Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Blank

MB: 241875
Analyzed: 09/29/2011 09:39
Units: ppb

Analyte	Result	MDL	RL	
Dichlorodifluoromethane	ND	0.15	1	
Chloromethane	ND	0.15	1	
Freon 114	ND	0.15	1	
Vinyl chloride	ND	0.15	1	
1,3-Butadiene	ND	0.15	1	
Bromomethane	ND	0.15	1	
Chloroethane	ND	0.15	1	
Freon 11	ND	0.15	1	
Freon 113	ND	0.15	1	
1,1-Dichloroethene	ND	0.15	1	
Acetone	0.321	0.15	1	
Carbon disulfide	ND	0.15	1	
Methylene chloride	ND	0.15	1	
trans-1,2-Dichloroethene	ND	0.15	1	
Methyl t-butyl ether	ND	0.15	1	
Vinyl acetate	ND	0.15	1	
2-Butanone	ND	0.15	1	
cis-1,2-Dichloroethene	ND	0.15	1	
1,1-Dichloroethane	ND	0.15	1	
Ethyl acetate	ND	0.15	1	
Hexane	ND	0.15	1	
Chloroform	ND	0.15	1	
Tetrahydrofuran	ND	0.15	1	
1,2-Dichloroethane	ND	0.15	1	
1,1,1-Trichloroethane	ND	0.15	1	
Carbon tetrachloride	ND	0.15	1	
Benzene	ND	0.15	1	
Cyclohexane	ND	0.15	1	
Trichloroethene	ND	0.15	1	
1,2-Dichloropropane	ND	0.15	1	
Bromodichloromethane	ND	0.15	1	
Heptane	ND	0.15	1	
cis-1,3-Dichloropropene	ND	0.15	1	
4-Methyl-2-pentanone	ND	0.15	1	

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Blank

MB: 241875
Analyzed: 09/29/2011 09:39
Units: ppb

Analyte	Result	MDL	RL	
trans-1,3-Dichloropropene	ND	0.15	1	
1,1,2-Trichloroethane	ND	0.15	1	
Toluene	ND	0.15	1	
2-Hexanone	ND	0.3	1	
Tetrachloroethene	ND	0.15	1	
Dibromochloromethane	ND	0.15	1	
1,2-Dibromoethane	ND	0.15	1	
Chlorobenzene	ND	0.15	1	
Ethyl benzene	ND	0.15	1	
m,p-Xylene	ND	0.15	1	
o-Xylene	ND	0.15	1	
Styrene	ND	0.15	1	
Bromoform	ND	0.15	1	
1,1,2,2-Tetrachloroethane	ND	0.15	1	
4-Ethyl toluene	ND	0.15	1	
1,3,5-Trimethylbenzene	ND	0.15	1	
1,2,4-Trimethylbenzene	ND	0.15	1	
1,3-Dichlorobenzene	ND	0.15	1	
1,4-Dichlorobenzene	ND	0.15	1	
Benzyl chloride	ND	0.0422	1	
1,2-Dichlorobenzene	ND	0.3	1	
1,2,4-Trichlorobenzene	ND	0.147	1	
Hexachlorobutadiene	ND	0.3	1	
Naphthalene	ND	NA	1	
Propene	ND	NA	1	
Total Xylene	ND	NA	3	

MB: 241878
Analyzed: 10/06/2011 11:46
Units: ppb

Analyte	Result	MDL	RL	
Dichlorodifluoromethane	ND	0.15	1	
Chloromethane	ND	0.15	1	
Freon 114	ND	0.15	1	
Vinyl chloride	ND	0.15	1	

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
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Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Blank

