

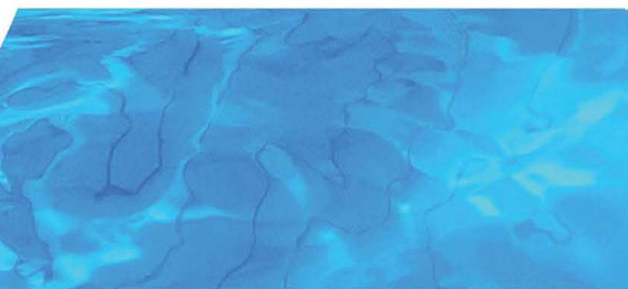
# Environmental Proficiency Testing

PT Analytics | Custom Reporting | Corrective Action Support | Technical PT Library



phenova®  
Certified Reference Materials

A Phenomenex®  
Company



ISO/IEC 17034 | ISO/IEC 17025 | ISO/IEC 17043 | TNI EL-V3

US

# QUALITY ACCREDITATIONS

You depend on the products we provide to accurately and efficiently perform your analyses. As a testament to our commitment to your satisfaction, we hold our products to the most stringent quality requirements.

**Phenova products are covered by one or all of the following quality certifications:**

## ISO/IEC 17034

General requirements for the competence of reference material producers.

- A2LA Cert No. 2427.02

## ISO/IEC 17025

General requirements for the competence of testing and calibration laboratories.

- A2LA Cert No. 2427.03

## TNI EL-V3

General requirement for environmental proficiency testing providers.

- A2LACertNo.2427.01

## ISO/IEC 17043

Conformity assessment - General requirements for proficiency testing.

- A2LA Cert No. 2427.01

Learn more at

[www.phenova.com/qua/ity](http://www.phenova.com/qua/ity)



Proficiency Testing Provider Certificate No. 2427.01  
Reference Material Producer Certificate No. 2427.02  
Chemical Testing Laboratory Certificate No. 2427.03

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## Quick Guide to Standards Included in Catalog\*:

### PT

#### Proiciency testing Standard

Demonstrate compliance with EPA, TNI, and state specific accreditation requirements by enrolling in a Phenova PT study.

### QC

#### Quality Control Standards

Investigate the root cause of a “Not Acceptable” result, execute internal quality objectives, and even train your staff. Certified values and acceptance limits are included with purchase.

### RR

#### Rapid Return™ Standards

Supplemental PT Studies without a fixed schedule, RR studies allow you to quickly demonstrate compliance with a PT requirement, complete corrective action, or add analytes to your scope.

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**Please Note:** Descriptions, analytes, and concentration ranges listed may change periodically due to regulatory or technical specification changes. For the most recent product information, please search our products at [www.phenova.com/products](http://www.phenova.com/products).

\* Phenova certified reference materials for calibration, surrogate and internal standards are not included in this catalog. For information on these products, please contact us at +1-303-940-0033 or email us at [sales@phenova.com](mailto:sales@phenova.com).





# Water Pollution

## INORGANIC

Phenova WP Inorganic Standards are provided as concentrates ready to dilute to produce your final samples in sufficient amounts for at least two methods, unless otherwise noted. The WP program is designed to be compliant with the Discharge Monitoring Report - Quality Assurance Program (DMR-QA). All standards are compliant with EPA, TNI and/or state specific criteria.



