Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run Number (SA,MS,SD,DU)
123721-0001-SA	AQUEOUS	8260-A		23 DEC 96-ACX	27 DEC 96-AC
123721-0002-SA	AQUEOUS	8260-A		23 DEC 96-ACX	27 DEC 96-AC
123721-0003-SA	AQUEOUS	8260-A		23 DEC 96-ACX	27 DEC 96-AC
123721-0004-SA	AQUEOUS	8260-A		27 DEC 96-ACX	27 DEC 96-AC
123721-0005-SA	AQUEOUS	8260-A		27 DEC 96-ACX	27 DEC 96-AC
123721-0006-SA	AQUEOUS	8260-A		27 DEC 96-ACX	27 DEC 96-AC
123721-0007-SA	AQUEOUS	8260-A		27 DEC 96-ACX	27 DEC 96-AC
123721-0008-SA	AQUEOUS	8260-A		27 DEC 96-ACX	27 DEC 96-AC
123721-0009-SA	AQUEOUS	8260-A		28 DEC 96-ACX	27 DEC 96-AC
123721-0010-SA	AQUEOUS	8260-A		28 DEC 96-ACX	27 DEC 96-AC
123721-0011-SA	AQUEOUS	8260-A		28 DEC 96-ACX	27 DEC 96-AC
123721-0012-TB	AQUEOUS	8260-A		23 DEC 96-ACX	27 DEC 96-AC

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Volatile Organics by GC/MS
Project: 123721

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
Date Analyzed: 28 DEC 96
QC Run: 28 DEC 96-ACX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	9.20	92	64-124
Benzene	10.0	10.6	106	67-127
Trichloroethene	10.0	10.2	102	60-120
Toluene	10.0	10.5	105	72-132
Chlorobenzene	10.0	10.8	108	68-128

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	11.2	112	80-120
Toluene-d8	10.0	9.89	99	88-110
Bromofluorobenzene	10.0	9.86	99	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
Date Analyzed: 27 DEC 96
QC Run: 27 DEC 96-ACX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	9.10	91	64-124
Benzene	10.0	10.7	107	67-127
Trichloroethene	10.0	10.4	104	60-120
Toluene	10.0	10.6	106	72-132
Chlorobenzene	10.0	10.6	106	68-128

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	11.1	111	80-120
Toluene-d8	10.0	9.91	99	88-110
Bromofluorobenzene	10.0	9.80	98	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
Date Analyzed: 23 DEC 96
QC Run: 23 DEC 96-ACX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	8.39	84	64-124
Benzene	10.0	10.3	103	67-127
Trichloroethene	10.0	9.82	98	60-120
Toluene	10.0	10.0	100	72-132
Chlorobenzene	10.0	10.2	102	68-128

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

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Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Volatile Organics by GC/MS (cont.)
Project: 123721

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	11.1	111	80-120
Toluene-d8	10.0	10.2	102	88-110
Bromofluorobenzene	10.0	9.90	99	86-115

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

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Volatile Organics by GC/MS
Project: 123721

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
Sample: 123721-0004
MS Run: 27 DEC 96-AC
Units: ug/L

Analyte	Concentration Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Acceptance Limit Recov.	Acceptance Limit RPD
1,1-Dichloroethene	29.7	52.6	51.1	20.0	114	107	2.9	64-124	25
Benzene	ND	23.8	21.1	20.0	119	106	12	67-127	25
Trichloroethene	118	142	146	20.0	NC	NC	NC	60-120	25
Toluene	ND	23.2	21.0	20.0	116	105	10	72-132	25
Chlorobenzene	ND	23.2	20.4	20.0	116	102	13	68-128	25

Surrogates	Sample %Recovery	%Recovery MS	%Recovery MSD	Acceptance Limit Recovery
1,2-Dichloroethane-d4	97	99	105	80-120
Toluene-d8	98	96	101	88-110
Bromofluorobenzene	93	90	96	86-115

