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Certificate of Analysis

SQCO-007 Semivolatiles in Soil

Catalog Number:	SQCO-007	Expiration Date:	10/31/2027
Lot Number:	S1024	Hazard:	IRRITANT
Manufactured Date:	09/11/2024	Solvent:	METHANOL, ACETONE

<u>Analyte</u>	<u>Study Mean</u> ug/kg	<u>Certified Concentration</u> ug/kg	<u>Acceptance Limits</u> ug/kg
1,1-Biphenyl	0.00	0 +/- 0	0.00-100
1,2,3-Trichlorobenzene	0.00	0 +/- 0	0.00-0.00
1,2,4,5-Tetrachlorobenzene	0.00	0 +/- 0	0.00-400
1,2,4-Trichlorobenzene	4212	5290 +/- 49.3	1230-7190
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.00	0 +/- 0	0.00-750
1,2-Diphenylhydrazine as Azobenzene	0.00	0 +/- 0	0.00-750
1,3,5-Trinitrobenzene	0.00	0 +/- 0	0.00-400
1,3-Dichlorobenzene (m-Dichlorobenzene)	8169	12870 +/- 120	1290-16400
1,3-Dinitrobenzene	0.00	0 +/- 0	0.00-750
1,4-Dichlorobenzene (p-Dichlorobenzene)	1470	2650 +/- 24.6	265-3000
1,4-Dioxane	0.00	0 +/- 0	0.00-750
1,4-Naphthoquinone	0.00	0 +/- 0	0.00-400
1-Chloronaphthalene	0.00	0 +/- 0	0.00-500
1-Methylnaphthalene	0.00	0 +/- 0	0.00-750
1-Naphthylamine	0.00	0 +/- 0	0.00-400
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	3913	4560 +/- 42.5	864-6820
2,3,4,5-Tetrachlorophenol	0.00	0 +/- 0	0.00-0.00
2,3,4,6-Tetrachlorophenol	0.00	0 +/- 0	0.00-1500
2,3,5,6-Tetrachlorophenol	0.00	0 +/- 0	0.00-1000
2,3-Dichloroaniline	0.00	0 +/- 0	0.00-750
2,4,5-Trichlorophenol	2656	3260 +/- 30.4	763-4550
2,4,6-Trichlorophenol	2515	3360 +/- 31.3	756-4230
2,4-Dichlorophenol	8484	11280 +/- 105	2950-14000
2,4-Dimethylphenol	11066	11780 +/- 110	5760-16400
2,4-Dinitrophenol	3283	6910 +/- 64.4	691-8620
2,4-Dinitrotoluene (2,4-DNT)	8088	10020 +/- 93.3	3300-12900
2,6-Dichlorophenol	0.00	6480 +/- 60.4	0.00-0.00
2,6-Dinitrotoluene (2,6-DNT)	0.00	0 +/- 0	0.00-150
2-Acetylaminofluorene	0.00	0 +/- 0	0.00-0.00
2-Amino-1-methylbenzene	0.00	0 +/- 0	0.00-0.00
2-Chloronaphthalene	2794	3750 +/- 34.9	945-4640
2-Chlorophenol	3526	5580 +/- 52.0	922-6140
2-Cyclohexyl-4,6-dinitrophenol	0.00	0 +/- 0	0.00-0.00

