

# LOW-LEVEL CRMs

*New in 2015!*

Synthetic drinking and wastewater matrices with low concentrations of analytes for testing water supply, drinking water, ground water, water pollution, or wastewater.

Save time diluting your standards or spending numerous hours producing them yourself with our new low-level CRMs.

Our new line of low-level CRMs are optimal for:

- Method development and validation
- System checks
- Evaluating limits of quantitation
- Minimum detection limit studies
- Detection verification
- Many other uses

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CRM – Certified Reference Material

# INORGANICS

## Chlorine

**CRM**  
Cat. #1358

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Total Chlorine.....	75-500 µg/L
Free Chlorine.....	75-500 µg/L

## Color

**CRM**  
Cat. #1353

One 125 mL whole-volume bottle sample is ready to be analyzed.

Color.....	5-25 pc units
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## Common Inorganics

**CRM**  
Cat. #1249

One liter poly bottle whole-volume sample is ready to be analyzed.

Alkalinity.....	20-120 mg/L
Calcium.....	2-50 mg/L
Chloride.....	25-500 mg/L
Conductivity.....	80-1,000 µmhos/cm
Fluoride.....	0.25-5 mg/L
Magnesium.....	1-25 mg/L
pH.....	5-10 units
Potassium.....	2-50 mg/L
Sodium.....	5-100 mg/L
Sulfate.....	2-50 mg/L
Total Dissolved Solids.....	60-750 mg/L
Total Hardness.....	9-250 mg/L

## Common Inorganics in Hard Water

**CRM**  
Cat. #1346

One liter poly bottle whole-volume sample is ready to be analyzed.

Alkalinity.....	25-200 mg/L
Calcium.....	10-100 mg/L
Chloride.....	20-250 mg/L
Conductivity.....	130-1400 µmhos/cm
Fluoride.....	0.2-2 mg/L
Magnesium.....	2-10 mg/L
pH.....	5-10 units
Potassium.....	2-25 mg/L
Sodium.....	20-250 mg/L
Sulfate.....	20-250 mg/L
Total dissolved solids.....	100-1,000 mg/L
Total Hardness.....	30-300 mg/L

## Common Inorganics in Soft Water

**CRM**  
Cat. #1347

A 1 liter poly bottle whole-volume sample is ready to be analyzed.

Alkalinity.....	25-200 mg/L
Calcium.....	2-20 mg/L
Chloride.....	5-50 mg/L
Conductivity.....	25-300 µmhos/cm
Fluoride.....	0.2-2 mg/L
Magnesium.....	0.5-5 mg/L
pH.....	5-10 units
Potassium.....	1-10 mg/L
Sodium.....	5-50 mg/L
Sulfate.....	5-50 mg/L
Total dissolved solids.....	20-200 mg/L
Total Hardness.....	5-75 mg/L

## Cyanide

**CRM**  
Cat. #1345

One 15 mL screw-cap vial yields up to 2 liters of sample.

Free Cyanide.....	5-100 µg/L
Total Cyanide.....	5-100 µg/L

## Demand

**CRM**  
Cat. #1354

One 15 mL screw-cap vial yields up to 2 liters of sample.

5-day BOD.....	2-25 mg/L
COD.....	2-25 mg/L
DOC.....	1-10 mg/L
TOC.....	1-10 mg/L

## Demand

**CRM**  
Cat. #1242

One 15 mL screw-cap vial spiking concentrate makes up to 2 liters of sample.

5-day BOD.....	5-75 mg/L
COD.....	10-150 mg/L
DOC.....	2-40 mg/L
TOC.....	2-40 mg/L

## INORGANICS

### High Solids

**CRM**  
Cat. #1355

One 24 mL screw-cap vial with a powder concentrate yields 1 liter of solution.  
 Total dissolved solids..... 100-1,000 mg/L  
 Total suspended solids (TSS)..... 5-50 mg/L

### Inorganic Disinfection By-products

**CRM**  
Cat. #1343

Two 24 mL screw-cap vials yield up to 2 liters of sample each.  
 Bromate..... 1-12 µg/L  
 Bromide..... 5-100 µg/L  
 Chlorate..... 5-100 µg/L  
 Chlorite..... 5-100 µg/L

### Solids Concentrate

**CRM**  
Cat. #1243

One 24 mL screw-cap vial concentrate makes 1 liter of sample.  
 Total dissolved solids..... 10-250 mg/L  
 Total suspended solids (TSS)..... 5-50 mg/L

### Total Phenolics (4-AAP)

**CRM**  
Cat. #1250

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.  
 Total phenolics by 4-AAP..... 0.06-5 mg/L

## METALS

### Hexavalent Chromium

**CRM**  
Cat. #1248

One 15 mL screw-cap vial spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.  
 Hexavalent chromium..... 10-200 µg/L

### Mercury

**CRM**  
Cat. #1341

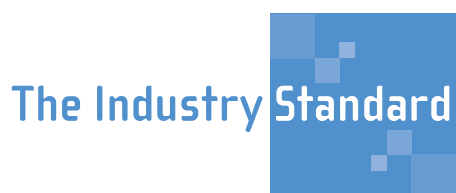
One 15 mL screw-cap vial spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.  
 Mercury, total..... 0.1 to 1.2 µg/L