# Inorganic Standards

Description	Proficiency Testing		Quality Control		Rapid Return™	
	Catalog Number		Catalog Number		Catalog Number	Price
<b>TNI Standards</b>						
WP Acidity	<a href="#">PT-ACD-WP</a>		<a href="#">QC-ACD-WP</a>		<a href="#">RR-ACD-WP</a>	8M 10
WP Color	<a href="#">PT-COL-WP</a>		<a href="#">QC-COL-WP</a>		<a href="#">RR-COL-WP</a>	8M 10
WP Cyanide	<a href="#">PT-CN-WP</a>		<a href="#">QC-CN-WP</a>		<a href="#">RR-CN-WP</a>	M 11
WP Demand	<a href="#">PT-DEM-WP</a>		<a href="#">QC-DEM-WP</a>		<a href="#">RR-DEM-WP</a>	M 8
WP Hexavalent Chromium	<a href="#">PT-CR6-WP</a>		<a href="#">QC-CR6-WP</a>		<a href="#">RR-CR6-WP</a>	M 7
WP Mercury - Low Level	<a href="#">PT-HGLL-WP</a>		<a href="#">QC-HGLL-WP</a>		<a href="#">RR-HGLL-WP</a>	6M 7
WP Minerals Set	<a href="#">PT-MINSET-WP</a>		<a href="#">QC-MINSET-WP</a>		<a href="#">RR-MINSET-WP</a>	M 8
WP Minerals 1	<a href="#">PT-MIN1-WP</a>		<a href="#">QC-MIN1-WP</a>		<a href="#">RR-MIN1-WP</a>	M 8
WP Minerals 2 - Hardness	<a href="#">PT-MIN2-WP</a>		<a href="#">QC-MIN2-WP</a>		<a href="#">RR-MIN2-WP</a>	M 8
WP Conductivity	<a href="#">PT-COND-WP</a>		<a href="#">QC-COND-WP</a>		<a href="#">RR-COND-WP</a>	M 10
WP Nutrients Set	<a href="#">PT-NUTSET-WP</a>		<a href="#">QC-NUTSET-WP</a>		<a href="#">RR-NUTSET-WP</a>	M 9
WP NUT1 - Simple Nutrients	<a href="#">PT-NUT1-WP</a>		<a href="#">QC-NUT1-WP</a>		<a href="#">RR-NUT1-WP</a>	M 9
WP NUT2 - Complex Nutrients	<a href="#">PT-NUT2-WP</a>		<a href="#">QC-NUT2-WP</a>		<a href="#">RR-NUT2-WP</a>	M 9
WP NUT3 - Nitrite	<a href="#">PT-NUT3-WP</a>		<a href="#">QC-NUT3-WP</a>		<a href="#">RR-NUT3-WP</a>	M 9
WP Oil and Grease	<a href="#">PT-OGR-WP</a>		<a href="#">QC-OGR-WP</a>		<a href="#">RR-OGR-WP</a>	M 9
WP Oil and Grease Acetone	<a href="#">PT-OGRA-WP</a>		<a href="#">QC-OGRA-WP</a>		<a href="#">RR-OGRA-WP</a>	Apr/Oct Only 9
WP Oil and Grease 1L Whole Volume	<a href="#">PT-OGR1L-WP</a>		<a href="#">QC-OGR1L-WP</a>		<a href="#">RR-OGR1L-WP</a>	M 9
WP pH	<a href="#">PT-PH-WP</a>		<a href="#">QC-PH-WP</a>		<a href="#">RR-PH-WP</a>	M 11
WP Phenolics	<a href="#">PT-PHEN-WP</a>		<a href="#">QC-PHEN-WP</a>		<a href="#">RR-PHEN-WP</a>	M 11
WP Residual Chlorine	<a href="#">PT-CL-WP</a>		<a href="#">QC-CL-WP</a>		<a href="#">RR-CL-WP</a>	M 11
WP Residual Chlorine - Low Level	<a href="#">PT-CLLL-WP</a>		<a href="#">QC-CLLL-WP</a>		<a href="#">RR-CLLL-WP</a>	6M 11
WP Settleable Solids	<a href="#">PT-SSOL-WP</a>		<a href="#">QC-SSOL-WP</a>		<a href="#">RR-SSOL-WP</a>	M 10
WP Silica	<a href="#">PT-SIO2-WP</a>		<a href="#">QC-SIO2-WP</a>		<a href="#">RR-SIO2-WP</a>	8M 11
WP Solids	<a href="#">PT-SOL-WP</a>		<a href="#">QC-SOL-WP</a>		<a href="#">RR-SOL-WP</a>	M 10
WP Sulfide	<a href="#">PT-S2-WP</a>		<a href="#">QC-S2-WP</a>		<a href="#">RR-S2-WP</a>	M 12
WP Surfactants as MBAS	<a href="#">PT-MBAS-WP</a>		<a href="#">QC-MBAS-WP</a>		<a href="#">RR-MBAS-WP</a>	8M 12
WP TPH	<a href="#">PT-TPH-WP</a>		<a href="#">QC-TPH-WP</a>		<a href="#">RR-TPH-WP</a>	8M 9
WP TPH 1L Whole Volume	<a href="#">PT-TPH1L-WP</a>		<a href="#">QC-TPH1L-WP</a>		<a href="#">RR-TPH1L-WP</a>	Q 9
WP Trace Metals Set	<a href="#">PT-TMSET-WP</a>		<a href="#">QC-TMSET-WP</a>		<a href="#">RR-TMSET-WP</a>	M 7
WP Trace Metals 1	<a href="#">PT-TM1-WP</a>		<a href="#">QC-TM1-WP</a>		<a href="#">RR-TM1-WP</a>	M 7
WP Mercury	<a href="#">PT-HG-WP</a>		<a href="#">QC-HG-WP</a>		<a href="#">RR-HG-WP</a>	M 7
WP Tin & Titanium	<a href="#">PT-SNTI-WP</a>		<a href="#">QC-SNTI-WP</a>		<a href="#">RR-SNTI-WP</a>	M 7
WP Turbidity	<a href="#">PT-TURB-WP</a>		<a href="#">QC-TURB-WP</a>		<a href="#">RR-TURB-WP</a>	M 10
WP Volatile Solids	<a href="#">PT-VSOL-WP</a>		<a href="#">QC-VSOL-WP</a>		<a href="#">RR-VSOL-WP</a>	M 10
<b>Non-TNI and State Specific Standards</b>						
WP Amenable Cyanide	<a href="#">PT-CNA-WP</a>		<a href="#">QC-CNA-WP</a>		<a href="#">RR-CNA-WP</a>	Q 11
WP Dissolved Oxygen	<a href="#">PT-O2-WP</a>		<a href="#">QC-O2-WP</a>		<a href="#">RR-O2-WP</a>	Q 12
WP Lithium	<a href="#">PT-LI-WP</a>		<a href="#">QC-LI-WP</a>		<a href="#">RR-LI-WP</a>	Q 7
WP Perchlorate	<a href="#">PT-PERC-WP</a>		<a href="#">QC-PERC-WP</a>		<a href="#">RR-PERC-WP</a>	Q 12
WP IDB Set			<a href="#">QC-IDBSET-WP</a>		<a href="#">RR-IDBSET-WP</a>	RR 12
WP IDB 1 - Bromide & Bromate			<a href="#">QC-IDB1-WP</a>		<a href="#">RR-IDB1-WP</a>	RR 12
WP IDB 2 - Chlorate & Chlorite			<a href="#">QC-IDB2-WP</a>		<a href="#">RR-IDB2-WP</a>	RR 12
WP Total Organic Halides (TOX)	<a href="#">PT-TOX-WP</a>		<a href="#">QC-TOX-WP</a>		<a href="#">RR-TOX-WP</a>	Q 12
WP Uranium	<a href="#">PT-U-WP</a>		<a href="#">QC-U-WP</a>		<a href="#">RR-U-WP</a>	Q 7
WP Volatile Suspended Solids	<a href="#">PT-VSS-WP</a>		<a href="#">QC-VSS-WP</a>		<a href="#">RR-VSS-WP</a>	6M 10

## PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Q	✓			✓			✓			✓		
6M	✓	✓		✓			✓	✓		✓		
8M	✓	✓	✓	✓			✓	✓	✓	✓		
RR	Product only available as a Rapid Return and Quality Control standard											

Water Pollution Studies between January & May can be used in lieu of DMR-QA Chemistry.



