TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

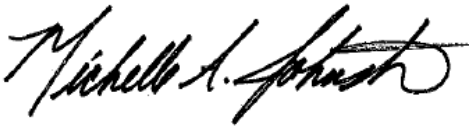
ANALYTICAL REPORT

Job Number: 280-76268-2

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 11:34 AM

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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 NELAC, 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.

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CASE NARRATIVE
Client: Sundance Consulting, Inc.
Project: Fort Wingate, New Mexico
Report Number: 280-76268-2

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

Seven samples were received on 11/3/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 11 coolers at receipt time were 0.3ºC, 0.6ºC, 0.6ºC, 0.7ºC, 1.5ºC, 1.6ºC, 1.7ºC, 1.9ºC, 2.2ºC, 2.6ºC and 3.1ºC.

Additional samples/analyses requested on the chain-of-custody are reported under separate cover (280-76268-1 & 280-76268-3).

No other anomalies were encountered during sample receipt.

GC/MS Semivolatiles - 8270D

Samples FW31102015EQU002 (280-76268-3), FW3112015 (280-76268-4), TMW35102015 (280-76268-6), MW22S102015 (280-76268-7), MW22D102015 (280-76268-8), MW20102015 (280-76268-9) and DMW20102015 (280-76268-10) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 11/04/2015 and analyzed on 11/24/2015.

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.

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.: 280-76268-2

SDG No.:

Instrument ID: SMS_Y Analysis Batch Number: 304895

Lab Sample ID: ICIS 280-304895/3 Client Sample ID:

Date Analyzed: 11/14/15 09:27 Lab File ID: Y6330.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	11/19/15 11:07

Lab Sample ID: STD004 280-304895/4 IC Client Sample ID:

Date Analyzed: 11/14/15 09:54 Lab File ID: Y6331.D GC Column: Vf-5MS (30.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Indeno[1,2,3-cd]pyrene	19.96	Split Peak	kiekeld	11/19/15 11:12

Lab Sample ID: STD050 280-304895/7 IC Client Sample ID:

Date Analyzed: 11/14/15 11:15 Lab File ID: Y6334.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	11/19/15 11:16

Lab Sample ID: STD120 280-304895/8 IC Client Sample ID:

Date Analyzed: 11/14/15 11:43 Lab File ID: Y6335.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	11/19/15 11:16

Lab Sample ID: STD160 280-304895/9 IC Client Sample ID:

Date Analyzed: 11/14/15 12:10 Lab File ID: Y6336.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	11/19/15 11:17

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Instrument ID: SMS_Y Analysis Batch Number: 304895

Lab Sample ID: STD200 280-304895/10 IC Client Sample ID:

Date Analyzed: 11/14/15 12:37 Lab File ID: Y6337.D GC Column: Vf-5MS (30.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.19	Split Peak	kiekeld	11/19/15 11:17

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Instrument ID: SMS_Y Analysis Batch Number: 305472

Lab Sample ID: CCV 280-305472/3 Client Sample ID:

Date Analyzed: 11/24/15 12:54 Lab File ID: Y6534.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	11/24/15 14:10

Lab Sample ID: LCS 280-304711/2-A Client Sample ID:

Date Analyzed: 11/24/15 16:24 Lab File ID: Y6542.D GC Column: Vf-5MS (30.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.12	Split Peak	kiekeld	11/25/15 11:41

Lab Sample ID: 280-76268-9 MS Client Sample ID: MW20102015MS MS

Date Analyzed: 11/24/15 20:30 Lab File ID: Y6551.D GC Column: Vf-5MS (30.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.15	Split Peak	kiekeld	11/25/15 11:46

Lab Sample ID: 280-76268-9 MSD Client Sample ID: MW20102015MSD MSD

Date Analyzed: 11/24/15 20:57 Lab File ID: Y6552.D GC Column: Vf-5MS (30.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.15	Split Peak	kiekeld	11/25/15 11:50

SAMPLE SUMMARY

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-76268-3	FW31102015EQU002	Water	11/02/2015 0930	11/03/2015 0920
280-76268-4	FW3112015	Water	11/02/2015 1105	11/03/2015 0920
280-76268-6	TMW35102015	Water	11/02/2015 0955	11/03/2015 0920
280-76268-7	MW22S102015	Water	11/02/2015 1115	11/03/2015 0920
280-76268-8	MW22D102015	Water	11/02/2015 1210	11/03/2015 0920
280-76268-9	MW20102015	Water	11/02/2015 1030	11/03/2015 0920
280-76268-9MS	MW20102015MS	Water	11/02/2015 1030	11/03/2015 0920
280-76268-9MSD	MW20102015MSD	Water	11/02/2015 1030	11/03/2015 0920
280-76268-10	DMW20102015	Water	11/02/2015 1030	11/03/2015 0920

EXECUTIVE SUMMARY - Detections

Client: Sundance Consulting, Inc Job Number: 280-76268-2

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

No Detections

METHOD SUMMARY

Client: Sundance Consulting, Inc Job Number: 280-76268-2

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: 280-76268-2

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

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: **FW31102015EQU002**

Lab Sample ID: 280-76268-3
Client Matrix: Water

Date Sampled: 11/02/2015 0930
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6545.D
Dilution:	1.0			Initial Weight/Volume:	1013 mL
Analysis Date:	11/24/2015 1746			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			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)	89		42 - 131
2-Fluorobiphenyl	71		48 - 120
2-Fluorophenol (Surr)	71		41 - 120
Nitrobenzene-d5 (Surr)	73		42 - 120
Phenol-d5 (Surr)	76		45 - 124
Terphenyl-d14 (Surr)	90		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: FW3112015

Lab Sample ID: 280-76268-4
Client Matrix: Water

Date Sampled: 11/02/2015 1105
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6546.D
Dilution:	1.0			Initial Weight/Volume:	980.3 mL
Analysis Date:	11/24/2015 1813			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.6	U	2.6	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	98		42 - 131
2-Fluorobiphenyl	71		48 - 120
2-Fluorophenol (Surr)	69		41 - 120
Nitrobenzene-d5 (Surr)	70		42 - 120
Phenol-d5 (Surr)	69		45 - 124
Terphenyl-d14 (Surr)	66		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: **TMW35102015**

Lab Sample ID: 280-76268-6
Client Matrix: Water

Date Sampled: 11/02/2015 0955
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6547.D
Dilution:	1.0			Initial Weight/Volume:	989.3 mL
Analysis Date:	11/24/2015 1841			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.5	U	2.5	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	102		42 - 131
2-Fluorobiphenyl	88		48 - 120
2-Fluorophenol (Surr)	84		41 - 120
Nitrobenzene-d5 (Surr)	87		42 - 120
Phenol-d5 (Surr)	87		45 - 124
Terphenyl-d14 (Surr)	86		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: **MW22S102015**

Lab Sample ID: 280-76268-7
Client Matrix: Water

Date Sampled: 11/02/2015 1115
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6548.D
Dilution:	1.0			Initial Weight/Volume:	928.4 mL
Analysis Date:	11/24/2015 1908			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			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)	97		42 - 131
2-Fluorobiphenyl	80		48 - 120
2-Fluorophenol (Surr)	75		41 - 120
Nitrobenzene-d5 (Surr)	73		42 - 120
Phenol-d5 (Surr)	80		45 - 124
Terphenyl-d14 (Surr)	26		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: MW22D102015

Lab Sample ID: 280-76268-8
Client Matrix: Water

Date Sampled: 11/02/2015 1210
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6549.D
Dilution:	1.0			Initial Weight/Volume:	963.2 mL
Analysis Date:	11/24/2015 1935			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			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)	95		42 - 131
2-Fluorobiphenyl	84		48 - 120
2-Fluorophenol (Surr)	75		41 - 120
Nitrobenzene-d5 (Surr)	83		42 - 120
Phenol-d5 (Surr)	78		45 - 124
Terphenyl-d14 (Surr)	36		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: MW20102015

Lab Sample ID: 280-76268-9
Client Matrix: Water

Date Sampled: 11/02/2015 1030
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6550.D
Dilution:	1.0			Initial Weight/Volume:	977.2 mL
Analysis Date:	11/24/2015 2003			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.6	U	2.6	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	98		42 - 131
2-Fluorobiphenyl	88		48 - 120
2-Fluorophenol (Surr)	75		41 - 120
Nitrobenzene-d5 (Surr)	86		42 - 120
Phenol-d5 (Surr)	81		45 - 124
Terphenyl-d14 (Surr)	36		20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Client Sample ID: DMW20102015

Lab Sample ID: 280-76268-10
Client Matrix: Water

Date Sampled: 11/02/2015 1030
Date Received: 11/03/2015 0920

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Prep Method:	3520C	Prep Batch:	280-304711	Lab File ID:	Y6553.D
Dilution:	1.0			Initial Weight/Volume:	888.9 mL
Analysis Date:	11/24/2015 2125			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Caprolactam	2.8	U	2.8	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	100		42 - 131
2-Fluorobiphenyl	90		48 - 120
2-Fluorophenol (Surr)	81		41 - 120
Nitrobenzene-d5 (Surr)	93		42 - 120
Phenol-d5 (Surr)	85		45 - 124
Terphenyl-d14 (Surr)	37		20 - 130

Client: Sundance Consulting, Inc Job Number: 280-76268-2

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
280-76268-3	FW31102015EQU002	71	76	73	71	89	90
280-76268-4	FW3112015	69	69	70	71	98	66
280-76268-6	TMW35102015	84	87	87	88	102	86
280-76268-7	MW22S102015	75	80	73	80	97	26
280-76268-8	MW22D102015	75	78	83	84	95	36
280-76268-9	MW20102015	75	81	86	88	98	36
280-76268-10	DMW20102015	81	85	93	90	100	37
MB 280-304711/1-A		88	90	90	88	100	93
LCS 280-304711/2-A		86	87	83	82	101	84
280-76268-9 MS	MW20102015MS MS	83	84	88	85	102	35
280-76268-9 MSD	MW20102015MSD MSD	82	84	86	85	102	43

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

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Method Blank - Batch: 280-304711

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 280-304711/1-A	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-304711	Lab File ID:	Y6541.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/24/2015 1556	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			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)	100	42 - 131
2-Fluorobiphenyl	88	48 - 120
2-Fluorophenol (Surr)	88	41 - 120
Nitrobenzene-d5 (Surr)	90	42 - 120
Phenol-d5 (Surr)	90	45 - 124
Terphenyl-d14 (Surr)	93	20 - 130

Lab Control Sample - Batch: 280-304711

Method: 8270D
Preparation: 3520C

Lab Sample ID:	LCS 280-304711/2-A	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-304711	Lab File ID:	Y6542.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/24/2015 1624	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Caprolactam	80.0	68.7	86	46 - 143	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	101	42 - 131
2-Fluorobiphenyl	82	48 - 120
2-Fluorophenol (Surr)	86	41 - 120
Nitrobenzene-d5 (Surr)	83	42 - 120
Phenol-d5 (Surr)	87	45 - 124
Terphenyl-d14 (Surr)	84	20 - 130

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-304711

Method: 8270D
Preparation: 3520C

MS Lab Sample ID:	280-76268-9	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-304711	Lab File ID:	Y6551.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	972.1 mL
Analysis Date:	11/24/2015 2030			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-76268-9	Analysis Batch:	280-305472	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-304711	Lab File ID:	Y6552.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	972.3 mL
Analysis Date:	11/24/2015 2057			Final Weight/Volume:	1 mL
Prep Date:	11/04/2015 1455			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Caprolactam	95	99	46 - 143	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	102	102	42 - 131
2-Fluorobiphenyl	85	85	48 - 120
2-Fluorophenol (Surr)	83	82	41 - 120
Nitrobenzene-d5 (Surr)	88	86	42 - 120
Phenol-d5 (Surr)	84	84	45 - 124
Terphenyl-d14 (Surr)	35	43	20 - 130

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-304711

Method: 8270D
Preparation: 3520C

MS Lab Sample ID:	280-76268-9	Units:	ug/L	MSD Lab Sample ID:	280-76268-9
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	11/24/2015 2030			Analysis Date:	11/24/2015 2057
Prep Date:	11/04/2015 1455			Prep Date:	11/04/2015 1455
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Caprolactam	2.6	U	82.3	82.3	78.1	81.0

DATA REPORTING QUALIFIERS

Client: Sundance Consulting, Inc Job Number: 280-76268-2

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

Client: Sundance Consulting, Inc Job Number: 280-76268-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-304711					
LCS 280-304711/2-A	Lab Control Sample	T	Water	3520C	
MB 280-304711/1-A	Method Blank	T	Water	3520C	
280-76268-3	FW31102015EQU002	T	Water	3520C	
280-76268-4	FW3112015	T	Water	3520C	
280-76268-6	TMW35102015	T	Water	3520C	
280-76268-7	MW22S102015	T	Water	3520C	
280-76268-8	MW22D102015	T	Water	3520C	
280-76268-9	MW20102015	T	Water	3520C	
280-76268-9MS	Matrix Spike	T	Water	3520C	
280-76268-9MSD	Matrix Spike Duplicate	T	Water	3520C	
280-76268-10	DMW20102015	T	Water	3520C	
Analysis Batch:280-305472					
LCS 280-304711/2-A	Lab Control Sample	T	Water	8270D	280-304711
MB 280-304711/1-A	Method Blank	T	Water	8270D	280-304711
280-76268-3	FW31102015EQU002	T	Water	8270D	280-304711
280-76268-4	FW3112015	T	Water	8270D	280-304711
280-76268-6	TMW35102015	T	Water	8270D	280-304711
280-76268-7	MW22S102015	T	Water	8270D	280-304711
280-76268-8	MW22D102015	T	Water	8270D	280-304711
280-76268-9	MW20102015	T	Water	8270D	280-304711
280-76268-9MS	Matrix Spike	T	Water	8270D	280-304711
280-76268-9MSD	Matrix Spike Duplicate	T	Water	8270D	280-304711
280-76268-10	DMW20102015	T	Water	8270D	280-304711

Report Basis
T = Total

Client: Sundance Consulting, Inc Job Number: 280-76268-2

Laboratory Chronicle

Lab ID: 280-76268-3 **Client ID: FW31102015EQU002**

Sample Date/Time: 11/02/2015 09:30 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-B-3-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-B-3-B		280-305472	280-304711	11/24/2015 17:46	1	TAL DEN	DCK

Lab ID: 280-76268-4 **Client ID: FW3112015**

Sample Date/Time: 11/02/2015 11:05 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-D-4-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-D-4-B		280-305472	280-304711	11/24/2015 18:13	1	TAL DEN	DCK

Lab ID: 280-76268-6 **Client ID: TMW35102015**

Sample Date/Time: 11/02/2015 09:55 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-E-6-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-E-6-B		280-305472	280-304711	11/24/2015 18:41	1	TAL DEN	DCK

Lab ID: 280-76268-7 **Client ID: MW22S102015**

Sample Date/Time: 11/02/2015 11:15 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-A-7-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-A-7-B		280-305472	280-304711	11/24/2015 19:08	1	TAL DEN	DCK

Lab ID: 280-76268-8 **Client ID: MW22D102015**

Sample Date/Time: 11/02/2015 12:10 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-C-8-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-C-8-B		280-305472	280-304711	11/24/2015 19:35	1	TAL DEN	DCK

Lab ID: 280-76268-9 **Client ID: MW20102015**

Sample Date/Time: 11/02/2015 10:30 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-G-9-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-G-9-B		280-305472	280-304711	11/24/2015 20:03	1	TAL DEN	DCK

Client: Sundance Consulting, Inc Job Number: 280-76268-2

Laboratory Chronicle

Lab ID: 280-76268-9 **Client ID: MW20102015MS**

Sample Date/Time: 11/02/2015 10:30 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-J-9-B MS		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-J-9-B MS		280-305472	280-304711	11/24/2015 20:30	1	TAL DEN	DCK

Lab ID: 280-76268-9 **Client ID: MW20102015MSD**

Sample Date/Time: 11/02/2015 10:30 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-F-9-B MSD		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-F-9-B MSD		280-305472	280-304711	11/24/2015 20:57	1	TAL DEN	DCK

Lab ID: 280-76268-10 **Client ID: DMW20102015**

Sample Date/Time: 11/02/2015 10:30 Received Date/Time: 11/03/2015 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-76268-C-10-B		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	280-76268-C-10-B		280-305472	280-304711	11/24/2015 21:25	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 280-304711/1-A		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	MB 280-304711/1-A		280-305472	280-304711	11/24/2015 15:56	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 280-304711/2-A		280-305472	280-304711	11/04/2015 14:55	1	TAL DEN	GLK
A:8270D	LCS 280-304711/2-A		280-305472	280-304711	11/24/2015 16:24	1	TAL DEN	DCK

Lab References:
TAL DEN = TestAmerica Denver

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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
							Indene	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)		1,1'-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.MS-569729_00036	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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
							Pyridine	1000 ug/mL
.MS-569729_00037	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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
							Pyridine	1000 ug/mL
.MS-569729_00044	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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_00135	11/02/15	10/30/15	P&T Methanol, Lot MethanolP&T_00126	50 mL	MS-569730_00022	2 mL	3,3'-Dichlorobenzidine	80 ug/mL
							Benzidine	80 ug/mL
					MS-569732_00023	2 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
.MS-569730_00022	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	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.: 280-76268-2

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
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00118	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
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00131	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
							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
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
.8270SurStkHL_00117	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
.8270SurStkHL_00118	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
.8270SurStkHL_00131	05/31/19		Restek, Lot A0103615		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					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
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-HSLA120_00020	11/20/15	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	300 uL	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.: 280-76268-2

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.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3,3'-Dichlorobenzidine	120 ug/mL
							Caprolactam	120 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
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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.: 280-76268-2

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	10/06/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00017	500 uL	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
							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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
..MS-569730 HSL_00001	07/31/16		Restek, Lot A0108709		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-76268-2

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_00069	02/29/16	11/19/15	Methylene Chloride, Lot 108136	0.5 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-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_00069	02/29/16	11/19/15	Methylene Chloride, Lot 108136	0.5 mL	MS-HSLA_STK_00018	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
							Caprolactam	80 ug/mL
.MS-HSLA_STK_00018	02/29/16	11/17/15	Methylene Chloride, Lot 108136	10 mL	MS-567685_00002	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-569732 HSL_00001	1 mL	Caprolactam	200 ug/mL
..MS-567685_00002	06/30/19		Restek, Lot A0103960		(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-569732 HSL_00001	08/31/16		Restek, Lot A0108989		(Purchased Reagent)		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
							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-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: 8270Surrogate_00086

		Expiration Date:	10/16/2016
Description:	8270 Surrogate 100ug/ml	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Stevenson, Michael D
Storage Location:	North Prep	Solvent:	ACETONE
Reagent Volume:	1000.000 mL	Solvent Lot:	Acetone_000137
Creation Date:	10/16/2015		
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

Merlz cyst_00243 Pip N @ 1/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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: 8270Surrogate_00086

		Expiration Date:	10/16/2016
Description:	8270 Surrogate 100ug/ml	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Stevenson, Michael D
Storage Location:	North Prep	Solvent:	ACETONE
Reagent Volume:	1000.000 mL	Solvent Lot:	Acetone_000137
Creation Date:	10/16/2015		
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_00117	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_00118	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_00131	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL
8270SurStkHL_00133	5000 ug/ml of each compound	ASTD	05/31/19	Restek	A0103615	567685	5.00000	mL

Report Date: 23-Oct-2015 07:15:39 Chrom Revision: 2.2 08-Oct-2015 07:17:48

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\SMSG6_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

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Certificate of Analysis

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	2,014.0 µg/mL	+/- 11.9625	µg/mL	Gravimetric
	CAS # 224-42-0 (Lot ER081407-01)		+/- 89.5165	µg/mL	Unstressed
	Purity 99%		+/- 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)

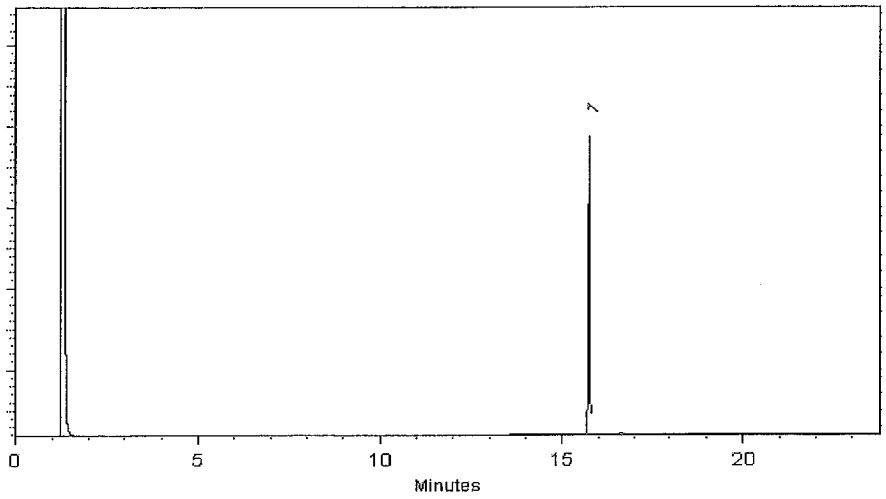
Carrier Gas:
hydrogen-constant pressure 10 psi.

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:

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

  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.

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 +/- 124.6713 µg/mL +/- 156.7818 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot M387P4) **Purity** 99%	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 (Lot PR-20474) **Purity** 99%	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 (Lot E11Y047) **Purity** 99%	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 (Lot 29699MJV) **Purity** 99%	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 (Lot PR-20577) **Purity** 99%	5,007.1 µg/mL	+/- 29.1100 µg/mL +/- 124.7604 µg/mL +/- 156.8938 µg/mL	Gravimetric Unstressed 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/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:

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

  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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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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	2-Fluorophenol **CAS #** 367-12-4 (Lot STBC5591V) **Purity** 99%	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 (Lot M387P4) **Purity** 99%	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 (Lot PR-20474) **Purity** 99%	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 (Lot E11Y047) **Purity** 99%	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 (Lot 29699MJV) **Purity** 99%	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 (Lot PR-20577) **Purity** 99%	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)

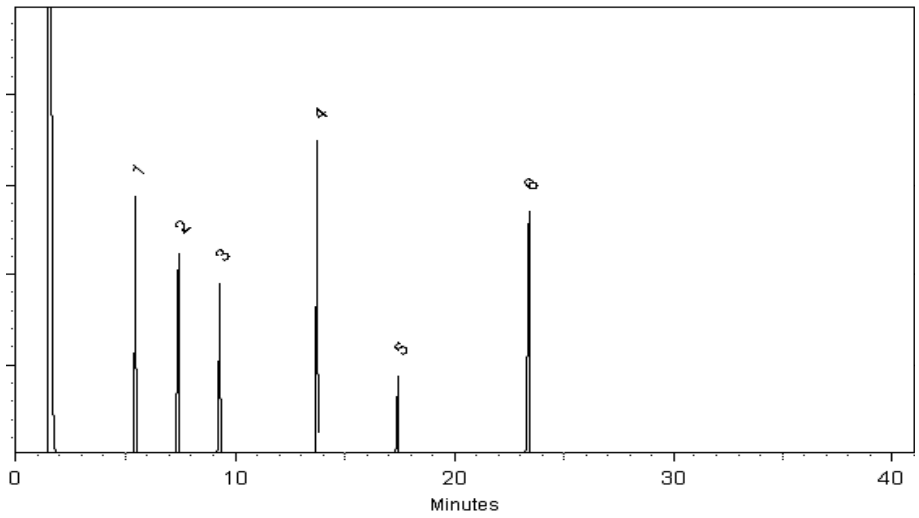
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

  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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CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

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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.

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	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

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)

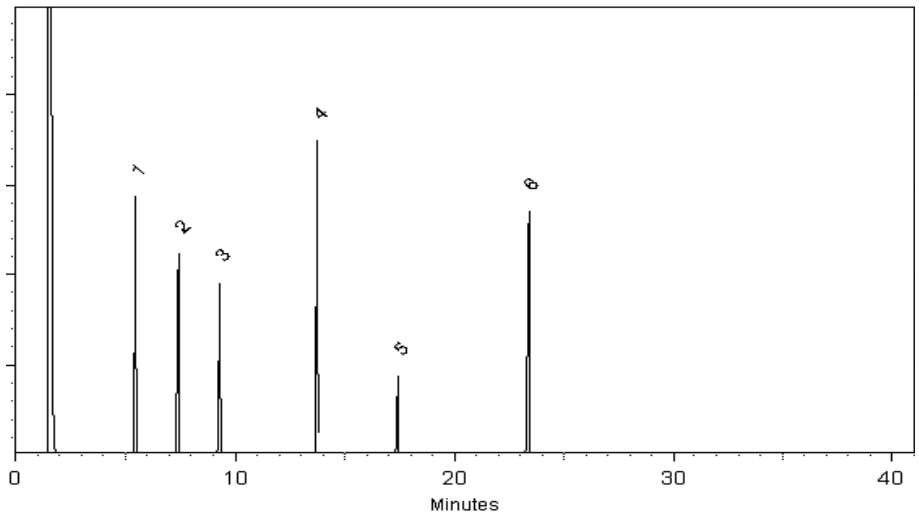
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.
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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:

- 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:

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

  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:

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Handling Notes:

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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

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RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

MANUFACTURED UNDER RESTEK'S ISO 9001 REGISTERED QUALITY SYSTEM

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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. : 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)

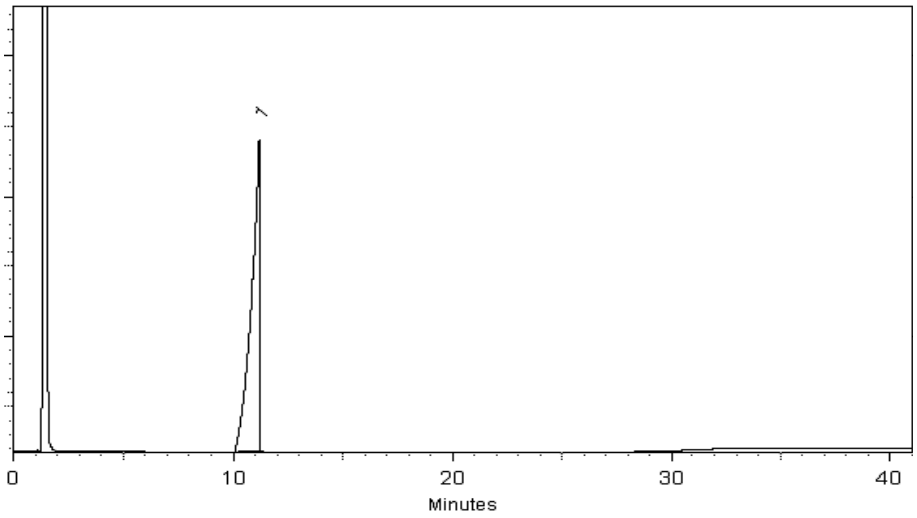
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - 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.
- 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 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.

RESTEK

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		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
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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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)

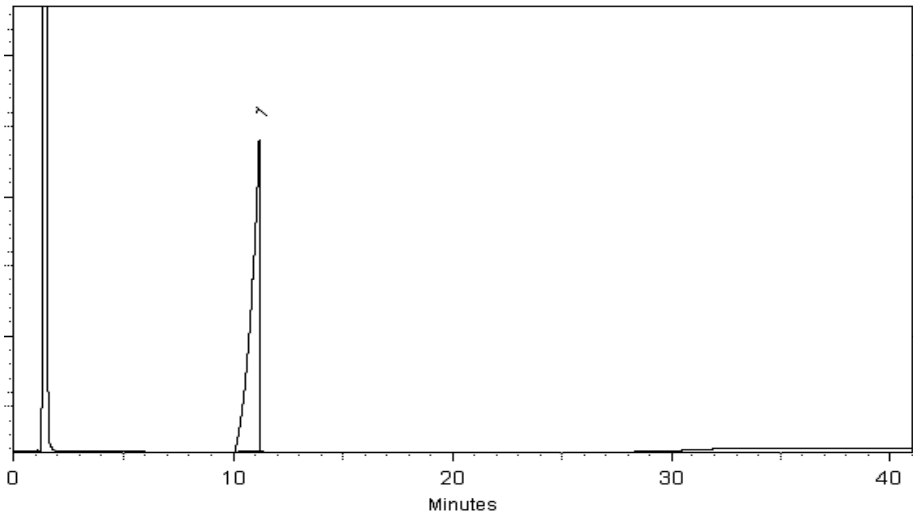
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - 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:

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

  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.

RESTEK

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		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
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)

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

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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. : 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 **CAS #** 3855-82-1 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 92.7158 +/- 101.3766	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 92.7158 +/- 101.3766	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	2,000.0 µg/mL	+/- 11.6282 +/- 92.7163 +/- 101.3771	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 92.7158 +/- 101.3766	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 +/- 92.7150 +/- 101.3758	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 92.7158 +/- 101.3766	µg/mL µg/mL µg/mL	Gravimetric Unstressed 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 +/- 92.7295 +/- 101.3892	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 +/- 92.7295 +/- 101.3892	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	2,000.1 µg/mL	+/- 11.7379 +/- 92.7360 +/- 101.3962	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 +/- 92.7295 +/- 101.3892	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 98%	2,000.2 µg/mL	+/- 11.7382 +/- 92.7378 +/- 101.3983	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 +/- 92.7295 +/- 101.3892	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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MS-
3043056
ID: MS-567684_00018
Exp: 11/30/19 Prpd: 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	2,017.6 µg/mL	+/- 11.7305 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 89.6430 µg/mL	Unstressed
	Purity 99%		+/- 98.4895 µg/mL	Stressed
2	Naphthalene-d8	2,003.8 µg/mL	+/- 11.6503 µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot PR-20449)		+/- 89.0299 µg/mL	Unstressed
	Purity 99%		+/- 97.8158 µg/mL	Stressed
3	Acenaphthene-d10	2,016.8 µg/mL	+/- 11.7260 µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-21070)		+/- 89.6085 µg/mL	Unstressed
	Purity 97%		+/- 98.4516 µg/mL	Stressed
4	Phenanthrene-d10	2,013.6 µg/mL	+/- 11.7072 µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-23065)		+/- 89.4653 µg/mL	Unstressed
	Purity 99%		+/- 98.2942 µg/mL	Stressed
5	Chrysene-d12	2,011.8 µg/mL	+/- 11.6968 µg/mL	Gravimetric
	CAS # 1719-03-5 (Lot PR-25081)		+/- 89.3853 µg/mL	Unstressed
	Purity 99%		+/- 98.2063 µg/mL	Stressed
6	Perylene-d12	2,017.8 µg/mL	+/- 11.7317 µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-24113)		+/- 89.6519 µg/mL	Unstressed
	Purity 99%		+/- 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)

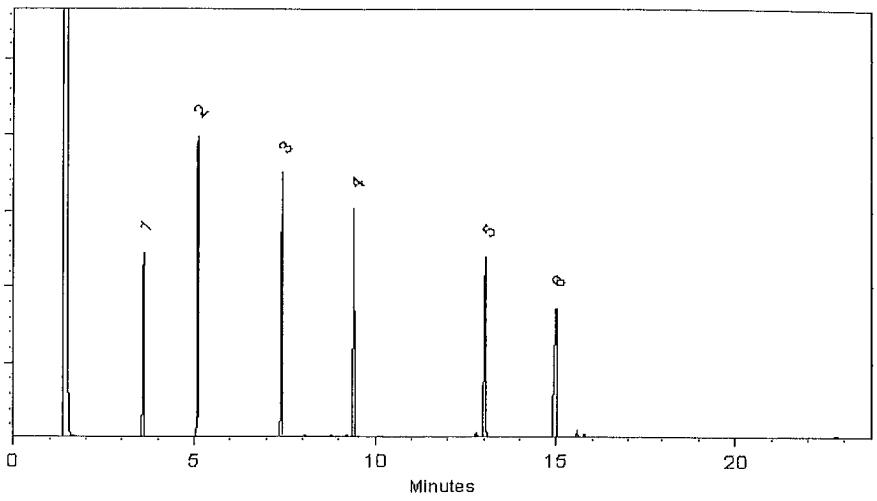
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - Mix Technician

Date Mixed: 17-Nov-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 19-Nov-2014

Manufactured under Restek's ISO 9001:2008
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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 - 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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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

3544259
ID: MS-567685_00002
Exp: 06/30/19 Prpd: DCK
8270 Surrogates 5000ug/mL

Catalog No. : 567685 **Lot No.:** A0103960

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 : June 30, 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)	5,006.1 µg/mL	+/- 29.1044 +/- 124.7363 +/- 156.8636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X479P6)	5,002.5 µg/mL	+/- 29.0834 +/- 124.6466 +/- 156.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-20474)	5,003.7 µg/mL	+/- 29.0901 +/- 124.6753 +/- 156.7868	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot B19Z016)	5,002.4 µg/mL	+/- 29.0826 +/- 124.6429 +/- 156.7461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,024.2 µg/mL	+/- 29.2093 +/- 125.1861 +/- 157.4292	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-20577)	5,010.4 µg/mL	+/- 29.1291 +/- 124.8422 +/- 156.9968	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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Gravimetric Certificate

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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.

3049651
ID: MS-568023_00010
Exp: 12/31/16 Prpd: 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 J Maye

Date Mixed: 18-Dec-2014 **Balance:** 1128353505

Manufactured under Restek's ISO 9001:2008
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3223427
ID: MS-569729_00025
Exp: 09/30/16 Prpd: DCK
RES HSLA Mega Mix 1000ug/

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.

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 SHBF2002V) **Purity** 99%	1,001.8 µg/mL	+/- 5.8246 µg/mL +/- 10.9684 µg/mL +/- 18.6042 µg/mL	Gravimetric Unstressed Stressed
2	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	1,004.7 µg/mL	+/- 5.8414 µg/mL +/- 11.0002 µg/mL +/- 18.6581 µg/mL	Gravimetric Unstressed Stressed
3	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 3498100) **Purity** 99%	1,000.0 µg/mL	+/- 5.8141 µg/mL +/- 10.9487 µg/mL +/- 18.5708 µg/mL	Gravimetric Unstressed Stressed
4	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,000.9 µg/mL	+/- 5.8193 µg/mL +/- 10.9586 µg/mL +/- 18.5875 µg/mL	Gravimetric Unstressed Stressed
5	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot 45296HKV) **Purity** 99%	1,001.9 µg/mL	+/- 5.8251 µg/mL +/- 10.9695 µg/mL +/- 18.6061 µg/mL	Gravimetric Unstressed Stressed
6	2-Chlorophenol **CAS #** 95-57-8 (Lot MKBD3900V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 10.9640 µg/mL +/- 18.5968 µg/mL	Gravimetric Unstressed Stressed
7	Phenol **CAS #** 108-95-2 (Lot SHBC6998V) **Purity** 99%	1,000.3 µg/mL	+/- 5.8158 µg/mL +/- 10.9520 µg/mL +/- 18.5764 µg/mL	Gravimetric Unstressed 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		1,002.1	µg/mL	+/-	5.8263	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 2238100)			+/-	10.9717	µg/mL	Unstressed
	Purity 99%				+/-	18.6098	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.8	µg/mL	+/-	5.8304	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	10.9794	µg/mL	Unstressed
	Purity 99%				+/-	18.6228	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	10.9529	µg/mL	Unstressed
	Purity 98%				+/-	18.5779	µg/mL	Stressed
27	Naphthalene		1,002.5	µg/mL	+/-	5.8286	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	10.9761	µg/mL	Unstressed
	Purity 99%				+/-	18.6172	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	10.9673	µg/mL	Unstressed
	Purity 99%				+/-	18.6024	µg/mL	Stressed
29	4-Chloroaniline		1,000.3	µg/mL	+/-	5.8157	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	10.9518	µg/mL	Unstressed
	Purity 98%				+/-	18.5761	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.1	µg/mL	+/-	5.8260	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	10.9711	µg/mL	Unstressed
	Purity 98%				+/-	18.6089	µg/mL	Stressed
31	2-Methylnaphthalene		1,000.2	µg/mL	+/-	5.8154	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	10.9512	µg/mL	Unstressed
	Purity 96%				+/-	18.5749	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	10.9586	µg/mL	Unstressed
	Purity 99%				+/-	18.5875	µg/mL	Stressed
33	1-Methylnaphthalene		990.0	µg/mL	+/-	5.7692	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	10.8463	µg/mL	Unstressed
	Purity 99%				+/-	18.3892	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	10.9509	µg/mL	Unstressed
	Purity 99%				+/-	18.5745	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 3691100)			+/-	10.9509	µg/mL	Unstressed
	Purity 99%				+/-	18.5745	µg/mL	Stressed
36	2,4,6-Trichlorophenol		999.9	µg/mL	+/-	5.8135	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBL4698V)			+/-	10.9475	µg/mL	Unstressed
	Purity 98%				+/-	18.5688	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,002.2	µg/mL	+/-	5.8269	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHM01)			+/-	10.9728	µg/mL	Unstressed
	Purity 99%				+/-	18.6116	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot FIJ01)			+/-	10.9520	µg/mL	Unstressed
	Purity 99%				+/-	18.5764	µg/mL	Stressed
39	Biphenyl		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	10.9783	µg/mL	Unstressed
	Purity 99%				+/-	18.6209	µg/mL	Stressed

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

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

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

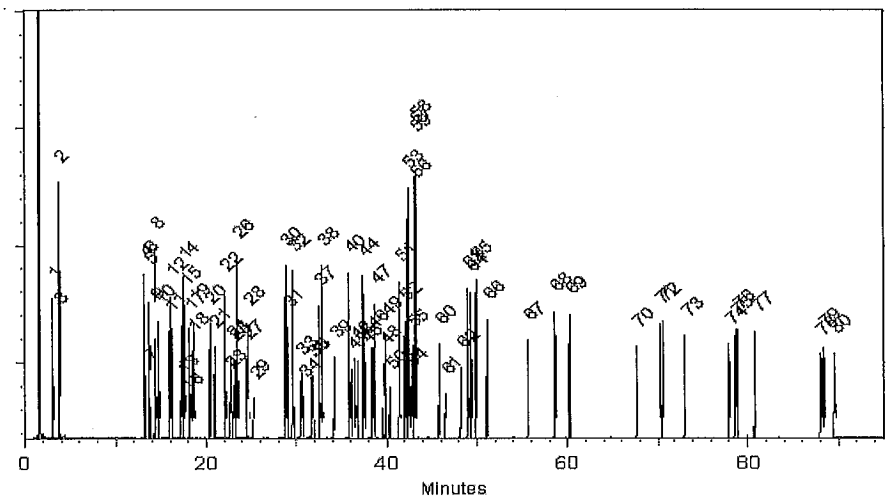
Carrier Gas:
hydrogen-constant pressure 10 psi

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

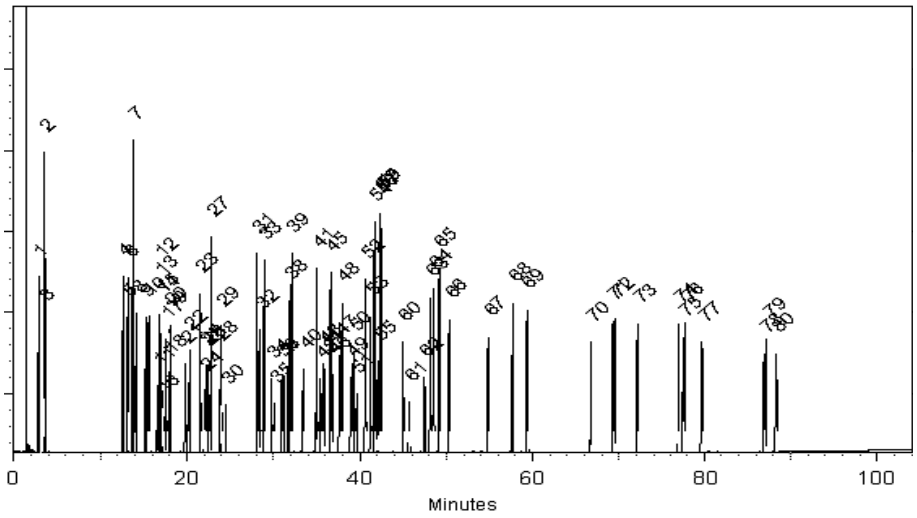
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

RESTEK®
110 Benner Circle
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Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

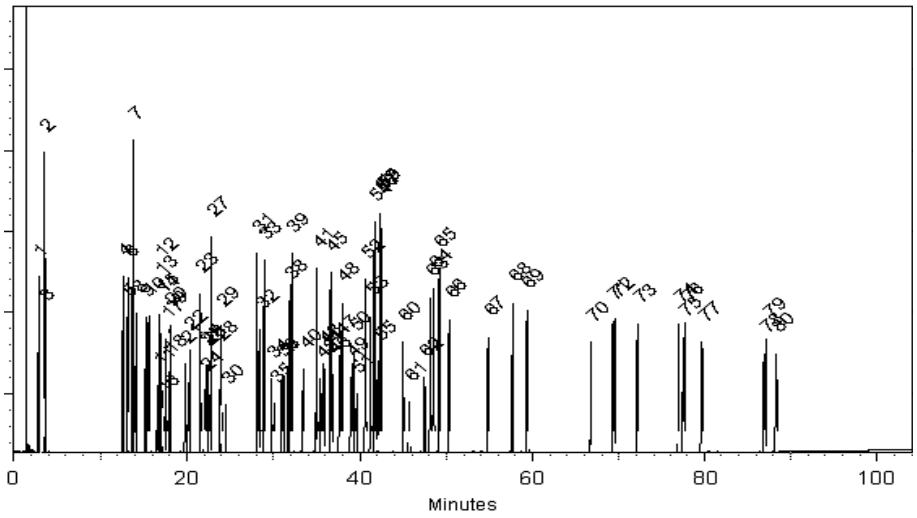
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

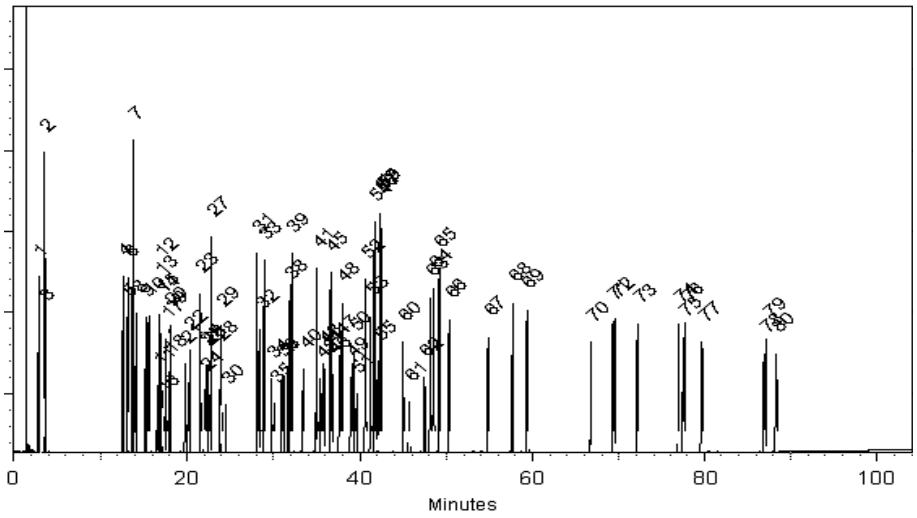
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

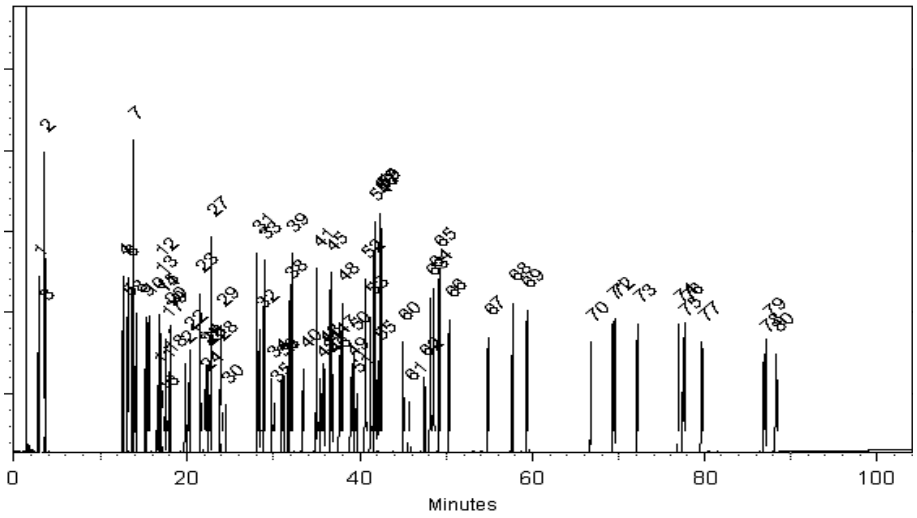
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

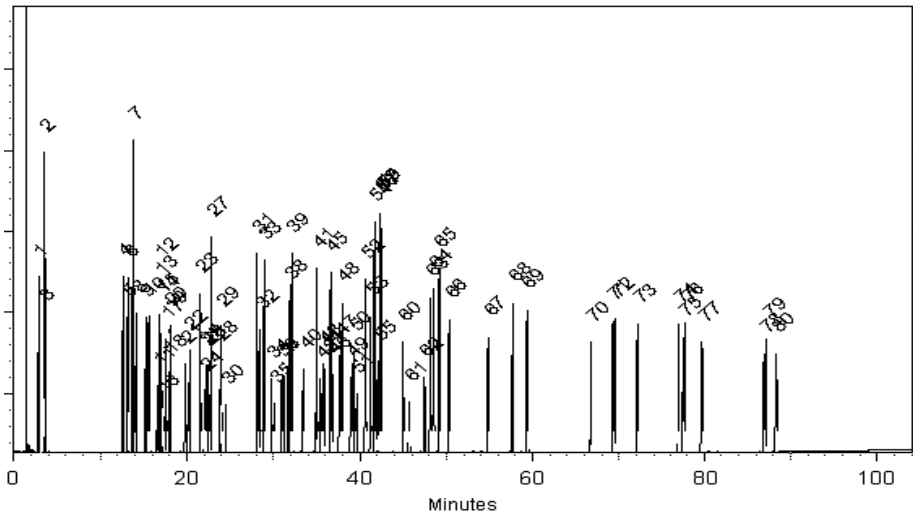
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

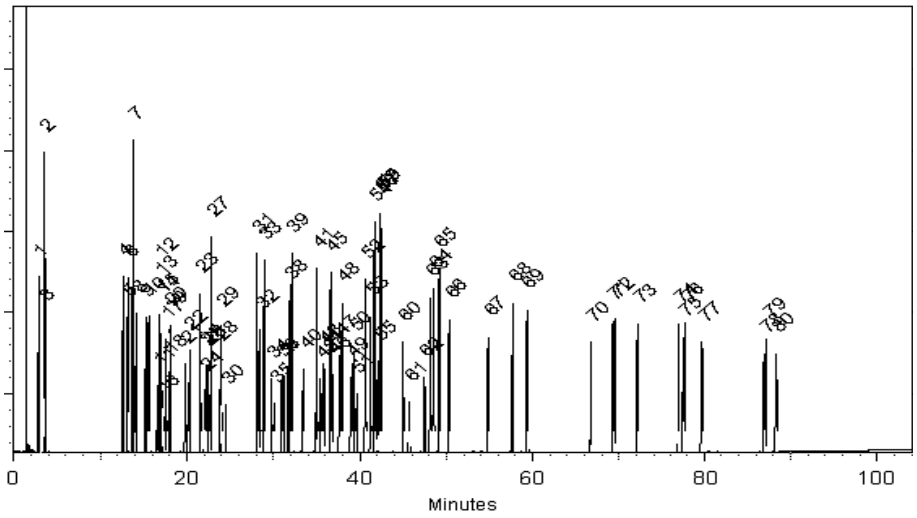
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

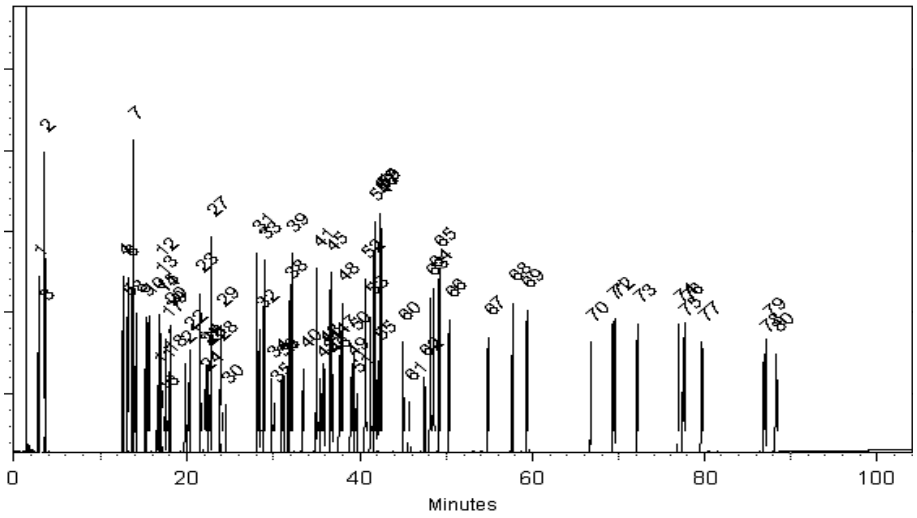
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.

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

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

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

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

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

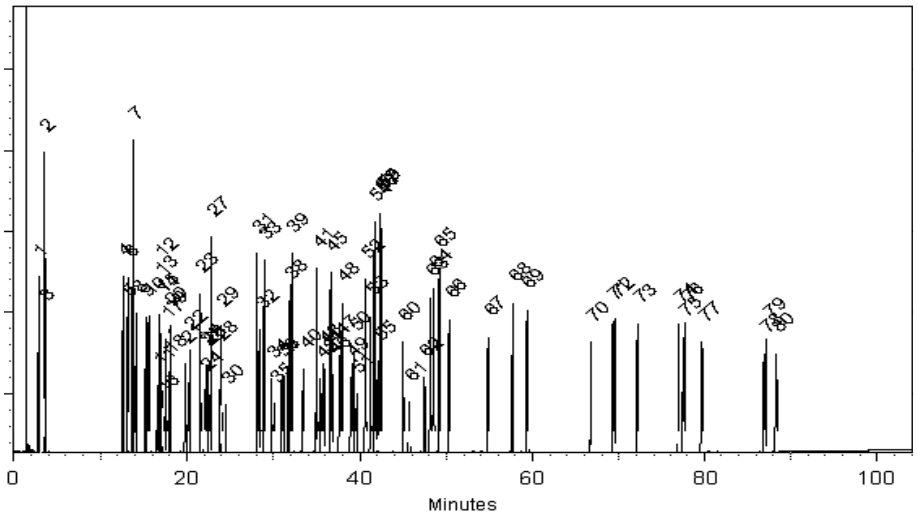
Carrier Gas:
hydrogen-constant pressure 10 psi

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 Sawyer

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:

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

  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.

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

3223479
ID: MS-569730 AFC_00001
Exp: 07/31/16 Prpd: 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.

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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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. : 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	2,001.0 µg/mL	+/- 11.6337	µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 150701JLMB)		+/- 21.9078	µg/mL	Unstressed
	Purity 99%		+/- 37.1592	µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,001.5 µg/mL	+/- 11.6369	µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 150701JLMA)		+/- 21.9138	µg/mL	Unstressed
	Purity 99%		+/- 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:

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

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

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- 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.

