Contents

CRM: A reference material characterized by a metrologically valid procedure for one or more specified properties, accompanied by a reference material certificate that provides the value of the specified property, its associated uncertainty, and a statement of metrological traceability.

A complete listing of ERA's CRMs can be found on our Scope of Accreditation for general requirements for competence of reference material producers available at www.eraqc.com/AboutERA/Accreditations.

PT: A Proficiency Test (PT) is an analysis of what is often referred to as a blind sample or a sample with unknown concentrations of analytes for the purpose of evaluating a laboratory's analytical performance.

QR: Similar to a Proficiency Test, a QuiK Response (QR) is a sample with unknown concentrations. However, unlike a scheduled PT, QR is on-demand and available at any time. Plus, your results are returned within two business days. QuiK Response can be used as a bilateral PT as referenced in the IUPAC/CITAC guide: Selection and use of PT schemes for a limited number of participants – chemical analytical labs.

RM: A material, sufficiently homogeneous and stable with respect to one or more specified properties, which has been established to be fit for its intended use in a measurement process.

All ERA Soil PTs open quarterly (Q) or biannually (B), unless otherwise noted. Quarterly months are January, April, July, and October.

Metals

Metals in Soil

NEW ANALYTE

CRM	PT		QR
Cat. #540	Cat. #620	Q	Cat. #540QR

One 40 g soil sample in a screw-cap bottle for all ICP and AA, RCRA and Superfund Methods including EPA Digestion Methods 3050 Hot Plate and 3051 Microwave, or other applicable methods. Includes all metals shown below.

Aluminum	2500–25,000 mg/kg
Antimony	80–300 mg/kg
Arsenic	40–400 mg/kg
Barium	100–1000 mg/kg
Beryllium	40–400 mg/kg
Boron	80–800 mg/kg
Cadmium	40–400 mg/kg
Calcium	1500–25,000 mg/kg
Chromium	40–400 mg/kg
Cobalt	40–400 mg/kg
Copper	40–400 mg/kg
Iron	5000–50000 mg/kg
Lead	40–400 mg/kg
Lithium	50–250 mg/kg
Magnesium	1200–25,000 mg/kg
Manganese	100–2000 mg/kg
Mercury	1–35 mg/kg
Molybdenum	30–300 mg/kg
Nickel	40–500 mg/kg
Potassium	1400–25,000 mg/kg
Selenium	40–400 mg/kg
Silver	20–100 mg/kg
Sodium	150–15,000 mg/kg
Strontium	40–400 mg/kg
Thallium	40–400 mg/kg
Tin	50–250 mg/kg
Titanium	10–2000 mg/kg
Uranium	1–250 mg/kg
Vanadium	40–400 mg/kg
Zinc	100–1000 mg/kg

Hexavalent Chromium in Soil

CRM	PT		QR
Cat. #921	Cat. #876	Q	Cat. #921QR

One 40 g standard in a screw-cap bottle for use with all promulgated hexavalent chromium methods.

Hexavalent chromium	40–300 mg/kg

TCLP Metals in Soil

CRM	PT		QR
Cat. #544	Cat. #629	Q	Cat. #544QR

One 105 g soil standard in a screw-cap bottle designed specifically to meet all state requirements for TCLP extraction and analysis for the metals listed below. Sample is designed to be extracted with fluid #1.

Antimony	Cadmium	Nickel
Arsenic	Chromium	Selenium
Barium	Lead	Silver
Beryllium	Mercury	Zinc

Metals in Sewage Sludge

CRM	PT		QR
Cat. #160	Cat. #619	Q	Cat. #160QR

One 40 g sludge standard in a screw-cap bottle to be analyzed for the metals listed below.