## Metals

### WP Trace Metals Set

This complete set includes WP Trace Metals 1, WP Mercury, and WP Tin in Titanium vials.

Part Numbers	PT	<a href="#">PT-TMSET-WP</a>
	QC	<a href="#">QC-TMSET-WP</a>
	RR	<a href="#">RR-TMSET-WP</a>

### WP Trace Metals 1

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 2% (v/v) nitric acid (HNO<sub>3</sub>) contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TM1-WP</a>
	QC	<a href="#">QC-TM1-WP</a>
	RR	<a href="#">RR-TM1-WP</a>

Analyte	Concentration
Aluminum	200-4000 µg/L
Antimony	90-900 µg/L
Arsenic	90-900 µg/L
Barium	100-2500 µg/L
Beryllium	50-500 µg/L
Boron	800-2000 µg/L
Cadmium	100-1000 µg/L
Chromium	100-1000 µg/L
Cobalt	100-1000 µg/L
Copper	100-1000 µg/L
Iron	200-4000 µg/L
Lead	100-1500 µg/L
Manganese	200-2000 µg/L
Molybdenum	60-600 µg/L
Nickel	200-2000 µg/L
Selenium	100-1000 µg/L
Silver	100-1000 µg/L
Strontium	50-500 µg/L
Thallium	80-800 µg/L
Vanadium	50-2000 µg/L
Zinc	300-2000 µg/L

### WP Mercury

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with approximately 1% (v/v) nitric acid (HNO<sub>3</sub>) + 10 ppm hexavalent chromium contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-HG-WP</a>
	QC	<a href="#">QC-HG-WP</a>
	RR	<a href="#">RR-HG-WP</a>

Mercury	3.0-30 µg/L
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### WP Mercury - Low Level

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 1-2% HNO<sub>3</sub> (v/v) + 10 ppm hexavalent chromium contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-HGLL-WP</a>
	QC	<a href="#">QC-HGLL-WP</a>
	RR	<a href="#">RR-HGLL-WP</a>

Mercury	20-100 ng/L
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### WP Tin and Titanium

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 5% hydrochloric acid (HCL) contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-SNTI-WP</a>
	QC	<a href="#">QC-SNTI-WP</a>
	RR	<a href="#">RR-SNTI-WP</a>

Analyte	Concentration
Tin	200-2000 µg/L
Titanium	60-300 µg/L

### WP Hexavalent Chromium

Store at 20 - 25 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-CR6-WP</a>
	QC	<a href="#">QC-CR6-WP</a>
	RR	<a href="#">RR-CR6-WP</a>

Analyte	Concentration
Chromium VI	90-900 µg/L

### WP Lithium (Non-TNI/State Specific)

Store at 20 - 25 °C

Provided as a >20 mL concentrate in water preserved with 5% nitric acid contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-LI-WP</a>
	QC	<a href="#">QC-LI-WP</a>
	RR	<a href="#">RR-LI-WP</a>

Analyte	Concentration
Lithium	50-500 µg/L

### WP Uranium (Non-TNI/State Specific)

Store at 20 - 25 °C

Provided as a >20 mL concentrate in water preserved with 2% HNO<sub>3</sub> contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-U-WP</a>
	QC	<a href="#">QC-U-WP</a>
	RR	<a href="#">RR-U-WP</a>

Analyte	Concentration
Uranium	30-100 µg/L







## Demand

### WP Demand

Store at 4 °C

Provided as a minimum 21 mL concentrate preserved with 0.5% (v/v) H<sub>2</sub>SO<sub>4</sub> contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-DEM-WP
	QC	QC-DEM-WP
	RR	RR-DEM-WP

Analyte	Concentration
BOD	18-230mg/L
CBOD	18-230mg/L
COD	30-250mg/L
TOC	6.0-100mg/L

## Minerals /Nutrients

### WP Minerals Set

This complete set includes WP Minerals 1, WP Minerals 2 - Hardness, and Conductivity containers.

Part Numbers	PT	PT-MINSET-WP
	QC	QC-MINSET-WP
	RR	RR-MINSET-WP

### WP Minerals 1

Store at 20-25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	PT-MIN1-WP
	QC	QC-MIN1-WP
	RR	RR-MIN1-WP

Analyte	Concentration
Total Alkalinity (CaCO <sub>3</sub> )	25-400 mg/L
Bromide	1.0-10mg/L
Chloride	35-275mg/L
Fluoride	0.40-4.0 mg/L
Total Inorganic Carbon	2.5-100 mg/L
Sulfate	5.0-125mg/L

### WP Minerals 2 - Hardness

Store at 20-25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	PT-MIN2-WP
	QC	QC-MIN2-WP
	RR	RR-MIN2-WP

Analyte	Concentration
Calcium	10-110mg/L
Calcium Hardness (as CaCO <sub>3</sub> )	25-250mg/L
Total Hardness (as CaCO <sub>3</sub> )	40-415 mg/L
Magnesium	4.0-40 mg/L
Potassium	4.0-40 mg/L
Sodium	10-100 mg/L





## WP Nutrients Set

This complete set includes WP Nutrients #1, #2 and #3

Part Numbers	PT	<a href="#">PT-NUTSET-WP</a>
	QC	<a href="#">QC-NUTSET-WP</a>
	RR	<a href="#">RR-NUTSET-WP</a>

## WP Nutrients 1 - Simple Nutrients

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-NUT1-WP</a>
	QC	<a href="#">QC-NUT1-WP</a>
	RR	<a href="#">RR-NUT1-WP</a>

Analyte	Concentration
Ammonia as N	1.0-20 mg/L
Nitrate as N	2.0-25 mg/L
Nitrate and Nitrite as N	2.5-25 mg/L
Orthophosphate as P	0.50-5.5 mg/L
Total Dissolved Phosphorus	0.50-5.5 mg/L
Dissolved Nitrogen	0.25-60 mg/L
Total Nitrogen	0.25-60 mg/L

