531	391.00	123
108.00	2926	182.00	266	258.00	3175	401.00	97
110.00	36064	183.00	134	259.00	704	402.00	234
111.00	4861	184.00	260	260.00	52	403.00	412
112.00	600	185.00	2393	261.00	50	404.00	140
113.00	83	186.00	15345	263.00	53	420.00	59
116.00	672	187.00	4254	265.00	1287	421.00	365
117.00	12122	188.00	375	266.00	314	422.00	455
118.00	1022	189.00	1021	267.00	142	423.00	3266
119.00	57	190.00	108	270.00	52	424.00	801
120.00	141	191.00	635	271.00	255	428.00	55
122.00	1225	192.00	1444	272.00	145	431.00	65
123.00	1626	193.00	1361	273.00	1458	432.00	66
124.00	826	194.00	396	274.00	4617	434.00	75
125.00	729	196.00	4294	275.00	22912	441.00	10425
127.00	62856	198.00	120456	276.00	3406	442.00	68928
128.00	5279	199.00	8115	277.00	2263	443.00	13486
129.00	23104	200.00	802	278.00	192	444.00	1186
130.00	2353	201.00	565	282.00	52		
131.00	361	202.00	69	283.00	142		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	102	167.00	5914	241.00	449	352.00	576
91.00	1207	168.00	2557	242.00	1021	353.00	495
92.00	1215	169.00	360	243.00	675	354.00	651
93.00	6546	170.00	100	244.00	11662	355.00	87
94.00	553	171.00	59	245.00	1610	362.00	80
95.00	269	172.00	393	246.00	2180	365.00	2661
96.00	513	173.00	740	247.00	473	366.00	418
98.00	4852	174.00	1134	249.00	548	369.00	110
99.00	3620	175.00	2233	250.00	90	371.00	96
100.00	434	176.00	563	251.00	146	372.00	1203
101.00	2395	177.00	988	252.00	160	373.00	208
103.00	828	178.00	248	253.00	476	382.00	67
104.00	1563	179.00	4417	255.00	57784	383.00	218
105.00	1501	180.00	3090	256.00	9375	390.00	138
107.00	18848	181.00	1598	257.00	531	391.00	123
108.00	2926	182.00	266	258.00	3175	401.00	97
110.00	36064	183.00	134	259.00	704	402.00	234
111.00	4861	184.00	260	260.00	52	403.00	412
112.00	600	185.00	2393	261.00	50	404.00	140
113.00	83	186.00	15345	263.00	53	420.00	59
116.00	672	187.00	4254	265.00	1287	421.00	365
117.00	12122	188.00	375	266.00	314	422.00	455
118.00	1022	189.00	1021	267.00	142	423.00	3266
119.00	57	190.00	108	270.00	52	424.00	801
120.00	141	191.00	635	271.00	255	428.00	55
122.00	1225	192.00	1444	272.00	145	431.00	65
123.00	1626	193.00	1361	273.00	1458	432.00	66
124.00	826	194.00	396	274.00	4617	434.00	75
125.00	729	196.00	4294	275.00	22912	441.00	10425
127.00	62856	198.00	120456	276.00	3406	442.00	68928
128.00	5279	199.00	8115	277.00	2263	443.00	13486
129.00	23104	200.00	802	278.00	192	444.00	1186
130.00	2353	201.00	565	282.00	52		
131.00	361	202.00	69	283.00	142		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13375.D
 Lims ID: DFTPP
 Client ID:
 Sample Type: DFTPP
 Inject. Date: 17-Nov-2015 17:37:30 ALS Bottle#: 1 Worklist Smp#: 2
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: DFTPP
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:26 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 07:07:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
21 Pentachlorophenol_T	266	3.692	3.692	0.000	90	82294	NR	NR	
37 Benzidine_T	184	4.771	4.771	0.000	100	747563	NR	NR	
156 DFTPP									
157 4,4'-DDD	235	5.198	5.198	0.000	92	5756	NR	NR	
158 4,4'-DDE	246	4.917	4.917	0.000	1	279	NR	NR	
159 4,4'-DDT	235	5.410	5.410	0.000	98	288443	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

MS-DFTPP_00040

Amount Added: 200.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13375.D

Injection Date: 17-Nov-2015 17:37:30

Instrument ID: SMS_D

Lims ID: DFTPP

Client ID:

Operator ID: KIEKELD

ALS Bottle#: 1 Worklist Smp#: 2

Injection Vol: 0.5 ul

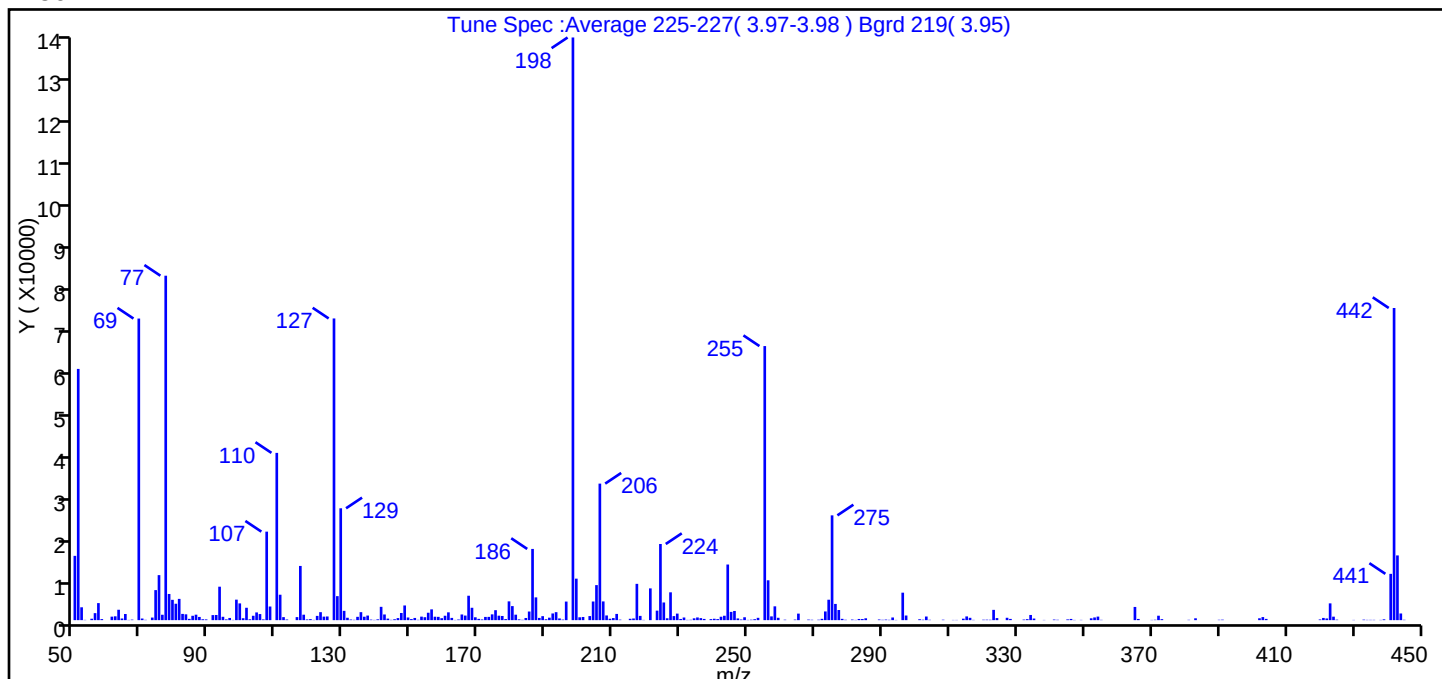
Dil. Factor: 1.0000

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Tune Method: DFTPP Method 8270

156 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	43.1
68	<2% of mass 69	0.0 (0.0)
69	Present	51.8
70	<2% of mass 69	0.3 (0.5)
127	40-60% of mass 198	51.8
197	<1% of mass 198	0.0
199	5-9% of mass 198	7.1
275	10-30% of mass 198	18.0
365	>1% of mass 198	2.3
441	Present but less than mass 443	7.9 (71.5)
442	>40% of mass 198	53.6
443	17-23% of mass 442	11.1 (20.7)

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\13375.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 17-Nov-2015 17:37:30
Spectrum: Tune Spec :Average 225-227(3.97-3.98) Bgrd 219(3.95)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	15195	131.00	562	204.00	4409	291.00	137
51.00	59384	132.00	145	205.00	8280	292.00	74
52.00	3040	133.00	78	206.00	32272	293.00	629
53.00	63	134.00	783	207.00	4427	294.00	51
55.00	332	135.00	1887	208.00	1109	296.00	6494
56.00	1655	136.00	809	209.00	332	297.00	1094
57.00	4028	137.00	1083	210.00	489	301.00	211
58.00	247	138.00	126	211.00	1470	302.00	102
61.00	825	139.00	57	212.00	119	303.00	857
62.00	905	140.00	191	215.00	321	304.00	80
63.00	2456	141.00	3145	216.00	394	308.00	103
64.00	387	142.00	1340	217.00	8579	311.00	50
65.00	1451	143.00	365	218.00	1006	312.00	51
66.00	50	144.00	69	219.00	56	314.00	346
67.00	123	145.00	209	221.00	7506	315.00	881
69.00	71288	146.00	487	223.00	2247	316.00	550
70.00	382	147.00	1690	224.00	18000	317.00	61
71.00	73	148.00	3469	225.00	4176	320.00	103
73.00	611	149.00	627	226.00	441	321.00	112
74.00	7100	150.00	251	227.00	6578	322.00	89
75.00	10640	151.00	519	228.00	954	323.00	2431
76.00	1274	152.00	78	229.00	1547	324.00	488
77.00	81416	153.00	829	230.00	278	327.00	559
78.00	6185	154.00	692	231.00	625	328.00	290
79.00	4802	155.00	1752	232.00	64	332.00	133
80.00	3876	156.00	2550	233.00	87	333.00	232
81.00	5025	157.00	811	234.00	432	334.00	1222
82.00	1474	158.00	776	235.00	635	335.00	376
83.00	1378	159.00	460	236.00	476	338.00	51
84.00	304	160.00	1040	237.00	287	341.00	141
85.00	1032	161.00	1845	239.00	242	342.00	87
86.00	1290	162.00	530	240.00	328	345.00	176
87.00	758	163.00	51	241.00	250	346.00	286

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\13375.D\SMS_D_8270D.rsl\spectra.d

Injection Date: 17-Nov-2015 17:37:30

Spectrum: Tune Spec :Average 225-227(3.97-3.98) Bgrd 219(3.95)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	212	164.00	147	242.00	805	347.00	52
89.00	178	165.00	1340	243.00	1037	349.00	60
91.00	1192	166.00	1083	244.00	13148	352.00	434
92.00	1220	167.00	5770	245.00	1948	353.00	635
93.00	7906	168.00	2925	246.00	2168	354.00	838
94.00	793	169.00	675	247.00	407	355.00	71
95.00	180	170.00	304	248.00	151	365.00	3120
96.00	517	171.00	165	249.00	682	366.00	283
97.00	56	172.00	761	250.00	59	370.00	55
98.00	4843	173.00	772	251.00	106	371.00	98
99.00	3958	174.00	1368	252.00	221	372.00	1046
100.00	451	175.00	2354	253.00	549	373.00	233
101.00	2925	176.00	1052	255.00	64784	381.00	78
102.00	205	177.00	985	256.00	9422	383.00	435
103.00	1034	178.00	253	257.00	889	390.00	86
104.00	1824	179.00	4439	258.00	3265	391.00	114
105.00	1438	180.00	3318	259.00	560	402.00	440
106.00	174	181.00	1292	261.00	105	403.00	724
107.00	20920	182.00	189	264.00	131	404.00	293
108.00	3222	183.00	77	265.00	1543	420.00	167
110.00	39536	184.00	512	268.00	134	421.00	521
111.00	6009	185.00	2038	269.00	88	422.00	399
112.00	713	186.00	16832	271.00	101	423.00	3965
113.00	152	187.00	5382	272.00	310	424.00	822
116.00	716	188.00	526	273.00	2054	425.00	117
117.00	12813	189.00	939	274.00	4828	430.00	54
118.00	1288	190.00	211	275.00	24768	433.00	120
119.00	167	191.00	584	276.00	3832	434.00	66
120.00	239	192.00	1582	277.00	2394	435.00	68
121.00	61	193.00	1887	278.00	307	436.00	69
122.00	1005	194.00	402	279.00	90	438.00	57
123.00	1885	195.00	130	281.00	137	439.00	190
124.00	831	196.00	4393	282.00	57	441.00	10942
125.00	867	198.00	137728	283.00	276	442.00	73784