Aluminum	1000–50,000 mg/kg
Antimony	80–300 mg/kg
Arsenic	50–400 mg/kg
Barium	250–2000 mg/kg
Beryllium	30–200 mg/kg
Cadmium	40–300 mg/kg
Calcium	5000–70,000 mg/kg
Chromium	40–300 mg/kg
Cobalt	5–50 mg/kg
Copper	40–1000 mg/kg
Iron	1000–50,000 mg/kg
Lead	50–250 mg/kg
Magnesium	1200–25,000 mg/kg
Manganese	100–2000 mg/kg
Mercury	1–50 mg/kg
Molybdenum	5–250 mg/kg
Nickel	40–250 mg/kg
Potassium	1400–25,000 mg/kg
Selenium	50–250 mg/kg
Silver	50–250 mg/kg
Sodium	150–15,000 mg/kg
Strontium	200–2000 mg/kg
Thallium	50–250 mg/kg
Vanadium	5–250 mg/kg
Zinc	70–1500 mg/kg

Physical Parameters

Corrosivity/pH in Soil

CRM	PT		QR
Cat. #914	Cat. #875	Q	Cat. #914QR

One 100 g soil standard in a screw-cap bottle. Use to measure corrosivity.

Corrosivity/pH	2–12 S.U.

Ignitability/Flash Point

CRM	PT		QR
Cat. #979	Cat. #874	Q	Cat. #979QR

One standard packaged in three 30 mL bottles. Use to measure ignitability.

Ignitability/flashpoint	100–200 °F

Oil & Grease

Oil & Grease in Soil

CRM	PT		QR
Cat. #549	Cat. #867	Q	Cat. #549QR

One screw-cap bottle containing 50 g of soil ready to analyze. Use with gravimetric method 9071B or infrared spectrometric analysis.

- n-Hexane extractable material (O&G) (Gravimetric) ..... 300–3000 mg/kg
- n-Hexane extractable material (O&G) (Infrared) ..... 300–3000 mg/kg

Inorganics

Anions in Soil

NEW ANALYTES

CRM	PT		QR
Cat. #543	Cat. #873	Q	Cat. #543QR

One 40 g soil standard in a screw-cap bottle designed for a DI water extraction procedure for all the anions listed below.

- Bromide ..... 10–100 mg/kg
- Chloride ..... 200–1000 mg/kg
- Fluoride ..... 25–500 mg/kg
- Nitrate as N ..... 25–500 mg/kg
- Nitrite as N ..... 0–500 mg/kg
- Nitrate + Nitrite as N ..... 0–2000 mg/kg
- Phosphate as P ..... 25–500 mg/kg
- Sulfate ..... 25–2000 mg/kg

Cyanide in Soil

CRM	PT		QR
Cat. #541	Cat. #621	Q	Cat. #541QR

One 40 g soil standard in a screw-cap bottle for all distillation/colorimetric methods.

- Total cyanide ..... 20–200 mg/kg
- Amenable cyanide ..... 0–100 mg/kg

Nutrients in Soil

CRM	PT		QR
Cat. #542	Cat. #869	Q	Cat. #542QR

One 40 g soil standard in a screw-cap bottle. Use to analyze for all the nutrients listed below.

- Ammonia as N ..... 300–3000 mg/kg
- Total Kjeldahl nitrogen as N ..... 400–4000 mg/kg
- Total organic carbon (TOC) ..... 1000–20,000 mg/kg
- Total phosphorus as P ..... 300–3000 mg/kg

Nutrients in Sludge

CRM
Cat. #545

One 40 g sludge standard in a screw-cap bottle is ready for analysis.

- Ammonia as N ..... 0.1–5% (w/w)
- Total Kjeldahl nitrogen as N ..... 2–10% (w/w)
- Total organic carbon (TOC) ..... 5–50% (w/w)
- Total phosphorus as P ..... 0.5–10% (w/w)

Volatiles

Volatiles in Soil

CRM	PT		QR
Cat. #721	Cat. #623	Q	Cat. #721QR

One 2 mL flame-sealed ampule in methanol requires spiking onto the provided ten grams of solid matrix before analysis. Use with EPA Methods 8021, 8260, or other applicable methods. Includes a subset of the analytes listed below at 20–200 µg/kg (40–400 µg/kg for total xylenes, 80–1000 for selected ketones, and 100–1000 µg/kg for acetonitrile).