MB: 241878
Analyzed: 10/06/2011 11:46
Units: ppb

Analyte	Result	MDL	RL	
1,3-Butadiene	ND	0.15	1	
Bromomethane	ND	0.15	1	
Chloroethane	ND	0.15	1	
Freon 11	ND	0.15	1	
Freon 113	ND	0.15	1	
1,1-Dichloroethene	ND	0.15	1	
Acetone	0.349	0.15	1	
Carbon disulfide	ND	0.15	1	
Methylene chloride	ND	0.15	1	
trans-1,2-Dichloroethene	ND	0.15	1	
Methyl t-butyl ether	ND	0.15	1	
Vinyl acetate	ND	0.15	1	
2-Butanone	ND	0.15	1	
cis-1,2-Dichloroethene	ND	0.15	1	
1,1-Dichloroethane	ND	0.15	1	
Ethyl acetate	ND	0.15	1	
Hexane	ND	0.15	1	
Chloroform	ND	0.15	1	
Tetrahydrofuran	ND	0.15	1	
1,2-Dichloroethane	ND	0.15	1	
1,1,1-Trichloroethane	ND	0.15	1	
Carbon tetrachloride	ND	0.15	1	
Benzene	ND	0.15	1	
Cyclohexane	ND	0.15	1	
Trichloroethene	ND	0.15	1	
1,2-Dichloropropane	ND	0.15	1	
Bromodichloromethane	ND	0.15	1	
Heptane	ND	0.15	1	
cis-1,3-Dichloropropene	ND	0.15	1	
4-Methyl-2-pentanone	ND	0.15	1	
trans-1,3-Dichloropropene	ND	0.15	1	
1,1,2-Trichloroethane	ND	0.15	1	
Toluene	ND	0.15	1	
2-Hexanone	ND	0.3	1	

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
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Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Blank

MB: 241878
Analyzed: 10/06/2011 11:46
Units: ppb

Analyte	Result	MDL	RL	
Tetrachloroethene	ND	0.15	1	
Dibromochloromethane	ND	0.15	1	
1,2-Dibromoethane	ND	0.15	1	
Chlorobenzene	ND	0.15	1	
Ethyl benzene	ND	0.15	1	
m,p-Xylene	ND	0.15	1	
o-Xylene	ND	0.15	1	
Styrene	ND	0.15	1	
Bromoform	ND	0.15	1	
1,1,2,2-Tetrachloroethane	ND	0.15	1	
4-Ethyl toluene	ND	0.15	1	
1,3,5-Trimethylbenzene	ND	0.15	1	
1,2,4-Trimethylbenzene	ND	0.15	1	
1,3-Dichlorobenzene	ND	0.15	1	
1,4-Dichlorobenzene	ND	0.15	1	
Benzyl chloride	ND	0.0422	1	
1,2-Dichlorobenzene	ND	0.3	1	
1,2,4-Trichlorobenzene	ND	0.147	1	
Hexachlorobutadiene	ND	0.3	1	
Naphthalene	ND	NA	1	
Propene	ND	NA	1	
Total Xylene	ND	NA	3	

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241873
Analyzed: 09/28/2011 21:34
Units: ppb

LCSD: 241874
Analyzed: 09/28/2011 22:09

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Dichlorodifluoromethane	9.48	10	94.8	59.3	135.1	10.2	6.98	0	25	
Chloromethane	10.3	10	103	55.2	137.4	10.4	1.59	0	25	
Freon 114	9.83	10	98.3	64.6	128	10.3	4.25	0	25	
Vinyl chloride	10.3	10	103	61.8	132.3	11	6.61	0	25	
1,3-Butadiene	10.1	10	101	58	138.3	10.7	5.16	0	25	
Bromomethane	9.79	10	97.9	63.3	129.9	10.2	3.79	0	25	

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241873
Analyzed: 09/28/2011 21:34
Units: ppb

