nsi lab solutions
protect more. test more.
7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Certificate of Analysis

SQCO-007 Semivolatiles in Soil

Catalog Number:	SQCO-007	**Expiration Date:**	02/28/2025
Lot Number:	S0222	**Hazard:**	Irritant
Manufactured Date:	01/05/2022	**Solvent:**	Solid Matrix

Analyte	Study Mean	Certified Concentration	Acceptance Limits
	ug/kg	ug/kg	ug/kg
1,1-Biphenyl	0.00	0 +/- 0	0.00-0.00
1,2,3-Trichlorobenzene	0.00	0 +/- 0	0.00-0.00
1,2,4,5-Tetrachlorobenzene	0.00	0 +/- 0	0.00-0.00
1,2,4-Trichlorobenzene	4225	6870 +/- 63.9	1240-7220
1,2-Dichlorobenzene (o-Dichlorobenzene)	7395	13540 +/- 126	968-14900
1,2-Diphenylhydrazine as Azobenzene	0.00	0 +/- 0	0.00-0.00
1,3,5-Trinitrobenzene	0.00	0 +/- 0	0.00-0.00
1,3-Dichlorobenzene (m-Dichlorobenzene)	7516	14790 +/- 138	758-16300
1,3-Dinitrobenzene	0.00	0 +/- 0	0.00-0.00
1,4-Dichlorobenzene (p-Dichlorobenzene)	3408	6830 +/- 63.6	344-7510
1,4-Dioxane	0.00	0 +/- 0	0.00-0.00
1,4-Naphthoquinone	0.00	0 +/- 0	0.00-0.00
1-Chloronaphthalene	0.00	0 +/- 0	0.00-0.00
1-Methylnaphthalene	0.00	0 +/- 0	0.00-0.00
1-Naphthylamine	0.00	0 +/- 0	0.00-0.00
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	4904	8400 +/- 78.2	1120-9240
2,3,4,5-Tetrachlorophenol	0.00	0 +/- 0	0.00-0.00
2,3,4,6-Tetrachlorophenol	0.00	0 +/- 0	0.00-0.00
2,3,5,6-Tetrachlorophenol	0.00	0 +/- 0	0.00-0.00
2,3-Dichloroaniline	0.00	0 +/- 0	0.00-0.00
2,4,5-Trichlorophenol	5867	8340 +/- 77.6	1750-9990
2,4,6-Trichlorophenol	7068	10130 +/- 94.3	2550-11600
2,4-Dichlorophenol	4678	6680 +/- 62.2	1530-7830
2,4-Dimethylphenol	6790	10170 +/- 94.6	2600-11200
2,4-Dinitrophenol	3207	12310 +/- 115	1230-13500
2,4-Dinitrotoluene (2,4-DNT)	4489	4900 +/- 45.6	1750-7230
2,6-Dichlorophenol	5092	7810 +/- 72.7	1270-8910
2,6-Dinitrotoluene (2,6-DNT)	4772	5770 +/- 53.7	2140-7400
2-Acetylaminofluorene	0.00	0 +/- 0	0.00-0.00
2-Amino-1-methylbenzene	0.00	0 +/- 0	0.00-0.00
2-Chloronaphthalene	5110	7770 +/- 72.3	1750-8470
2-Chlorophenol	7113	10470 +/- 97.5	1910-12300
2-Cyclohexyl-4,6-dinitrophenol	0.00	0 +/- 0	0.00-0.00
2-Methyl-4,6-dinitrophenol	3691	6650 +/- 61.9	665-9430

ISO 9001:2015 UL Registered Firm - Certificate # 10002343 QM15

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER
ISO 17034:2016
Certificate # AR-1571