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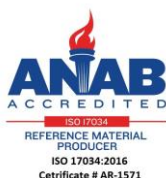
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2-Methyl-4,6-dinitrophenol	2775	4070 +/- 37.9	407-6750
2-Methylcholanthrene	0.00	0 +/- 0	0.00-0.00
2-Methylnaphthalene	7216	9650 +/- 89.9	2740-11700
2-Methylphenol	9848	12170 +/- 113	2360-17300
2-Naphthylamine	0.00	0 +/- 0	0.00-0.00
2-Nitroaniline	0.00	0 +/- 0	0.00-1000
2-Nitrophenol	6000	8370 +/- 78.0	1420-10600
2-Picoline	0.00	0 +/- 0	0.00-0.00
3+4-Methylphenol	6510	7950 +/- 74.1	4430-8750
3,3'-Dichlorobenzidine	0.00	0 +/- 0	0.00-1000
3,3-Dimethylbenzidine	0.00	0 +/- 0	0.00-0.00
3-Methylcholanthrene	0.00	0 +/- 0	0.00-0.00
3-Methylphenol	0.00	0 +/- 0	0.00-0.00
3-Nitroaniline	0.00	0 +/- 0	0.00-1000
3-Nitrophenol	0.00	0 +/- 0	0.00-0.00
4-Aminobiphenyl	0.00	0 +/- 0	0.00-0.00
4-Bromophenyl phenyl ether (BDE-3)	4844	5040 +/- 46.9	1950-7810
4-Chloro-3-methylphenol	5756	7020 +/- 65.4	2170-9360
4-Chloroaniline	0.00	0 +/- 0	0.00-2100
4-Chlorophenyl phenylether	6630	7690 +/- 71.6	2480-10800
4-Methylphenol	7240	7950 +/- 74.1	3270-11200
4-Nitroaniline	0.00	0 +/- 0	0.00-2500
4-Nitrophenol	7192	9240 +/- 86.0	924-15600
4-Nitroquinoline-1-oxide	0.00	0 +/- 0	0.00-0.00
5-Nitro-o-toluidine	0.00	0 +/- 0	0.00-350
7,12-Dimethylbenz(a)anthracene	0.00	0 +/- 0	0.00-0.00
a,a-Dimethylphenethylamine	0.00	0 +/- 0	0.00-0.00
Acenaphthene	4410	5590 +/- 52.1	1800-7020
Acenaphthylene	7659	9380 +/- 87.3	2810-12500
Acetophenone	0.00	0 +/- 0	0.00-400
Aniline	0.00	0 +/- 0	0.00-1000
Anthracene	5163	6060 +/- 56.4	2350-7950
Atrazine	0.00	0 +/- 0	0.00-100
Benzaldehyde	0.00	0 +/- 0	0.00-100
Benzidine	0.00	0 +/- 0	0.00-1000
Benzo(a)anthracene	0.00	0 +/- 0	0.00-100
Benzo(a)pyrene	0.00	0 +/- 0	0.00-100
Benzo(b)fluoranthene	6695	8390 +/- 78.1	2750-10600
Benzo(b)fluoranthene + Benzo(k)fluoranthene	0.00	17330 +/- 161	0.00-3680
Benzo(g,h,i)perylene	6108	7630 +/- 71.0	2420-9690
Benzo(k)fluoranthene	7551	8950 +/- 83.3	3070-12000
Benzoic acid	0.00	0 +/- 0	0.00-2000
Benzyl alcohol	0.00	0 +/- 0	0.00-750
bis(2-Chloroethoxy)methane	6794	7690 +/- 71.6	2550-11000
bis(2-Chloroethyl)ether	0.00	0 +/- 0	0.00-150
Butyl benzyl phthalate	2811	3200 +/- 29.8	987-4590
Caprolactam	0.00	0 +/- 0	0.00-100
Carbazole	0.00	0 +/- 0	0.00-1000
Chlorobenzilate	0.00	0 +/- 0	0.00-0.00
Chrysene	6802	8960 +/- 83.4	3400-10200
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	3199	3670 +/- 34.2	869-5510
Di-n-butyl phthalate	4539	4880 +/- 45.4	1430-7660