3231000
ID: MS-569731_00013
Exp: 07/31/16 Prpd: DCK
HSLA Benzoic Acid (2015)

Catalog No. : 569731 **Lot No.:** A0107943

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 : 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	2,001.4 µg/mL	+/- 11.6363	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBP3098V)		+/- 22.5687	µg/mL	Unstressed
	Purity 99%		+/- 25.9700	µg/mL	Stressed
2	Benzoic acid	2,005.8 µg/mL	+/- 11.6619	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBL6689V)		+/- 22.6183	µg/mL	Unstressed
	Purity 99%		+/- 26.0271	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. : 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 +/- 22.5687 µg/mL +/- 25.9700 µg/mL		Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99%	(Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL +/- 22.5540 µg/mL +/- 25.9531 µg/mL		Gravimetric Unstressed 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:

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

  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. : 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 +/- 22.5687 +/- 25.9700	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99%	(Lot MKBL6689V)	2,000.1	µg/mL	+/- 11.6288 +/- 22.5540 +/- 25.9531	µg/mL µg/mL µg/mL	Gravimetric Unstressed 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:

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

  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.
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Manufacturing Notes:

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Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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 +/- 22.5687 µg/mL +/- 25.9700 µg/mL		Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99%	(Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL +/- 22.5540 µg/mL +/- 25.9531 µg/mL		Gravimetric Unstressed 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:

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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

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Manufacturing Notes:

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Handling Notes:

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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 +/- 22.5687 +/- 25.9700	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99%	(Lot MKBL6689V)	2,000.1	µg/mL	+/- 11.6288 +/- 22.5540 +/- 25.9531	µg/mL µg/mL µg/mL	Gravimetric Unstressed 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:

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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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- 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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Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

3230998
ID: MS-569732 HSL_00001
Exp: 08/31/16 Prpd: DCK
8270 List 1/ Std 11 (2015

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	2,011.6 µg/mL	+/- 11.6956	µg/mL	Gravimetric
	CAS # 100-52-7 (Lot SHBD3510V)		+/- 64.4832	µg/mL	Unstressed
	Purity 99%		+/- 74.9592	µg/mL	Stressed
2	epsilon-Caprolactam	2,009.2 µg/mL	+/- 11.6817	µg/mL	Gravimetric
	CAS # 105-60-2 (Lot I16X016)		+/- 64.4062	µg/mL	Unstressed
	Purity 99%		+/- 74.8697	µg/mL	Stressed
3	Atrazine	2,001.6 µg/mL	+/- 11.6372	µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot TZ8ED)		+/- 64.1611	µg/mL	Unstressed
	Purity 98%		+/- 74.5847	µg/mL	Stressed

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

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		2,011.6 µg/mL	+/- 11.6956	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBD3510V)		+/- 64.4832	µg/mL	Unstressed
	Purity 99%			+/- 74.9592	µg/mL	Stressed
2	epsilon-Caprolactam		2,009.2 µg/mL	+/- 11.6817	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.4062	µg/mL	Unstressed
	Purity 99%			+/- 74.8697	µg/mL	Stressed
3	Atrazine		2,001.6 µg/mL	+/- 11.6372	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)		+/- 64.1611	µg/mL	Unstressed
	Purity 98%			+/- 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)

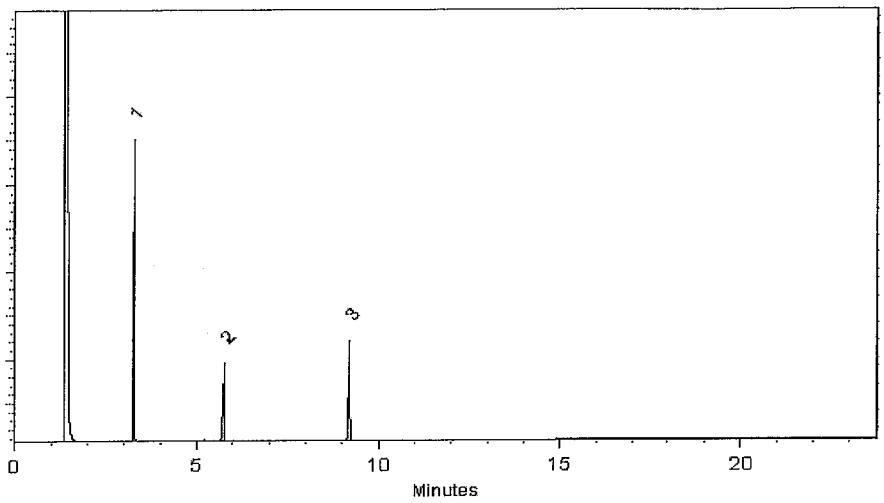
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - Mix Technician

Date Mixed: 10-Feb-2015 **Balance:** 1128360905

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.
- 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:

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

  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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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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

3231454
ID: MS-569732SEC_00001
Exp: 06/30/16 Prpd: DCK
RES 8270 List 1 / Std# 11

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

Expiration Date : June 30, 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	2,002.0 µg/mL	+/- 11.6398 µg/mL	Gravimetric
	CAS # 100-52-7.SEC (Lot E7DWH)		+/- 64.1754 µg/mL	Unstressed
	Purity 99% Remove		+/- 74.6014 µg/mL	Stressed
2	epsilon-Caprolactam	2,001.2 µg/mL	+/- 11.6351 µg/mL	Gravimetric
	CAS # 105-60-2.SEC (Lot BLJTB)		+/- 64.1498 µg/mL	Unstressed
	Purity 99%		+/- 74.5716 µg/mL	Stressed
3	Atrazine	2,000.2 µg/mL	+/- 11.6293 µg/mL	Gravimetric
	CAS # 1912-24-9.SEC (Lot 2887600)		+/- 64.1177 µg/mL	Unstressed
	Purity 99%		+/- 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: 280-76268-2

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.: 280-76268-2

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 #
FW31102015EQU002	280-76268-3	71	76	73	71	89	90
FW3112015	280-76268-4	69	69	70	71	98	66
TMW35102015	280-76268-6	84	87	87	88	102	86
MW22S102015	280-76268-7	75	80	73	80	97	26
MW22D102015	280-76268-8	75	78	83	84	95	36
MW20102015	280-76268-9	75	81	86	88	98	36
DMW20102015	280-76268-10	81	85	93	90	100	37
	MB 280-304711/1-A	88	90	90	88	100	93
	LCS 280-304711/2-A	86	87	83	82	101	84
MW20102015MS MS	280-76268-9 MS	83	84	88	85	102	35
MW20102015MSD MSD	280-76268-9 MSD	82	84	86	85	102	43

	QC 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

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Matrix: Water Level: Low Lab File ID: Y6542.D

Lab ID: LCS 280-304711/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Caprolactam	80.0	68.7	86	46-143	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Matrix: Water Level: Low Lab File ID: Y6551.D

Lab ID: 280-76268-9 MS Client ID: MW20102015MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Caprolactam	82.3	2.6 U	78.1	95	46-143	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Matrix: Water Level: Low Lab File ID: Y6552.D

Lab ID: 280-76268-9 MSD Client ID: MW20102015MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Caprolactam	82.3	81.0	99	4	30	46-143	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab File ID: Y6541.D Lab Sample ID: MB 280-304711/1-A

Matrix: Water Date Extracted: 11/04/2015 14:55

Instrument ID: SMS_Y Date Analyzed: 11/24/2015 15:56

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-304711/2-A	Y6542.D	11/24/2015 16:24
FW31102015EQU002	280-76268-3	Y6545.D	11/24/2015 17:46
FW3112015	280-76268-4	Y6546.D	11/24/2015 18:13
TMW35102015	280-76268-6	Y6547.D	11/24/2015 18:41
MW22S102015	280-76268-7	Y6548.D	11/24/2015 19:08
MW22D102015	280-76268-8	Y6549.D	11/24/2015 19:35
MW20102015	280-76268-9	Y6550.D	11/24/2015 20:03
MW20102015MS MS	280-76268-9 MS	Y6551.D	11/24/2015 20:30
MW20102015MSD MSD	280-76268-9 MSD	Y6552.D	11/24/2015 20:57
DMW20102015	280-76268-10	Y6553.D	11/24/2015 21:25

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab File ID: Y6329.D DFTPP Injection Date: 11/14/2015

Instrument ID: SMS_Y DFTPP Injection Time: 09:15

Analysis Batch No.: 304895

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	43.4	
68	Less than 2% of mass 69	0.0	(0.0) 1
69	Mass 69 Relative abundance	44.8	
70	Less than 2% of mass 69	0.2	(0.5) 1
127	10-80% of Base Peak	50.0	
197	Less than 2% of mass 198	0.4	
198	Base peak	100.0	
199	5-9% of mass 198	7.4	
275	10-60% of Base Peak	21.0	
365	Greater than 1% of mass 198	2.3	
441	present but less than 24% of mass 442	12.1	(15.2) 2
442	Greater than 50% of mass 198	79.4	
443	15-24% of mass 442	15.7	(19.7) 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
	ICIS 280-304895/3	Y6330.D	11/14/2015	09:27
	STD004 280-304895/4	Y6331.D	11/14/2015	09:54
	STD010 280-304895/5	Y6332.D	11/14/2015	10:21
	STD020 280-304895/6	Y6333.D	11/14/2015	10:48
	STD050 280-304895/7	Y6334.D	11/14/2015	11:15
	STD120 280-304895/8	Y6335.D	11/14/2015	11:43
	STD160 280-304895/9	Y6336.D	11/14/2015	12:10
	STD200 280-304895/10	Y6337.D	11/14/2015	12:37
	ICV 280-304895/11	Y6338.D	11/14/2015	13:05
	ICV 280-304895/12	Y6339.D	11/14/2015	13:32
	ICV 280-304895/13	Y6340.D	11/14/2015	13:59

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab File ID: Y6533.D DFTPP Injection Date: 11/24/2015

Instrument ID: SMS_Y DFTPP Injection Time: 12:39

Analysis Batch No.: 305472

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	40.7	
68	Less than 2% of mass 69	0.0	(0.0) 1
69	Mass 69 Relative abundance	44.4	
70	Less than 2% of mass 69	0.3	(0.6) 1
127	10-80% of Base Peak	49.1	
197	Less than 2% of mass 198	0.6	
198	Base peak	100.0	
199	5-9% of mass 198	6.6	
275	10-60% of Base Peak	20.1	
365	Greater than 1% of mass 198	2.3	
441	present but less than 24% of mass 442	11.9	(14.7) 2
442	Greater than 50% of mass 198	81.5	
443	15-24% of mass 442	16.3	(20.0) 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
	CCV 280-305472/3	Y6534.D	11/24/2015	12:54
	MB 280-304711/1-A	Y6541.D	11/24/2015	15:56
	LCS 280-304711/2-A	Y6542.D	11/24/2015	16:24
FW31102015EQU002	280-76268-3	Y6545.D	11/24/2015	17:46
FW3112015	280-76268-4	Y6546.D	11/24/2015	18:13
TMW35102015	280-76268-6	Y6547.D	11/24/2015	18:41
MW22S102015	280-76268-7	Y6548.D	11/24/2015	19:08
MW22D102015	280-76268-8	Y6549.D	11/24/2015	19:35
MW20102015	280-76268-9	Y6550.D	11/24/2015	20:03
MW20102015MS MS	280-76268-9 MS	Y6551.D	11/24/2015	20:30
MW20102015MSD MSD	280-76268-9 MSD	Y6552.D	11/24/2015	20:57
DMW20102015	280-76268-10	Y6553.D	11/24/2015	21:25

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Sample No.: ICIS 280-304895/3 Date Analyzed: 11/14/2015 09:27

Instrument ID: SMS_Y GC Column: Vf-5MS (30.25) ID: 0.25(mm)

Lab File ID (Standard): Y6330.D Heated Purge: (Y/N) N

Calibration ID: 24462

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		217007	4.57	864926	5.79	507794	7.54
UPPER LIMIT		434014	5.07	1729852	6.29	1015588	8.04
LOWER LIMIT		108504	4.07	432463	5.29	253897	7.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-304895/11		221679	4.57	864064	5.79	505137	7.54
ICV 280-304895/12		211222	4.57	831090	5.79	475657	7.54
ICV 280-304895/13		289596	4.57	1153649	5.79	661833	7.54
CCV 280-305472/3		199630	4.51	799605	5.74	467157	7.49
MB 280-304711/1-A		196190	4.51	773326	5.74	461730	7.49
LCS 280-304711/2-A		204436	4.51	831006	5.74	493096	7.49
280-76268-3	FW31102015EQU002	207946	4.51	818910	5.74	495209	7.49
280-76268-4	FW3112015	211119	4.51	818248	5.74	484610	7.49
280-76268-6	TMW35102015	211066	4.52	831002	5.74	479014	7.49
280-76268-7	MW22S102015	209634	4.51	859681	5.74	493597	7.49
280-76268-8	MW22D102015	212921	4.51	839239	5.74	492698	7.49
280-76268-9	MW20102015	209579	4.51	817116	5.74	482764	7.49
280-76268-9 MS	MW20102015MS MS	210934	4.51	868690	5.74	510871	7.49
280-76268-9 MSD	MW20102015MSD MSD	225362	4.51	892549	5.74	527026	7.49
280-76268-10	DMW20102015	214682	4.51	857862	5.74	510485	7.49

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

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

Column used to flag values outside QC limits

FORM VIII 8270D

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

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Sample No.: ICIS 280-304895/3 Date Analyzed: 11/14/2015 09:27

Instrument ID: SMS_Y GC Column: Vf-5MS (30.25) ID: 0.25(mm)

Lab File ID (Standard): Y6330.D Heated Purge: (Y/N) N

Calibration ID: 24462

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		893120	9.04	904971	13.02	763455	16.89
UPPER LIMIT		1786240	9.54	1809942	13.52	1526910	17.39
LOWER LIMIT		446560	8.54	452486	12.52	381728	16.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-304895/11		881628	9.03	856972	13.02	773980	16.88
ICV 280-304895/12		857218	9.03	831071	13.01	736106	16.88
ICV 280-304895/13		1161821	9.03	1233983	13.01	1015798	16.88
CCV 280-305472/3		846091	8.98	850772	12.91	732902	16.74
MB 280-304711/1-A		836282	8.98	834137	12.90	694735	16.73
LCS 280-304711/2-A		864187	8.98	896549	12.90	784625	16.73
280-76268-3	FW31102015EQU002	879493	8.98	881418	12.89	763558	16.72
280-76268-4	FW3112015	888009	8.98	901086	12.89	799684	16.72
280-76268-6	TMW35102015	885965	8.98	858698	12.89	773467	16.72
280-76268-7	MW22S102015	888486	8.98	917145	12.90	797958	16.72
280-76268-8	MW22D102015	906841	8.98	921591	12.89	801998	16.72
280-76268-9	MW20102015	866065	8.98	871072	12.90	751532	16.72
280-76268-9 MS	MW20102015MS MS	914714	8.98	934095	12.90	853376	16.72
280-76268-9 MSD	MW20102015MSD MSD	935321	8.98	944642	12.90	842061	16.73
280-76268-10	DMW20102015	933152	8.98	925309	12.89	833465	16.72

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

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

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-76268-2

SDG No.:

Client Sample ID: FW31102015EQU002 | Lab Sample ID: 280-76268-3

Matrix: Water | Lab File ID: Y6545.D

Analysis Method: 8270D | Date Collected: 11/02/2015 09:30

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 1013(mL) | Date Analyzed: 11/24/2015 17:46

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.: 305472 | Units: ug/L

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)	89		42-131
321-60-8	2-Fluorobiphenyl	71		48-120
367-12-4	2-Fluorophenol (Surr)	71		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	73		42-120
4165-62-2	Phenol-d5 (Surr)	76		45-124
1718-51-0	Terphenyl-d14 (Surr)	90		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6545.D
Lims ID: 280-76268-B-3-B Lab Sample ID: 280-76268-3
Client ID: FW31102015EQU002
Sample Type: Client
Inject. Date: 24-Nov-2015 17:46:30 ALS Bottle#: 13 Worklist Smp#: 21
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-B-3-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:42:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.514	4.513	0.001	96	207946	40.0	
* 2 Naphthalene-d8	136	5.742	5.740	0.002	99	818910	40.0	
* 3 Acenaphthene-d10	164	7.492	7.491	0.001	92	495209	40.0	
* 4 Phenanthrene-d10	188	8.978	8.983	-0.005	98	879493	40.0	
* 5 Chrysene-d12	240	12.891	12.907	-0.016	98	881418	40.0	
* 6 Perylene-d12	264	16.715	16.737	-0.022	97	763558	40.0	
$ 7 2-Fluorophenol	112	3.333	3.332	0.001	92	514910	71.2	
$ 8 Phenol-d5	99	4.161	4.160	0.001	98	678046	75.5	
$ 9 Nitrobenzene-d5	82	5.031	5.029	0.002	88	564616	72.8	
$ 10 2-Fluorobiphenyl	172	6.805	6.809	-0.004	100	1192370	70.6	
$ 11 2,4,6-Tribromophenol	330	8.279	8.284	-0.005	93	159303	89.2	
$ 12 Terphenyl-d14	244	10.870	10.875	-0.004	99	1659589	89.7	
14 N-Nitrosodimethylamine	74		2.175				ND	
22 Benzaldehyde	106		3.961				ND	
24 Phenol	94		4.172				ND	
26 Bis(2-chloroethyl)ether	93		4.242				ND	
27 2-Chlorophenol	128		4.325				ND	
28 1,3-Dichlorobenzene	146		4.466				ND	
32 1,4-Dichlorobenzene	146		4.530				ND	
33 Benzyl alcohol	108		4.630				ND	
34 1,2-Dichlorobenzene	146		4.677				ND	
35 2-Methylphenol	108		4.742				ND	
37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
40 3 & 4 Methylphenol	108		4.883				ND	
42 N-Nitrosodi-n-propylamine	70		4.877				ND	
43 Acetophenone	105	4.878	4.883	-0.005	92	2858	0.2956	
45 Hexachloroethane	117		5.006				ND	
47 Nitrobenzene	77		5.053				ND	
48 Isophorone	82		5.276				ND	
50 2-Nitrophenol	139		5.364				ND	
51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105	5.436	5.505	-0.069	83	5149	12.1	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128	5.759	5.764	-0.005	91	6337	0.3058	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163		7.203				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.870	10.625	0.245	52	21460	NC	
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

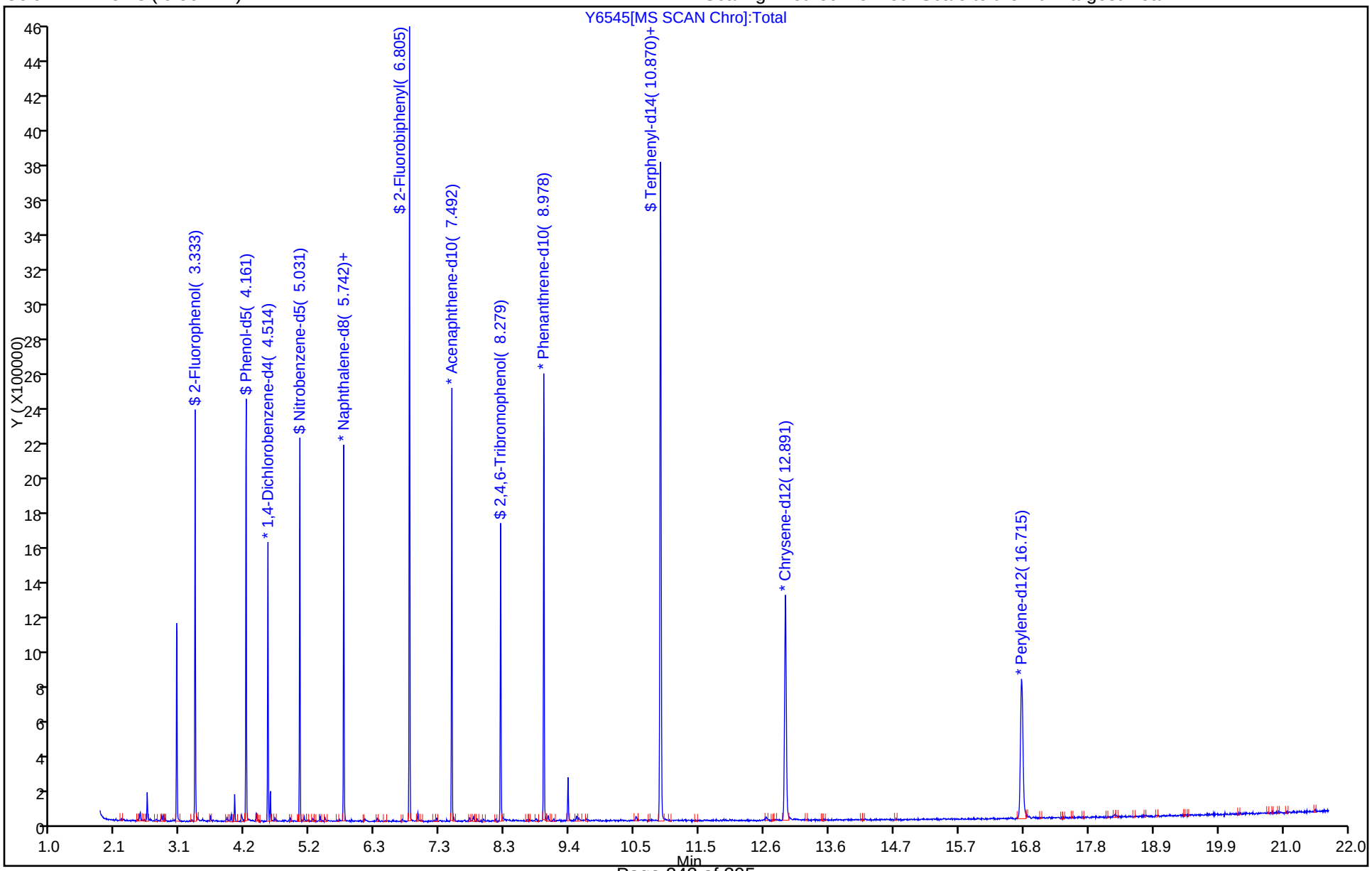
Report Date: 25-Nov-2015 16:00:51 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6545.D

Injection Date:	24-Nov-2015 17:46:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-B-3-B	Lab Sample ID:	280-76268-3	Worklist Smp#:	21
Client ID:	FW31102015EQU002				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: FW3112015 | Lab Sample ID: 280-76268-4

Matrix: Water | Lab File ID: Y6546.D

Analysis Method: 8270D | Date Collected: 11/02/2015 11:05

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 980.3(mL) | Date Analyzed: 11/24/2015 18:13

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.6	U	5.1	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	98		42-131
321-60-8	2-Fluorobiphenyl	71		48-120
367-12-4	2-Fluorophenol (Surr)	69		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	70		42-120
4165-62-2	Phenol-d5 (Surr)	69		45-124
1718-51-0	Terphenyl-d14 (Surr)	66		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6546.D
Lims ID: 280-76268-D-4-B Lab Sample ID: 280-76268-4
Client ID: FW3112015
Sample Type: Client
Inject. Date: 24-Nov-2015 18:13:30 ALS Bottle#: 14 Worklist Smp#: 22
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-D-4-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:43:09

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.514	4.513	0.001	96	211119	40.0	
*	2 Naphthalene-d8	136	5.741	5.740	0.001	99	818248	40.0	
*	3 Acenaphthene-d10	164	7.492	7.491	0.001	91	484610	40.0	
*	4 Phenanthrene-d10	188	8.978	8.983	-0.005	97	888009	40.0	
*	5 Chrysene-d12	240	12.891	12.907	-0.016	98	901086	40.0	
*	6 Perylene-d12	264	16.721	16.737	-0.016	97	799684	40.0	
$	7 2-Fluorophenol	112	3.333	3.332	0.001	91	504324	68.7	
$	8 Phenol-d5	99	4.161	4.160	0.001	98	632481	69.4	
$	9 Nitrobenzene-d5	82	5.031	5.029	0.002	89	542415	70.0	
$	10 2-Fluorobiphenyl	172	6.805	6.809	-0.004	100	1175582	71.1	
$	11 2,4,6-Tribromophenol	330	8.285	8.284	0.001	91	171241	98.0	
$	12 Terphenyl-d14	244	10.870	10.875	-0.004	99	1248244	66.0	
	14 N-Nitrosodimethylamine	74		2.175				ND	
	22 Benzaldehyde	106		3.961				ND	
	24 Phenol	94		4.172				ND	
	26 Bis(2-chloroethyl)ether	93		4.242				ND	
	27 2-Chlorophenol	128		4.325				ND	
	28 1,3-Dichlorobenzene	146		4.466				ND	
	32 1,4-Dichlorobenzene	146		4.530				ND	
	33 Benzyl alcohol	108		4.630				ND	
	34 1,2-Dichlorobenzene	146		4.677				ND	
	35 2-Methylphenol	108		4.742				ND	
	37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
	40 3 & 4 Methylphenol	108		4.883				ND	
	42 N-Nitrosodi-n-propylamine	70		4.877				ND	
	43 Acetophenone	105		4.883				ND	
	45 Hexachloroethane	117		5.006				ND	
	47 Nitrobenzene	77		5.053				ND	
	48 Isophorone	82		5.276				ND	
	50 2-Nitrophenol	139		5.364				ND	
	51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163		7.203				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.476	10.625	-0.149	39	200		NC
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

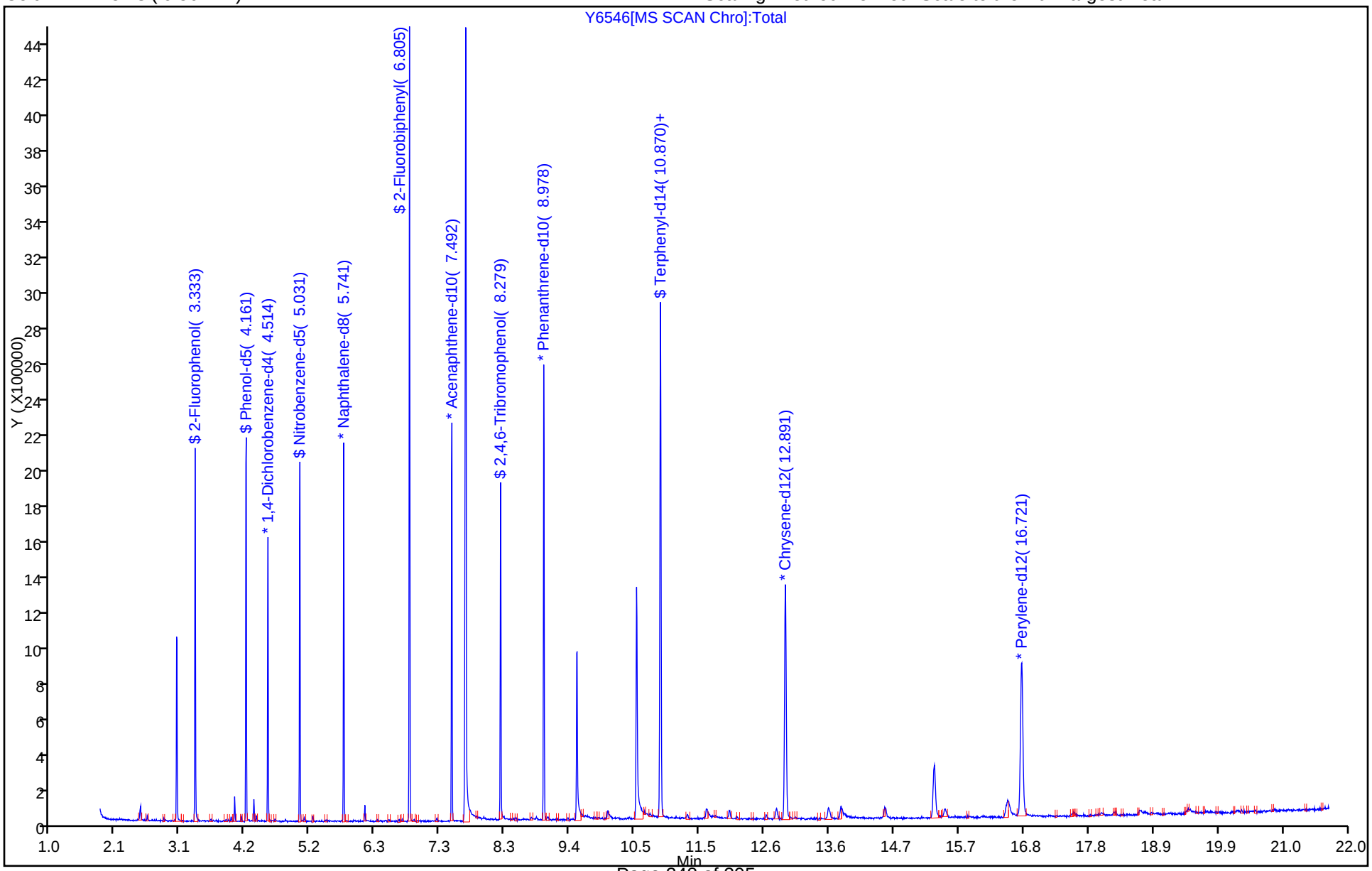
Report Date: 25-Nov-2015 16:00:56 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6546.D

Injection Date:	24-Nov-2015 18:13:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-D-4-B	Lab Sample ID:	280-76268-4	Worklist Smp#:	22
Client ID:	FW3112015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: TMW35102015 | Lab Sample ID: 280-76268-6

Matrix: Water | Lab File ID: Y6547.D

Analysis Method: 8270D | Date Collected: 11/02/2015 09:55

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 989.3(mL) | Date Analyzed: 11/24/2015 18:41

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.5	U	5.1	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	102		42-131
321-60-8	2-Fluorobiphenyl	88		48-120
367-12-4	2-Fluorophenol (Surr)	84		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	87		42-120
4165-62-2	Phenol-d5 (Surr)	87		45-124
1718-51-0	Terphenyl-d14 (Surr)	86		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6547.D
Lims ID: 280-76268-E-6-B Lab Sample ID: 280-76268-6
Client ID: TMW35102015
Sample Type: Client
Inject. Date: 24-Nov-2015 18:41:30 ALS Bottle#: 15 Worklist Smp#: 23
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-E-6-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:43:42

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.515	4.513	0.002	96	211066	40.0	
*	2 Naphthalene-d8	136	5.737	5.740	-0.003	100	831002	40.0	
*	3 Acenaphthene-d10	164	7.488	7.491	-0.003	93	479014	40.0	
*	4 Phenanthrene-d10	188	8.980	8.983	-0.003	97	885965	40.0	
*	5 Chrysene-d12	240	12.892	12.907	-0.015	98	858698	40.0	
*	6 Perylene-d12	264	16.722	16.737	-0.015	94	773467	40.0	
$	7 2-Fluorophenol	112	3.335	3.332	0.003	91	615047	83.7	
$	8 Phenol-d5	99	4.157	4.160	-0.003	98	793036	87.0	
$	9 Nitrobenzene-d5	82	5.026	5.029	-0.003	88	682418	86.8	
$	10 2-Fluorobiphenyl	172	6.806	6.809	-0.003	100	1445433	88.5	
$	11 2,4,6-Tribromophenol	330	8.281	8.284	-0.003	92	176754	102.4	
$	12 Terphenyl-d14	244	10.871	10.875	-0.003	99	1553150	86.1	
	14 N-Nitrosodimethylamine	74		2.175				ND	
	22 Benzaldehyde	106		3.961				ND	
	24 Phenol	94		4.172				ND	
	26 Bis(2-chloroethyl)ether	93		4.242				ND	
	27 2-Chlorophenol	128		4.325				ND	
	28 1,3-Dichlorobenzene	146		4.466				ND	
	32 1,4-Dichlorobenzene	146		4.530				ND	
	33 Benzyl alcohol	108		4.630				ND	
	34 1,2-Dichlorobenzene	146		4.677				ND	
	35 2-Methylphenol	108		4.742				ND	
	37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
	40 3 & 4 Methylphenol	108		4.883				ND	
	42 N-Nitrosodi-n-propylamine	70		4.877				ND	
	43 Acetophenone	105		4.883				ND	
	45 Hexachloroethane	117		5.006				ND	
	47 Nitrobenzene	77		5.053				ND	
	48 Isophorone	82		5.276				ND	
	50 2-Nitrophenol	139		5.364				ND	
	51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163		7.203				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.866	10.625	0.241	52	23935		NC
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

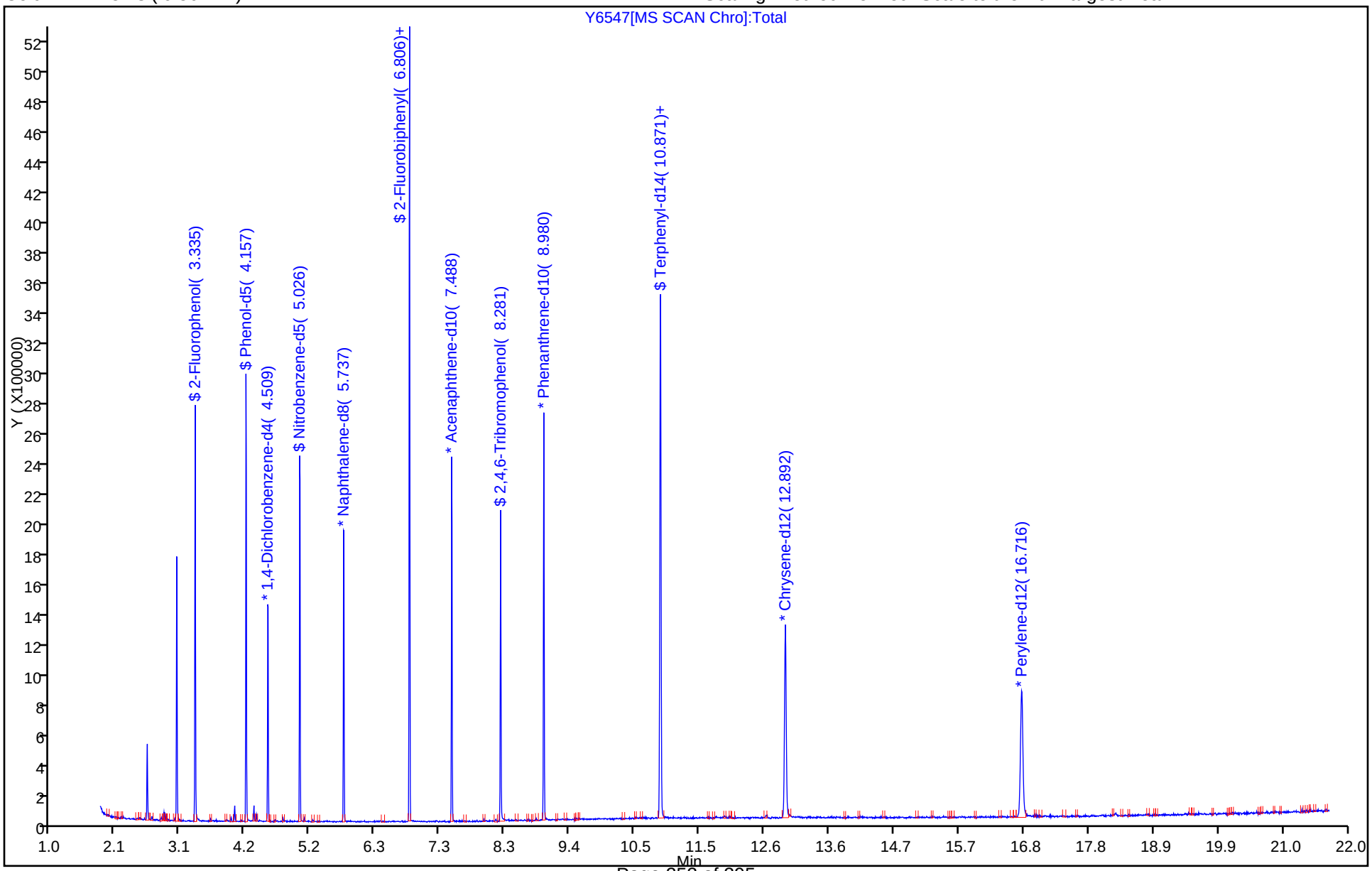
Report Date: 25-Nov-2015 16:01:05 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6547.D

Injection Date:	24-Nov-2015 18:41:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-E-6-B	Lab Sample ID:	280-76268-6	Worklist Smp#:	23
Client ID:	TMW35102015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: MW22S102015 | Lab Sample ID: 280-76268-7

Matrix: Water | Lab File ID: Y6548.D

Analysis Method: 8270D | Date Collected: 11/02/2015 11:15

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 928.4(mL) | Date Analyzed: 11/24/2015 19:08

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.: 305472 | Units: ug/L

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)	97		42-131
321-60-8	2-Fluorobiphenyl	80		48-120
367-12-4	2-Fluorophenol (Surr)	75		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	73		42-120
4165-62-2	Phenol-d5 (Surr)	80		45-124
1718-51-0	Terphenyl-d14 (Surr)	26		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6548.D
Lims ID: 280-76268-A-7-B Lab Sample ID: 280-76268-7
Client ID: MW22S102015
Sample Type: Client
Inject. Date: 24-Nov-2015 19:08:30 ALS Bottle#: 16 Worklist Smp#: 24
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-A-7-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:44:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.513	4.513	0.000	97	209634	40.0	
* 2 Naphthalene-d8	136	5.740	5.740	0.000	99	859681	40.0	
* 3 Acenaphthene-d10	164	7.491	7.491	0.000	93	493597	40.0	
* 4 Phenanthrene-d10	188	8.977	8.983	-0.006	97	888486	40.0	
* 5 Chrysene-d12	240	12.895	12.907	-0.012	99	917145	40.0	
* 6 Perylene-d12	264	16.720	16.737	-0.017	97	797958	40.0	
$ 7 2-Fluorophenol	112	3.332	3.332	0.000	92	544169	74.6	
$ 8 Phenol-d5	99	4.160	4.160	0.000	98	724552	80.0	
$ 9 Nitrobenzene-d5	82	5.030	5.029	0.001	89	592082	72.8	
$ 10 2-Fluorobiphenyl	172	6.804	6.809	-0.005	99	1354507	80.5	
$ 11 2,4,6-Tribromophenol	330	8.284	8.284	0.000	91	172616	97.0	
$ 12 Terphenyl-d14	244	10.869	10.875	-0.005	99	501115	26.0	
14 N-Nitrosodimethylamine	74		2.175				ND	
22 Benzaldehyde	106		3.961				ND	
24 Phenol	94		4.172				ND	
26 Bis(2-chloroethyl)ether	93		4.242				ND	
27 2-Chlorophenol	128		4.325				ND	
28 1,3-Dichlorobenzene	146		4.466				ND	
32 1,4-Dichlorobenzene	146		4.530				ND	
33 Benzyl alcohol	108		4.630				ND	
34 1,2-Dichlorobenzene	146		4.677				ND	
35 2-Methylphenol	108		4.742				ND	
37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
40 3 & 4 Methylphenol	108		4.883				ND	
42 N-Nitrosodi-n-propylamine	70		4.877				ND	
43 Acetophenone	105		4.883				ND	
45 Hexachloroethane	117		5.006				ND	
47 Nitrobenzene	77		5.053				ND	
48 Isophorone	82		5.276				ND	
50 2-Nitrophenol	139		5.364				ND	
51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163		7.203				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.387	10.625	-0.238	35	304		NC
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

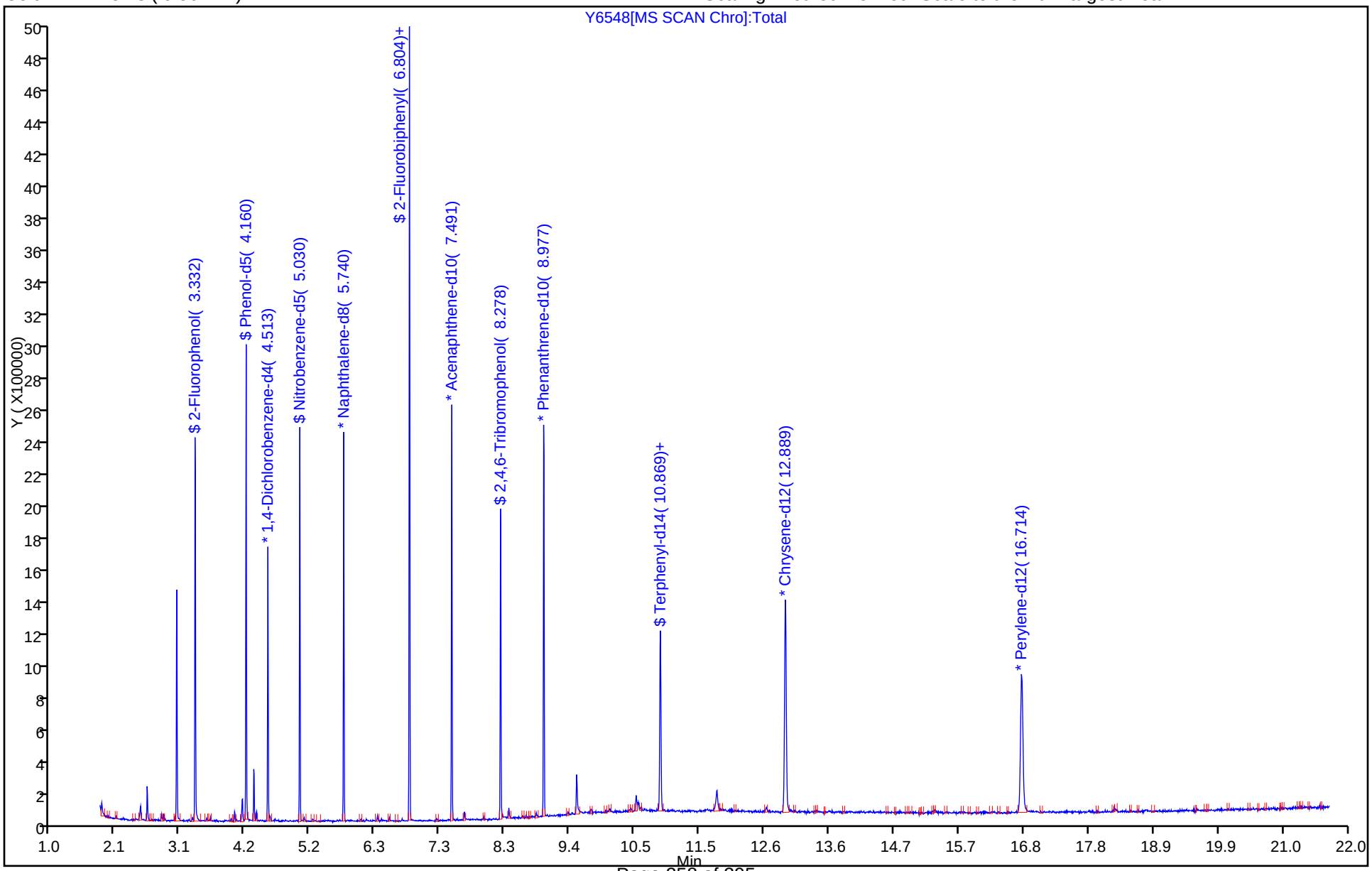
Report Date: 25-Nov-2015 16:01:14 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6548.D

Injection Date:	24-Nov-2015 19:08:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-A-7-B	Lab Sample ID:	280-76268-7	Worklist Smp#:	24
Client ID:	MW22S102015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: MW22D102015 | Lab Sample ID: 280-76268-8

Matrix: Water | Lab File ID: Y6549.D

Analysis Method: 8270D | Date Collected: 11/02/2015 12:10

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 963.2(mL) | Date Analyzed: 11/24/2015 19:35

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.: 305472 | Units: ug/L

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)	95		42-131
321-60-8	2-Fluorobiphenyl	84		48-120
367-12-4	2-Fluorophenol (Surr)	75		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		42-120
4165-62-2	Phenol-d5 (Surr)	78		45-124
1718-51-0	Terphenyl-d14 (Surr)	36		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6549.D
Lims ID: 280-76268-C-8-B Lab Sample ID: 280-76268-8
Client ID: MW22D102015
Sample Type: Client
Inject. Date: 24-Nov-2015 19:35:30 ALS Bottle#: 17 Worklist Smp#: 25
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-C-8-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-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	4.510	4.513	-0.003	96	212921	40.0	
*	2 Naphthalene-d8	136	5.738	5.740	-0.002	100	839239	40.0	
*	3 Acenaphthene-d10	164	7.489	7.491	-0.002	93	492698	40.0	
*	4 Phenanthrene-d10	188	8.981	8.983	-0.002	97	906841	40.0	
*	5 Chrysene-d12	240	12.893	12.907	-0.014	98	921591	40.0	
*	6 Perylene-d12	264	16.717	16.737	-0.020	97	801998	40.0	
$	7 2-Fluorophenol	112	3.335	3.332	0.003	92	559056	75.5	
$	8 Phenol-d5	99	4.158	4.160	-0.002	98	714405	77.7	
$	9 Nitrobenzene-d5	82	5.027	5.029	-0.002	88	656537	82.7	
$	10 2-Fluorobiphenyl	172	6.807	6.809	-0.002	99	1412907	84.1	
$	11 2,4,6-Tribromophenol	330	8.282	8.284	-0.002	93	168306	94.8	
$	12 Terphenyl-d14	244	10.866	10.875	-0.008	99	701975	36.3	
	14 N-Nitrosodimethylamine	74		2.175				ND	
	22 Benzaldehyde	106		3.961				ND	
	24 Phenol	94		4.172				ND	
	26 Bis(2-chloroethyl)ether	93		4.242				ND	
	27 2-Chlorophenol	128		4.325				ND	
	28 1,3-Dichlorobenzene	146		4.466				ND	
	32 1,4-Dichlorobenzene	146		4.530				ND	
	33 Benzyl alcohol	108		4.630				ND	
	34 1,2-Dichlorobenzene	146		4.677				ND	
	35 2-Methylphenol	108		4.742				ND	
	37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
	40 3 & 4 Methylphenol	108		4.883				ND	
	42 N-Nitrosodi-n-propylamine	70		4.877				ND	
	43 Acetophenone	105		4.883				ND	
	45 Hexachloroethane	117		5.006				ND	
	47 Nitrobenzene	77		5.053				ND	
	48 Isophorone	82		5.276				ND	
	50 2-Nitrophenol	139		5.364				ND	
	51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163		7.203				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.866	10.625	0.241	52	10282		NC
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

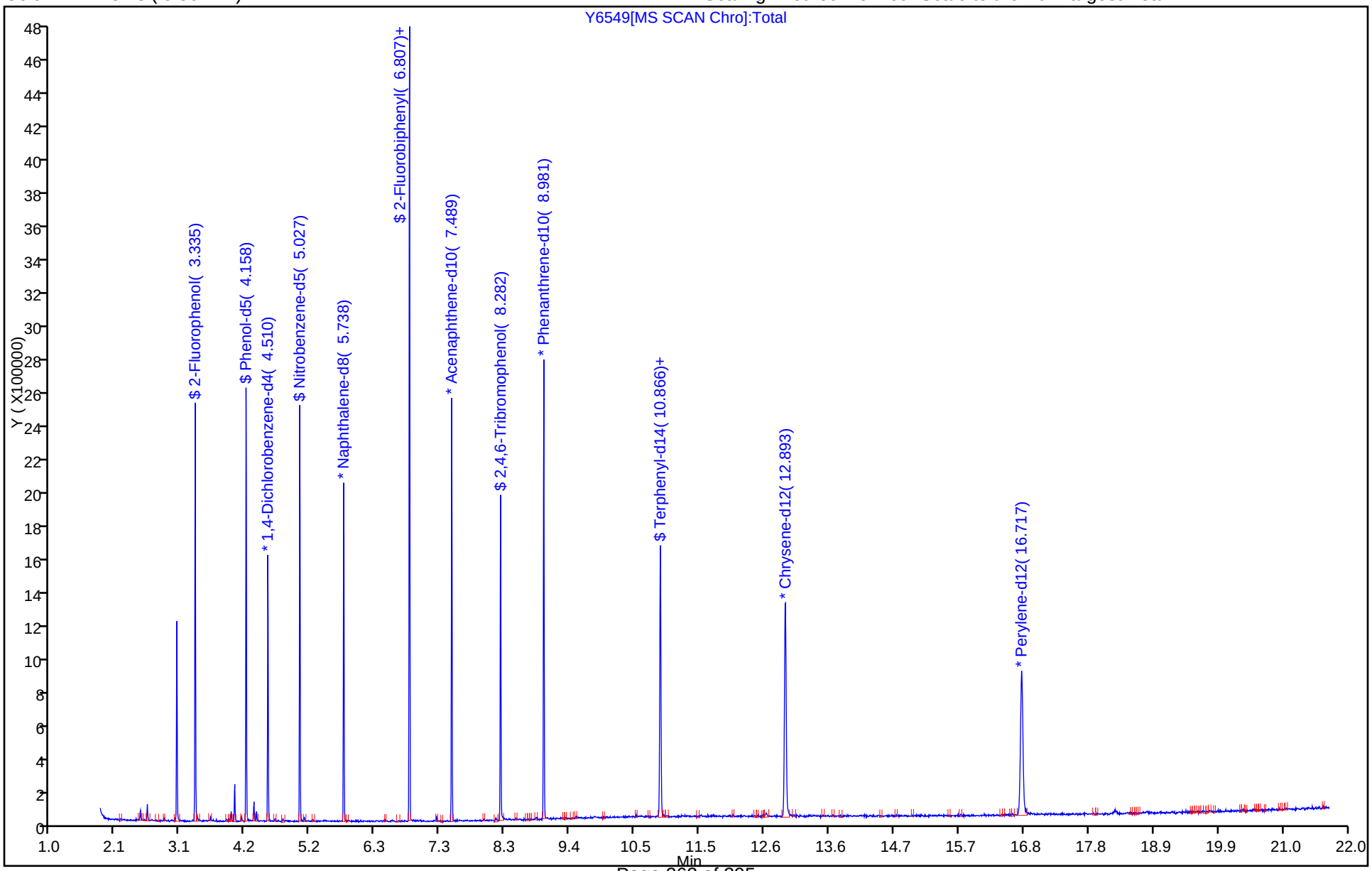
Report Date: 25-Nov-2015 16:01:23 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6549.D

Injection Date:	24-Nov-2015 19:35:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-C-8-B	Lab Sample ID:	280-76268-8	Worklist Smp#:	25
Client ID:	MW22D102015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: MW20102015 | Lab Sample ID: 280-76268-9

Matrix: Water | Lab File ID: Y6550.D

Analysis Method: 8270D | Date Collected: 11/02/2015 10:30

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 977.2(mL) | Date Analyzed: 11/24/2015 20:03

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.6	U	5.1	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	98		42-131
321-60-8	2-Fluorobiphenyl	88		48-120
367-12-4	2-Fluorophenol (Surr)	75		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	86		42-120
4165-62-2	Phenol-d5 (Surr)	81		45-124
1718-51-0	Terphenyl-d14 (Surr)	36		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6550.D
Lims ID: 280-76268-G-9-B Lab Sample ID: 280-76268-9
Client ID: MW20102015
Sample Type: Client
Inject. Date: 24-Nov-2015 20:03:30 ALS Bottle#: 18 Worklist Smp#: 26
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-G-9-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:44:53

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.512	4.513	-0.001	96	209579	40.0	
*	2 Naphthalene-d8	136	5.740	5.740	0.000	99	817116	40.0	
*	3 Acenaphthene-d10	164	7.491	7.491	0.000	92	482764	40.0	
*	4 Phenanthrene-d10	188	8.983	8.983	0.000	97	866065	40.0	
*	5 Chrysene-d12	240	12.895	12.907	-0.012	98	871072	40.0	
*	6 Perylene-d12	264	16.719	16.737	-0.018	97	751532	40.0	
$	7 2-Fluorophenol	112	3.338	3.332	0.006	92	548271	75.2	
$	8 Phenol-d5	99	4.160	4.160	0.000	98	736622	81.4	
$	9 Nitrobenzene-d5	82	5.029	5.029	0.000	88	661226	85.5	
$	10 2-Fluorobiphenyl	172	6.803	6.809	-0.006	99	1447636	87.9	
$	11 2,4,6-Tribromophenol	330	8.284	8.284	0.000	93	170539	98.0	
$	12 Terphenyl-d14	244	10.869	10.875	-0.005	99	665638	36.4	
	13 1,4-Dioxane	88		1.951				ND	
	14 N-Nitrosodimethylamine	74		2.175				ND	
	15 Pyridine	79		2.227				ND	
	16 2-Picoline	93		2.869				ND	
	17 N-Nitrosomethylethylamine	88		2.940				ND	
	18 Methyl methanesulfonate	80		3.198				ND	
	19 N-Nitrosodiethylamine	102		3.574				ND	
	20 Ethyl methanesulfonate	79		3.827				ND	
	21 Pentachlorophenol_T	266		3.678				ND	
	22 Benzaldehyde	106		3.961				ND	
	23 Pentachloroethane	117		4.326				ND	
	24 Phenol	94		4.172				ND	
	25 Aniline	93		4.201				ND	
	26 Bis(2-chloroethyl)ether	93		4.242				ND	
	27 2-Chlorophenol	128		4.325				ND	
	28 1,3-Dichlorobenzene	146		4.466				ND	
	29 N-Nitrosopyrrolidine	100		4.920				ND	
	30 N-Nitrosomorpholine	116		4.955				ND	
	31 2-Toluidine	106		4.996				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
32 1,4-Dichlorobenzene	146		4.530				ND	
33 Benzyl alcohol	108		4.630				ND	
34 1,2-Dichlorobenzene	146		4.677				ND	
35 2-Methylphenol	108		4.742				ND	
36 Benzidine_T	184		4.764				ND	
37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
38 N-Nitrosopiperidine	114		5.261				ND	
39 3-Methylphenol	108		4.883				ND	
40 3 & 4 Methylphenol	108		4.883				ND	
41 4-Methylphenol	108		4.883				ND	
42 N-Nitrosodi-n-propylamine	70		4.877				ND	
43 Acetophenone	105		4.883				ND	
44 o,o',o''-Triethylphosphoro	198		5.531				ND	
45 Hexachloroethane	117		5.006				ND	
46 alpha,alpha-Dimethyl phene	58		5.695				ND	
47 Nitrobenzene	77		5.053				ND	
48 Isophorone	82		5.276				ND	
49 Hexachloropropene	213		5.942				ND	
50 2-Nitrophenol	139		5.364				ND	
51 2,4-Dimethylphenol	107		5.400				ND	
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
54 N-Nitrosodi-n-butylamine	84		6.207				ND	
55 p-Phenylene diamine	108		6.218				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
58 Safrole, Total	162		6.430				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
63 Isosafrole Peak 1	162	6.645	6.718	-0.073	1	157		NC
64 Isosafrole Peak 2	104	6.944	6.947	-0.003	1	56		NC
65 Caprolactam	55		6.157				ND	
66 1-Chloronaphthalene	162		7.041				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
68 1,4-Naphthoquinone	158		7.170				ND	
69 1,4-Dinitrobenzene	168		7.217				ND	
70 2-Methylnaphthalene	142		6.451				ND	
71 1-Methylnaphthalene	142		6.551				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
76 Pentachlorobenzene	250		7.746				ND	
77 1,1'-Biphenyl	154		6.909				ND	
78 2-Chloronaphthalene	162		6.933				ND	
79 1-Naphthylamine	143		7.840				ND	
80 2-Naphthylamine	143		7.922				ND	
81 2-Nitroaniline	65		7.027				ND	
82 Thionazin	97		8.057				ND	
83 N-Nitro-o-toluidine	152		8.110				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
84 Dimethyl phthalate	163		7.203				ND	
85 Diphenylamine	169		8.216				ND	
86 1,3-Dinitrobenzene	168		7.232				ND	
87 2,6-Dinitrotoluene	165		7.262				ND	
88 Sulfotepp	97		8.363				ND	
89 Acenaphthylene	152		7.350				ND	
90 Diallate Peak 1	86	8.525	8.510	0.015	18	765		NC
91 3-Nitroaniline	138		7.438				ND	
92 Phorate	121		8.516				ND	
93 1,3,5-Trinitrobenzene	213		8.451				ND	
94 Phenacetin	108		8.510				ND	
95 Acenaphthene	153		7.526				ND	
96 Diallate Peak 2	86	8.666	8.598	0.068	19	518		NC
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
99 Dimethoate	87		8.674				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
102 4-Aminobiphenyl	169		8.851				ND	
103 Pronamide	173		8.909				ND	
104 Pentachloronitrobenzene	237		8.892				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
107 Disulfoton	88		9.039				ND	
108 Dinoseb	211		9.044				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
114 Azobenzene	77		8.190				ND	
115 1,2-Diphenylhydrazine	77		8.190				ND	
116 Methyl parathion	109		9.415				ND	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
118 Ethyl Parathion	109		9.832				ND	
119 Hexachlorobenzene	284		8.607				ND	
120 Atrazine	200		8.677				ND	
121 4-Nitroquinoline-1-oxide	190		9.873				ND	
122 Methapyrilene	97		9.967				ND	
123 Pentachlorophenol	266		8.801				ND	
124 Isodrin	193		10.237				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.863	10.625	0.238	65	9520		NC
128 Carbazole	167		9.218				ND	
129 Alachlor	188	9.376	9.377	-0.001	0	190		NC
130 Aramite Peak 1	185	10.951	10.925	0.026	37	385		NC
131 Di-n-butyl phthalate	149		9.553				ND	
132 Aramite Peak 2	185	11.109	11.048	0.061	39	397		NC
133 p-Dimethylamino azobenzene	120		11.201				ND	
134 Chlorobenzilate	251		11.283				ND	
135 3,3'-Dimethylbenzidine	212		11.800				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
138 2-Acetylaminofluorene	181		12.305				ND	
139 4,4'-Methylene bis(2-chlor	231		12.963				ND	
140 Famphur	218		11.615				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
146 7,12-Dimethylbenz(a)anthra	256		15.825				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
148 Hexachlorophene	196	15.286	15.289	-0.003	0	216		NC
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	
151 3-Methylcholanthrene	268		17.805				ND	
152 Benzo[a]pyrene	252		16.573				ND	
153 Dibenz[a,j]acridine	279		19.509				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	
S 163 Aramite, Total	185		15.047				ND	
S 164 Isosafrole	162		15.047				ND	
S 165 Diallate	86		15.047				ND	
157 Total Cresols	1		0.000				ND	
158 Tetraethyl Pyrophosphate (	1		0.000				ND	
160 4,4'-DDE	246		4.895				ND	
161 4,4'-DDD	235		5.175				ND	
162 4,4'-DDT	235		5.387				ND	
S 166 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

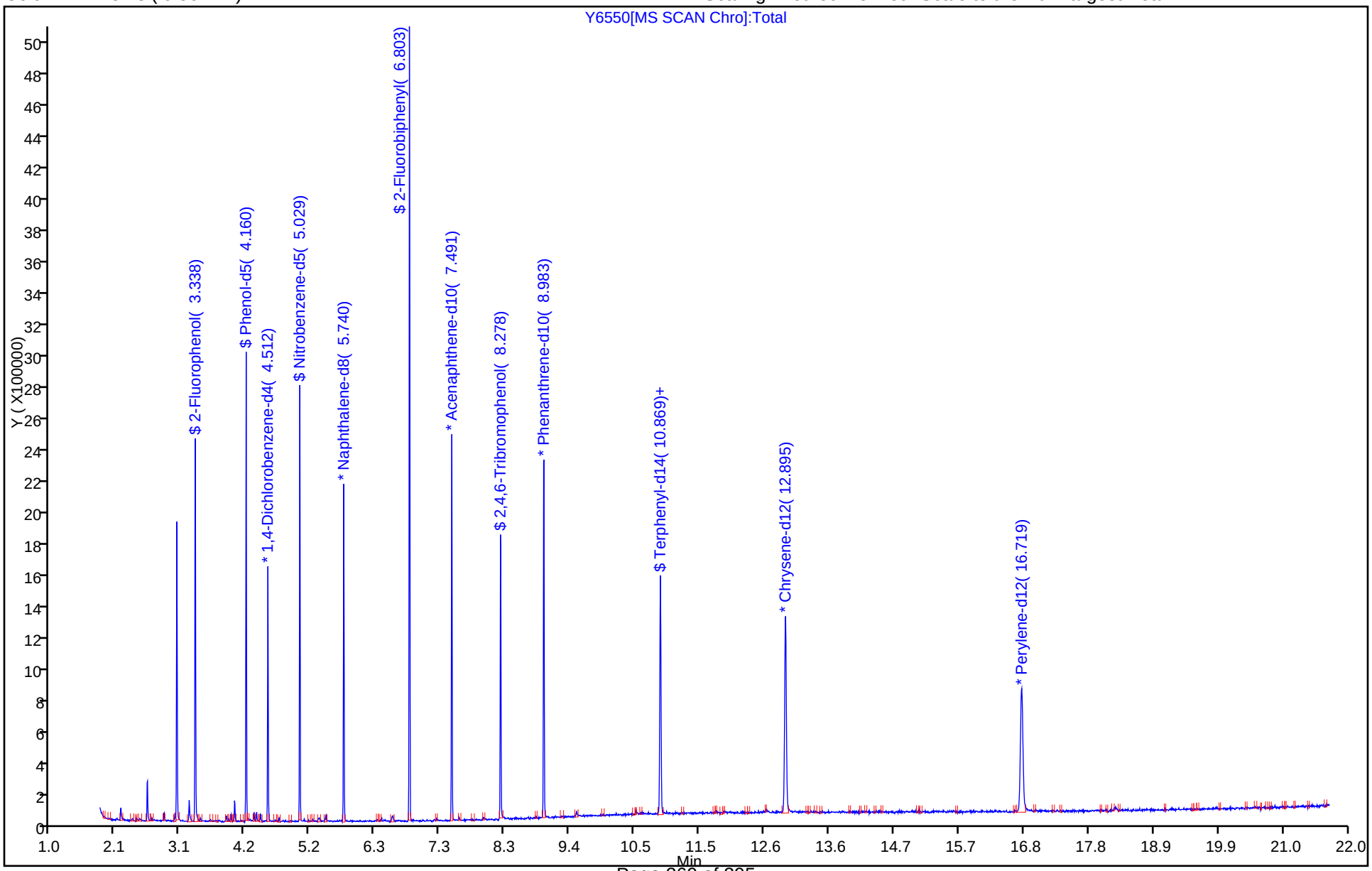
Report Date: 25-Nov-2015 16:01:36 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6550.D

Injection Date:	24-Nov-2015 20:03:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-G-9-B	Lab Sample ID:	280-76268-9	Worklist Smp#:	26
Client ID:	MW20102015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: DMW20102015 | Lab Sample ID: 280-76268-10

Matrix: Water | Lab File ID: Y6553.D

Analysis Method: 8270D | Date Collected: 11/02/2015 10:30

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 888.9(mL) | Date Analyzed: 11/24/2015 21:25

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	2.8	U	5.6	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	100		42-131
321-60-8	2-Fluorobiphenyl	90		48-120
367-12-4	2-Fluorophenol (Surr)	81		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	93		42-120
4165-62-2	Phenol-d5 (Surr)	85		45-124
1718-51-0	Terphenyl-d14 (Surr)	37		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6553.D
Lims ID: 280-76268-C-10-B Lab Sample ID: 280-76268-10
Client ID: DMW20102015
Sample Type: Client
Inject. Date: 24-Nov-2015 21:25:30 ALS Bottle#: 21 Worklist Smp#: 29
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-C-10-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:51:40

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.510	4.513	-0.003	96	214682	40.0	
*	2 Naphthalene-d8	136	5.743	5.740	0.003	99	857862	40.0	
*	3 Acenaphthene-d10	164	7.488	7.491	-0.003	93	510485	40.0	
*	4 Phenanthrene-d10	188	8.980	8.983	-0.003	97	933152	40.0	
*	5 Chrysene-d12	240	12.893	12.907	-0.014	98	925309	40.0	
*	6 Perylene-d12	264	16.723	16.737	-0.014	97	833465	40.0	
$	7 2-Fluorophenol	112	3.335	3.332	0.003	91	604561	80.9	
$	8 Phenol-d5	99	4.163	4.160	0.003	98	792442	85.5	
$	9 Nitrobenzene-d5	82	5.027	5.029	-0.002	88	751664	92.6	
$	10 2-Fluorobiphenyl	172	6.807	6.809	-0.002	99	1561592	89.7	
$	11 2,4,6-Tribromophenol	330	8.281	8.284	-0.003	92	183646	99.8	
$	12 Terphenyl-d14	244	10.866	10.875	-0.008	99	724469	37.3	
	14 N-Nitrosodimethylamine	74		2.175				ND	
	22 Benzaldehyde	106		3.961				ND	
	24 Phenol	94		4.172				ND	
	26 Bis(2-chloroethyl)ether	93		4.242				ND	
	27 2-Chlorophenol	128		4.325				ND	
	28 1,3-Dichlorobenzene	146		4.466				ND	
	32 1,4-Dichlorobenzene	146		4.530				ND	
	33 Benzyl alcohol	108		4.630				ND	
	34 1,2-Dichlorobenzene	146		4.677				ND	
	35 2-Methylphenol	108		4.742				ND	
	37 2,2'-oxybis[1-chloropropan	45		4.759				ND	
	40 3 & 4 Methylphenol	108		4.883				ND	
	42 N-Nitrosodi-n-propylamine	70		4.877				ND	
	43 Acetophenone	105	4.880	4.883	-0.003	78	2598	0.2602	
	45 Hexachloroethane	117		5.006				ND	
	47 Nitrobenzene	77		5.053				ND	
	48 Isophorone	82	5.273	5.276	-0.003	75	3539	0.2490	
	50 2-Nitrophenol	139		5.364				ND	
	51 2,4-Dimethylphenol	107		5.400				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
52 Bis(2-chloroethoxy)methane	93		5.476				ND	
53 Benzoic acid	105		5.505				ND	
56 2,4-Dichlorophenol	162		5.605				ND	
57 1,2,4-Trichlorobenzene	180		5.687				ND	
59 Naphthalene	128		5.764				ND	
60 4-Chloroaniline	127		5.805				ND	
61 2,6-Dichlorophenol	162		5.823				ND	
62 Hexachlorobutadiene	225		5.893				ND	
65 Caprolactam	55		6.157				ND	
67 4-Chloro-3-methylphenol	107		6.292				ND	
70 2-Methylnaphthalene	142		6.451				ND	
72 Hexachlorocyclopentadiene	237		6.616				ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621				ND	
74 2,4,6-Trichlorophenol	196		6.733				ND	
75 2,4,5-Trichlorophenol	196		6.774				ND	
78 2-Chloronaphthalene	162		6.933				ND	
81 2-Nitroaniline	65		7.027				ND	
84 Dimethyl phthalate	163	7.194	7.203	-0.009	94	3678	0.2279	
87 2,6-Dinitrotoluene	165		7.262				ND	
89 Acenaphthylene	152		7.350				ND	
91 3-Nitroaniline	138		7.438				ND	
95 Acenaphthene	153		7.526				ND	
97 2,4-Dinitrophenol	184		7.538				ND	
98 4-Nitrophenol	109		7.620				ND	
100 2,4-Dinitrotoluene	165		7.667				ND	
101 Dibenzofuran	168		7.696				ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826				ND	
106 Diethyl phthalate	149		7.908				ND	
109 4-Chlorophenyl phenyl ethe	204		8.031				ND	
110 Fluorene	166		8.043				ND	
111 4-Nitroaniline	138		8.055				ND	
112 4,6-Dinitro-2-methylphenol	198		8.084				ND	
113 N-Nitrosodiphenylamine	169		8.149				ND	
115 1,2-Diphenylhydrazine	77	8.187	8.190	-0.003	89	3948	0.2285	
117 4-Bromophenyl phenyl ether	248		8.525				ND	
119 Hexachlorobenzene	284		8.607				ND	
123 Pentachlorophenol	266		8.801				ND	
125 Phenanthrene	178		9.012				ND	
126 Anthracene	178		9.059				ND	
127 Benzidine	184	10.866	10.625	0.241	53	11614	NC	
128 Carbazole	167		9.218				ND	
131 Di-n-butyl phthalate	149		9.553				ND	
136 Pyrene	202		10.334				ND	
137 Fluoranthene	202		10.657				ND	
141 Butyl benzyl phthalate	149		11.738				ND	
142 3,3'-Dichlorobenzidine	252		12.848				ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060				ND	
144 Benzo[a]anthracene	228		12.889				ND	
145 Chrysene	228		12.972				ND	
147 Di-n-octyl phthalate	149		14.816				ND	
149 Benzo[b]fluoranthene	252		15.674				ND	
150 Benzo[k]fluoranthene	252		15.744				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
152 Benzo[a]pyrene	252		16.573				ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804				ND	
155 Dibenz(a,h)anthracene	278		19.903				ND	
156 Benzo[g,h,i]perylene	276		20.532				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

