



Certificate of Analysis

QCO-121 Base/Neutrals

Catalog Number:	QCO-121	Expiration Date:	01/31/2025
Lot Number:	N0122	Hazard:	Irritant, Flammable
Manufactured Date:	12/09/2021	Solvent:	Acetone/Methanol

<u>Analyte</u>	<u>Study Mean</u> ug/L	<u>Certified Concentration</u> ug/L	<u>Acceptance Limits</u> ug/L
1,1-Biphenyl	0.00	0.00 +/- 0.00	0.00-0.00
1,2,4,5-Tetrachlorobenzene	0.00	0.00 +/- 0.00	0.00-0.00
1,2,4-Trichlorobenzene	89.7	114 +/- 1.06	21.9-135
1,2-Dichlorobenzene (o-Dichlorobenzene)	70.3	104 +/- 0.968	13.0-121
1,2-Diphenylhydrazine as Azobenzene	0.00	0.00 +/- 0.00	0.00-0.00
1,3,5-Trinitrobenzene	0.00	0.00 +/- 0.00	0.00-0.00
1,3-Dichlorobenzene (m-Dichlorobenzene)	97.9	146 +/- 1.36	14.6-169
1,3-Dinitrobenzene	0.00	0.00 +/- 0.00	0.00-0.00
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.00	0.00 +/- 0.00	0.00-0.00
1,4-Dioxane	0.00	0.00 +/- 0.00	0.00-0.00
1,4-Naphthoquinone	0.00	0.00 +/- 0.00	0.00-0.00
1-Chloronaphthalene	0.00	0.00 +/- 0.00	0.00-0.00
1-Methylnaphthalene	0.00	0.00 +/- 0.00	0.00-0.00
1-Naphthylamine	0.00	0.00 +/- 0.00	0.00-0.00
2,2-Oxybis(1-chloropropane)	87.3	113 +/- 1.05	31.1-137
2,3-Dichloroaniline	0.00	0.00 +/- 0.00	0.00-0.00
2,4-Dinitrotoluene (2,4-DNT)	93.6	82.0 +/- 0.763	33.5-102
2,6-Dinitrotoluene (2,6-DNT)	185	193 +/- 1.80	78.4-232
2-Acetylaminofluorene	0.00	0.00 +/- 0.00	0.00-0.00
2-Chloronaphthalene	0.00	0.00 +/- 0.00	0.00-0.00
2-Methylcholanthrene	0.00	0.00 +/- 0.00	0.00-0.00
2-Methylnaphthalene	0.00	0.00 +/- 0.00	0.00-0.00
2-Naphthylamine	0.00	0.00 +/- 0.00	0.00-0.00
2-Nitroaniline	0.00	0.00 +/- 0.00	0.00-0.00
2-Picoline	0.00	0.00 +/- 0.00	0.00-0.00
3,3'-Dichlorobenzidine	0.00	0.00 +/- 0.00	0.00-0.00
3,3-Dimethylbenzidine	0.00	0.00 +/- 0.00	0.00-0.00
3-Methylcholanthrene	0.00	0.00 +/- 0.00	0.00-0.00
3-Nitroaniline	0.00	0.00 +/- 0.00	0.00-0.00
4-Aminobiphenyl	0.00	0.00 +/- 0.00	0.00-0.00
4-Bromophenyl phenyl ether (BDE-3)	169	185 +/- 1.72	76.2-228
4-Chloroaniline	0.00	0.00 +/- 0.00	0.00-0.00
4-Chlorophenyl phenylether	156	180 +/- 1.68	64.5-219
4-Nitroaniline	0.00	0.00 +/- 0.00	0.00-0.00
4-Nitroquinoline-1-oxide	0.00	0.00 +/- 0.00	0.00-0.00

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





nsi lab solutions

protect more. test more.