## WP Nutrients 2 - Complex Nutrients

Store at 4 °C

Provided as a > 20 mL concentrate in water preserved with hydrochloric acid (HCl) to a pH < 2 and trace sodium hypochlorite (NaOCl) contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-NUT2-WP</a>
	QC	<a href="#">QC-NUT2-WP</a>
	RR	<a href="#">RR-NUT2-WP</a>

Analyte	Concentration
Total Kjeldahl Nitrogen (TKN)	3.0-35 mg/L
Total Phosphorous	0.50-10 mg/L

## WP Nutrients 3 - Nitrite

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-NUT3-WP</a>
	QC	<a href="#">QC-NUT3-WP</a>
	RR	<a href="#">RR-NUT3-WP</a>

Analyte	Concentration
Nitrite as N	0.40-4.0 mg/L

## Oil & Grease/ TPH

### WP Oil & Grease

Store at 20-25 °C

Provided as a > 20 mL concentrate in n-propanol contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-OGR-WP</a>
	QC	<a href="#">QC-OGR-WP</a>
	RR	<a href="#">RR-OGR-WP</a>

Analyte	Concentration
Oil & Grease	20-200 mg/L

### WP Oil & Grease 1L

Store at 20-25 °C

Provided as a 1L ready to use standard in water preserved with 0.1% HCl contained in a 32 oz clear glass bottle.

Part Numbers	PT	<a href="#">PT-OGR1L-WP</a>
	QC	<a href="#">QC-OGR1L-WP</a>
	RR	<a href="#">RR-OGR1L-WP</a>

Analyte	Concentration
Oil & Grease	20-200 mg/L

### WP Oil & Grease in Acetone

Store at 20-25 °C

Provided as a > 20 mL concentrate in acetone contained in a 24 mL amber glass vial.

Part Numbers	PT	<a href="#">PT-OGRA-WP</a>
	QC	<a href="#">QC-OGRA-WP</a>
	RR	<a href="#">RR-OGRA-WP</a>

Analyte	Concentration
Oil & Grease	20-200 mg/L

### WP Total Petroleum Hydrocarbons

Store at 20-25 °C

Provided as a > 20 mL concentrate in n-propanol contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TPH-WP</a>
	QC	<a href="#">QC-TPH-WP</a>
	RR	<a href="#">RR-TPH-WP</a>

Analyte	Concentration
Total Petroleum Hydrocarbons (TPH)	20-200 mg/L

### WP Total Petroleum Hydrocarbons 1L

Store at 20-25 °C

Provided as a 1L ready to use standard in water preserved with 0.1% HCl contained in a 32 oz clear glass bottle.

Part Numbers	PT	<a href="#">PT-TPH1L-WP</a>
	QC	<a href="#">QC-TPH1L-WP</a>
	RR	<a href="#">RR-TPH1L-WP</a>

Analyte	Concentration
Total Petroleum Hydrocarbons (TPH)	20-200 mg/L

## Properties

### WP Acidity

Store at 20-25 °C

Provided as a 250 mL ready to use standard in water contained in a 250 mL poly bottle.

Part Numbers	PT	<a href="#">PT-ACD-WP</a>
	QC	<a href="#">QC-ACD-WP</a>
	RR	<a href="#">RR-ACD-WP</a>

Analyte	Concentration
Acidity, as CaCO <sub>3</sub>	650-1800 mg/L

### WP Color

Store at 20-25 °C

Provided as a 24 mL clear glass vial containing at a minimum 21 mL of standard concentrate. The standard is preserved with 1%-7% hydrochloric acid (HCL).

Part Numbers	PT	<a href="#">PT-COL-WP</a>
	QC	<a href="#">QC-COL-WP</a>
	RR	<a href="#">RR-COL-WP</a>

Analyte	Concentration
Color	10-75 CU

### WP Conductivity

Store at 20-25 °C

Provided as a 100 mL ready to use standard in water contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-COND-WP</a>
	QC	<a href="#">QC-COND-WP</a>
	RR	<a href="#">RR-COND-WP</a>

Analyte	Concentration
Specific Conductance at 25 °C	200-1200 µmhos/cm

### WP Turbidity

Store at 20-25 °C

Provided as a > 20 mL concentrate in water preserved with trace NaOCl contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TURB-WP</a>
	QC	<a href="#">QC-TURB-WP</a>
	RR	<a href="#">RR-TURB-WP</a>

Analyte	Concentration
Turbidity	2.0-30 NTU

### WP Settleable Solids

Store at 20-25 °C

Provided as a solid material in a 40 mL vial.

Part Numbers	PT	<a href="#">PT-SSOL-WP</a>
	QC	<a href="#">QC-SSOL-WP</a>
	RR	<a href="#">RR-SSOL-WP</a>

Analyte	Concentration
Settleable Solids	5.0-50 mL/L

### WP Solids

Store at 20-25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-SOL-WP</a>
	QC	<a href="#">QC-SOL-WP</a>
	RR	<a href="#">RR-SOL-WP</a>

Analyte	Concentration
Total Dissolved Solids at 180 °C (TFR)	140-800 mg/L
Non-Filterable Residue (TSS)	20-100 mg/L
Total Solids	140-800 mg/L

### WP Volatile Solids

Store at 20-25 °C

Provided as a solid material in a 24 mL screw cap vial.

Part Numbers	PT	<a href="#">PT-VSOL-WP</a>
	QC	<a href="#">QC-VSOL-WP</a>
	RR	<a href="#">RR-VSOL-WP</a>

Analyte	Concentration
Volatile Solids	100-500 mg/L

### WP Volatile Suspended Solids (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-VSS-WP</a>
	QC	<a href="#">QC-VSS-WP</a>
	RR	<a href="#">RR-VSS-WP</a>

Analyte	Concentration
Volatile Suspended Solids	25-200 mg/L



## Miscellaneous

### WP Cyanide

Store at 20-25 °C

Provided as a 20 mL concentrate preserved with sodium hydroxide (NaOH) to pH ~10 contained in a 20 mL amber glass vial.