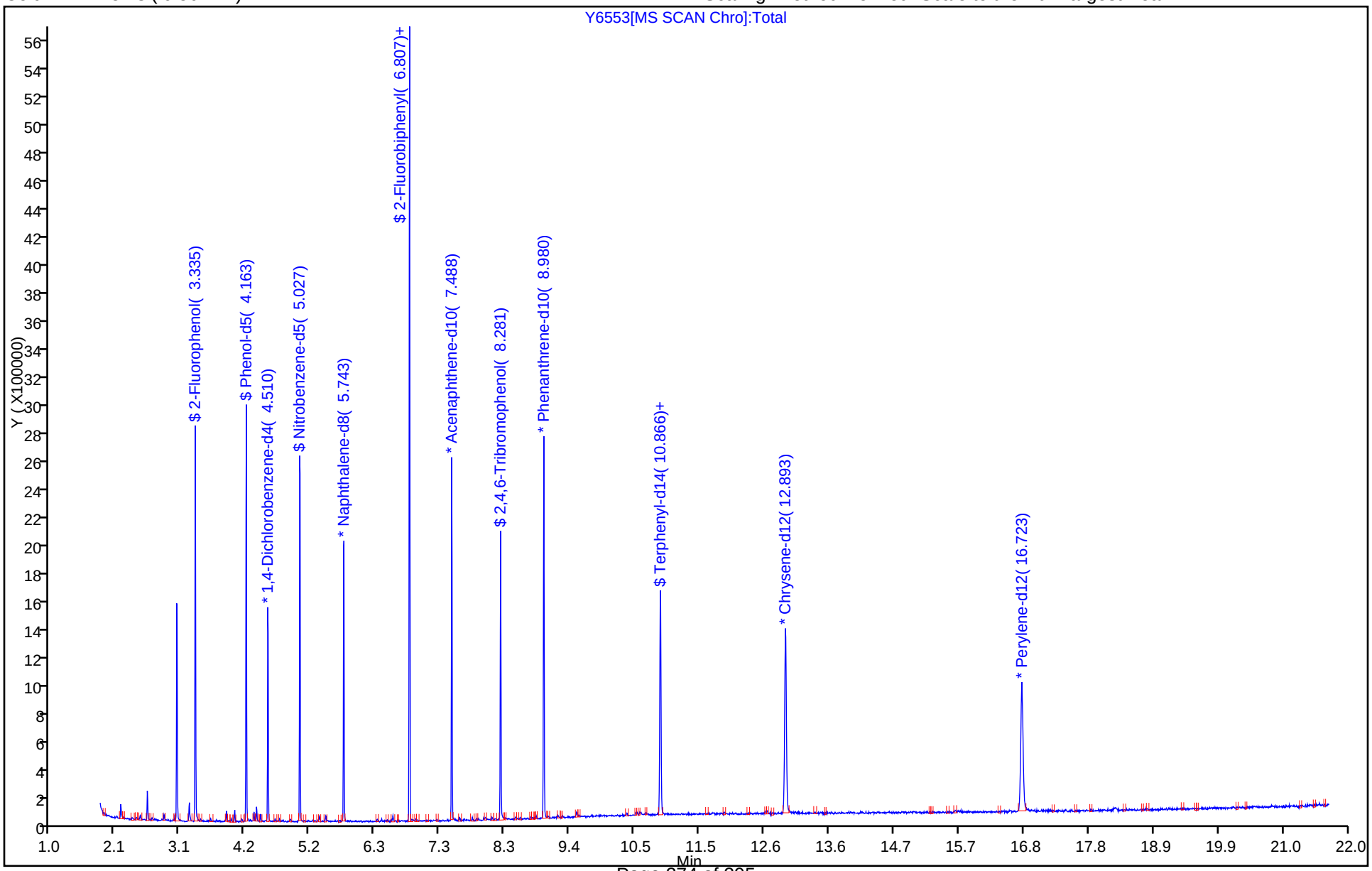
Report Date: 25-Nov-2015 16:02:13 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6553.D

Injection Date:	24-Nov-2015 21:25:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-C-10-B	Lab Sample ID:	280-76268-10	Worklist Smp#:	29
Client ID:	DMW20102015				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	SMS_Y8270D	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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-304895/4	Y6331.D
Level 2	STD010 280-304895/5	Y6332.D
Level 3	STD020 280-304895/6	Y6333.D
Level 4	STD050 280-304895/7	Y6334.D
Level 5	ICIS 280-304895/3	Y6330.D
Level 6	STD120 280-304895/8	Y6335.D
Level 7	STD160 280-304895/9	Y6336.D
Level 8	STD200 280-304895/10	Y6337.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.7176 0.5702	0.6273 0.5622	0.6221 0.5428	0.5948	0.5855	Ave		0.6028				9.0		20.0			
N-Nitrosodimethylamine	0.9949 0.9585	0.9425 0.9466	0.9515 0.9292	0.9780	0.9832	Ave		0.9605				2.4		20.0			
Pyridine	1.8232 1.6249	1.6082 1.6086	1.6114 1.5687	1.6477	1.6871	Ave		1.6475				4.8		20.0			
Phenol	2.0608 1.7589	1.8530 1.6682	1.8084 1.5894	1.8493	1.8410	Ave		1.8036			0.8000	7.8		20.0			
Aniline	2.5188 2.2451	2.3645 2.2452	2.3883 2.1087	2.3847	2.3335	Ave		2.3236				5.3		20.0			
Bis(2-chloroethyl)ether	1.7157 1.3386	1.5367 1.2975	1.4421 1.2030	1.4370	1.4263	Ave		1.4246			0.7000	11.0		20.0			
2-Chlorophenol	1.4875 1.3517	1.3732 1.3468	1.4012 1.2860	1.4060	1.3925	Ave		1.3806			0.8000	4.2		20.0			
1,3-Dichlorobenzene	1.8729 1.5849	1.6470 1.5261	1.6673 1.4437	1.6092	1.6215	Ave		1.6216				7.7		20.0			
1,4-Dichlorobenzene	1.8976 1.6216	1.7540 1.5468	1.6744 1.4746	1.6767	1.6398	Ave		1.6607				7.7		20.0			
Benzyl alcohol	0.8723 0.9100	0.8682 0.8896	0.9027 0.8549	0.9132	0.9237	Ave		0.8918				2.8		20.0			
1,2-Dichlorobenzene	1.7886 1.5431	1.5835 1.4902	1.6320 1.4044	1.5969	1.5589	Ave		1.5747				7.1		20.0			
2-Methylphenol	1.4142 1.2580	1.2743 1.2224	1.3362 1.1829	1.3288	1.2866	Ave		1.2879			0.7000	5.6		20.0			
bis (2-chloroisopropyl) ether	2.2510 1.8586	2.0686 1.7907	2.0403 1.6588	2.0315	2.0038	Ave		1.9629			0.0100	9.4		20.0			
3 & 4 Methylphenol	1.4932 1.3056	1.3438 1.2516	1.3121 1.1780	1.3720	1.3614	Ave		1.3272				7.0		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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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								
3-Methylphenol	1.4932 1.3056	1.3438 1.2516	1.3121 1.1780	1.3720	1.3614	Ave		1.3272				7.0		20.0			
4-Methylphenol	1.4932 1.3056	1.3438 1.2516	1.3121 1.1780	1.3720	1.3614	Ave		1.3272			0.6000	7.0		20.0			
N-Nitrosodi-n-propylamine	1.0570 1.0411	1.0747 1.0041	1.1058 0.9461	1.0932	1.1098	Ave		1.0540			0.5000	5.3		20.0			
Acetophenone	2.1215 1.7910	1.9423 1.6925	1.9258 1.5909	1.8807	1.9359	Ave		1.8601			0.0100	8.9		20.0			
Hexachloroethane	0.6422 0.5949	0.5990 0.5838	0.5823 0.5522	0.6094	0.6036	Ave		0.5959			0.3000	4.3		20.0			
Nitrobenzene	0.3579 0.3794	0.3855 0.3702	0.3835 0.3647	0.4039	0.3987	Ave		0.3805				4.2		20.0			
Isophorone	0.6810 0.6540	0.6527 0.6364	0.6648 0.6254	0.6951	0.6922	Ave		0.6627			0.4000	3.8		20.0			
2-Nitrophenol	0.1405 0.1816	0.1392 0.1830	0.1596 0.1858	0.1796	0.1818	Ave		0.1689			0.1000	11.6		20.0			
2,4-Dimethylphenol	0.3473 0.3361	0.3441 0.3264	0.3536 0.3199	0.3676	0.3526	Ave		0.3435			0.2000	4.5		20.0			
Bis(2-chloroethoxy)methane	0.4569 0.3988	0.4486 0.3814	0.4327 0.3754	0.4365	0.4216	Ave		0.4190			0.3000	7.3		20.0			
Benzoic acid	+++++ 0.2559	0.1263 0.2561	0.1715 0.2693	0.2208	0.2359	Lin2	-2.906	0.2614							0.9970		0.9900
2,4-Dichlorophenol	0.2758 0.2888	0.3030 0.2814	0.2875 0.2782	0.3037	0.3011	Ave		0.2899			0.2000	3.9		20.0			
1,2,4-Trichlorobenzene	0.3519 0.3030	0.3522 0.2969	0.3224 0.2889	0.3257	0.3154	Ave		0.3195				7.4		20.0			
Naphthalene	1.1279 0.9534	1.1216 0.9181	1.0205 0.8847	1.0560	1.0156	Ave		1.0122			0.7000	8.8		20.0			
4-Chloroaniline	0.4699 0.4414	0.4796 0.4336	0.4582 0.4194	0.4894	0.4755	Ave		0.4584			0.0100	5.4		20.0			
2,6-Dichlorophenol	0.2655 0.2827	0.2975 0.2712	0.2885 0.2764	0.2974	0.2963	Ave		0.2844				4.4		20.0			
Hexachlorobutadiene	0.1784 0.1749	0.1857 0.1667	0.1837 0.1659	0.1831	0.1763	Ave		0.1768			0.0100	4.2		20.0			
Caprolactam	0.0743 0.1541	0.1033 0.1516	0.1273 0.1637	0.1536	0.1563	Lin2	-0.357	0.1557							0.9950		0.9900
4-Chloro-3-methylphenol	0.2652 0.2929	0.3033 0.2841	0.2905 0.2824	0.3101	0.3076	Ave		0.2920			0.2000	5.1		20.0			
2-Methylnaphthalene	0.7907 0.6710	0.7794 0.6476	0.7156 0.6372	0.7433	0.7217	Ave		0.7133			0.4000	8.1		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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	0.6861 0.6032	0.6721 0.5806	0.6443 0.5670	0.6654	0.6369	Ave		0.6320				7.0		20.0			
Hexachlorocyclopentadiene	0.2887 0.3485	0.3070 0.3354	0.3067 0.3264	0.3360	0.3475	Ave		0.3245			0.0500	6.6		20.0			
1,2,4,5-Tetrachlorobenzene	0.3517 0.3015	0.3430 0.2894	0.3249 0.2830	0.3264	0.3173	Ave		0.3171			0.0100	7.7		20.0			
2,4,6-Trichlorophenol	0.3033 0.3650	0.3177 0.3424	0.3646 0.3360	0.3629	0.3716	Ave		0.3455			0.2000	7.2		20.0			
2,4,5-Trichlorophenol	0.3132 0.4085	0.3587 0.3852	0.3886 0.3750	0.4274	0.4047	Ave		0.3827			0.2000	9.2		20.0			
1,1'-Biphenyl	1.6688 1.3931	1.5648 1.3088	1.5183 1.2547	1.4952	1.4287	Ave		1.4541				9.4		20.0			
2-Chloronaphthalene	1.2661 1.1236	1.1747 1.0469	1.2084 1.0310	1.1957	1.1746	Ave		1.1526			0.8000	7.0		20.0			
2-Nitroaniline	0.2275 0.3658	0.2762 0.3475	0.3189 0.3507	0.3672	0.3640	Lin2	-0.571	0.3595			0.0100				0.9980		0.9900
Dimethyl phthalate	1.3205 1.2705	1.3333 1.1605	1.2684 1.1393	1.3327	1.2913	Ave		1.2646			0.0100	6.0		20.0			
1,3-Dinitrobenzene	0.1104 0.2167	0.1386 0.2012	0.1556 0.2077	0.1975	0.2014	Lin2	-0.418	0.2022							0.9920		0.9900
2,6-Dinitrotoluene	0.2390 0.3059	0.2550 0.2931	0.2800 0.2918	0.2977	0.3031	Ave		0.2832			0.2000	8.5		20.0			
Acenaphthylene	1.8907 1.8111	1.8143 1.6757	1.8972 1.6361	1.8902	1.8431	Ave		1.8073			0.9000	5.5		20.0			
3-Nitroaniline	0.2785 0.3770	0.3028 0.3599	0.3398 0.3550	0.3716	0.3648	Ave		0.3437			0.0100	10.2		20.0			
Acenaphthene	1.2691 1.1052	1.2199 1.0099	1.1961 0.9956	1.1820	1.1180	Ave		1.1370			0.9000	8.6		20.0			
2,4-Dinitrophenol	+++++ 0.1830	0.0775 0.1815	0.1073 0.1879	0.1527	0.1661	Lin2	-2.351	0.1848			0.0100				0.9950		0.9900
4-Nitrophenol	0.1408 0.1954	0.1627 0.1868	0.1857 0.1844	0.1980	0.1950	Ave		0.1811			0.0100	10.9		20.0			
2,4-Dinitrotoluene	0.2449 0.4073	0.3050 0.3860	0.3792 0.3841	0.4199	0.3973	Lin2	-0.667	0.4032			0.2000				0.9970		0.9900
Dibenzofuran	1.7736 1.5312	1.7115 1.4210	1.6839 1.3820	1.6515	1.5723	Ave		1.5909			0.8000	8.8		20.0			
2,3,4,6-Tetrachlorophenol	0.2288 0.3055	0.2357 0.2884	0.2754 0.2852	0.2927	0.2927	Ave		0.2756			0.0100	10.2		20.0			
Diethyl phthalate	1.2648 1.2941	1.3012 1.1712	1.2905 1.1298	1.3292	1.3148	Ave		1.2620			0.0100	5.7		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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	0.7334 0.6088	0.6744 0.5697	0.6735 0.5566	0.6602	0.6315	Ave		0.6385			0.4000	9.2		20.0			
Fluorene	1.4306 1.2813	1.4594 1.1644	1.3706 1.1490	1.3812	1.2977	Ave		1.3168			0.9000	8.8		20.0			
4-Nitroaniline	0.2615 0.3750	0.2913 0.3536	0.3338 0.3461	0.3689	0.3703	Ave		0.3376			0.0100	12.1		20.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1325	0.0784 0.1387	0.0980 0.1377	0.1243	0.1291	Lin2	-1.282	0.1383			0.0100				0.9980		0.9900
N-Nitrosodiphenylamine	0.6519 0.5516	0.6054 0.5180	0.5943 0.4987	0.5895	0.5828	Ave		0.5740			0.0100	8.6		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	1.3516 1.3558	1.3928 1.2404	1.4138 1.2045	1.4626	1.4105	Ave		1.3540				6.6		20.0			
Azobenzene	1.3665 1.3707	1.4081 1.2541	1.4293 1.2178	1.4786	1.4260	Ave		1.3689				6.6		20.0			
4-Bromophenyl phenyl ether	0.1904 0.1919	0.1947 0.1869	0.1926 0.1874	0.2032	0.1999	Ave		0.1934			0.1000	3.0		20.0			
Hexachlorobenzene	0.2152 0.1830	0.1932 0.1773	0.1919 0.1747	0.1896	0.1917	Ave		0.1896			0.1000	6.6		20.0			
Pentachlorophenol	+++++ 0.1156	0.0872 0.1130	0.0991 0.1143	0.1109	0.1149	Lin2	-0.606	0.1166			0.0500				1.0000		0.9900
Phenanthrene	1.2804 1.0594	1.1876 1.0230	1.1443 0.9868	1.1502	1.1269	Ave		1.1198			0.7000	8.4		20.0			
Anthracene	1.1412 1.0819	1.1208 1.0349	1.1276 1.0155	1.1482	1.1483	Ave		1.1023			0.7000	4.8		20.0			
Carbazole	1.1245 1.0406	1.0837 0.9778	1.0722 0.9456	1.0774	1.0854	Ave		1.0509			0.0100	5.7		20.0			
Di-n-butyl phthalate	1.0009 1.2293	1.0556 1.1578	1.1343 1.0999	1.2320	1.2756	Ave		1.1482			0.0100	8.2		20.0			
Pyrene	1.2137 1.2184	1.2210 1.2092	1.2161 1.1720	1.2537	1.2718	Ave		1.2220			0.6000	2.4		20.0			
Fluoranthene	1.2915 1.2863	1.2875 1.2260	1.3070 1.1715	1.3484	1.3313	Ave		1.2812			0.6000	4.5		20.0			
Famphur	0.2290 0.4003	0.2697 0.3926	0.3161 0.3717	0.3825	0.4083	Lin2	-0.721	0.3870							0.9930		0.9900
Butyl benzyl phthalate	0.3027 0.5459	0.3519 0.5604	0.4278 0.5484	0.5205	0.5400	Lin2	-1.085	0.5360			0.0100				0.9920		0.9900
3,3'-Dichlorobenzidine	0.2156 0.3788	0.2180 0.3799	0.2660 0.3680	0.3417	0.3915	Lin1	-1.076	0.3808			0.0100				0.9970		0.9900
Benzo[a]anthracene	1.1101 1.2116	1.1114 1.2157	1.1499 1.1683	1.2368	1.2644	Ave		1.1835			0.8000	4.9		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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	1.2551 1.1844	1.1537 1.1804	1.1761 1.1434	1.2140	1.2002	Ave		1.1884			0.7000	3.0		20.0			
Bis(2-ethylhexyl) phthalate	0.3213 0.7116	0.3801 0.7389	0.4934 0.7237	0.6475	0.7271	Lin1	-2.536	0.7362			0.0100				0.9970		0.9900
Di-n-octyl phthalate	+++++ 1.1319	+++++ 1.2077	0.5811 1.2027	0.9068	1.1043	Lin2	-14.03	1.2611			0.0100				0.9980		0.9900
Benzo[b]fluoranthene	1.1263 1.2977	1.1169 1.2855	1.2089 1.2223	1.3186	1.3517	Ave		1.2410			0.7000	7.0		20.0			
Benzo[k]fluoranthene	1.1892 1.4092	1.2434 1.3750	1.3115 1.3086	1.4390	1.4555	Ave		1.3414			0.7000	7.1		20.0			
Benzo[a]pyrene	1.0974 1.2201	1.1577 1.2002	1.1607 1.1405	1.2413	1.2676	Ave		1.1857			0.7000	4.8		20.0			
Indeno[1,2,3-cd]pyrene	0.5456 0.9325	0.6246 0.9700	0.7081 0.9735	0.8591	0.9384	Lin2	-1.763	0.9186			0.5000				0.9900		0.9900
Dibenz(a,h)anthracene	0.7437 1.0806	0.8047 1.0833	0.9141 1.0389	1.0740	1.1216	Ave		0.9826			0.4000	14.6		20.0			
Benzo[g,h,i]perylene	0.9107 1.1713	0.9321 1.1632	1.0329 1.1167	1.1511	1.1945	Ave		1.0841			0.5000	10.3		20.0			
2-Fluorophenol (Surr)	1.5084 1.3865	1.3356 1.3660	1.3519 1.3118	1.4304	1.4441	Ave		1.3918				4.7		20.0			
Phenol-d5 (Surr)	1.8414 1.6966	1.7425 1.6681	1.7704 1.5854	1.7245	1.7907	Ave		1.7274				4.6		20.0			
Nitrobenzene-d5 (Surr)	0.3533 0.3870	0.3659 0.3801	0.3784 0.3728	0.4041	0.3870	Ave		0.3786				4.0		20.0			
2-Fluorobiphenyl	1.5363 1.3388	1.4225 1.2375	1.4026 1.2028	1.4180	1.3544	Ave		1.3641				7.8		20.0			
2,4,6-Tribromophenol (Surr)	0.1221 0.1612	0.1244 0.1519	0.1328 0.1485	0.1570	0.1554	Ave		0.1442				10.7		20.0			
Terphenyl-d14 (Surr)	0.8524 0.8339	0.8286 0.8342	0.8316 0.8099	0.8641	0.8654	Ave		0.8400				2.3		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
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-304895/4	Y6331.D
Level 2	STD010 280-304895/5	Y6332.D
Level 3	STD020 280-304895/6	Y6333.D
Level 4	STD050 280-304895/7	Y6334.D
Level 5	ICIS 280-304895/3	Y6330.D
Level 6	STD120 280-304895/8	Y6335.D
Level 7	STD160 280-304895/9	Y6336.D
Level 8	STD200 280-304895/10	Y6337.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	15081 348581	32956 483452	63267 607885	156221	254119	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCB	Ave	20909 585923	49515 814052	96762 1040506	256836	426709	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCB	Ave	38318 993279	84487 1383410	163873 1756716	432733	732204	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol	DCB	Ave	43311 1075200	97342 1434654	183901 1779835	485684	799024	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCB	Ave	52937 1372407	124217 1930846	242873 2361349	626271	1012763	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCB	Ave	36058 818257	80730 1115812	146652 1347135	377404	619023	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCB	Ave	31263 826309	72140 1158230	142489 1440107	369241	604352	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCB	Ave	39362 968812	86524 1312416	169559 1616632	422611	703775	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCB	Ave	39882 991295	92144 1330232	170274 1651265	440356	711708	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCB	Ave	18333 556265	45610 765070	91795 957318	239822	400896	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCB	Ave	37591 943309	83187 1281597	165966 1572626	419397	676602	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCB	Ave	29723 769016	66942 1051280	135881 1324652	348978	558422	4.00 120	10.0 160	20.0 200	50.0	80.0
bis (2-chloroisopropyl) ether	DCB	Ave	47310 1136168	108670 1539983	207487 1857521	533510	869679	4.00 120	10.0 160	20.0 200	50.0	80.0
3 & 4 Methylphenol	DCB	Ave	31383 798120	70594 1076408	133436 1319178	360331	590862	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Methylphenol	DCB	Ave	31383 798120	70594 1076408	133436 1319178	360331	590862	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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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-Methylphenol	DCB	Ave	31383 798120	70594 1076408	133436 1319178	360331	590862	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCB	Ave	22216 636433	56457 863532	112457 1059438	287105	481677	4.00 120	10.0 160	20.0 200	50.0	80.0
Acetophenone	DCB	Ave	44587 1094854	102034 1455527	195841 1781555	493931	840216	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCB	Ave	13498 363663	31469 502025	59217 618344	160040	261981	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	30724 945544	78513 1296260	154964 1615795	418201	689747	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	58454 1630142	132910 2228643	268640 2770427	719796	1197411	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	12063 452561	28352 640996	64488 823034	185936	314428	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	29814 837707	70081 1143011	142891 1417239	380593	609990	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	39215 994062	91356 1335477	174843 1663012	451968	729275	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	+++++ 1275627	51433 1793850	138603 2386063	457221	816297	+++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	23672 719898	61707 985412	116172 1232394	314490	520852	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	30203 755109	71725 1039686	130252 1279714	337233	545646	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	96814 2376421	228408 3214999	412329 3919181	1093401	1756897	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	40338 1100080	97670 1518340	185148 1858027	506703	822508	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	22785 704600	60592 949563	116569 1224551	307949	512556	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	15312 435915	37822 583830	74220 734785	189627	305050	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Lin2	6379 383971	21040 530985	51427 725313	159011	270423	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	22767 729945	61771 994835	117385 1251106	321068	532055	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	67874 1672501	158713 2267888	289135 2822816	769631	1248429	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	58895 1503525	136876 2032993	260354 2511831	689018	1101757	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	14248 497090	37340 693477	71609 857648	203664	352883	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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	30187 751369	69842 1013481	131261 1253607	337924	548869	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	14969 520737	38646 707819	85124 883048	220020	377360	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,5-Trichlorophenol	ANT	Ave	15456 582667	43632 796322	90717 985380	259119	411006	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	82352 1987218	190342 2705838	354462 3297342	906411	1450943	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	62480 1602864	142887 2164341	282117 2709538	724850	1192884	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Lin2	11228 521845	33599 718406	74456 921521	222620	369697	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	65164 1812354	162184 2399222	296121 2994168	807907	1311467	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Lin2	5447 309103	16865 415895	36323 545751	119744	204570	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	11796 436391	31019 605910	65379 766839	180468	307848	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	93303 2583599	220690 3464433	442922 4299675	1145855	1871880	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	13744 537860	36837 744095	79321 932838	225274	370470	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	62629 1576583	148382 2087859	279246 2616285	716512	1135419	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Lin2	+++++ 522169	18846 750427	50097 987629	185183	337454	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	13895 557346	39569 772454	86715 969370	239996	396076	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Lin2	12085 580996	37102 798078	88533 1009480	254514	403512	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	87521 2184284	208189 2937724	393118 3631743	1001150	1596813	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	11291 435746	28665 596265	64295 749541	177465	297260	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	62417 1846011	158281 2421271	301278 2969134	805756	1335261	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	36194 868515	82027 1177847	157232 1462642	400210	641390	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	70597 1827763	177522 2407317	319971 3019661	837269	1317905	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	12902 534887	35428 731099	77933 909665	223605	376086	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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	+++++ 681290	33738 993806	82927 1254881	274393	461036	+++++ 240	20.0 320	40.0 400	100	160
N-Nitrosodiphenylamine	PHN	Ave	111198 2836411	260618 3711566	502837 4544513	1301548	2082153	8.00 240	20.0 320	40.0 400	100	160
1,2-Diphenylhydrazine(as Azobenzene)	ANT	Ave	67432 1955311	171280 2592643	333685 3200245	896346	1448181	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	67432 1955311	171280 2592643	333685 3200245	896346	1448181	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	16234 493392	41910 669571	81494 853910	224313	357041	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	18351 470509	41595 635389	81190 796021	209277	342412	4.00 120	10.0 160	20.0 200	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 594641	37546 809959	83866 1041780	244961	410634	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	109192 2723776	255626 3665226	484117 4496398	1269815	2012936	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	97325 2781680	241243 3707917	477050 4627476	1267605	2051081	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	95896 2675456	233251 3503095	453616 4308645	1189421	1938826	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	85361 3160807	227203 4148201	479873 5012016	1360133	2278531	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	106396 3168005	264874 4198384	520943 5120280	1400458	2301892	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	110141 3307357	277129 4392353	552936 5338233	1488649	2377948	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Lin2	20071 1040976	58506 1363136	135421 1623784	427257	739041	4.00 120	10.0 160	20.0 200	50.0	80.0
Butyl benzyl phthalate	CRY	Lin2	26539 1419544	76344 1945571	183247 2395728	581380	977347	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Lin1	18903 984964	47303 1318892	113952 1607669	381698	708633	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	97312 3150418	241103 4220775	492601 5104014	1381573	2288484	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	110028 3079714	250281 4098328	503823 4995194	1356073	2172311	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Lin1	28163 1850439	82450 2565214	211380 3161852	723241	1315936	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Lin2	+++++ 2943261	+++++ 4192868	248936 5254600	1012963	1998794	+++++ 120	+++++ 160	20.0 200	50.0	80.0
Benzo[b]fluoranthene	PRY	Ave	82245 2956707	206482 4030277	441217 4959636	1237099	2063864	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.: 280-76268-2 Analy Batch No.: 304895

SDG No.:

Instrument ID: SMS_Y GC Column: Vf-5MS (30. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/14/2015 09:27 Calibration End Date: 11/14/2015 12:37 Calibration ID: 24462

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	86834 3210812	229854 4311026	478663 5309837	1350017	2222424	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	80135 2779964	214024 3762815	423647 4627837	1164520	1935445	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	CRY	Lin2	47825 2424712	135495 3367749	303334 4253123	959650	1698527	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Ave	54309 2462081	148759 3396279	333632 4215656	1007640	1712507	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	66501 2668611	172309 3646978	376989 4531080	1079921	1823878	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCB	Ave	31702 847584	70166 1174740	137482 1468946	375659	626764	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCB	Ave	38700 1037127	91539 1434523	180034 1775341	452893	777190	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	30328 964612	74513 1330995	152909 1651518	418421	669381	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	75811 1909858	173034 2558347	327451 3160809	859580	1375486	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	6027 230025	15137 314121	30996 390260	95196	157839	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	74722 2168305	179767 2896182	356257 3538507	965220	1566331	4.00 120	10.0 160	20.0 200	50.0	80.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6330.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 14-Nov-2015 09:27:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:48 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:07:47

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	4.567	4.567	0.000	97	217007	40.0	40.0	
* 2 Naphthalene-d8	136	5.789	5.789	0.000	100	864926	40.0	40.0	
* 3 Acenaphthene-d10	164	7.540	7.540	0.000	93	507794	40.0	40.0	
* 4 Phenanthrene-d10	188	9.038	9.038	0.000	97	893120	40.0	40.0	
* 5 Chrysene-d12	240	13.020	13.020	0.000	98	904971	40.0	40.0	
* 6 Perylene-d12	264	16.886	16.886	0.000	97	763455	40.0	40.0	
$ 7 2-Fluorophenol	112	3.398	3.398	0.000	93	626764	80.0	83.0	
$ 8 Phenol-d5	99	4.191	4.191	0.000	96	777190	80.0	82.9	
$ 9 Nitrobenzene-d5	82	5.078	5.078	0.000	89	669381	80.0	81.8	
$ 10 2-Fluorobiphenyl	172	6.852	6.852	0.000	100	1375486	80.0	79.4	
$ 11 2,4,6-Tribromophenol	330	8.333	8.333	0.000	93	157839	80.0	86.2	
$ 12 Terphenyl-d14	244	10.959	10.959	0.000	99	1566331	80.0	82.4	
13 1,4-Dioxane	88	2.100	2.100	0.000	96	254119	80.0	77.7	
14 N-Nitrosodimethylamine	74	2.306	2.306	0.000	91	426709	80.0	81.9	
15 Pyridine	79	2.358	2.358	0.000	95	732204	80.0	81.9	
24 Phenol	94	4.209	4.209	0.000	99	799024	80.0	81.7	
25 Aniline	93	4.256	4.256	0.000	97	1012763	80.0	80.3	
26 Bis(2-chloroethyl)ether	93	4.297	4.297	0.000	98	619023	80.0	80.1	
27 2-Chlorophenol	128	4.373	4.373	0.000	98	604352	80.0	80.7	
28 1,3-Dichlorobenzene	146	4.520	4.520	0.000	97	703775	80.0	80.0	
32 1,4-Dichlorobenzene	146	4.585	4.585	0.000	94	711708	80.0	79.0	
33 Benzyl alcohol	108	4.673	4.673	0.000	91	400896	80.0	82.9	
34 1,2-Dichlorobenzene	146	4.732	4.732	0.000	96	676602	80.0	79.2	
35 2-Methylphenol	108	4.773	4.773	0.000	97	558422	80.0	79.9	
37 2,2'-oxybis[1-chloropropan	45	4.808	4.808	0.000	93	869679	80.0	81.7	
39 3-Methylphenol	108	4.914	4.914	0.000	98	590862	80.0	82.1	
40 3 & 4 Methylphenol	108	4.914	4.914	0.000	98	590862	80.0	82.1	
41 4-Methylphenol	108	4.914	4.914	0.000	95	590862	80.0	82.1	
42 N-Nitrosodi-n-propylamine	70	4.925	4.925	0.000	92	481677	80.0	84.2	
43 Acetophenone	105	4.931	4.931	0.000	98	840216	80.0	83.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.061	5.061	0.000	94	261981	80.0	81.0	
47 Nitrobenzene	77	5.096	5.096	0.000	89	689747	80.0	83.8	
48 Isophorone	82	5.325	5.325	0.000	99	1197411	80.0	83.6	
50 2-Nitrophenol	139	5.407	5.407	0.000	96	314428	80.0	86.1	
51 2,4-Dimethylphenol	107	5.431	5.431	0.000	94	609990	80.0	82.1	
52 Bis(2-chloroethoxy)methane	93	5.525	5.525	0.000	99	729275	80.0	80.5	
53 Benzoic acid	105	5.531	5.531	0.000	90	816297	160.0	155.6	
56 2,4-Dichlorophenol	162	5.642	5.642	0.000	95	520852	80.0	83.1	
57 1,2,4-Trichlorobenzene	180	5.730	5.730	0.000	94	545646	80.0	79.0	
59 Naphthalene	128	5.813	5.813	0.000	98	1756897	80.0	80.3	
60 4-Chloroaniline	127	5.848	5.848	0.000	95	822508	80.0	83.0	
61 2,6-Dichlorophenol	162	5.860	5.860	0.000	99	512556	80.0	83.3	
62 Hexachlorobutadiene	225	5.936	5.936	0.000	97	305050	80.0	79.8	
65 Caprolactam	55	6.165	6.165	0.000	80	270423	80.0	82.6	M
67 4-Chloro-3-methylphenol	107	6.318	6.318	0.000	96	532055	80.0	84.3	
70 2-Methylnaphthalene	142	6.494	6.494	0.000	93	1248429	80.0	80.9	
71 1-Methylnaphthalene	142	6.594	6.594	0.000	93	1101757	80.0	80.6	
72 Hexachlorocyclopentadiene	237	6.664	6.664	0.000	95	352883	80.0	85.7	
73 1,2,4,5-Tetrachlorobenzene	216	6.664	6.664	0.000	97	548869	80.0	80.0	
74 2,4,6-Trichlorophenol	196	6.770	6.770	0.000	79	377360	80.0	86.0	
75 2,4,5-Trichlorophenol	196	6.805	6.805	0.000	94	411006	80.0	84.6	
77 1,1'-Biphenyl	154	6.952	6.952	0.000	96	1450943	80.0	78.6	
78 2-Chloronaphthalene	162	6.982	6.982	0.000	96	1192884	80.0	81.5	
81 2-Nitroaniline	65	7.070	7.070	0.000	85	369697	80.0	82.6	
84 Dimethyl phthalate	163	7.246	7.246	0.000	98	1311467	80.0	81.7	
86 1,3-Dinitrobenzene	168	7.275	7.275	0.000	87	204570	80.0	81.7	
87 2,6-Dinitrotoluene	165	7.305	7.305	0.000	96	307848	80.0	85.6	
89 Acenaphthylene	152	7.399	7.399	0.000	98	1871880	80.0	81.6	
91 3-Nitroaniline	138	7.475	7.475	0.000	95	370470	80.0	84.9	
95 Acenaphthene	153	7.575	7.575	0.000	92	1135419	80.0	78.7	
97 2,4-Dinitrophenol	184	7.581	7.581	0.000	86	337454	160.0	156.6	
98 4-Nitrophenol	109	7.634	7.634	0.000	97	396076	160.0	172.3	
100 2,4-Dinitrotoluene	165	7.710	7.710	0.000	95	403512	80.0	80.5	
101 Dibenzofuran	168	7.745	7.745	0.000	96	1596813	80.0	79.1	
105 2,3,4,6-Tetrachlorophenol	232	7.869	7.869	0.000	75	297260	80.0	85.0	
106 Diethyl phthalate	149	7.951	7.951	0.000	98	1335261	80.0	83.3	
109 4-Chlorophenyl phenyl ethe	204	8.080	8.080	0.000	93	641390	80.0	79.1	
110 Fluorene	166	8.092	8.092	0.000	94	1317905	80.0	78.8	
111 4-Nitroaniline	138	8.092	8.092	0.000	89	376086	80.0	87.8	
112 4,6-Dinitro-2-methylphenol	198	8.127	8.127	0.000	85	461036	160.0	158.6	
113 N-Nitrosodiphenylamine	169	8.198	8.198	0.000	60	2082153	160.0	162.5	
114 Azobenzene	77	8.239	8.239	0.000	100	1448181	80.0	83.3	
115 1,2-Diphenylhydrazine	77	8.239	8.239	0.000	99	1448181	80.9	84.3	
117 4-Bromophenyl phenyl ether	248	8.574	8.574	0.000	70	357041	80.0	82.7	
119 Hexachlorobenzene	284	8.662	8.662	0.000	91	342412	80.0	80.9	
120 Atrazine	200	8.720	8.720	0.000	0	382687	NC	NC	
123 Pentachlorophenol	266	8.844	8.844	0.000	89	410634	160.0	162.9	
125 Phenanthrene	178	9.061	9.061	0.000	98	2012936	80.0	80.5	
126 Anthracene	178	9.114	9.114	0.000	98	2051081	80.0	83.3	
128 Carbazole	167	9.261	9.261	0.000	96	1938826	80.0	82.6	
129 Alachlor	188	9.402	9.402	0.000	0	269105	NC	NC	
131 Di-n-butyl phthalate	149	9.607	9.607	0.000	100	2278531	80.0	88.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.406	10.406	0.000	98	2301892	80.0	83.3	
137 Fluoranthene	202	10.729	10.729	0.000	99	2377948	80.0	83.1	
140 Famphur	218	11.705	11.705	0.000	99	739041	80.0	86.3	
141 Butyl benzyl phthalate	149	11.828	11.828	0.000	98	977347	80.0	82.6	
142 3,3'-Dichlorobenzidine	252	12.956	12.956	0.000	74	708633	80.0	85.1	
143 Bis(2-ethylhexyl) phthalat	149	13.173	13.173	0.000	97	1315936	80.0	82.4	
144 Benzo[a]anthracene	228	12.997	12.997	0.000	99	2288484	80.0	85.5	
145 Chrysene	228	13.079	13.079	0.000	97	2172311	80.0	80.8	
147 Di-n-octyl phthalate	149	14.947	14.947	0.000	99	1998794	80.0	81.2	
149 Benzo[b]fluoranthene	252	15.811	15.811	0.000	98	2063864	80.0	87.1	
150 Benzo[k]fluoranthene	252	15.887	15.887	0.000	98	2222424	80.0	86.8	
152 Benzo[a]pyrene	252	16.580	16.580	0.000	79	1935445	80.0	85.5	
154 Indeno[1,2,3-cd]pyrene	276	19.982	19.982	0.000	94	1698527	80.0	83.6	
155 Dibenz(a,h)anthracene	278	20.081	20.081	0.000	95	1712507	80.0	91.3	
156 Benzo[g,h,i]perylene	276	20.716	20.716	0.000	93	1823878	80.0	88.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA080_00020 Amount Added: 200.00 Units: uL

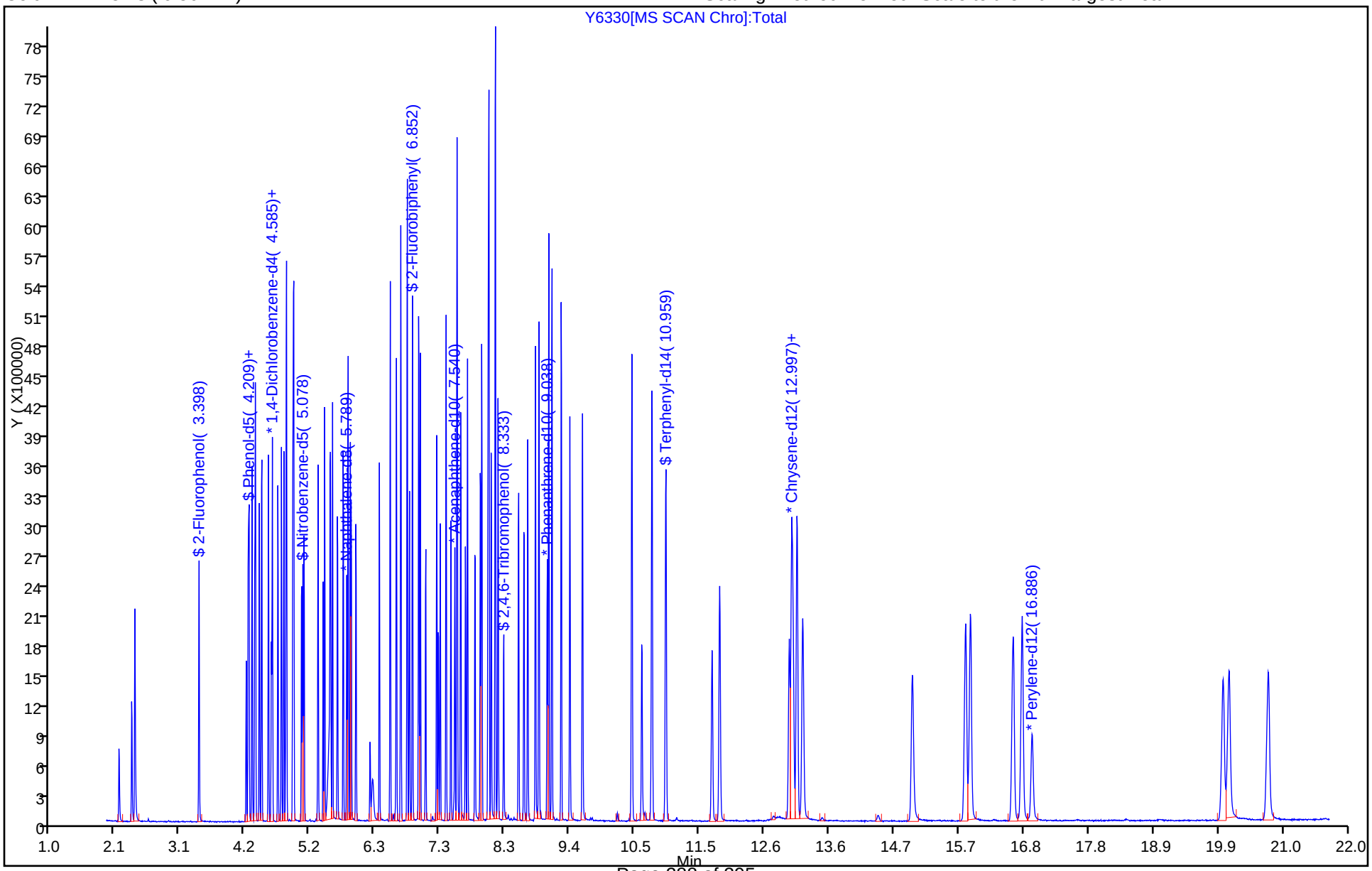
Report Date: 20-Nov-2015 10:59:49 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6330.D

Injection Date:	14-Nov-2015 09:27:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

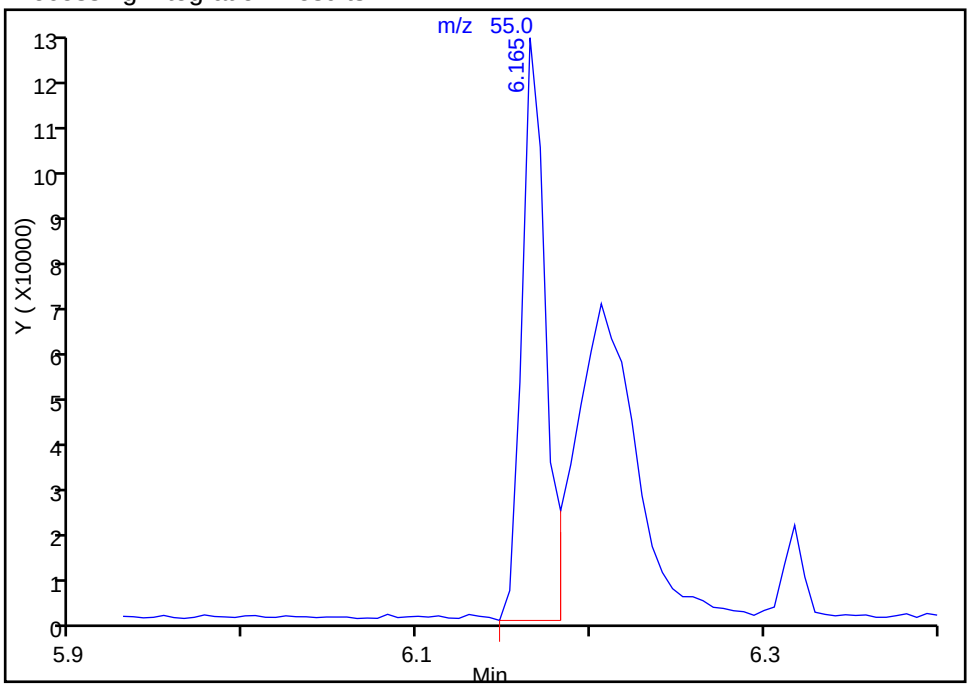
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6330.D
Injection Date: 14-Nov-2015 09:27:30 Instrument ID: SMS_Y
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

65 Caprolactam, CAS: 105-60-2

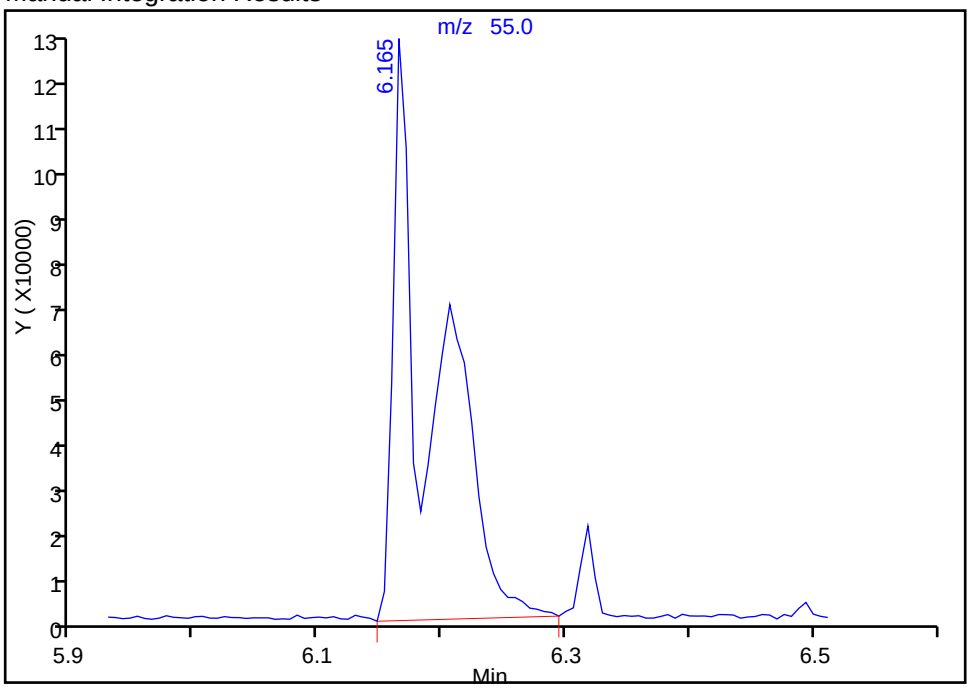
Processing Integration Results

RT: 6.16
Area: 119028
Amount: 80.000000
Amount Units: ug/ml



Manual Integration Results

RT: 6.16
Area: 270423
Amount: 82.606643
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:07:47
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6331.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-Nov-2015 09:54:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:50 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:12:12

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	4.568	4.567	0.001	97	210171	40.0	40.0	
* 2 Naphthalene-d8	136	5.784	5.789	-0.005	100	858353	40.0	40.0	
* 3 Acenaphthene-d10	164	7.535	7.540	-0.005	93	493478	40.0	40.0	
* 4 Phenanthrene-d10	188	9.033	9.038	-0.005	98	852821	40.0	40.0	
* 5 Chrysene-d12	240	13.010	13.020	-0.010	98	876627	40.0	40.0	
* 6 Perylene-d12	264	16.875	16.886	-0.011	97	730218	40.0	40.0	
$ 7 2-Fluorophenol	112	3.393	3.398	-0.005	92	31702	4.00	4.33	
$ 8 Phenol-d5	99	4.192	4.191	0.001	96	38700	4.00	4.26	
$ 9 Nitrobenzene-d5	82	5.073	5.078	-0.005	89	30328	4.00	3.73	
$ 10 2-Fluorobiphenyl	172	6.853	6.852	0.001	99	75811	4.00	4.50	
$ 11 2,4,6-Tribromophenol	330	8.328	8.333	-0.005	86	6027	4.00	3.39	
$ 12 Terphenyl-d14	244	10.954	10.959	-0.004	98	74722	4.00	4.06	
13 1,4-Dioxane	88	2.101	2.100	0.001	94	15081	4.00	4.76	
14 N-Nitrosodimethylamine	74	2.307	2.306	0.001	91	20909	4.00	4.14	
15 Pyridine	79	2.359	2.358	0.001	97	38318	4.00	4.43	
24 Phenol	94	4.204	4.209	-0.005	97	43311	4.00	4.57	
25 Aniline	93	4.251	4.256	-0.005	98	52937	4.00	4.34	
26 Bis(2-chloroethyl)ether	93	4.298	4.297	0.001	97	36058	4.00	4.82	
27 2-Chlorophenol	128	4.368	4.373	-0.005	97	31263	4.00	4.31	
28 1,3-Dichlorobenzene	146	4.521	4.520	0.001	97	39362	4.00	4.62	
32 1,4-Dichlorobenzene	146	4.586	4.585	0.001	92	39882	4.00	4.57	
33 Benzyl alcohol	108	4.674	4.673	0.001	93	18333	4.00	3.91	
34 1,2-Dichlorobenzene	146	4.733	4.732	0.001	96	37591	4.00	4.54	
35 2-Methylphenol	108	4.768	4.773	-0.005	94	29723	4.00	4.39	
37 2,2'-oxybis[1-chloropropan	45	4.803	4.808	-0.005	92	47310	4.00	4.59	
39 3-Methylphenol	108	4.909	4.914	-0.005	94	31383	4.00	4.50	
40 3 & 4 Methylphenol	108	4.909	4.914	-0.005	94	31383	4.00	4.50	
41 4-Methylphenol	108	4.909	4.914	-0.005	88	31383	4.00	4.50	
42 N-Nitrosodi-n-propylamine	70	4.921	4.925	-0.004	91	22216	4.00	4.01	
43 Acetophenone	105	4.927	4.931	-0.004	95	44587	4.00	4.56	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.056	5.061	-0.005	92	13498	4.00	4.31	
47 Nitrobenzene	77	5.091	5.096	-0.005	90	30724	4.00	3.76	
48 Isophorone	82	5.320	5.325	-0.005	98	58454	4.00	4.11	
50 2-Nitrophenol	139	5.408	5.407	0.001	93	12063	4.00	3.33	
51 2,4-Dimethylphenol	107	5.426	5.431	-0.005	96	29814	4.00	4.05	
52 Bis(2-chloroethoxy)methane	93	5.520	5.525	-0.005	99	39215	4.00	4.36	
53 Benzoic acid	105	5.461	5.531	-0.070	93	16671	8.00	14.1	
56 2,4-Dichlorophenol	162	5.637	5.642	-0.005	95	23672	4.00	3.80	
57 1,2,4-Trichlorobenzene	180	5.731	5.730	0.001	91	30203	4.00	4.40	
59 Naphthalene	128	5.808	5.813	-0.005	98	96814	4.00	4.46	
60 4-Chloroaniline	127	5.843	5.848	-0.005	94	40338	4.00	4.10	
61 2,6-Dichlorophenol	162	5.861	5.860	0.001	91	22785	4.00	3.73	
62 Hexachlorobutadiene	225	5.937	5.936	0.001	95	15312	4.00	4.03	
65 Caprolactam	55	6.143	6.165	-0.022	70	6379	4.00	4.20	
67 4-Chloro-3-methylphenol	107	6.313	6.318	-0.005	94	22767	4.00	3.63	
70 2-Methylnaphthalene	142	6.489	6.494	-0.005	92	67874	4.00	4.43	
71 1-Methylnaphthalene	142	6.589	6.594	-0.005	92	58895	4.00	4.34	
72 Hexachlorocyclopentadiene	237	6.659	6.664	-0.005	90	14248	4.00	3.56	
73 1,2,4,5-Tetrachlorobenzene	216	6.665	6.664	0.001	95	30187	4.00	4.44	
74 2,4,6-Trichlorophenol	196	6.765	6.770	-0.005	71	14969	4.00	3.51	
75 2,4,5-Trichlorophenol	196	6.800	6.805	-0.005	88	15456	4.00	3.27	
77 1,1'-Biphenyl	154	6.953	6.952	0.001	95	82352	4.00	4.59	
78 2-Chloronaphthalene	162	6.977	6.982	-0.005	97	62480	4.00	4.39	
81 2-Nitroaniline	65	7.065	7.070	-0.005	85	11228	4.00	4.12	
84 Dimethyl phthalate	163	7.241	7.246	-0.005	98	65164	4.00	4.18	
86 1,3-Dinitrobenzene	168	7.265	7.275	-0.010	83	5447	4.00	4.25	
87 2,6-Dinitrotoluene	165	7.300	7.305	-0.005	95	11796	4.00	3.38	
89 Acenaphthylene	152	7.394	7.399	-0.005	98	93303	4.00	4.18	
91 3-Nitroaniline	138	7.470	7.475	-0.005	88	13744	4.00	3.24	
95 Acenaphthene	153	7.570	7.575	-0.005	93	62629	4.00	4.46	
97 2,4-Dinitrophenol	184	7.576	7.581	-0.005	79	4870	8.00	14.9	
98 4-Nitrophenol	109	7.623	7.634	-0.011	94	13895	8.00	6.22	
100 2,4-Dinitrotoluene	165	7.705	7.710	-0.005	91	12085	4.00	4.08	
101 Dibenzofuran	168	7.740	7.745	-0.005	96	87521	4.00	4.46	
105 2,3,4,6-Tetrachlorophenol	232	7.864	7.869	-0.005	77	11291	4.00	3.32	
106 Diethyl phthalate	149	7.946	7.951	-0.005	97	62417	4.00	4.01	
109 4-Chlorophenyl phenyl ethe	204	8.075	8.080	-0.005	93	36194	4.00	4.59	
110 Fluorene	166	8.087	8.092	-0.005	91	70597	4.00	4.35	
111 4-Nitroaniline	138	8.081	8.092	-0.011	83	12902	4.00	3.10	
112 4,6-Dinitro-2-methylphenol	198	8.122	8.127	-0.005	78	8969	8.00	12.3	
113 N-Nitrosodiphenylamine	169	8.187	8.198	-0.011	61	111198	8.00	9.09	
114 Azobenzene	77	8.234	8.239	-0.005	99	67432	4.00	3.99	
115 1,2-Diphenylhydrazine	77	8.234	8.239	-0.005	98	67432	4.04	4.04	
117 4-Bromophenyl phenyl ether	248	8.569	8.574	-0.005	72	16234	4.00	3.94	
119 Hexachlorobenzene	284	8.657	8.662	-0.005	88	18351	4.00	4.54	
120 Atrazine	200	8.716	8.720	-0.004	0	14620	NC	NC	
123 Pentachlorophenol	266	8.845	8.844	0.001	90	13018	8.00	10.4	
125 Phenanthrene	178	9.056	9.061	-0.005	97	109192	4.00	4.57	
126 Anthracene	178	9.109	9.114	-0.005	97	97325	4.00	4.14	
128 Carbazole	167	9.256	9.261	-0.005	96	95896	4.00	4.28	
129 Alachlor	188	9.397	9.402	-0.005	0	9113	NC	NC	
131 Di-n-butyl phthalate	149	9.603	9.607	-0.004	100	85361	4.00	3.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.401	10.406	-0.005	97	106396	4.00	3.97	
137 Fluoranthene	202	10.725	10.729	-0.004	98	110141	4.00	4.03	
140 Famphur	218	11.694	11.705	-0.011	95	20071	4.00	4.23	
141 Butyl benzyl phthalate	149	11.823	11.828	-0.005	95	26539	4.00	4.28	
142 3,3'-Dichlorobenzidine	252	12.945	12.956	-0.011	73	18903	4.00	5.09	
143 Bis(2-ethylhexyl) phthalat	149	13.168	13.173	-0.005	96	28163	4.00	5.19	
144 Benzo[a]anthracene	228	12.986	12.997	-0.011	98	97312	4.00	3.75	
145 Chrysene	228	13.068	13.079	-0.011	96	110028	4.00	4.22	
147 Di-n-octyl phthalate	149	14.931	14.947	-0.016	98	27612	4.00	12.1	
149 Benzo[b]fluoranthene	252	15.788	15.811	-0.023	98	82245	4.00	3.63	
150 Benzo[k]fluoranthene	252	15.865	15.887	-0.022	97	86834	4.00	3.55	
152 Benzo[a]pyrene	252	16.564	16.580	-0.016	79	80135	4.00	3.70	
154 Indeno[1,2,3-cd]pyrene	276	19.959	19.982	-0.023	95	47825	4.00	4.29	M
155 Dibenz(a,h)anthracene	278	20.047	20.081	-0.034	96	54309	4.00	3.03	
156 Benzo[g,h,i]perylene	276	20.688	20.716	-0.028	95	66501	4.00	3.36	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA004_00020 Amount Added: 200.00 Units: uL

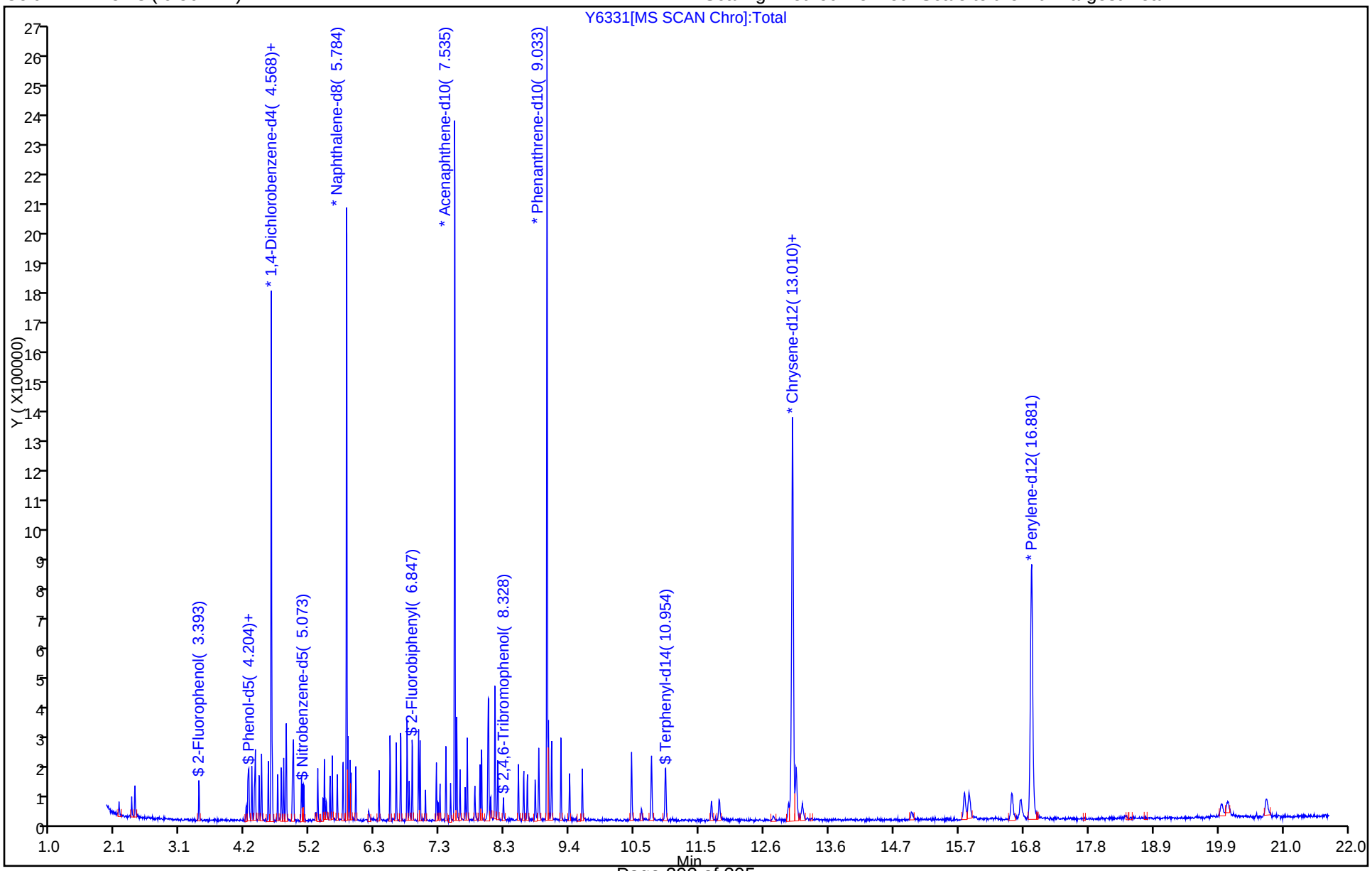
Report Date: 20-Nov-2015 10:59:51 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6331.D