### Metals

**CRM**  
Cat. #1340

Two 15 mL screw-cap vial spiking concentrates and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Aluminum .....	25-500 µg/L
Antimony.....	1-20 µg/L
Arsenic.....	1-25 µg/L
Barium.....	100-2,000 µg/L
Beryllium.....	1-20 µg/L
Boron.....	100-2,000 µg/L
Cadmium.....	1-20 µg/L
Chromium.....	5-100 µg/L
Cobalt.....	2-50 µg/L
Copper.....	200-5,000 µg/L
Iron.....	25-500 µg/L
Lead.....	1-25 µg/L
Lithium.....	50-1,000 µg/L
Manganese.....	5-100 µg/L
Molybdenum.....	5-100 µg/L
Nickel.....	1-25 µg/L
Selenium.....	1-12 µg/L
Silver.....	10-200 µg/L
Strontium.....	50-1,000 µg/L
Thallium.....	2-50 µg/L
Tin.....	100-2,000 µg/L
Vanadium.....	2-50 µg/L
Zinc.....	100-2,000 µg/L



## METALS

### Metals

**CRM**  
Cat. #1244

One 15 mL screw-cap vial spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Aluminum	200-4,000 µg/L
Antimony	95-900 µg/L
Arsenic	70-900 µg/L
Barium	100-2,500 µg/L
Beryllium	8-900 µg/L
Boron	800-2,000 µg/L
Cadmium	8-750 µg/L
Chromium, total	17-1,000 µg/L
Cobalt	28-1,000 µg/L
Copper	40-900 µg/L
Iron	200-4,000 µg/L
Lead	70-3,000 µg/L
Manganese	70-4,000 µg/L
Molybdenum	60-600 µg/L
Nickel	80-3,000 µg/L
Selenium	90-2,000 µg/L
Silver	26-600 µg/L
Strontium	30-300 µg/L
Thallium	60-900 µg/L
Vanadium	55-2,000 µg/L
Zinc	100-2,000 µg/L

## NUTRIENTS

### Complex Nutrients in Hard Water

**CRM**  
Cat. #1241

One 15 mL screw-cap vial spiking concentrate makes up to 2 liters of sample.

Total Kjeldahl Nitrogen	1-15 mg/L
Total Nitrogen	1-20 mg/L
Total Phosphorus	0.5-5 mg/L

### Complex Nutrients in Soft Water

**CRM**  
Cat. #1351

One 15 mL screw-cap vial spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Total Kjeldahl Nitrogen	0.5-5 mg/L
Total Phosphorus	0.5-5 mg/L

### Simple Nutrients

**CRM**  
Cat. #1240

Two 15 mL screw-cap vials makes up to 2 liters of sample.

Ammonia (N)	1-20 mg/L
Nitrate (NO <sub>3</sub> )	0.5-10 mg/L
Nitrite (NO <sub>2</sub> )	0.5-5 mg/L
Total oxidised nitrogen	1-15 mg/L
Soluble reactive phosphorus (P)	0.5-5 mg/L

### Simple Nutrients in Hard Water

**CRM**  
Cat. #1348

Two 15 mL screw-cap vial spiking concentrates and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Ammonium (NH <sub>4</sub> )	0.1-1 mg/L
Nitrate (NO <sub>3</sub> )	3-60 mg/L
Nitrite (NO <sub>2</sub> )	0.1-1 mg/L
Soluble reactive phosphorus (P)	0.5-5 mg/L
Total oxidised nitrogen (TON)	3-60 mg/L

### Simple Nutrients in Soft Water

**CRM**  
Cat. #1349

Two 15 mL screw-cap vial spiking concentrates and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample.

Ammonium (NH <sub>4</sub> )	0.1-1 mg/L
Nitrate (NO <sub>3</sub> )	3-60 mg/L
Nitrite (NO <sub>2</sub> )	0.1-1 mg/L
Soluble reactive phosphorus (P)	0.5-5 mg/L
Total oxidised nitrogen (TON)	3-60 mg/L

# ORGANICS

## Herbicides

### CRM

Cat. #1376

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 10-150 ng/L.

2,4-DB	loxynil
Bromoxynil	Monuron
Dicamba	Propyzamide
Dichlorprop	Trichlopyr

## Organochlorine Pesticides

### CRM

Cat. #1374

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 10-150 ng/L (aldrin, dieldrin, heptachlor, and heptachlor epoxide at 2-40 ng/L).

2,4-DDT	Endosulfan I
4,4'-DDD	Endosulfan II
4,4'-DDE	Endrin
4,4'-DDT	Gamma BHC (Lindane)
Aldrin	Heptachlor
Alpha BHC	Heptachlor epoxide
Beta BHC	Hexachlorobenzene
Delta BHC	Pentachlorobenzene
Dieldrin	Trifluralin

## Organochlorine Pesticides

### CRM

Cat. #1253

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 100-2,000 ng/L.

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

## Organophosphorus Pesticides

### CRM

Cat. #1256

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 100-1,500 ng/L.