Report Date: 18-Nov-2015 11:45:27

Chrom Revision: 2.2 08-Oct-2015 07:17:48

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13375.D\SMS_D_8270D.rslt\spectra.d

Injection Date: 17-Nov-2015 17:37:30

Spectrum: Tune Spec :Average 225-227(3.97-3.98) Bgrd 219(3.95)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	71312	199.00	9806	284.00	261	443.00	15297
128.00	5671	200.00	676	285.00	435	444.00	1575
129.00	26440	201.00	745	289.00	157	445.00	87
130.00	2198	203.00	964	290.00	83		

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 280-303850/1-A
 Matrix: Water Lab File ID: D13381.D
 Analysis Method: 8270D Date Collected: _____
 Extract. Method: 3520C Date Extracted: 11/07/2015 14:08
 Sample wt/vol: 1000 (mL) Date Analyzed: 11/17/2015 19:52
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1
 Injection Volume: 0.5 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 304623 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.5	U	5.0	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	83		42-131
321-60-8	2-Fluorobiphenyl	76		48-120
367-12-4	2-Fluorophenol (Surr)	83		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	81		42-120
4165-62-2	Phenol-d5 (Surr)	84		45-124
1718-51-0	Terphenyl-d14 (Surr)	75		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13381.D
 Lims ID: MB 280-303850/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 17-Nov-2015 19:52:30 ALS Bottle#: 7 Worklist Smp#: 20
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: MB280-303850_1-A
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:37:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	97	176098	40.0	40.0	
* 2 Naphthalene-d8	136	5.766	5.772	-0.006	99	664589	40.0	40.0	
* 3 Acenaphthene-d10	164	7.523	7.524	-0.001	90	433863	40.0	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	793171	40.0	40.0	
* 5 Chrysene-d12	240	12.989	13.000	-0.012	98	808130	40.0	40.0	
* 6 Perylene-d12	264	16.867	16.878	-0.011	97	774477	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.335	3.336	-0.001	92	552852	100.0	82.9	
\$ 8 Phenol-d5	99	4.174	4.174	0.000	98	754181	100.0	84.1	
\$ 9 Nitrobenzene-d5	82	5.055	5.056	-0.001	86	644586	100.0	80.7	
\$ 10 2-Fluorobiphenyl	172	6.834	6.840	-0.006	99	1074733	100.0	76.4	
\$ 11 2,4,6-Tribromophenol	330	8.314	8.320	-0.006	92	136475	100.0	82.5	
\$ 12 Terphenyl-d14	244	10.926	10.927	-0.001	100	1281930	100.0	75.1	
13 1,4-Dioxane	88		1.872					ND	
14 N-Nitrosodimethylamine	74		2.112					ND	
15 Pyridine	79		2.166					ND	
16 2-Picoline	93		2.749					ND	
17 N-Nitrosomethylethylamine	88		2.829					ND	
18 Methyl methanesulfonate	80		3.064					ND	
19 N-Nitrosodiethylamine	102		3.374					ND	
20 Ethyl methanesulfonate	79		3.598					ND	
21 Pentachlorophenol_T	266		3.692					ND	
22 Pentachloroethane	117		4.010					ND	
23 Benzaldehyde	106		4.349					ND	
24 Phenol	94		4.190					ND	
25 Aniline	93		4.217					ND	
26 Bis(2-chloroethyl)ether	93		4.260					ND	
27 2-Chlorophenol	128		4.340					ND	
28 N-Nitrosopyrrolidine	100		4.544					ND	
29 N-Nitrosomorpholine	116	4.532	4.571	-0.039	46	8585		NC	
30 2-Toluidine	106		4.587					ND	
31 1,3-Dichlorobenzene	146		4.484					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
32 1,4-Dichlorobenzene	146		4.548					ND	
33 N-Nitrosopiperidine	114		4.827					ND	
34 Benzyl alcohol	108		4.650					ND	
35 1,2-Dichlorobenzene	146		4.698					ND	
36 2-Methylphenol	108		4.762					ND	
37 Benzidine_T	184		4.771					ND	
38 2,2'-oxybis[1-chloropropan	45		4.783					ND	
39 o,o',o"-Triethylphosphoro	198		4.998					ND	
40 3 & 4 Methylphenol	108		4.906					ND	
41 3-Methylphenol	108		4.906					ND	
42 4-Methylphenol	108		4.906					ND	
43 N-Nitrosodi-n-propylamine	70		4.901					ND	
44 Acetophenone	105		4.906					ND	
45 alpha,alpha-Dimethyl phene	58		5.148					ND	
46 Hexachloroethane	117		5.029					ND	
47 Nitrobenzene	77		5.072					ND	
48 2,6-Dichlorophenol	162		5.852					ND	
49 Hexachloropropene	213		5.367					ND	
50 Isophorone	82		5.307					ND	
51 2,4-Dimethylphenol	107		5.424					ND	
52 2-Nitrophenol	139		5.387					ND	
53 N-Nitrosodi-n-butylamine	84		5.580					ND	
54 p-Phenylene diamine	108	5.766	5.634	0.132	48	71314		NC	
55 Bis(2-chloroethoxy)methane	93		5.505					ND	
56 Benzoic acid	105		5.553					ND	
57 Safrole, Total	162		5.778					ND	
58 2,4-Dichlorophenol	162		5.633					ND	
59 1,2,4-Trichlorobenzene	180		5.713					ND	
60 Naphthalene	128		5.793					ND	
61 4-Chloroaniline	127		5.830					ND	
62 Isosafrole Peak 1	162		6.024					ND	
63 Hexachlorobutadiene	225		5.921					ND	
64 Isosafrole Peak 2	104		6.211					ND	
65 1-Chloronaphthalene	162		6.307					ND	
66 Caprolactam	55		6.172					ND	
67 1,4-Naphthoquinone	158		6.435					ND	
68 4-Chloro-3-methylphenol	107		6.317					ND	
69 1,4-Dinitrobenzene	168		6.483					ND	
70 2-Methylnaphthalene	142		6.477					ND	
71 1-Methylnaphthalene	142		6.578					ND	
72 Hexachlorocyclopentadiene	237		6.648					ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.653					ND	
74 Pentachlorobenzene	250		6.889					ND	
75 2,4,6-Trichlorophenol	196		6.760					ND	
76 2,4,5-Trichlorophenol	196		6.803					ND	
77 1-Naphthylamine	143		7.001					ND	
78 2-Naphthylamine	143		7.066					ND	
79 1,1'-Biphenyl	154		6.942					ND	
80 Thionazin	97		7.140					ND	
81 2-Chloronaphthalene	162		6.968					ND	
82 N-Nitro-o-toluidine	152		7.226					ND	
83 2-Nitroaniline	65		7.054					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
84 Diphenylamine	169		7.295					ND	
85 Sulfotep	97		7.375					ND	
86 Dimethyl phthalate	163		7.230					ND	
87 1,3-Dinitrobenzene	168		7.262					ND	
88 2,6-Dinitrotoluene	165		7.289					ND	
89 Diallate Peak 1	86	7.523	7.509	0.014	1	1176			NC
90 Phorate	121		7.520					ND	
91 1,3,5-Trinitrobenzene	213		7.520					ND	
92 Phenacetin	108		7.541					ND	
93 Acenaphthylene	152		7.385					ND	
94 Diallate Peak 2	86		7.589					ND	
95 3-Nitroaniline	138		7.465					ND	
96 Dimethoate	87		7.691					ND	
97 Acenaphthene	153		7.556					ND	
98 2,4-Dinitrophenol	184		7.572					ND	
99 4-Nitrophenol	109		7.647					ND	
100 4-Aminobiphenyl	169		7.840					ND	
101 Pronamide	173		7.845					ND	
102 Pentachloronitrobenzene	237		7.851					ND	
103 2,4-Dinitrotoluene	165		7.700					ND	
104 Dibenzofuran	168		7.732					ND	
105 Disulfoton	88		7.958					ND	
106 Dinoseb	211		7.968					ND	
107 2,3,4,6-Tetrachlorophenol	232		7.855					ND	
108 Diethyl phthalate	149		7.941					ND	
109 4-Chlorophenyl phenyl ether	204		8.063					ND	
110 Fluorene	166		8.074					ND	
111 Methyl parathion	109		8.289					ND	
112 4-Nitroaniline	138		8.079					ND	
113 4,6-Dinitro-2-methylphenol	198		8.117					ND	
114 N-Nitrosodiphenylamine	169		8.181					ND	
115 Azobenzene	77		8.224					ND	
116 1,2-Diphenylhydrazine	77		8.224					ND	
117 Ethyl Parathion	109		8.636					ND	
118 4-Bromophenyl phenyl ether	248		8.555					ND	
119 4-Nitroquinoline-1-oxide	190		8.748					ND	
120 Methapyrilene	97		8.748					ND	
121 Hexachlorobenzene	284		8.646					ND	
122 Pentachlorophenol	266		8.833					ND	
123 Isodrin	193		9.010					ND	
124 Phenanthrene	178		9.041					ND	
125 Anthracene	178		9.089					ND	
126 Carbazole	167		9.244					ND	
127 Benzidine	184		9.493					ND	
128 Aramite Peak 1	185		9.560					ND	
129 Aramite Peak 2	185		9.667					ND	
130 Di-n-butyl phthalate	149		9.581					ND	
131 p-Dimethylamino azobenzene	120		9.865					ND	
132 Chlorobenzilate	251		9.902					ND	
133 3,3'-Dimethylbenzidine	212		10.442					ND	
134 Fluoranthene	202		10.382					ND	
135 2-Acetylaminofluorene	181		10.933					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202		10.702					ND	
137 4,4'-Methylene bis(2-chlor	231		11.564					ND	
138 Famphur	218		11.675					ND	
139 Butyl benzyl phthalate	149		11.798					ND	
140 3,3'-Dichlorobenzidine	252		12.930					ND	
141 Benzo[a]anthracene	228		12.978					ND	
142 Bis(2-ethylhexyl) phthalat	149		13.149					ND	
143 Chrysene	228		13.064					ND	
144 7,12-Dimethylbenz(a)anthra	256		14.438					ND	
145 Di-n-octyl phthalate	149		14.923					ND	
146 3-Methylcholanthrene	268		16.564					ND	
147 Benzo[b]fluoranthene	252		15.804					ND	
148 Benzo[k]fluoranthene	252		15.879					ND	
149 Benzo[a]pyrene	252		16.723					ND	
150 Dibenz[a,j]acridine	279		18.535					ND	
151 Indeno[1,2,3-cd]pyrene	276		19.982					ND	
152 Dibenz(a,h)anthracene	278		20.078					ND	
153 Benzo[g,h,i]perylene	276		20.719					ND	
S 160 Aramite, Total	185		15.047					ND	
S 161 Isosafrole	162		15.047					ND	
S 162 Diallate	86		15.047					ND	
154 Total Cresols	1		0.000					ND	
155 Tetraethyl Pyrophosphate (	1		0.000					ND	
157 4,4'-DDD	235		5.198					ND	
158 4,4'-DDE	246		4.917					ND	
159 4,4'-DDT	235		5.410					ND	
S 163 Methyl Phenols, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13381.D

Injection Date: 17-Nov-2015 19:52:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: MB 280-303850/1-A