- Acetone
- Acetonitrile
- Acrolein
- Benzene
- Bromobenzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- n-Butylbenzene
- sec-Butylbenzene
- tert-Butylbenzene
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethyl vinyl ether
- Chloroform
- Chloromethane
- 2-Chlorotoluene
- 4-Chlorotoluene
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- 1,3-Dichloropropane
- 2,2-Dichloropropane
- 1,1-Dichloropropene
- cis-1,3-Dichloropropylene
- trans-1,3-Dichloropropylene
- Ethylbenzene
- Hexachlorobutadiene
- Hexachloroethane
- 2-Hexanone
- Isopropylbenzene
- p-Isopropyltoluene
- Methyl tert-butyl ether (MTBE)
- 4-Methyl-2-pentanone (MIBK)
- Methylene chloride
- Naphthalene
- Nitrobenzene
- n-Propylbenzene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,3-Trichlorobenzene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethene
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Vinyl acetate
- Vinyl chloride
- m&p-Xylene
- o-Xylene
- Xylenes, total

This standard is not compliant with the NELAC concentration for hexachloroethane, hexachlorobutadiene, and nitrobenzene. If a NELAC compliant sample is required for these analytes, use Ready-to-Use VOAs in Soil, or Base/Neutrals and Acids in Soil.

1,4-Dioxane in Soil

NEW PRODUCT

CRM	PT		QR
Cat. #538	Cat. #461	B	Cat. #538QR

One 2 mL flame-sealed ampule requires spiking onto the provided ten grams of solid matrix before analysis. Use with modified versions of EPA method 8260, 1624 or other applicable methods.

- 1,4-Dioxane ..... 20–200 ug/kg

Gasoline Range Organics (GRO) in Soil

CRM	PT		QR
Cat. #763	Cat. #630	Q	Cat. #763QR

One flame-sealed ampule with 20 g of soil spiked with unleaded regular gasoline in the range 100–2000 mg/kg. Use with purge and trap and modified EPA 8015 GC/FID Methods, or other applicable methods. Also use to test for BTEX in gasoline.

Note: This standard is not compliant with the NELAC concentration ranges for the BTEX analytes. If a NELAC-compliant sample for these analytes is required, use Volatiles in Soil, Cat. #623 or BTEX & MTBE Soil, Cat. #633.

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Volatiles (continued)

BTEX & MTBE in Soil

CRM	PT	QR
Cat. #761	Cat. #633 Q	Cat. #761QR

One 2 mL flame-sealed ampule requires spiking onto the ten grams of provided certified clean soil. Includes the anlaytes below at 20–200 µg/kg (40–400 µg/kg for total xylenes). Use with EPA Method 8021, or other applicable methods.

- Benzene
- Ethylbenzene
- Methyl tert-butyl ether (MTBE)
- Toluene
- Xylenes, total
- m&p Xylene
- o-Xylene

Ready-to-Use VOAs in Soil

CRM	PT	QR
Cat. #924	Cat. #870 Q	Cat. #924QR

One 20 mL flame-sealed ampule containing 10 g of soil and 10 mL of methanol is ready to analyze. Use with EPA Methods 8021, 8260, or other applicable methods. Includes a subset of the analytes listed below at 1000–20,000 µg/kg.

- Acetone
- Acetonitrile
- Acrolein
- Benzene
- Bromobenzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform
- Bromomethane
- 2-Butanone (MEK)
- n-Butylbenzene
- sec-Butylbenzene
- tert-Butylbenzene
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- 2-Chloroethyl vinyl ether
- Chloroform
- Chloromethane
- 2-Chlorotoluene
- 4-Chlorotoluene
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- 1,3-Dichloropropane
- 2,2-Dichloropropane
- 1,1-Dichloropropene
- cis-1,3-Dichloropropylene
- trans-1,3-Dichloropropylene
- Ethylbenzene
- Hexachlorobutadiene
- Hexachloroethane
- 2-Hexanone
- Isopropylbenzene
- p-Isopropyltoluene
- Methyl tert-butyl ether (MTBE)
- 4-Methyl-2-pentanone (MIBK)
- Methylene chloride
- Naphthalene
- Nitrobenzene
- n-Propylbenzene
- Styrene
- 1,1,1,2-Tetrachloroethane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene
- Toluene
- 1,2,3-Trichlorobenzene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethene
- Trichlorofluoromethane
- 1,2,3-Trichlorobenzene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Vinyl acetate
- Vinyl chloride
- m&p-Xylene
- o-Xylene
- Xylenes, total

Total Petroleum Hydrocarbons

Total Petroleum Hydrocarbons (TPH) in Soil #1

CRM	PT	QR
Cat. #570	Cat. #632 Q	Cat. #572QR

One screw-top bottle with 50 g of soil to be analyzed for TPH. Use with EPA IR or Gravimetric Methods 8440, 9071B, or other applicable methods.