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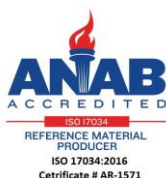
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Di-n-octyl phthalate	0.00	0 +/- 0	0.00-100
Diallate	0.00	0 +/- 0	0.00-0.00
Dibenz(a,h)anthracene	1769	2250 +/- 20.9	532-3010
Dibenzofuran	2986	3600 +/- 33.5	1300-4680
Diethyl phthalate	0.00	0 +/- 0	0.00-100
Dimethoate	0.00	0 +/- 0	0.00-50.0
Dimethyl phthalate	0.00	0 +/- 0	0.00-100
Dinoseb	0.00	0 +/- 0	0.00-0.00
Diphenyl ether	0.00	0 +/- 0	0.00-1000
Diphenylamine	0.00	0 +/- 0	0.00-750
Disulfoton	0.00	0 +/- 0	0.00-0.00
Ethyl methane sulfonate	0.00	0 +/- 0	0.00-0.00
Famphur	0.00	0 +/- 0	0.00-0.00
Fluoranthene	3229	3710 +/- 34.5	1300-5160
Fluorene	6626	8330 +/- 77.6	3050-10200
Hexachlorobenzene	0.00	0 +/- 0	0.00-150
Hexachlorobutadiene	6317	8870 +/- 82.6	1860-10700
Hexachlorocyclopentadiene	0.00	0 +/- 0	0.00-1000
Hexachloroethane	0.00	0 +/- 0	0.00-150
Hexachlorophene	0.00	0 +/- 0	0.00-2000
Hexachloropropene	0.00	0 +/- 0	0.00-0.00
Indeno(1,2,3-c,d)pyrene	6451	8630 +/- 80.4	1440-11400
Isodrin	0.00	0 +/- 0	0.00-0.00
Isophorone	0.00	0 +/- 0	0.00-150
Isosafrole	0.00	0 +/- 0	0.00-0.00
Kepone	0.00	0 +/- 0	0.00-2000
m-Dinitrobenzene	0.00	0 +/- 0	0.00-2000
Maleic anhydride	0.00	0 +/- 0	0.00-0.00
Methapyrilene	0.00	0 +/- 0	0.00-2000
Methyl methane sulfonate	0.00	0 +/- 0	0.00-0.00
n-Decane	0.00	0 +/- 0	0.00-750
N-Nitroso-di-n-butylamine	0.00	0 +/- 0	0.00-400
N-Nitroso-di-n-propylamine	8998	10770 +/- 100	2330-15700
N-Nitrosodiethylamine	0.00	0 +/- 0	0.00-0.00
N-Nitrosodimethylamine	0.00	0 +/- 0	0.00-1000
N-Nitrosodiphenylamine	0.00	0 +/- 0	0.00-1000
N-Nitrosomethylethylamine	0.00	0 +/- 0	0.00-400
N-Nitrosomorpholine	0.00	0 +/- 0	0.00-400
N-Nitrosopiperidine	0.00	0 +/- 0	0.00-400
N-Nitrosopyrrolidine	0.00	0 +/- 0	0.00-400
n-Octadecane	0.00	0 +/- 0	0.00-750
Naphthalene	3734	5400 +/- 50.2	929-6530
Naphthalene-d8	0.00	0 +/- 0	0.00-0.00
Nitrobenzene	0.00	0 +/- 0	0.00-150
o,o,o-Triethyl phosphorothioate	0.00	0 +/- 0	0.00-0.00
o-Dinitrobenzene	0.00	0 +/- 0	0.00-2000
o-Toluidine	0.00	0 +/- 0	0.00-750
p-Dimethylaminoazobenzene	0.00	0 +/- 0	0.00-0.00
p-Dinitrobenzene	0.00	0 +/- 0	0.00-2000
p-Phenylenediamine	0.00	0 +/- 0	0.00-0.00
Parathion, ethyl	0.00	0 +/- 0	0.00-0.00
Parathion, methyl	0.00	0 +/- 0	0.00-0.00
Pentachlorobenzene	0.00	0 +/- 0	0.00-0.00

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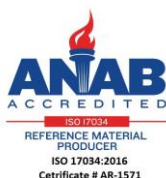
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Pentachlorohexane	0.00	0 +/- 0	0.00-0.00
Pentachloronitrobenzene	0.00	0 +/- 0	0.00-400
Pentachlorophenol	7770	12110 +/- 113	1210-14600
Phenacetin	0.00	0 +/- 0	0.00-400
Phenanthrene	4971	6050 +/- 56.3	2260-7650
Phenol	7218	10260 +/- 95.5	1990-12500
Phorate	0.00	0 +/- 0	0.00-0.00
Pronamide	0.00	0 +/- 0	0.00-0.00
Pyrene	2826	3510 +/- 32.7	1060-4550
Pyridine	0.00	0 +/- 0	0.00-1000
Safrole	0.00	0 +/- 0	0.00-0.00
Sulfotepp	0.00	0 +/- 0	0.00-0.00
Thionazin	0.00	0 +/- 0	0.00-0.00
Total Cresols	0.00	0 +/- 0	0.00-0.00

This CRM was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034. Acceptance limits are set at current industry standards. The study mean is set at the mean of an interlaboratory proficiency testing study with outlier rejection. This CRM is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

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Catalog Number: SQCO-007

Lot Number: S1024

Storage & Instructions For Use

Required storage is 10°C to 20°C.

Retrieve a vial and allow to equilibrate to room temperature.

This sample has been designed to be totally used. Do not subsample since intra-sample homogeneity cannot be assured. Transfer the entire contents of the sample vial and rinse the vial with 2 small aliquots of extraction solvent adding rinsates to the extraction vessel. Complete the analysis according to your normal procedures.

Determine the concentration of the analytes listed. Report in ug/kg assuming a 30 g sample size. No dry weight correction is required.

Traceability Information

Analyte Source Materials: All analytes and matrix materials are obtained and verified by NSI from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of NSI CRMs are tracked and documented.

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 CRM was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random. The stability of this CRM is based on short-term and longterm 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, Certified Officer

Quentisha Forrester

Quentisha Forrester, Quality Lead

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