Worklist Smp#: 20

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

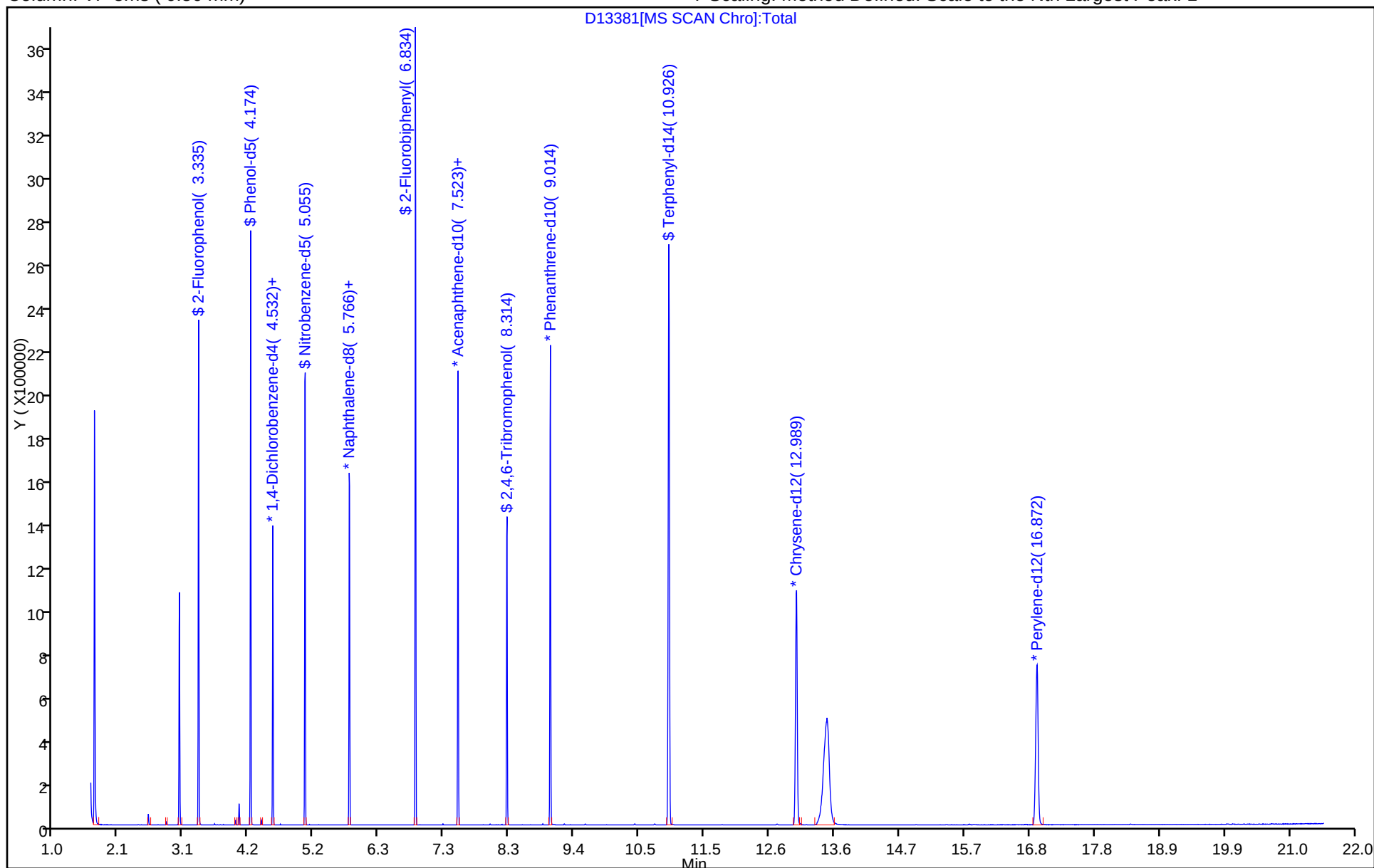
ALS Bottle#: 7

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 280-303850/2-A
 Matrix: Water Lab File ID: D13382.D
 Analysis Method: 8270D Date Collected: _____
 Extract. Method: 3520C Date Extracted: 11/07/2015 14:08
 Sample wt/vol: 1000 (mL) Date Analyzed: 11/17/2015 20:19
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1
 Injection Volume: 0.5 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 304623 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	68.0		5.0	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	87		42-131
321-60-8	2-Fluorobiphenyl	79		48-120
367-12-4	2-Fluorophenol (Surr)	79		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	79		42-120
4165-62-2	Phenol-d5 (Surr)	82		45-124
1718-51-0	Terphenyl-d14 (Surr)	75		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13382.D
 Lims ID: LCS 280-303850/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 17-Nov-2015 20:19:30 ALS Bottle#: 8 Worklist Smp#: 21
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: LCS280-303850_2-A
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:39:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.536	4.532	0.004	96	181334	40.0	40.0	
* 2 Naphthalene-d8	136	5.770	5.772	-0.002	100	706414	40.0	40.0	
* 3 Acenaphthene-d10	164	7.522	7.524	-0.002	91	456133	40.0	40.0	
* 4 Phenanthrene-d10	188	9.013	9.014	-0.001	97	836684	40.0	40.0	
* 5 Chrysene-d12	240	12.998	13.000	-0.002	98	845932	40.0	40.0	
* 6 Perylene-d12	264	16.871	16.878	-0.007	97	785257	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.334	3.336	-0.002	92	546023	100.0	79.5	
\$ 8 Phenol-d5	99	4.178	4.174	0.004	98	760902	100.0	82.4	
\$ 9 Nitrobenzene-d5	82	5.054	5.056	-0.002	86	674402	100.0	79.4	
\$ 10 2-Fluorobiphenyl	172	6.839	6.840	-0.001	99	1172334	100.0	79.2	
\$ 11 2,4,6-Tribromophenol	330	8.318	8.320	-0.002	92	151860	100.0	87.4	
\$ 12 Terphenyl-d14	244	10.925	10.927	-0.002	99	1337643	100.0	74.9	
13 1,4-Dioxane	88	1.870	1.872	-0.002	92	174845	80.0	53.2	
14 N-Nitrosodimethylamine	74	2.111	2.112	-0.001	91	336613	80.0	65.4	
15 Pyridine	79	2.164	2.166	-0.002	97	474727	80.0	52.9	
23 Benzaldehyde	106		4.349				ND	ND	
24 Phenol	94	4.189	4.190	-0.001	98	642891	80.0	67.0	
25 Aniline	93	4.216	4.217	-0.001	99	678856	80.0	55.7	
26 Bis(2-chloroethyl)ether	93	4.264	4.260	0.004	98	487063	80.0	69.7	
27 2-Chlorophenol	128	4.344	4.340	0.004	97	448196	80.0	68.2	
31 1,3-Dichlorobenzene	146	4.488	4.484	0.004	97	326072	80.0	47.5	
32 1,4-Dichlorobenzene	146	4.552	4.548	0.004	93	334586	80.0	48.0	
34 Benzyl alcohol	108	4.648	4.650	-0.002	94	345211	80.0	69.0	
35 1,2-Dichlorobenzene	146	4.702	4.698	0.004	96	328812	80.0	48.7	
36 2-Methylphenol	108	4.761	4.762	-0.002	93	480023	80.0	68.7	
38 2,2'-oxybis[1-chloropropan	45	4.782	4.783	-0.001	95	534339	80.0	66.3	
40 3 & 4 Methylphenol	108	4.905	4.906	-0.001	76	473948	80.0	70.5	
41 3-Methylphenol	108	4.905	4.906	-0.001	73	473948	80.0	70.5	
42 4-Methylphenol	108	4.905	4.906	-0.001	69	473948	80.0	70.5	
43 N-Nitrosodi-n-propylamine	70	4.905	4.901	0.004	82	358807	80.0	70.1	
44 Acetophenone	105	4.905	4.906	-0.001	85	630024	80.0	68.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.033	5.029	0.004	95	123063	80.0	43.8	
47 Nitrobenzene	77	5.076	5.072	0.004	85	528631	80.0	64.4	
48 2,6-Dichlorophenol	162	5.850	5.852	-0.002	97	373248	80.0	67.5	
50 Isophorone	82	5.305	5.307	-0.002	99	994460	80.0	65.2	
51 2,4-Dimethylphenol	107	5.423	5.424	-0.001	96	483493	80.0	67.6	
52 2-Nitrophenol	139	5.386	5.387	-0.001	97	237473	80.0	67.1	
55 Bis(2-chloroethoxy)methane	93	5.503	5.505	-0.001	98	589762	80.0	66.7	
56 Benzoic acid	105	5.514	5.553	-0.039	88	303854	80.0	54.2	
58 2,4-Dichlorophenol	162	5.631	5.633	-0.002	94	381374	80.0	68.5	
59 1,2,4-Trichlorobenzene	180	5.717	5.713	0.004	94	306751	80.0	49.8	
60 Naphthalene	128	5.792	5.793	-0.001	97	1098543	80.0	57.9	
61 4-Chloroaniline	127	5.829	5.830	-0.001	96	434638	80.0	50.4	
63 Hexachlorobutadiene	225	5.925	5.921	0.004	95	147291	80.0	44.3	
66 Caprolactam	55	6.155	6.172	-0.017	82	226385	80.0	68.0	M
68 4-Chloro-3-methylphenol	107	6.320	6.317	0.003	96	431203	80.0	69.2	
70 2-Methylnaphthalene	142	6.475	6.477	-0.002	94	779630	80.0	59.5	
71 1-Methylnaphthalene	142	6.577	6.578	-0.001	94	729152	80.0	62.5	
72 Hexachlorocyclopentadiene	237	6.652	6.648	0.004	96	135061	80.0	43.5	
73 1,2,4,5-Tetrachlorobenzene	216	6.652	6.653	-0.001	97	356350	80.0	60.3	
75 2,4,6-Trichlorophenol	196	6.758	6.760	-0.002	93	297046	80.0	72.4	
76 2,4,5-Trichlorophenol	196	6.801	6.803	-0.002	95	311040	80.0	68.8	
79 1,1'-Biphenyl	154	6.940	6.942	-0.002	95	978003	80.0	63.3	
81 2-Chloronaphthalene	162	6.967	6.968	-0.001	96	746225	80.0	61.5	
83 2-Nitroaniline	65	7.052	7.054	-0.002	81	307718	80.0	68.7	
86 Dimethyl phthalate	163	7.229	7.230	-0.001	98	944717	80.0	69.2	
87 1,3-Dinitrobenzene	168	7.261	7.262	-0.001	88	174556	80.0	71.1	
88 2,6-Dinitrotoluene	165	7.287	7.289	-0.002	96	237399	80.0	68.3	
93 Acenaphthylene	152	7.384	7.385	-0.001	99	1323838	80.0	65.4	
95 3-Nitroaniline	138	7.464	7.465	-0.001	96	226027	80.0	54.1	
97 Acenaphthene	153	7.560	7.556	0.004	94	782858	80.0	65.6	
98 2,4-Dinitrophenol	184	7.570	7.572	-0.002	84	297415	160.0	145.5	
99 4-Nitrophenol	109	7.640	7.647	-0.007	93	296213	160.0	140.1	
103 2,4-Dinitrotoluene	165	7.699	7.700	-0.001	92	325402	80.0	70.0	
104 Dibenzofuran	168	7.731	7.732	-0.001	98	1210086	80.0	67.0	
107 2,3,4,6-Tetrachlorophenol	232	7.854	7.855	-0.001	72	254706	80.0	72.1	
108 Diethyl phthalate	149	7.939	7.941	-0.002	98	973374	80.0	70.9	
109 4-Chlorophenyl phenyl ethe	204	8.062	8.063	-0.001	91	464050	80.0	67.6	
110 Fluorene	166	8.073	8.074	-0.001	95	963187	80.0	67.1	
112 4-Nitroaniline	138	8.078	8.079	-0.001	85	279116	80.0	67.4	
113 4,6-Dinitro-2-methylphenol	198	8.115	8.117	-0.002	87	415574	160.0	137.4	
114 N-Nitrosodiphenylamine	169	8.179	8.181	-0.002	61	1421910	160.0	133.3	
115 Azobenzene	77	8.222	8.224	-0.002	97	1144994	80.0	68.1	
116 1,2-Diphenylhydrazine	77	8.222	8.224	-0.002	97	1144994	80.9	68.9	
118 4-Bromophenyl phenyl ether	248	8.553	8.555	-0.002	66	285870	80.0	66.1	
121 Hexachlorobenzene	284	8.644	8.646	-0.002	94	278802	80.0	65.1	
122 Pentachlorophenol	266	8.831	8.833	-0.002	93	336139	160.0	135.6	
124 Phenanthrene	178	9.040	9.041	-0.001	98	1495341	80.0	66.5	
125 Anthracene	178	9.088	9.089	-0.001	98	1498054	80.0	65.8	
126 Carbazole	167	9.243	9.244	-0.001	95	1514981	80.0	67.9	
127 Benzidine	184		9.493				ND	ND	
130 Di-n-butyl phthalate	149	9.579	9.581	-0.002	100	1692368	80.0	68.5	
134 Fluoranthene	202	10.380	10.382	-0.002	98	1719407	80.0	68.4	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13382.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.701	10.702	-0.001	97	1839289	80.0	66.4	
139 Butyl benzyl phthalate	149	11.796	11.798	-0.002	97	806176	80.0	65.5	
140 3,3'-Dichlorobenzidine	252	12.929	12.930	-0.001	74	498293	80.0	55.8	
141 Benzo[a]anthracene	228	12.971	12.978	-0.007	99	1774945	80.0	65.5	
142 Bis(2-ethylhexyl) phthalat	149	13.148	13.149	-0.001	97	1110715	80.0	65.3	
143 Chrysene	228	13.057	13.064	-0.007	98	1697771	80.0	65.5	
145 Di-n-octyl phthalate	149	14.927	14.923	0.004	99	2015461	80.0	68.6	
147 Benzo[b]fluoranthene	252	15.797	15.804	-0.007	98	1645247	80.0	66.4	
148 Benzo[k]fluoranthene	252	15.877	15.879	-0.002	99	1645455	80.0	66.6	
149 Benzo[a]pyrene	252	16.711	16.723	-0.012	78	1618145	80.0	72.5	
151 Indeno[1,2,3-cd]pyrene	276	19.980	19.982	-0.002	99	1369514	80.0	63.8	
152 Dibenz(a,h)anthracene	278	20.066	20.078	-0.012	93	1347322	80.0	65.4	
153 Benzo[g,h,i]perylene	276	20.707	20.719	-0.012	98	1431769	80.0	65.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13382.D