Injection Date:	14-Nov-2015 09:54:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



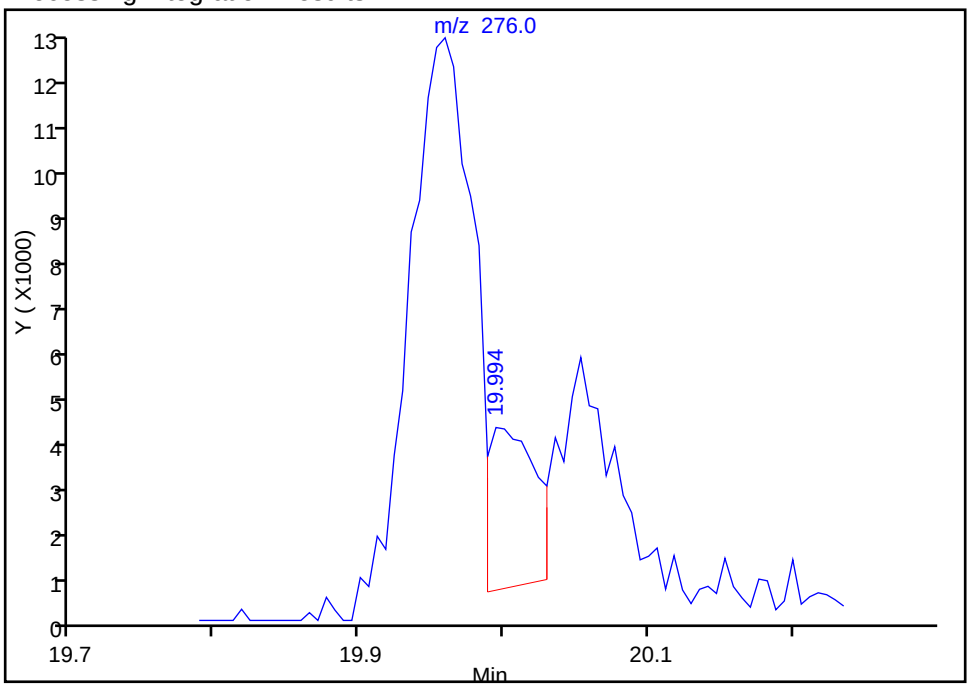
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6331.D
Injection Date: 14-Nov-2015 09:54:30 Instrument ID: SMS_Y
Lims ID: STD004 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

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

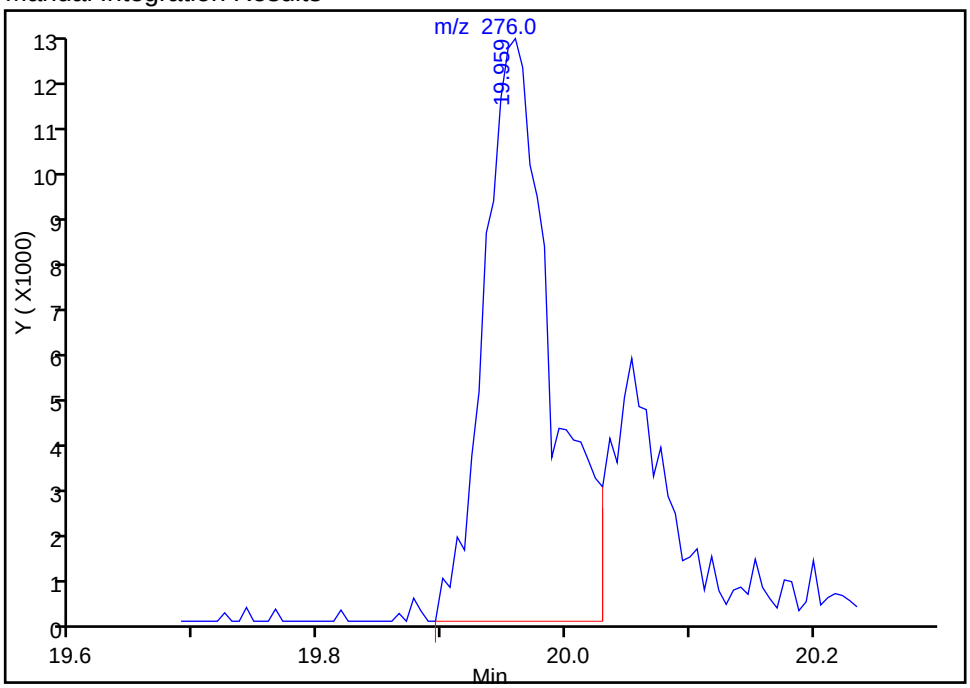
Processing Integration Results

RT: 19.99
Area: 8159
Amount: 0.488308
Amount Units: ug/ml



Manual Integration Results

RT: 19.96
Area: 47825
Amount: 4.294466
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:12:12
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6332.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Nov-2015 10:21:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:51 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:13:33

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	4.569	4.567	0.002	97	210134	40.0	40.0	
* 2 Naphthalene-d8	136	5.786	5.789	-0.003	100	814563	40.0	40.0	
* 3 Acenaphthene-d10	164	7.536	7.540	-0.004	93	486551	40.0	40.0	
* 4 Phenanthrene-d10	188	9.034	9.038	-0.004	97	860972	40.0	40.0	
* 5 Chrysene-d12	240	13.011	13.020	-0.009	98	867761	40.0	40.0	
* 6 Perylene-d12	264	16.876	16.886	-0.010	97	739455	40.0	40.0	
$ 7 2-Fluorophenol	112	3.395	3.398	-0.003	94	70166	10.0	9.60	
$ 8 Phenol-d5	99	4.188	4.191	-0.003	98	91539	10.0	10.1	
$ 9 Nitrobenzene-d5	82	5.075	5.078	-0.003	93	74513	10.0	9.67	
$ 10 2-Fluorobiphenyl	172	6.849	6.852	-0.003	100	173034	10.0	10.4	
$ 11 2,4,6-Tribromophenol	330	8.329	8.333	-0.004	91	15137	10.0	8.63	
$ 12 Terphenyl-d14	244	10.949	10.959	-0.009	99	179767	10.0	9.86	
13 1,4-Dioxane	88	2.102	2.100	0.002	94	32956	10.0	10.4	
14 N-Nitrosodimethylamine	74	2.308	2.306	0.002	90	49515	10.0	9.81	
15 Pyridine	79	2.355	2.358	-0.003	94	84487	10.0	9.76	
24 Phenol	94	4.199	4.209	-0.010	99	97342	10.0	10.3	
25 Aniline	93	4.252	4.256	-0.004	97	124217	10.0	10.2	
26 Bis(2-chloroethyl)ether	93	4.293	4.297	-0.004	98	80730	10.0	10.8	
27 2-Chlorophenol	128	4.370	4.373	-0.003	97	72140	10.0	9.95	
28 1,3-Dichlorobenzene	146	4.523	4.520	0.002	96	86524	10.0	10.2	
32 1,4-Dichlorobenzene	146	4.581	4.585	-0.004	95	92144	10.0	10.6	
33 Benzyl alcohol	108	4.669	4.673	-0.004	91	45610	10.0	9.74	
34 1,2-Dichlorobenzene	146	4.728	4.732	-0.004	94	83187	10.0	10.1	
35 2-Methylphenol	108	4.769	4.773	-0.004	97	66942	10.0	9.89	
37 2,2'-oxybis[1-chloropropan	45	4.804	4.808	-0.004	92	108670	10.0	10.5	
39 3-Methylphenol	108	4.910	4.914	-0.004	98	70594	10.0	10.1	
40 3 & 4 Methylphenol	108	4.910	4.914	-0.004	98	70594	10.0	10.1	
41 4-Methylphenol	108	4.910	4.914	-0.004	94	70594	10.0	10.1	
42 N-Nitrosodi-n-propylamine	70	4.922	4.925	-0.003	91	56457	10.0	10.2	
43 Acetophenone	105	4.928	4.931	-0.003	96	102034	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.057	5.061	-0.004	94	31469	10.0	10.1	
47 Nitrobenzene	77	5.092	5.096	-0.004	88	78513	10.0	10.1	
48 Isophorone	82	5.321	5.325	-0.004	99	132910	10.0	9.85	
50 2-Nitrophenol	139	5.404	5.407	-0.003	96	28352	10.0	8.24	
51 2,4-Dimethylphenol	107	5.427	5.431	-0.004	94	70081	10.0	10.0	
52 Bis(2-chloroethoxy)methane	93	5.521	5.525	-0.004	99	91356	10.0	10.7	
53 Benzoic acid	105	5.468	5.531	-0.063	87	51433	20.0	20.8	
56 2,4-Dichlorophenol	162	5.639	5.642	-0.003	95	61707	10.0	10.5	
57 1,2,4-Trichlorobenzene	180	5.727	5.730	-0.003	94	71725	10.0	11.0	
59 Naphthalene	128	5.809	5.813	-0.004	98	228408	10.0	11.1	
60 4-Chloroaniline	127	5.844	5.848	-0.004	96	97670	10.0	10.5	
61 2,6-Dichlorophenol	162	5.862	5.860	0.002	96	60592	10.0	10.5	
62 Hexachlorobutadiene	225	5.938	5.936	0.002	96	37822	10.0	10.5	
65 Caprolactam	55	6.144	6.165	-0.021	75	21040	10.0	8.93	
67 4-Chloro-3-methylphenol	107	6.314	6.318	-0.004	97	61771	10.0	10.4	
70 2-Methylnaphthalene	142	6.490	6.494	-0.004	92	158713	10.0	10.9	
71 1-Methylnaphthalene	142	6.590	6.594	-0.004	93	136876	10.0	10.6	
72 Hexachlorocyclopentadiene	237	6.661	6.664	-0.003	95	37340	10.0	9.46	
73 1,2,4,5-Tetrachlorobenzene	216	6.661	6.664	-0.003	97	69842	10.0	10.8	
74 2,4,6-Trichlorophenol	196	6.767	6.770	-0.003	75	38646	10.0	9.20	
75 2,4,5-Trichlorophenol	196	6.802	6.805	-0.003	96	43632	10.0	9.37	
77 1,1'-Biphenyl	154	6.955	6.952	0.002	95	190342	10.0	10.8	
78 2-Chloronaphthalene	162	6.978	6.982	-0.004	97	142887	10.0	10.2	
81 2-Nitroaniline	65	7.060	7.070	-0.010	82	33599	10.0	9.27	
84 Dimethyl phthalate	163	7.242	7.246	-0.004	99	162184	10.0	10.5	
86 1,3-Dinitrobenzene	168	7.266	7.275	-0.009	84	16865	10.0	8.92	
87 2,6-Dinitrotoluene	165	7.301	7.305	-0.004	95	31019	10.0	9.00	
89 Acenaphthylene	152	7.395	7.399	-0.004	98	220690	10.0	10.0	
91 3-Nitroaniline	138	7.471	7.475	-0.004	92	36837	10.0	8.81	
95 Acenaphthene	153	7.571	7.575	-0.004	94	148382	10.0	10.7	
97 2,4-Dinitrophenol	184	7.577	7.581	-0.004	78	18846	20.0	21.1	
98 4-Nitrophenol	109	7.624	7.634	-0.010	95	39569	20.0	18.0	
100 2,4-Dinitrotoluene	165	7.706	7.710	-0.004	87	37102	10.0	9.22	
101 Dibenzofuran	168	7.742	7.745	-0.003	97	208189	10.0	10.8	
105 2,3,4,6-Tetrachlorophenol	232	7.865	7.869	-0.004	75	28665	10.0	8.55	
106 Diethyl phthalate	149	7.947	7.951	-0.004	98	158281	10.0	10.3	
109 4-Chlorophenyl phenyl ethe	204	8.077	8.080	-0.003	93	82027	10.0	10.6	
110 Fluorene	166	8.088	8.092	-0.004	96	177522	10.0	11.1	
111 4-Nitroaniline	138	8.082	8.092	-0.010	86	35428	10.0	8.63	
112 4,6-Dinitro-2-methylphenol	198	8.118	8.127	-0.009	85	33738	20.0	20.6	
113 N-Nitrosodiphenylamine	169	8.188	8.198	-0.010	69	260618	20.0	21.1	
114 Azobenzene	77	8.235	8.239	-0.004	99	171280	10.0	10.3	
115 1,2-Diphenylhydrazine	77	8.235	8.239	-0.004	98	171280	10.1	10.4	
117 4-Bromophenyl phenyl ether	248	8.570	8.574	-0.004	70	41910	10.0	10.1	
119 Hexachlorobenzene	284	8.652	8.662	-0.010	89	41595	10.0	10.2	
120 Atrazine	200	8.711	8.720	-0.009	0	40522	NC	NC	
123 Pentachlorophenol	266	8.840	8.844	-0.004	89	37546	20.0	20.1	
125 Phenanthrene	178	9.058	9.061	-0.003	97	255626	10.0	10.6	
126 Anthracene	178	9.105	9.114	-0.009	97	241243	10.0	10.2	
128 Carbazole	167	9.257	9.261	-0.004	97	233251	10.0	10.3	
129 Alachlor	188	9.398	9.402	-0.004	0	26493	NC	NC	
131 Di-n-butyl phthalate	149	9.604	9.607	-0.003	100	227203	10.0	9.19	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.403	10.406	-0.003	98	264874	10.0	10.0	
137 Fluoranthene	202	10.726	10.729	-0.003	98	277129	10.0	10.0	
140 Famphur	218	11.695	11.705	-0.010	98	58506	10.0	8.83	
141 Butyl benzyl phthalate	149	11.819	11.828	-0.010	97	76344	10.0	8.59	
142 3,3'-Dichlorobenzidine	252	12.946	12.956	-0.010	74	47303	10.0	8.55	
143 Bis(2-ethylhexyl) phthalat	149	13.170	13.173	-0.003	98	82450	10.0	8.61	
144 Benzo[a]anthracene	228	12.988	12.997	-0.009	98	241103	10.0	9.39	
145 Chrysene	228	13.070	13.079	-0.009	97	250281	10.0	9.71	
147 Di-n-octyl phthalate	149	14.944	14.947	-0.003	99	91605	10.0	14.5	
149 Benzo[b]fluoranthene	252	15.790	15.811	-0.021	97	206482	10.0	9.00	
150 Benzo[k]fluoranthene	252	15.866	15.887	-0.021	99	229854	10.0	9.27	
152 Benzo[a]pyrene	252	16.559	16.580	-0.021	79	214024	10.0	9.76	
154 Indeno[1,2,3-cd]pyrene	276	19.960	19.982	-0.022	99	135495	10.0	8.72	
155 Dibenz(a,h)anthracene	278	20.054	20.081	-0.027	93	148759	10.0	8.19	
156 Benzo[g,h,i]perylene	276	20.689	20.716	-0.027	96	172309	10.0	8.60	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-HSLA010_00020 Amount Added: 200.00 Units: uL

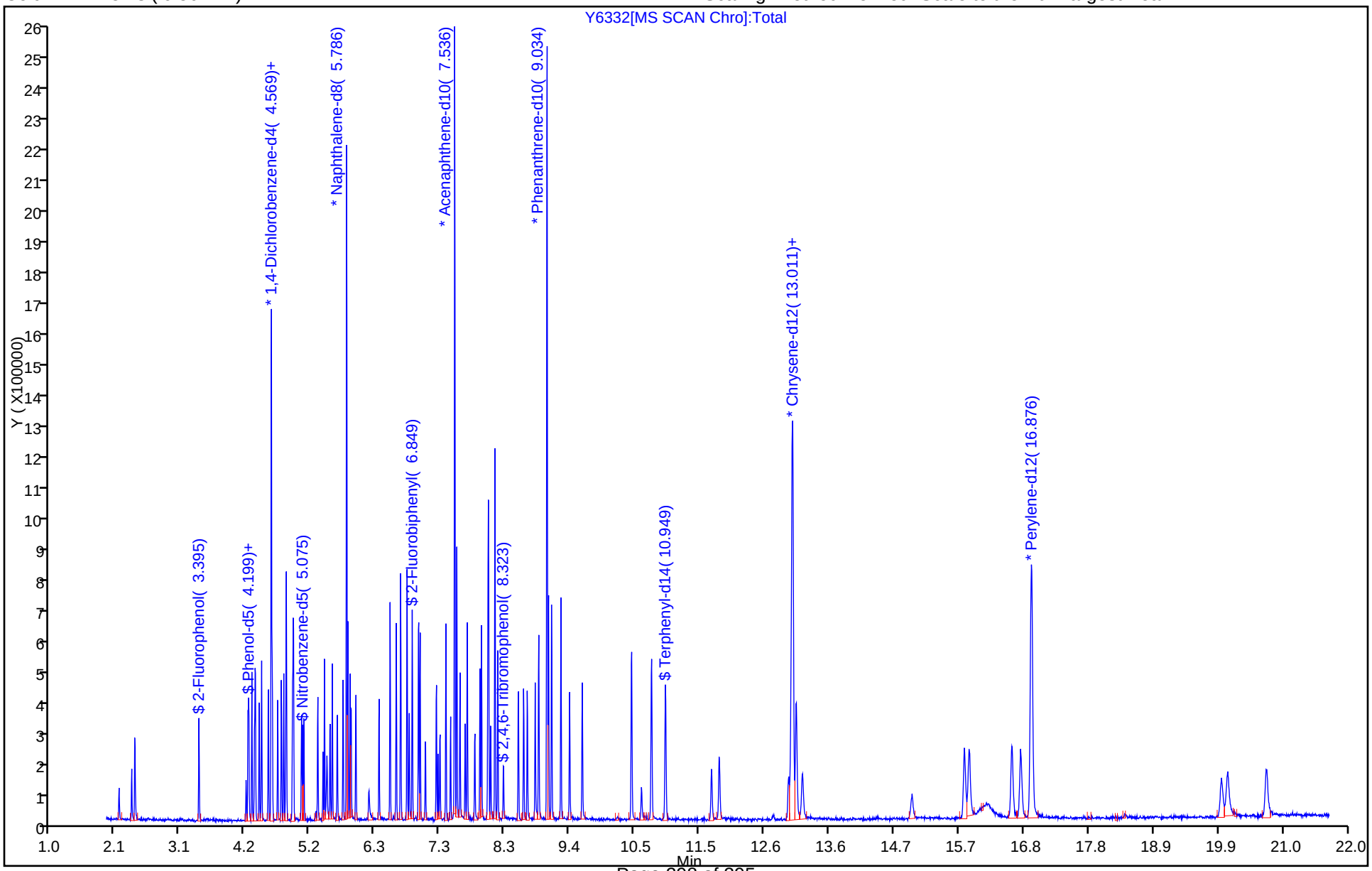
Report Date: 20-Nov-2015 10:59:52 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6332.D

Injection Date:	14-Nov-2015 10:21:30	Instrument ID:	SMS_Y	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_Y8270D	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_Y\20151119-41682.b\Y6333.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Nov-2015 10:48:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:53 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:15:37

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	4.566	4.567	-0.001	98	203388	40.0	40.0	
* 2 Naphthalene-d8	136	5.788	5.789	-0.001	100	808130	40.0	40.0	
* 3 Acenaphthene-d10	164	7.538	7.540	-0.002	93	466915	40.0	40.0	
* 4 Phenanthrene-d10	188	9.030	9.038	-0.008	97	846146	40.0	40.0	
* 5 Chrysene-d12	240	13.007	13.020	-0.013	98	856765	40.0	40.0	
* 6 Perylene-d12	264	16.879	16.886	-0.007	97	729971	40.0	40.0	
$ 7 2-Fluorophenol	112	3.397	3.398	-0.001	92	137482	20.0	19.4	
$ 8 Phenol-d5	99	4.190	4.191	-0.001	97	180034	20.0	20.5	
$ 9 Nitrobenzene-d5	82	5.077	5.078	-0.001	89	152909	20.0	20.0	
$ 10 2-Fluorobiphenyl	172	6.851	6.852	-0.001	99	327451	20.0	20.6	
$ 11 2,4,6-Tribromophenol	330	8.325	8.333	-0.008	84	30996	20.0	18.4	
$ 12 Terphenyl-d14	244	10.951	10.959	-0.007	98	356257	20.0	19.8	
13 1,4-Dioxane	88	2.104	2.100	0.004	97	63267	20.0	20.6	
14 N-Nitrosodimethylamine	74	2.304	2.306	-0.002	91	96762	20.0	19.8	
15 Pyridine	79	2.357	2.358	-0.001	93	163873	20.0	19.6	
24 Phenol	94	4.202	4.209	-0.007	99	183901	20.0	20.1	
25 Aniline	93	4.254	4.256	-0.002	98	242873	20.0	20.6	
26 Bis(2-chloroethyl)ether	93	4.296	4.297	-0.001	97	146652	20.0	20.2	
27 2-Chlorophenol	128	4.372	4.373	-0.001	97	142489	20.0	20.3	
28 1,3-Dichlorobenzene	146	4.519	4.520	-0.001	97	169559	20.0	20.6	
32 1,4-Dichlorobenzene	146	4.583	4.585	-0.002	94	170274	20.0	20.2	
33 Benzyl alcohol	108	4.672	4.673	-0.001	92	91795	20.0	20.2	
34 1,2-Dichlorobenzene	146	4.730	4.732	-0.002	96	165966	20.0	20.7	
35 2-Methylphenol	108	4.766	4.773	-0.007	95	135881	20.0	20.7	
37 2,2'-oxybis[1-chloropropan	45	4.807	4.808	-0.001	92	207487	20.0	20.8	
39 3-Methylphenol	108	4.912	4.914	-0.002	96	133436	20.0	19.8	
40 3 & 4 Methylphenol	108	4.912	4.914	-0.002	96	133436	20.0	19.8	
41 4-Methylphenol	108	4.912	4.914	-0.002	97	133436	20.0	19.8	
42 N-Nitrosodi-n-propylamine	70	4.918	4.925	-0.007	91	112457	20.0	21.0	
43 Acetophenone	105	4.930	4.931	-0.001	97	195841	20.0	20.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.053	5.061	-0.008	92	59217	20.0	19.5	
47 Nitrobenzene	77	5.095	5.096	-0.001	89	154964	20.0	20.2	
48 Isophorone	82	5.318	5.325	-0.007	99	268640	20.0	20.1	
50 2-Nitrophenol	139	5.406	5.407	-0.001	94	64488	20.0	18.9	
51 2,4-Dimethylphenol	107	5.429	5.431	-0.002	94	142891	20.0	20.6	
52 Bis(2-chloroethoxy)methane	93	5.517	5.525	-0.008	99	174843	20.0	20.7	
53 Benzoic acid	105	5.482	5.531	-0.049	91	138603	40.0	37.4	
56 2,4-Dichlorophenol	162	5.635	5.642	-0.007	97	116172	20.0	19.8	
57 1,2,4-Trichlorobenzene	180	5.729	5.730	-0.001	92	130252	20.0	20.2	
59 Naphthalene	128	5.805	5.813	-0.008	98	412329	20.0	20.2	
60 4-Chloroaniline	127	5.846	5.848	-0.002	95	185148	20.0	20.0	
61 2,6-Dichlorophenol	162	5.858	5.860	-0.002	96	116569	20.0	20.3	
62 Hexachlorobutadiene	225	5.935	5.936	-0.001	97	74220	20.0	20.8	
65 Caprolactam	55	6.152	6.165	-0.013	80	51427	20.0	18.6	
67 4-Chloro-3-methylphenol	107	6.311	6.318	-0.007	95	117385	20.0	19.9	
70 2-Methylnaphthalene	142	6.493	6.494	-0.001	91	289135	20.0	20.1	
71 1-Methylnaphthalene	142	6.592	6.594	-0.002	92	260354	20.0	20.4	
72 Hexachlorocyclopentadiene	237	6.663	6.664	-0.001	96	71609	20.0	18.9	
73 1,2,4,5-Tetrachlorobenzene	216	6.663	6.664	-0.001	97	131261	20.0	20.5	
74 2,4,6-Trichlorophenol	196	6.769	6.770	-0.001	77	85124	20.0	21.1	
75 2,4,5-Trichlorophenol	196	6.804	6.805	-0.001	96	90717	20.0	20.3	
77 1,1'-Biphenyl	154	6.951	6.952	-0.001	95	354462	20.0	20.9	
78 2-Chloronaphthalene	162	6.980	6.982	-0.002	96	282117	20.0	21.0	
81 2-Nitroaniline	65	7.062	7.070	-0.008	83	74456	20.0	19.3	
84 Dimethyl phthalate	163	7.239	7.246	-0.007	98	296121	20.0	20.1	
86 1,3-Dinitrobenzene	168	7.268	7.275	-0.007	84	36323	20.0	17.5	
87 2,6-Dinitrotoluene	165	7.297	7.305	-0.008	96	65379	20.0	19.8	
89 Acenaphthylene	152	7.397	7.399	-0.002	98	442922	20.0	21.0	
91 3-Nitroaniline	138	7.468	7.475	-0.007	96	79321	20.0	19.8	
95 Acenaphthene	153	7.568	7.575	-0.007	94	279246	20.0	21.0	
97 2,4-Dinitrophenol	184	7.574	7.581	-0.007	81	50097	40.0	35.9	
98 4-Nitrophenol	109	7.626	7.634	-0.008	95	86715	40.0	41.0	
100 2,4-Dinitrotoluene	165	7.709	7.710	-0.001	95	88533	20.0	20.5	
101 Dibenzofuran	168	7.744	7.745	-0.001	96	393118	20.0	21.2	
105 2,3,4,6-Tetrachlorophenol	232	7.861	7.869	-0.008	75	64295	20.0	20.0	
106 Diethyl phthalate	149	7.949	7.951	-0.002	98	301278	20.0	20.5	
109 4-Chlorophenyl phenyl ethe	204	8.073	8.080	-0.007	95	157232	20.0	21.1	
110 Fluorene	166	8.085	8.092	-0.007	94	319971	20.0	20.8	
111 4-Nitroaniline	138	8.085	8.092	-0.007	86	77933	20.0	19.8	
112 4,6-Dinitro-2-methylphenol	198	8.120	8.127	-0.007	85	82927	40.0	37.6	
113 N-Nitrosodiphenylamine	169	8.190	8.198	-0.008	61	502837	40.0	41.4	
114 Azobenzene	77	8.237	8.239	-0.002	99	333685	20.0	20.9	
115 1,2-Diphenylhydrazine	77	8.237	8.239	-0.002	99	333685	20.2	21.1	
117 4-Bromophenyl phenyl ether	248	8.566	8.574	-0.008	70	81494	20.0	19.9	
119 Hexachlorobenzene	284	8.654	8.662	-0.008	91	81190	20.0	20.2	
120 Atrazine	200	8.713	8.720	-0.007	0	83572	NC	NC	
123 Pentachlorophenol	266	8.842	8.844	-0.002	90	83866	40.0	39.2	
125 Phenanthrene	178	9.054	9.061	-0.007	98	484117	20.0	20.4	
126 Anthracene	178	9.107	9.114	-0.007	98	477050	20.0	20.5	
128 Carbazole	167	9.259	9.261	-0.002	97	453616	20.0	20.4	
129 Alachlor	188	9.400	9.402	-0.002	0	54187	NC	NC	
131 Di-n-butyl phthalate	149	9.600	9.607	-0.007	100	479873	20.0	19.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.399	10.406	-0.007	98	520943	20.0	19.9	
137 Fluoranthene	202	10.722	10.729	-0.007	99	552936	20.0	20.4	
140 Famphur	218	11.697	11.705	-0.008	98	135421	20.0	18.2	
141 Butyl benzyl phthalate	149	11.821	11.828	-0.007	97	183247	20.0	18.0	
142 3,3'-Dichlorobenzidine	252	12.943	12.956	-0.013	75	113952	20.0	16.8	
143 Bis(2-ethylhexyl) phthalat	149	13.166	13.173	-0.007	98	211380	20.0	16.8	
144 Benzo[a]anthracene	228	12.984	12.997	-0.013	99	492601	20.0	19.4	
145 Chrysene	228	13.066	13.079	-0.013	97	503823	20.0	19.8	
147 Di-n-octyl phthalate	149	14.940	14.947	-0.007	99	248936	20.0	20.3	
149 Benzo[b]fluoranthene	252	15.792	15.811	-0.019	97	441217	20.0	19.5	
150 Benzo[k]fluoranthene	252	15.874	15.887	-0.013	99	478663	20.0	19.6	
152 Benzo[a]pyrene	252	16.561	16.580	-0.019	79	423647	20.0	19.6	
154 Indeno[1,2,3-cd]pyrene	276	19.951	19.982	-0.031	97	303334	20.0	17.3	
155 Dibenz(a,h)anthracene	278	20.062	20.081	-0.019	95	333632	20.0	18.6	
156 Benzo[g,h,i]perylene	276	20.685	20.716	-0.031	97	376989	20.0	19.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-HSLA020_00020 Amount Added: 200.00 Units: uL

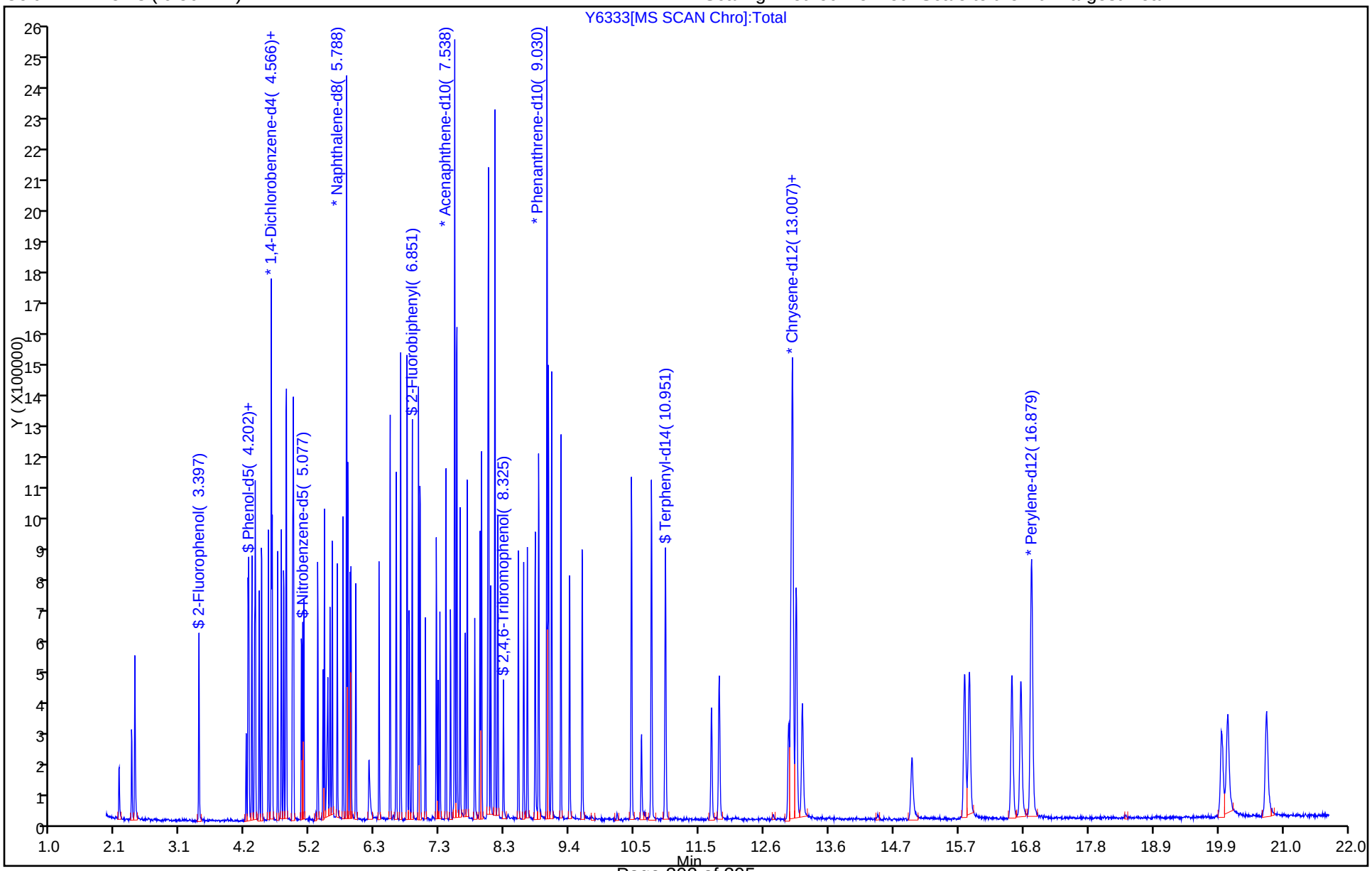
Report Date: 20-Nov-2015 10:59:54 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6333.D

Injection Date:	14-Nov-2015 10:48:30	Instrument ID:	SMS_Y	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_Y8270D	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_Y\20151119-41682.b\Y6334.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Nov-2015 11:15:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:55 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:16:37

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	4.569	4.567	0.002	96	210100	40.0	40.0	
* 2 Naphthalene-d8	136	5.785	5.789	-0.004	100	828369	40.0	40.0	
* 3 Acenaphthene-d10	164	7.536	7.540	-0.004	93	484961	40.0	40.0	
* 4 Phenanthrene-d10	188	9.034	9.038	-0.004	97	883192	40.0	40.0	
* 5 Chrysene-d12	240	13.011	13.020	-0.009	98	893638	40.0	40.0	
* 6 Perylene-d12	264	16.876	16.886	-0.010	97	750540	40.0	40.0	
$ 7 2-Fluorophenol	112	3.394	3.398	-0.004	93	375659	50.0	51.4	
$ 8 Phenol-d5	99	4.193	4.191	0.002	97	452893	50.0	49.9	
$ 9 Nitrobenzene-d5	82	5.074	5.078	-0.004	91	418421	50.0	53.4	
$ 10 2-Fluorobiphenyl	172	6.848	6.852	-0.004	100	859580	50.0	52.0	
$ 11 2,4,6-Tribromophenol	330	8.329	8.333	-0.004	91	95196	50.0	54.5	
$ 12 Terphenyl-d14	244	10.949	10.959	-0.009	99	965220	50.0	51.4	
13 1,4-Dioxane	88	2.102	2.100	0.002	96	156221	50.0	49.3	
14 N-Nitrosodimethylamine	74	2.308	2.306	0.002	91	256836	50.0	50.9	
15 Pyridine	79	2.360	2.358	0.002	94	432733	50.0	50.0	
24 Phenol	94	4.205	4.209	-0.004	99	485684	50.0	51.3	
25 Aniline	93	4.252	4.256	-0.004	98	626271	50.0	51.3	
26 Bis(2-chloroethyl)ether	93	4.299	4.297	0.002	98	377404	50.0	50.4	
27 2-Chlorophenol	128	4.369	4.373	-0.004	97	369241	50.0	50.9	
28 1,3-Dichlorobenzene	146	4.522	4.520	0.002	97	422611	50.0	49.6	
32 1,4-Dichlorobenzene	146	4.581	4.585	-0.004	93	440356	50.0	50.5	
33 Benzyl alcohol	108	4.675	4.673	0.002	91	239822	50.0	51.2	
34 1,2-Dichlorobenzene	146	4.728	4.732	-0.004	96	419397	50.0	50.7	
35 2-Methylphenol	108	4.769	4.773	-0.004	97	348978	50.0	51.6	
37 2,2'-oxybis[1-chloropropan	45	4.804	4.808	-0.004	91	533510	50.0	51.7	
39 3-Methylphenol	108	4.916	4.914	0.002	93	360331	50.0	51.7	
40 3 & 4 Methylphenol	108	4.916	4.914	0.002	93	360331	50.0	51.7	
41 4-Methylphenol	108	4.916	4.914	0.002	93	360331	50.0	51.7	
42 N-Nitrosodi-n-propylamine	70	4.922	4.925	-0.003	92	287105	50.0	51.9	
43 Acetophenone	105	4.928	4.931	-0.003	96	493931	50.0	50.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.057	5.061	-0.004	94	160040	50.0	51.1	
47 Nitrobenzene	77	5.098	5.096	0.002	88	418201	50.0	53.1	
48 Isophorone	82	5.321	5.325	-0.004	99	719796	50.0	52.4	
50 2-Nitrophenol	139	5.403	5.407	-0.004	96	185936	50.0	53.2	
51 2,4-Dimethylphenol	107	5.427	5.431	-0.004	96	380593	50.0	53.5	
52 Bis(2-chloroethoxy)methane	93	5.521	5.525	-0.004	99	451968	50.0	52.1	
53 Benzoic acid	105	5.509	5.531	-0.022	91	457221	100.0	95.6	
56 2,4-Dichlorophenol	162	5.638	5.642	-0.004	95	314490	50.0	52.4	
57 1,2,4-Trichlorobenzene	180	5.732	5.730	0.002	94	337233	50.0	51.0	
59 Naphthalene	128	5.809	5.813	-0.004	98	1093401	50.0	52.2	
60 4-Chloroaniline	127	5.844	5.848	-0.004	97	506703	50.0	53.4	
61 2,6-Dichlorophenol	162	5.862	5.860	0.002	97	307949	50.0	52.3	
62 Hexachlorobutadiene	225	5.938	5.936	0.002	97	189627	50.0	51.8	
65 Caprolactam	55	6.155	6.165	-0.010	75	159011	50.0	51.6	M
67 4-Chloro-3-methylphenol	107	6.314	6.318	-0.004	96	321068	50.0	53.1	
70 2-Methylnaphthalene	142	6.490	6.494	-0.004	92	769631	50.0	52.1	
71 1-Methylnaphthalene	142	6.590	6.594	-0.004	94	689018	50.0	52.6	
72 Hexachlorocyclopentadiene	237	6.660	6.664	-0.004	97	203664	50.0	51.8	
73 1,2,4,5-Tetrachlorobenzene	216	6.666	6.664	0.002	97	337924	50.0	51.5	
74 2,4,6-Trichlorophenol	196	6.766	6.770	-0.004	78	220020	50.0	52.5	
75 2,4,5-Trichlorophenol	196	6.801	6.805	-0.004	96	259119	50.0	55.9	
77 1,1'-Biphenyl	154	6.954	6.952	0.002	95	906411	50.0	51.4	
78 2-Chloronaphthalene	162	6.978	6.982	-0.004	97	724850	50.0	51.9	
81 2-Nitroaniline	65	7.066	7.070	-0.004	84	222620	50.0	52.7	
84 Dimethyl phthalate	163	7.242	7.246	-0.004	99	807907	50.0	52.7	
86 1,3-Dinitrobenzene	168	7.271	7.275	-0.004	86	119744	50.0	50.9	
87 2,6-Dinitrotoluene	165	7.301	7.305	-0.004	95	180468	50.0	52.6	
89 Acenaphthylene	152	7.395	7.399	-0.004	98	1145855	50.0	52.3	
91 3-Nitroaniline	138	7.471	7.475	-0.004	94	225274	50.0	54.1	
95 Acenaphthene	153	7.571	7.575	-0.004	93	716512	50.0	52.0	
97 2,4-Dinitrophenol	184	7.577	7.581	-0.004	83	185183	100.0	95.4	
98 4-Nitrophenol	109	7.630	7.634	-0.004	96	239996	100.0	109.3	
100 2,4-Dinitrotoluene	165	7.706	7.710	-0.004	94	254514	50.0	53.7	
101 Dibenzofuran	168	7.741	7.745	-0.004	96	1001150	50.0	51.9	
105 2,3,4,6-Tetrachlorophenol	232	7.865	7.869	-0.004	75	177465	50.0	53.1	
106 Diethyl phthalate	149	7.947	7.951	-0.004	98	805756	50.0	52.7	
109 4-Chlorophenyl phenyl ethe	204	8.076	8.080	-0.004	94	400210	50.0	51.7	
110 Fluorene	166	8.088	8.092	-0.004	95	837269	50.0	52.4	
111 4-Nitroaniline	138	8.088	8.092	-0.004	63	223605	50.0	54.6	
112 4,6-Dinitro-2-methylphenol	198	8.123	8.127	-0.004	86	274393	100.0	99.1	
113 N-Nitrosodiphenylamine	169	8.194	8.198	-0.004	61	1301548	100.0	102.7	
114 Azobenzene	77	8.235	8.239	-0.004	100	896346	50.0	54.0	
115 1,2-Diphenylhydrazine	77	8.235	8.239	-0.004	98	896346	50.5	54.6	
117 4-Bromophenyl phenyl ether	248	8.570	8.574	-0.004	69	224313	50.0	52.5	
119 Hexachlorobenzene	284	8.658	8.662	-0.004	91	209277	50.0	50.0	
120 Atrazine	200	8.717	8.720	-0.004	0	233399	NC	NC	
123 Pentachlorophenol	266	8.840	8.844	-0.004	89	244961	100.0	100.3	
125 Phenanthrene	178	9.057	9.061	-0.004	98	1269815	50.0	51.4	
126 Anthracene	178	9.110	9.114	-0.004	98	1267605	50.0	52.1	
128 Carbazole	167	9.257	9.261	-0.004	97	1189421	50.0	51.3	
129 Alachlor	188	9.398	9.402	-0.004	0	168931	NC	NC	
131 Di-n-butyl phthalate	149	9.604	9.607	-0.003	100	1360133	50.0	53.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.402	10.406	-0.004	98	1400458	50.0	51.3	
137 Fluoranthene	202	10.726	10.729	-0.003	99	1488649	50.0	52.6	
140 Famphur	218	11.701	11.705	-0.004	99	427257	50.0	51.3	
141 Butyl benzyl phthalate	149	11.824	11.828	-0.004	98	581380	50.0	50.6	
142 3,3'-Dichlorobenzidine	252	12.946	12.956	-0.010	74	381698	50.0	47.7	
143 Bis(2-ethylhexyl) phthalat	149	13.169	13.173	-0.004	97	723241	50.0	47.4	
144 Benzo[a]anthracene	228	12.987	12.997	-0.010	98	1381573	50.0	52.3	
145 Chrysene	228	13.075	13.079	-0.004	97	1356073	50.0	51.1	
147 Di-n-octyl phthalate	149	14.943	14.947	-0.004	99	1012963	50.0	47.1	
149 Benzo[b]fluoranthene	252	15.801	15.811	-0.010	98	1237099	50.0	53.1	
150 Benzo[k]fluoranthene	252	15.877	15.887	-0.010	99	1350017	50.0	53.6	
152 Benzo[a]pyrene	252	16.571	16.580	-0.009	79	1164520	50.0	52.3	
154 Indeno[1,2,3-cd]pyrene	276	19.966	19.982	-0.016	97	959650	50.0	48.7	
155 Dibenz(a,h)anthracene	278	20.066	20.081	-0.015	94	1007640	50.0	54.7	
156 Benzo[g,h,i]perylene	276	20.700	20.716	-0.016	96	1079921	50.0	53.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA050_00021 Amount Added: 200.00 Units: uL

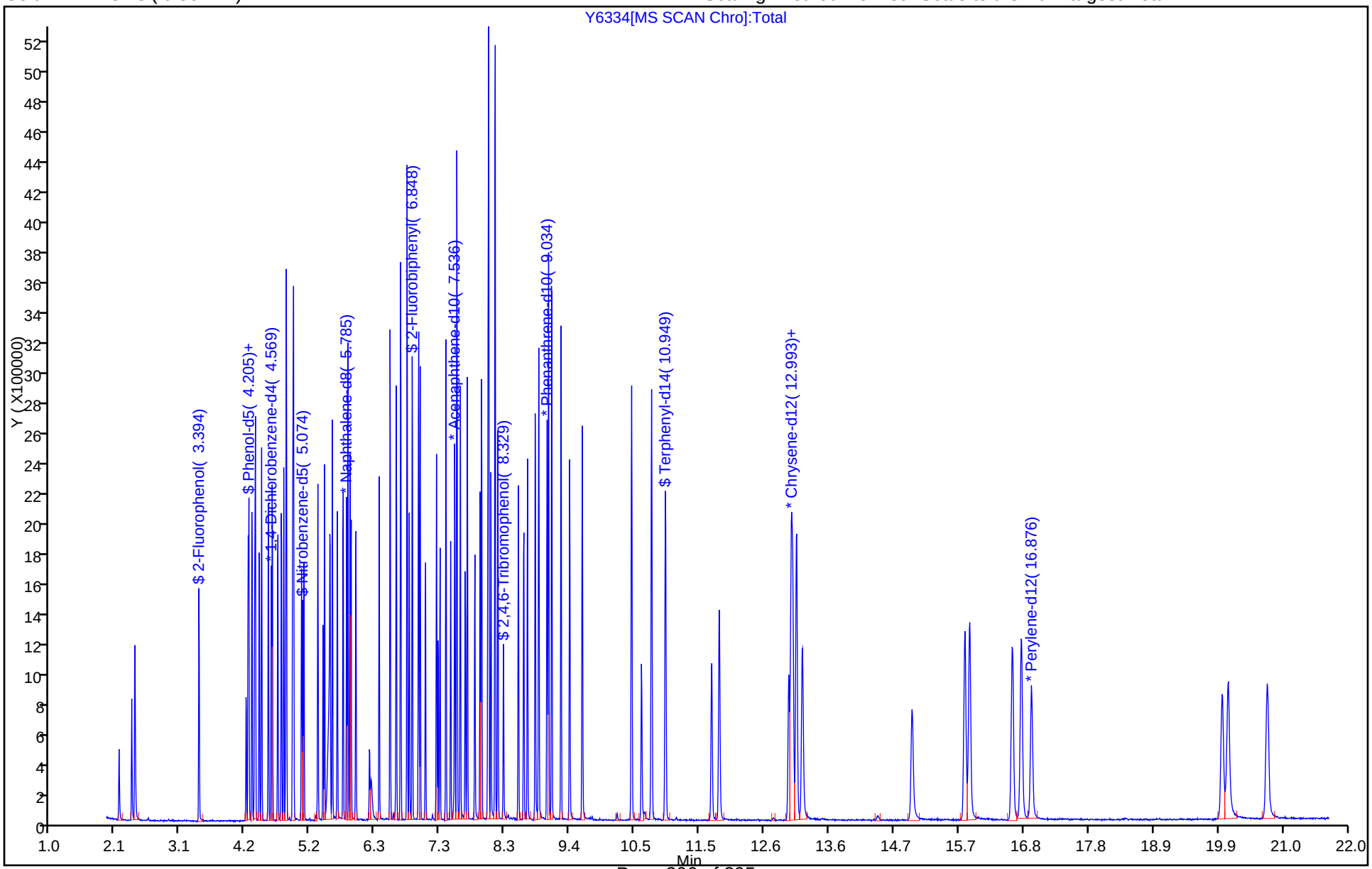
Report Date: 20-Nov-2015 10:59:56 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6334.D

Injection Date:	14-Nov-2015 11:15:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

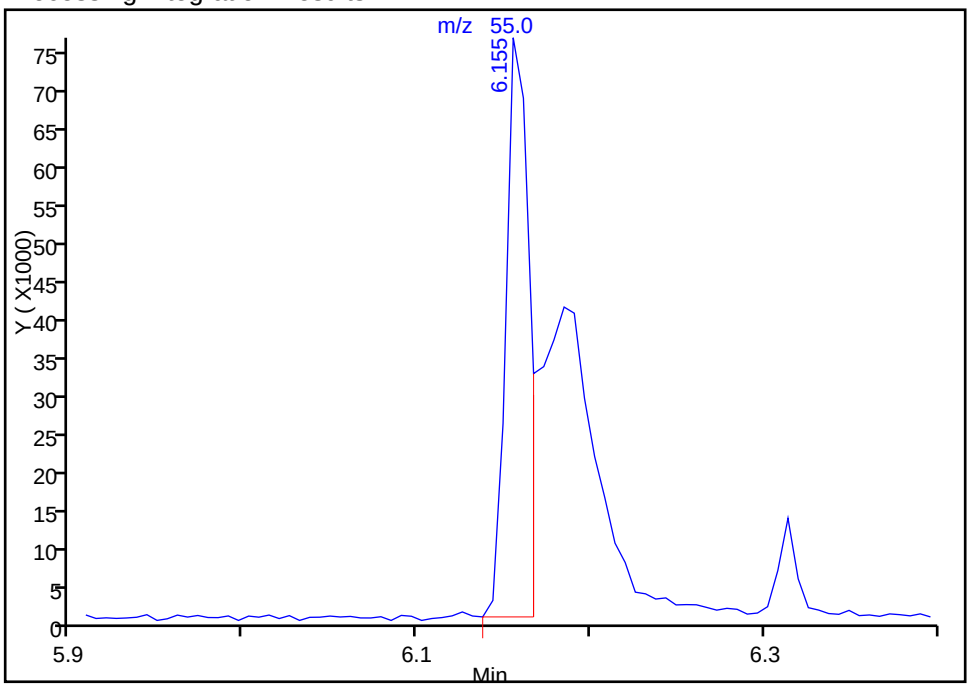
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6334.D
Injection Date: 14-Nov-2015 11:15:30 Instrument ID: SMS_Y
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

65 Caprolactam, CAS: 105-60-2

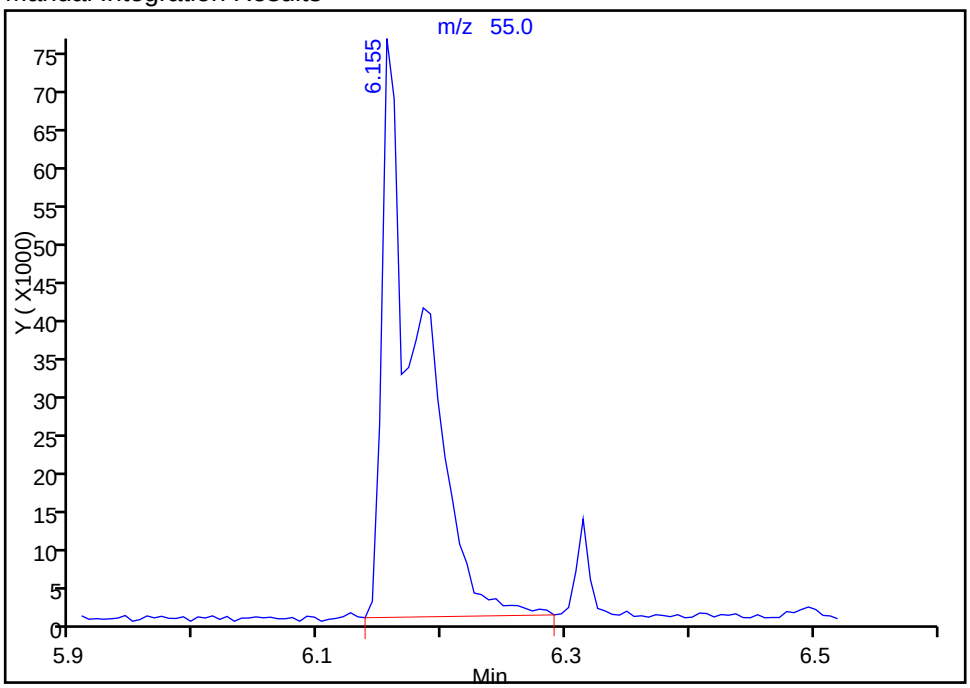
Processing Integration Results

RT: 6.16
Area: 71760
Amount: 36.848564
Amount Units: ug/ml



Manual Integration Results

RT: 6.16
Area: 159011
Amount: 51.602924
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:16:37
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6335.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Nov-2015 11:43:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:56 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:16:59

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	4.568	4.567	0.001	96	203764	40.0	40.0	
* 2 Naphthalene-d8	136	5.790	5.789	0.001	99	830834	40.0	40.0	
* 3 Acenaphthene-d10	164	7.540	7.540	0.000	93	475504	40.0	40.0	
* 4 Phenanthrene-d10	188	9.032	9.038	-0.006	98	857043	40.0	40.0	
* 5 Chrysene-d12	240	13.015	13.020	-0.005	98	866738	40.0	40.0	
* 6 Perylene-d12	264	16.881	16.886	-0.005	97	759463	40.0	40.0	
$ 7 2-Fluorophenol	112	3.399	3.398	0.001	93	847584	120.0	119.5	
$ 8 Phenol-d5	99	4.198	4.191	0.007	97	1037127	120.0	117.9	
$ 9 Nitrobenzene-d5	82	5.079	5.078	0.001	90	964612	120.0	122.7	
$ 10 2-Fluorobiphenyl	172	6.853	6.852	0.001	100	1909858	120.0	117.8	
$ 11 2,4,6-Tribromophenol	330	8.333	8.333	0.000	92	230025	120.0	134.2	
$ 12 Terphenyl-d14	244	10.953	10.959	-0.005	99	2168305	120.0	119.1	
13 1,4-Dioxane	88	2.101	2.100	0.001	96	348581	120.0	113.5	
14 N-Nitrosodimethylamine	74	2.306	2.306	0.000	91	585923	120.0	119.7	
15 Pyridine	79	2.359	2.358	0.001	94	993279	120.0	118.4	
24 Phenol	94	4.210	4.209	0.001	99	1075200	120.0	117.0	
25 Aniline	93	4.257	4.256	0.001	97	1372407	120.0	115.9	
26 Bis(2-chloroethyl)ether	93	4.298	4.297	0.001	97	818257	120.0	112.8	
27 2-Chlorophenol	128	4.374	4.373	0.001	98	826309	120.0	117.5	
28 1,3-Dichlorobenzene	146	4.521	4.520	0.001	98	968812	120.0	117.3	
32 1,4-Dichlorobenzene	146	4.586	4.585	0.001	93	991295	120.0	117.2	
33 Benzyl alcohol	108	4.674	4.673	0.001	91	556265	120.0	122.4	
34 1,2-Dichlorobenzene	146	4.732	4.732	0.000	96	943309	120.0	117.6	
35 2-Methylphenol	108	4.774	4.773	0.001	97	769016	120.0	117.2	
37 2,2'-oxybis[1-chloropropan	45	4.809	4.808	0.001	92	1136168	120.0	113.6	
39 3-Methylphenol	108	4.915	4.914	0.001	99	798120	120.0	118.0	
40 3 & 4 Methylphenol	108	4.915	4.914	0.001	99	798120	120.0	118.0	
41 4-Methylphenol	108	4.915	4.914	0.001	95	798120	120.0	118.0	
42 N-Nitrosodi-n-propylamine	70	4.926	4.925	0.001	92	636433	120.0	118.5	
43 Acetophenone	105	4.932	4.931	0.001	99	1094854	120.0	115.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.056	5.061	-0.005	95	363663	120.0	119.8	
47 Nitrobenzene	77	5.097	5.096	0.001	88	945544	120.0	119.6	
48 Isophorone	82	5.326	5.325	0.001	99	1630142	120.0	118.4	
50 2-Nitrophenol	139	5.408	5.407	0.001	95	452561	120.0	129.0	
51 2,4-Dimethylphenol	107	5.431	5.431	0.000	95	837707	120.0	117.4	
52 Bis(2-chloroethoxy)methane	93	5.520	5.525	-0.005	99	994062	120.0	114.2	
53 Benzoic acid	105	5.549	5.531	0.018	90	1275627	240.0	246.1	
56 2,4-Dichlorophenol	162	5.637	5.642	-0.005	96	719898	120.0	119.5	
57 1,2,4-Trichlorobenzene	180	5.731	5.730	0.001	93	755109	120.0	113.8	
59 Naphthalene	128	5.807	5.813	-0.006	98	2376421	120.0	113.0	
60 4-Chloroaniline	127	5.849	5.848	0.001	95	1100080	120.0	115.5	
61 2,6-Dichlorophenol	162	5.860	5.860	0.000	97	704600	120.0	119.3	
62 Hexachlorobutadiene	225	5.937	5.936	0.001	96	435915	120.0	118.7	
65 Caprolactam	55	6.178	6.165	0.013	79	383971	120.0	121.0	M
67 4-Chloro-3-methylphenol	107	6.319	6.318	0.000	96	729945	120.0	120.3	
70 2-Methylnaphthalene	142	6.495	6.494	0.001	92	1672501	120.0	112.9	
71 1-Methylnaphthalene	142	6.595	6.594	0.001	93	1503525	120.0	114.5	
72 Hexachlorocyclopentadiene	237	6.659	6.664	-0.005	95	497090	120.0	128.9	
73 1,2,4,5-Tetrachlorobenzene	216	6.665	6.664	0.001	97	751369	120.0	114.1	
74 2,4,6-Trichlorophenol	196	6.771	6.770	0.001	80	520737	120.0	126.8	
75 2,4,5-Trichlorophenol	196	6.806	6.805	0.001	95	582667	120.0	128.1	
77 1,1'-Biphenyl	154	6.953	6.952	0.001	96	1987218	120.0	115.0	
78 2-Chloronaphthalene	162	6.982	6.982	0.000	96	1602864	120.0	117.0	
81 2-Nitroaniline	65	7.065	7.070	-0.005	85	521845	120.0	123.7	
84 Dimethyl phthalate	163	7.247	7.246	0.001	99	1812354	120.0	120.6	
86 1,3-Dinitrobenzene	168	7.276	7.275	0.001	88	309103	120.0	130.6	
87 2,6-Dinitrotoluene	165	7.305	7.305	0.000	96	436391	120.0	129.6	
89 Acenaphthylene	152	7.399	7.399	0.000	98	2583599	120.0	120.3	
91 3-Nitroaniline	138	7.476	7.475	0.001	96	537860	120.0	131.6	
95 Acenaphthene	153	7.576	7.575	0.001	94	1576583	120.0	116.6	
97 2,4-Dinitrophenol	184	7.581	7.581	0.000	90	522169	240.0	250.4	
98 4-Nitrophenol	109	7.640	7.634	0.006	95	557346	240.0	258.9	
100 2,4-Dinitrotoluene	165	7.711	7.710	0.001	95	580996	120.0	122.9	
101 Dibenzofuran	168	7.746	7.745	0.001	96	2184284	120.0	115.5	
105 2,3,4,6-Tetrachlorophenol	232	7.863	7.869	-0.006	81	435746	120.0	133.0	
106 Diethyl phthalate	149	7.952	7.951	0.001	98	1846011	120.0	123.1	
109 4-Chlorophenyl phenyl ethe	204	8.081	8.080	0.001	92	868515	120.0	114.4	
110 Fluorene	166	8.093	8.092	0.001	94	1827763	120.0	116.8	
111 4-Nitroaniline	138	8.098	8.092	0.006	86	534887	120.0	133.3	
112 4,6-Dinitro-2-methylphenol	198	8.134	8.127	0.007	88	681290	240.0	239.2	
113 N-Nitrosodiphenylamine	169	8.198	8.198	0.000	60	2836411	240.0	230.6	
114 Azobenzene	77	8.239	8.239	0.000	99	1955311	120.0	120.2	
115 1,2-Diphenylhydrazine	77	8.239	8.239	0.000	98	1955311	121.3	121.5	
117 4-Bromophenyl phenyl ether	248	8.574	8.574	0.000	69	493392	120.0	119.1	
119 Hexachlorobenzene	284	8.657	8.662	-0.006	90	470509	120.0	115.8	
120 Atrazine	200	8.721	8.720	0.001	0	523521	NC	NC	
123 Pentachlorophenol	266	8.844	8.844	0.000	90	594641	240.0	243.2	
125 Phenanthrene	178	9.062	9.061	0.001	98	2723776	120.0	113.5	
126 Anthracene	178	9.109	9.114	-0.005	98	2781680	120.0	117.8	
128 Carbazole	167	9.262	9.261	0.001	97	2675456	120.0	118.8	
129 Alachlor	188	9.403	9.402	0.001	0	386816	NC	NC	
131 Di-n-butyl phthalate	149	9.608	9.607	0.001	100	3160807	120.0	128.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.407	10.406	0.001	98	3168005	120.0	119.6	
137 Fluoranthene	202	10.730	10.729	0.001	98	3307357	120.0	120.5	
140 Famphur	218	11.705	11.705	0.000	99	1040976	120.0	126.0	
141 Butyl benzyl phthalate	149	11.823	11.828	-0.005	98	1419544	120.0	124.3	
142 3,3'-Dichlorobenzidine	252	12.957	12.956	0.001	74	984964	120.0	122.2	
143 Bis(2-ethylhexyl) phthalat	149	13.168	13.173	-0.005	97	1850439	120.0	119.4	
144 Benzo[a]anthracene	228	12.998	12.997	0.001	99	3150418	120.0	122.8	
145 Chrysene	228	13.086	13.079	0.007	97	3079714	120.0	119.6	
147 Di-n-octyl phthalate	149	14.942	14.947	-0.005	99	2943261	120.0	118.8	
149 Benzo[b]fluoranthene	252	15.812	15.811	0.001	98	2956707	120.0	125.5	
150 Benzo[k]fluoranthene	252	15.894	15.887	0.007	99	3210812	120.0	126.1	
152 Benzo[a]pyrene	252	16.587	16.580	0.007	79	2779964	120.0	123.5	
154 Indeno[1,2,3-cd]pyrene	276	19.988	19.982	0.006	98	2424712	120.0	123.7	
155 Dibenz(a,h)anthracene	278	20.082	20.081	0.001	94	2462081	120.0	132.0	
156 Benzo[g,h,i]perylene	276	20.717	20.716	0.001	96	2668611	120.0	129.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA120_00020 Amount Added: 200.00 Units: uL