Part Numbers	PT	PT-CN-WP
	QC	QC-CN-WP
	RR	RR-CN-WP

Analyte	Concentration
Total Cyanide	0.10-1.0 mg/L

### WP Amenable Cyanide (Non-TNI/State Specific)

Store at 4 °C

Provided as a 20 mL concentrate preserved with approximately 0.20% (w/v) potassium hydroxide (KOH) contained in a 23 mL amber glass vial.

Part Numbers	PT	PT-CNA-WP
	QC	QC-CNA-WP
	RR	RR-CNA-WP

Analyte	Concentration
Amenable Cyanide	0.10-0.50 mg/L

### WP pH

Store at 20-25 °C

Provided as a 100 mL ready to use standard in water contained in a 125 mL poly bottle.

Part Numbers	PT	PT-PH-WP
	QC	QC-PH-WP
	RR	RR-PH-WP

Analyte	Concentration
pH	5.0-10 S.U.

### WP Phenolics

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule.

Part Numbers	PT	PT-PHEN-WP
	QC	QC-PHEN-WP
	RR	RR-PHEN-WP

Analyte	Concentration
Total Phenolics (4AAP)	0.5-5.0 mg/L

### WP Residual Chlorine

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	PT-CL-WP
	QC	QC-CL-WP
	RR	RR-CL-WP

Analyte	Concentration
Total Residual Chlorine	0.5-3.0 mg/L

### WP Residual Chlorine - Low Level

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	PT-CLLL-WP
	QC	QC-CLLL-WP
	RR	RR-CLLL-WP

Analyte	Concentration
Total Residual Chlorine	50-250 µg/L

### WP Silica

Store at 20-25 °C

Provided as a 250 mL ready to use standard in water contained in a 250 mL poly bottle.

Part Numbers	PT	PT-SIO2-WP
	QC	QC-SIO2-WP
	RR	RR-SIO2-WP

Analyte	Concentration
Silica as SiO <sub>2</sub>	50-250 mg/L



## Miscellaneous (cont'd)

### WP Sulfide

Store at 4 °C

Provided as a >20mL concentrate in water preserved with NaOH to pH > 12 and ZnOAc, contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-S2-WP</a>
	QC	<a href="#">QC-S2-WP</a>
	RR	<a href="#">RR-S2-WP</a>

Analyte	Concentration
Sulfide	2.0-10.0 mg/L

### WP Surfactants as MBAS

Store at 20-25 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-MBAS-WP</a>
	QC	<a href="#">QC-MBAS-WP</a>
	RR	<a href="#">RR-MBAS-WP</a>

Analyte	Concentration
Surfactants - MBAS	0.2-1.0 mg/L

### WP Total Organic Halides (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Part Numbers	PT	<a href="#">PT-TOX-WP</a>
	QC	<a href="#">QC-TOX-WP</a>
	RR	<a href="#">RR-TOX-WP</a>

Analyte	Concentration
Total Organic Halides (TOX)	300-1500 µg/L

### WP Perchlorate (Non-TNI/State Specific)

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-PERC-WP</a>
	QC	<a href="#">QC-PERC-WP</a>
	RR	<a href="#">RR-PERC-WP</a>

Analyte	Concentration
Perchlorate	4.0-20 µg/L

### WP Inorganic Disinfections By-Products Set

This complete set includes WP IDB 1 and 2 vials.

Part Numbers	PT	
	QC	<a href="#">QC-IDBSET-WP</a>
	RR	<a href="#">RR-IDBSET-WP</a>

### WP IDB 1 - Bromide and Bromate

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	
	QC	<a href="#">QC-IDB1-WP</a>
	RR	<a href="#">RR-IDB1-WP</a>

Analyte	Concentration
Bromate	7.0-50 µg/L
Bromide	50-300 µg/L

### WP IDB 2 - Chlorite and Chlorate

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	
	QC	<a href="#">QC-IDB2-WP</a>
	RR	<a href="#">RR-IDB2-WP</a>

Analyte	Concentration
Chlorite	100-1000 µg/L
Chlorate	60-180 µg/L

### WP Dissolved Oxygen (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 500mL ready to use standard in water contained in a 500mL amber glass bottle.

Part Numbers	PT	<a href="#">PT-O2-WP</a>
	QC	<a href="#">QC-O2-WP</a>
	RR	<a href="#">RR-O2-WP</a>

Analyte	Concentration
Dissolved Oxygen	1.0-50 mg/L



# Water Pollution

## ORGANIC

Phenova WP Organic Standards are provided as concentrates ready to dilute to produce your final samples in sufficient amounts for at least two methods, unless otherwise noted. All standards are compliant with EPA, TNI and/or state specific criteria.