Injection Date: 17-Nov-2015 20:19:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: LCS 280-303850/2-A

Worklist Smp#: 21

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

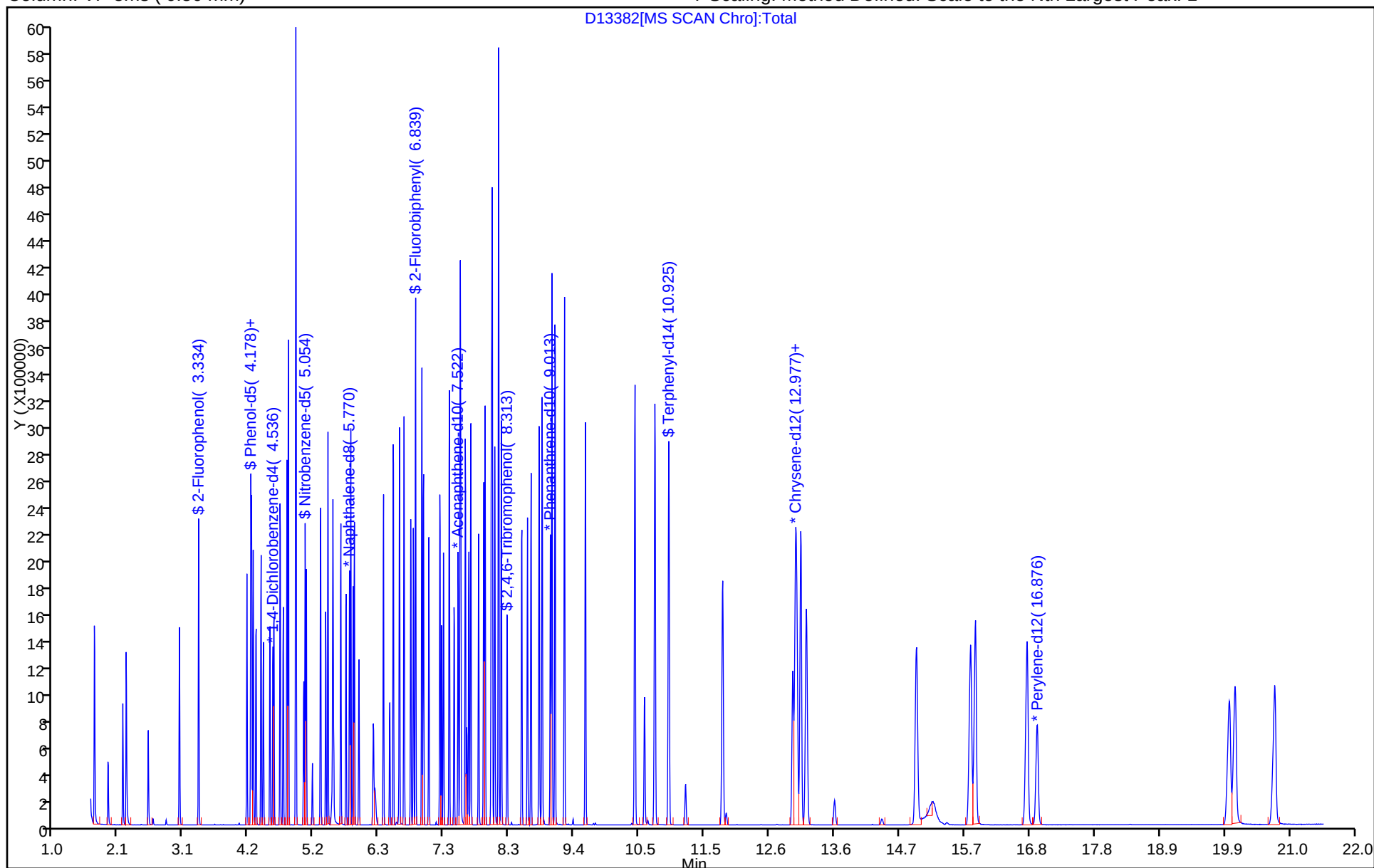
ALS Bottle#: 8

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



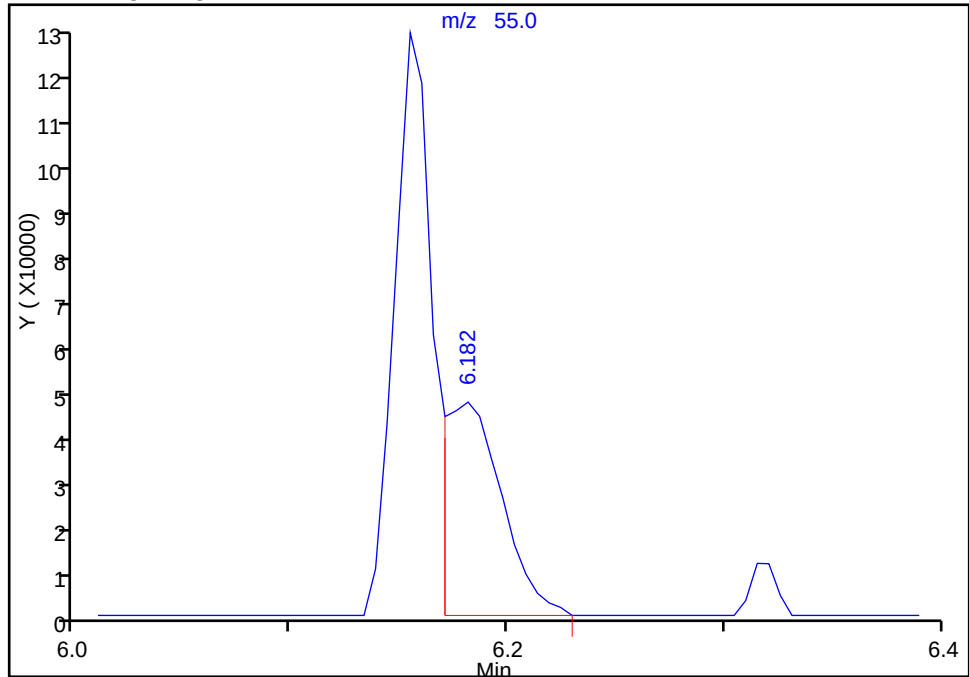
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13382.D
Injection Date: 17-Nov-2015 20:19:30 Instrument ID: SMS_D
Lims ID: LCS 280-303850/2-A
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 21
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

66 Caprolactam, CAS: 105-60-2

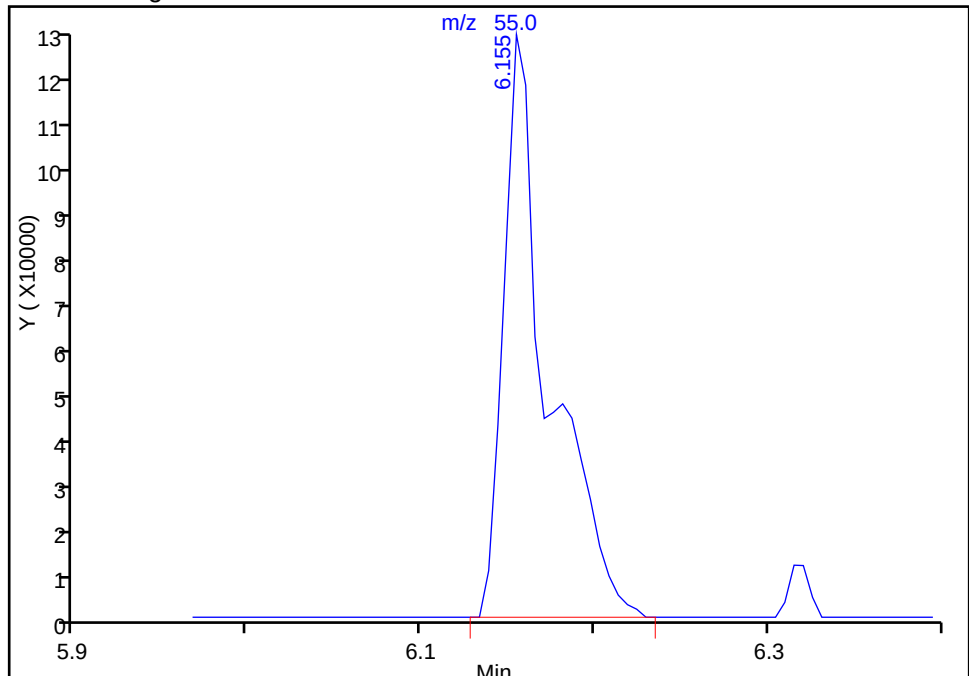
RT: 6.18
Area: 86195
Amount: 25.903241
Amount Units: ug/ml

Processing Integration Results



RT: 6.15
Area: 226385
Amount: 68.033008
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 18-Nov-2015 11:39:04
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 280-303850/3-A
 Matrix: Water Lab File ID: D13383.D
 Analysis Method: 8270D Date Collected: _____
 Extract. Method: 3520C Date Extracted: 11/07/2015 14:08
 Sample wt/vol: 1000 (mL) Date Analyzed: 11/17/2015 20:46
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1
 Injection Volume: 0.5 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 304623 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	71.9		5.0	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	91		42-131
321-60-8	2-Fluorobiphenyl	83		48-120
367-12-4	2-Fluorophenol (Surr)	86		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	84		42-120
4165-62-2	Phenol-d5 (Surr)	88		45-124
1718-51-0	Terphenyl-d14 (Surr)	77		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13383.D
 Lims ID: LCSD 280-303850/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 17-Nov-2015 20:46:30 ALS Bottle#: 9 Worklist Smp#: 22
 Injection Vol: 0.5 ul Dil. Factor: 1.0000
 Sample Info: LCSD280-303850_3-A
 Operator ID: KIEKELD Instrument ID: SMS_D
 Method: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\SMS_D_8270D.m
 Limit Group: MSSV - 8270D
 Method Label: 8270D
 Last Update: 18-Nov-2015 11:45:31 Calib Date: 14-Nov-2015 11:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20151117-41571.b\D13301.D
 Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: kiekeld