LCSD: 241874
Analyzed: 09/28/2011 22:09

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Chloroethane	10.2	10	102	57.6	137.1	10.2	0.363	0	25	
Freon 11	9.69	10	96.9	58.9	132.8	9.87	1.83	0	25	
Freon 113	9.66	10	96.6	68.5	120	9.83	1.72	0	25	
1,1-Dichloroethene	10.1	10	101	67.2	125.1	9.98	1.32	0	25	
Acetone	9.54	10	95.4	42.5	146	9.72	1.93	0	25	
Carbon disulfide	10.5	10	105	63.9	128.8	10.9	3.81	0	25	
Methylene chloride	9.8	10	98	63.7	127.9	9.96	1.63	0	25	
trans-1,2-Dichloroethene	11	10	110	68.1	124.6	10.9	0.439	0	25	
Methyl t-butyl ether	10.7	10	107	60.8	138	10.8	0.501	0	25	
Vinyl acetate	11	10	110	59.3	141.1	11	0.0272	0	25	
2-Butanone	10.3	10	103	51.7	144.2	10.8	4.31	0	25	
cis-1,2-Dichloroethene	11	10	110	69.8	124.3	11	0.118	0	25	
1,1-Dichloroethane	10.1	10	101	67.7	123.6	10.4	2.94	0	25	
Ethyl acetate	11.4	10	114	53.4	156.9	11.2	1.57	0	25	
Hexane	11	10	110	62.4	129.5	10.9	1	0	25	
Chloroform	10.1	10	101	67.3	121.8	10.2	1.56	0	25	
Tetrahydrofuran	11.7	10	117	50.6	155.3	11.8	1.05	0	25	
1,2-Dichloroethane	10.1	10	101	62.4	130.5	10.5	3.42	0	25	
1,1,1-Trichloroethane	10.1	10	101	60.4	127.7	10.1	0.387	0	25	
Carbon tetrachloride	9.99	10	99.9	58.2	130.6	9.98	0.131	0	25	
Benzene	10.9	10	109	64.1	127.3	11.2	2.11	0	25	
Cyclohexane	9.57	10	95.7	61.9	123.6	9.47	1.04	0	25	
Trichloroethene	10.6	10	106	62.4	126.8	10.9	2.27	0	25	
1,2-Dichloropropane	10.4	10	104	60.7	130.6	10.6	2.16	0	25	
Bromodichloromethane	9.76	10	97.6	62.9	128.3	10.1	3.56	0	25	
Heptane	10.5	10	105	59.5	133.4	10.8	2.61	0	25	
cis-1,3-Dichloropropene	11.8	10	118	64.1	133.6	11.5	2.2	0	25	
4-Methyl-2-pentanone	10.3	10	103	53.8	142	10.7	3.46	0	25	
trans-1,3-Dichloropropene	11	10	110	62.1	137.9	11	0.0182	0	25	
1,1,2-Trichloroethane	10	10	100	65	126.6	10.5	4.51	0	25	
Toluene	11.1	10	111	63	130.1	11.4	2.1	0	25	
2-Hexanone	10.7	10	107	53	148	11.1	3.31	0	25	
Tetrachloroethene	8.77	10	87.7	60.7	126.6	8.74	0.314	0	25	
Dibromochloromethane	10.1	10	101	62.4	130.9	10	0.685	0	25	

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
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Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241873
Analyzed: 09/28/2011 21:34
Units: ppb

LCSD: 241874
Analyzed: 09/28/2011 22:09

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
1,2-Dibromoethane	10.6	10	106	64.4	129	10.3	2.8	0	25	
Chlorobenzene	10	10	100	62.8	126.9	9.98	0.403	0	25	
Ethyl benzene	11.5	10	115	60.7	134.5	11.4	0.639	0	25	
m,p-Xylene	21	20	105	61	132.5	20.8	0.747	0	25	
o-Xylene	10.8	10	108	60.4	133.9	10.7	1.43	0	25	
Styrene	10.7	10	107	59.7	139.5	11.6	8.23	0	25	
Bromoform	8.12	10	81.2	59.7	136	7.85	3.38	0	25	
1,1,2,2-Tetrachloroethane	8.93	10	89.3	59.3	134.8	9.09	1.8	0	25	
4-Ethyl toluene	11	10	110	57.7	142.1	11.3	2.12	0	25	
1,3,5-Trimethylbenzene	10.2	10	102	56.4	139.5	10.2	0.354	0	25	
1,2,4-Trimethylbenzene	10.3	10	103	56.8	143.4	10.3	0.262	0	25	
1,3-Dichlorobenzene	8.29	10	82.9	57.8	136.9	8.1	2.28	0	25	
1,4-Dichlorobenzene	8.09	10	80.9	57.7	137.2	8.45	4.27	0	25	
Benzyl chloride	8.55	10	85.5	60.1	182.5	8.94	4.38	0	25	
1,2-Dichlorobenzene	8.56	10	85.6	56.5	140	8.5	0.731	0	25	
1,2,4-Trichlorobenzene	9.15	10	91.5	3.6	224.6	8.9	2.81	0	25	
Hexachlorobutadiene	6.7	10	67	25.3	155.9	7.25	7.85	0	25	
Naphthalene	9.36	10	93.6	70	130	9.99	6.5	0	25	
Propene	9.94	10	99.4	70	130	10.5	5.67	0	25	
Total Xylene	30.6	30	102	70	130	30.5	0.511	0	25	