# Organic Standards

Description	Proficiency Testing		Quality Control		Rapid Return™	
	Catalog Number	Catalog Number	Catalog Number	Price	PT Availability	Page No.
<b>TNI Standards</b>						
WP Acids	<a href="#">PT-ACIDS-WP</a>	<a href="#">QC-ACIDS-WP</a>	<a href="#">RR-ACIDS-WP</a>		<b>M</b>	18
WP Base Neutrals	<a href="#">PT-BN-WP</a>	<a href="#">QC-BN-WP</a>	<a href="#">RR-BN-WP</a>		<b>M</b>	18-19
WP BTEX	<a href="#">PT-BTEX-WP</a>	<a href="#">QC-BTEX-WP</a>	<a href="#">RR-BTEX-WP</a>		<b>Q</b>	20
WP Chlordane	<a href="#">PT-CHLR-WP</a>	<a href="#">QC-CHLR-WP</a>	<a href="#">RR-CHLR-WP</a>		<b>M</b>	16
WP Diesel Range Organics	<a href="#">PT-DIES-WP</a>	<a href="#">QC-DIES-WP</a>	<a href="#">RR-DIES-WP</a>		<b>6M</b>	17
WP EPA 8011 EDB/DBCP/TCP	<a href="#">PT-8011-WP</a>	<a href="#">QC-8011-WP</a>	<a href="#">RR-8011-WP</a>		<b>Q</b>	20
WP Gasoline Range Organics	<a href="#">PT-GAS-WP</a>	<a href="#">QC-GAS-WP</a>	<a href="#">RR-GAS-WP</a>		<b>6M</b>	17
WP Herbicides	<a href="#">PT-HERB-WP</a>	<a href="#">QC-HERB-WP</a>	<a href="#">RR-HERB-WP</a>		<b>8M</b>	15
WP PAHs-Low Level	<a href="#">PT-PAH-WP</a>	<a href="#">QC-PAH-WP</a>	<a href="#">RR-PAH-WP</a>		<b>6M</b>	19
WP PAHs-High Level	<a href="#">PT-PAHGC-WP</a>	<a href="#">QC-PAHGC-WP</a>	<a href="#">RR-PAHGC-WP</a>		<b>Q</b>	19
WP PCBs in Oil	<a href="#">PT-PCBO-WP</a>	<a href="#">QC-PCBO-WP</a>	<a href="#">RR-PCBO-WP</a>		<b>6M</b>	18
WP PCBs in Water	<a href="#">PT-PCBW-WP</a>	<a href="#">QC-PCBW-WP</a>	<a href="#">RR-PCBW-WP</a>		<b>M</b>	18
WP Pesticides	<a href="#">PT-PEST-WP</a>	<a href="#">QC-PEST-WP</a>	<a href="#">RR-PEST-WP</a>		<b>M</b>	16
WP Toxaphene	<a href="#">PT-TXP-WP</a>	<a href="#">QC-TXP-WP</a>	<a href="#">RR-TXP-WP</a>		<b>M</b>	16
WP Volatiles	<a href="#">PT-VOA-WP</a>	<a href="#">QC-VOA-WP</a>	<a href="#">RR-VOA-WP</a>		<b>M</b>	20
WP VOA-GC	<a href="#">PT-VOAGC-WP</a>	<a href="#">QC-VOAGC-WP</a>	<a href="#">RR-VOAGC-WP</a>		<b>Jan, Jul</b>	20
<b>Non-TNI and State Specific Standards</b>						
WP Carbamates	<a href="#">PT-CARB-WP</a>	<a href="#">QC-CARB-WP</a>	<a href="#">RR-CARB-WP</a>		<b>Q</b>	16
WP Explosives - Low Level	<a href="#">PT-EXP-WP</a>	<a href="#">QC-EXP-WP</a>	<a href="#">RR-EXP-WP</a>		<b>Q</b>	15
WP Gasoline Additives	<a href="#">PT-ADD-WP</a>	<a href="#">QC-ADD-WP</a>	<a href="#">RR-ADD-WP</a>		<b>Q</b>	17
WP Glycols	<a href="#">PT-GLYCOLS-WP</a>	<a href="#">QC-GLYCOLS-WP</a>	<a href="#">RR-GLYCOLS-WP</a>		<b>Q</b>	19
WP Nitrogen and Triazine Pesticide Set	<a href="#">PT-NPESTSET-WP</a>	<a href="#">QC-NPESTSET-WP</a>	<a href="#">RR-NPESTSET-WP</a>		<b>Q</b>	16
WP Nitrogen	<a href="#">PT-NPEST-WP</a>	<a href="#">QC-NPEST-WP</a>	<a href="#">RR-NPEST-WP</a>		<b>Q</b>	16
WP Triazine	<a href="#">PT-TRIAZINE-WP</a>	<a href="#">QC-TRIAZINE-WP</a>	<a href="#">RR-TRIAZINE-WP</a>		<b>Q</b>	17
WP Organic Phosphorus Pesticides	<a href="#">PT-OPP-WP</a>	<a href="#">QC-OPP-WP</a>	<a href="#">RR-OPP-WP</a>		<b>6M</b>	17
WP Phosmet	<a href="#">PT-PHOSMET-WP</a>	<a href="#">QC-PHOSMET-WP</a>	<a href="#">RR-PHOSMET-WP</a>		<b>Q</b>	17

## PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Q	✓						✓			✓	
6M	✓	✓		✓			✓	✓		✓	
8M	✓	✓	✓	✓			✓	✓	✓	✓	
RR	Product only available as a Rapid Return and Quality Control standard										



## Explosives

### WP Explosives - Low Level (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in acetonitrile flame sealed in a 2mL amber ampoule. Use with EPA methods 8330 and 8095.

Part Numbers	PT	PT-EXP-WP
	QC	QC-EXP-WP
	RR	RR-EXP-WP

Analyte	Concentration
2-Amino-4,6-dinitrotoluene	1.0-20 µg/L
4-Amino-2,6-dinitrotoluene	1.0-20 µg/L
3,5-Dinitroaniline	1.0-20 µg/L
1,3-Dinitrobenzene	1.0-20 µg/L
2,4-Dinitrotoluene	1.0-20 µg/L
2,6-Dinitrotoluene	1.0-20 µg/L
HMX (Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine)	1.0-20 µg/L
Nitrobenzene	1.0-20 µg/L
Nitroglycerin	1.0-20 µg/L
2-Nitrotoluene	1.0-20 µg/L
3-Nitrotoluene	1.0-20 µg/L
4-Nitrotoluene	1.0-20 µg/L
Pentaerythritol tetranitrate (PETN)	1.0-20 µg/L
RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	1.0-20 µg/L
Tetryl (Methyl-2,4,6-trinitrophenylnitramine)	1.0-20 µg/L
1,3,5-Trinitrobenzene	1.0-20 µg/L
2,4,6-Trinitrotoluene	1.0-20 µg/L

## Herbicides

### WP Herbicides

Store at 4 °C

Provided as a 2mL concentrate in acetonitrile flame sealed in a 2mL amber ampoule. Contains all TNI herbicides (2,4-D, Dicamba, 2,4,5-T and Silvex) and a random selection of the other analytes listed below. Use with EPA methods 615 and 8151.