Date: 18-Nov-2015 11:40:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.532	4.532	0.000	96	183750	40.0	40.0	
* 2 Naphthalene-d8	136	5.771	5.772	-0.001	100	713921	40.0	40.0	
* 3 Acenaphthene-d10	164	7.523	7.524	-0.001	90	469761	40.0	40.0	
* 4 Phenanthrene-d10	188	9.014	9.014	0.000	97	829778	40.0	40.0	
* 5 Chrysene-d12	240	12.999	13.000	-0.001	98	843926	40.0	40.0	
* 6 Perylene-d12	264	16.872	16.878	-0.006	98	778840	40.0	40.0	
\$ 7 2-Fluorophenol	112	3.335	3.336	-0.001	92	597214	100.0	85.8	
\$ 8 Phenol-d5	99	4.179	4.174	0.005	98	820393	100.0	87.7	
\$ 9 Nitrobenzene-d5	82	5.055	5.056	-0.001	86	724156	100.0	84.4	
\$ 10 2-Fluorobiphenyl	172	6.839	6.840	-0.001	99	1260531	100.0	82.7	
\$ 11 2,4,6-Tribromophenol	330	8.319	8.320	-0.001	92	162176	100.0	90.6	
\$ 12 Terphenyl-d14	244	10.926	10.927	-0.001	99	1374919	100.0	77.1	
13 1,4-Dioxane	88	1.871	1.872	-0.001	91	195167	80.0	58.6	
14 N-Nitrosodimethylamine	74	2.112	2.112	0.000	91	364072	80.0	69.8	
15 Pyridine	79	2.165	2.166	-0.001	97	502856	80.0	55.3	
23 Benzaldehyde	106		4.349				ND	ND	
24 Phenol	94	4.190	4.190	0.000	97	699986	80.0	72.0	
25 Aniline	93	4.216	4.217	-0.001	99	706979	80.0	57.2	
26 Bis(2-chloroethyl)ether	93	4.259	4.260	-0.001	98	532699	80.0	75.3	
27 2-Chlorophenol	128	4.345	4.340	0.005	97	487237	80.0	73.1	
31 1,3-Dichlorobenzene	146	4.484	4.484	0.000	97	383746	80.0	55.2	
32 1,4-Dichlorobenzene	146	4.548	4.548	0.000	92	398252	80.0	56.3	
34 Benzyl alcohol	108	4.649	4.650	-0.001	94	372565	80.0	73.5	
35 1,2-Dichlorobenzene	146	4.703	4.698	0.005	95	389477	80.0	57.0	
36 2-Methylphenol	108	4.761	4.762	-0.001	93	509394	80.0	72.0	
38 2,2'-oxybis[1-chloropropan	45	4.783	4.783	0.000	92	583391	80.0	71.4	
40 3 & 4 Methylphenol	108	4.906	4.906	0.000	75	504454	80.0	74.1	
41 3-Methylphenol	108	4.906	4.906	0.000	73	504454	80.0	74.1	
42 4-Methylphenol	108	4.906	4.906	0.000	69	504454	80.0	74.1	
43 N-Nitrosodi-n-propylamine	70	4.900	4.901	-0.001	84	386825	80.0	74.5	
44 Acetophenone	105	4.906	4.906	0.000	84	675299	80.0	72.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
46 Hexachloroethane	117	5.028	5.029	-0.001	95	149103	80.0	52.4	
47 Nitrobenzene	77	5.071	5.072	-0.001	86	576175	80.0	69.4	
48 2,6-Dichlorophenol	162	5.851	5.852	-0.001	97	401183	80.0	71.8	
50 Isophorone	82	5.306	5.307	-0.001	99	1059783	80.0	68.8	
51 2,4-Dimethylphenol	107	5.424	5.424	0.000	96	515256	80.0	71.3	
52 2-Nitrophenol	139	5.386	5.387	-0.001	97	256060	80.0	71.6	
55 Bis(2-chloroethoxy)methane	93	5.504	5.505	0.000	98	639399	80.0	71.5	
56 Benzoic acid	105	5.515	5.553	-0.038	88	301549	80.0	53.4	
58 2,4-Dichlorophenol	162	5.632	5.633	-0.001	94	408377	80.0	72.6	
59 1,2,4-Trichlorobenzene	180	5.712	5.713	-0.001	93	370746	80.0	59.5	
60 Naphthalene	128	5.792	5.793	-0.001	97	1255298	80.0	65.4	
61 4-Chloroaniline	127	5.830	5.830	0.000	96	470974	80.0	54.1	
63 Hexachlorobutadiene	225	5.921	5.921	0.000	96	182838	80.0	54.4	
66 Caprolactam	55	6.156	6.172	-0.016	84	241758	80.0	71.9	M
68 4-Chloro-3-methylphenol	107	6.321	6.317	0.004	96	464527	80.0	73.8	
70 2-Methylnaphthalene	142	6.476	6.477	-0.001	93	887494	80.0	67.1	
71 1-Methylnaphthalene	142	6.578	6.578	0.000	94	818128	80.0	69.4	
72 Hexachlorocyclopentadiene	237	6.652	6.648	0.004	97	161186	80.0	50.4	
73 1,2,4,5-Tetrachlorobenzene	216	6.652	6.653	-0.001	97	404465	80.0	67.7	
75 2,4,6-Trichlorophenol	196	6.759	6.760	-0.001	93	313964	80.0	74.3	
76 2,4,5-Trichlorophenol	196	6.802	6.803	-0.001	95	336058	80.0	72.2	
79 1,1'-Biphenyl	154	6.941	6.942	-0.001	95	1069173	80.0	67.2	
81 2-Chloronaphthalene	162	6.968	6.968	0.000	96	824919	80.0	66.1	
83 2-Nitroaniline	65	7.053	7.054	-0.001	82	324920	80.0	70.5	
86 Dimethyl phthalate	163	7.229	7.230	-0.001	98	1010254	80.0	71.8	
87 1,3-Dinitrobenzene	168	7.261	7.262	-0.001	88	187017	80.0	73.9	
88 2,6-Dinitrotoluene	165	7.288	7.289	-0.001	96	256850	80.0	71.8	
93 Acenaphthylene	152	7.384	7.385	-0.001	99	1418895	80.0	68.1	
95 3-Nitroaniline	138	7.459	7.465	-0.006	94	243321	80.0	56.6	
97 Acenaphthene	153	7.561	7.556	0.005	94	841453	80.0	68.5	
98 2,4-Dinitrophenol	184	7.571	7.572	-0.001	84	320701	160.0	152.3	
99 4-Nitrophenol	109	7.641	7.647	-0.006	94	314161	160.0	144.3	
103 2,4-Dinitrotoluene	165	7.700	7.700	0.000	92	341332	80.0	71.3	
104 Dibenzofuran	168	7.732	7.732	0.000	98	1282150	80.0	68.9	
107 2,3,4,6-Tetrachlorophenol	232	7.854	7.855	-0.001	72	272474	80.0	74.9	
108 Diethyl phthalate	149	7.940	7.941	-0.001	98	1021688	80.0	72.2	
109 4-Chlorophenyl phenyl ethe	204	8.063	8.063	0.000	90	491601	80.0	69.6	
110 Fluorene	166	8.073	8.074	-0.001	95	1027463	80.0	69.5	
112 4-Nitroaniline	138	8.079	8.079	0.000	86	294469	80.0	69.1	
113 4,6-Dinitro-2-methylphenol	198	8.116	8.117	-0.001	86	433978	160.0	144.5	
114 N-Nitrosodiphenylamine	169	8.180	8.181	-0.001	61	1480438	160.0	139.9	
115 Azobenzene	77	8.223	8.224	-0.001	97	1199288	80.0	69.3	
116 1,2-Diphenylhydrazine	77	8.223	8.224	-0.001	97	1199288	80.9	70.1	
118 4-Bromophenyl phenyl ether	248	8.554	8.555	-0.001	66	301162	80.0	70.2	
121 Hexachlorobenzene	284	8.645	8.646	-0.001	94	290276	80.0	68.3	
122 Pentachlorophenol	266	8.832	8.833	-0.001	92	349909	160.0	142.2	
124 Phenanthrene	178	9.040	9.041	-0.001	98	1556948	80.0	69.8	
125 Anthracene	178	9.088	9.089	-0.001	98	1579250	80.0	69.9	
126 Carbazole	167	9.243	9.244	-0.001	95	1581946	80.0	71.5	
127 Benzidine	184		9.493				ND	ND	
130 Di-n-butyl phthalate	149	9.580	9.581	-0.001	100	1767869	80.0	72.2	
134 Fluoranthene	202	10.381	10.382	-0.001	98	1776090	80.0	71.2	

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\13383.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.702	10.702	0.000	97	1900376	80.0	68.8	
139 Butyl benzyl phthalate	149	11.797	11.798	-0.001	97	841367	80.0	68.5	
140 3,3'-Dichlorobenzidine	252	12.929	12.930	-0.001	74	547134	80.0	61.4	
141 Benzo[a]anthracene	228	12.972	12.978	-0.006	99	1835535	80.0	67.9	
142 Bis(2-ethylhexyl) phthalat	149	13.149	13.149	-0.001	97	1163699	80.0	68.5	
143 Chrysene	228	13.058	13.064	-0.006	98	1738234	80.0	67.2	
145 Di-n-octyl phthalate	149	14.922	14.923	-0.001	99	2085715	80.0	71.2	
147 Benzo[b]fluoranthene	252	15.798	15.804	-0.006	98	1689325	80.0	68.7	
148 Benzo[k]fluoranthene	252	15.878	15.879	-0.001	99	1736150	80.0	70.9	
149 Benzo[a]pyrene	252	16.712	16.723	-0.011	78	1656588	80.0	74.9	
151 Indeno[1,2,3-cd]pyrene	276	19.981	19.982	-0.001	99	1401805	80.0	65.4	
152 Dibenz(a,h)anthracene	278	20.067	20.078	-0.011	93	1388323	80.0	68.0	
153 Benzo[g,h,i]perylene	276	20.713	20.719	-0.006	98	1471384	80.0	67.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00008

Amount Added: 20.00

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13383.D

Injection Date: 17-Nov-2015 20:46:30

Instrument ID: SMS_D

Operator ID: KIEKELD

Lims ID: LCSD 280-303850/3-A

Worklist Smp#: 22

Client ID:

Injection Vol: 0.5 ul

Dil. Factor: 1.0000

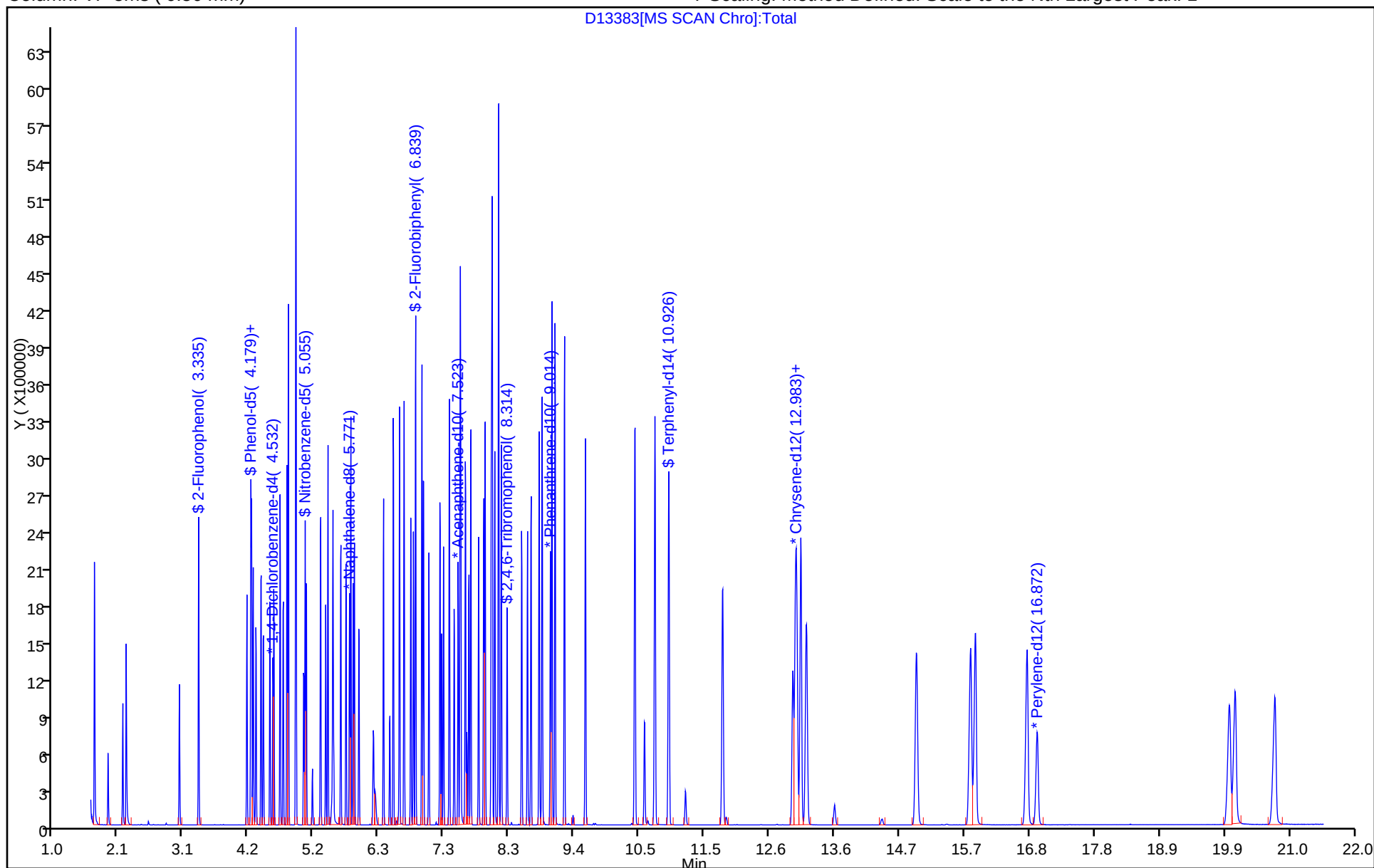
ALS Bottle#: 9

Method: SMS_D_8270D

Limit Group: MSSV - 8270D

Column: VF-5ms (0.50 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



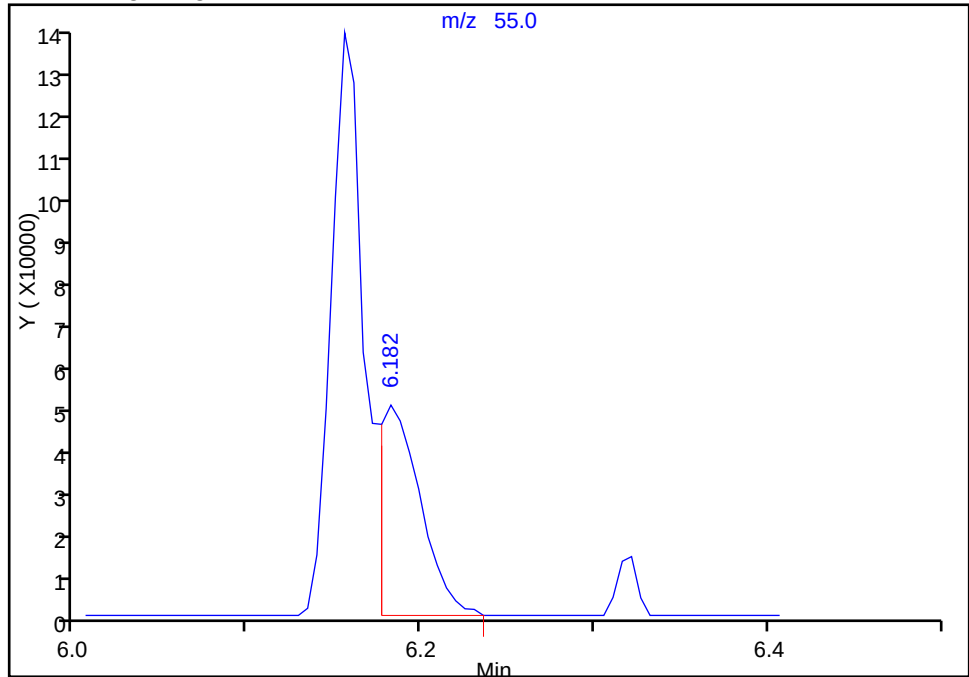
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20151118-41615.b\D13383.D
Injection Date: 17-Nov-2015 20:46:30 Instrument ID: SMS_D
Lims ID: LCSD 280-303850/3-A
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 22
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector: MS SCAN

66 Caprolactam, CAS: 105-60-2

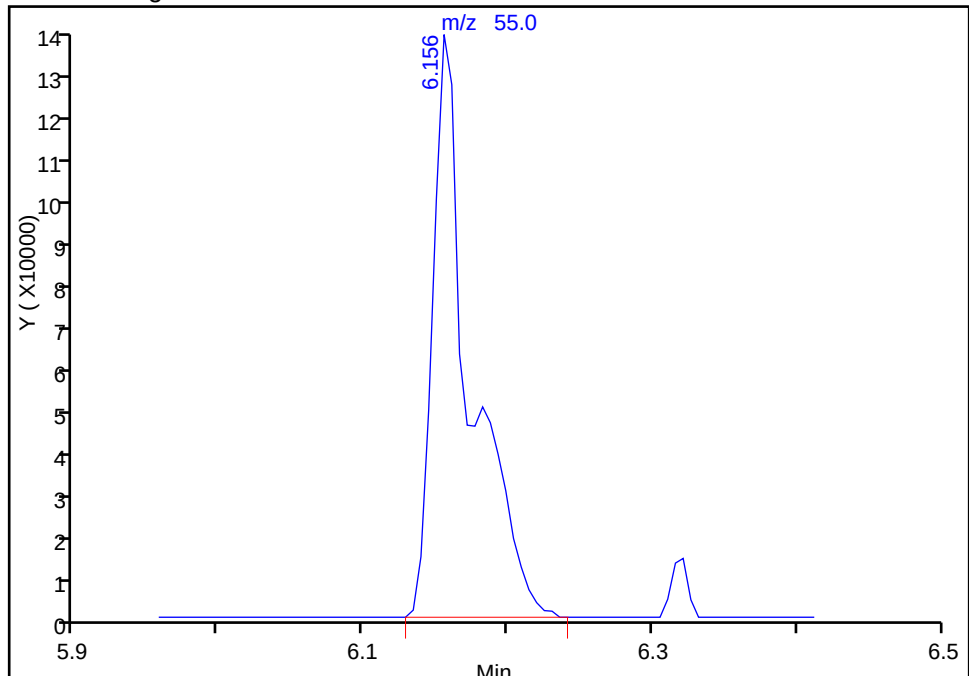
RT: 6.18
Area: 77549
Amount: 23.059897
Amount Units: ug/ml

Processing Integration Results



RT: 6.16
Area: 241758
Amount: 71.888930
Amount Units: ug/ml

Manual Integration Results



Reviewer: kiekeld, 18-Nov-2015 11:40:57
Audit Action: Manually Integrated
Audit Reason: Split Peak

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Instrument ID: SMS_D Start Date: 11/14/2015 08:15Analysis Batch Number: 304451 End Date: 11/14/2015 13:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-304451/2		11/14/2015 08:15	1	D13293.D	Vf-5MS (30.25) 0.25 (mm)
ICIS 280-304451/3		11/14/2015 08:27	1	D13294.D	Vf-5MS (30.25) 0.25 (mm)
STD004 280-304451/4 IC		11/14/2015 08:56	1	D13295.D	Vf-5MS (30.25) 0.25 (mm)
STD010 280-304451/5 IC		11/14/2015 09:23	1	D13296.D	Vf-5MS (30.25) 0.25 (mm)
STD020 280-304451/6 IC		11/14/2015 09:50	1	D13297.D	Vf-5MS (30.25) 0.25 (mm)
STD050 280-304451/7 IC		11/14/2015 10:17	1	D13298.D	Vf-5MS (30.25) 0.25 (mm)
STD120 280-304451/8 IC		11/14/2015 10:44	1	D13299.D	Vf-5MS (30.25) 0.25 (mm)
STD160 280-304451/9 IC		11/14/2015 11:11	1	D13300.D	Vf-5MS (30.25) 0.25 (mm)
STD200 280-304451/10 IC		11/14/2015 11:38	1	D13301.D	Vf-5MS (30.25) 0.25 (mm)
ICV 280-304451/11		11/14/2015 12:06	1	D13302.D	Vf-5MS (30.25) 0.25 (mm)
ICV 280-304451/12		11/14/2015 12:33	1	D13303.D	Vf-5MS (30.25) 0.25 (mm)
ICV 280-304451/13		11/14/2015 13:00	1	D13304.D	Vf-5MS (30.25) 0.25 (mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Instrument ID: SMS_D Start Date: 11/17/2015 00:24Analysis Batch Number: 304623 End Date: 11/18/2015 03:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
280-76475-4	TMW31D102015	11/17/2015 00:24	1	D13391.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-5	DTW31D102015	11/17/2015 00:51	1	D13392.D	Vf-5MS (30.25) 0.25 (mm)
DFTPP 280-304623/2		11/17/2015 17:37	1	D13375.D	Vf-5MS (30.25) 0.25 (mm)
CCV 280-304623/3		11/17/2015 17:49	1	D13376.D	Vf-5MS (30.25) 0.25 (mm)
MB 280-303850/1-A		11/17/2015 19:52	1	D13381.D	Vf-5MS (30.25) 0.25 (mm)
LCS 280-303850/2-A		11/17/2015 20:19	1	D13382.D	Vf-5MS (30.25) 0.25 (mm)
LCSD 280-303850/3-A		11/17/2015 20:46	1	D13383.D	Vf-5MS (30.25) 0.25 (mm)
ZZZZZ		11/17/2015 22:08	1		Vf-5MS (30.25) 0.25 (mm)
ZZZZZ		11/17/2015 22:35	1		Vf-5MS (30.25) 0.25 (mm)
ZZZZZ		11/17/2015 23:02	1		Vf-5MS (30.25) 0.25 (mm)
ZZZZZ		11/17/2015 23:30	1		Vf-5MS (30.25) 0.25 (mm)
280-76475-3	TMW49102015	11/17/2015 23:57	1	D13390.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-7	MW24102015	11/18/2015 01:19	1	D13393.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-8	TMW32102015	11/18/2015 01:46	1	D13394.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-9	BGMW01102015	11/18/2015 02:13	1	D13395.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-10	BGMW02102015	11/18/2015 02:40	1	D13396.D	Vf-5MS (30.25) 0.25 (mm)
280-76475-12	TMW47102015	11/18/2015 03:08	1	D13397.D	Vf-5MS (30.25) 0.25 (mm)

GC/MS Semivolatile Data Review Checklist-CCV and Tune

D-111715

HSL/APC/APG/BZUD

LIMS Batch Number: 304567/304623	Worklist #: 41600/41615	Instrument ID: D
Analyst/1 st Reviewer: BDD	Method (circle): 625 8270C 8270D	Circle: Full Scan SIM BP LL SIM
Date: 11/18/15		
QC Type (circle): Standard	DOD Q4 DoD Q5	QAPP Other

Review Items	Yes	No	NA	2 nd Rev	If No, why is data reportable? (List NCM #)
A. Tune/Calibration Verification					
1. Did DFTPP meet tune criteria? If SIM, did the PFTBA Tune check meet ion ratio criteria?	✓			✓	
2. Are the Benzidine and PCP tailing ≤ 2? (8270D/DoD), Benzidine tailing ≤ 3 and PCP tailing ≤ 5? (8270C)	✓			✓	
3. Is the DDT degradation ≤ 20%	✓			✓	
4. Were all standards injected within 12 hr of DFTPP? (or 24 hrs for 625)?	✓			✓	
5. Was the correct ICAL used for quantitation? Date & instrument ID verified? (Check both Chrom and TALS)	✓			✓	
6. Do the RFs meet method minimum criteria? (8270D/625) Are the RFs for SPCCs ≥ 0.050? (8270C)	✓			✓	
7. Is the %D (difference or drift) 8270C: ≤ 20% for all CCCs? all other analytes within 35%, or 55% (poor performers) 8270D: %D ≤ 20% for all analytes, at least 80% of compounds meet criteria?	✓			✓	(8270C: %D high, samples ND?) (8270D: <20% of cmpds fail criteria & for failed cmpds RL std verifies sensitivity for NDs?) List Compounds outside criteria:
8. For any compound > 20% D (low), was RL standard analyzed and detected? (8270D)			✓	NA	
9. NOTE: For any compounds > 20% D (high or low), <u>detects</u> will be flagged as "EST" & narrated. (8270D)			✓	NA	□ Must be done in consultation with client.
10. Are the internal standard responses within limits? (between -50% and +100% of the mid-level ICAL standard)	✓			✓	
11. Are the internal standard retention times within method limits? (±30 sec of ICAL mid pt for 8270C/D)	✓			✓	
12. Benzo(b & k)fluoranthene: height of the valley between must be less than 50% of the average of the two peak heights?	✓			✓	
13. Elution order checked Isomeric pairs and coeluters?					(Chrom: View/Documents/Methods/Isomers)
• aniline / bis(2-chloroethyl)ether	✓			✓	
• N-nitrosodiphenylamine/diphenylamine			✓	NA	
• 1,3-, 1,4-, 1,2-dichlorobenzene	✓			✓	
• benzyl alcohol / 2-methylphenol / 3/4-methylphenol	✓			✓	
• 2 & 1-methylnaphthalene	✓			✓	
• 2,4-dimethylphenol / 3,5-dimethylphenol	✓			✓	
• 2,4,6- and 2,4,5-trichlorophenol	✓			✓	
• phenanthrene / anthracene	✓			✓	

Panida R.

