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Certificate of Analysis

VOCs in Soil - Low Level QC Sample

Catalog Number: SQCO-008L
Lot Number: S0420
Manufacture Date: 12/30/2019
Certified Date: 12/30/2019

Expiration: 04/30/2023
Storage: -10°C to -20°C
Solvent: P&T Methanol/H2O (90:10)
Hazards: Flammable, Irritant

Analyte	Study Mean (ug/kg)	Gravimetric Concentration (ug/kg)	Acceptance Limits (ug/kg)
1,1,1,2-Tetrachloroethane	93.2	96.8	58.0-136
1,1,1-Trichloroethane	113	135	74.3-196
1,1,2,2-Tetrachloroethane	47.6	47.9	26.3-69.4
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00	0.00	0.00-0.00
1,1,2-Trichloroethane	0.00	0.00	0.00-14.0
1,1-Dichloroethane	23.0	23.8	14.3-33.3
1,1-Dichloroethylene	121	104	52.0-156
1,1-Dichloropropylene	0.00	0.00	0.00-0.00
1,2,3-Trichlorobenzene	0.00	0.00	0.00-0.00
1,2,3-Trichloropropane	114	129	64.5-193
1,2,4-Trichlorobenzene	187	186	74.4-298
1,2,4-Trimethylbenzene	0.00	0.00	0.00-0.00
1,2-Dibromo-3-chloropropane	144	145	72.5-217
1,2-Dibromoethane	97.9	96.7	62.9-131
1,2-Dichlorobenzene	136	145	86.9-203
1,2-Dichloroethane	0.00	0.00	0.00-12.0
1,2-Dichloropropane	137	141	91.5-190
1,3,5-Trichlorobenzene	0.00	0.00	0.00-0.00
1,3,5-Trimethylbenzene	0.00	0.00	0.00-0.00
1,3-Dichlorobenzene	0.00	0.00	0.00-12.0
1,3-Dichloropropane	0.00	0.00	0.00-0.00
1,4-Dichlorobenzene	38.6	38.8	23.3-54.4
1,4-Dioxane	0.00	0.00	0.00-0.00
1-Chlorohexane	0.00	0.00	0.00-0.00
2,2-Dichloropropane	0.00	0.00	0.00-0.00
2-Butanone	354	410	133-631
2-Chloroethyl vinyl ether	0.00	0.00	0.00-0.00
2-Chlorotoluene	0.00	0.00	0.00-0.00
2-Hexanone	322	391	196-586
3,3-Dimethyl-1-butanol	0.00	0.00	0.00-0.00
4-Chlorotoluene	0.00	0.00	0.00-0.00
4-Methyl-2-pentanone	315	361	181-541
Acetone	677	714	72.7-1110
Acetonitrile	0.00	0.00	0.00-0.00

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Acrolein	0.00	0.00	0.00-0.00
Acrylonitrile	0.00	0.00	0.00-0.00
Allyl chloride	0.00	0.00	0.00-0.00
Benzene	176	183	119-247
Bromobenzene	109	86.5	53.1-163
Bromochloromethane	0.00	0.00	0.00-0.00
Bromodichloromethane	194	180	108-251
Bromoform	151	162	88.8-234
Bromomethane	0.00	0.00	0.00-0.00
Carbon disulfide	0.00	0.00	0.00-0.00
Carbon tetrachloride	34.8	36.5	18.2-54.7
Chlorobenzene	112	114	57.0-171
Chloroethane	0.00	0.00	0.00-0.00
Chloroform	160	150	89.9-210
Chloromethane	0.00	0.00	0.00-0.00
Chloroprene	0.00	0.00	0.00-0.00
cis-1,2-Dichloroethylene	162	167	100-234
cis-1,3-Dichloropropene	159	159	95.3-223
cis-1,4-Dichloro-2-butene	0.00	0.00	0.00-0.00
Cyclohexane	0.00	0.00	0.00-0.00
Di-isopropyl ether	0.00	0.00	0.00-0.00
Dibromochloromethane	158	162	97.1-227
Dibromomethane	0.00	0.00	0.00-0.00
Dichlorodifluoromethane	0.00	0.00	0.00-0.00
Diethyl ether	0.00	0.00	0.00-0.00
Ethanol	0.00	0.00	0.00-0.00
Ethyl methacrylate	0.00	0.00	0.00-0.00
Ethyl-tert-butyl ether (ETBE)	0.00	0.00	0.00-0.00
Ethylbenzene	69.4	71.7	43.0-100
Hexachlorobutadiene	0.00	0.00	0.00-0.00
Hexachloroethane	0.00	0.00	0.00-0.00
Iodomethane	0.00	0.00	0.00-0.00
Isobutyl alcohol	0.00	0.00	0.00-0.00
Isopropylbenzene	0.00	0.00	0.00-0.00
Methacrylonitrile	0.00	0.00	0.00-0.00
Methyl acetate	0.00	0.00	0.00-0.00
Methyl cyclohexane	0.00	0.00	0.00-0.00
Methyl methacrylate	0.00	0.00	0.00-0.00
Methyl-tert-butyl ether (MTBE)	0.00	0.00	0.00-12.0
Methylene chloride	118	108	54.0-162
n-Butylbenzene	0.00	0.00	0.00-0.00
n-Hexane	0.00	0.00	0.00-0.00