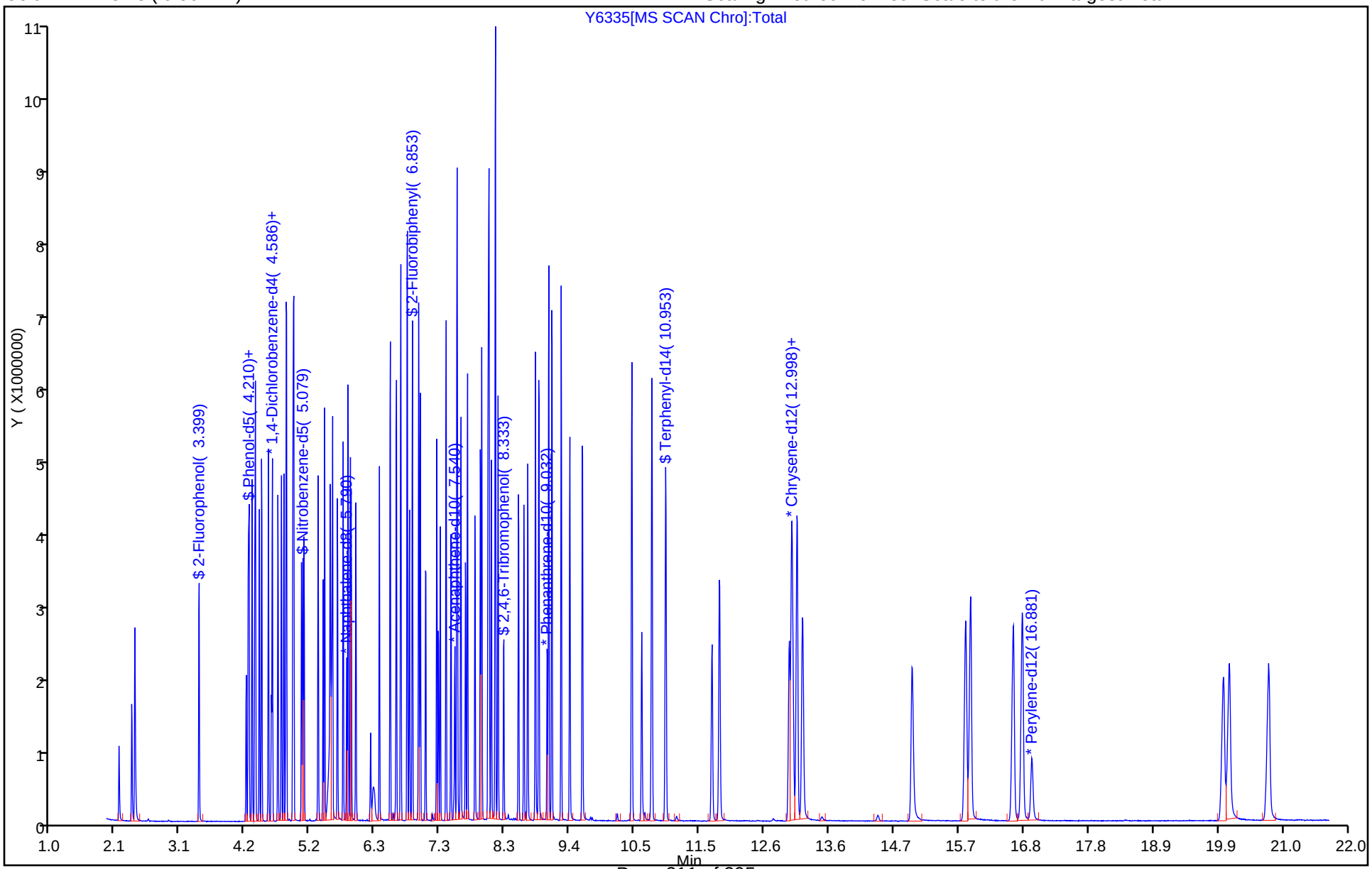
Report Date: 20-Nov-2015 10:59:57 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6335.D

Injection Date:	14-Nov-2015 11:43:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

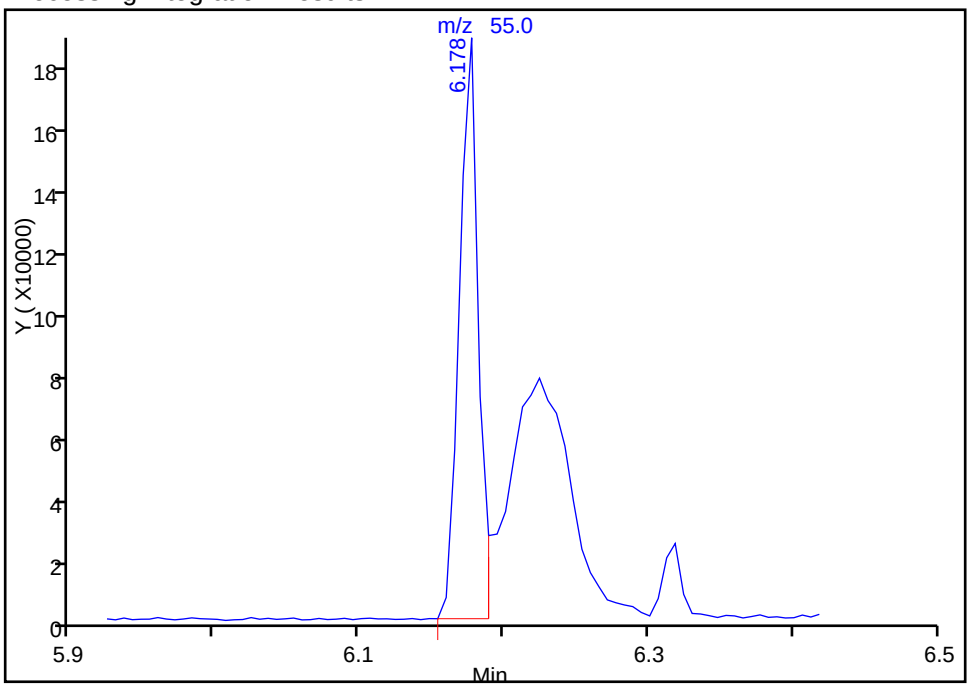
TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6335.D				
Injection Date:	14-Nov-2015 11:43:30	Instrument ID:	SMS_Y		
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_Y8270D	Limit Group:	MSSV - 8270D		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

65 Caprolactam, CAS: 105-60-2

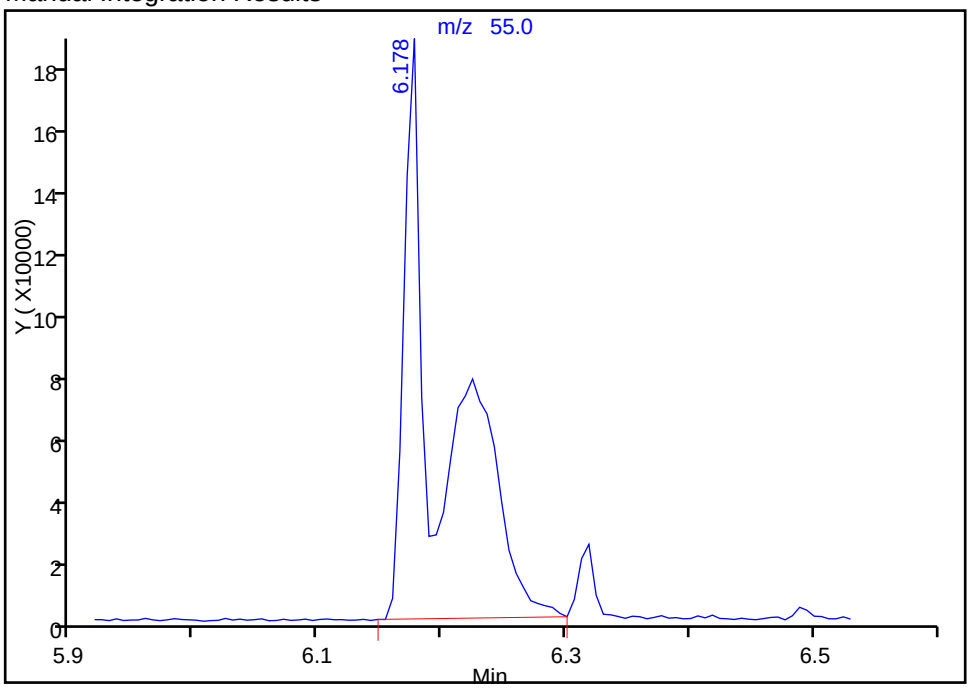
Processing Integration Results

RT: 6.18
Area: 169580
Amount: 78.075448
Amount Units: ug/ml



Manual Integration Results

RT: 6.18
Area: 383971
Amount: 121.0080
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:16:59
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6336.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 14-Nov-2015 12:10:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:58 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:17:16

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	4.569	4.567	0.002	97	214998	40.0	40.0	
* 2 Naphthalene-d8	136	5.791	5.789	0.002	99	875458	40.0	40.0	
* 3 Acenaphthene-d10	164	7.541	7.540	0.001	92	516852	40.0	40.0	
* 4 Phenanthrene-d10	188	9.033	9.038	-0.005	97	895699	40.0	40.0	
* 5 Chrysene-d12	240	13.022	13.020	0.002	98	867974	40.0	40.0	
* 6 Perylene-d12	264	16.888	16.886	0.002	97	783800	40.0	40.0	
$ 7 2-Fluorophenol	112	3.400	3.398	0.002	93	1174740	160.0	157.0	
$ 8 Phenol-d5	99	4.199	4.191	0.008	97	1434523	160.0	154.5	
$ 9 Nitrobenzene-d5	82	5.080	5.078	0.002	90	1330995	160.0	160.6	
$ 10 2-Fluorobiphenyl	172	6.854	6.852	0.002	100	2558347	160.0	145.1	
$ 11 2,4,6-Tribromophenol	330	8.334	8.333	0.001	92	314121	160.0	168.6	
$ 12 Terphenyl-d14	244	10.954	10.959	-0.004	99	2896182	160.0	158.9	
13 1,4-Dioxane	88	2.102	2.100	0.002	97	483452	160.0	149.2	
14 N-Nitrosodimethylamine	74	2.313	2.306	0.007	91	814052	160.0	157.7	
15 Pyridine	79	2.360	2.358	0.002	94	1383410	160.0	156.2	
24 Phenol	94	4.211	4.209	0.002	99	1434654	160.0	148.0	
25 Aniline	93	4.258	4.256	0.002	97	1930846	160.0	154.6	
26 Bis(2-chloroethyl)ether	93	4.299	4.297	0.002	97	1115812	160.0	145.7	
27 2-Chlorophenol	128	4.375	4.373	0.002	97	1158230	160.0	156.1	
28 1,3-Dichlorobenzene	146	4.522	4.520	0.002	97	1312416	160.0	150.6	
32 1,4-Dichlorobenzene	146	4.587	4.585	0.002	93	1330232	160.0	149.0	
33 Benzyl alcohol	108	4.681	4.673	0.008	91	765070	160.0	159.6	
34 1,2-Dichlorobenzene	146	4.733	4.732	0.001	96	1281597	160.0	151.4	
35 2-Methylphenol	108	4.775	4.773	0.002	97	1051280	160.0	151.9	
37 2,2'-oxybis[1-chloropropan	45	4.810	4.808	0.002	93	1539983	160.0	146.0	
39 3-Methylphenol	108	4.921	4.914	0.007	95	1076408	160.0	150.9	
40 3 & 4 Methylphenol	108	4.921	4.914	0.007	95	1076408	160.0	150.9	
41 4-Methylphenol	108	4.921	4.914	0.007	94	1076408	160.0	150.9	
42 N-Nitrosodi-n-propylamine	70	4.933	4.925	0.008	88	863532	160.0	152.4	
43 Acetophenone	105	4.933	4.931	0.002	95	1455527	160.0	145.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.057	5.061	-0.004	93	502025	160.0	156.7	
47 Nitrobenzene	77	5.098	5.096	0.002	90	1296260	160.0	155.7	
48 Isophorone	82	5.333	5.325	0.008	98	2228643	160.0	153.7	
50 2-Nitrophenol	139	5.409	5.407	0.002	95	640996	160.0	173.4	
51 2,4-Dimethylphenol	107	5.432	5.431	0.001	95	1143011	160.0	152.1	
52 Bis(2-chloroethoxy)methane	93	5.521	5.525	-0.004	99	1335477	160.0	145.6	
53 Benzoic acid	105	5.562	5.531	0.031	92	1793850	320.0	324.7	
56 2,4-Dichlorophenol	162	5.644	5.642	0.002	94	985412	160.0	155.3	
57 1,2,4-Trichlorobenzene	180	5.732	5.730	0.002	93	1039686	160.0	148.7	
59 Naphthalene	128	5.814	5.813	0.001	98	3214999	160.0	145.1	
60 4-Chloroaniline	127	5.850	5.848	0.002	96	1518340	160.0	151.3	
61 2,6-Dichlorophenol	162	5.861	5.860	0.001	97	949563	160.0	152.5	
62 Hexachlorobutadiene	225	5.938	5.936	0.002	97	583830	160.0	150.8	
65 Caprolactam	55	6.184	6.165	0.019	79	530985	160.0	158.1	M
67 4-Chloro-3-methylphenol	107	6.320	6.318	0.002	95	994835	160.0	155.7	
70 2-Methylnaphthalene	142	6.496	6.494	0.002	92	2267888	160.0	145.3	
71 1-Methylnaphthalene	142	6.596	6.594	0.002	93	2032993	160.0	147.0	
72 Hexachlorocyclopentadiene	237	6.666	6.664	0.002	96	693477	160.0	165.4	
73 1,2,4,5-Tetrachlorobenzene	216	6.666	6.664	0.002	97	1013481	160.0	146.0	
74 2,4,6-Trichlorophenol	196	6.772	6.770	0.002	80	707819	160.0	158.6	
75 2,4,5-Trichlorophenol	196	6.807	6.805	0.002	95	796322	160.0	161.1	
77 1,1'-Biphenyl	154	6.954	6.952	0.002	96	2705838	160.0	144.0	
78 2-Chloronaphthalene	162	6.983	6.982	0.001	96	2164341	160.0	145.3	
81 2-Nitroaniline	65	7.071	7.070	0.001	85	718406	160.0	156.2	
84 Dimethyl phthalate	163	7.248	7.246	0.002	99	2399222	160.0	146.8	
86 1,3-Dinitrobenzene	168	7.277	7.275	0.002	85	415895	160.0	161.2	
87 2,6-Dinitrotoluene	165	7.306	7.305	0.001	96	605910	160.0	165.6	
89 Acenaphthylene	152	7.400	7.399	0.001	98	3464433	160.0	148.4	
91 3-Nitroaniline	138	7.483	7.475	0.008	96	744095	160.0	167.6	
95 Acenaphthene	153	7.577	7.575	0.002	94	2087859	160.0	142.1	
97 2,4-Dinitrophenol	184	7.588	7.581	0.007	89	750427	320.0	327.0	
98 4-Nitrophenol	109	7.647	7.634	0.013	93	772454	320.0	330.1	
100 2,4-Dinitrotoluene	165	7.718	7.710	0.008	94	798078	160.0	154.9	
101 Dibenzofuran	168	7.747	7.745	0.002	96	2937724	160.0	142.9	
105 2,3,4,6-Tetrachlorophenol	232	7.870	7.869	0.001	74	596265	160.0	167.5	
106 Diethyl phthalate	149	7.958	7.951	0.007	98	2421271	160.0	148.5	
109 4-Chlorophenyl phenyl ethe	204	8.082	8.080	0.002	94	1177847	160.0	142.8	
110 Fluorene	166	8.094	8.092	0.002	94	2407317	160.0	141.5	
111 4-Nitroaniline	138	8.105	8.092	0.013	86	731099	160.0	167.6	
112 4,6-Dinitro-2-methylphenol	198	8.135	8.127	0.008	88	993806	320.0	330.2	
113 N-Nitrosodiphenylamine	169	8.199	8.198	0.001	61	3711566	320.0	288.8	
114 Azobenzene	77	8.240	8.239	0.001	99	2592643	160.0	146.6	
115 1,2-Diphenylhydrazine	77	8.240	8.239	0.001	98	2592643	161.8	148.2	
117 4-Bromophenyl phenyl ether	248	8.575	8.574	0.001	70	669571	160.0	154.6	
119 Hexachlorobenzene	284	8.658	8.662	-0.004	91	635389	160.0	149.7	
120 Atrazine	200	8.722	8.720	0.002	0	693643	NC	NC	
123 Pentachlorophenol	266	8.846	8.844	0.002	90	809959	320.0	315.3	
125 Phenanthrene	178	9.063	9.061	0.002	98	3665226	160.0	146.2	
126 Anthracene	178	9.116	9.114	0.002	98	3707917	160.0	150.2	
128 Carbazole	167	9.263	9.261	0.002	97	3503095	160.0	148.9	
129 Alachlor	188	9.404	9.402	0.002	0	518248	NC	NC	
131 Di-n-butyl phthalate	149	9.609	9.607	0.002	100	4148201	160.0	161.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.408	10.406	0.002	97	4198384	160.0	158.3	
137 Fluoranthene	202	10.731	10.729	0.002	98	4392353	160.0	153.1	
140 Famphur	218	11.706	11.705	0.001	99	1363136	160.0	164.2	
141 Butyl benzyl phthalate	149	11.830	11.828	0.002	98	1945571	160.0	169.3	
142 3,3'-Dichlorobenzidine	252	12.958	12.956	0.002	74	1318892	160.0	162.5	
143 Bis(2-ethylhexyl) phthalat	149	13.175	13.173	0.002	96	2565214	160.0	164.0	
144 Benzo[a]anthracene	228	12.999	12.997	0.002	99	4220775	160.0	164.4	
145 Chrysene	228	13.087	13.079	0.008	97	4098328	160.0	158.9	
147 Di-n-octyl phthalate	149	14.949	14.947	0.002	99	4192868	160.0	164.3	
149 Benzo[b]fluoranthene	252	15.818	15.811	0.007	98	4030277	160.0	165.7	
150 Benzo[k]fluoranthene	252	15.901	15.887	0.014	98	4311026	160.0	164.0	
152 Benzo[a]pyrene	252	16.594	16.580	0.014	79	3762815	160.0	162.0	
154 Indeno[1,2,3-cd]pyrene	276	19.995	19.982	0.013	98	3367749	160.0	170.9	
155 Dibenz(a,h)anthracene	278	20.095	20.081	0.014	94	3396279	160.0	176.4	
156 Benzo[g,h,i]perylene	276	20.729	20.716	0.013	96	3646978	160.0	171.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA160_00020 Amount Added: 200.00 Units: uL

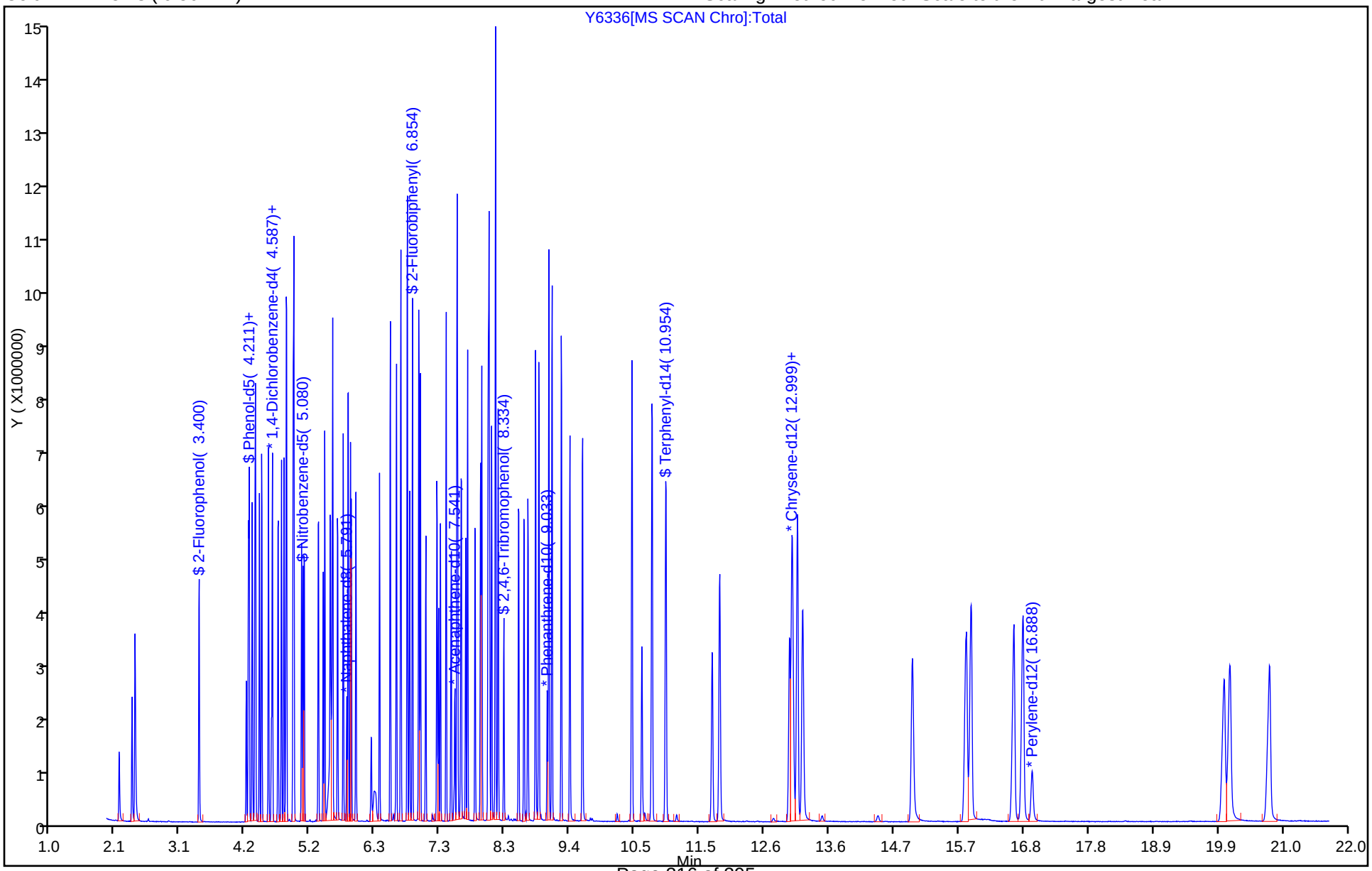
Report Date: 20-Nov-2015 10:59:59 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6336.D

Injection Date:	14-Nov-2015 12:10:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

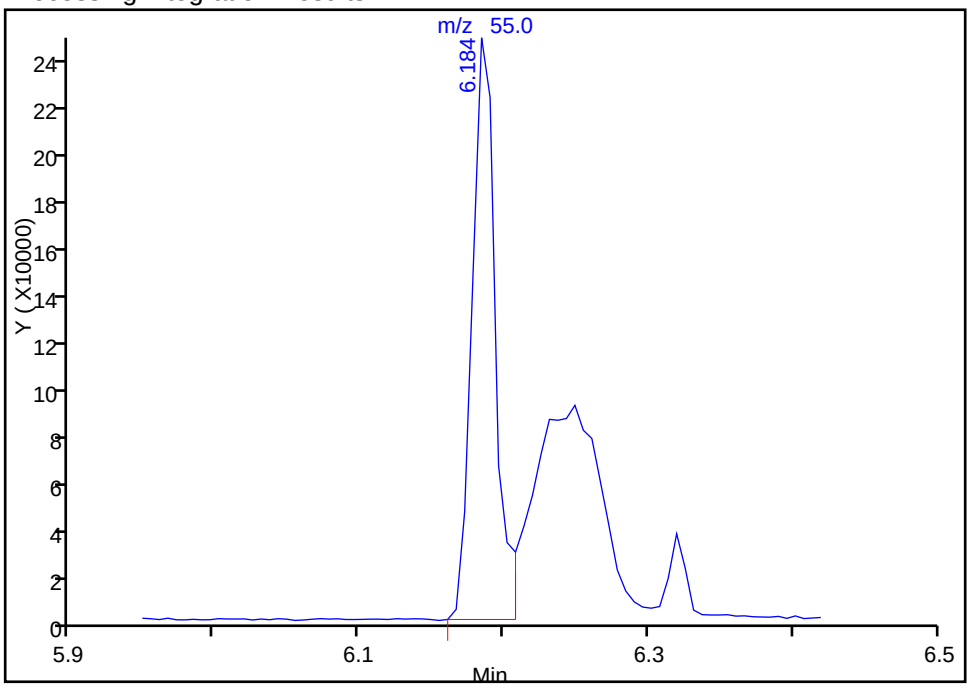
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6336.D
Injection Date: 14-Nov-2015 12:10:30 Instrument ID: SMS_Y
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_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

65 Caprolactam, CAS: 105-60-2

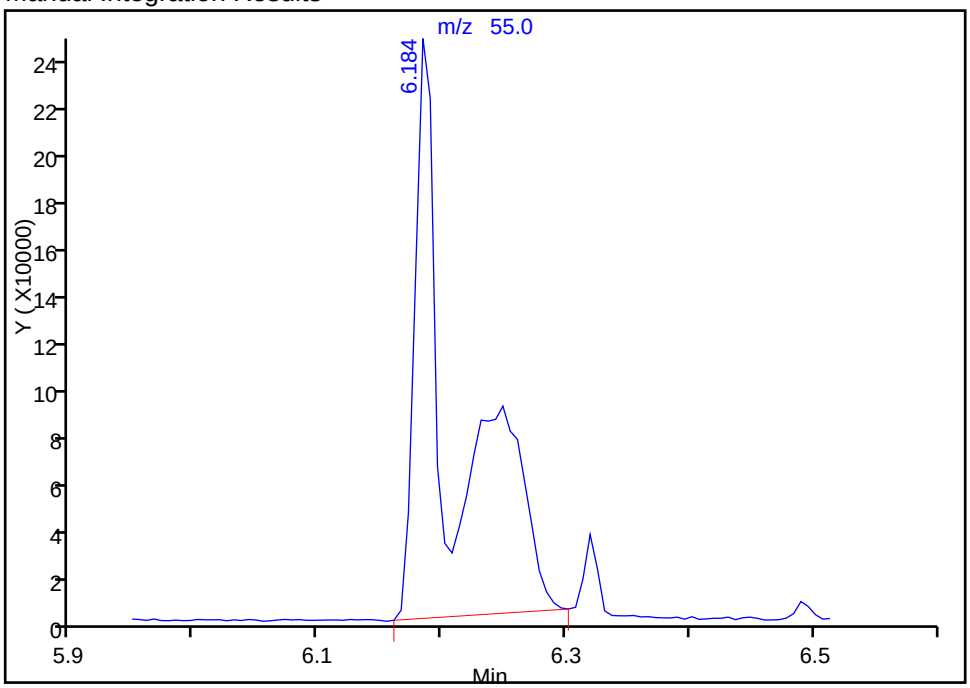
Processing Integration Results

RT: 6.18
Area: 271952
Amount: 107.7474
Amount Units: ug/ml



Manual Integration Results

RT: 6.18
Area: 530985
Amount: 158.0927
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:17:16
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 14-Nov-2015 12:37:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 11:00:00 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:17:38

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	4.572	4.567	0.005	96	223964	40.0	40.0	
* 2 Naphthalene-d8	136	5.794	5.789	0.005	99	886020	40.0	40.0	
* 3 Acenaphthene-d10	164	7.538	7.540	-0.002	93	525594	40.0	40.0	
* 4 Phenanthrene-d10	188	9.036	9.038	-0.002	97	911351	40.0	40.0	
* 5 Chrysene-d12	240	13.025	13.020	0.005	98	873781	40.0	40.0	
* 6 Perylene-d12	264	16.890	16.886	0.004	97	811548	40.0	40.0	
$ 7 2-Fluorophenol	112	3.397	3.398	-0.001	93	1468946	200.0	188.5	
$ 8 Phenol-d5	99	4.202	4.191	0.011	96	1775341	200.0	183.6	
$ 9 Nitrobenzene-d5	82	5.083	5.078	0.005	90	1651518	200.0	196.9	
$ 10 2-Fluorobiphenyl	172	6.857	6.852	0.005	99	3160809	200.0	176.3	
$ 11 2,4,6-Tribromophenol	330	8.337	8.333	0.004	92	390260	200.0	206.0	
$ 12 Terphenyl-d14	244	10.957	10.959	-0.001	99	3538507	200.0	192.8	
13 1,4-Dioxane	88	2.104	2.100	0.004	96	607885	200.0	180.1	
14 N-Nitrosodimethylamine	74	2.316	2.306	0.010	92	1040506	200.0	193.5	
15 Pyridine	79	2.363	2.358	0.005	94	1756716	200.0	190.4	
24 Phenol	94	4.213	4.209	0.004	99	1779835	200.0	176.2	
25 Aniline	93	4.260	4.256	0.004	97	2361349	200.0	181.5	
26 Bis(2-chloroethyl)ether	93	4.301	4.297	0.004	96	1347135	200.0	168.9	
27 2-Chlorophenol	128	4.378	4.373	0.005	97	1440107	200.0	186.3	
28 1,3-Dichlorobenzene	146	4.525	4.520	0.005	98	1616632	200.0	178.1	
32 1,4-Dichlorobenzene	146	4.583	4.585	-0.002	94	1651265	200.0	177.6	
33 Benzyl alcohol	108	4.677	4.673	0.004	91	957318	200.0	191.7	
34 1,2-Dichlorobenzene	146	4.730	4.732	-0.002	96	1572626	200.0	178.4	
35 2-Methylphenol	108	4.777	4.773	0.004	97	1324652	200.0	183.7	
37 2,2'-oxybis[1-chloropropan	45	4.807	4.808	-0.001	93	1857521	200.0	169.0	
39 3-Methylphenol	108	4.924	4.914	0.010	95	1319178	200.0	177.5	
40 3 & 4 Methylphenol	108	4.924	4.914	0.010	95	1319178	200.0	177.5	
41 4-Methylphenol	108	4.924	4.914	0.010	94	1319178	200.0	177.5	
42 N-Nitrosodi-n-propylamine	70	4.936	4.925	0.011	80	1059438	200.0	179.5	
43 Acetophenone	105	4.936	4.931	0.005	92	1781555	200.0	171.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.059	5.061	-0.002	95	618344	200.0	185.3	
47 Nitrobenzene	77	5.100	5.096	0.004	89	1615795	200.0	191.7	
48 Isophorone	82	5.335	5.325	0.010	98	2770427	200.0	188.7	
50 2-Nitrophenol	139	5.412	5.407	0.005	94	823034	200.0	220.0	
51 2,4-Dimethylphenol	107	5.435	5.431	0.004	95	1417239	200.0	186.3	
52 Bis(2-chloroethoxy)methane	93	5.523	5.525	-0.002	99	1663012	200.0	179.2	
53 Benzoic acid	105	5.576	5.531	0.045	94	2386063	400.0	423.3	
56 2,4-Dichlorophenol	162	5.641	5.642	-0.001	96	1232394	200.0	191.9	
57 1,2,4-Trichlorobenzene	180	5.735	5.730	0.005	93	1279714	200.0	180.8	
59 Naphthalene	128	5.811	5.813	-0.002	98	3919181	200.0	174.8	
60 4-Chloroaniline	127	5.852	5.848	0.004	95	1858027	200.0	183.0	
61 2,6-Dichlorophenol	162	5.864	5.860	0.004	97	1224551	200.0	194.4	
62 Hexachlorobutadiene	225	5.940	5.936	0.004	97	734785	200.0	187.6	
65 Caprolactam	55	6.193	6.165	0.028	80	725313	200.0	212.6	M
67 4-Chloro-3-methylphenol	107	6.322	6.318	0.004	96	1251106	200.0	193.4	
70 2-Methylnaphthalene	142	6.493	6.494	-0.001	93	2822816	200.0	178.7	
71 1-Methylnaphthalene	142	6.598	6.594	0.004	93	2511831	200.0	179.4	
72 Hexachlorocyclopentadiene	237	6.663	6.664	-0.001	96	857648	200.0	201.1	
73 1,2,4,5-Tetrachlorobenzene	216	6.669	6.664	0.005	97	1253607	200.0	178.5	
74 2,4,6-Trichlorophenol	196	6.775	6.770	0.005	81	883048	200.0	194.5	
75 2,4,5-Trichlorophenol	196	6.810	6.805	0.005	95	985380	200.0	196.0	
77 1,1'-Biphenyl	154	6.957	6.952	0.005	96	3297342	200.0	172.6	
78 2-Chloronaphthalene	162	6.986	6.982	0.004	96	2709538	200.0	178.9	
81 2-Nitroaniline	65	7.074	7.070	0.004	85	921521	200.0	196.7	
84 Dimethyl phthalate	163	7.256	7.246	0.010	99	2994168	200.0	180.2	
86 1,3-Dinitrobenzene	168	7.280	7.275	0.005	86	545751	200.0	207.4	
87 2,6-Dinitrotoluene	165	7.309	7.305	0.004	96	766839	200.0	206.1	
89 Acenaphthylene	152	7.403	7.399	0.004	98	4299675	200.0	181.1	
91 3-Nitroaniline	138	7.485	7.475	0.010	96	932838	200.0	206.6	
95 Acenaphthene	153	7.574	7.575	-0.001	95	2616285	200.0	175.1	
97 2,4-Dinitrophenol	184	7.591	7.581	0.010	87	987629	400.0	419.5	
98 4-Nitrophenol	109	7.650	7.634	0.016	95	969370	400.0	407.4	
100 2,4-Dinitrotoluene	165	7.720	7.710	0.010	94	1009480	200.0	192.2	
101 Dibenzofuran	168	7.750	7.745	0.005	96	3631743	200.0	173.7	
105 2,3,4,6-Tetrachlorophenol	232	7.867	7.869	-0.002	74	749541	200.0	207.0	
106 Diethyl phthalate	149	7.961	7.951	0.010	98	2969134	200.0	179.1	
109 4-Chlorophenyl phenyl ethe	204	8.079	8.080	-0.001	94	1462642	200.0	174.3	
110 Fluorene	166	8.090	8.092	-0.002	94	3019661	200.0	174.5	
111 4-Nitroaniline	138	8.108	8.092	0.016	85	909665	200.0	205.1	
112 4,6-Dinitro-2-methylphenol	198	8.143	8.127	0.016	93	1254881	400.0	407.5	
113 N-Nitrosodiphenylamine	169	8.202	8.198	0.004	71	4544513	400.0	347.5	
114 Azobenzene	77	8.243	8.239	0.004	98	3200245	200.0	177.9	
115 1,2-Diphenylhydrazine	77	8.243	8.239	0.004	98	3200245	202.2	179.9	
117 4-Bromophenyl phenyl ether	248	8.572	8.574	-0.002	68	853910	200.0	193.8	
119 Hexachlorobenzene	284	8.660	8.662	-0.002	91	796021	200.0	184.3	
120 Atrazine	200	8.725	8.720	0.005	0	824259	NC	NC	
123 Pentachlorophenol	266	8.848	8.844	0.004	90	1041780	400.0	397.3	
125 Phenanthrene	178	9.066	9.061	0.005	98	4496398	200.0	176.2	
126 Anthracene	178	9.113	9.114	-0.001	98	4627476	200.0	184.3	
128 Carbazole	167	9.265	9.261	0.004	97	4308645	200.0	180.0	
129 Alachlor	188	9.406	9.402	0.004	0	644465	NC	NC	
131 Di-n-butyl phthalate	149	9.606	9.607	-0.001	100	5012016	200.0	191.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.411	10.406	0.005	97	5120280	200.0	191.8	
137 Fluoranthene	202	10.734	10.729	0.005	98	5338233	200.0	182.9	
140 Famphur	218	11.709	11.705	0.004	99	1623784	200.0	193.9	
141 Butyl benzyl phthalate	149	11.827	11.828	-0.001	98	2395728	200.0	206.6	
142 3,3'-Dichlorobenzidine	252	12.960	12.956	0.004	75	1607669	200.0	196.1	
143 Bis(2-ethylhexyl) phthalat	149	13.172	13.173	-0.001	97	3161852	200.0	200.0	
144 Benzo[a]anthracene	228	13.001	12.997	0.004	99	5104014	200.0	197.4	
145 Chrysene	228	13.090	13.079	0.011	97	4995194	200.0	192.4	
147 Di-n-octyl phthalate	149	14.952	14.947	0.005	99	5254600	200.0	201.9	
149 Benzo[b]fluoranthene	252	15.827	15.811	0.016	98	4959636	200.0	197.0	
150 Benzo[k]fluoranthene	252	15.909	15.887	0.022	98	5309837	200.0	195.1	
152 Benzo[a]pyrene	252	16.597	16.580	0.017	79	4627837	200.0	192.4	
154 Indeno[1,2,3-cd]pyrene	276	20.004	19.982	0.022	98	4253123	200.0	213.9	
155 Dibenz(a,h)anthracene	278	20.098	20.081	0.017	94	4215656	200.0	211.5	
156 Benzo[g,h,i]perylene	276	20.744	20.716	0.028	96	4531080	200.0	206.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA200_00020 Amount Added: 200.00 Units: uL

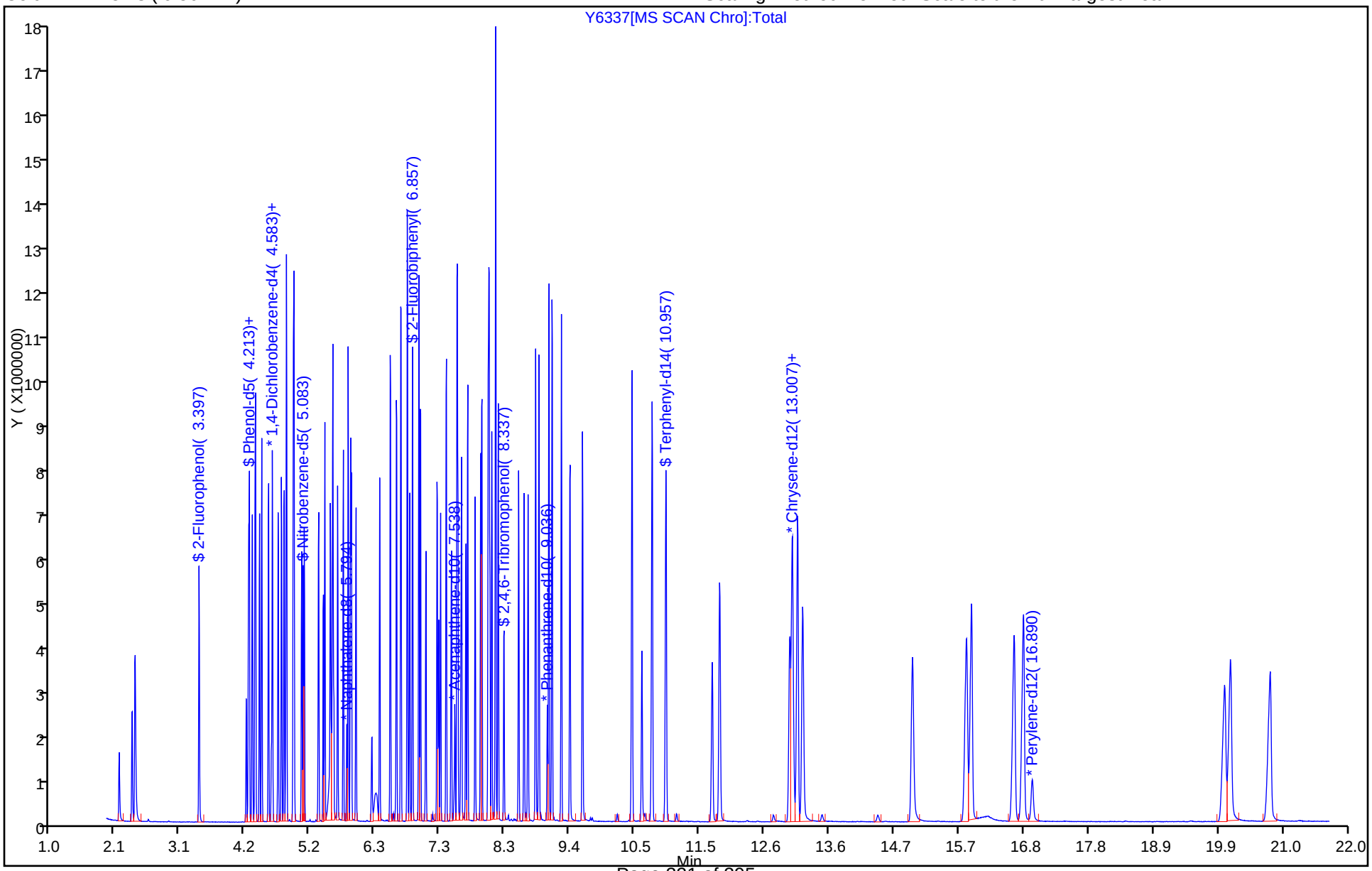
Report Date: 20-Nov-2015 11:00:01 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Injection Date:	14-Nov-2015 12:37:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

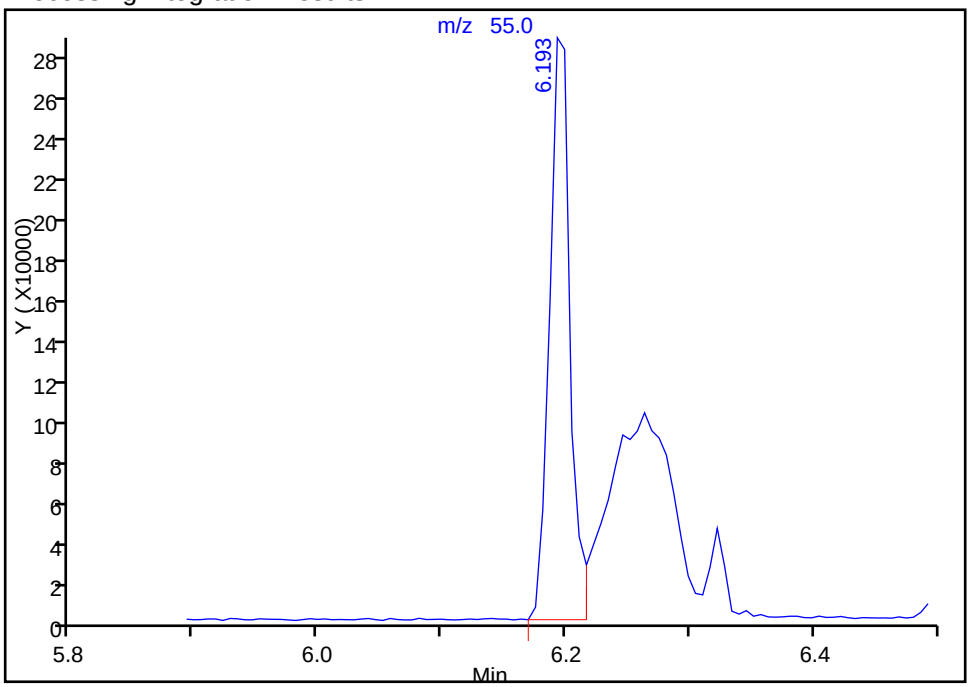
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D
Injection Date: 14-Nov-2015 12:37:30 Instrument ID: SMS_Y
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_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

65 Caprolactam, CAS: 105-60-2

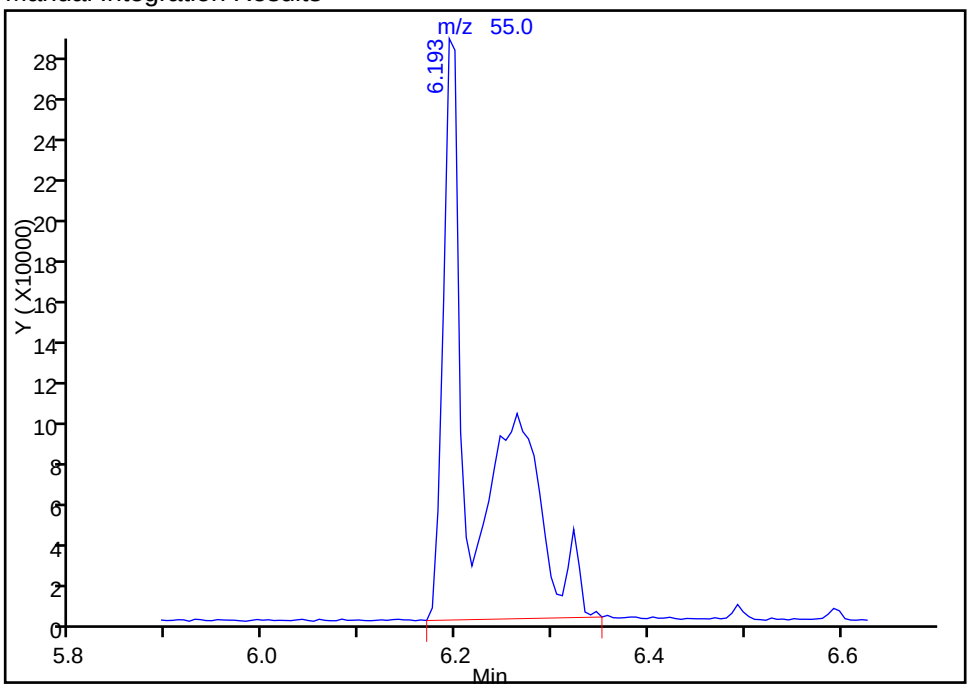
Processing Integration Results

RT: 6.19
Area: 336949
Amount: 122.1166
Amount Units: ug/ml



Manual Integration Results

RT: 6.19
Area: 725313
Amount: 212.5742
Amount Units: ug/ml



Reviewer: kiekeld, 19-Nov-2015 11:17:38
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab Sample ID: ICV 280-304895/11 Calibration Date: 11/14/2015 13:05

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6338.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6028	0.5418		89.9	100	-10.1	30.0
N-Nitrosodimethylamine	Ave	0.9605	0.7787		81.1	100	-18.9	30.0
Pyridine	Ave	1.647	1.554		94.3	100	-5.7	30.0
Phenol	Ave	1.804	1.692	0.8000	93.8	100	-6.2	30.0
Aniline	Ave	2.324	2.113		91.0	100	-9.0	30.0
Bis(2-chloroethyl)ether	Ave	1.425	1.245	0.7000	87.4	100	-12.6	30.0
2-Chlorophenol	Ave	1.381	1.326	0.8000	96.1	100	-3.9	30.0
1,3-Dichlorobenzene	Ave	1.622	1.481		91.3	100	-8.7	30.0
1,4-Dichlorobenzene	Ave	1.661	1.506		90.7	100	-9.3	30.0
Benzyl alcohol	Ave	0.8918	0.8768		98.3	100	-1.7	30.0
1,2-Dichlorobenzene	Ave	1.575	1.440		91.4	100	-8.6	30.0
2-Methylphenol	Ave	1.288	1.236	0.7000	96.0	100	-4.0	30.0
bis (2-chloroisopropyl) ether	Ave	1.963	1.817	0.0100	92.5	100	-7.5	30.0
3 & 4 Methylphenol	Ave	1.327	1.238		93.2	100	-6.8	30.0
3-Methylphenol	Ave	1.327	1.238		93.2	100	-6.8	30.0
4-Methylphenol	Ave	1.327	1.238	0.6000	93.2	100	-6.8	30.0
N-Nitrosodi-n-propylamine	Ave	1.054	0.9866	0.5000	93.6	100	-6.4	30.0
Acetophenone	Ave	1.860	1.723	0.0100	92.7	100	-7.3	30.0
Hexachloroethane	Ave	0.5959	0.5703	0.3000	95.7	100	-4.3	30.0
Nitrobenzene	Ave	0.3805	0.3696		97.1	100	-2.9	30.0
Isophorone	Ave	0.6627	0.6585	0.4000	99.4	100	-0.6	30.0
2-Nitrophenol	Ave	0.1689	0.1816	0.1000	108	100	7.5	30.0
2,4-Dimethylphenol	Ave	0.3435	0.3243	0.2000	94.4	100	-5.6	30.0
Bis(2-chloroethoxy)methane	Ave	0.4190	0.3902	0.3000	93.1	100	-6.9	30.0
Benzoic acid	Lin2		0.2604		210	200	5.2	30.0
2,4-Dichlorophenol	Ave	0.2899	0.2855	0.2000	98.5	100	-1.5	30.0
1,2,4-Trichlorobenzene	Ave	0.3195	0.2999		93.9	100	-6.1	30.0
Naphthalene	Ave	1.012	0.9568	0.7000	94.5	100	-5.5	30.0
4-Chloroaniline	Ave	0.4584	0.4359	0.0100	95.1	100	-4.9	30.0
2,6-Dichlorophenol	Ave	0.2844	0.2811		98.8	100	-1.2	30.0
Hexachlorobutadiene	Ave	0.1768	0.1741	0.0100	98.5	100	-1.5	30.0
4-Chloro-3-methylphenol	Ave	0.2920	0.2947	0.2000	101	100	0.9	30.0
2-Methylnaphthalene	Ave	0.7133	0.6473	0.4000	90.7	100	-9.3	30.0
1-Methylnaphthalene	Ave	0.6320	0.6147		97.3	100	-2.7	30.0
Hexachlorocyclopentadiene	Ave	0.3245	0.3341	0.0500	103	100	3.0	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3171	0.2948	0.0100	93.0	100	-7.0	30.0
2,4,6-Trichlorophenol	Ave	0.3455	0.3485	0.2000	101	100	0.9	30.0
2,4,5-Trichlorophenol	Ave	0.3827	0.3976	0.2000	104	100	3.9	30.0
1,1'-Biphenyl	Ave	1.454	1.380		94.9	100	-5.1	30.0
2-Chloronaphthalene	Ave	1.153	1.083	0.8000	94.0	100	-6.0	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab Sample ID: ICV 280-304895/11 Calibration Date: 11/14/2015 13:05

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6338.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Lin2		0.3593	0.0100	102	100	1.5	30.0
Dimethyl phthalate	Ave	1.265	1.220	0.0100	96.4	100	-3.6	30.0
1,3-Dinitrobenzene	Lin2		0.2055		104	100	3.7	30.0
2,6-Dinitrotoluene	Ave	0.2832	0.2958	0.2000	104	100	4.4	30.0
Acenaphthylene	Ave	1.807	1.668	0.9000	92.3	100	-7.7	30.0
3-Nitroaniline	Ave	0.3437	0.3476	0.0100	101	100	1.1	30.0
Acenaphthene	Ave	1.137	1.060	0.9000	93.2	100	-6.8	30.0
2,4-Dinitrophenol	Lin2		0.1755	0.0100	203	200	1.3	30.0
4-Nitrophenol	Ave	0.1811	0.1901	0.0100	210	200	5.0	30.0
2,4-Dinitrotoluene	Lin2		0.3967	0.2000	100	100	0.0	30.0
Dibenzofuran	Ave	1.591	1.472	0.8000	92.5	100	-7.5	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2756	0.2907	0.0100	105	100	5.5	30.0
Diethyl phthalate	Ave	1.262	1.220	0.0100	96.6	100	-3.4	30.0
4-Chlorophenyl phenyl ether	Ave	0.6385	0.5916	0.4000	92.7	100	-7.3	30.0
Fluorene	Ave	1.317	1.222	0.9000	92.8	100	-7.2	30.0
4-Nitroaniline	Ave	0.3376	0.3406	0.0100	101	100	0.9	30.0
4,6-Dinitro-2-methylphenol	Lin2		0.1384	0.0100	209	200	4.7	30.0
N-Nitrosodiphenylamine	Ave	0.5740	0.5402	0.0100	188	200	-5.9	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	1.354	1.307		97.6	101	-3.5	30.0
Azobenzene	Ave	1.369	1.322		96.5	100	-3.5	30.0
4-Bromophenyl phenyl ether	Ave	0.1934	0.1914	0.1000	99.0	100	-1.0	30.0
Hexachlorobenzene	Ave	0.1896	0.1819	0.1000	95.9	100	-4.1	30.0
Pentachlorophenol	Lin2		0.1230	0.0500	216	200	8.1	30.0
Phenanthrene	Ave	1.120	1.041	0.7000	93.0	100	-7.0	30.0
Anthracene	Ave	1.102	1.071	0.7000	97.2	100	-2.8	30.0
Carbazole	Ave	1.051	0.9895	0.0100	94.2	100	-5.8	30.0
Di-n-butyl phthalate	Ave	1.148	1.170	0.0100	102	100	1.9	30.0
Pyrene	Ave	1.222	1.196	0.6000	97.9	100	-2.1	30.0
Fluoranthene	Ave	1.281	1.216	0.6000	94.9	100	-5.1	30.0
Butyl benzyl phthalate	Lin2		0.5274	0.0100	100	100	0.4	30.0
Benzo[a]anthracene	Ave	1.184	1.170	0.8000	98.9	100	-1.1	30.0
Chrysene	Ave	1.188	1.163	0.7000	97.8	100	-2.2	30.0
Bis(2-ethylhexyl) phthalate	Lin1		0.6720	0.0100	94.7	100	-5.3	30.0
Di-n-octyl phthalate	Lin2		1.092	0.0100	97.7	100	-2.3	30.0
Benzo[b]fluoranthene	Ave	1.241	1.249	0.7000	101	100	0.6	30.0
Benzo[k]fluoranthene	Ave	1.341	1.298	0.7000	96.8	100	-3.2	30.0
Benzo[a]pyrene	Ave	1.186	1.208	0.7000	102	100	1.8	30.0
Indeno[1,2,3-cd]pyrene	Lin2		0.9100	0.5000	101	100	1.0	30.0
Dibenz(a,h)anthracene	Ave	0.9826	1.052	0.4000	107	100	7.0	30.0
Benzo[g,h,i]perylene	Ave	1.084	1.128	0.5000	104	100	4.1	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6338.D
Lims ID: ICV HSL 1
Client ID:
Sample Type: ICV
Inject. Date: 14-Nov-2015 13:05:30 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_Y
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 11:00:00 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 20-Nov-2015 10:59:07