LCS: 241876
Analyzed: 10/06/2011 02:46
Units: ppb

LCSD: 241877
Analyzed: 10/06/2011 03:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Dichlorodifluoromethane	12	10	120	59.3	135.1	12.7	5.97	0	25	
Chloromethane	11	10	110	55.2	137.4	11.2	1.97	0	25	
Freon 114	11.9	10	119	64.6	128	12.4	4	0	25	
Vinyl chloride	11.2	10	112	61.8	132.3	11.5	2.56	0	25	
1,3-Butadiene	10.9	10	109	58	138.3	11.2	2.89	0	25	
Bromomethane	11	10	110	63.3	129.9	11.3	2.4	0	25	
Chloroethane	10.7	10	107	57.6	137.1	11.3	5.55	0	25	
Freon 11	12.5	10	125	58.9	132.8	12.9	3.61	0	25	
Freon 113	11.5	10	115	68.5	120	12.1	5.55	0	25	
1,1-Dichloroethene	11.3	10	113	67.2	125.1	11.2	1.09	0	25	

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241876
Analyzed: 10/06/2011 02:46
Units: ppb

LCSD: 241877
Analyzed: 10/06/2011 03:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Acetone	10.8	10	108	42.5	146	10.7	0.409	0	25	
Carbon disulfide	10.9	10	109	63.9	128.8	10.9	0.578	0	25	
Methylene chloride	10.9	10	109	63.7	127.9	11.7	7.04	0	25	
trans-1,2-Dichloroethene	10.5	10	105	68.1	124.6	10.9	3.82	0	25	
Methyl t-butyl ether	10.7	10	107	60.8	138	11.1	4.33	0	25	
Vinyl acetate	10.8	10	108	59.3	141.1	11.1	2.68	0	25	
2-Butanone	10.3	10	103	51.7	144.2	9.85	4.46	0	25	
cis-1,2-Dichloroethene	10.4	10	104	69.8	124.3	11.1	6.64	0	25	
1,1-Dichloroethane	11.1	10	111	67.7	123.6	11.7	5.69	0	25	
Ethyl acetate	12.5	10	125	53.4	156.9	12.2	1.93	0	25	
Hexane	10.2	10	102	62.4	129.5	10.1	1.3	0	25	
Chloroform	11.8	10	118	67.3	121.8	12.1	2.33	0	25	
Tetrahydrofuran	10.6	10	106	50.6	155.3	10.3	3.12	0	25	
1,2-Dichloroethane	11.9	10	119	62.4	130.5	12.3	3.19	0	25	
1,1,1-Trichloroethane	12.5	10	125	60.4	127.7	12.7	1.69	0	25	
Carbon tetrachloride	12.6	10	126	58.2	130.6	12.6	0.301	0	25	
Benzene	10.1	10	101	64.1	127.3	9.85	2.66	0	25	
Cyclohexane	10.1	10	101	61.9	123.6	10.3	2.34	0	25	
Trichloroethene	10.3	10	103	62.4	126.8	10.4	0.889	0	25	
1,2-Dichloropropane	10.2	10	102	60.7	130.6	9.84	3.13	0	25	
Bromodichloromethane	11.8	10	118	62.9	128.3	12.1	2.29	0	25	
Heptane	10.4	10	104	59.5	133.4	10.7	2.49	0	25	
cis-1,3-Dichloropropene	11.3	10	113	64.1	133.6	11.2	0.701	0	25	
4-Methyl-2-pentanone	10.8	10	108	53.8	142	10.5	2.85	0	25	
trans-1,3-Dichloropropene	11.6	10	116	62.1	137.9	11.4	1.33	0	25	
1,1,2-Trichloroethane	11.1	10	111	65	126.6	11	1.56	0	25	
Toluene	10.1	10	101	63	130.1	9.84	2.94	0	25	
2-Hexanone	9.9	10	99	53	148	9.73	1.79	0	25	
Tetrachloroethene	8.43	10	84.3	60.7	126.6	8.37	0.732	0	25	
Dibromochloromethane	11	10	110	62.4	130.9	11	0.455	0	25	
1,2-Dibromoethane	10.5	10	105	64.4	129	10.5	0.0952	0	25	
Chlorobenzene	9.67	10	96.7	62.8	126.9	9.59	0.849	0	25	
Ethyl benzene	9.91	10	99.1	60.7	134.5	9.6	3.12	0	25	
m,p-Xylene	18.7	20	93.6	61	132.5	18.7	0.0085	0	25	