- Non-polar extractable material (TPH) (Gravimetric)..... 300–3000 mg/kg
- Non-polar extractable material (TPH) (IR)..... 300–3000 mg/kg

Total Petroleum Hydrocarbons (TPH) in Soil #2

CRM	PT	QR
Cat. #571	Cat. #632 Q	Cat. #572QR

One screw-top bottle with 50 g of soil to be analyzed for TPH in the presence of interfering fatty acids. Use with EPA IR or Gravimetric Methods 8440, 9071B, or other applicable methods.

- Non-polar extractable material (TPH) (Gravimetric)..... 300–3000 mg/kg
- Non-polar extractable material (TPH) (IR)..... 300–3000 mg/kg

TCLP

TCLP Volatiles

CRM	QR
Cat. #730	Cat. #730QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 0.05–2.0 mg/L.

- Benzene
- 2-Butanone (MEK)
- Carbon tetrachloride
- Chlorobenzene
- Chloroform
- 1,4-Dichlorobenzene
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- Tetrachloroethylene
- Trichloroethylene
- Vinyl chloride

TCLP Semivolatiles

CRM	QR
Cat. #737	Cat. #737QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 0.1–2.0 mg/L after dilution. All unspiked analytes are certified at <0.5 mg/L.

- 1,4-Dichlorobenzene
- 2,4-Dinitrotoluene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachloroethane
- 2-Methylphenol
- 3 & 4-Methylphenol
- Nitrobenzene
- Pentachlorophenol
- Pyridine
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol

TCLP Organochlorine Pesticides

CRM	QR
Cat. #732	Cat. #732QR

One 2 mL flame-sealed ampule containing a subset of the analytes listed below, each at a concentration of 0.01–0.2 mg/L after dilution. All unspiked analytes are certified at <0.1 mg/L.

- Endrin
- Heptachlor
- Heptachlor epoxide
- gamma-BHC (Lindane)
- Methoxychlor

Semivolatiles

Nitroaromatics & Nitramines in Soil

CRM	PT		QR
Cat. #920	Cat. #871	Q	Cat. #920QR

Two flame-sealed ampules each containing 30 g of soil are ready to analyze. Use for EPA Methods 8330, 8091, or other applicable methods. Includes a subset of the analytes listed below at 1500–15,000 µg/kg.

- 4-Amino-2,6-dinitrotoluene
- 2-Amino-4,6-dinitrotoluene
- 1,3-Dinitrobenzene
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- HMX
- Nitrobenzene
- 2-Nitrotoluene
- 3-Nitrotoluene
- 4-Nitrotoluene
- RDX
- Tetryl
- 1,3,5-Trinitrobenzene
- 2,4,6-Trinitrotoluene

Per- & Polyfluoroalkyl Substances (PFAS) in Soil

NEW ANALYTES

CRM	PT		QR
Cat. #604	Cat. #462	Q	Cat. #604QR

One flame-sealed ampule containing 10 g of soil. The standard is certified for all analytes listed below. Each lot will be spiked with 6-12 of the analytes specified in the range of 20-100 µg/kg (40-100 µg/kg for HFPO-DA). Design is suitable for methods analyzing these components with LC-MS/MS techniques.