NC = Not Calculated, calculation not applicable.
ND = Not Detected

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

Quanterra
Environmental Services

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS
Project: 123721

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 28 DEC 96-ACX Date Analyzed: 28 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.5	105	80-120
Toluene-d8	10.0	9.86	99	88-110
Bromofluorobenzene	10.0	9.19	92	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 27 DEC 96-ACX Date Analyzed: 27 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.3	103	80-120
Toluene-d8	10.0	9.65	96	88-110
Bromofluorobenzene	10.0	9.19	92	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 23 DEC 96-ACX Date Analyzed: 23 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.5	105	80-120
Toluene-d8	10.0	10.2	102	88-110
Bromofluorobenzene	10.0	9.80	98	86-115

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

Quanterra Environmental Services

METHOD BLANK REPORT
Volatile Organics by GC/MS
Project: 123721

Test: 8260-A
Matrix: AQUEOUS
QC Run: 23 DEC 96-ACX

Method 8260 - Volatile Organics

Date Analyzed: 23 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0

ND = Not Detected

Quanterra
Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123721

Test: 8260-A
Matrix: AQUEOUS
QC Run: 23 DEC 96-ACX

Method 8260 - Volatile Organics (cont.)

Date Analyzed: 23 DEC 96

Analyte	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123721

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 27 DEC 96-ACX

Date Analyzed: 27 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0

ND = Not Detected

Quanterra
Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123721

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 27 DEC 96-ACX

Date Analyzed: 27 DEC 96

Analyte	Result	Units	Reporting Limit
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123721

Quanterra Environmental Services

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 28 DEC 96-ACX

Date Analyzed: 28 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0

ND = Not Detected

Quanterra
Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123721

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 28 DEC 96-ACX

Date Analyzed: 28 DEC 96

Analyte	Result	Units	Reporting Limit
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run Number (SA,MS,SD,DU)
123741-0001-SA	AQUEOUS	8260-A		30 DEC 96-ADX	30 DEC 96-AD
123741-0002-SA	AQUEOUS	8260-A		30 DEC 96-ADX	30 DEC 96-AD
123741-0003-SA	AQUEOUS	8260-A		30 DEC 96-BDX	30 DEC 96-AD
123741-0004-SA	AQUEOUS	8260-A		30 DEC 96-BDX	30 DEC 96-AD
123741-0005-SA	AQUEOUS	8260-A		31 DEC 96-BCX	30 DEC 96-AD
123741-0006-EB	AQUEOUS	8260-A		31 DEC 96-BCX	30 DEC 96-AD

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Volatile Organics by GC/MS
Project: 123741

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS Date Analyzed: 31 DEC 96
QC Run: 31 DEC 96-BCX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	10.9	109	64-124
Benzene	10.0	10.3	103	67-127
Trichloroethene	10.0	10.2	102	60-120
Toluene	10.0	10.5	105	72-132
Chlorobenzene	10.0	9.61	96	68-128

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	9.94	99	80-120
Toluene-d8	10.0	10.1	101	88-110
Bromofluorobenzene	10.0	9.79	98	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS Date Analyzed: 30 DEC 96
QC Run: 30 DEC 96-BDX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	12.4	124	64-124
Benzene	10.0	11.2	112	67-127
Trichloroethene	10.0	10.6	106	60-120
Toluene	10.0	10.8	108	72-132
Chlorobenzene	10.0	10.4	104	68-128

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.3	103	80-120
Toluene-d8	10.0	10.3	103	88-110
Bromofluorobenzene	10.0	9.93	99	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS Date Analyzed: 30 DEC 96
QC Run: 30 DEC 96-ADX
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	10.0	11.0	110	64-124
Benzene	10.0	10.4	104	67-127
Trichloroethene	10.0	10.2	102	60-120
Toluene	10.0	10.1	101	72-132
Chlorobenzene	10.0	10.5	105	68-128