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RPD - Relative % Difference (Spike / Spike Duplicate)
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QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241876
Analyzed: 10/06/2011 02:46
Units: ppb

LCSD: 241877
Analyzed: 10/06/2011 03:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
o-Xylene	9.45	10	94.5	60.4	133.9	9.2	2.63	0	25	
Styrene	9.94	10	99.4	59.7	139.5	9.63	3.16	0	25	
Bromoform	8.7	10	87	59.7	136	8.63	0.84	0	25	
1,1,2,2-Tetrachloroethane	8.97	10	89.7	59.3	134.8	8.89	0.873	0	25	
4-Ethyl toluene	8.86	10	88.6	57.7	142.1	8.36	5.8	0	25	
1,3,5-Trimethylbenzene	8.66	10	86.6	56.4	139.5	9	3.75	0	25	
1,2,4-Trimethylbenzene	8.8	10	88	56.8	143.4	8.7	1.14	0	25	
1,3-Dichlorobenzene	8	10	80	57.8	136.9	7.92	1.02	0	25	
1,4-Dichlorobenzene	8.42	10	84.2	57.7	137.2	8.31	1.33	0	25	
Benzyl chloride	9.23	10	92.3	60.1	182.5	8.77	5.01	0	25	
1,2-Dichlorobenzene	8.23	10	82.3	56.5	140	8.15	1	0	25	
1,2,4-Trichlorobenzene	7.49	10	74.9	3.6	224.6	7.58	1.17	0	25	
Hexachlorobutadiene	7.99	10	79.9	25.3	155.9	7.66	4.23	0	25	
Naphthalene	7.27	10	72.7	70	130	7	3.72	0	25	
Propene	10.6	10	106	70	130	11.2	5.54	0	25	
Total Xylene	30	30	99.8	70	130	29.7	0.988	0	25	

Surrogate Recoveries

Surrogate	Bromofluorobenzene		
QC Limits	67.7	129.9	
Units	ppb		
Lab ID	Result	Target	% Recovery
241873-LCS	19.7	20	98.3
241874-LCSD	19.2	20	96.2
241875-MB	20.7	20	104
1126538008	16.5	20	82.4
241876-LCS	22	20	110
241877-LCSD	22.4	20	112
241878-MB	23.5	20	118
1126538001	23.8	20	119
1126538002	22.5	20	113
1126538003	21.8	20	109
1126538004	21.1	20	106
1126538005	21.2	20	106

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1794 (HBN: 74581)
Analyzed By: Thomas J. Masoian

Surrogate Recoveries

Surrogate	Bromofluorobenzene		
QC Limits	67.7	129.9	
Units	ppb		
Lab ID	Result	Target	% Recovery
1126538006	22.6	20	113
1126538007	22.4	20	112
1126538009	24	20	120
1126538010	21.5	20	107
1126538011	21.7	20	109
1126538012	20.6	20	103
1126538013	19.8	20	99.2
1126538014	20.5	20	103
1126538015	22.2	20	111
1126538016	20.8	20	104
1126538017	19.9	20	99.6
1126538018	21.3	20	106