- 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)..... 20-100 µg/kg
- 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)..... 20-100 µg/kg
- 4,8-dioxa-3H-perfluorononanoic acid (DONA)..... 20-100 µg/kg
- N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)..... 20-100 µg/kg
- 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)..... 20-100 µg/kg
- 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)..... 20-100 µg/kg
- 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)..... 20-100 µg/kg
- Hexafluoropropylene oxide dimer acid (HFPO-DA)..... 40-100 µg/kg
- N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)..... 20-100 µg/kg
- Perfluorobutanesulfonic acid (PFBS)..... 20-100 µg/kg
- Perfluorobutanoic acid (PFBA)..... 20-100 µg/kg
- Perfluorodecane sulfonic acid (PFDS)..... 20-100 µg/kg
- Perfluorodecanoic acid (PFDA)..... 20-100 µg/kg
- Perfluorododecanoic acid (PFDoA)..... 20-100 µg/kg
- Perfluoroheptane sulfonic acid (PFHpS)..... 20-100 µg/kg
- Perfluoroheptanoic acid (PFHpA)..... 20-100 µg/kg
- Perfluorohexanesulfonic acid (PFHxS)..... 20-100 µg/kg
- Perfluorohexanoic acid (PFHxA)..... 20-100 µg/kg
- Perfluorononane sulfonic acid (PFNS)..... 20-100 µg/kg
- Perfluorononanoic acid (PFNA)..... 20-100 µg/kg
- Perfluorooctane sulfonamide (PFOSAm)..... 20-100 µg/kg
- Perfluorooctanesulfonic acid (PFOS)..... 20-100 µg/kg
- Perfluorooctanoic acid (PFOA)..... 20-100 µg/kg
- Perfluoropentanoic acid (PFPeA)..... 20-100 µg/kg
- Perfluoropentane sulfonic acid (PFPeS)..... 20-100 µg/kg
- Perfluorotetradecanoic acid (PFTDA)..... 20-100 µg/kg
- Perfluorotridecanoic acid (PFTrDA)..... 20-100 µg/kg
- Perfluoroundecanoic acid (PFUnDA)..... 20-100 µg/kg

Low-Level PAHs in Soil

CRM	PT		QR
Cat. #722	Cat. #625	Q	Cat. #722QR

Two flame-sealed ampules each containing 30 g are ready to analyze. Use for EPA HPLC Method 8310, 8270 SIM, or other applicable method. Includes a subset of the analytes listed below at 50–1000 µg/kg.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Diesel Range Organics (DRO) in Soil

CRM	PT		QR
Cat. #765	Cat. #631	Q	Cat. #765QR

One flame-sealed ampule with 20 g of soil spiked with #2 Diesel Fuel in the range 300–3000 mg/kg. Use with modified EPA Method 8015, or other applicable GC/FID methods.

Glycols in Soil

CRM	PT		QR
Cat. #928	Cat. #463	Q	Cat. #928QR

Two flame-sealed ampules each containing 30 g of soil are ready-to-use. Use with EPA Methods 8015B, 8430, 1671, or other applicable method. Includes all the analytes listed below at 75-200 mg/kg.

- Diethylene glycol
- Ethylene glycol
- Propylene glycol
- Tetraethylene glycol
- Triethylene glycol

Base/Neutrals & Acids in Soil

NEW ANALYTES

CRM	PT		QR
Cat. #727	Cat. #467	Q	Cat. #727QR

Two flame-sealed ampules each containing 30 g of soil are ready-to-use. Use with EPA Method 8270, or other applicable method. Includes a subset of the analytes listed below at 500–15,000 ug/kg.