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	4.569	4.567	0.002	96	221679	40.0	40.0	
* 2 Naphthalene-d8	136	5.791	5.789	0.002	100	864064	40.0	40.0	
* 3 Acenaphthene-d10	164	7.541	7.540	0.001	93	505137	40.0	40.0	
* 4 Phenanthrene-d10	188	9.033	9.038	-0.005	98	881628	40.0	40.0	
* 5 Chrysene-d12	240	13.016	13.020	-0.004	99	856972	40.0	40.0	
* 6 Perylene-d12	264	16.882	16.886	-0.004	97	773980	40.0	40.0	
13 1,4-Dioxane	88	2.102	2.100	0.002	96	300256	100.0	89.9	
14 N-Nitrosodimethylamine	74	2.307	2.306	0.001	91	431560	100.0	81.1	
15 Pyridine	79	2.360	2.358	0.002	94	861158	100.0	94.3	
24 Phenol	94	4.205	4.209	-0.004	99	937727	100.0	93.8	
25 Aniline	93	4.258	4.256	0.002	97	1171189	100.0	91.0	
26 Bis(2-chloroethyl)ether	93	4.299	4.297	0.002	97	689725	100.0	87.4	
27 2-Chlorophenol	128	4.375	4.373	0.002	97	735116	100.0	96.1	
28 1,3-Dichlorobenzene	146	4.522	4.520	0.002	97	820646	100.0	91.3	
32 1,4-Dichlorobenzene	146	4.587	4.585	0.002	93	834833	100.0	90.7	
33 Benzyl alcohol	108	4.675	4.673	0.002	91	485914	100.0	98.3	
34 1,2-Dichlorobenzene	146	4.733	4.732	0.001	96	798001	100.0	91.4	
35 2-Methylphenol	108	4.769	4.773	-0.004	97	684960	100.0	96.0	
37 2,2'-oxybis[1-chloropropan	45	4.804	4.808	-0.004	93	1006778	100.0	92.5	
39 3-Methylphenol	108	4.916	4.914	0.002	97	685823	100.0	93.2	
40 3 & 4 Methylphenol	108	4.916	4.914	0.002	97	685823	100.0	93.2	
41 4-Methylphenol	108	4.916	4.914	0.002	97	685823	100.0	93.2	
42 N-Nitrosodi-n-propylamine	70	4.927	4.925	0.002	93	546752	100.0	93.6	
43 Acetophenone	105	4.933	4.931	0.002	96	955131	100.0	92.7	
45 Hexachloroethane	117	5.057	5.061	-0.005	95	316059	100.0	95.7	
47 Nitrobenzene	77	5.098	5.096	0.002	89	798466	100.0	97.1	
48 Isophorone	82	5.327	5.325	0.002	99	1422352	100.0	99.4	
50 2-Nitrophenol	139	5.409	5.407	0.002	95	392294	100.0	107.5	
51 2,4-Dimethylphenol	107	5.432	5.431	0.001	94	700568	100.0	94.4	
52 Bis(2-chloroethoxy)methane	93	5.521	5.525	-0.004	98	842980	100.0	93.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
53 Benzoic acid	105	5.538	5.531	0.007	92	1124978	200.0	210.4	
56 2,4-Dichlorophenol	162	5.638	5.642	-0.004	94	616697	100.0	98.5	
57 1,2,4-Trichlorobenzene	180	5.732	5.730	0.002	93	647808	100.0	93.9	
59 Naphthalene	128	5.808	5.813	-0.005	98	2066762	100.0	94.5	
60 4-Chloroaniline	127	5.844	5.848	-0.004	95	941704	100.0	95.1	
61 2,6-Dichlorophenol	162	5.861	5.860	0.001	97	607180	100.0	98.8	
62 Hexachlorobutadiene	225	5.938	5.936	0.002	97	376106	100.0	98.5	
67 4-Chloro-3-methylphenol	107	6.314	6.318	-0.004	95	636551	100.0	100.9	
70 2-Methylnaphthalene	142	6.490	6.494	-0.004	93	1398161	100.0	90.7	
71 1-Methylnaphthalene	142	6.596	6.594	0.002	93	1327807	100.0	97.3	
72 Hexachlorocyclopentadiene	237	6.660	6.664	-0.004	96	421959	100.0	103.0	
73 1,2,4,5-Tetrachlorobenzene	216	6.666	6.664	0.002	97	636878	100.0	93.0	
74 2,4,6-Trichlorophenol	196	6.766	6.770	-0.004	80	440087	100.0	100.9	
75 2,4,5-Trichlorophenol	196	6.801	6.805	-0.004	95	502096	100.0	103.9	
77 1,1'-Biphenyl	154	6.954	6.952	0.002	96	1742529	100.0	94.9	
78 2-Chloronaphthalene	162	6.977	6.982	-0.005	97	1368265	100.0	94.0	
81 2-Nitroaniline	65	7.066	7.070	-0.004	84	453783	100.0	101.5	
84 Dimethyl phthalate	163	7.248	7.246	0.002	99	1540079	100.0	96.4	
86 1,3-Dinitrobenzene	168	7.271	7.275	-0.004	85	259513	100.0	103.7	
87 2,6-Dinitrotoluene	165	7.306	7.305	0.001	96	373549	100.0	104.4	
89 Acenaphthylene	152	7.395	7.399	-0.005	98	2105874	100.0	92.3	
91 3-Nitroaniline	138	7.477	7.475	0.002	95	438923	100.0	101.1	
95 Acenaphthene	153	7.571	7.575	-0.004	95	1338024	100.0	93.2	
97 2,4-Dinitrophenol	184	7.582	7.581	0.001	91	443248	200.0	202.7	
98 4-Nitrophenol	109	7.635	7.634	0.001	96	480216	200.0	210.0	
100 2,4-Dinitrotoluene	165	7.712	7.710	0.002	94	501024	100.0	100.1	
101 Dibenzofuran	168	7.747	7.745	0.002	96	1858574	100.0	92.5	
105 2,3,4,6-Tetrachlorophenol	232	7.864	7.869	-0.005	75	367089	100.0	105.5	
106 Diethyl phthalate	149	7.953	7.951	0.002	98	1540253	100.0	96.6	
109 4-Chlorophenyl phenyl ethe	204	8.076	8.080	-0.004	95	747131	100.0	92.7	
110 Fluorene	166	8.088	8.092	-0.004	94	1543175	100.0	92.8	
111 4-Nitroaniline	138	8.094	8.092	0.002	86	430100	100.0	100.9	
112 4,6-Dinitro-2-methylphenol	198	8.129	8.127	0.002	86	610053	200.0	209.4	
113 N-Nitrosodiphenylamine	169	8.193	8.198	-0.005	60	2381232	200.0	188.2	
114 Azobenzene	77	8.240	8.239	0.001	99	1668861	100.0	96.5	
115 1,2-Diphenylhydrazine	77	8.240	8.239	0.001	98	1668861	101.1	97.6	
117 4-Bromophenyl phenyl ether	248	8.569	8.574	-0.005	68	421757	100.0	99.0	
119 Hexachlorobenzene	284	8.658	8.662	-0.004	91	400853	100.0	95.9	
123 Pentachlorophenol	266	8.845	8.844	0.001	90	542241	200.0	216.1	
125 Phenanthrene	178	9.057	9.061	-0.004	98	2294497	100.0	93.0	
126 Anthracene	178	9.110	9.114	-0.004	98	2361000	100.0	97.2	
128 Carbazole	167	9.263	9.261	0.002	97	2180931	100.0	94.2	
129 Alachlor	188	9.404	9.402	0.002	0	309389	NC	NC	
131 Di-n-butyl phthalate	149	9.603	9.607	-0.004	100	2579303	100.0	101.9	
136 Pyrene	202	10.402	10.406	-0.004	98	2562553	100.0	97.9	
137 Fluoranthene	202	10.731	10.729	0.002	99	2679685	100.0	94.9	
141 Butyl benzyl phthalate	149	11.824	11.828	-0.004	98	1129943	100.0	100.4	
143 Bis(2-ethylhexyl) phthalat	149	13.169	13.173	-0.004	97	1439674	100.0	94.7	
144 Benzo[a]anthracene	228	12.993	12.997	-0.004	99	2507532	100.0	98.9	
145 Chrysene	228	13.075	13.079	-0.004	97	2491089	100.0	97.8	
147 Di-n-octyl phthalate	149	14.949	14.947	0.002	99	2340249	100.0	97.7	
149 Benzo[b]fluoranthene	252	15.813	15.811	0.002	96	2416327	100.0	100.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
150 Benzo[k]fluoranthene	252	15.889	15.887	0.002	99	2512206	100.0	96.8	
152 Benzo[a]pyrene	252	16.576	16.580	-0.004	79	2336604	100.0	101.8	
154 Indeno[1,2,3-cd]pyrene	276	19.977	19.982	-0.005	98	1949569	100.0	101.0	
155 Dibenz(a,h)anthracene	278	20.071	20.081	-0.010	94	2035211	100.0	107.0	
156 Benzo[g,h,i]perylene	276	20.712	20.716	-0.004	97	2183308	100.0	104.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MS-HSLB1B3SSV_00028 Amount Added: 200.00 Units: uL

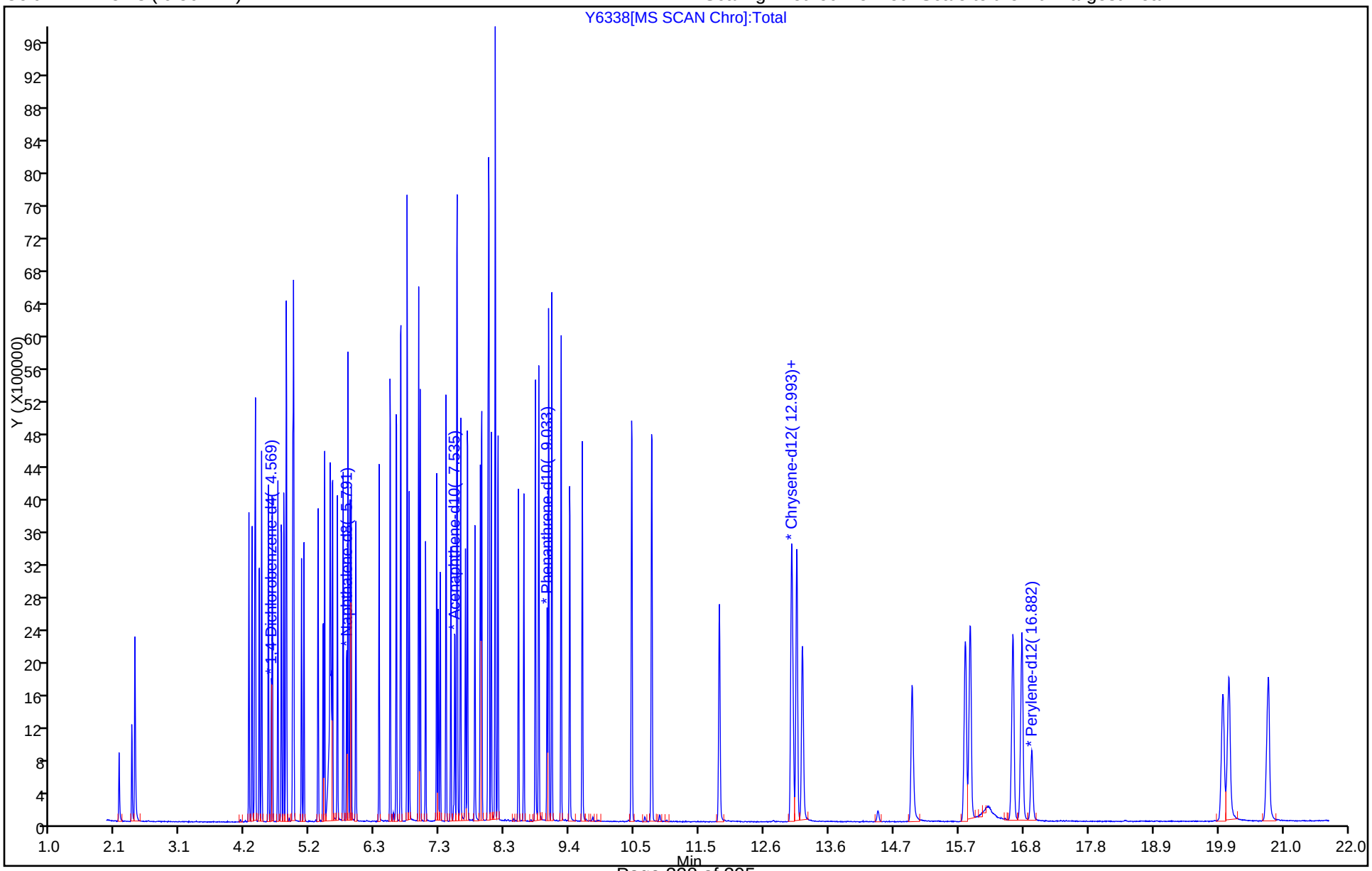
Report Date: 20-Nov-2015 11:00:04 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6338.D

Injection Date:	14-Nov-2015 13:05:30	Instrument ID:	SMS_Y	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_Y8270D	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.: 280-76268-2

SDG No.:

Lab Sample ID: ICV 280-304895/12 Calibration Date: 11/14/2015 13:32

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6339.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Caprolactam	Lin2		0.1312		86.5	100	-13.5	30.0
3,3'-Dichlorobenzidine	Lin1		0.3927	0.0100	106	100	6.0	30.0

Report Date: 20-Nov-2015 11:00:06 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6339.D
Lims ID: ICV HSL 2
Client ID:
Sample Type: ICV
Inject. Date: 14-Nov-2015 13:32:30 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_Y
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 11:00:00 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 20-Nov-2015 10:56:08

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	4.566	4.567	-0.001	97	211222	40.0	40.0	
* 2 Naphthalene-d8	136	5.788	5.789	-0.001	100	831090	40.0	40.0	
* 3 Acenaphthene-d10	164	7.539	7.540	-0.001	93	475657	40.0	40.0	
* 4 Phenanthrene-d10	188	9.031	9.038	-0.007	97	857218	40.0	40.0	
* 5 Chrysene-d12	240	13.008	13.020	-0.012	98	831071	40.0	40.0	
* 6 Perylene-d12	264	16.879	16.886	-0.007	97	736106	40.0	40.0	
65 Caprolactam	55	6.153	6.165	-0.012	80	272582	100.0	86.5	
120 Atrazine	200	8.720	8.720	0.000	0	405987	NC	NC	
142 3,3'-Dichlorobenzidine	252	12.949	12.956	-0.007	74	815973	100.0	106.0	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

MS-HSLB2SSV_00025 Amount Added: 200.00 Units: uL

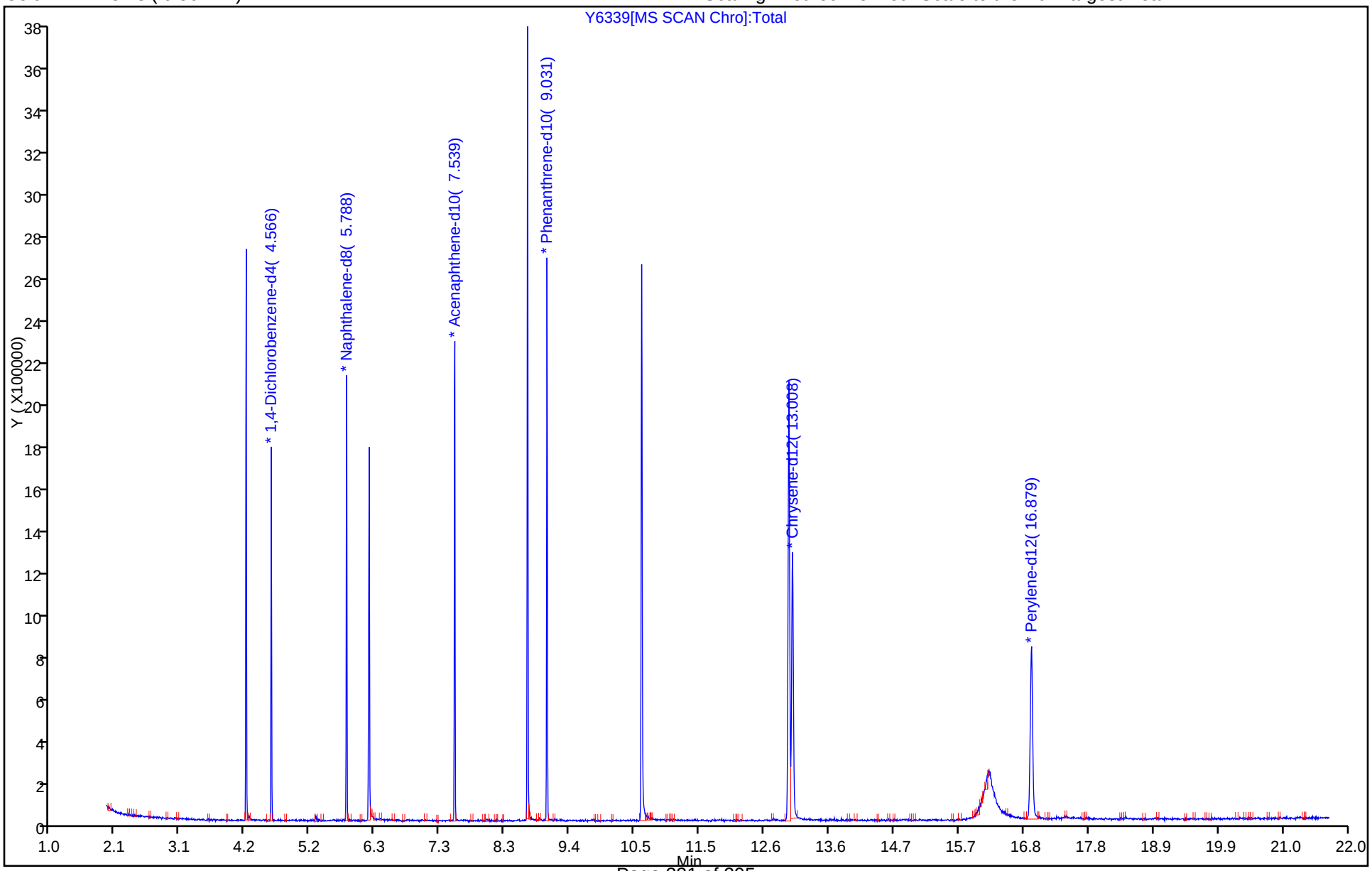
Report Date: 20-Nov-2015 11:00:06 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6339.D

Injection Date:	14-Nov-2015 13:32:30	Instrument ID:	SMS_Y	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_Y8270D	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.: 280-76268-2

SDG No.:

Lab Sample ID: ICV 280-304895/13 Calibration Date: 11/14/2015 13:59

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6340.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Famphur	Lin2		0.3704		97.6	100	-2.4	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6340.D
Lims ID: ICV FAM
Client ID:
Sample Type: ICV
Inject. Date: 14-Nov-2015 13:59:30 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_Y
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 11:00:00 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 20-Nov-2015 10:59:29

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	4.569	4.567	0.002	97	289596	40.0	40.0	
* 2 Naphthalene-d8	136	5.785	5.789	-0.004	99	1153649	40.0	40.0	
* 3 Acenaphthene-d10	164	7.535	7.540	-0.005	93	661833	40.0	40.0	
* 4 Phenanthrene-d10	188	9.033	9.038	-0.005	97	1161821	40.0	40.0	
* 5 Chrysene-d12	240	13.010	13.020	-0.010	97	1233983	40.0	40.0	
* 6 Perylene-d12	264	16.876	16.886	-0.010	96	1015798	40.0	40.0	
140 Famphur	218	11.706	11.705	0.001	99	1142793	100.0	97.6	

Reagents:

MS-FAMSSV_100_00013 Amount Added: 200.00 Units: uL

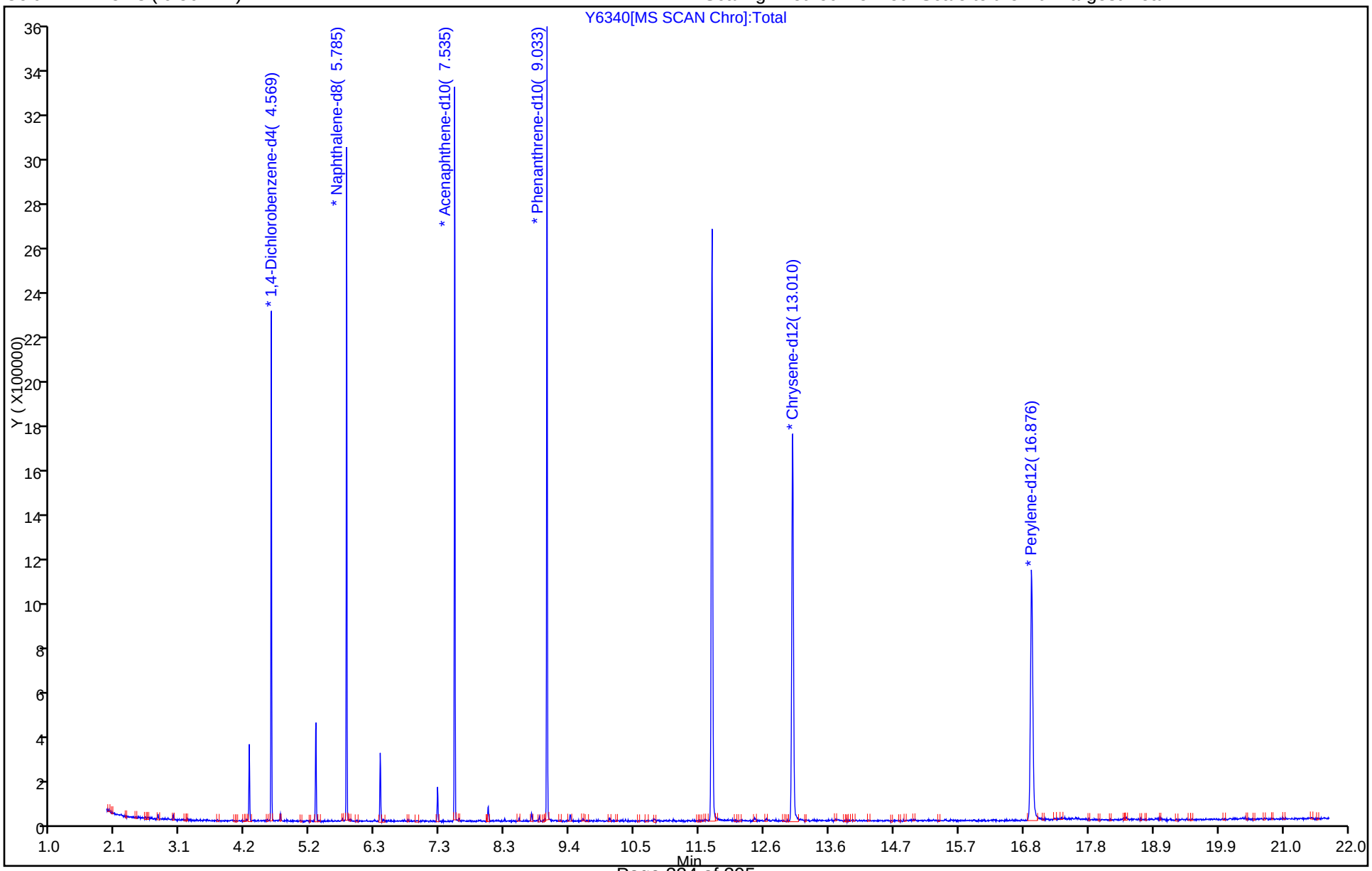
Report Date: 20-Nov-2015 11:00:07 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6340.D

Injection Date:	14-Nov-2015 13:59:30	Instrument ID:	SMS_Y	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_Y8270D	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.: 280-76268-2

SDG No.:

Lab Sample ID: CCV 280-305472/3 Calibration Date: 11/24/2015 12:54

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6534.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6028	0.5667		75.2	80.0	-6.0	20.0
N-Nitrosodimethylamine	Ave	0.9605	0.9639		80.3	80.0	0.3	20.0
Pyridine	Ave	1.647	1.662		80.7	80.0	0.9	20.0
Phenol	Ave	1.804	1.833	0.8000	81.3	80.0	1.7	20.0
Aniline	Ave	2.324	2.324		80.0	80.0	0.0	20.0
Bis(2-chloroethyl)ether	Ave	1.425	1.377	0.7000	77.3	80.0	-3.3	20.0
2-Chlorophenol	Ave	1.381	1.398	0.8000	81.0	80.0	1.3	20.0
1,3-Dichlorobenzene	Ave	1.622	1.606		79.2	80.0	-1.0	20.0
1,4-Dichlorobenzene	Ave	1.661	1.640		79.0	80.0	-1.3	20.0
Benzyl alcohol	Ave	0.8918	0.8895		79.8	80.0	-0.3	20.0
1,2-Dichlorobenzene	Ave	1.575	1.568		79.6	80.0	-0.5	20.0
2-Methylphenol	Ave	1.288	1.296	0.7000	80.5	80.0	0.6	20.0
bis (2-chloroisopropyl) ether	Ave	1.963	1.860	0.0100	75.8	80.0	-5.3	20.0
N-Nitrosodi-n-propylamine	Ave	1.054	1.031	0.5000	78.2	80.0	-2.2	20.0
3 & 4 Methylphenol	Ave	1.327	1.295		78.1	80.0	-2.4	20.0
3-Methylphenol	Ave	1.327	1.295		78.1	80.0	-2.4	20.0
4-Methylphenol	Ave	1.327	1.295	0.6000	78.1	80.0	-2.4	20.0
Acetophenone	Ave	1.860	1.837	0.0100	79.0	80.0	-1.2	20.0
Hexachloroethane	Ave	0.5959	0.6001	0.3000	80.6	80.0	0.7	20.0
Nitrobenzene	Ave	0.3805	0.3828		80.5	80.0	0.6	20.0
Isophorone	Ave	0.6627	0.6576	0.4000	79.4	80.0	-0.8	20.0
2-Nitrophenol	Ave	0.1689	0.1865	0.1000	88.3	80.0	10.4	20.0
2,4-Dimethylphenol	Ave	0.3435	0.3482	0.2000	81.1	80.0	1.4	20.0
Bis(2-chloroethoxy)methane	Ave	0.4190	0.4207	0.3000	80.3	80.0	0.4	20.0
Benzoic acid	Lin2		0.2365		156	160	-2.6	20.0
2,4-Dichlorophenol	Ave	0.2899	0.2966	0.2000	81.8	80.0	2.3	20.0
1,2,4-Trichlorobenzene	Ave	0.3195	0.3237		81.0	80.0	1.3	20.0
Naphthalene	Ave	1.012	1.006	0.7000	79.5	80.0	-0.6	20.0
4-Chloroaniline	Ave	0.4584	0.4680	0.0100	81.7	80.0	2.1	20.0
2,6-Dichlorophenol	Ave	0.2844	0.2882		81.1	80.0	1.3	20.0
Hexachlorobutadiene	Ave	0.1768	0.1760	0.0100	79.6	80.0	-0.5	20.0
Caprolactam	Lin2		0.1513		80.0	80.0	0.0	20.0
4-Chloro-3-methylphenol	Ave	0.2920	0.3045	0.2000	83.4	80.0	4.3	20.0
2-Methylnaphthalene	Ave	0.7133	0.7105	0.4000	79.7	80.0	-0.4	20.0
1-Methylnaphthalene	Ave	0.6320	0.6231		78.9	80.0	-1.4	20.0
Hexachlorocyclopentadiene	Ave	0.3245	0.3447	0.0500	85.0	80.0	6.2	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3171	0.3147	0.0100	79.4	80.0	-0.8	20.0
2,4,6-Trichlorophenol	Ave	0.3455	0.3838	0.2000	88.9	80.0	11.1	20.0
2,4,5-Trichlorophenol	Ave	0.3827	0.4150	0.2000	86.8	80.0	8.5	20.0
1,1'-Biphenyl	Ave	1.454	1.432		78.8	80.0	-1.5	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab Sample ID: CCV 280-305472/3 Calibration Date: 11/24/2015 12:54

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6534.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloronaphthalene	Ave	1.153	1.165	0.8000	80.9	80.0	1.1	20.0
2-Nitroaniline	Lin2		0.3594	0.0100	81.6	80.0	2.0	20.0
Dimethyl phthalate	Ave	1.265	1.278	0.0100	80.8	80.0	1.1	20.0
1,3-Dinitrobenzene	Lin2		0.2015		81.8	80.0	2.2	20.0
2,6-Dinitrotoluene	Ave	0.2832	0.3025	0.2000	85.5	80.0	6.8	20.0
Acenaphthylene	Ave	1.807	1.851	0.9000	81.9	80.0	2.4	20.0
3-Nitroaniline	Ave	0.3437	0.3664	0.0100	85.3	80.0	6.6	20.0
Acenaphthene	Ave	1.137	1.146	0.9000	80.6	80.0	0.8	20.0
2,4-Dinitrophenol	Lin2		0.1729	0.0100	162	160	1.5	20.0
4-Nitrophenol	Ave	0.1811	0.1908	0.0100	169	160	5.4	20.0
2,4-Dinitrotoluene	Lin2		0.4119	0.2000	83.4	80.0	4.2	20.0
Dibenzofuran	Ave	1.591	1.584	0.8000	79.6	80.0	-0.4	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2756	0.3030	0.0100	88.0	80.0	10.0	20.0
Diethyl phthalate	Ave	1.262	1.293	0.0100	82.0	80.0	2.5	20.0
4-Chlorophenyl phenyl ether	Ave	0.6385	0.6381	0.4000	79.9	80.0	-0.0	20.0
Fluorene	Ave	1.317	1.318	0.9000	80.1	80.0	0.1	20.0
4-Nitroaniline	Ave	0.3376	0.3835	0.0100	90.9	80.0	13.6	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1263	0.0100	155	160	-2.9	20.0
N-Nitrosodiphenylamine	Ave	0.5740	0.5631	0.0100	157	160	-1.9	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	1.354	1.351		80.7	80.9	-0.2	20.0
Azobenzene	Ave	1.369	1.366		79.8	80.0	-0.2	20.0
4-Bromophenyl phenyl ether	Ave	0.1934	0.1920	0.1000	79.4	80.0	-0.7	20.0
Hexachlorobenzene	Ave	0.1896	0.1913	0.1000	80.7	80.0	0.9	20.0
Pentachlorophenol	Lin2		0.1091	0.0500	155	160	-3.2	20.0
Phenanthrene	Ave	1.120	1.086	0.7000	77.6	80.0	-3.0	20.0
Anthracene	Ave	1.102	1.090	0.7000	79.1	80.0	-1.1	20.0
Carbazole	Ave	1.051	1.053	0.0100	80.1	80.0	0.2	20.0
Di-n-butyl phthalate	Ave	1.148	1.218	0.0100	84.9	80.0	6.1	20.0
Pyrene	Ave	1.222	1.238	0.6000	81.1	80.0	1.3	20.0
Fluoranthene	Ave	1.281	1.302	0.6000	81.3	80.0	1.6	20.0
Famphur	Lin2		0.4002		84.6	80.0	5.7	20.0
Butyl benzyl phthalate	Lin2		0.5492	0.0100	84.0	80.0	5.0	20.0
3,3'-Dichlorobenzidine	Lin1		0.4101	0.0100	89.0	80.0	11.2	20.0
Benzo[a]anthracene	Ave	1.184	1.228	0.8000	83.0	80.0	3.8	20.0
Chrysene	Ave	1.188	1.197	0.7000	80.6	80.0	0.7	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.7048	0.0100	80.0	80.0	0.0	20.0
Di-n-octyl phthalate	Lin2		1.088	0.0100	80.1	80.0	0.2	20.0
Benzo[b]fluoranthene	Ave	1.241	1.315	0.7000	84.8	80.0	6.0	20.0
Benzo[k]fluoranthene	Ave	1.341	1.440	0.7000	85.9	80.0	7.3	20.0
Benzo[a]pyrene	Ave	1.186	1.345	0.7000	90.8	80.0	13.5	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Lab Sample ID: CCV 280-305472/3 Calibration Date: 11/24/2015 12:54

Instrument ID: SMS_Y Calib Start Date: 11/14/2015 09:27

GC Column: Vf-5MS (30.25) ID: 0.25(mm) Calib End Date: 11/14/2015 12:37

Lab File ID: Y6534.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	Lin2		0.9154	0.5000	81.6	80.0	2.1	20.0
Dibenz(a,h)anthracene	Ave	0.9826	1.077	0.4000	87.7	80.0	9.6	20.0
Benzo[g,h,i]perylene	Ave	1.084	1.210	0.5000	89.3	80.0	11.6	20.0
2-Fluorophenol (Surr)	Ave	1.392	1.404		80.7	80.0	0.9	20.0
Phenol-d5 (Surr)	Ave	1.727	1.714		79.4	80.0	-0.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3786	0.3600		76.1	80.0	-4.9	20.0
2-Fluorobiphenyl	Ave	1.364	1.310		76.8	80.0	-4.0	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1442	0.1671		92.7	80.0	15.9	20.0
Terphenyl-d14 (Surr)	Ave	0.8400	0.7855		74.8	80.0	-6.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6534.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 24-Nov-2015 12:54:30 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_Y
Sublist: chrom-SMS_Y8270D*sub7

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 24-Nov-2015 14:10:18

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	4.513	4.513	0.000	97	199630	40.0	40.0	
* 2 Naphthalene-d8	136	5.740	5.740	0.000	100	799605	40.0	40.0	
* 3 Acenaphthene-d10	164	7.491	7.491	0.000	94	467157	40.0	40.0	
* 4 Phenanthrene-d10	188	8.983	8.983	0.000	97	846091	40.0	40.0	
* 5 Chrysene-d12	240	12.907	12.907	0.000	98	850772	40.0	40.0	
* 6 Perylene-d12	264	16.737	16.737	0.000	97	732902	40.0	40.0	
$ 7 2-Fluorophenol	112	3.332	3.332	0.000	91	560513	80.0	80.7	
$ 8 Phenol-d5	99	4.160	4.160	0.000	98	684525	80.0	79.4	
$ 9 Nitrobenzene-d5	82	5.029	5.029	0.000	90	575673	80.0	76.1	
$ 10 2-Fluorobiphenyl	172	6.809	6.809	0.000	100	1224014	80.0	76.8	
$ 11 2,4,6-Tribromophenol	330	8.284	8.284	0.000	91	156073	80.0	92.7	
$ 12 Terphenyl-d14	244	10.875	10.875	0.000	99	1336480	80.0	74.8	
13 1,4-Dioxane	88	1.951	1.951	0.000	95	226248	80.0	75.2	
14 N-Nitrosodimethylamine	74	2.175	2.175	0.000	92	384831	80.0	80.3	
15 Pyridine	79	2.227	2.227	0.000	96	663537	80.0	80.7	
24 Phenol	94	4.172	4.172	0.000	99	732019	80.0	81.3	
25 Aniline	93	4.201	4.201	0.000	98	928003	80.0	80.0	
26 Bis(2-chloroethyl)ether	93	4.242	4.242	0.000	98	549813	80.0	77.3	
27 2-Chlorophenol	128	4.325	4.325	0.000	97	558198	80.0	81.0	
28 1,3-Dichlorobenzene	146	4.466	4.466	0.000	97	641179	80.0	79.2	
32 1,4-Dichlorobenzene	146	4.530	4.530	0.000	94	654637	80.0	79.0	
33 Benzyl alcohol	108	4.630	4.630	0.000	92	355158	80.0	79.8	
34 1,2-Dichlorobenzene	146	4.677	4.677	0.000	97	625875	80.0	79.6	
35 2-Methylphenol	108	4.742	4.742	0.000	95	517274	80.0	80.5	
37 2,2'-oxybis[1-chloropropan	45	4.759	4.759	0.000	91	742458	80.0	75.8	
39 3-Methylphenol	108	4.883	4.883	0.000	70	517017	80.0	78.1	
40 3 & 4 Methylphenol	108	4.883	4.883	0.000	70	517017	80.0	78.1	
41 4-Methylphenol	108	4.883	4.883	0.000	65	517017	80.0	78.1	
42 N-Nitrosodi-n-propylamine	70	4.877	4.877	0.000	91	411573	80.0	78.2	
43 Acetophenone	105	4.883	4.883	0.000	85	733593	80.0	79.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.006	5.006	0.000	95	239605	80.0	80.6	
47 Nitrobenzene	77	5.053	5.053	0.000	87	612124	80.0	80.5	
48 Isophorone	82	5.276	5.276	0.000	99	1051621	80.0	79.4	
50 2-Nitrophenol	139	5.364	5.364	0.000	94	298200	80.0	88.3	
51 2,4-Dimethylphenol	107	5.400	5.400	0.000	94	556850	80.0	81.1	
52 Bis(2-chloroethoxy)methane	93	5.476	5.476	0.000	99	672834	80.0	80.3	
53 Benzoic acid	105	5.505	5.505	0.000	89	756354	160.0	155.9	
56 2,4-Dichlorophenol	162	5.605	5.605	0.000	94	474319	80.0	81.8	
57 1,2,4-Trichlorobenzene	180	5.687	5.687	0.000	94	517650	80.0	81.0	
59 Naphthalene	128	5.764	5.764	0.000	98	1609111	80.0	79.5	
60 4-Chloroaniline	127	5.805	5.805	0.000	96	748413	80.0	81.7	
61 2,6-Dichlorophenol	162	5.823	5.823	0.000	97	460878	80.0	81.1	
62 Hexachlorobutadiene	225	5.893	5.893	0.000	97	281440	80.0	79.6	
65 Caprolactam	55	6.157	6.157	0.000	81	241917	80.0	80.0	M
67 4-Chloro-3-methylphenol	107	6.292	6.292	0.000	95	486878	80.0	83.4	
70 2-Methylnaphthalene	142	6.451	6.451	0.000	92	1136210	80.0	79.7	
71 1-Methylnaphthalene	142	6.551	6.551	0.000	93	996496	80.0	78.9	
72 Hexachlorocyclopentadiene	237	6.616	6.616	0.000	95	322093	80.0	85.0	
73 1,2,4,5-Tetrachlorobenzene	216	6.621	6.621	0.000	97	503322	80.0	79.4	
74 2,4,6-Trichlorophenol	196	6.733	6.733	0.000	91	358562	80.0	88.9	
75 2,4,5-Trichlorophenol	196	6.774	6.774	0.000	96	387762	80.0	86.8	
77 1,1'-Biphenyl	154	6.909	6.909	0.000	96	1338299	80.0	78.8	
78 2-Chloronaphthalene	162	6.933	6.933	0.000	97	1088937	80.0	80.9	
81 2-Nitroaniline	65	7.027	7.027	0.000	90	335790	80.0	81.6	
84 Dimethyl phthalate	163	7.203	7.203	0.000	99	1194065	80.0	80.8	
86 1,3-Dinitrobenzene	168	7.232	7.232	0.000	88	188273	80.0	81.8	
87 2,6-Dinitrotoluene	165	7.262	7.262	0.000	96	282665	80.0	85.5	
89 Acenaphthylene	152	7.350	7.350	0.000	98	1729700	80.0	81.9	
91 3-Nitroaniline	138	7.438	7.438	0.000	96	342312	80.0	85.3	
95 Acenaphthene	153	7.526	7.526	0.000	94	1070319	80.0	80.6	
97 2,4-Dinitrophenol	184	7.538	7.538	0.000	87	323038	160.0	162.4	
98 4-Nitrophenol	109	7.620	7.620	0.000	93	356531	160.0	168.6	
100 2,4-Dinitrotoluene	165	7.667	7.667	0.000	95	384863	80.0	83.4	
101 Dibenzofuran	168	7.696	7.696	0.000	96	1479858	80.0	79.6	
105 2,3,4,6-Tetrachlorophenol	232	7.826	7.826	0.000	74	283116	80.0	88.0	
106 Diethyl phthalate	149	7.908	7.908	0.000	98	1208468	80.0	82.0	
109 4-Chlorophenyl phenyl ethe	204	8.031	8.031	0.000	92	596152	80.0	79.9	
110 Fluorene	166	8.043	8.043	0.000	94	1231824	80.0	80.1	
111 4-Nitroaniline	138	8.055	8.055	0.000	87	358313	80.0	90.9	
112 4,6-Dinitro-2-methylphenol	198	8.084	8.084	0.000	87	427340	160.0	155.4	
113 N-Nitrosodiphenylamine	169	8.149	8.149	0.000	61	1905557	160.0	156.9	
114 Azobenzene	77	8.190	8.190	0.000	99	1276348	80.0	79.8	
115 1,2-Diphenylhydrazine	77	8.190	8.190	0.000	98	1276348	80.9	80.7	
117 4-Bromophenyl phenyl ether	248	8.525	8.525	0.000	68	324953	80.0	79.4	
119 Hexachlorobenzene	284	8.607	8.607	0.000	92	323773	80.0	80.7	
120 Atrazine	200	8.677	8.677	0.000	0	364000	NC	NC	
123 Pentachlorophenol	266	8.801	8.801	0.000	90	369221	160.0	154.9	
125 Phenanthrene	178	9.012	9.012	0.000	98	1837756	80.0	77.6	
126 Anthracene	178	9.059	9.059	0.000	98	1844007	80.0	79.1	
128 Carbazole	167	9.218	9.218	0.000	97	1781329	80.0	80.1	
129 Alachlor	188	9.377	9.377	0.000	0	1095	NC	NC	
131 Di-n-butyl phthalate	149	9.553	9.553	0.000	100	2061547	80.0	84.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.334	10.334	0.000	98	2106746	80.0	81.1	
137 Fluoranthene	202	10.657	10.657	0.000	99	2203701	80.0	81.3	
140 Famphur	218	11.615	11.615	0.000	99	681010	80.0	84.6	
141 Butyl benzyl phthalate	149	11.738	11.738	0.000	98	934520	80.0	84.0	
142 3,3'-Dichlorobenzidine	252	12.848	12.848	0.000	74	697804	80.0	89.0	
143 Bis(2-ethylhexyl) phthalat	149	13.060	13.060	0.000	97	1199206	80.0	80.0	
144 Benzo[a]anthracene	228	12.889	12.889	0.000	99	2089335	80.0	83.0	
145 Chrysene	228	12.972	12.972	0.000	97	2037218	80.0	80.6	
147 Di-n-octyl phthalate	149	14.816	14.816	0.000	99	1850748	80.0	80.1	
149 Benzo[b]fluoranthene	252	15.674	15.674	0.000	98	1927815	80.0	84.8	
150 Benzo[k]fluoranthene	252	15.744	15.744	0.000	98	2110188	80.0	85.9	
152 Benzo[a]pyrene	252	16.573	16.573	0.000	78	1971890	80.0	90.8	
154 Indeno[1,2,3-cd]pyrene	276	19.804	19.804	0.000	98	1557661	80.0	81.6	
155 Dibenz(a,h)anthracene	278	19.903	19.903	0.000	94	1578536	80.0	87.7	
156 Benzo[g,h,i]perylene	276	20.532	20.532	0.000	97	1773581	80.0	89.3	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MS-HSLACCV080_00069 Amount Added: 200.00 Units: uL

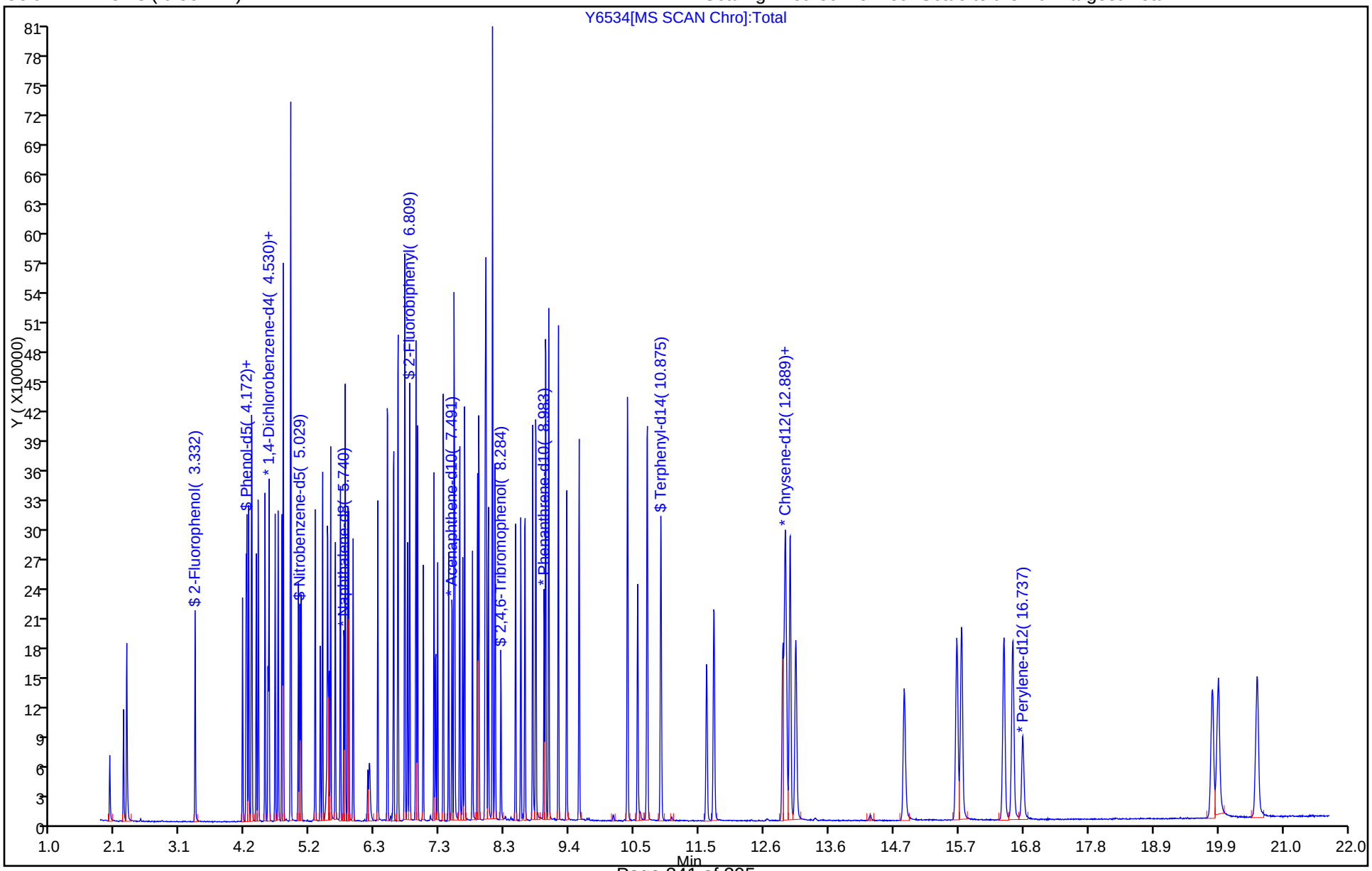
Report Date: 25-Nov-2015 11:54:28 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6534.D

Injection Date:	24-Nov-2015 12:54:30	Instrument ID:	SMS_Y	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_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

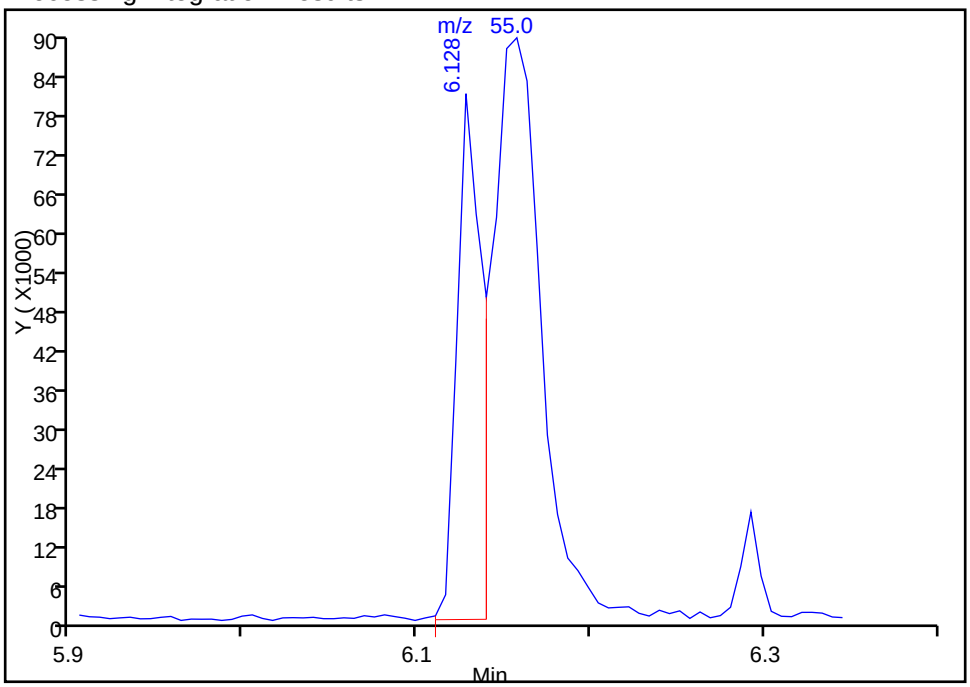
TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6534.D				
Injection Date:	24-Nov-2015 12:54:30	Instrument ID:	SMS_Y		
Lims ID:	CCV HSL				
Client ID:					
Operator ID:	KIEKELD	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

65 Caprolactam, CAS: 105-60-2

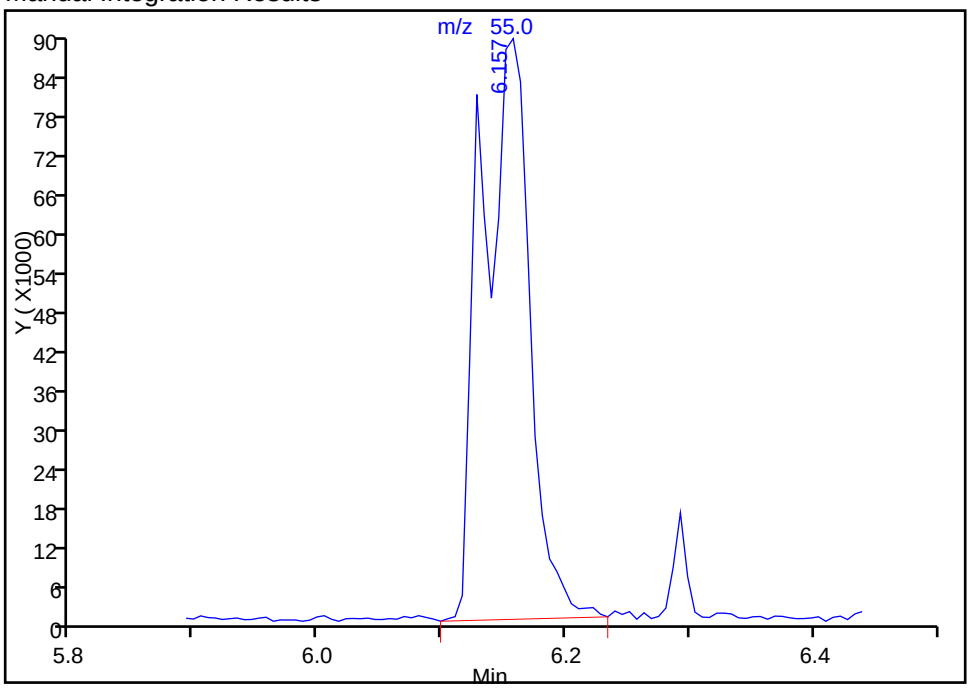
Processing Integration Results

RT: 6.13
Area: 83356
Amount: 29.072731
Amount Units: ug/ml



Manual Integration Results

RT: 6.16
Area: 241917
Amount: 80.009973
Amount Units: ug/ml



Reviewer: kiekeld, 24-Nov-2015 14:10:18
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6329.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 14-Nov-2015 09:15:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 20-Nov-2015 10:59:47 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: kiekeld Date: 19-Nov-2015 11:04:12

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	3.726	3.726	0.000	89	264406	NR	NR	
36 Benzidine_T	184	4.806	4.806	0.000	99	2176558	NR	NR	
159 DFTPP									
160 4,4'-DDE	246	4.948	4.948	0.000	38	1263	NR	NR	
161 4,4'-DDD	235	5.228	5.228	0.000	96	14517	NR	NR	
162 4,4'-DDT	235	5.446	5.446	0.000	98	897575	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

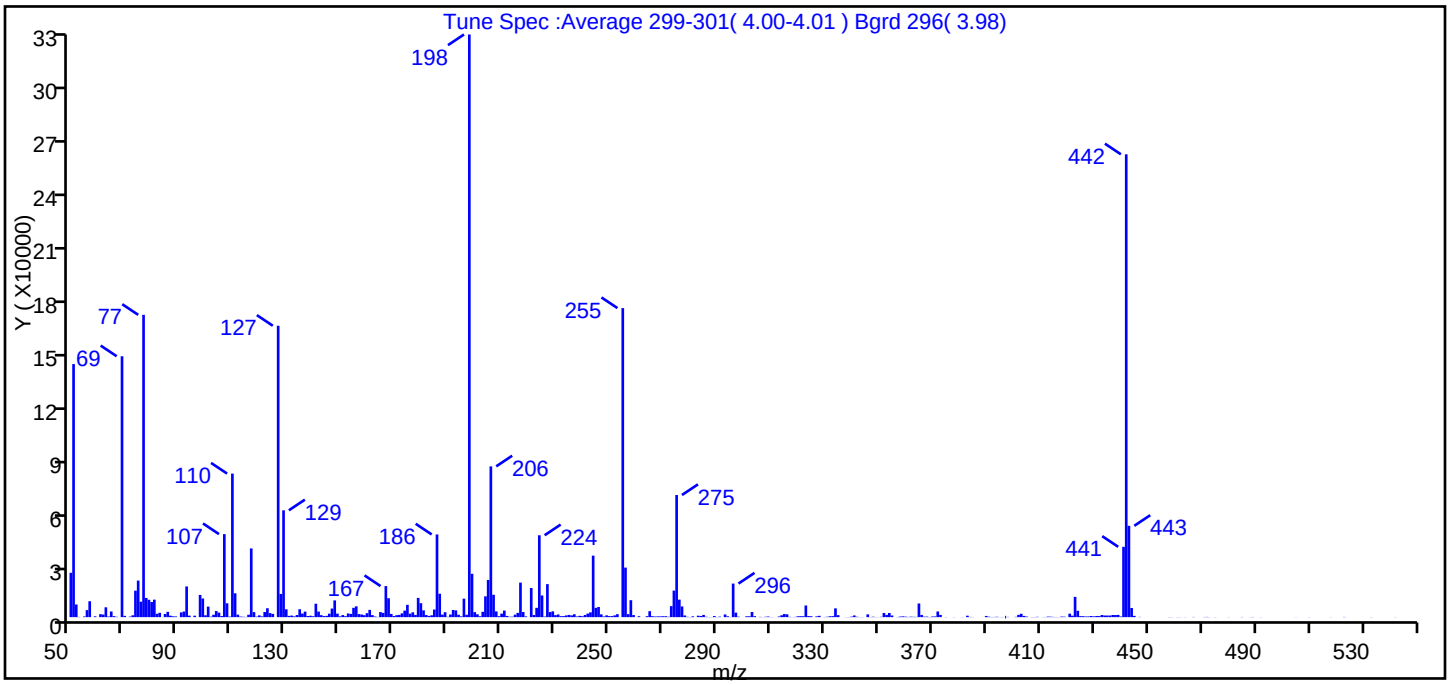
MS-DFTPP_00040 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6329.D
Injection Date: 14-Nov-2015 09:15:30 Instrument ID: SMS_Y
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_Y8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

159 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	43.4
68	<2% of mass 69	0.0 (0.0)
69	Present	44.8
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	50.0
197	<1% of mass 198	0.4
199	5-9% of mass 198	7.4
275	10-30% of mass 198	21.0
365	>1% of mass 198	2.3
441	Present but less than mass 443	12.1 (77.0)
442	>40% of mass 198	79.4
443	17-23% of mass 442	15.7 (19.7)

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6329.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 14-Nov-2015 09:15:30
Spectrum: Tune Spec :Average 299-301(4.00-4.01) Bgrd 296(3.98)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 378

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	24744	154.00	1824	250.00	576	360.00	292
51.00	141248	155.00	5209	251.00	586	361.00	123
52.00	7068	156.00	6023	252.00	978	362.00	256
53.00	122	157.00	1697	253.00	1648	363.00	188
55.00	374	158.00	1469	255.00	172480	364.00	130
56.00	3929	159.00	1097	256.00	27648	365.00	7617
57.00	8871	160.00	2215	257.00	1676	366.00	1225
59.00	456	161.00	4064	258.00	9459	367.00	263
61.00	1652	162.00	1130	259.00	1159	368.00	297
62.00	1449	163.00	347	261.00	498	369.00	86
63.00	5491	164.00	123	264.00	543	370.00	350
64.00	344	165.00	2822	265.00	3321	371.00	389
65.00	3165	166.00	2377	266.00	529	372.00	3159
66.00	569	167.00	17344	267.00	361	373.00	1244
67.00	198	168.00	10553	268.00	429	375.00	85
69.00	145600	169.00	1806	269.00	446	378.00	68
70.00	728	170.00	626	270.00	508	381.00	60
72.00	315	171.00	1091	271.00	519	383.00	805
73.00	1026	172.00	1269	272.00	192	384.00	134
74.00	14789	173.00	2130	273.00	6138	385.00	57
75.00	20400	174.00	3617	274.00	14814	390.00	674
76.00	8615	175.00	6874	275.00	68160	391.00	254
77.00	168704	176.00	1927	276.00	9765	392.00	99
78.00	10717	177.00	2699	277.00	5968	393.00	115
79.00	9681	178.00	1250	278.00	930	394.00	213
80.00	8456	179.00	10741	279.00	204	395.00	51
81.00	9774	180.00	7789	280.00	80	396.00	97
82.00	1873	181.00	3790	281.00	458	397.00	1
83.00	2428	182.00	1162	283.00	807	398.00	139
84.00	38	183.00	692	284.00	646	401.00	168
85.00	1748	184.00	1027	285.00	1255	402.00	1280
86.00	2967	185.00	4242	286.00	226	403.00	1882
87.00	812	186.00	46144	287.00	91	404.00	694

Report Date: 20-Nov-2015 10:59:47 Chrom Revision: 2.2 08-Oct-2015 07:17:48
Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6329.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 14-Nov-2015 09:15:30
Spectrum: Tune Spec :Average 299-301(4.00-4.01) Bgrd 296(3.98)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 378

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	466	187.00	13057	288.00	80	405.00	329
89.00	390	188.00	1406	289.00	617	407.00	88
91.00	2654	189.00	2756	290.00	96	408.00	91
92.00	3111	190.00	182	291.00	283	409.00	186
93.00	17136	191.00	1480	293.00	1496	411.00	50
94.00	843	192.00	4010	294.00	475	412.00	94
96.00	809	193.00	3758	295.00	65	413.00	312
98.00	12399	194.00	1342	296.00	18736	414.00	237
99.00	10402	195.00	440	297.00	2522	415.00	130
100.00	1036	196.00	10316	298.00	260	416.00	91
101.00	5881	197.00	1315	301.00	469	417.00	68
102.00	260	198.00	325184	302.00	495	418.00	322
103.00	1347	199.00	24192	303.00	2852	419.00	269
104.00	3409	200.00	2804	304.00	560	421.00	1939
105.00	2507	201.00	1589	306.00	156	422.00	807
106.00	616	202.00	489	307.00	52	423.00	11306
107.00	46336	203.00	2980	308.00	198	424.00	3542
108.00	7725	204.00	11622	309.00	346	425.00	575
109.00	300	205.00	20768	310.00	73	426.00	524
110.00	80120	206.00	84144	311.00	51	427.00	375
111.00	13305	207.00	12494	312.00	14	428.00	410
112.00	1390	208.00	3192	313.00	357	429.00	626
113.00	325	209.00	545	314.00	1032	430.00	448
114.00	208	210.00	1962	315.00	1736	431.00	656
115.00	137	211.00	3664	316.00	1585	432.00	587
116.00	1339	212.00	680	317.00	168	433.00	1198
117.00	38336	213.00	232	318.00	54	434.00	919
118.00	2808	214.00	258	319.00	122	435.00	922
119.00	285	215.00	1380	320.00	464	436.00	894
120.00	985	216.00	2380	321.00	552	437.00	1208
121.00	408	217.00	19272	322.00	510	438.00	1194
122.00	2857	218.00	2844	323.00	6507	439.00	1248
123.00	4972	219.00	420	324.00	594	440.00	359
124.00	2248	221.00	16262	325.00	490	441.00	39248

Report Date: 20-Nov-2015 10:59:47 Chrom Revision: 2.2 08-Oct-2015 07:17:48
Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6329.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 14-Nov-2015 09:15:30
Spectrum: Tune Spec :Average 299-301(4.00-4.01) Bgrd 296(3.98)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 378

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1814	222.00	1184	327.00	437	442.00	258304
127.00	162624	223.00	5205	328.00	736	443.00	50960
128.00	12946	224.00	45704	330.00	105	444.00	5114
129.00	59624	225.00	12088	331.00	223	445.00	705
130.00	4384	226.00	319	332.00	509	447.00	128
131.00	705	227.00	18432	333.00	554	458.00	73
132.00	883	228.00	2851	334.00	4911	459.00	68
133.00	421	229.00	3238	335.00	1108	461.00	62
134.00	1182	230.00	1122	338.00	78	462.00	60
135.00	4412	231.00	1487	339.00	81	464.00	55
136.00	2002	232.00	549	340.00	301	467.00	116
137.00	3093	233.00	591	341.00	944	471.00	89
138.00	633	234.00	952	342.00	217	472.00	137
139.00	803	235.00	1251	343.00	63	473.00	57
140.00	489	236.00	975	344.00	62	475.00	70
141.00	7499	237.00	1615	346.00	1549	480.00	56
142.00	3090	238.00	377	347.00	76	485.00	100
143.00	1096	239.00	734	348.00	232	488.00	53
144.00	606	240.00	511	349.00	64	489.00	101
145.00	728	241.00	1215	350.00	55	492.00	58
146.00	1927	242.00	1990	351.00	182	505.00	51
147.00	4808	243.00	2682	352.00	2339	510.00	65
148.00	9351	244.00	34328	353.00	1264	518.00	58
149.00	1960	245.00	5196	354.00	2320	523.00	118
150.00	450	246.00	5663	355.00	914	533.00	69
151.00	1157	247.00	1555	357.00	84	542.00	55
152.00	537	248.00	382	358.00	319		
153.00	2039	249.00	996	359.00	437		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6533.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 24-Nov-2015 12:39:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:24 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 24-Nov-2015 14:11:36