*Note: Pentachlorophenol and 4-Nitrophenol are not within the TNI range.*

Please use

WP Acids for TNI compliance.

Part Numbers	PT	PT-HERB-WP
	QC	QC-HERB-WP
	RR	RR-HERB-WP

Analyte	Concentration
Acifluorfen	2.0-10 µg/L
Bentazon	2.0-10 µg/L
Brominal (Bromoxynil)	2.0-10 µg/L
Chloramben	2.0-10 µg/L
2,4-D	2.0-10 µg/L
2,4-DB	2.0-10 µg/L
2,4-DP (Dichlorprop)	2.0-10 µg/L
Dacthal (DCPA diacid)	2.0-10 µg/L
Dalapon	2.0-10 µg/L
Dicamba	2.0-10 µg/L
3,5-Dichlorobenzoic acid	2.0-10 µg/L
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	2.0-10 µg/L
MCPA	25-100 µg/L
MCPP	25-100 µg/L
4-Nitrophenol	2.0-10 µg/L
Pentachlorophenol	2.0-10 µg/L
Picloram	2.0-10 µg/L
2,4,5-T	2.0-10 µg/L
2,4,5-TP (Silvex)	2.0-10 µg/L



## Pesticides

### WP Pesticides

Store at 4 °C

Provided as a 2mL concentrate in acetone flame sealed in a 2mL amber ampoule. Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA methods 608 and 8081.

Part Numbers	PT	<a href="#">PT-PEST-WP</a>
	QC	<a href="#">QC-PEST-WP</a>
	RR	<a href="#">RR-PEST-WP</a>

Analyte	Concentration
Aldrin	1.0-15 µg/L
alpha-BHC	2.0-20 µg/L
beta-BHC	2.0-20 µg/L
delta-BHC	2.0-20 µg/L
gamma-BHC (Lindane)	2.0-20 µg/L
alpha-Chlordane	1.0-10 µg/L
gamma-Chlordane	1.0-10 µg/L
4,4'-DDD	2.0-10 µg/L
4,4'-DDE	1.0-10 µg/L
4,4'-DDT	1.0-10 µg/L
Dieldrin	1.0-15 µg/L
Endosulfan I	4.0-20 µg/L
Endosulfan II	4.0-20 µg/L
Endosulfan sulfate	4.0-20 µg/L
Endrin	2.0-20 µg/L
Endrin aldehyde	4.0-20 µg/L
Endrin ketone	4.0-20 µg/L
Heptachlor	1.0-10 µg/L
Heptachlor Epoxide (beta)	1.0-10 µg/L
Methoxychlor	2.0-20 µg/L

### WP Chlordane

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Use with EPA methods 608, 8080 and 8081.

Part Numbers	PT	<a href="#">PT-CHLR-WP</a>
	QC	<a href="#">QC-CHLR-WP</a>
	RR	<a href="#">RR-CHLR-WP</a>

Analyte	Concentration
Chlordane (total)	3.0-25 µg/L

### WP Toxaphene

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Use with EPA methods 608, 8080, and 8081.

Part Numbers	PT	<a href="#">PT-TXP-WP</a>
	QC	<a href="#">QC-TXP-WP</a>
	RR	<a href="#">RR-TXP-WP</a>

Analyte	Concentration
Toxaphene (total)	20-100 µg/L

### WP Carbamates (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-CARB-WP</a>
	QC	<a href="#">QC-CARB-WP</a>
	RR	<a href="#">RR-CARB-WP</a>

Analyte	Concentration
Aldicarb	15-100 µg/L
Aldicarb sulfone	15-100 µg/L
Aldicarb sulfoxide	15-80 µg/L
Baygon	30-140 µg/L
Carbaryl	15-100 µg/L
Carbofuran	15-150 µg/L
Diuron	30-140 µg/L
3-Hydroxycarbofuran	15-80 µg/L
Methiocarb	30-140 µg/L
Methomyl	15-100 µg/L
Oxamyl (Vydate)	15-100 µg/L
Propham	30-140 µg/L

### WP Nitrogen and Triazine Pesticide Set

This complete set includes both WP Nitrogen and Triazine Pesticides.

Part Numbers	PT	<a href="#">PT-NPESTSET-WP</a>
	QC	<a href="#">QC-NPESTSET-WP</a>
	RR	<a href="#">RR-NPESTSET-WP</a>

### WP Nitrogen Pesticides (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains all of the Wisconsin required analytes and a subset of the analytes listed. Use with EPA methods 619, 633, 8141, 8270.

Part Numbers	PT	<a href="#">PT-NPEST-WP</a>
	QC	<a href="#">QC-NPEST-WP</a>
	RR	<a href="#">RR-NPEST-WP</a>

Analyte	Concentration
Alachlor	2.0-20 µg/L
Bromacil	2.0-20 µg/L
Butachlor	2.0-20 µg/L
Butylate	2.0-20 µg/L
EPTC (Eptam, s-ethyl-dipropyl thio carbamate)	2.0-20 µg/L
Hexazinone	2.0-20 µg/L
Metolachlor	2.0-20 µg/L
Metribuzir	2.0-20 µg/L
Napropamide	2.0-20 µg/L
Pronamide (Kerb)	2.0-20 µg/L
Propachlor (Ramrod)	2.0-20 µg/L
Terbacil	2.0-20 µg/L
Trifluralin	2.0-20 µg/L

### WP Triazine Pesticides (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Contains all of the Wisconsin required analytes and a subset of the analytes listed.  
 Use with EPA methods 619, 633, 8141, 8270.