- Acenaphthene
- Acenaphthylene
- Acetophenone
- 2-Amino-1-methylbenzene (o-Toluidine)
- Aniline
- Anthracene
- Atrazine
- Benzaldehyde
- Benzidine
- Benzoic acid
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Benzyl alcohol
- Biphenyl
- 4-Bromophenyl phenyl ether
- Butyl benzyl phthalate
- Caprolactam
- Carbazole
- 4-Chloroaniline
- bis(2-Chloroethyl)ether
- bis(2-Chloroethoxy)methane
- 4-Chloro-3-methylphenol
- 1-Chloronaphthalene
- 2-Chloronaphthalene
- 2-Chlorophenol
- 4-Chlorophenyl phenyl ether
- Chrysene
- Dibenz(a,h)anthracene
- Dibenzofuran
- Di-n-butyl phthalate
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 3,3'-Dichlorobenzidine
- 2,4-Dichlorophenol
- 2,6-Dichlorophenol
- Diethyl phthalate
- 2,4-Dimethylphenol
- Dimethyl phthalate
- 2,4-Dinitrophenol
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- Di-n-octyl phthalate
- bis(2-Ethylhexyl)phthalate
- Fluoranthene
- Fluorene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachlorocyclopentadiene
- Hexachloroethane
- Indeno(1,2,3-cd)pyrene
- Isophorone
- 2-Methyl-4,6-dinitrophenol
- 2-Methylnaphthalene
- 2-Methylphenol
- 3 & 4-Methylphenol
- Naphthalene
- 2-Nitroaniline
- 3-Nitroaniline
- 4-Nitroaniline
- Nitrobenzene
- 2-Nitrophenol
- 4-Nitrophenol
- N-Nitrosodiethylamine
- N-Nitrosodimethylamine
- N-Nitrosodiphenylamine
- N-Nitroso-di-n-propylamine
- 2,2'-Oxybis(1-Chloropropane)
- Pentachlorobenzene
- Pentachlorophenol
- Phenanthrene
- Phenol
- Pyrene
- Pyridine
- 1,2,4,5-Tetrachlorobenzene
- 2,3,4,6-Tetrachlorophenol
- 1,2,4-Trichlorobenzene
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol

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Herbicides

Chlorinated Acid Herbicides in Soil

CRM	PT	QR
Cat. #723	Cat. #626 Q	Cat. #723QR

Two flame-sealed ampules, each containing 30 g of soil are ready-to-use. Use with EPA Method 8151, or other applicable methods. Includes a subset of the analytes listed below at 100–1000 µg/kg (MCPA & MCPP 1000–10,000 µg/kg).

Acifluorfen	Dalapon	MCPP
Bentazon	Dicamba	4-Nitrophenol
Chloramben	3,5-Dichlorobenzoic acid	Pentachlorophenol
2,4-D	Dichlorprop	Picloram
2,4-DB	Dinoseb	2,4,5-T
Dacthal diacid (DCPA)	MCPA	2,4,5-TP (Silvex)

This standard is not compliant with the NELAC concentration for 4-Nitrophenol. If a NELAC compliant sample is required for this analyte, use Base/Neutrals and Acids in Soil.

PCBs

PCBs in Oil

CRM	PT	QR
Cat. #563	Cat. #817 Q	Cat. #563QR

One 10 mL flame-sealed ampule is ready to analyze. Contains a different Aroclor, randomly selected from the list below at 10–50 mg/kg.

Aroclor 1016	Aroclor 1242	Aroclor 1254
Aroclor 1221	Aroclor 1248	Aroclor 1260
Aroclor 1232		

PCBs in Oil Standards

PCBs in oil standards are sold individually in ready-to-use flame-sealed ampules with 5 g of oil. Use with EPA Methods 8082, EPA-600/4-81-045, Sept. 1982, or other applicable methods. LOW LEVEL standards contain an aroclor in the range 10–50 ppm. HIGH LEVEL standards contain an aroclor in the range 51–500 ppm.

CRM Cat. #	Concentration	Aroclor	Range
820	Low	1242	10–50 ppm
821	High	1242	51–500 ppm
826	Low	1248	10–50 ppm
827	High	1248	51–500 ppm
822	Low	1254	10–50 ppm
823	High	1254	51–500 ppm
824	Low	1260	10–50 ppm
825	High	1260	51–500 ppm

PCBs in Soil

CRM	PT	QR
Cat. #726	Cat. #624 Q	Cat. #726QR

One screw-top bottle containing 50 grams of standard is ready to analyze. Use with EPA Method 8082, or other applicable methods. Each standard includes a different aroclor randomly selected from the list below at 1–50 mg/kg.

Aroclor 1016	Aroclor 1242	Aroclor 1254
Aroclor 1221	Aroclor 1248	Aroclor 1260
Aroclor 1232		

PCBs in Soil Standards

PCBs in soil standards are sold individually in screw-top bottles containing 50 g of soil. Use with EPA Methods 8082, 4020, or other applicable methods. LOW LEVEL standards contain an aroclor in the range 0.5–50 ppm. HIGH LEVEL standards contain an aroclor in the range 51–500 ppm.