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

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Volatile Organics by GC/MS (cont.)
Project: 123741

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.4	104	80-120
Toluene-d8	10.0	10.1	101	88-110
Bromofluorobenzene	10.0	10.0	100	86-115

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

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Volatile Organics by GC/MS
Project: 123741

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
Sample: 123741-0002
MS Run: 30 DEC 96-AD
Units: ug/L

Analyte	Concentration Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Acceptance Limit Recov.	Acceptance Limit RPD
1,1-Dichloroethene	15800	18100	17200	2500	NC	NC	NC	64-124	25
Benzene	ND	2770	2800	2500	111	112	1.1	67-127	25
Trichloroethene	ND	2800	2750	2500	112	110	1.8	60-120	25
Toluene	20400	23100	23200	2500	NC	NC	NC	72-132	25
Chlorobenzene	ND	2550	2650	2500	102	106	3.8	68-128	25

Surrogates	Sample %Recovery	%Recovery MS	%Recovery MSD	Acceptance Limit Recovery
1,2-Dichloroethane-d4	104	106	99	80-120
Toluene-d8	103	104	105	88-110
Bromofluorobenzene	100	103	109	86-115

NC = Not Calculated, calculation not applicable.
ND = Not Detected

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

Quanterra
Environmental Services

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS
Project: 123741

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 31 DEC 96-BCX Date Analyzed: 31 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	9.86	99	80-120
Toluene-d8	10.0	9.84	98	88-110
Bromofluorobenzene	10.0	9.40	94	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 30 DEC 96-BDX Date Analyzed: 30 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	10.4	104	80-120
Toluene-d8	10.0	10.2	102	88-110
Bromofluorobenzene	10.0	9.77	98	86-115

Category: 8260-A Volatile Organics, 8260
Matrix: AQUEOUS
QC Run: 30 DEC 96-ADX Date Analyzed: 30 DEC 96
Concentration Units: ug/L

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	10.0	9.41	94	80-120
Toluene-d8	10.0	10.3	103	88-110
Bromofluorobenzene	10.0	10.0	100	86-115

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

Quanterra Environmental Services

METHOD BLANK REPORT
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS
QC Run: 30 DEC 96-ADX

Method 8260 - Volatile Organics

Date Analyzed: 30 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS
QC Run: 30 DEC 96-ADX

Method 8260 - Volatile Organics (cont.)

Date Analyzed: 30 DEC 96

Analyte	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 30 DEC 96-BDX

Date Analyzed: 30 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 30 DEC 96-BDX

Date Analyzed: 30 DEC 96

Analyte	Result	Units	Reporting Limit
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 31 DEC 96-BCX

Date Analyzed: 31 DEC 96

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Vinyl chloride	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Methylene chloride	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1-Dichloropropene	ND	ug/L	1.0
Carbon tetrachloride	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
Benzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,2-Dibromoethane (EDB)	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Dibromochloromethane	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
1-Methylethylbenzene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	1.0
n-Propylbenzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
1,3,5-Trimethylbenzene	ND	ug/L	1.0
2-Chlorotoluene	ND	ug/L	1.0
4-Chlorotoluene	ND	ug/L	1.0
tert-Butylbenzene	ND	ug/L	1.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
Isopropyltoluene	ND	ug/L	1.0

ND = Not Detected

Quanterra Environmental Services

METHOD BLANK REPORT (cont.)
Volatile Organics by GC/MS
Project: 123741

Test: 8260-A
Matrix: AQUEOUS

Method 8260 - Volatile Organics (cont.)

QC Run: 31 DEC 96-BCX

Date Analyzed: 31 DEC 96

Analyte	Result	Units	Reporting Limit
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
n-Butylbenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloro-propane (DBCP)	ND	ug/L	1.0
1,2,4-Trichlorobenzene	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	1.0
Naphthalene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	1.0
Acetone	ND	ug/L	10
2-Butanone	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0

ND = Not Detected