Comments

None

QC Data Approved and Reviewed by

Thomas J. Masoian	Lisa M. Reid	10/14/2011
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1799 (HBN: 74872)
Analyzed By: Thomas J. Masoian

Blank

MB: 241959
Analyzed: 10/11/2011 15:02
Units: ppb

Analyte	Result	MDL	RL	
Dichlorodifluoromethane	ND	0.15	1	
Chloromethane	ND	0.15	1	
Freon 114	ND	0.15	1	
Vinyl chloride	ND	0.15	1	
1,3-Butadiene	ND	0.15	1	
Bromomethane	ND	0.15	1	
Chloroethane	ND	0.15	1	
Freon 11	ND	0.15	1	
Freon 113	ND	0.15	1	
1,1-Dichloroethene	ND	0.15	1	
Acetone	0.277	0.15	1	
Carbon disulfide	ND	0.15	1	
Methylene chloride	ND	0.15	1	
trans-1,2-Dichloroethene	ND	0.15	1	
Methyl t-butyl ether	ND	0.15	1	
Vinyl acetate	ND	0.15	1	
2-Butanone	ND	0.15	1	
cis-1,2-Dichloroethene	ND	0.15	1	
1,1-Dichloroethane	ND	0.15	1	
Ethyl acetate	ND	0.15	1	
Hexane	ND	0.15	1	
Chloroform	ND	0.15	1	
Tetrahydrofuran	ND	0.15	1	
1,2-Dichloroethane	ND	0.15	1	
1,1,1-Trichloroethane	ND	0.15	1	
Carbon tetrachloride	ND	0.15	1	
Benzene	ND	0.15	1	
Cyclohexane	ND	0.15	1	
Trichloroethene	ND	0.15	1	
1,2-Dichloropropane	ND	0.15	1	
Bromodichloromethane	ND	0.15	1	
Heptane	ND	0.15	1	
cis-1,3-Dichloropropene	ND	0.15	1	
4-Methyl-2-pentanone	ND	0.15	1	

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1799 (HBN: 74872)
Analyzed By: Thomas J. Masoian

Blank

MB: 241959
Analyzed: 10/11/2011 15:02
Units: ppb

Analyte	Result	MDL	RL	
trans-1,3-Dichloropropene	ND	0.15	1	
1,1,2-Trichloroethane	ND	0.15	1	
Toluene	ND	0.15	1	
2-Hexanone	ND	0.3	1	
Tetrachloroethene	ND	0.15	1	
Dibromochloromethane	ND	0.15	1	
1,2-Dibromoethane	ND	0.15	1	
Chlorobenzene	ND	0.15	1	
Ethyl benzene	ND	0.15	1	
m,p-Xylene	ND	0.15	1	
o-Xylene	ND	0.15	1	
Styrene	ND	0.15	1	
Bromoform	ND	0.15	1	
1,1,2,2-Tetrachloroethane	ND	0.15	1	
4-Ethyl toluene	ND	0.15	1	
1,3,5-Trimethylbenzene	ND	0.15	1	
1,2,4-Trimethylbenzene	ND	0.15	1	
1,3-Dichlorobenzene	ND	0.15	1	
1,4-Dichlorobenzene	ND	0.15	1	
Benzyl chloride	ND	0.0422	1	
1,2-Dichlorobenzene	ND	0.3	1	
1,2,4-Trichlorobenzene	ND	0.147	1	
Hexachlorobutadiene	ND	0.3	1	
Naphthalene	ND	NA	1	
Propene	ND	NA	1	
Total Xylene	ND	NA	3	

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241957
Analyzed: 10/11/2011 13:47
Units: ppb

LCSD: 241958
Analyzed: 10/11/2011 14:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Dichlorodifluoromethane	9.75	10	97.5	59.3	135.1	10.4	6.32	0	25	
Chloromethane	9.58	10	95.8	55.2	137.4	10.5	9.59	0	25	

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1799 (HBN: 74872)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241957
Analyzed: 10/11/2011 13:47
Units: ppb