CRM Cat. #	Concentration	Aroclor	Range
490	Low	1242	0.5–50 ppm
491	High	1242	51–500 ppm
496	Low	1248	0.5–50 ppm
497	High	1248	51–500 ppm
492	Low	1254	0.5–50 ppm
493	High	1254	51–500 ppm
494	Low	1260	0.5–50 ppm
495	High	1260	51–500 ppm

Learn more about Soil products

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Pesticides

Organochlorine Pesticides in Soil

CRM	PT		QR
Cat. #728	Cat. #468	Q	Cat. #728QR

Two flame-sealed ampules each containing 30 g of soil are ready-to-use. Use with EPA Method 8081, or other applicable methods. Includes a subset of the analytes listed below at 50–500 µg/kg.

- Aldrin
- alpha-BHC
- beta-BHC
- delta-BHC
- gamma-BHC (Lindane)
- alpha-Chlordane
- gamma-Chlordane
- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- Dieldrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- Heptachlor
- Heptachlor epoxide
- Methoxychlor

Chlordane in Soil

CRM	PT		QR
Cat. #725	Cat. #628	Q	Cat. #725QR

One screw-top bottle containing 50 g of soil is ready to analyze. Use with EPA Method 8081, or other applicable methods. The standard contains technical chlordane at 100–1000 µg/kg.

Toxaphene in Soil

CRM	PT		QR
Cat. #724	Cat. #627	Q	Cat. #724QR

One screw-top bottle containing 50 g of soil is ready to analyze. Use with EPA Method 8081, or other applicable methods. The standard contains toxaphene at 200–2000 µg/kg.

Carbamate Pesticides in Soil

CRM	PT		QR
Cat. #926	Cat. #879	Q	Cat. #926QR

Two flame-sealed ampules, each containing 30 g of soil are ready to analyze. Use with EPA Methods 8318, 8321, or other applicable methods. Each standard contains a subset of the analytes listed below at 250–2500 µg/kg.

- Aldicarb
- Aldicarb sulfone
- Aldicarb sulfoxide
- Carbaryl
- Carbofuran
- Dioxacarb
- Diuron
- 3-Hydroxycarbofuran
- Methiocarb
- Methomyl
- Oxamyl
- Promecarb
- Propham
- Propoxur

Organophosphorus Pesticides (OPP) in Soil

CRM	PT		QR
Cat. #925	Cat. #878	Q	Cat. #925QR

Two flame-sealed ampules, each containing 30 g of soil are ready to analyze. Use with EPA Method 8141, or other applicable methods. Each standard contains a subset of the analytes listed below at 100–1000 µg/kg.

- Azinphos-methyl (Guthion)
- Chlorpyrifos
- Demeton
- Demeton O & S
- Diazinon
- Dichlorvos (DDVP)
- Disulfoton
- Ethyl parathion (Parathion)
- Malathion
- Methyl parathion
- Phorate
- Ronnel
- Stirophos (Tetrachlorovinphos)
- Terbufos

Blank Soil

Metals & Cyanide Blank Sand

CRM
Cat. #058

One 40 g sand sample in a screw-cap bottle. The concentrations of all EPA/NELAC including the priority pollutant metal and cyanide analytes are below the CLP Required Detection Limits (CRDLs) except iron, which is <250 mg/kg.

Metals & Cyanide Blank Soil

CRM
Cat. #057

One 40 g soil sample in a screw-cap bottle. The concentrations of all of the following analytes are below the CLP CRDL's: antimony, arsenic, beryllium, cadmium, cobalt, mercury, nickel, selenium, silver, sodium, thallium, and cyanide. The concentrations of the following analytes are below 10x the CLP CRDL's: barium, chromium, copper, lead, magnesium, potassium, and vanadium. The concentrations of manganese and zinc are <750 mg/kg. The concentration range for aluminum, calcium, and iron is 3000–25,000 mg/kg.

All ERA Soil PTs open quarterly (Q) or biannually (B), unless otherwise noted. Quarterly months are January, April, July, and October.