7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

5-Nitro-o-toluidine	0.00	0.00 +/- 0.00	0.00-0.00
7,12-Dimethylbenz(a)anthracene	0.00	0.00 +/- 0.00	0.00-0.00
a,a-Dimethylphenethylamine	0.00	0.00 +/- 0.00	0.00-0.00
Acenaphthene	63.9	69.6 +/- 0.648	24.6-84.9
Acenaphthylene	0.00	0.00 +/- 0.00	0.00-0.00
Acetophenone	0.00	0.00 +/- 0.00	0.00-0.00
Aniline	0.00	0.00 +/- 0.00	0.00-0.00
Anthracene	131	170 +/- 1.58	72.5-202
Atrazine	0.00	0.00 +/- 0.00	0.00-0.00
Benzaldehyde	0.00	0.00 +/- 0.00	0.00-0.00
Benzidine	0.00	0.00 +/- 0.00	0.00-0.00
Benzo(a)anthracene	148	180 +/- 1.68	86.7-216
Benzo(a)pyrene	0.00	0.00 +/- 0.00	0.00-0.00
Benzo(b)fluoranthene	0.00	0.00 +/- 0.00	0.00-0.00
Benzo(g,h,i)perylene	0.00	0.00 +/- 0.00	0.00-0.00
Benzo(k)fluoranthene	53.9	54.0 +/- 0.503	12.9-79.9
Benzyl alcohol	0.00	0.00 +/- 0.00	0.00-0.00
bis(2-Chloroethoxy)methane	107	122 +/- 1.14	45.2-142
bis(2-Chloroethyl)ether	0.00	0.00 +/- 0.00	0.00-0.00
Butyl benzyl phthalate	113	105 +/- 0.978	31.0-144
Caprolactam	0.00	0.00 +/- 0.00	0.00-0.00
Carbazole	85.6	88.0 +/- 0.819	61.6-114
Chlorobenzilate	0.00	0.00 +/- 0.00	0.00-0.00
Chrysene	39.1	43.1 +/- 0.401	19.5-55.7
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	0.00	0.00 +/- 0.00	0.00-0.00
Di-n-butyl phthalate	110	112 +/- 1.04	39.8-145
Di-n-octyl phthalate	161	171 +/- 1.59	50.7-235
Diallate	0.00	0.00 +/- 0.00	0.00-0.00
Dibenzo(a,h)anthracene	35.6	37.6 +/- 0.350	13.3-52.2
Dibenzofuran	46.7	58.7 +/- 0.546	22.6-69.8
Diethyl phthalate	0.00	0.00 +/- 0.00	0.00-0.00
Dimethoate	0.00	0.00 +/- 0.00	0.00-0.00
Dimethyl phthalate	126	155 +/- 1.44	15.5-223
Dinoseb	0.00	0.00 +/- 0.00	0.00-0.00
Diphenyl ether	0.00	0.00 +/- 0.00	0.00-0.00
Disulfoton	0.00	0.00 +/- 0.00	0.00-0.00
Ethyl methanesulfonate	0.00	0.00 +/- 0.00	0.00-0.00
Famphur	0.00	0.00 +/- 0.00	0.00-0.00
Fluoranthene	166	172 +/- 1.60	76.4-208
Fluorene	83.5	101 +/- 0.940	42.2-119
Hexachlorobenzene	104	122 +/- 1.14	54.5-146
Hexachlorobutadiene	0.00	0.00 +/- 0.00	0.00-0.00
Hexachlorocyclopentadiene	0.00	0.00 +/- 0.00	0.00-0.00
Hexachloroethane	99.9	158 +/- 1.47	15.8-174
Hexachlorophene	0.00	0.00 +/- 0.00	0.00-0.00
Hexachloropropene	0.00	0.00 +/- 0.00	0.00-0.00
Indeno(1,2,3-c,d)pyrene	52.2	50.0 +/- 0.466	14.9-66.3
Isodrin	0.00	0.00 +/- 0.00	0.00-0.00
Isophorone	0.00	0.00 +/- 0.00	0.00-0.00
Isosafrole	0.00	0.00 +/- 0.00	0.00-0.00
Kepone	0.00	0.00 +/- 0.00	0.00-0.00
m-Dinitrobenzene	0.00	0.00 +/- 0.00	0.00-0.00
Methapyrilene	0.00	0.00 +/- 0.00	0.00-0.00

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





nsi lab solutions

protect more. test more.

7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Methyl methanesulfonate	0.00	0.00 +/- 0.00	0.00-0.00
n-Decane	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitroso-di-n-butylamine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosodi-n-propylamine	105	132 +/- 1.23	43.1-166
N-Nitrosodiethylamine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosodimethylamine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosodiphenylamine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosomorpholine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosopiperidine	0.00	0.00 +/- 0.00	0.00-0.00
N-Nitrosopyrrolidine	0.00	0.00 +/- 0.00	0.00-0.00
n-Octadecane	0.00	0.00 +/- 0.00	0.00-0.00
Naphthalene	0.00	0.00 +/- 0.00	0.00-0.00
Nitrobenzene	103	135 +/- 1.26	44.1-159
o,o,o-Triethyl phosphorothioate	0.00	0.00 +/- 0.00	0.00-0.00
o-Dinitrobenzene	98.4	95.9 +/- 0.893	67.1-125
o-Toluidine	0.00	0.00 +/- 0.00	0.00-0.00
p-Dimethylaminoazobenzene	0.00	0.00 +/- 0.00	0.00-0.00
p-Dinitrobenzene	0.00	0.00 +/- 0.00	0.00-0.00
p-Phenylenediamine	0.00	0.00 +/- 0.00	0.00-0.00
Parathion, ethyl	0.00	0.00 +/- 0.00	0.00-0.00
Parathion, methyl	0.00	0.00 +/- 0.00	0.00-0.00
Pentachlorobenzene	0.00	0.00 +/- 0.00	0.00-0.00
Pentachlorohexane	0.00	0.00 +/- 0.00	0.00-0.00
Pentachloronitrobenzene	0.00	0.00 +/- 0.00	0.00-0.00
Phenacetin	0.00	0.00 +/- 0.00	0.00-0.00
Phenanthrene	89.2	95.2 +/- 0.886	44.5-114
Phorate	0.00	0.00 +/- 0.00	0.00-0.00
Pronamide	0.00	0.00 +/- 0.00	0.00-0.00
Pyrene	185	183 +/- 1.70	74.3-239
Pyridine	0.00	0.00 +/- 0.00	0.00-0.00
Safrole	0.00	0.00 +/- 0.00	0.00-0.00
Sulfotepp	0.00	0.00 +/- 0.00	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 2°C to 8°C.

Fill a 1000 mL Class A volumetric flask with 950 mL of organic free reagent water.
Allow the ampule concentrate to equilibrate to room temperature.
Open the ampule and pipet exactly 1.0 mL of the concentrate into the flask with a Class A pipet.
Bring the flask to volume with reagent water.
Stopper the flask and mix well.
This represents the sample for analysis.

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



Catalog Number: QCO-121

Lot Number: N0122

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.

Kenneth Grzybowski

Kenneth Grzybowski, Technical Organic Manager

Erin Taylor

Erin Taylor, Quality Manager

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