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	3.678	3.678	0.000	90	257772	NR	NR	
36 Benzidine_T	184	4.764	4.764	0.000	99	2246529	NR	NR	
159 DFTPP									
160 4,4'-DDE	246	4.895	4.895	0.000	23	1550	NR	NR	
161 4,4'-DDD	235	5.175	5.175	0.000	91	15771	NR	NR	
162 4,4'-DDT	235	5.387	5.387	0.000	98	914583	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

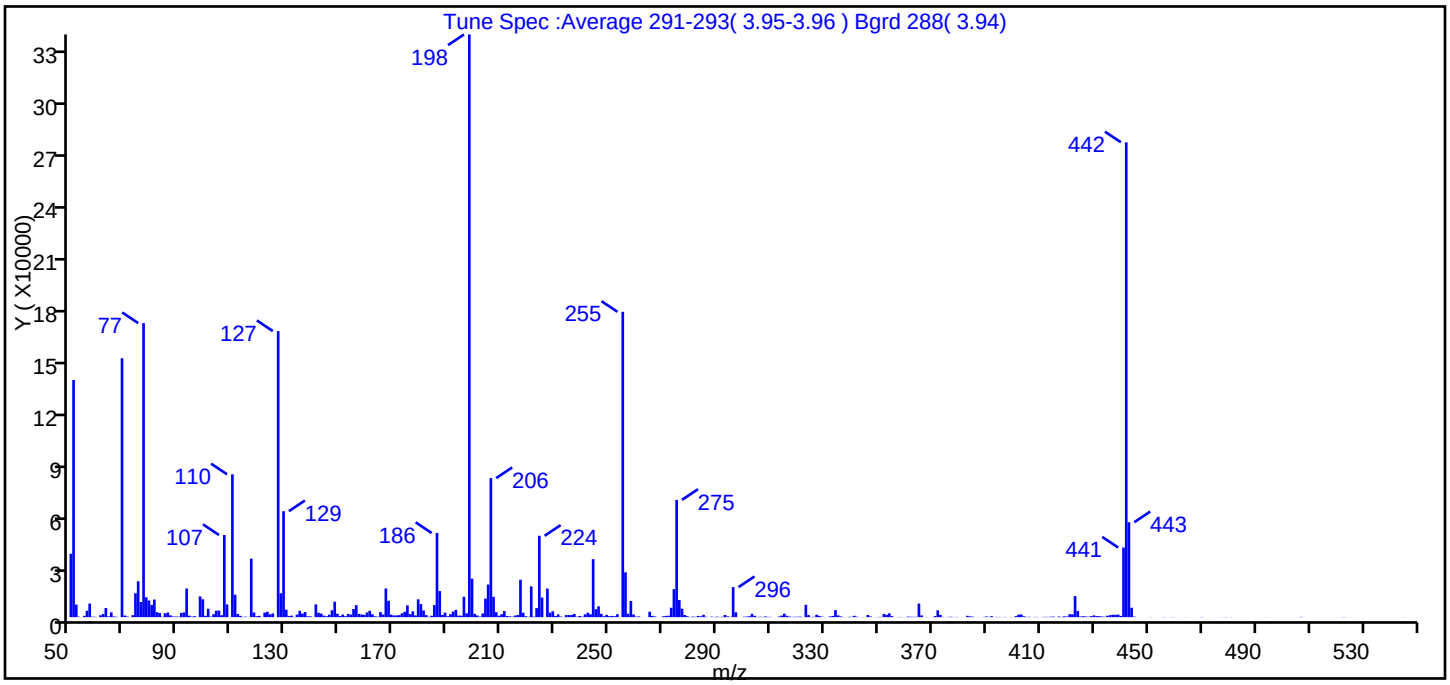
MS-DFTPP_00040 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6533.D
Injection Date: 24-Nov-2015 12:39:30 Instrument ID: SMS_Y
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_Y8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

159 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	40.7
68	<2% of mass 69	0.0 (0.0)
69	Present	44.4
70	<2% of mass 69	0.3 (0.6)
127	40-60% of mass 198	49.1
197	<1% of mass 198	0.6
199	5-9% of mass 198	6.6
275	10-30% of mass 198	20.1
365	>1% of mass 198	2.3
441	Present but less than mass 443	11.9 (73.3)
442	>40% of mass 198	81.5
443	17-23% of mass 442	16.3 (20.0)

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6533.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 24-Nov-2015 12:39:30
Spectrum: Tune Spec :Average 291-293(3.95-3.96) Bgrd 288(3.94)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	36256	153.00	1788	247.00	1882	354.00	2153
51.00	135552	154.00	1486	248.00	570	355.00	621
52.00	7178	155.00	4646	249.00	1310	357.00	63
53.00	255	156.00	6861	250.00	582	358.00	128
55.00	756	157.00	1879	251.00	705	359.00	79
56.00	3596	158.00	1488	252.00	539	360.00	66
57.00	7760	159.00	1305	253.00	1638	361.00	333
58.00	274	160.00	2711	255.00	174528	362.00	223
59.00	206	161.00	3638	256.00	25608	363.00	183
61.00	1079	162.00	1647	257.00	1925	364.00	191
62.00	1778	163.00	481	258.00	9235	365.00	7761
63.00	5197	164.00	262	259.00	1515	366.00	994
64.00	447	165.00	2894	260.00	292	368.00	115
65.00	2743	166.00	1485	261.00	417	369.00	31
66.00	414	167.00	16360	264.00	5	370.00	61
67.00	212	168.00	9341	265.00	3101	371.00	637
69.00	147968	169.00	1406	266.00	713	372.00	3940
70.00	941	170.00	988	267.00	387	373.00	1258
71.00	366	171.00	978	270.00	480	374.00	146
72.00	53	172.00	1154	271.00	713	376.00	153
73.00	1137	173.00	2189	272.00	824	377.00	238
74.00	13664	174.00	3036	273.00	5377	378.00	63
75.00	20504	175.00	6728	274.00	16004	379.00	138
76.00	8659	176.00	1743	275.00	67024	381.00	51
77.00	168064	177.00	3340	276.00	9781	383.00	772
78.00	11346	178.00	999	277.00	4868	384.00	470
79.00	9512	179.00	10206	278.00	1210	385.00	287
80.00	6981	180.00	7454	279.00	522	386.00	61
81.00	10062	181.00	3840	280.00	128	387.00	50
82.00	2804	182.00	1158	281.00	331	389.00	115
83.00	2373	183.00	223	282.00	175	390.00	394
84.00	240	184.00	798	283.00	681	391.00	171
85.00	2214	185.00	6922	284.00	498	392.00	571

Report Date: 25-Nov-2015 11:54:25 Chrom Revision: 2.2 08-Oct-2015 07:17:48
Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6533.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 24-Nov-2015 12:39:30
Spectrum: Tune Spec :Average 291-293(3.95-3.96) Bgrd 288(3.94)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	2645	186.00	48080	285.00	1330	394.00	152
87.00	1035	187.00	14900	286.00	231	395.00	99
88.00	376	188.00	1247	288.00	275	396.00	60
89.00	341	189.00	2595	289.00	90	397.00	142
90.00	280	190.00	518	290.00	313	399.00	83
91.00	2395	191.00	1704	291.00	91	401.00	582
92.00	2691	192.00	3173	292.00	242	402.00	1394
93.00	16351	193.00	4168	293.00	1234	403.00	1550
94.00	817	194.00	885	294.00	445	404.00	510
95.00	314	195.00	865	295.00	192	405.00	129
96.00	552	196.00	11645	296.00	17152	406.00	196
98.00	11846	197.00	2164	297.00	2749	408.00	112
99.00	10225	198.00	333056	298.00	11	409.00	145
100.00	748	199.00	21968	300.00	217	411.00	131
101.00	4803	200.00	1883	301.00	350	412.00	176
102.00	307	201.00	936	302.00	534	413.00	145
103.00	1667	202.00	321	303.00	1868	414.00	245
104.00	3709	203.00	2081	304.00	766	415.00	317
105.00	3753	204.00	10579	305.00	113	417.00	367
106.00	1093	205.00	18648	306.00	223	418.00	159
107.00	46944	206.00	79488	307.00	155	419.00	476
108.00	7283	207.00	11601	308.00	424	420.00	369
110.00	81640	208.00	2834	309.00	155	421.00	1655
111.00	12801	209.00	792	310.00	153	422.00	1609
112.00	1801	210.00	1679	313.00	375	423.00	12029
113.00	731	211.00	3485	314.00	874	424.00	3453
114.00	163	212.00	645	315.00	1972	425.00	364
115.00	281	213.00	477	316.00	783	426.00	553
117.00	33440	214.00	238	317.00	333	427.00	408
118.00	2650	215.00	918	318.00	159	428.00	211
119.00	535	216.00	1218	319.00	232	429.00	606
120.00	737	217.00	21400	320.00	228	430.00	979
122.00	2591	218.00	2511	321.00	308	431.00	593
123.00	3068	219.00	521	322.00	70	432.00	582

Report Date: 25-Nov-2015 11:54:25 Chrom Revision: 2.2 08-Oct-2015 07:17:48
Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6533.D\SMS_Y8270D.rslt\spectra.d
Injection Date: 24-Nov-2015 12:39:30
Spectrum: Tune Spec :Average 291-293(3.95-3.96) Bgrd 288(3.94)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1629	220.00	201	323.00	7039	433.00	373
125.00	2095	221.00	17584	324.00	1188	434.00	216
127.00	163520	222.00	289	325.00	115	435.00	798
128.00	13669	223.00	5156	326.00	243	436.00	1157
129.00	60568	224.00	46520	327.00	1384	437.00	1372
130.00	4254	225.00	11208	328.00	756	438.00	1326
131.00	687	226.00	34	329.00	304	439.00	1458
132.00	875	227.00	16323	330.00	96	440.00	726
133.00	106	228.00	2549	332.00	443	441.00	39776
134.00	1459	229.00	3363	333.00	665	442.00	271424
135.00	3622	230.00	673	334.00	4028	443.00	54248
136.00	2050	231.00	1579	335.00	993	444.00	5381
137.00	2905	232.00	330	336.00	431	445.00	312
138.00	491	233.00	68	337.00	67	451.00	88
139.00	446	234.00	1190	339.00	185	456.00	129
141.00	7282	235.00	1181	340.00	205	459.00	119
142.00	2484	236.00	1219	341.00	772	460.00	56
143.00	2036	237.00	1806	342.00	259	464.00	55
144.00	851	238.00	262	344.00	100	470.00	112
145.00	541	239.00	686	345.00	52	478.00	55
146.00	1371	240.00	270	346.00	1236	479.00	103
147.00	3926	241.00	1569	347.00	424	481.00	77
148.00	8842	242.00	2546	349.00	72	494.00	50
149.00	1943	243.00	1622	350.00	130	507.00	182
150.00	654	244.00	33144	351.00	168	522.00	54
151.00	1491	245.00	4533	352.00	1808	523.00	134
152.00	561	246.00	6175	353.00	1321	545.00	54

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-76268-2

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-304711/1-A

Matrix: Water | Lab File ID: Y6541.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2015 15:56

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.: 305472 | 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)	100		42-131
321-60-8	2-Fluorobiphenyl	88		48-120
367-12-4	2-Fluorophenol (Surr)	88		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	90		42-120
4165-62-2	Phenol-d5 (Surr)	90		45-124
1718-51-0	Terphenyl-d14 (Surr)	93		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6541.D
Lims ID: MB 280-304711/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Nov-2015 15:56:30 ALS Bottle#: 9 Worklist Smp#: 19
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB280-302550_1-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:39:16

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	4.512	4.513	-0.001	97	196190	40.0	40.0	
* 2 Naphthalene-d8	136	5.740	5.740	0.000	99	773326	40.0	40.0	
* 3 Acenaphthene-d10	164	7.491	7.491	0.000	92	461730	40.0	40.0	
* 4 Phenanthrene-d10	188	8.983	8.983	0.000	97	836282	40.0	40.0	
* 5 Chrysene-d12	240	12.895	12.907	-0.012	98	834137	40.0	40.0	
* 6 Perylene-d12	264	16.725	16.737	-0.012	97	694735	40.0	40.0	
$ 7 2-Fluorophenol	112	3.331	3.332	-0.001	92	599122	100.0	87.8	
$ 8 Phenol-d5	99	4.160	4.160	0.000	98	765694	100.0	90.4	
$ 9 Nitrobenzene-d5	82	5.029	5.029	0.000	89	655890	100.0	89.6	
$ 10 2-Fluorobiphenyl	172	6.803	6.809	-0.006	99	1391684	100.0	88.4	
$ 11 2,4,6-Tribromophenol	330	8.284	8.284	0.000	93	166833	100.0	100.2	
$ 12 Terphenyl-d14	244	10.868	10.875	-0.006	100	1631846	100.0	93.2	
13 1,4-Dioxane	88		1.951					ND	
14 N-Nitrosodimethylamine	74		2.175					ND	
15 Pyridine	79		2.227					ND	
16 2-Picoline	93		2.869					ND	
17 N-Nitrosomethylethylamine	88		2.940					ND	
18 Methyl methanesulfonate	80		3.198					ND	
19 N-Nitrosodiethylamine	102		3.574					ND	
20 Ethyl methanesulfonate	79		3.827					ND	
21 Pentachlorophenol_T	266		3.678					ND	
22 Benzaldehyde	106		3.961					ND	
23 Pentachloroethane	117		4.326					ND	
24 Phenol	94		4.172					ND	
25 Aniline	93		4.201					ND	
26 Bis(2-chloroethyl)ether	93		4.242					ND	
27 2-Chlorophenol	128		4.325					ND	
28 1,3-Dichlorobenzene	146		4.466					ND	
29 N-Nitrosopyrrolidine	100		4.920					ND	
30 N-Nitrosomorpholine	116		4.955					ND	
31 2-Toluidine	106		4.996					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		4.530					ND	
33 Benzyl alcohol	108		4.630					ND	
34 1,2-Dichlorobenzene	146		4.677					ND	
35 2-Methylphenol	108		4.742					ND	
36 Benzidine_T	184		4.764					ND	
37 2,2'-oxybis[1-chloropropan	45		4.759					ND	
38 N-Nitrosopiperidine	114		5.261					ND	
39 3-Methylphenol	108		4.883					ND	
40 3 & 4 Methylphenol	108		4.883					ND	
41 4-Methylphenol	108		4.883					ND	
42 N-Nitrosodi-n-propylamine	70		4.877					ND	
43 Acetophenone	105		4.883					ND	
44 o,o',o''-Triethylphosphoro	198		5.531					ND	
45 Hexachloroethane	117		5.006					ND	
46 alpha,alpha-Dimethyl phene	58		5.695					ND	
47 Nitrobenzene	77		5.053					ND	
48 Isophorone	82		5.276					ND	
49 Hexachloropropene	213		5.942					ND	
50 2-Nitrophenol	139		5.364					ND	
51 2,4-Dimethylphenol	107		5.400					ND	
52 Bis(2-chloroethoxy)methane	93		5.476					ND	
53 Benzoic acid	105		5.505					ND	
54 N-Nitrosodi-n-butylamine	84		6.207					ND	
55 p-Phenylene diamine	108		6.218					ND	
56 2,4-Dichlorophenol	162		5.605					ND	
57 1,2,4-Trichlorobenzene	180		5.687					ND	
58 Safrole, Total	162		6.430					ND	
59 Naphthalene	128		5.764					ND	
60 4-Chloroaniline	127		5.805					ND	
61 2,6-Dichlorophenol	162		5.823					ND	
62 Hexachlorobutadiene	225		5.893					ND	
63 Isosafrole Peak 1	162	6.803	6.718	0.085	45	437			NC
64 Isosafrole Peak 2	104	6.944	6.947	-0.003	1	65			NC
65 Caprolactam	55		6.157					ND	
66 1-Chloronaphthalene	162		7.041					ND	
67 4-Chloro-3-methylphenol	107		6.292					ND	
68 1,4-Naphthoquinone	158		7.170					ND	
69 1,4-Dinitrobenzene	168		7.217					ND	
70 2-Methylnaphthalene	142		6.451					ND	
71 1-Methylnaphthalene	142		6.551					ND	
72 Hexachlorocyclopentadiene	237		6.616					ND	
73 1,2,4,5-Tetrachlorobenzene	216		6.621					ND	
74 2,4,6-Trichlorophenol	196		6.733					ND	
75 2,4,5-Trichlorophenol	196		6.774					ND	
76 Pentachlorobenzene	250		7.746					ND	
77 1,1'-Biphenyl	154		6.909					ND	
78 2-Chloronaphthalene	162		6.933					ND	
79 1-Naphthylamine	143		7.840					ND	
80 2-Naphthylamine	143		7.922					ND	
81 2-Nitroaniline	65		7.027					ND	
82 Thionazin	97		8.057					ND	
83 N-Nitro-o-toluidine	152		8.110					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
84 Dimethyl phthalate	163		7.203					ND	
85 Diphenylamine	169		8.216					ND	
86 1,3-Dinitrobenzene	168		7.232					ND	
87 2,6-Dinitrotoluene	165		7.262					ND	
88 Sulfotepp	97		8.363					ND	
89 Acenaphthylene	152		7.350					ND	
90 Diallate Peak 1	86	8.513	8.510	0.003	15	597			NC
91 3-Nitroaniline	138		7.438					ND	
92 Phorate	121		8.516					ND	
93 1,3,5-Trinitrobenzene	213		8.451					ND	
94 Phenacetin	108		8.510					ND	
95 Acenaphthene	153		7.526					ND	
96 Diallate Peak 2	86		8.598					ND	
97 2,4-Dinitrophenol	184		7.538					ND	
98 4-Nitrophenol	109		7.620					ND	
99 Dimethoate	87		8.674					ND	
100 2,4-Dinitrotoluene	165		7.667					ND	
101 Dibenzofuran	168		7.696					ND	
102 4-Aminobiphenyl	169		8.851					ND	
103 Pronamide	173		8.909					ND	
104 Pentachloronitrobenzene	237		8.892					ND	
105 2,3,4,6-Tetrachlorophenol	232		7.826					ND	
106 Diethyl phthalate	149		7.908					ND	
107 Disulfoton	88		9.039					ND	
108 Dinoseb	211		9.044					ND	
109 4-Chlorophenyl phenyl ethe	204		8.031					ND	
110 Fluorene	166		8.043					ND	
111 4-Nitroaniline	138		8.055					ND	
112 4,6-Dinitro-2-methylphenol	198		8.084					ND	
113 N-Nitrosodiphenylamine	169		8.149					ND	
114 Azobenzene	77		8.190					ND	
115 1,2-Diphenylhydrazine	77		8.190					ND	
116 Methyl parathion	109		9.415					ND	
117 4-Bromophenyl phenyl ether	248		8.525					ND	
118 Ethyl Parathion	109		9.832					ND	
119 Hexachlorobenzene	284		8.607					ND	
120 Atrazine	200		8.677					ND	
121 4-Nitroquinoline-1-oxide	190		9.873					ND	
122 Methapyrilene	97		9.967					ND	
123 Pentachlorophenol	266		8.801					ND	
124 Isodrin	193		10.237					ND	
125 Phenanthrene	178		9.012					ND	
126 Anthracene	178		9.059					ND	
127 Benzidine	184	10.874	10.625	0.249	55	25307			NC
128 Carbazole	167		9.218					ND	
129 Alachlor	188	9.382	9.377	0.005	0	66			NC
130 Aramite Peak 1	185	10.868	10.925	-0.057	46	4809			NC
131 Di-n-butyl phthalate	149		9.553					ND	
132 Aramite Peak 2	185	10.868	11.048	-0.180	50	4809			NC
133 p-Dimethylamino azobenzene	120		11.201					ND	
134 Chlorobenzilate	251		11.283					ND	
135 3,3'-Dimethylbenzidine	212		11.800					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		10.334					ND	
137 Fluoranthene	202		10.657					ND	
138 2-Acetylaminofluorene	181		12.305					ND	
139 4,4'-Methylene bis(2-chlor	231		12.963					ND	
140 Famphur	218		11.615					ND	
141 Butyl benzyl phthalate	149		11.738					ND	
142 3,3'-Dichlorobenzidine	252		12.848					ND	
143 Bis(2-ethylhexyl) phthalat	149		13.060					ND	
144 Benzo[a]anthracene	228		12.889					ND	
145 Chrysene	228		12.972					ND	
146 7,12-Dimethylbenz(a)anthra	256		15.825					ND	
147 Di-n-octyl phthalate	149		14.816					ND	
148 Hexachlorophene	196		15.289					ND	
149 Benzo[b]fluoranthene	252		15.674					ND	
150 Benzo[k]fluoranthene	252		15.744					ND	
151 3-Methylcholanthrene	268		17.805					ND	
152 Benzo[a]pyrene	252		16.573					ND	
153 Dibenz[a,j]acridine	279		19.509					ND	
154 Indeno[1,2,3-cd]pyrene	276		19.804					ND	
155 Dibenz(a,h)anthracene	278		19.903					ND	
156 Benzo[g,h,i]perylene	276		20.532					ND	
S 163 Aramite, Total	185		15.047					ND	
S 164 Isosafrole	162		15.047					ND	
S 165 Diallate	86		15.047					ND	
157 Total Cresols	1		0.000					ND	
158 Tetraethyl Pyrophosphate (	1		0.000					ND	
160 4,4'-DDE	246		4.895					ND	
161 4,4'-DDD	235		5.175					ND	
162 4,4'-DDT	235		5.387					ND	
S 166 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

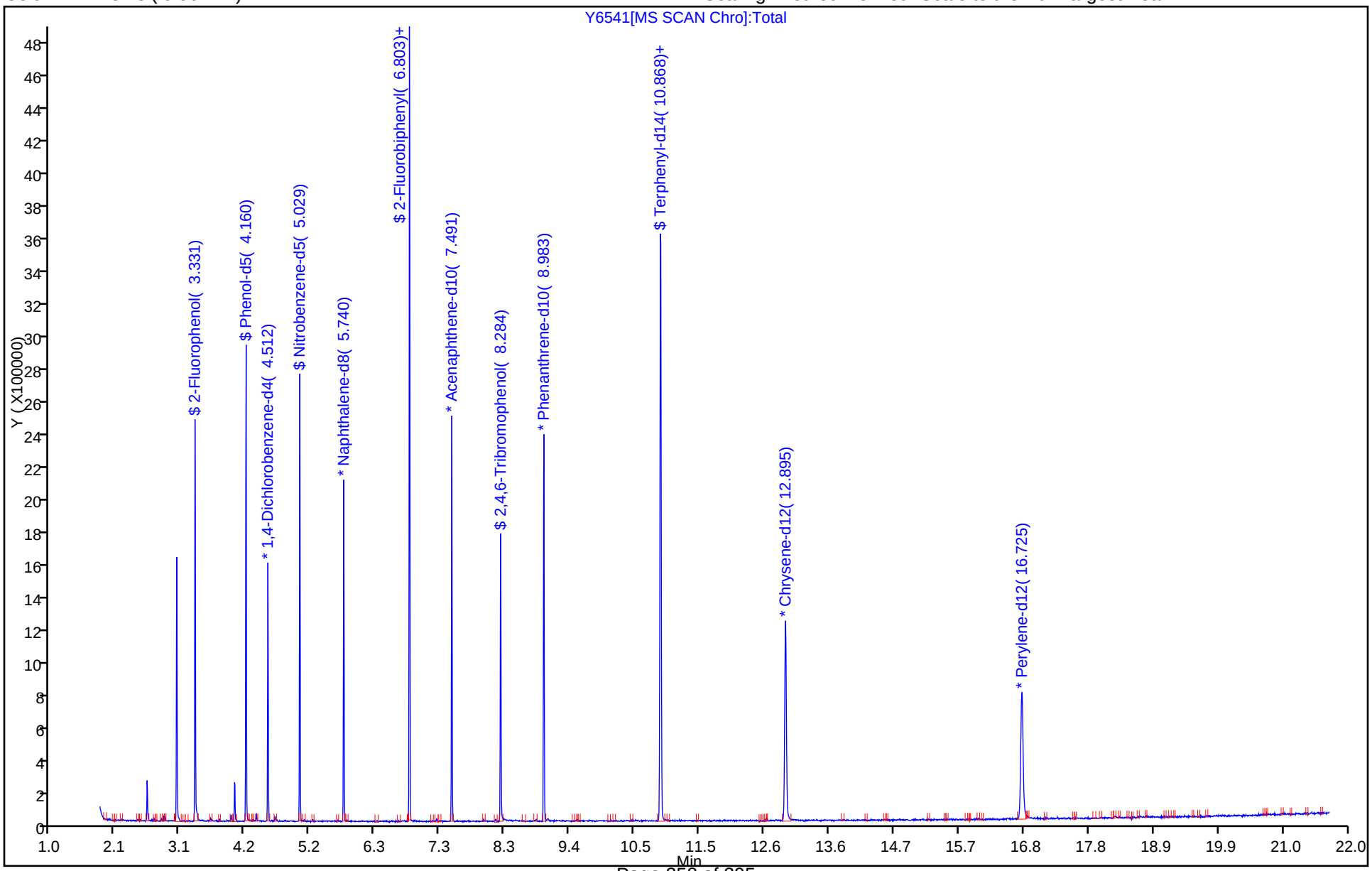
Report Date: 25-Nov-2015 16:00:41 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6541.D

Injection Date:	24-Nov-2015 15:56:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	MB 280-304711/1-A			Worklist Smp#:	19
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMS_Y8270D	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.: 280-76268-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-304711/2-A

Matrix: Water | Lab File ID: Y6542.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2015 16:24

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	68.7		5.0	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	101		42-131
321-60-8	2-Fluorobiphenyl	82		48-120
367-12-4	2-Fluorophenol (Surr)	86		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		42-120
4165-62-2	Phenol-d5 (Surr)	87		45-124
1718-51-0	Terphenyl-d14 (Surr)	84		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6542.D
Lims ID: LCS 280-304711/2-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Nov-2015 16:24:30 ALS Bottle#: 10 Worklist Smp#: 20
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS280-302550_2-A
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:41:57

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	4.514	4.513	0.001	95	204436	40.0	40.0	
* 2 Naphthalene-d8	136	5.741	5.740	0.001	99	831006	40.0	40.0	
* 3 Acenaphthene-d10	164	7.492	7.491	0.001	93	493096	40.0	40.0	
* 4 Phenanthrene-d10	188	8.984	8.983	0.001	97	864187	40.0	40.0	
* 5 Chrysene-d12	240	12.902	12.907	-0.005	98	896549	40.0	40.0	
* 6 Perylene-d12	264	16.726	16.737	-0.011	97	784625	40.0	40.0	
$ 7 2-Fluorophenol	112	3.333	3.332	0.001	91	614122	100.0	86.3	
$ 8 Phenol-d5	99	4.161	4.160	0.001	98	766288	100.0	86.8	
$ 9 Nitrobenzene-d5	82	5.030	5.029	0.001	88	656350	100.0	83.5	
$ 10 2-Fluorobiphenyl	172	6.805	6.809	-0.004	100	1379403	100.0	82.0	
$ 11 2,4,6-Tribromophenol	330	8.285	8.284	0.001	92	179174	100.0	100.8	
$ 12 Terphenyl-d14	244	10.870	10.875	-0.004	99	1573854	100.0	83.6	
13 1,4-Dioxane	88	1.952	1.951	0.001	94	179103	80.0	58.1	
14 N-Nitrosodimethylamine	74	2.176	2.175	0.001	92	329229	80.0	67.1	
15 Pyridine	79	2.223	2.227	-0.005	96	484287	80.0	57.5	
22 Benzaldehyde	106		3.961				ND	ND	
24 Phenol	94	4.173	4.172	0.001	100	640436	80.0	69.5	
25 Aniline	93	4.202	4.201	0.001	98	651625	80.0	54.9	
26 Bis(2-chloroethyl)ether	93	4.243	4.242	0.001	98	492973	80.0	67.7	
27 2-Chlorophenol	128	4.326	4.325	0.001	97	500797	80.0	71.0	
28 1,3-Dichlorobenzene	146	4.467	4.466	0.001	97	451923	80.0	54.5	
32 1,4-Dichlorobenzene	146	4.531	4.530	0.001	94	475233	80.0	56.0	
33 Benzyl alcohol	108	4.631	4.630	0.001	93	333202	80.0	73.1	
34 1,2-Dichlorobenzene	146	4.678	4.677	0.001	97	451090	80.0	56.0	
35 2-Methylphenol	108	4.737	4.742	-0.005	97	455333	80.0	69.2	
37 2,2'-oxybis[1-chloropropan	45	4.754	4.759	-0.005	90	648844	80.0	64.7	
39 3-Methylphenol	108	4.884	4.883	0.001	71	457545	80.0	67.5	
40 3 & 4 Methylphenol	108	4.884	4.883	0.001	71	457545	80.0	67.5	
41 4-Methylphenol	108	4.884	4.883	0.001	67	457545	80.0	67.5	
42 N-Nitrosodi-n-propylamine	70	4.878	4.877	0.001	91	374827	80.0	69.6	
43 Acetophenone	105	4.884	4.883	0.001	85	643445	80.0	67.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.007	5.006	0.001	96	165991	80.0	54.5	
47 Nitrobenzene	77	5.048	5.053	-0.005	88	535679	80.0	67.8	
48 Isophorone	82	5.277	5.276	0.001	99	924043	80.0	67.1	
50 2-Nitrophenol	139	5.359	5.364	-0.005	95	264115	80.0	75.3	
51 2,4-Dimethylphenol	107	5.395	5.400	-0.005	94	430635	80.0	60.4	
52 Bis(2-chloroethoxy)methane	93	5.477	5.476	0.001	99	602536	80.0	69.2	
53 Benzoic acid	105	5.471	5.505	-0.034	90	261152	80.0	59.2	
56 2,4-Dichlorophenol	162	5.600	5.605	-0.005	96	413084	80.0	68.6	
57 1,2,4-Trichlorobenzene	180	5.683	5.687	-0.004	94	385937	80.0	58.1	
59 Naphthalene	128	5.765	5.764	0.001	97	1300137	80.0	61.8	
60 4-Chloroaniline	127	5.806	5.805	0.001	96	496086	80.0	52.1	
61 2,6-Dichlorophenol	162	5.824	5.823	0.001	98	425993	80.0	72.1	
62 Hexachlorobutadiene	225	5.894	5.893	0.001	97	196596	80.0	53.5	
65 Caprolactam	55	6.123	6.157	-0.034	79	214847	80.0	68.7	M
67 4-Chloro-3-methylphenol	107	6.288	6.292	-0.004	96	435609	80.0	71.8	
70 2-Methylnaphthalene	142	6.446	6.451	-0.005	93	935934	80.0	63.2	
71 1-Methylnaphthalene	142	6.546	6.551	-0.005	93	860207	80.0	65.5	
72 Hexachlorocyclopentadiene	237	6.617	6.616	0.001	94	62743	80.0	15.7	
73 1,2,4,5-Tetrachlorobenzene	216	6.617	6.621	-0.004	97	411891	80.0	62.5	
74 2,4,6-Trichlorophenol	196	6.728	6.733	-0.005	92	331330	80.0	77.8	
75 2,4,5-Trichlorophenol	196	6.769	6.774	-0.005	96	350103	80.0	74.2	
77 1,1'-Biphenyl	154	6.910	6.909	0.001	95	1144521	80.0	63.9	
78 2-Chloronaphthalene	162	6.934	6.933	0.001	96	906325	80.0	63.8	
81 2-Nitroaniline	65	7.028	7.027	0.001	87	302228	80.0	69.8	
84 Dimethyl phthalate	163	7.198	7.203	-0.005	99	1116702	80.0	71.6	
86 1,3-Dinitrobenzene	168	7.227	7.232	-0.005	87	179574	80.0	74.1	
87 2,6-Dinitrotoluene	165	7.257	7.262	-0.005	96	260349	80.0	74.6	
89 Acenaphthylene	152	7.351	7.350	0.001	98	1472598	80.0	66.1	
91 3-Nitroaniline	138	7.433	7.438	-0.005	97	257072	80.0	60.7	
95 Acenaphthene	153	7.527	7.526	0.001	94	949006	80.0	67.7	
97 2,4-Dinitrophenol	184	7.539	7.538	0.001	87	306680	160.0	147.3	
98 4-Nitrophenol	109	7.615	7.620	-0.005	92	318417	160.0	142.6	
100 2,4-Dinitrotoluene	165	7.668	7.667	0.001	95	367826	80.0	75.7	
101 Dibenzofuran	168	7.697	7.696	0.001	96	1307948	80.0	66.7	
105 2,3,4,6-Tetrachlorophenol	232	7.821	7.826	-0.005	74	265826	80.0	78.3	
106 Diethyl phthalate	149	7.903	7.908	-0.005	98	1140545	80.0	73.3	
109 4-Chlorophenyl phenyl ethe	204	8.026	8.031	-0.005	95	517413	80.0	65.7	
110 Fluorene	166	8.038	8.043	-0.005	94	1104298	80.0	68.0	
111 4-Nitroaniline	138	8.050	8.055	-0.005	86	326490	80.0	78.5	
112 4,6-Dinitro-2-methylphenol	198	8.079	8.084	-0.005	87	438260	160.0	155.9	
113 N-Nitrosodiphenylamine	169	8.150	8.149	0.001	60	1728431	160.0	139.4	
114 Azobenzene	77	8.191	8.190	0.001	98	1149475	80.0	68.1	
115 1,2-Diphenylhydrazine	77	8.191	8.190	0.001	98	1149475	80.9	68.9	
117 4-Bromophenyl phenyl ether	248	8.520	8.525	-0.005	68	299524	80.0	71.7	
119 Hexachlorobenzene	284	8.608	8.607	0.001	91	294246	80.0	71.8	
120 Atrazine	200	8.673	8.677	-0.004	0	343136	NC	NC	
123 Pentachlorophenol	266	8.796	8.801	-0.005	91	327605	160.0	135.2	
125 Phenanthrene	178	9.007	9.012	-0.005	98	1710333	80.0	70.7	
126 Anthracene	178	9.060	9.059	0.001	97	1712940	80.0	71.9	
127 Benzidine	184	10.617	10.625	-0.008	38	1045	NC	NC	
128 Carbazole	167	9.213	9.218	-0.005	97	1678578	80.0	73.9	
131 Di-n-butyl phthalate	149	9.548	9.553	-0.005	100	1918346	80.0	77.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.329	10.334	-0.005	98	1961821	80.0	71.6	
137 Fluoranthene	202	10.646	10.657	-0.011	98	2078917	80.0	75.1	
141 Butyl benzyl phthalate	149	11.727	11.738	-0.011	98	860753	80.0	73.7	
142 3,3'-Dichlorobenzidine	252	12.843	12.848	-0.005	74	519651	80.0	63.7	
143 Bis(2-ethylhexyl) phthalat	149	13.055	13.060	-0.005	97	1130557	80.0	72.0	
144 Benzo[a]anthracene	228	12.879	12.889	-0.010	99	1933496	80.0	72.9	
145 Chrysene	228	12.961	12.972	-0.011	98	1914996	80.0	71.9	
147 Di-n-octyl phthalate	149	14.805	14.816	-0.011	99	1737215	80.0	72.6	
149 Benzo[b]fluoranthene	252	15.657	15.674	-0.017	97	1863674	80.0	76.6	
150 Benzo[k]fluoranthene	252	15.734	15.744	-0.010	99	1942720	80.0	73.8	
152 Benzo[a]pyrene	252	16.562	16.573	-0.011	78	1702941	80.0	73.2	
154 Indeno[1,2,3-cd]pyrene	276	19.793	19.804	-0.011	99	1461599	80.0	72.9	
155 Dibenz(a,h)anthracene	278	19.893	19.903	-0.010	96	1455353	80.0	75.5	
156 Benzo[g,h,i]perylene	276	20.521	20.532	-0.011	96	1599620	80.0	75.2	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

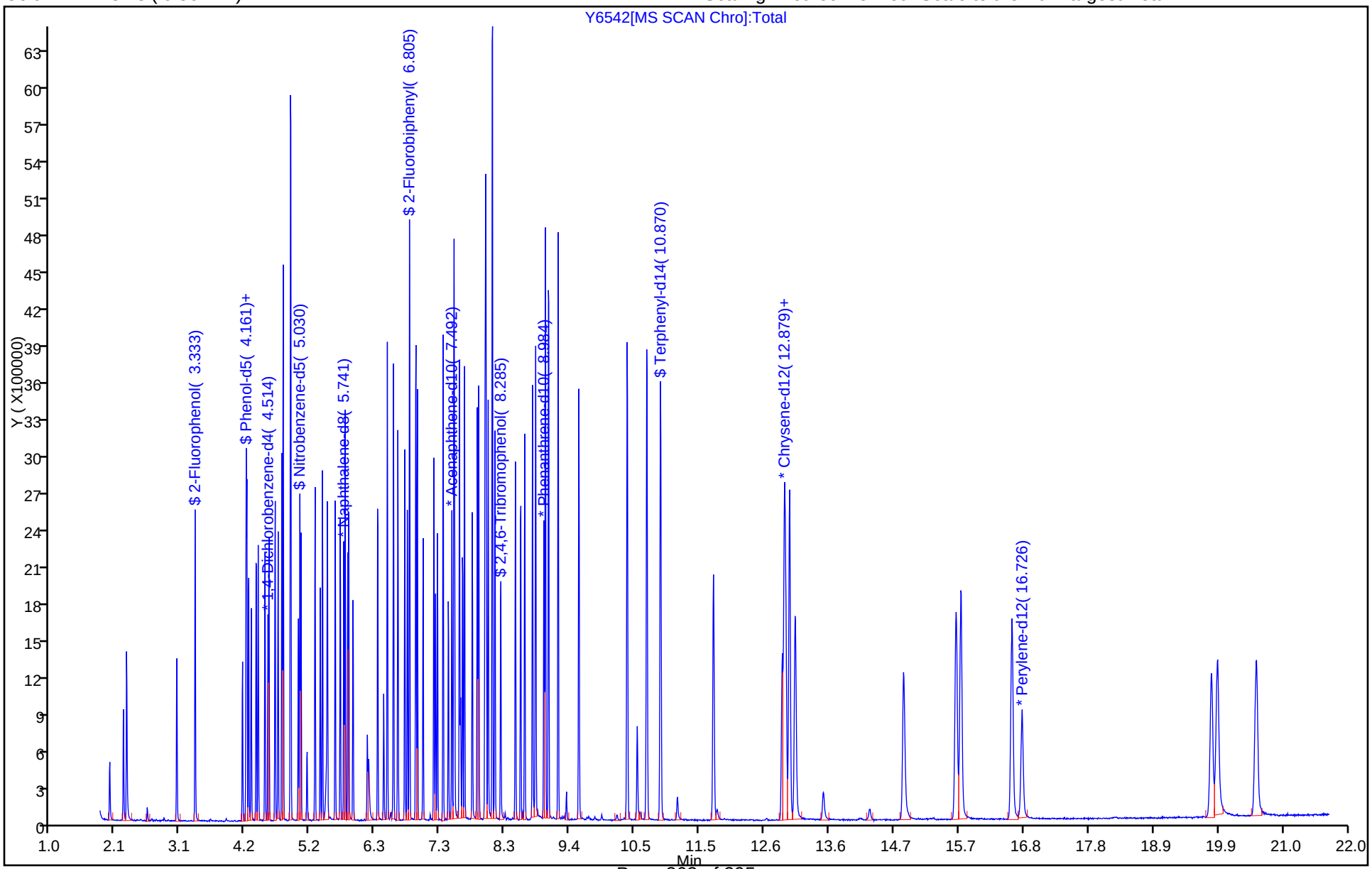
Report Date: 25-Nov-2015 16:00:46 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6542.D

Injection Date:	24-Nov-2015 16:24:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	LCS 280-304711/2-A			Worklist Smp#:	20
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

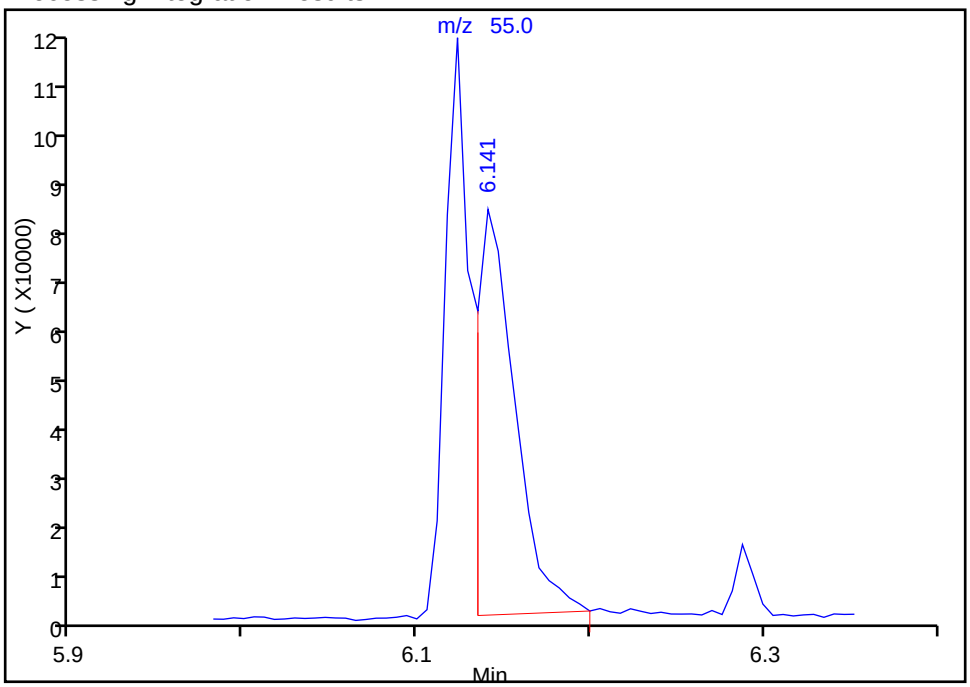
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6542.D
Injection Date: 24-Nov-2015 16:24:30 Instrument ID: SMS_Y
Lims ID: LCS 280-304711/2-A
Client ID:
Operator ID: KIEKELD ALS Bottle#: 10 Worklist Smp#: 20
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMS_Y8270D Limit Group: MSSV - 8270D
Column: VF-5ms (0.50 mm) Detector MS SCAN

65 Caprolactam, CAS: 105-60-2

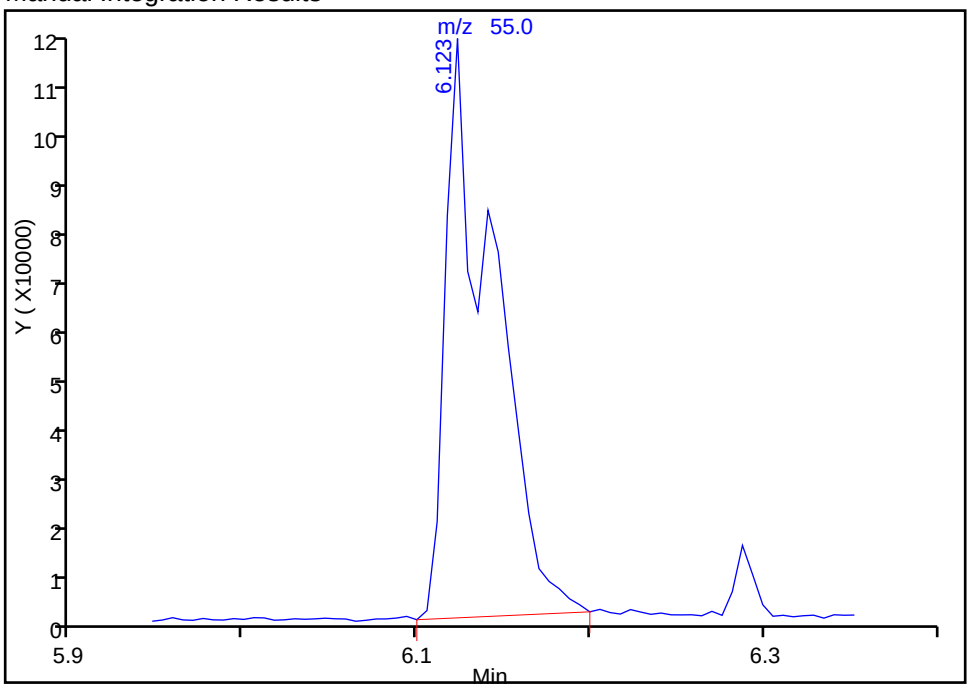
Processing Integration Results

RT: 6.14
Area: 117867
Amount: 38.728513
Amount Units: ug/ml



Manual Integration Results

RT: 6.12
Area: 214847
Amount: 68.705817
Amount Units: ug/ml



Reviewer: kiekeld, 25-Nov-2015 11:41:57
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-76268-2

SDG No.:

Client Sample ID: MW20102015MS MS | Lab Sample ID: 280-76268-9 MS

Matrix: Water | Lab File ID: Y6551.D

Analysis Method: 8270D | Date Collected: 11/02/2015 10:30

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 972.1(mL) | Date Analyzed: 11/24/2015 20:30

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	78.1		5.1	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	102		42-131
321-60-8	2-Fluorobiphenyl	85		48-120
367-12-4	2-Fluorophenol (Surr)	83		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	88		42-120
4165-62-2	Phenol-d5 (Surr)	84		45-124
1718-51-0	Terphenyl-d14 (Surr)	35		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6551.D
Lims ID: 280-76268-J-9-B MS
Client ID: MW20102015MS
Sample Type: MS
Inject. Date: 24-Nov-2015 20:30:30 ALS Bottle#: 19 Worklist Smp#: 27
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-J-9-AMS
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:46:38

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	4.514	4.513	0.001	96	210934	40.0	40.0	
* 2 Naphthalene-d8	136	5.742	5.740	0.002	99	868690	40.0	40.0	
* 3 Acenaphthene-d10	164	7.492	7.491	0.001	93	510871	40.0	40.0	
* 4 Phenanthrene-d10	188	8.984	8.983	0.001	97	914714	40.0	40.0	
* 5 Chrysene-d12	240	12.897	12.907	-0.010	98	934095	40.0	40.0	
* 6 Perylene-d12	264	16.721	16.737	-0.016	97	853376	40.0	40.0	
$ 7 2-Fluorophenol	112	3.339	3.332	0.007	92	610638	100.0	83.2	
$ 8 Phenol-d5	99	4.161	4.160	0.001	97	768547	100.0	84.4	
$ 9 Nitrobenzene-d5	82	5.031	5.029	0.002	89	721862	100.0	87.8	
$ 10 2-Fluorobiphenyl	172	6.805	6.809	-0.004	100	1484947	100.0	85.2	
$ 11 2,4,6-Tribromophenol	330	8.285	8.284	0.001	92	187584	100.0	101.9	
$ 12 Terphenyl-d14	244	10.870	10.875	-0.004	99	679500	100.0	34.6	
13 1,4-Dioxane	88	1.953	1.951	0.002	96	185848	80.0	58.5	
14 N-Nitrosodimethylamine	74	2.176	2.175	0.001	92	358889	80.0	70.9	
15 Pyridine	79	2.229	2.227	0.002	96	534756	80.0	61.6	
22 Benzaldehyde	106		3.961				ND	ND	
24 Phenol	94	4.173	4.172	0.001	99	1041001	80.0	109.5	
25 Aniline	93		4.201				ND	ND	
26 Bis(2-chloroethyl)ether	93	4.244	4.242	0.002	96	519979	80.0	69.2	
27 2-Chlorophenol	128	4.326	4.325	0.001	97	526826	80.0	72.4	
28 1,3-Dichlorobenzene	146	4.467	4.466	0.001	98	563534	80.0	65.9	
32 1,4-Dichlorobenzene	146	4.531	4.530	0.001	94	584037	80.0	66.7	
33 Benzyl alcohol	108	4.631	4.630	0.001	92	358870	80.0	76.3	
34 1,2-Dichlorobenzene	146	4.678	4.677	0.001	97	550169	80.0	66.3	
35 2-Methylphenol	108	4.737	4.742	-0.005	97	415859	80.0	61.2	
37 2,2'-oxybis[1-chloropropan	45	4.755	4.759	-0.004	91	687798	80.0	66.4	
39 3-Methylphenol	108	4.884	4.883	0.001	92	432987	80.0	61.9	
40 3 & 4 Methylphenol	108	4.884	4.883	0.001	92	432987	80.0	61.9	
41 4-Methylphenol	108	4.884	4.883	0.001	94	432987	80.0	61.9	
42 N-Nitrosodi-n-propylamine	70	4.878	4.877	0.001	91	411483	80.0	74.0	
43 Acetophenone	105	4.884	4.883	0.001	90	708979	80.0	72.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.007	5.006	0.001	94	204732	80.0	65.1	
47 Nitrobenzene	77	5.048	5.053	-0.005	88	1273502	80.0	154.1	
48 Isophorone	82	5.278	5.276	0.002	99	1012082	80.0	70.3	
50 2-Nitrophenol	139	5.360	5.364	-0.004	95	303959	80.0	82.9	
51 2,4-Dimethylphenol	107	5.395	5.400	-0.005	95	81673	80.0	10.9	
52 Bis(2-chloroethoxy)methane	93	5.477	5.476	0.001	99	629853	80.0	69.2	
53 Benzoic acid	105	5.483	5.505	-0.022	89	366138	80.0	75.6	
56 2,4-Dichlorophenol	162	5.601	5.605	-0.004	95	440097	80.0	69.9	
57 1,2,4-Trichlorobenzene	180	5.683	5.687	-0.004	94	467351	80.0	67.3	
59 Naphthalene	128	5.765	5.764	0.001	98	1512816	80.0	68.8	
60 4-Chloroaniline	127	5.806	5.805	0.001	94	37074	80.0	3.72	
61 2,6-Dichlorophenol	162	5.818	5.823	-0.005	98	436214	80.0	70.6	
62 Hexachlorobutadiene	225	5.888	5.893	-0.005	95	251812	80.0	65.6	
65 Caprolactam	55	6.147	6.157	-0.010	82	248976	80.0	75.9	M
67 4-Chloro-3-methylphenol	107	6.294	6.292	0.002	96	458691	80.0	72.3	
70 2-Methylnaphthalene	142	6.447	6.451	-0.004	93	1064321	80.0	68.7	
71 1-Methylnaphthalene	142	6.546	6.551	-0.005	93	970032	80.0	70.7	
72 Hexachlorocyclopentadiene	237	6.611	6.616	-0.005	94	88326	80.0	21.3	
73 1,2,4,5-Tetrachlorobenzene	216	6.617	6.621	-0.004	97	486991	80.0	70.7	
74 2,4,6-Trichlorophenol	196	6.729	6.733	-0.005	92	347621	80.0	78.8	
75 2,4,5-Trichlorophenol	196	6.776	6.774	0.002	95	374242	80.0	76.6	
77 1,1'-Biphenyl	154	6.911	6.909	0.002	95	1633516	80.0	88.0	
78 2-Chloronaphthalene	162	6.934	6.933	0.001	96	1027510	80.0	69.8	
81 2-Nitroaniline	65	7.022	7.027	-0.005	86	69354	80.0	16.7	
84 Dimethyl phthalate	163	7.198	7.203	-0.005	99	1149171	80.0	71.2	
86 1,3-Dinitrobenzene	168	7.228	7.232	-0.004	87	195456	80.0	77.7	
87 2,6-Dinitrotoluene	165	7.257	7.262	-0.005	97	285628	80.0	79.0	
89 Acenaphthylene	152	7.351	7.350	0.001	98	1536102	80.0	66.5	
91 3-Nitroaniline	138	7.433	7.438	-0.005	98	35556	80.0	8.10	
95 Acenaphthene	153	7.522	7.526	-0.004	95	1020457	80.0	70.3	
97 2,4-Dinitrophenol	184	7.533	7.538	-0.005	87	353562	160.0	162.5	
98 4-Nitrophenol	109	7.621	7.620	0.001	90	351873	160.0	152.1	
100 2,4-Dinitrotoluene	165	7.663	7.667	-0.004	96	400486	80.0	79.4	
101 Dibenzofuran	168	7.698	7.696	0.002	96	1411203	80.0	69.5	
105 2,3,4,6-Tetrachlorophenol	232	7.821	7.826	-0.005	73	285183	80.0	81.0	
106 Diethyl phthalate	149	7.903	7.908	-0.005	98	1181204	80.0	73.3	
109 4-Chlorophenyl phenyl ethe	204	8.027	8.031	-0.004	94	582321	80.0	71.4	
110 Fluorene	166	8.038	8.043	-0.005	95	1206987	80.0	71.8	
111 4-Nitroaniline	138	8.044	8.055	-0.011	90	72749	80.0	16.9	
112 4,6-Dinitro-2-methylphenol	198	8.080	8.084	-0.004	88	476788	160.0	160.0	
113 N-Nitrosodiphenylamine	169	8.150	8.149	0.001	60	1737299	160.0	132.4	
114 Azobenzene	77	8.191	8.190	0.001	98	1222593	80.0	69.9	
115 1,2-Diphenylhydrazine	77	8.191	8.190	0.001	98	1222593	80.9	70.7	
117 4-Bromophenyl phenyl ether	248	8.520	8.525	-0.005	67	332596	80.0	75.2	
119 Hexachlorobenzene	284	8.608	8.607	0.001	91	314073	80.0	72.4	
120 Atrazine	200	8.673	8.677	-0.004	0	312849	NC	NC	
123 Pentachlorophenol	266	8.796	8.801	-0.005	90	361077	160.0	140.6	
125 Phenanthrene	178	9.008	9.012	-0.004	98	1835724	80.0	71.7	
126 Anthracene	178	9.055	9.059	-0.004	98	1648131	80.0	65.4	
127 Benzidine	184	10.606	10.625	-0.019	38	375	NC	NC	
128 Carbazole	167	9.213	9.218	-0.005	97	1807103	80.0	75.2	
131 Di-n-butyl phthalate	149	9.548	9.553	-0.005	100	2043330	80.0	77.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.330	10.334	-0.004	98	2126777	80.0	74.5	
137 Fluoranthene	202	10.647	10.657	-0.010	99	2242392	80.0	76.5	
141 Butyl benzyl phthalate	149	11.728	11.738	-0.010	95	937514	80.0	76.9	
142 3,3'-Dichlorobenzidine	252		12.848				ND	ND	
143 Bis(2-ethylhexyl) phthalat	149	13.049	13.060	-0.011	97	1283279	80.0	78.1	
144 Benzo[a]anthracene	228	12.879	12.889	-0.010	99	2060492	80.0	74.6	
145 Chrysene	228	12.961	12.972	-0.011	97	2010214	80.0	72.4	
147 Di-n-octyl phthalate	149	14.806	14.816	-0.010	99	2142391	80.0	83.9	
149 Benzo[b]fluoranthene	252	15.658	15.674	-0.016	98	1963948	80.0	74.2	
150 Benzo[k]fluoranthene	252	15.734	15.744	-0.010	98	2090821	80.0	73.1	
152 Benzo[a]pyrene	252	16.562	16.573	-0.011	78	1757064	80.0	69.5	
154 Indeno[1,2,3-cd]pyrene	276	19.793	19.804	-0.011	98	1585932	80.0	75.9	
155 Dibenz(a,h)anthracene	278	19.893	19.903	-0.010	94	1659758	80.0	79.2	
156 Benzo[g,h,i]perylene	276	20.527	20.532	-0.005	96	1759753	80.0	76.1	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

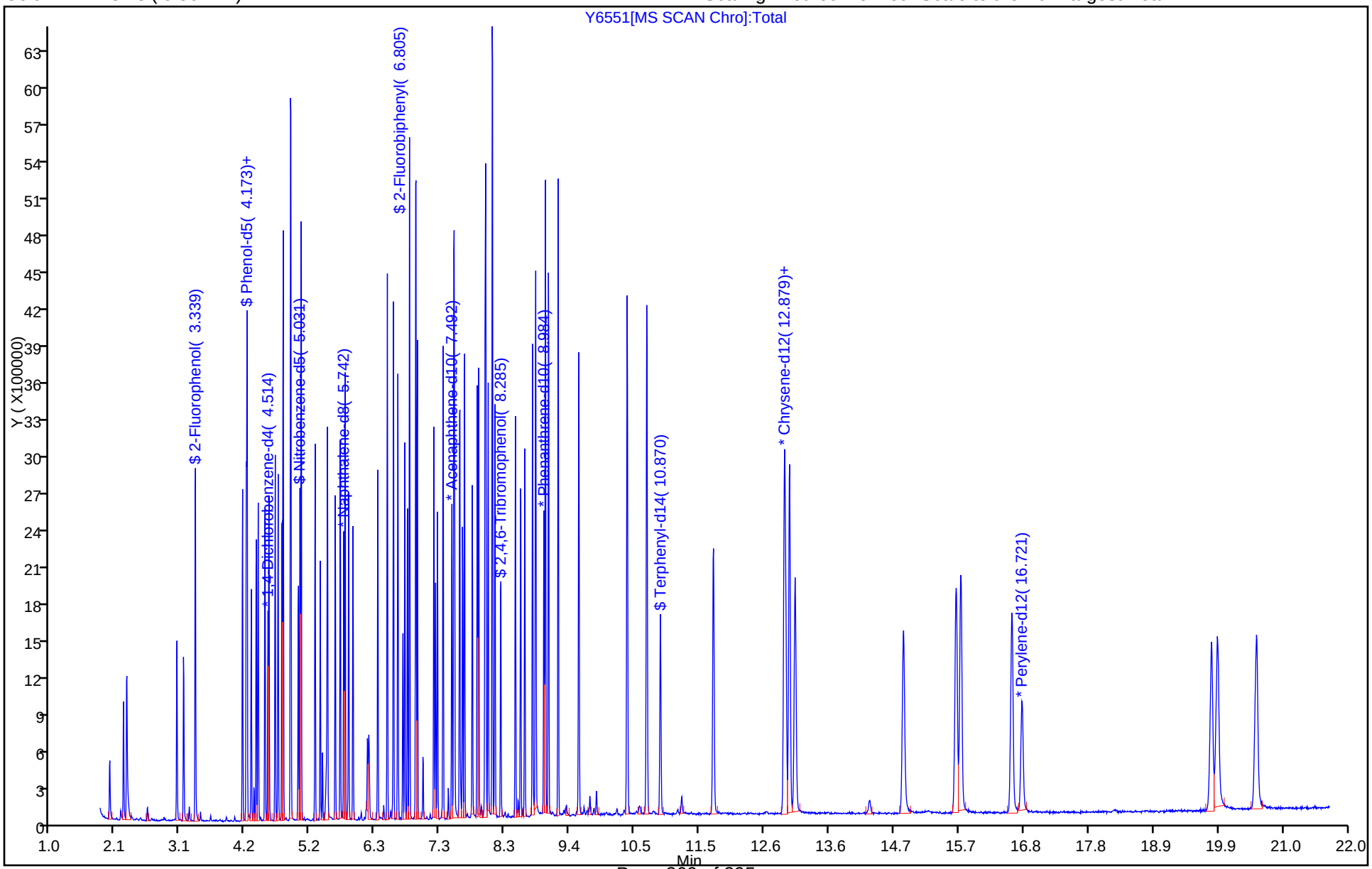
Report Date: 25-Nov-2015 16:01:50 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6551.D

Injection Date:	24-Nov-2015 20:30:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-J-9-B MS			Worklist Smp#:	27
Client ID:	MW20102015MS				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