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n-Propylbenzene	0.00	0.00	0.00-0.00
Naphthalene	168	177	88.5-265
p-Isopropyltoluene	0.00	0.00	0.00-0.00
Pentachloroethane	0.00	0.00	0.00-0.00
Propionitrile	0.00	0.00	0.00-0.00
sec-Butylbenzene	0.00	0.00	0.00-0.00
Styrene	160	163	106-220
t-Amyl alcohol	0.00	0.00	0.00-0.00
t-Amylmethyl ether (TAME)	0.00	0.00	0.00-0.00
t-Butyl alcohol	0.00	0.00	0.00-0.00
tert-Butylbenzene	0.00	0.00	0.00-0.00
Tetrachloroethylene	140	133	66.5-199
Tetrahydrofuran	0.00	0.00	0.00-0.00
Toluene	0.00	0.00	0.00-13.0
Total Xylenes	117	134	73.7-194
trans-1,2-Dichloroethylene	167	168	101-235
trans-1,3-Dichloropropene	106	115	63.3-167
trans-1,4-Dichloro-2-butene	0.00	0.00	0.00-0.00
Trichloroethylene	68.1	60.8	36.4-85.1
Trichlorofluoromethane	0.00	0.00	0.00-0.00
Vinyl acetate	0.00	0.00	0.00-0.00
Vinyl chloride	0.00	0.00	0.00-0.00

This quality control sample was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 34. Acceptance limits are set at current NELAC standards. The study mean is set at the mean of an interlaboratory proficiency testing study with outlier rejection. This sample is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

Storage & Instructions For Use

Store the ampule concentrate at -10°C to -20°C. The matrix blank can be stored at room temperature (15-30°C).

The sample is to be analyzed using the solid waste method for sediment/soil using purge and trap.
Weigh 5.0 g of the VOCs in Soil - Low Level Matrix Blank into a sparger cell.
Carefully snap the top off the VOCs in Soil - Low Level Spike ampule.
Using a 25 uL gas tight syringe, inject 20 uL of the concentrate into the matrix by placing the syringe tip slightly below the surface of the matrix in the sparger cell.
Immediately complete other sample preparation steps such as adding water to the sparger cell and closing the apparatus according to your analytical procedures. Perform this step fast.
Complete the analysis according to your normal procedures.
Report results in units of ug/kg based on a 5 g sample size. No dry weight correction is required.

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Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this sample. Analyte source material purity and associated uncertainty has been analytically verified against appropriate NIST SRMs, where available.

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our samples is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Homogeneity/Stability/Expiration

This quality control sample was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random. The stability of this quality control sample is based on short-term and long-term monitoring of the certified concentration. The expiration date is guaranteed to be valid from the manufacture date and is based on results of long-term monitoring.

Kenneth Grzybowski

Kenneth Grzybowski, Technical Organic Manager