LCSD: 241958
Analyzed: 10/11/2011 14:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Freon 114	9.98	10	99.8	64.6	128	10.1	1.26	0	25	
Vinyl chloride	9.77	10	97.7	61.8	132.3	10.6	8.6	0	25	
1,3-Butadiene	10.2	10	102	58	138.3	11	7.42	0	25	
Bromomethane	10	10	100	63.3	129.9	10.6	5.9	0	25	
Chloroethane	9.86	10	98.6	57.6	137.1	10.3	3.89	0	25	
Freon 11	9.63	10	96.3	58.9	132.8	10.2	5.98	0	25	
Freon 113	10	10	100	68.5	120	10.1	0.826	0	25	
1,1-Dichloroethene	10.2	10	102	67.2	125.1	10.5	2.62	0	25	
Acetone	8.68	10	86.8	42.5	146	9.64	10.6	0	25	
Carbon disulfide	10.3	10	103	63.9	128.8	10.9	5.21	0	25	
Methylene chloride	9.94	10	99.4	63.7	127.9	9.85	0.894	0	25	
trans-1,2-Dichloroethene	10.7	10	107	68.1	124.6	11.3	5.57	0	25	
Methyl t-butyl ether	10.3	10	103	60.8	138	11.3	9.31	0	25	
Vinyl acetate	10.5	10	105	59.3	141.1	11.8	11.7	0	25	
2-Butanone	10.3	10	103	51.7	144.2	11.1	8.01	0	25	
cis-1,2-Dichloroethene	10.8	10	108	69.8	124.3	11.6	7.06	0	25	
1,1-Dichloroethane	9.96	10	99.6	67.7	123.6	10.8	7.82	0	25	
Ethyl acetate	10.8	10	108	53.4	156.9	11.8	9.05	0	25	
Hexane	10.2	10	102	62.4	129.5	11.3	9.59	0	25	
Chloroform	9.75	10	97.5	67.3	121.8	10.5	7.01	0	25	
Tetrahydrofuran	10.8	10	108	50.6	155.3	12	10.4	0	25	
1,2-Dichloroethane	9.91	10	99.1	62.4	130.5	10.5	5.66	0	25	
1,1,1-Trichloroethane	10.1	10	101	60.4	127.7	10.6	4.97	0	25	
Carbon tetrachloride	9.95	10	99.5	58.2	130.6	10.5	5.49	0	25	
Benzene	10.4	10	104	64.1	127.3	11	6.17	0	25	
Cyclohexane	9.08	10	90.8	61.9	123.6	9.33	2.78	0	25	
Trichloroethene	10.8	10	108	62.4	126.8	11.3	3.83	0	25	
1,2-Dichloropropane	9.85	10	98.5	60.7	130.6	10.4	5.29	0	25	
Bromodichloromethane	10.1	10	101	62.9	128.3	10.9	7.12	0	25	
Heptane	10.1	10	101	59.5	133.4	10.6	4.6	0	25	
cis-1,3-Dichloropropene	11.2	10	112	64.1	133.6	12.2	8.12	0	25	
4-Methyl-2-pentanone	10.5	10	105	53.8	142	11.5	9.1	0	25	
trans-1,3-Dichloropropene	11.1	10	111	62.1	137.9	11.6	4.56	0	25	
1,1,2-Trichloroethane	9.82	10	98.2	65	126.6	10.7	8.57	0	25	

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1799 (HBN: 74872)
Analyzed By: Thomas J. Masoian

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 241957
Analyzed: 10/11/2011 13:47
Units: ppb