2-Methylcholanthrene	0.00	0 +/- 0	0.00-0.00
2-Methylnaphthalene	7026	10790 +/- 100	2670-11400
2-Methylphenol	6583	9760 +/- 90.9	1460-11700
2-Naphthylamine	0.00	0 +/- 0	0.00-0.00
2-Nitroaniline	0.00	0 +/- 0	0.00-0.00
2-Nitrophenol	2499	4350 +/- 40.5	560-4790
2-Picoline	0.00	0 +/- 0	0.00-0.00
3+4-Methylphenol	4407	5570 +/- 51.8	1170-7640
3,3'-Dichlorobenzidine	0.00	0 +/- 0	0.00-0.00
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	0.00-0.00
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)	7097	9400 +/- 87.5	2870-11300
4-Chloro-3-methylphenol	8293	10950 +/- 102	3190-13400
4-Chloroaniline	0.00	0 +/- 0	0.00-0.00
4-Chlorophenyl phenylether	4052	5660 +/- 52.7	1510-6590
4-Methylphenol	3791	5570 +/- 51.8	2650-6130
4-Nitroaniline	0.00	0 +/- 0	0.00-0.00
4-Nitrophenol	5441	8330 +/- 77.5	544-11900
4-Nitroquinoline-1-oxide	0.00	0 +/- 0	0.00-0.00
5-Nitro-o-toluidine	0.00	0 +/- 0	0.00-0.00
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	5276	7690 +/- 71.6	2160-8400
Acenaphthylene	3574	5100 +/- 47.5	1310-5830
Acetophenone	0.00	0 +/- 0	0.00-0.00
Aniline	0.00	0 +/- 0	0.00-0.00
Anthracene	0.00	0 +/- 0	0.00-100
Atrazine	0.00	0 +/- 0	0.00-0.00
Benzaldehyde	0.00	0 +/- 0	0.00-0.00
Benzidine	0.00	0 +/- 0	0.00-0.00
Benzo(a)anthracene	0.00	0 +/- 0	0.00-100
Benzo(a)pyrene	5754	7220 +/- 67.2	2440-9060
Benzo(b)fluoranthene	5066	6580 +/- 61.2	2060-8080
Benzo(b)fluoranthene + Benzo(k)fluoranthene	0.00	0 +/- 0	0.00-0.00
Benzo(g,h,i)perylene	6358	8130 +/- 75.7	2540-10200
Benzo(k)fluoranthene	5289	6690 +/- 62.2	2150-8430
Benzoic acid	0.00	0 +/- 0	0.00-0.00
Benzyl alcohol	0.00	0 +/- 0	0.00-0.00
bis(2-Chloroethoxy)methane	0.00	0 +/- 0	0.00-100
bis(2-Chloroethyl)ether	5907	0 +/- 0	2520-9300
Butyl benzyl phthalate	5328	7210 +/- 67.1	1930-8730
Caprolactam	0.00	0 +/- 0	0.00-0.00
Carbazole	0.00	0 +/- 0	0.00-0.00
Chlorobenzilate	0.00	0 +/- 0	0.00-0.00
Chrysene	3715	5170 +/- 48.1	1820-5610
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	9806	12950 +/- 121	3300-16300
Di-n-butyl phthalate	0.00	0 +/- 0	0.00-100
Di-n-octyl phthalate	1630	2010 +/- 18.7	346-2910
Diallate	0.00	0 +/- 0	0.00-0.00