11-19-15

A. Tune/Calibration Verification (cont.)

Review Items	Yes	No	NA	2 nd Rev	If No, why is data reportable? (List NCM #)
• fluoranthene / pyrene	✓			✓	
• benzo(a)anthracene / chrysene	✓			✓	
• benzo(e)pyrene/benzo(a)pyrene	✓			✓	
• bis(2-ethylhexyl)/di-n-octyl phthalate	✓			✓	
• benzo(b)fluoranthene / benzo(k)fluoranthene	✓			✓	
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene	✓			✓	
• safrole/1-chloronaphthalene	✓			✓	
• 1-/2-naphthylamine	✓			✓	
• 1 and 2-chloronaphthalene				✓	
• 2,4,6 and 2,4,5-tribromophenol			✓	NA	
14. If any criteria from items above were not met, was a NCM generated?			✓	↓	
15. Were manual integrations performed correctly and properly documented? (dated, initialed and reason given) 2nd review of all MIs required	✓			✓	

Comments:

2nd Reviewer: Alex Hoyer

Review Date: 11/18/15

Injection Log

Directory: C:\HPCHEM1\DATA\111715.B

Line	Vial	FileName	Multipier	SampleName	Misc Info
1	100	D13374.D	1.	PRIMER	
2	1	D13375.D	1.	DFTPP	
3	2	D13376.D	1.	CCV HSL	
4	3	D13377.D	1.	CCV AFC	
5	4	D13378.D	1.	CCV AP9	
6	5	D13379.D	1.	CCV BZHD	
7	6	D13380.D	1.	CCV REF	
8	7	D13381.D	1.	MB280-303850_1-A	
9	8	D13382.D	1.	LCSD280-303850_2-A	
10	9	D13383.D	1.	LCSD280-303850_3-A	
11	10	D13384.D	1.	LCSD280-303193_2-A	
12	11	D13385.D	1.	LCSD280-303193_3-A	
13	12	D13386.D	1.	280-76435-A-12-A	
14	13	D13387.D	1.	280-76435-A-28-A	
15	14	D13388.D	1.	280-76435-A-29-A	
16	15	D13389.D	1.	280-76166-D-11-C	
17	16	D13390.D	1.	280-76475-A-3-C	
18	17	D13391.D	1.	280-76475-A-4-C	
19	18	D13392.D	1.	280-76475-D-5-C	
20	19	D13393.D	1.	280-76475-C-7-C	
21	20	D13394.D	1.	280-76475-A-8-C	
22	21	D13395.D	1.	280-76475-A-9-C	
23	22	D13396.D	1.	280-76475-B-10-C	
24	23	D13397.D	1.	280-76475-A-12-C	
25	24	D13398.D	1.	CCVC AFC	
26	25	D13399.D	1.	CCVC BZHD	
27	26	D13400.D	1.	CCVC AP9	
28	27	D13401.D	1.	CCVC HSL	
29	28	D13402.D	1.	MB280-303193_1-A	
30	29	D13403.D	1.	280-76296-A-1-A 4x	NR
31	30	D13404.D	1.	280-76411-C-1-A 10x	Color
32	31	D13405.D	1.	280-76423-A-1-A 10x	
33	32	D13406.D	1.	280-76529-B-12-A	
34	33	D13407.D	1.	280-76529-A-18-A	
35	34	D13408.D	1.	280-76446-B-1-A	
36	35	D13409.D	1.	280-76387-A-1-A 40x	NR
37	36	D13410.D	1.	280-76424-A-1-A	
38	37	D13411.D	1.	280-76433-C-1-A	
39	38	D13412.D	1.	280-76287-A-1-A	
40	39	D13413.D	1.	280-76358-A-1-A	
41	40	D13414.D	1.	280-76508-B-4-A	
42	41	D13415.D	1.	280-76421-A-1-A 40x	NR
43	98	D13416.D	1.	RINSE	
44	99	D13417.D	1.	RINSE	
45	100	D13418.D	1.	RINSE	
46	98	D13419.D	1.	RINSE	
47	99	D13420.D	1.	RINSE	
48	100	D13421.D	1.	RINSE	

Injected
 17 Nov 2015 17:13
 17 Nov 2015 17:37
 17 Nov 2015 17:49
 17 Nov 2015 18:16
 17 Nov 2015 18:39
 17 Nov 2015 19:06
 17 Nov 2015 19:29
 17 Nov 2015 19:52
 17 Nov 2015 20:19
 17 Nov 2015 20:46
 17 Nov 2015 21:13
 17 Nov 2015 21:41
 17 Nov 2015 22:08
 17 Nov 2015 22:35
 17 Nov 2015 23:02
 17 Nov 2015 23:30
 17 Nov 2015 23:57
 17 Nov 2015 00:24
 17 Nov 2015 00:51
 18 Nov 2015 01:19
 18 Nov 2015 01:46
 18 Nov 2015 02:13
 18 Nov 2015 02:40
 18 Nov 2015 03:08
 18 Nov 2015 03:35
 18 Nov 2015 03:58
 18 Nov 2015 04:21
 18 Nov 2015 04:48
 18 Nov 2015 05:15
 18 Nov 2015 05:42
 18 Nov 2015 06:09
 18 Nov 2015 06:37
 18 Nov 2015 07:04
 18 Nov 2015 07:31
 18 Nov 2015 07:58
 18 Nov 2015 08:26
 18 Nov 2015 08:53
 18 Nov 2015 09:20
 18 Nov 2015 09:47
 18 Nov 2015 10:15
 18 Nov 2015 10:42
 18 Nov 2015 11:09
 18 Nov 2015 11:36
 18 Nov 2015 12:04
 18 Nov 2015 12:31
 18 Nov 2015 12:58
 18 Nov 2015 13:26
 18 Nov 2015 13:53

Quelley
 11/18/15

Dilution Solvent Lot #: 108136 Pipette ID: SV-20 K1-23 Method(s) Performed: 827D-DDS/827D/625

Daily Maintenance: Check box if maintenance was performed. No mark indicates the item was not changed.

☒ Changed Septum
 ☒ Changed Liner
 ☒ Changed Seal
 ☒ Changed Ferrule
 ☒ Clipped Column

52
D. Luy
 Banida R.
 11-19-15

D-111415-HSL-8270D

GC/MS Semivolatile Initial Calibration Data Review Checklist

LIMS Batch Number: 304451	Worklist: 41571	ICIS/ICIV Line #: 3	2 nd Day ICV Line #: NA	Instrument ID: D
Analyst/1 st Reviewer: DJL	Method (circle): 625 8270C 8270D	Circle: Full Scan	SIM	BP LLSIM
Date: 11/7/15				
QC Type (circle): Standard	DoD Q4	DoD Q5	QAPP	Other: DJL 11/7/15

Review Items	Yes	No	NA	2 nd Rev	If No, why is data reportable?
A. Tune/Calibration Verification					
1. Did DFTPP meet tune criteria? If SIM, did the PFTBA Tune check meet ion ratio criteria?	✓			✓	
2. Are the Benzidine and PCP tailing ≤ 2 ? (8270D/DoD) Benzidine tailing ≤ 3 and PCP tailing ≤ 5 ? (8270C)	✓			✓	
3. Is the DDT degradation $\leq 20\%$	✓			✓	
4. Were all standards injected within 12 hr of DFTPP? (or 24 hrs for 625)?	✓			✓	
5. Were ≥ 5 levels of each compound and surrogate analyzed?	✓			✓	
6. At least 6 consecutive points used for quadratic curves?			✓	NA	
7. Was low level standard at or below RL?	✓			✓	
8. If calibration points removed, were reasons for removal documented? Did sufficient calibration points remain? (removal from middle of curve not allowed)	✓			✓	(e.g.; some points <RL removed)
9. Does the low level standard have enough sensitivity to produce at least 5-10 scans across the peak, and all secondary ions are present?	✓			✓	
10. Do the average RFs meet minimum RF requirements? (625 – not method defined) (8270C-SPCCs ≥ 0.05) (8270D- all cmpds have min RFs defined in method/SOP)	✓			✓	
10. Did the calibration %RSD meet method requirements? (625: $\leq 35\%$ all cmpds) (8270C: $\leq 30\%$ for CCCs & $\leq 15\%$ for all other cmpds/surrogates) (8270D: $\leq 20\%$ for all cmpds/surrogates)	✓			✓	
11. Was a linear or quadratic regression fit used for analytes that exceeded the %RSD requirements?	✓			✓	
12. If regression fit used, $r^2 \geq 0.990$?	✓			✓	
13. Does the low point of a linear regression fit meet the $\pm 30\%$ read-back criteria? (8270D)	✓			✓	
14. For quadratic – evaluate curve fitting errors: Does each point fall within criteria when 'read-back' against the curve? (TA requirement – CA-Q-S-005; recommended limits $\pm 30\%$ low point & $\pm 20\%$ all other points) (Chrom Report - Details of Calibration per Analyte)			✓	NA	
15. Is the concentration intercept $< RL $ for each cmpd? ("X" intercept in Chrom)	✓			✓	
16. Were manual integrations performed correctly and properly documented (Dated, Initialed and reason given) for all calibration points? 2 nd review of all MIs required	✓			✓	
17. Was the high point checked for detector saturation?	✓			✓	
18. Do the relative retention times for each analyte in each standard agree within ± 0.06 units (abs RT ± 0.5 min)	✓			✓	
19. Benzo(b & k)fluoranthene: height of the valley between must be less than 50% of the average of the two peak heights?	✓			✓	

Panida R.

77-99-75

Review Items	Yes	No	NA	2 nd Rev	If No, why is data reportable?
20. Elution order checked Isomeric pairs and coeluters?					Chrom: View/Documents/Methods/Isomers)
• aniline / bis(2-chloroethyl)ether	✓			✓	
• N-nitrosodiphenylamine/diphenylamine			✓		
• 1,3-, 1,4-, 1,2-dichlorobenzene	✓				
• benzyl alcohol / 2-methylphenol / 3/4-methylphenol	✓				
• 2,4-dimethylphenol / 3,5-dimethylphenol	✓				
• 2 & 1 - methyl naphthalene	✓				
• 2,4,6- and 2,4,5-trichlorophenol	✓				
• phenanthrene / anthracene	✓				
• fluoranthene / pyrene	✓				
• benzo(a)anthracene / chrysene	✓				
• bis(2-ethylhexyl)/di-n-octyl phthalate	✓				
• benzo(b)fluoranthene / benzo(k)fluoranthene	✓				
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene	✓				
• safrole/1-chloronaphthalene			✓		
• 1-/2-naphthylamine			✓		
• 1- and 2-chloronaphthalene			✓		
• 2,4,6- and 2,4,5-tribromophenol			✓		
• Benzo(e)pyrene / benzo(a)pyrene	✓			✓	
21. Was the ICV within required criteria? 625 = QCS method defined/Table6 8270C = ±35% or ±55% of expected for poor performers; 8270D = ±20%, poor performers <50% DoD = ±20% QAPP/Other _____	✓			✓	
22. If any criteria from items above were not met, was NCM generated?			✓	NA	NCM #:
23. Were manual integrations for ICV performed correctly and properly documented? (dated, initialed and reason given; 2nd review of all MIs required)	✓			✓	
24. Are all files and QC linked and processed correctly?	✓		✓	✓	☒ Files linked properly to calibration levels? ☒ All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed] ☒ Runs linked to DFTPP? [QC links] ☒ Checklist & run log scanned, attached & assigned properly?
25. Is the ICAL locked in TALS and Chrom?	✓			✓	