LCSD: 241958
Analyzed: 10/11/2011 14:24

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits		
Toluene	10.3	10	103	63	130.1	11.3	9.25	0	25	
2-Hexanone	10.6	10	106	53	148	11.7	9.92	0	25	
Tetrachloroethene	8.22	10	82.2	60.7	126.6	9.1	10.1	0	25	
Dibromochloromethane	9.64	10	96.4	62.4	130.9	10.9	12	0	25	
1,2-Dibromoethane	9.98	10	99.8	64.4	129	11	9.74	0	25	
Chlorobenzene	9.3	10	93	62.8	126.9	9.7	4.16	0	25	
Ethyl benzene	10.5	10	105	60.7	134.5	11.4	8.71	0	25	
m,p-Xylene	19.6	20	98.2	61	132.5	21.4	8.66	0	25	
o-Xylene	10.1	10	101	60.4	133.9	11.4	11.9	0	25	
Styrene	10.8	10	108	59.7	139.5	12.4	13.8	0	25	
Bromoform	7.66	10	76.6	59.7	136	8.64	12	0	25	
1,1,2,2-Tetrachloroethane	8.11	10	81.1	59.3	134.8	9.32	13.8	0	25	
4-Ethyl toluene	10.1	10	101	57.7	142.1	11.3	11.1	0	25	
1,3,5-Trimethylbenzene	9.09	10	90.9	56.4	139.5	11.1	19.8	0	25	
1,2,4-Trimethylbenzene	9.56	10	95.6	56.8	143.4	10.5	9.26	0	25	
1,3-Dichlorobenzene	7.7	10	77	57.8	136.9	8.41	8.83	0	25	
1,4-Dichlorobenzene	8.79	10	87.9	57.7	137.2	9.2	4.63	0	25	
Benzyl chloride	8.62	10	86.2	60.1	182.5	9.9	13.9	0	25	
1,2-Dichlorobenzene	8.85	10	88.5	56.5	140	8.94	1.03	0	25	
1,2,4-Trichlorobenzene	9.05	10	90.5	3.6	224.6	10.5	15.1	0	25	
Hexachlorobutadiene	7.47	10	74.7	25.3	155.9	8.45	12.3	0	25	
Naphthalene	10.8	10	*108			12.3	*12.6			
Propene	11.2	10	*112			11.2	*0.107			
Total Xylene	31.3	30	*104			34.7	*10.4			

Surrogate Recoveries

Surrogate	Bromofluorobenzene		
QC Limits	67.7	129.9	
Units	ppb		
Lab ID	Result	Target	% Recovery
241957-LCS	19.4	20	96.9
241958-LCSD	19.9	20	99.4
241959-MB	19.9	20	99.7
1126538019	20.1	20	101

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA TO-15
Batch: IVOA/1799 (HBN: 74872)
Analyzed By: Thomas J. Masoian

Surrogate Recoveries

Surrogate	Bromofluorobenzene		
QC Limits	67.7	129.9	
Units	ppb		
Lab ID	Result	Target	% Recovery
1126538025	19.7	20	98.7
1126538033	19.2	20	95.9
1126538034	19.3	20	96.6
1126538035	18.8	20	93.9
1126538036	18	20	90.1
1126538037	20.9	20	104
1126538038	21	20	105
1126538039	19.3	20	96.5
1126538040	17.8	20	88.9

Comments

None

QC Data Approved and Reviewed by

Thomas J. Masoian	Lisa M. Reid	10/14/2011
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1126538**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: Massachusetts APH
Batch: IVOA/1801 (HBN: 74904)
Analyzed By: Thomas J. Masoian

Blank

MB: 242456
Analyzed: 10/10/2011 00:00
Units: ppb

Analyte	Result	RL
C5-C8 Aliphatic Hydrocarbons	ND	18
C9-C12 Aliphatic Hydrocarbons	ND	31
C9-C10 Aromatic Hydrocarbons	ND	25

Surrogate Recoveries

Surrogate	Bromofluorobenzene		
QC Limits	67.7	129.9	
Units	ppb		
Lab ID	Result	Target	% Recovery
1126538020	20.9	20	104
1126538021	22	20	110
1126538022	21.4	20	107
1126538023	19.6	20	97.8
1126538024	18.8	20	94
1126538026	18.5	20	92.6
1126538027	19	20	95.2
1126538028	18.9	20	94.6
1126538029	18.9	20	94.3
1126538030	21	20	105
1126538031	21.4	20	107
1126538032	19.8	20	98.9
1126538033	18.4	20	92.1
1126538034	18.2	20	91.2
1126538039	17.2	20	85.8

Comments

None

QC Data Approved and Reviewed by

Thomas J. Masoian	Lisa M. Reid	10/14/2011
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.