Azinphos-ethyl	Diazinon	Mevinphos
Azinphos-methyl	Dichlorvos	Parathion-ethyl
Chlorfenvinphos	Fenitrothion	Parathion-methyl
Chlorpyrifos	Fenthion	
Cypermethrin	Malathion	

## PAHs

### CRM

Cat. #1254

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 10-250 ng/L.

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

## PCB Congeners

### CRM

Cat. #1373

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 5-100 ng/L.

PCB 28	PCB 138
PCB 52	PCB 153
PCB 101	PCB 180
PCB 118	

## PCB Congeners

### CRM

Cat. #1255

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 100-1,500 ng/L.

PCB 28	PCB 118	PCB 180
PCB 52	PCB 138	
PCB 101	PCB 153	

## Semivolatiles

### CRM

Cat. #1372

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 2-50 ng/L (benzo(a)pyrene at 1-12 ng/L).

Acenaphthene	Diethyl phthalate
Acenaphthylene	Dimethyl phthalate
Anthracene	Di-n-octyl phthalate
Benzo(a)anthracene	bis(2-Ethylhexyl)adipate
Benzo(b)fluoranthene	bis(2-Ethylhexyl)phthalate
Benzo(k)fluoranthene	Fluoranthene
Benzo(g,h,i)perylene	Fluorene
Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene
Butylbenzylphthalate	Naphthalene
Chrysene	Phenanthrene
Dibenz(a,h)anthracene	Pyrene
Di-n-butyl phthalate	

## ORGANICS

### Triazines, Urons and Acid Herbicides

**CRM**  
Cat. #1375

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 10-150 ng/L.

2,4-D	Isoproturon
AMPA	Linuron
Atrazine	MCPA
Bentazone	MCPB
Chlortoluron	Mecoprop
Diuron	Propazine
Glyphosate	Simazine

### Trihalomethanes

**CRM**  
Cat. #1371

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 10-100 µg/L.

Bromodichloromethane	Chlorodibromomethane
Bromoform	Chloroform

### Triazines, Urons and Acid Herbicides

**CRM**  
Cat. #1257

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 100-1,200 ng/L.

2,4-D	Diuron	MCPB
AMPA	Glyphosate	Mecoprop
Atrazine	Isoproturon	Propazine
Bentazone	Linuron	Simazine
Chlortoluron	MCPA	



**ERA's technical experts are here to help you improve root cause analysis and corrective action.**

## ORGANICS

## Volatiles

CRM  
Cat. #1370

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 0.1-50 µg/L.

Benzene	Tetrachloroethene
Carbon tetrachloride	Toluene
Chlorobenzene	1,2,4-Trichlorobenzene
1,2-Dichlorobenzene	1,1,1-Trichloroethane
1,4-Dichlorobenzene	1,1,2-Trichloroethane
1,2-Dichloroethane	Trichloroethene
1,1-Dichloroethylene	Vinyl chloride
cis-1,2-Dichloroethylene	o-Xylene
trans-1,2-Dichloroethylene	m-Xylene
1,2-Dichloropropane	p-Xylene
Ethylbenzene	m+p-Xylene
Methylene chloride	Xylenes, total
Styrene	

## Volatiles

CRM  
Cat. #1251

One 2 mL flame-sealed ampule spiking concentrate and one 24 mL screw-cap vial matrix concentrate makes up to 2 liters of sample to be analyzed for the compounds listed below at 1-300 µg/L.

Acetone	1,2-Dibromoethane (EDB)	4-Methyl-2-pentanone (MIBK)
Acetonitrile	Dibromomethane	Methyl tert-butyl ether (MTBE)
Acrolein	1,2-Dichlorobenzene	Naphthalene
Acrylonitrile	1,3-Dichlorobenzene	Styrene
Benzene	1,4-Dichlorobenzene	1,1,1,2-Tetrachloroethane
Bromodichloromethane	Dichlorodifluoromethane	1,1,2,2-Tetrachloroethane
Bromoform	1,1-Dichloroethane	Tetrachloroethene
Bromomethane	1,2-Dichloroethane	Toluene
2-Butanone (MEK)	1,1-Dichloroethene	1,2,4-Trichlorobenzene
Carbon disulfide	cis-1,2-Dichloroethene	1,1,1-Trichloroethane
Carbon tetrachloride	trans-1,2-Dichloroethene	1,1,2-Trichloroethane
Chlorobenzene	1,2-Dichloropropane	Trichloroethene
Chlorodibromomethane	cis-1,3-Dichloropropene	Trichlorofluoromethane
Chloroethane	trans-1,3-Dichloropropene	(Freon 11)
2-Chloroethyl vinyl ether	Ethylbenzene	1,2,3-Trichloropropane
Chloroform	Hexachlorobutadiene	Vinyl acetate
Chloromethane	2-Hexanone	Vinyl chloride
1,2-Dibromo-3-chloropropane (DBCP)	Methylene Chloride	Xylenes, total

## HOW CAN ERA'S FASTER PT RESULTS MAKE YOUR JOB EASIER?

*"It makes it a lot easier to correct problems faster, in order to get back on track of providing good data."*

– Lab Manager, Nevada