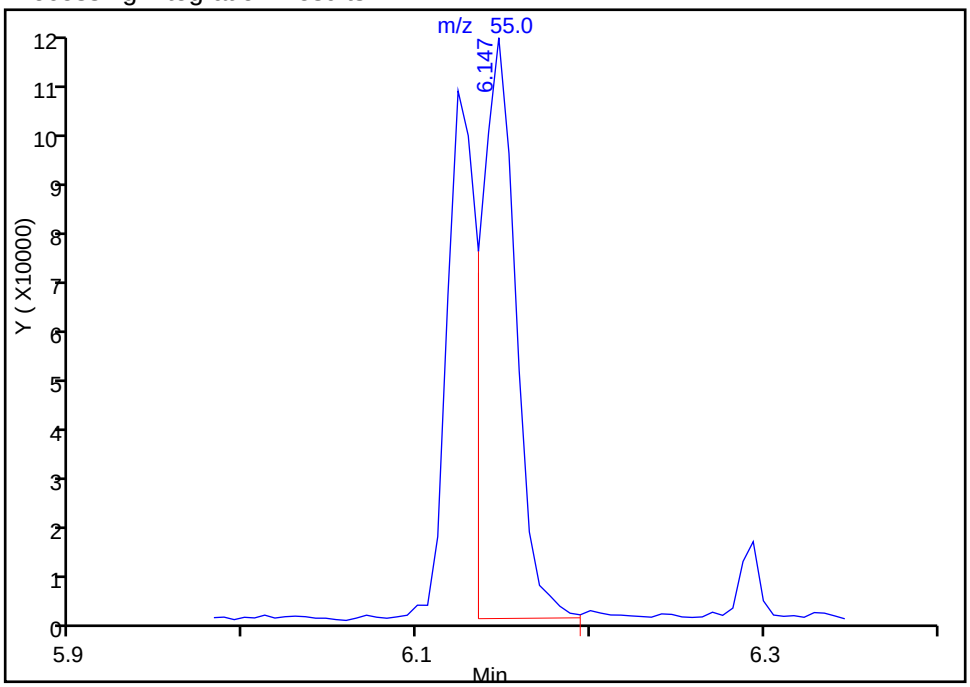
TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6551.D				
Injection Date:	24-Nov-2015 20:30:30	Instrument ID:	SMS_Y		
Lims ID:	280-76268-J-9-B MS				
Client ID:	MW20102015MS				
Operator ID:	KIEKELD	ALS Bottle#:	19	Worklist Smp#:	27
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

65 Caprolactam, CAS: 105-60-2

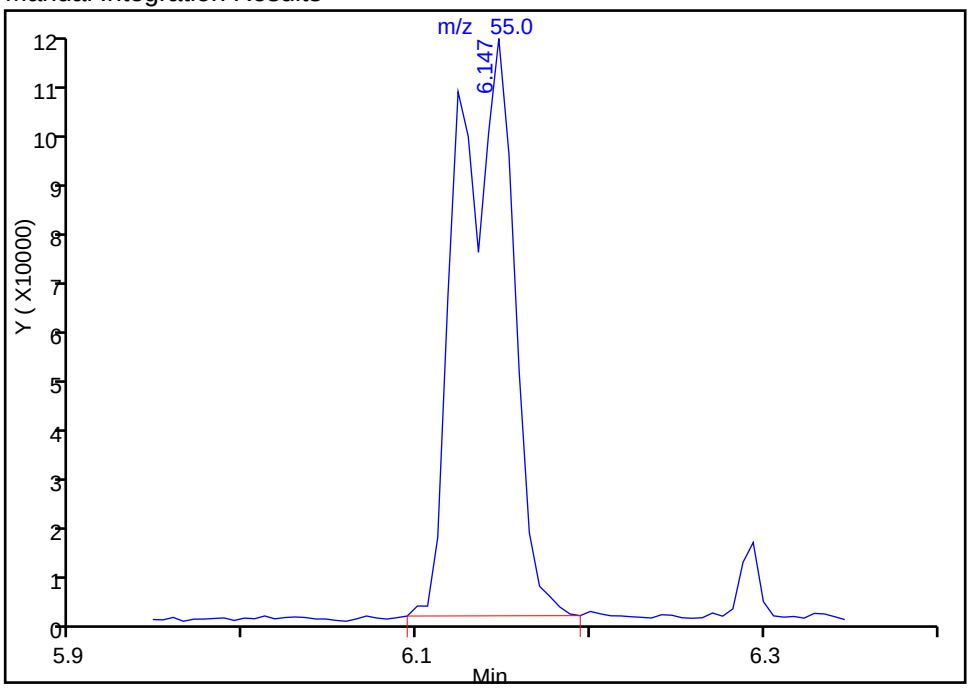
Processing Integration Results

RT: 6.15
Area: 155623
Amount: 48.312420
Amount Units: ug/ml



Manual Integration Results

RT: 6.15
Area: 248976
Amount: 75.916801
Amount Units: ug/ml



Reviewer: kiekeld, 25-Nov-2015 11:46:38
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-76268-2

SDG No.:

Client Sample ID: MW20102015MSD MSD | Lab Sample ID: 280-76268-9 MSD

Matrix: Water | Lab File ID: Y6552.D

Analysis Method: 8270D | Date Collected: 11/02/2015 10:30

Extract. Method: 3520C | Date Extracted: 11/04/2015 14:55

Sample wt/vol: 972.3(mL) | Date Analyzed: 11/24/2015 20:57

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.: 305472 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
105-60-2	Caprolactam	81.0		5.1	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	102		42-131
321-60-8	2-Fluorobiphenyl	85		48-120
367-12-4	2-Fluorophenol (Surr)	82		41-120
4165-60-0	Nitrobenzene-d5 (Surr)	86		42-120
4165-62-2	Phenol-d5 (Surr)	84		45-124
1718-51-0	Terphenyl-d14 (Surr)	43		20-130

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6552.D
Lims ID: 280-76268-F-9-B MSD
Client ID: MW20102015MSD
Sample Type: MSD
Inject. Date: 24-Nov-2015 20:57:30 ALS Bottle#: 20 Worklist Smp#: 28
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-76268-F-9-AMSD
Operator ID: KIEKELD Instrument ID: SMS_Y

Method: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\SMS_Y8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 25-Nov-2015 11:54:27 Calib Date: 14-Nov-2015 12:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_Y\20151119-41682.b\Y6337.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: kiekeld Date: 25-Nov-2015 11:50:38

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	4.513	4.513	0.000	95	225362	40.0	40.0	
* 2 Naphthalene-d8	136	5.741	5.740	0.001	99	892549	40.0	40.0	
* 3 Acenaphthene-d10	164	7.492	7.491	0.001	92	527026	40.0	40.0	
* 4 Phenanthrene-d10	188	8.984	8.983	0.001	97	935321	40.0	40.0	
* 5 Chrysene-d12	240	12.902	12.907	-0.005	98	944642	40.0	40.0	
* 6 Perylene-d12	264	16.726	16.737	-0.011	97	842061	40.0	40.0	
$ 7 2-Fluorophenol	112	3.338	3.332	0.006	92	641508	100.0	81.8	
$ 8 Phenol-d5	99	4.161	4.160	0.001	98	818504	100.0	84.1	
$ 9 Nitrobenzene-d5	82	5.030	5.029	0.001	89	726884	100.0	86.0	
$ 10 2-Fluorobiphenyl	172	6.804	6.809	-0.005	99	1529707	100.0	85.1	
$ 11 2,4,6-Tribromophenol	330	8.285	8.284	0.001	91	193557	100.0	101.9	
$ 12 Terphenyl-d14	244	10.869	10.875	-0.005	99	854546	100.0	43.1	
13 1,4-Dioxane	88	1.952	1.951	0.001	96	188141	80.0	55.4	
14 N-Nitrosodimethylamine	74	2.175	2.175	0.000	93	353717	80.0	65.4	
15 Pyridine	79	2.228	2.227	0.001	98	555357	80.0	59.8	
22 Benzaldehyde	106		3.961				ND	ND	
24 Phenol	94	4.178	4.172	0.006	99	1116122	80.0	109.8	
25 Aniline	93		4.201				ND	ND	
26 Bis(2-chloroethyl)ether	93	4.243	4.242	0.001	98	532479	80.0	66.3	
27 2-Chlorophenol	128	4.325	4.325	0.000	97	534246	80.0	68.7	
28 1,3-Dichlorobenzene	146	4.466	4.466	0.000	98	576790	80.0	63.1	
32 1,4-Dichlorobenzene	146	4.531	4.530	0.001	94	595204	80.0	63.6	
33 Benzyl alcohol	108	4.631	4.630	0.001	92	361733	80.0	72.0	
34 1,2-Dichlorobenzene	146	4.678	4.677	0.001	96	569528	80.0	64.2	
35 2-Methylphenol	108	4.742	4.742	0.000	97	404008	80.0	55.7	
37 2,2'-oxybis[1-chloropropan	45	4.754	4.759	-0.005	93	698371	80.0	63.1	
39 3-Methylphenol	108	4.889	4.883	0.006	89	441541	80.0	59.0	
40 3 & 4 Methylphenol	108	4.889	4.883	0.006	89	441541	80.0	59.0	
41 4-Methylphenol	108	4.889	4.883	0.006	90	441541	80.0	59.0	
42 N-Nitrosodi-n-propylamine	70	4.877	4.877	0.000	90	419424	80.0	70.6	
43 Acetophenone	105	4.883	4.883	0.000	92	702804	80.0	67.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
45 Hexachloroethane	117	5.007	5.006	0.001	96	208576	80.0	62.1	
47 Nitrobenzene	77	5.054	5.053	0.001	87	1352456	80.0	159.3	
48 Isophorone	82	5.277	5.276	0.001	99	1021220	80.0	69.1	
50 2-Nitrophenol	139	5.359	5.364	-0.005	96	317700	80.0	84.3	
51 2,4-Dimethylphenol	107	5.394	5.400	-0.006	96	65470	80.0	8.54	
52 Bis(2-chloroethoxy)methane	93	5.477	5.476	0.001	99	640415	80.0	68.5	
53 Benzoic acid	105	5.483	5.505	-0.023	90	403620	80.0	80.3	
56 2,4-Dichlorophenol	162	5.606	5.605	0.001	93	472140	80.0	73.0	
57 1,2,4-Trichlorobenzene	180	5.682	5.687	-0.005	94	482077	80.0	67.6	
59 Naphthalene	128	5.764	5.764	0.000	98	1530598	80.0	67.8	
60 4-Chloroaniline	127		5.805				ND	ND	
61 2,6-Dichlorophenol	162	5.823	5.823	0.000	98	455376	80.0	71.7	
62 Hexachlorobutadiene	225	5.888	5.893	-0.005	96	255885	80.0	64.8	
65 Caprolactam	55	6.152	6.157	-0.005	82	265849	80.0	78.8	M
67 4-Chloro-3-methylphenol	107	6.293	6.292	0.001	95	466112	80.0	71.5	
70 2-Methylnaphthalene	142	6.446	6.451	-0.005	93	1094519	80.0	68.8	
71 1-Methylnaphthalene	142	6.546	6.551	-0.005	93	1005876	80.0	71.3	
72 Hexachlorocyclopentadiene	237	6.616	6.616	0.000	95	94801	80.0	22.2	
73 1,2,4,5-Tetrachlorobenzene	216	6.616	6.621	-0.005	97	502177	80.0	71.0	
74 2,4,6-Trichlorophenol	196	6.728	6.733	-0.005	92	370620	80.0	81.4	
75 2,4,5-Trichlorophenol	196	6.775	6.774	0.001	95	393723	80.0	78.1	
77 1,1'-Biphenyl	154	6.910	6.909	0.001	95	1663802	80.0	86.8	
78 2-Chloronaphthalene	162	6.933	6.933	0.000	96	1061081	80.0	69.9	
81 2-Nitroaniline	65	7.022	7.027	-0.005	86	63112	80.0	14.9	
84 Dimethyl phthalate	163	7.204	7.203	0.001	99	1246204	80.0	74.8	
86 1,3-Dinitrobenzene	168	7.227	7.232	-0.005	87	210177	80.0	80.9	
87 2,6-Dinitrotoluene	165	7.262	7.262	0.000	97	295182	80.0	79.1	
89 Acenaphthylene	152	7.351	7.350	0.001	98	1591035	80.0	66.8	
91 3-Nitroaniline	138	7.439	7.438	0.001	95	25640	80.0	5.66	
95 Acenaphthene	153	7.527	7.526	0.001	94	1049664	80.0	70.1	
97 2,4-Dinitrophenol	184	7.539	7.538	0.001	88	395986	160.0	175.4	
98 4-Nitrophenol	109	7.621	7.620	0.001	91	376909	160.0	158.0	
100 2,4-Dinitrotoluene	165	7.668	7.667	0.001	95	399342	80.0	76.8	
101 Dibenzofuran	168	7.697	7.696	0.001	96	1499903	80.0	71.6	
105 2,3,4,6-Tetrachlorophenol	232	7.821	7.826	-0.005	74	301636	80.0	83.1	
106 Diethyl phthalate	149	7.903	7.908	-0.005	98	1258775	80.0	75.7	
109 4-Chlorophenyl phenyl ethe	204	8.026	8.031	-0.005	93	602524	80.0	71.6	
110 Fluorene	166	8.038	8.043	-0.005	95	1277521	80.0	73.6	
111 4-Nitroaniline	138	8.050	8.055	-0.005	89	62947	80.0	14.2	
112 4,6-Dinitro-2-methylphenol	198	8.079	8.084	-0.005	89	527760	160.0	172.5	
113 N-Nitrosodiphenylamine	169	8.149	8.149	0.000	60	1789836	160.0	133.3	
114 Azobenzene	77	8.191	8.190	0.001	98	1251889	80.0	69.4	
115 1,2-Diphenylhydrazine	77	8.191	8.190	0.001	98	1251889	80.9	70.2	
117 4-Bromophenyl phenyl ether	248	8.520	8.525	-0.005	67	349730	80.0	77.3	
119 Hexachlorobenzene	284	8.608	8.607	0.001	93	337615	80.0	76.2	
120 Atrazine	200	8.672	8.677	-0.005	0	316120	NC	NC	
123 Pentachlorophenol	266	8.802	8.801	0.001	92	392745	160.0	149.2	
125 Phenanthrene	178	9.007	9.012	-0.005	98	1965176	80.0	75.1	
126 Anthracene	178	9.054	9.059	-0.005	98	1703055	80.0	66.1	
127 Benzidine	184	10.493	10.625	-0.132	39	358	NC	NC	
128 Carbazole	167	9.213	9.218	-0.005	98	1851918	80.0	75.4	
131 Di-n-butyl phthalate	149	9.548	9.553	-0.005	100	2141207	80.0	79.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Pyrene	202	10.329	10.334	-0.005	98	2204716	80.0	76.4	
137 Fluoranthene	202	10.652	10.657	-0.005	98	2340092	80.0	78.1	
141 Butyl benzyl phthalate	149	11.727	11.738	-0.011	98	1006312	80.0	81.5	
142 3,3'-Dichlorobenzidine	252		12.848				ND	ND	
143 Bis(2-ethylhexyl) phthalat	149	13.049	13.060	-0.011	96	1368460	80.0	82.2	
144 Benzo[a]anthracene	228	12.878	12.889	-0.011	99	2112391	80.0	75.6	
145 Chrysene	228	12.961	12.972	-0.011	97	2099339	80.0	74.8	
147 Di-n-octyl phthalate	149	14.805	14.816	-0.011	99	2238251	80.0	86.3	
149 Benzo[b]fluoranthene	252	15.663	15.674	-0.011	98	2106720	80.0	80.6	
150 Benzo[k]fluoranthene	252	15.733	15.744	-0.011	99	2140999	80.0	75.8	
152 Benzo[a]pyrene	252	16.562	16.573	-0.011	78	1770825	80.0	70.9	
154 Indeno[1,2,3-cd]pyrene	276	19.798	19.804	-0.006	98	1637928	80.0	77.4	
155 Dibenz(a,h)anthracene	278	19.887	19.903	-0.016	95	1661088	80.0	80.3	
156 Benzo[g,h,i]perylene	276	20.527	20.532	-0.005	97	1805009	80.0	79.1	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated

Reagents:

MS-IS_00008 Amount Added: 20.00 Units: uL Run Reagent

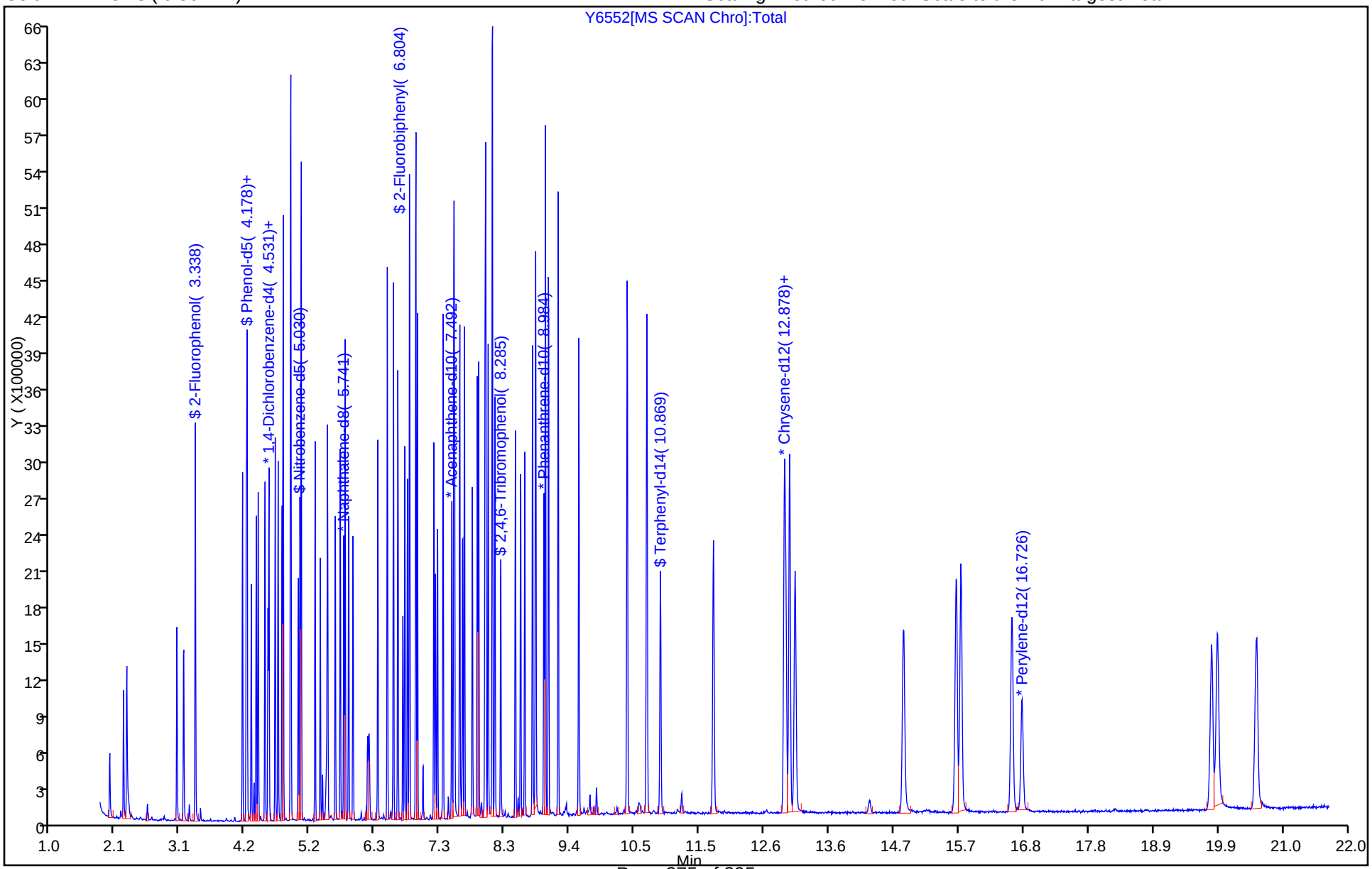
Report Date: 25-Nov-2015 16:02:01 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6552.D

Injection Date:	24-Nov-2015 20:57:30	Instrument ID:	SMS_Y	Operator ID:	KIEKELD
Lims ID:	280-76268-F-9-B MSD			Worklist Smp#:	28
Client ID:	MW20102015MSD				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



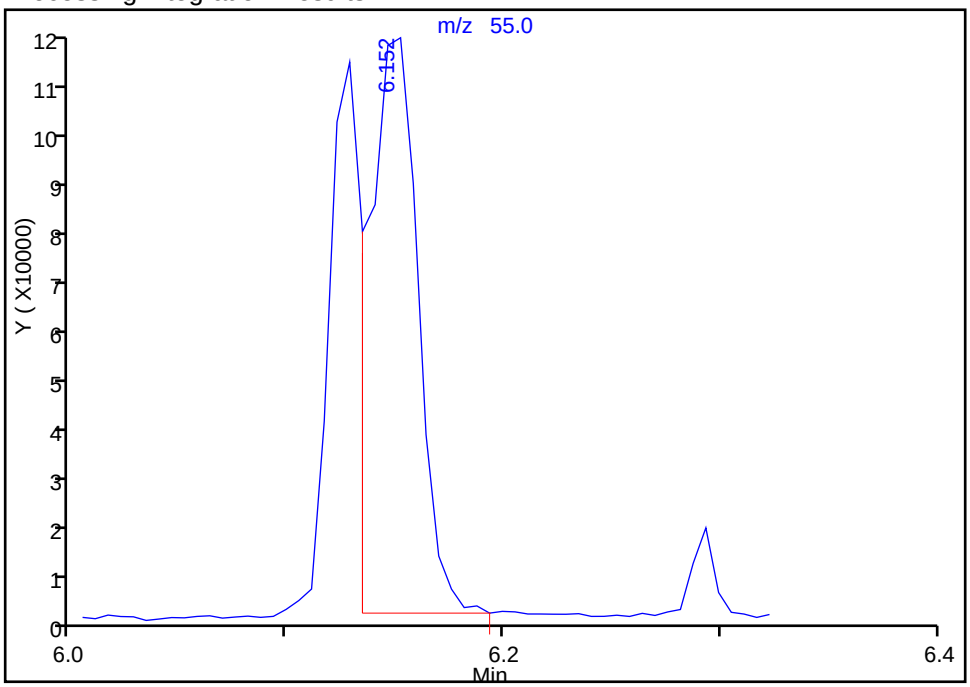
TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_Y\20151124-41853.b\Y6552.D				
Injection Date:	24-Nov-2015 20:57:30	Instrument ID:	SMS_Y		
Lims ID:	280-76268-F-9-B MSD				
Client ID:	MW20102015MSD				
Operator ID:	KIEKELD	ALS Bottle#:	20	Worklist Smp#:	28
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMS_Y8270D	Limit Group:	MSSV - 8270D		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

65 Caprolactam, CAS: 105-60-2

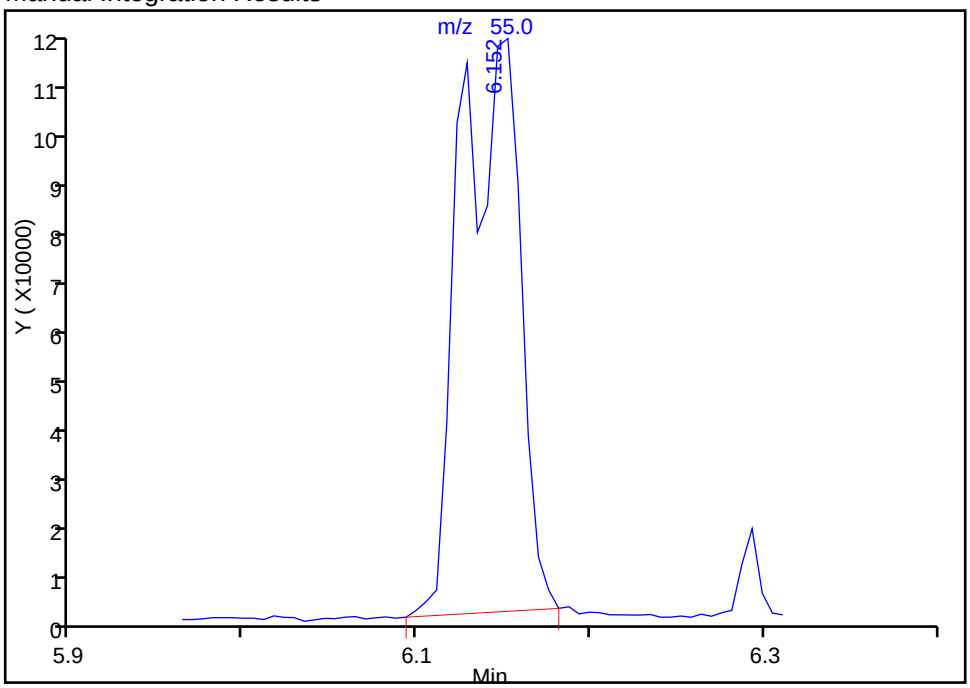
Processing Integration Results

RT: 6.15
Area: 180488
Amount: 54.238321
Amount Units: ug/ml



Manual Integration Results

RT: 6.15
Area: 265849
Amount: 78.804747
Amount Units: ug/ml



Reviewer: kiekeld, 25-Nov-2015 11:50:38
Audit Action: Manually Integrated
Audit Reason: Split Peak

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Instrument ID: SMS_Y Start Date: 11/14/2015 09:15

Analysis Batch Number: 304895 End Date: 11/14/2015 13:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-304895/2		11/14/2015 09:15	1	Y6329.D	Vf-5MS (30.25) 0.25(mm)
ICIS 280-304895/3		11/14/2015 09:27	1	Y6330.D	Vf-5MS (30.25) 0.25(mm)
STD004 280-304895/4 IC		11/14/2015 09:54	1	Y6331.D	Vf-5MS (30.25) 0.25(mm)
STD010 280-304895/5 IC		11/14/2015 10:21	1	Y6332.D	Vf-5MS (30.25) 0.25(mm)
STD020 280-304895/6 IC		11/14/2015 10:48	1	Y6333.D	Vf-5MS (30.25) 0.25(mm)
STD050 280-304895/7 IC		11/14/2015 11:15	1	Y6334.D	Vf-5MS (30.25) 0.25(mm)
STD120 280-304895/8 IC		11/14/2015 11:43	1	Y6335.D	Vf-5MS (30.25) 0.25(mm)
STD160 280-304895/9 IC		11/14/2015 12:10	1	Y6336.D	Vf-5MS (30.25) 0.25(mm)
STD200 280-304895/10 IC		11/14/2015 12:37	1	Y6337.D	Vf-5MS (30.25) 0.25(mm)
ICV 280-304895/11		11/14/2015 13:05	1	Y6338.D	Vf-5MS (30.25) 0.25(mm)
ICV 280-304895/12		11/14/2015 13:32	1	Y6339.D	Vf-5MS (30.25) 0.25(mm)
ICV 280-304895/13		11/14/2015 13:59	1	Y6340.D	Vf-5MS (30.25) 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Instrument ID: SMS_Y Start Date: 11/24/2015 12:39

Analysis Batch Number: 305472 End Date: 11/24/2015 21:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-305472/2		11/24/2015 12:39	1	Y6533.D	Vf-5MS (30.25) 0.25(mm)
CCV 280-305472/3		11/24/2015 12:54	1	Y6534.D	Vf-5MS (30.25) 0.25(mm)
MB 280-304711/1-A		11/24/2015 15:56	1	Y6541.D	Vf-5MS (30.25) 0.25(mm)
LCS 280-304711/2-A		11/24/2015 16:24	1	Y6542.D	Vf-5MS (30.25) 0.25(mm)
280-76268-3	FW31102015EQU002	11/24/2015 17:46	1	Y6545.D	Vf-5MS (30.25) 0.25(mm)
280-76268-4	FW3112015	11/24/2015 18:13	1	Y6546.D	Vf-5MS (30.25) 0.25(mm)
280-76268-6	TMW35102015	11/24/2015 18:41	1	Y6547.D	Vf-5MS (30.25) 0.25(mm)
280-76268-7	MW22S102015	11/24/2015 19:08	1	Y6548.D	Vf-5MS (30.25) 0.25(mm)
280-76268-8	MW22D102015	11/24/2015 19:35	1	Y6549.D	Vf-5MS (30.25) 0.25(mm)
280-76268-9	MW20102015	11/24/2015 20:03	1	Y6550.D	Vf-5MS (30.25) 0.25(mm)
280-76268-9 MS	MW20102015MS MS	11/24/2015 20:30	1	Y6551.D	Vf-5MS (30.25) 0.25(mm)
280-76268-9 MSD	MW20102015MSD MSD	11/24/2015 20:57	1	Y6552.D	Vf-5MS (30.25) 0.25(mm)
280-76268-10	DMW20102015	11/24/2015 21:25	1	Y6553.D	Vf-5MS (30.25) 0.25(mm)

TestAmerica *Denver*

Y-112415

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GC/MS Semivolatile Data Review Checklist-CCV and Tune

LIMS Batch Number: 305466/305472	Worklist #: 41851/41853	Instrument ID: Y
Analyst/1st Reviewer: DW	Method (circle): 625 8270C 8270D	Circle: Full Scan SIM BP LL SIM
Date: 11/25/15		
QC Type (circle): Standard DOD Q4 DoD Q5	QAPP_____	Other_____

Review Items	Yes	No	NA	2nd 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), detects 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	✓			✓	

A. Tune/Calibration Verification (cont.)					
Review Items	**Yes**	**No**	**NA**	**2nd 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			✓	NA	
• 2,4,6 and 2,4,5-tribromophenol			✓		
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: DW 11/25/15

2nd Reviewer: Amy Hoyle **Review Date:** 11/25/15

Directory: C:\HPCHEM\1\DATA\112415.B

Injection Log

11/25/15

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	Y6532.d	1.	PRIMER		24 Nov 2015 12:14
2	1	Y6533.d	1.	DFTPP		24 Nov 2015 12:39
3	2	Y6534.d	1.	CCV HSL		24 Nov 2015 12:54
4	3	Y6535.d	1.	CCV AFC		24 Nov 2015 13:21
5	4	Y6536.d	1.	CCV AP9		24 Nov 2015 13:44
6	5	Y6537.d	1.	CCV BZHD		24 Nov 2015 14:11
7	6	Y6538.d	1.	MB280-304950_1-A		24 Nov 2015 14:34
8	7	Y6539.d	1.	LCS280-304950_2-A		24 Nov 2015 15:01
9	8	Y6540.d	1.	LCSD280-304950_3-A		24 Nov 2015 15:29
10	9	Y6541.d	1.	MB280-302550_1-A		24 Nov 2015 15:56
11	10	Y6542.d	1.	LCS280-302550_2-A		24 Nov 2015 16:24
12	11	Y6543.d	1.	280-76405-B-7-A		24 Nov 2015 16:51
13	12	Y6544.d	1.	280-76216-A-11-A		24 Nov 2015 17:18
14	13	Y6545.d	1.	280-76268-B-3-A		24 Nov 2015 17:46
15	14	Y6546.d	1.	280-76268-D-4-A		24 Nov 2015 18:13
16	15	Y6547.d	1.	280-76268-E-6-A		24 Nov 2015 18:41
17	16	Y6548.d	1.	280-76268-A-7-A		24 Nov 2015 19:08
18	17	Y6549.d	1.	280-76268-C-8-A		24 Nov 2015 19:35
19	18	Y6550.d	1.	280-76268-G-9-A		24 Nov 2015 20:03
20	19	Y6551.d	1.	280-76268-J-9-AMS		24 Nov 2015 20:30
21	20	Y6552.d	1.	280-76268-F-9-AMSD		24 Nov 2015 20:57
22	21	Y6553.d	1.	280-76268-C-10-A		24 Nov 2015 21:25
23	22	Y6554.d	1.	CCVC AFC		24 Nov 2015 21:52
24	23	Y6555.d	1.	CCVC BZHD		24 Nov 2015 22:15
25	24	Y6556.d	1.	CCVC AP9		24 Nov 2015 22:38
26	25	Y6557.d	1.	CCVC HSL		24 Nov 2015 23:05
27	98	Y6558.d	1.	RINSE		24 Nov 2015 23:32
28	99	Y6559.d	1.	RINSE		24 Nov 2015 23:59
29	100	Y6560.d	1.	RINSE		25 Nov 2015 00:27
30	98	Y6561.d	1.	RINSE		25 Nov 2015 00:54
31	99	Y6562.d	1.	RINSE		25 Nov 2015 01:21
32	100	Y6563.d	1.	RINSE		25 Nov 2015 01:48

Dilution Solvent Lot #: N/A **Pipette ID:** SV-20 for 03 **Method(s) Performed:** 8270C

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** ☑

DBM

TestAmerica-*Denver*

Y-111415-HSL-8270D

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GC/MS Semivolatile Initial Calibration Data Review Checklist

LIMS Batch Number: 304895	Worklist: 41682	ICIS/ICIV Line # 3	2nd Day ICV Line # N/A	Instrument ID: Y
Analyst/1st Reviewer: DLL Date: 11/2015	Method (circle): 625 8270C ~~8270D~~		Circle: Full Scan SIM BP LLSIM	
QC Type (circle): Standard ~~DOD Q4~~ ~~DoD Q5~~ ~~QAPP~~ ~~Other~~				DLL 11/2015

Review Items	Yes	No	NA	2nd 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 ≤ 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: ≤35% all cmpds) (8270C: ≤30% for CCCs & ≤15% for all other cmpds/ surrogates) (8270D: ≤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 ≥0.990?	✓			✓	
13. Does the low point of a linear regression fit meet the ±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 ±30% low point & ±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? 2nd 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?	✓			✓	

Review Items	Yes	No	NA	2nd 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 - methylnaphthalene	✓			✓	
• 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			✓	NA	
• 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?			✓	NA	□ 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: _____

DD 11/2015

2nd Reviewer: Alex Hoefler **Review Date:** 11/20/15

Directory: C:\HPCHEM\1\DATA\111415.B

Injection Log

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	Y6328.d	1.	PRIMER		14 Nov 2015 08:50
2	1	Y6329.d	1.	DFTPP		14 Nov 2015 09:15
3	2	Y6330.d	1.	ICIS HSL		14 Nov 2015 09:27
4	3	Y6331.d	1.	STD004 HSL		14 Nov 2015 09:54
5	4	Y6332.d	1.	STD010 HSL		14 Nov 2015 10:21
6	5	Y6333.d	1.	STD020 HSL		14 Nov 2015 10:48
7	6	Y6334.d	1.	STD050 HSL		14 Nov 2015 11:15
8	7	Y6335.d	1.	STD120 HSL		14 Nov 2015 11:43
9	8	Y6336.d	1.	STD160 HSL		14 Nov 2015 12:10
10	9	Y6337.d	1.	STD200 HSL		14 Nov 2015 12:37
11	10	Y6338.d	1.	ICV HSL 1		14 Nov 2015 13:05
12	11	Y6339.d	1.	ICV HSL 2		14 Nov 2015 13:32
13	12	Y6340.d	1.	ICV FAM		14 Nov 2015 13:59
14	1	Y6341.d	1.	DFTPP		14 Nov 2015 14:23
15	2	Y6342.d	1.	CCV HSL		14 Nov 2015 14:38
16	3	Y6343.d	1.	LB 280-303399_1-E		14 Nov 2015 15:05
17	4	Y6344.d	1.	LCS 280-303399_2-E		14 Nov 2015 15:28
18	5	Y6345.d	1.	LB 280-301935_1-D		14 Nov 2015 15:51
19	6	Y6346.d	1.	LCS 280-301935_2-D		14 Nov 2015 16:14
20	7	Y6347.d	1.	LB 280-301938_1-G		14 Nov 2015 16:37
21	8	Y6348.d	1.	LCS 280-301938_2-G		14 Nov 2015 17:00
22	9	Y6349.d	1.	LB 280-302581_1-B		14 Nov 2015 17:23
23	10	Y6350.d	1.	LCS 280-302581_2-B		14 Nov 2015 17:46
24	11	Y6351.d	1.	280-76498-D-2-D		14 Nov 2015 18:09
25	12	Y6352.d	1.	280-76498-C-3-D		14 Nov 2015 18:32
26	13	Y6353.d	1.	280-76498-D-4-E		14 Nov 2015 18:54
27	14	Y6354.d	1.	280-76498-D-5-D		14 Nov 2015 19:17
28	15	Y6355.d	1.	280-76498-A-6-F (E)	r.r. ICV	14 Nov 2015 19:40
29	16	Y6356.d	1.	280-76498-A-6-G MS		14 Nov 2015 20:03
30	17	Y6357.d	1.	280-76498-A-6-H MSD		14 Nov 2015 20:26
31	18	Y6358.d	1.	280-76316-F-1-D		14 Nov 2015 20:48
32	19	Y6359.d	1.	280-76311-A-1-J 20x	organic acids r.r. 10X	14 Nov 2015 21:11
33	20	Y6360.d	1.	280-76040-I-1-H 4x		14 Nov 2015 21:34
34	21	Y6361.d	1.	280-76040-I-1-I MS 4x		14 Nov 2015 21:56
35	22	Y6362.d	1.	280-76040-I-1-J MSD 4x		14 Nov 2015 22:19
36	23	Y6363.d	1.	280-76055-C-1-G		14 Nov 2015 22:42
37	24	Y6364.d	1.	280-76055-C-1-H MS		14 Nov 2015 23:05
38	25	Y6365.d	1.	280-76055-C-1-I MSD		14 Nov 2015 23:27
39	26	Y6366.d	1.	280-75996-B-1-K		14 Nov 2015 23:50
40	27	Y6367.d	1.	280-76262-D-4-B		15 Nov 2015 00:13
41	28	Y6368.d	1.	280-76262-D-4-C MS		15 Nov 2015 00:35
42	29	Y6369.d	1.	280-76262-D-4-D MSD		15 Nov 2015 00:58
43	98	Y6370.d	1.	RINSE		15 Nov 2015 01:20
44	99	Y6371.d	1.	RINSE		15 Nov 2015 01:43
45	100	Y6372.d	1.	RINSE		15 Nov 2015 02:06
46	98	Y6373.d	1.	RINSE		15 Nov 2015 02:28
47	99	Y6374.d	1.	RINSE		15 Nov 2015 02:51
48	100	Y6375.d	1.	RINSE		15 Nov 2015 03:13

(1000)

3C4151
411493

Dilution Solvent Lot #: 108136 **Pipette ID:** 51/20/50, 23 **Method(s) Performed:** 8270C

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** ☐

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Batch Number: 304711 Batch Start Date: 11/04/15 14:55 Batch Analyst: Knaub, Gentry L

Batch Method: 3520C Batch End Date: 11/16/15 14:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	GrossWeight	TareWeight	InitialAmount	FinalAmount	FirstAdjustpH
MB 280-304711/1		3520C, 8270D		7			1000 mL	1 mL	1-2
LCS 280-304711/2		3520C, 8270D		7			1000 mL	1 mL	1-2
280-76268-B-3	FW31102015EQU002	3520C, 8270D	T	6	1517.0 g	504.0 g	1013 mL	1 mL	1-2
280-76268-D-4	FW3112015	3520C, 8270D	T	7	1484.5 g	504.2 g	980.3 mL	1 mL	1-2
280-76268-E-6	TMW35102015	3520C, 8270D	T	7	1492.4 g	503.1 g	989.3 mL	1 mL	1-2
280-76268-A-7	MW22S102015	3520C, 8270D	T	7	1437.1 g	508.7 g	928.4 mL	1 mL	1-2
280-76268-C-8	MW22D102015	3520C, 8270D	T	7	1466.3 g	503.1 g	963.2 mL	1 mL	1-2
280-76268-G-9	MW20102015	3520C, 8270D	T	7	1477.3 g	500.1 g	977.2 mL	1 mL	1-2
280-76268-J-9 MS	MW20102015MS	3520C, 8270D	T	7	1472.0 g	499.9 g	972.1 mL	1 mL	1-2
280-76268-F-9 MSD	MW20102015MSD	3520C, 8270D	T	7	1472.0 g	499.7 g	972.3 mL	1 mL	1-2
280-76268-C-10	DMW20102015	3520C, 8270D	T	7	1388.7 g	499.8 g	888.9 mL	1 mL	1-2

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270_LCS_Main 00026	8270_LCS_Supp 00135	8270Surrogate 00086		
MB 280-304711/1		3520C, 8270D		11-12			1 mL		
LCS 280-304711/2		3520C, 8270D		11-12	1 mL	1 mL	1 mL		
280-76268-B-3	FW31102015EQU002	3520C, 8270D	T	11-12			1 mL		
280-76268-D-4	FW3112015	3520C, 8270D	T	11-12			1 mL		
280-76268-E-6	TMW35102015	3520C, 8270D	T	11-12			1 mL		
280-76268-A-7	MW22S102015	3520C, 8270D	T	11-12			1 mL		
280-76268-C-8	MW22D102015	3520C, 8270D	T	11-12			1 mL		
280-76268-G-9	MW20102015	3520C, 8270D	T	11-12			1 mL		
280-76268-J-9 MS	MW20102015MS	3520C, 8270D	T	11-12	1 mL	1 mL	1 mL		
280-76268-F-9 MSD	MW20102015MSD	3520C, 8270D	T	11-12	1 mL	1 mL	1 mL		
280-76268-C-10	DMW20102015	3520C, 8270D	T	11-12			1 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-76268-2

SDG No.:

Batch Number: 304711 Batch Start Date: 11/04/15 14:55 Batch Analyst: Knaub, Gentry L

Batch Method: 3520C Batch End Date: 11/16/15 14:15

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	Gentry Knaub
Time the first extraction ended 24hr	11/05/15 @ 0935
Time the first extraction started 24 hr	11/04/15 @ 1525
Na2SO4 Lot Number	0000121812_00002
NaCl Lot #	148298
Prep Solvent Lot #	MeCl2_Cycl_00247
Prep Solvent Name	MeCl2
Prep Solvent Volume Used	300 mL
Person's name who did the prep	Gentry Knaub + John Arko Pipette: N
Person's name who witnessed reagent drop	Reviewer: GLK
Time the second extraction ended 24hr	11/06/15 @ 800
Time the second extraction started 24hr	11/05/15 @ 1140
Sufficient volume for MS/MSD?	NO
Uncorrected Temperature	84 Celsius
Water Bath ID	Bath 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

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
phone 303-736-0100 fax 303-431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: John Nance	Site Contact: John Nance 505 321 7260	Date: 11/2/15	COC No: FWDAOCT15-05
John Nance	Tel: 505 835 7660	Lab Contact: Michelle Johnston	Carrier: Federal Express	1 of 1 COCs
6700 Jefferson Street NE Suite C3	Analysis Turnaround Time			Job No.
Albuquerque, NM 87109	Calendar (C) or Work Days (W) W			
505 835 7660 PHONE	TAT if different from Below 15			
	☐ 2 weeks			
Project Name: Fort Wingate	☐ 1 week			
Site: Fort Wingate, New Mexico	☐ 2 days			
PO#	☐ 1 day			

280-76268 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives 8330B	Nitrate Nitrite 9056	Perchlorate 6860	TAL Metal6010C/6020A/7470A Total	TAL Metal6010C/6020A/7470A Diss.	Organochlorine Pesticides 8081A	Volatile Organic Compounds 8260C	Semivolatile Organics 8270D	ORO 8015C C24-C36	TPH-DRO 8015C C10-C28	TPH-GRO 8015C C6-C10	TCLP VOCs 1311/8260B	EDB 8011	TCLP SVOCs 1311/8270D	Metals 6010C/6020A dissolved	TCLP Pesticides 1311/8081A	TCLP Herbicides 1311/8151A	pH 9045C	Ignitibility 1010	Sample Specific Notes:
TB-08-102015	11/2/2015	08:00	Grab	GW	1	N							1														Trip Blank
TB-09-102015	11/2/2015	08:05	Grab	GW	1	N											1										Trip Blank
FW31102015EQU002	11/2/2015	09:30	Grab	GW	15	Y	2	1		1	1	2	3	2					3								
FW31102015	11/2/2015	11:05	Grab	GW	12	Y	2	1		1	1	2	3	2													
MW18D102015	11/2/2015	12:30	Grab	GW	17	Y	2	1	1	1	1		3			2	3		3								
TMW35102015	11/2/2015	09:55	Grab	GW	19	Y		1	1	1	1	2	3	2		2	3		3								
MW22S102015	11/2/2015	11:15	Grab	GW	1	Y								1													Partial. Well Dry after 1 Liter.
MW22D102015	11/2/2015	12:10	Grab	GW	21	Y	2	1	1	1	1	2	3	2		2	3		3								
MW20102015	11/2/2015	10:30	Grab	GW	21	Y	2	1	1	1	1	2	3	2		2	3		3								
DMW20102015	11/2/2015	10:30	Grab	GW	21	Y	2	1	1	1	1	2	3	2		2	3		3								
MW20102015MS	11/2/2015	10:30	Grab	GW	21	Y	2	1	1	1	1	2	3	2		2	3		3								Matrix Spike
MW20102015MSD	11/2/2015	10:30	Grab	GW	21	Y	2	1	1	1	1	2	3	2		2	3		3								Matrix Spike Duplicate
			Grab	GW		Y																					
			Grab	GW		Y																					
			Grab	GW		Y																					

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☒ *Unknown*

Sample Disposal
☐ *Return To Client* ☒ *Disposal By Lab* Archive ☒ For 60 days after invoice

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
L. Hill L. Hill	CH2M HILL	11/2/15 16:00		TAO	11/3/15 920
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

2.2, 0.7, 1.7, 0.3, 1.9, 3.1, 1.6, 0.6, 1.5, 0.6, 2.6 + 0.0 DR# FDW 11/3/15

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S. Saturday delivery available.

1 From SUNDANCE

ORDER: 00823698
8210 Louisiana Blvd NE, Ste C
ABQ, NM 87113
(505) 835-7660

Package Weight

FedEx Priority Overnight®

Release Signature
For nonresidential deliveries.

Sign within the area. Please do not remove.

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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Employee Number	Base Charges
Other	Total Charges

M-10091 Rev. 3/10

2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
(303) 736-0100

NONREDEEMABLE
Please see the back of the receipt for important terms and conditions.

FedEx TRK# 0667 8087 7478 0055

TUE - 03 NOV 10:30A
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA

FID 789936 02NOV16 GUPA 539C2/3F56/31D0

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Employee Number	Base Charges
Other	Total Charges

M-10091 Rev. 3/10

2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
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NONREDEEMABLE
Please see the back of the receipt for important terms and conditions.

SATURDAY DELIVERY

FedEx TRK# 0667 8087 7478 0022

TUE - 03 NOV 10:30A
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA

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1 From SUNDANCE
ORDER: 00823698
8210 Louisiana Blvd NE, St. C
ABQ, NM 87113
(505) 835-7660

Package Weight

FedEx Priority Overnight®

Release Signature
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→ Sign within this area. Please do not remove.
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For FedEx Use Only
Employee Number | Base Charges
Other | Total Charges

2 To *Shipment will not be accepted if address below is altered.* M-10091 Rev. 3/10

SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
(303) 736-0100

NONREDEEMABLE
Please see the back of the receipt for important terms and conditions.

SATURDAY DELIVERY

FedEx TRK# 0667 8087 7477 9989

TUE - 03 NOV 10:30A
PRIORITY OVERNIGHT

XH WHHA

80002
CO-US
DEN

FedEx Express Expanded Billable Stamp

Use only for shipments within the U.S. Saturday delivery available.

1 From SUNDANCE
ORDER: 00823698
8210 Louisiana Blvd NE, St. C
ABQ, NM 87113
(505) 835-7660

Package Weight

FedEx Priority Overnight®

Release Signature
For nonresidential deliveries.
→ Sign within this area. Please do not remove.
By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

For FedEx Use Only
Employee Number | Base Charges
Other | Total Charges

2 To *Shipment will not be accepted if address below is altered.* M-10091 Rev. 3/10

SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
(303) 736-0100

NONREDEEMABLE
Please see the back of the receipt for important terms and conditions.

FedEx TRK# 0667 8087 7478 0000

TUE - 03 NOV 10:30A
PRIORITY OVERNIGHT

XH WHHA

80002
CO-US
DEN

FedEx Express Expanded Billable Stamp

Use only for shipments within the U.S.
Saturday delivery available.

© 2011

1 From SUNDANCE

ORDER: 00823698
8210 Louisiana Blvd NE, Ste C
ABQ, NM 87113
(505) 835-7660

Package Weight

FedEx Priority Overnight®

Release Signature
For nonresidential deliveries.
Sign within the area. Please do not remove.
By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

For FedEx Use Only
Employee Number | Base Charges
Other | Total Charges

2 To Shipment will not be accepted if address below is altered.

M-10091 Rev. 3/10

SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
(303) 736-0100

NONREDEEMABLE
Please see the back of the receipt for important terms and conditions.

FedEx
TRK# 0667 8087 7478 0033

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FedEx Express Expanded Billable Stamp

Use only for shipments within the U.S.
Saturday delivery available.

1 From SUNDANCE

ORDER: 00823698
8210 Louisiana Blvd NE, Ste C
ABQ, NM 87113
(505) 835-7660

Package Weight

FedEx Priority Overnight®

Release Signature
For nonresidential deliveries.
Sign within the area. Please do not remove.
By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

For FedEx Use Only
Employee Number | Base Charges
Other | Total Charges

2 To Shipment will not be accepted if address below is altered.

M-10091 Rev. 3/10

SAMPLE RECEIVING
TESTAMERICA DENVER
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NONREDEEMABLE
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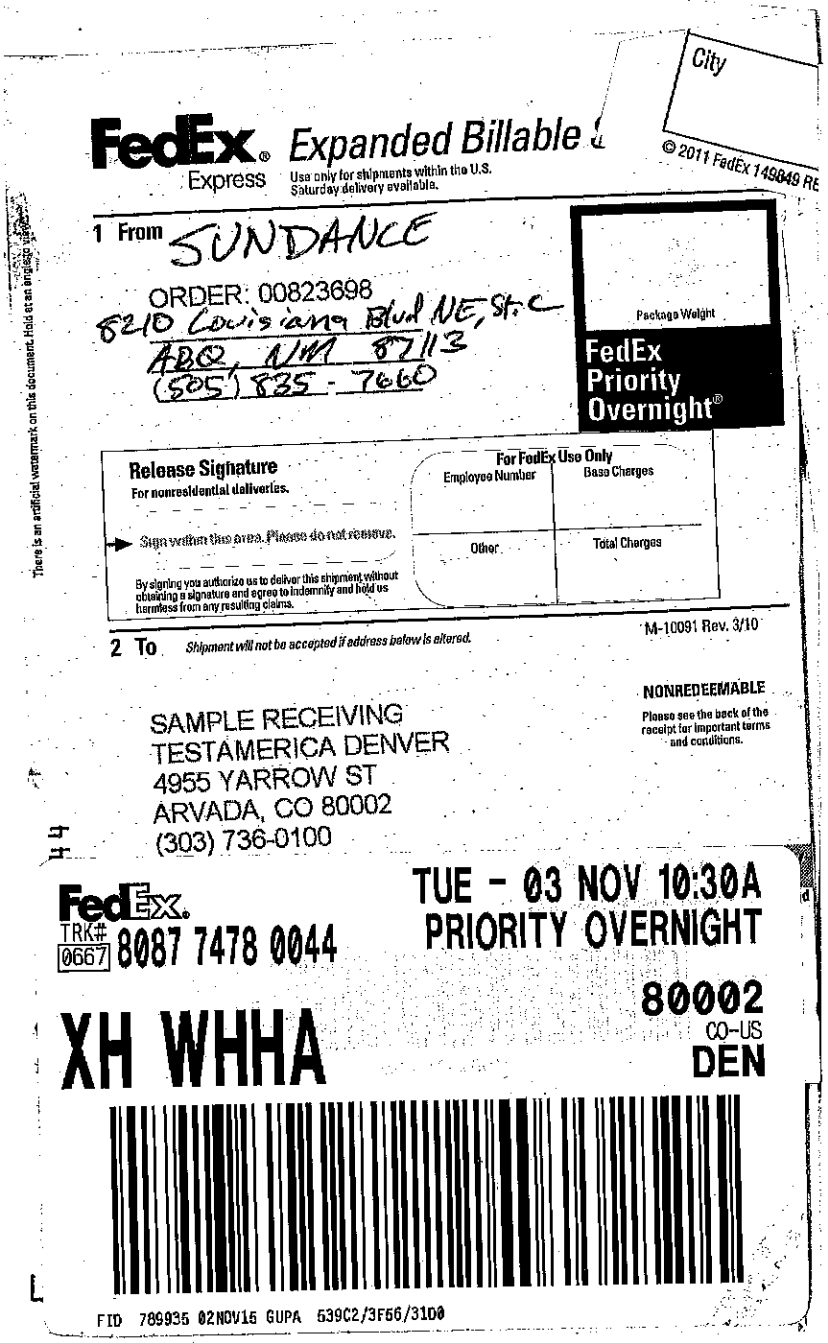

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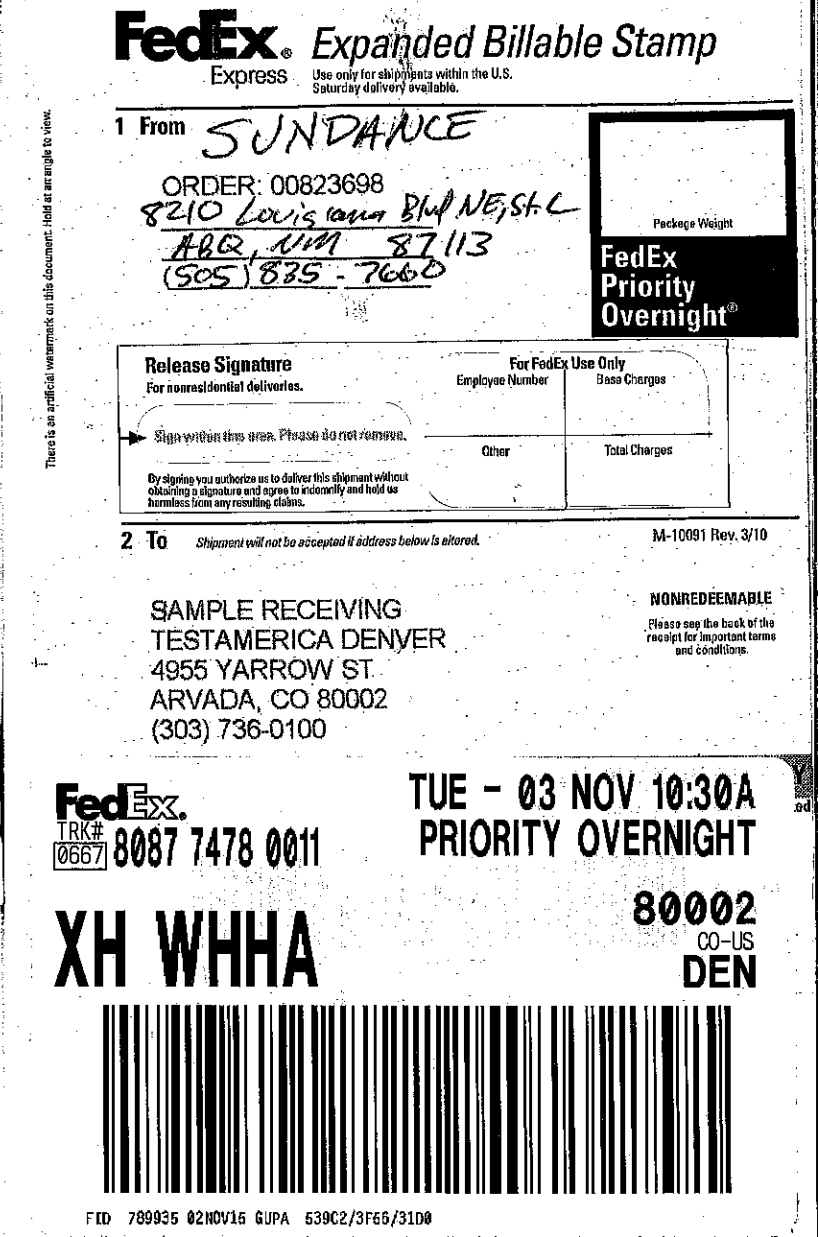

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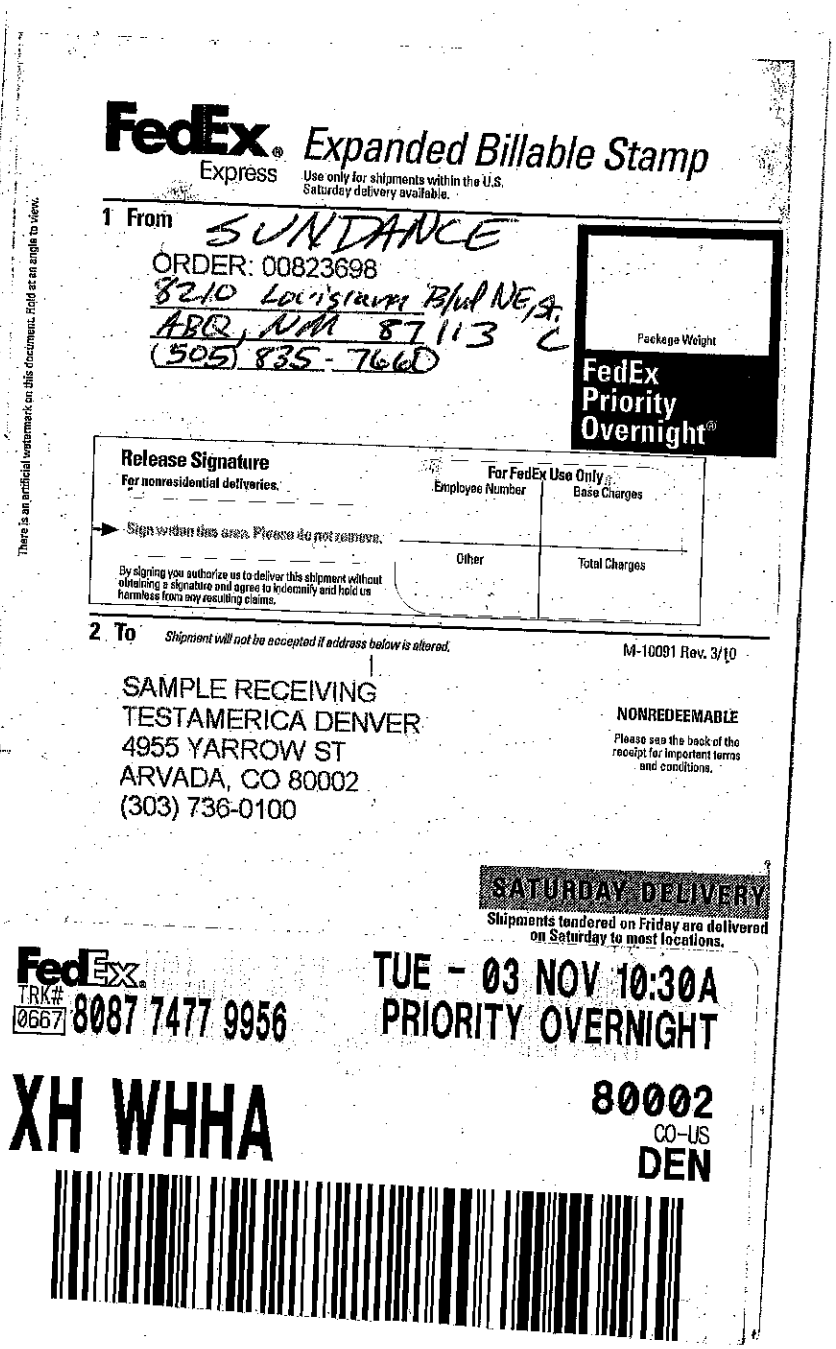

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SATURDAY DELIVERY

Shipments tendered on Friday are delivered on Saturday to most locations.

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Login Sample Receipt Checklist

Client: Sundance Consulting, Inc

Job Number: 280-76268-2

Login Number: 76268
List Number: 1
Creator: White, Denise E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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?	N/A	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	