Comments: _____

2nd Reviewer: _____

Review Date: 11/17/15

Panida R.
11-19-15

Injection Log

Directory: C:\HPCHEM\1\DATA\111415.B

Line	Vial	FileName	Multipier	SampleName	Misc Info
1	100	D13292.D	1	PRIMER	
2	1	D13293.D	1	DFTPP	
3	2	D13294.D	1	ICIS HSL	
4	3	D13295.D	1	STD004 HSL	304041
5	4	D13296.D	1	STD010 HSL	4/1471
6	5	D13297.D	1	STD020 HSL	
7	6	D13298.D	1	STD050 HSL	
8	7	D13299.D	1	STD120 HSL	
9	8	D13300.D	1	STD160 HSL	
10	9	D13301.D	1	STD200 HSL	
11	10	D13302.D	1	ICV HSL 1	
12	11	D13303.D	1	ICV HSL 2	
13	12	D13304.D	1	ICV FAM	
14	1	D13306.D	1	DFTPP	
15	2	D13307.D	1	CCV HSL	
16	3	D13308.D	1	CCV AFC	
17	4	D13309.D	1	CCV AP9	
18	5	D13310.D	1	CCV BZHD	
19	6	D13311.D	1	MB 280-302325_1-A	
20	7	D13312.D	1	LCS 280-302325_2-A	
21	8	D13313.D	1	280-75930-B-8-A	
22	9	D13314.D	1	280-75930-B-9-A	
23	10	D13315.D	1	280-75930-B-10-A	
24	11	D13316.D	1	280-75930-B-11-A	
25	12	D13317.D	1	280-75930-A-12-B	
26	13	D13318.D	1	280-75930-A-13-B	
27	14	D13319.D	1	280-75930-B-14-A	
28	15	D13320.D	1	280-75930-B-15-A	
29	16	D13321.D	1	280-75930-A-16-B	
30	17	D13322.D	1	280-75930-F-17-A	
31	18	D13323.D	1	280-75930-F-17-B MS	
32	19	D13324.D	1	280-75930-F-17-C MSD	
33	20	D13325.D	1	280-75930-A-18-B	
34	21	D13326.D	1	280-75930-A-19-B	
35	22	D13327.D	1	280-75930-A-20-B	
36	23	D13328.D	1	280-75930-A-21-B	
37	24	D13329.D	1	280-75930-B-22-A	
38	25	D13330.D	1	280-75930-B-23-A	
39	26	D13331.D	1	280-75999-A-2-C	
40	27	D13332.D	1	280-75999-A-3-C	
41	98	D13333.D	1	RINSE	
42	99	D13334.D	1	RINSE	
43	100	D13335.D	1	RINSE	
44	98	D13336.D	1	RINSE	
45	99	D13337.D	1	RINSE	
46	100	D13338.D	1	RINSE	

Injected

14 Nov 2015 07:52
14 Nov 2015 08:15
14 Nov 2015 08:27
14 Nov 2015 08:56
14 Nov 2015 09:23
14 Nov 2015 09:50
14 Nov 2015 10:17
14 Nov 2015 10:44
14 Nov 2015 11:11
14 Nov 2015 11:38
14 Nov 2015 12:06
14 Nov 2015 12:33
14 Nov 2015 13:00
14 Nov 2015 14:05
14 Nov 2015 14:16
14 Nov 2015 14:43
14 Nov 2015 15:10
14 Nov 2015 15:37
14 Nov 2015 16:00
14 Nov 2015 16:28
14 Nov 2015 16:55
14 Nov 2015 17:22
14 Nov 2015 17:49
14 Nov 2015 18:16
14 Nov 2015 18:44
14 Nov 2015 19:11
14 Nov 2015 19:38
14 Nov 2015 20:05
14 Nov 2015 20:32
14 Nov 2015 20:59
14 Nov 2015 21:26
14 Nov 2015 21:53
14 Nov 2015 22:20
14 Nov 2015 22:47
14 Nov 2015 23:14
14 Nov 2015 23:41
14 Nov 2015 00:08
14 Nov 2015 00:35
15 Nov 2015 01:02
15 Nov 2015 01:29
15 Nov 2015 01:56
15 Nov 2015 02:23
15 Nov 2015 02:50
15 Nov 2015 03:17
15 Nov 2015 03:43
15 Nov 2015 04:10

Dilution Solvent Lot #: NA

Pipette ID: SV20/SV103

Method(s) Performed: 8270.DOT

Daily Maintenance: Check box if maintenance was performed. No mark indicates the item was not changed.

Changed Septum ☒

Changed Liner ☒

Changed Seal ☒

Changed Ferrule ☒

Clipped Column ☒

50

Panda R.

11-19-15

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Batch Number: 303850 Batch Start Date: 11/07/15 14:08 Batch Analyst: Arko, John RBatch Method: 3520C Batch End Date: 11/11/15 11:58

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH
MB 280-303850/1		3520C, 8270D		7			1000 mL	1 mL	7
LCS 280-303850/2		3520C, 8270D		7			1000 mL	1 mL	7
LCSD 280-303850/3		3520C, 8270D		7			1000 mL	1 mL	7
280-76475-A-3	TMW49102015	3520C, 8270D	T	7	1424.5 g	504.5 g	920 mL	1 mL	7
280-76475-A-4	TMW31D102015	3520C, 8270D	T	7	1468.2 g	503.8 g	964.4 mL	1 mL	7
280-76475-D-5	DTW31D102015	3520C, 8270D	T	7	1443.6 g	503.9 g	939.7 mL	1 mL	7
280-76475-C-7	MW24102015	3520C, 8270D	T	7	1514.0 g	500.7 g	1013.3 mL	1 mL	7
280-76475-A-8	TMW32102015	3520C, 8270D	T	7	1345.2 g	499.4 g	845.8 mL	1 mL	7
280-76475-A-9	BGMW01102015	3520C, 8270D	T	7	1466.4 g	504.0 g	962.4 mL	1 mL	7
280-76475-B-10	BGMW02102015	3520C, 8270D	T	7	1528.8 g	503.7 g	1025.1 mL	1 mL	7
280-76475-A-12	TMW47102015	3520C, 8270D	T	7	1406.7 g	504.8 g	901.9 mL	1 mL	7

Lab Sample ID	Client Sample ID	Method Chain	Basis	FirstAdjustpH	SecondAdjustpH	8270_LCS_Main 00026	8270_LCS_Supp 00136	8270Surrogate 00086	AnalysisComment
MB 280-303850/1		3520C, 8270D		2	12			1 mL	Same as batch 303064
LCS 280-303850/2		3520C, 8270D		2	12	1 mL	1 mL	1 mL	Same as batch 303064
LCSD 280-303850/3		3520C, 8270D		2	12	1 mL	1 mL	1 mL	Same as batch 303064
280-76475-A-3	TMW49102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-A-4	TMW31D102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-D-5	DTW31D102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-C-7	MW24102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-A-8	TMW32102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-A-9	BGMW01102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-B-10	BGMW02102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064
280-76475-A-12	TMW47102015	3520C, 8270D	T	2	12			1 mL	Same as batch 303064

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-76475-2

SDG No.: _____

Batch Number: 303850 Batch Start Date: 11/07/15 14:08 Batch Analyst: Arko, John RBatch Method: 3520C Batch End Date: 11/11/15 11:58

Batch Notes	
Acid used for pH adjustment	1:1 H2SO4
Acid used for pH adjust Lot #	1:1 H2SO4_00044
Balance ID	24350888
Base used for pH adjustment	10N NaOH
Base used for pH adjust Lot #	10N NaOH_00072
Batch Comment	DV-OP-0008/7 H2O:N. Elga
Person's name who did the concentration	MAVJr, JRA
Time the first extraction ended 24hr	11.08.15 @ 0845
Time the first extraction started 24 hr	11.07.15 @ 1430
Na2SO4 Lot Number	0000121812_00002
NaCl Lot #	147425
Oven, Bath or Block Temperature 1	See Above Celsius
Prep Solvent Lot #	MeCl2_Cycl_00248
Prep Solvent Name	MeCl2
Prep Solvent Volume Used	300 mL
Person's name who did the prep	John Arko- Pipette: N
Person's name who witnessed reagent drop	Reviewer: JK
Time the second extraction ended 24hr	11.09.15 @ 0700
Time the second extraction started 24hr	11.08.15 @ 1135
Sufficient volume for MS/MSD?	no
Uncorrected Temperature	84 Celsius
Water Bath ID	A
Water Bath Temperature	84 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Chain of Custody Record

phone 303-736-0100 fax 303-431-7171

TestAmerica Laboratories, Inc.

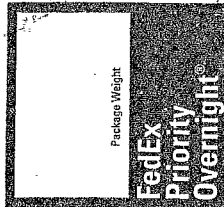
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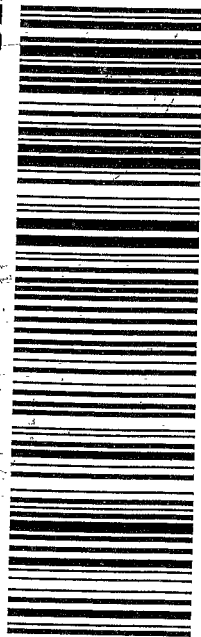
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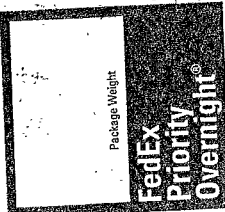
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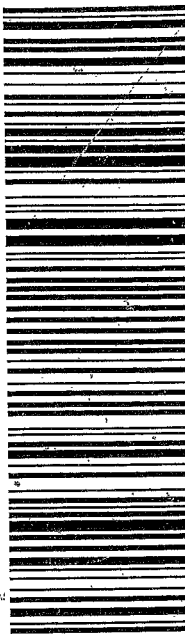
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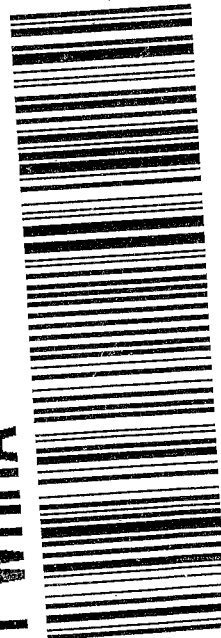
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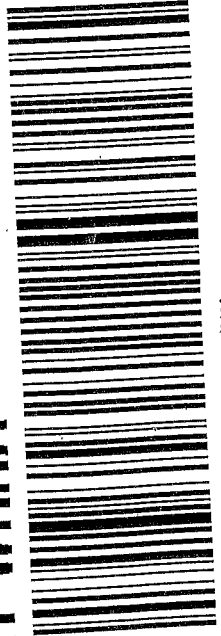
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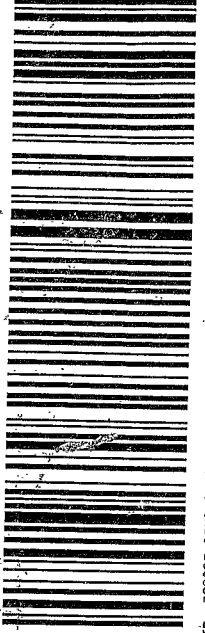
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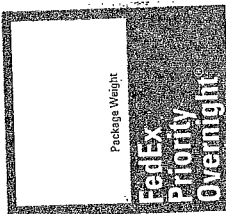
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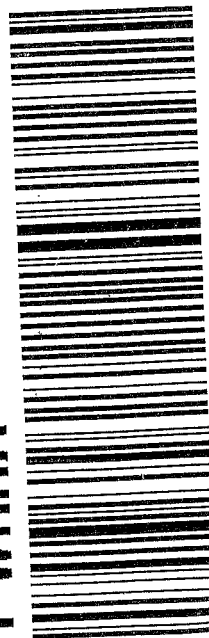
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Total Charges

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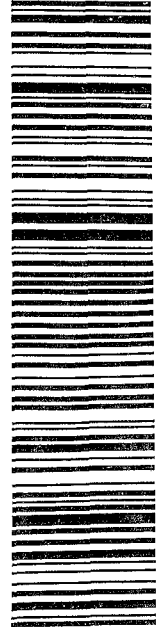
8087 7478 0283

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Login Sample Receipt Checklist

Client: Sundance Consulting, Inc

Job Number: 280-76475-2

Login Number: 76475

List Source: TestAmerica Denver

List Number: 1

Creator: Muniz, Ashley T

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	