Dibenz(a,h)anthracene	0.00	0 +/- 0	0.00-100
Dibenzofuran	6862	9890 +/- 92.1	3110-10600
Diethyl phthalate	0.00	0 +/- 0	0.00-100
Dimethoate	0.00	0 +/- 0	0.00-0.00
Dimethyl phthalate	3796	5290 +/- 49.3	1520-6070
Dinoseb	0.00	0 +/- 0	0.00-0.00
Diphenyl ether	0.00	0 +/- 0	0.00-0.00
Diphenylamine	0.00	0 +/- 0	0.00-0.00
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	7241	9300 +/- 86.6	3010-11500
Fluorene	2540	3490 +/- 32.4	1060-4020
Hexachlorobenzene	9200	12240 +/- 114	4460-13900
Hexachlorobutadiene	0.00	0 +/- 0	0.00-150
Hexachlorocyclopentadiene	0.00	0 +/- 0	0.00-0.00
Hexachloroethane	6753	12210 +/- 114	1220-13600
Hexachlorophene	0.00	0 +/- 0	0.00-0.00
Hexachloropropene	0.00	0 +/- 0	0.00-0.00
Indeno(1,2,3-c,d)pyrene	1625	1960 +/- 18.3	351-2900
Isodrin	0.00	0 +/- 0	0.00-0.00
Isophorone	7801	11930 +/- 111	2710-12900
Isosafrole	0.00	0 +/- 0	0.00-0.00
Kepone	0.00	0 +/- 0	0.00-0.00
m-Dinitrobenzene	0.00	0 +/- 0	0.00-0.00
Maleic anhydride	0.00	0 +/- 0	0.00-0.00
Methapyrilene	0.00	0 +/- 0	0.00-0.00
Methyl methane sulfonate	0.00	0 +/- 0	0.00-0.00
n-Decane	0.00	0 +/- 0	0.00-0.00
N-Nitroso-di-n-butylamine	0.00	0 +/- 0	0.00-0.00
N-Nitroso-di-n-propylamine	5717	8730 +/- 81.3	1480-9960
N-Nitrosodiethylamine	0.00	0 +/- 0	0.00-0.00
N-Nitrosodimethylamine	0.00	0 +/- 0	0.00-0.00
N-Nitrosodiphenylamine	0.00	0 +/- 0	0.00-0.00
N-Nitrosomethylethylamine	0.00	0 +/- 0	0.00-0.00
N-Nitrosomorpholine	0.00	0 +/- 0	0.00-0.00
N-Nitrosopiperidine	0.00	0 +/- 0	0.00-0.00
N-Nitrosopyrrolidine	0.00	0 +/- 0	0.00-0.00
n-Octadecane	0.00	0 +/- 0	0.00-0.00
Naphthalene	0.00	0 +/- 0	0.00-100
Naphthalene-d8	0.00	0 +/- 0	0.00-0.00
Nitrobenzene	7340	11120 +/- 104	2400-12300
o,o,o-Triethyl phoshorothioate	0.00	0 +/- 0	0.00-0.00
o-Dinitrobenzene	0.00	0 +/- 0	0.00-0.00
o-Toluidine	0.00	0 +/- 0	0.00-0.00
p-Dimethylaminoazobenzene	0.00	0 +/- 0	0.00-0.00
p-Dinitrobenzene	0.00	0 +/- 0	0.00-0.00
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
Pentachlorohexane	0.00	0 +/- 0	0.00-0.00
Pentachloronitrobenzene	0.00	0 +/- 0	0.00-0.00
Pentachlorophenol	6874	11620 +/- 108	687-13300

Phenacetin	0.00	0 +/- 0	0.00-0.00
Phenanthrene	3881	5290 +/- 49.2	1770-5990
Phenol	7229	11060 +/- 103	1990-12500
Phorate	0.00	0 +/- 0	0.00-0.00
Pronamide	0.00	0 +/- 0	0.00-0.00
Pyrene	2715	3790 +/- 35.2	1020-4410
Pyridine	0.00	0 +/- 0	0.00-0.00
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	15330 +/- 143	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 for analyst proficiency testing. Certified concentration is the prepared concentration traceable to NIST.

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 homogeniety cannot be assured. Transfer the entire contents of the sample vial and rinse the vial with 2 small aliquots of extraction solvent adding rinseates 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: The highest purity analyte source materials are used in the manufacture of this CRM. 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 CRM was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random consistent with guide ISO-35:2017. 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.

nsi lab solutions
protect more. test more.
7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Kenneth Grzybowski

Kenneth Grzybowski, Technical Organic Manager

Erin Taylor

Erin Taylor, Quality Manager

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER
ISO 17034:2016
Certificate # AR-1571