Part Numbers	PT	<a href="#">PT-TRIAZINE-WP</a>
	QC	<a href="#">QC-TRIAZINE-WP</a>
	RR	<a href="#">RR-TRIAZINE-WP</a>

Analyte	Concentration
Ametryn	2.0-20 µg/L
Anilazine	2.0-20 µg/L
Atraton	2.0-20 µg/L
Atrazine	2.0-20 µg/L
Cyanazine	2.0-20 µg/L
Deethyl atrazine	2.0-20 µg/L
Deisopropyl atrazine	2.0-20 µg/L
Diamino atrazine	2.0-20 µg/L
Prometon	2.0-20 µg/L
Prometryn	2.0-20 µg/L
Propazine	2.0-20 µg/L
Simazine	2.0-20 µg/L

### WP Organic Phosphorus Pesticides (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flames sealed in a 2mL amber ampoule.  
 Use with EPA methods 614, 622, 8141 and 8270.

Part Numbers	PT	<a href="#">PT-OPP-WP</a>
	QC	<a href="#">QC-OPP-WP</a>
	RR	<a href="#">RR-OPP-WP</a>

Analyte	Concentration
Azinphos-methyl (Guthion)	2.0-20 µg/L
Carbophenothion	2.0-20 µg/L
Chlorpyrifos	2.0-20 µg/L
Demeton-o	2.0-20 µg/L
Demeton-s	2.0-20 µg/L
Demeton O & S	4.0-40 µg/L
Diazinon	2.0-20 µg/L
Dichlorovos (DDVP, Dichlorvos)	2.0-20 µg/L
Dimethoate	2.0-20 µg/L
Dioxathion	2.0-20 µg/L
Disulfoton	2.0-20 µg/L
Ethion	2.0-20 µg/L
Ethoprop	2.0-20 µg/L
Famphur	2.0-20 µg/L
Fonophos	2.0-20 µg/L
Malathion	2.0-20 µg/L
Parathion, ethyl	2.0-20 µg/L
Methyl parathion (Parathion, methyl)	2.0-20 µg/L
Phorate	2.0-20 µg/L
Phosmet (Imidan)	2.0-20 µg/L
Ronnel	2.0-20 µg/L
Terbufos	2.0-20 µg/L
Tetrachlorvinphos (Stirophos, Gardona)	2.0-20 µg/L

### WP Phosmet

Store at 0 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with EPA methods 8141, 8270, 614.

Part Numbers	PT	<a href="#">PT-PHOSMET-WP</a>
	QC	<a href="#">QC-PHOSMET-WP</a>
	RR	<a href="#">RR-PHOSMET-WP</a>

Analyte	Concentration
Phosmet	2.0-20 µg/L

## Petroleum Hydrocarbons & Fuels

### WP Gasoline Additives (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Contains all analytes listed below. Use with EPA methods 624 and 8260.

Part Numbers	PT	<a href="#">PT-ADD-WP</a>
	QC	<a href="#">QC-ADD-WP</a>
	RR	<a href="#">RR-ADD-WP</a>

Analyte	Concentration
Methyl tert-butyl ether (MTBE)	15-150 µg/L
DIPE	10-100 µg/L
ETBE	10-100 µg/L
Freon 113	10-100 µg/L
n-Propylbenzene	10-100 µg/L
TAME	10-100 µg/L
tert-Butyl alcohol	100-500 µg/L

### WP Gasoline Range Organics

Store at 4 °C  
 Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use volatiles EPA 8015 GC/FID method. Contains TNI analyte (GRO) and other analytes listed below.

Part Numbers	PT	<a href="#">PT-GAS-WP</a>
	QC	<a href="#">QC-GAS-WP</a>
	RR	<a href="#">RR-GAS-WP</a>

Analyte	Concentration
Gasoline range organics (GRO)	400-4000 µg/L
Benzene	2.0-100 µg/L
Ethylbenzene	2.0-100 µg/L
Methyl tert-butyl ether (MTBE)	2.0-100 µg/L
Toluene	5.0-250 µg/L
m+p-xylene	20-300 µg/L
o-xylene	20-300 µg/L
Xylenes, total	5.0-250 µg/L

### WP Diesel Range Organics

Store at 4 °C  
 Provided as an approximately 2mL concentrate in acetone or methanol flame sealed in a 2mL amber ampoule. Use with modified EPA 8015 GC/FID methods.

Part Numbers	PT	<a href="#">PT-DIES-WP</a>
	QC	<a href="#">QC-DIES-WP</a>
	RR	<a href="#">RR-DIES-WP</a>

Analyte	Concentration
Diesel Range Organics (DRO)	800-6000 µg/L

## Polychlorinated Biphenyls (PCBs)

### WP PCBs in Oil

Store at 20-25 °C

Provided as a 10 mL amber ampoule containing approximately 5 grams of spiked transformer oil. Contains one Aroclor randomly selected. Use with EPA method 8082.

Part Numbers	PT	<a href="#">PT-PCBO-WP</a>
	QC	<a href="#">QC-PCBO-WP</a>
	RR	<a href="#">RR-PCBO-WP</a>

Analyte	Concentration
Aroclor 1016	10-50 mg/kg
Aroclor 1242	10-50 mg/kg
Aroclor 1254	10-50 mg/kg
Aroclor 1260	10-50 mg/kg

### WP PCBs in Water

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule. Contains one Aroclor randomly selected. Use with EPA methods 608, 8082.

Part Numbers	PT	<a href="#">PT-PCBW-WP</a>
	QC	<a href="#">QC-PCBW-WP</a>
	RR	<a href="#">RR-PCBW-WP</a>

Analyte	Concentration
Aroclor 1016	2.0-10 µg/L
Aroclor 1221	2.0-10 µg/L
Aroclor 1232	2.0-10 µg/L
Aroclor 1242	2.0-10 µg/L
Aroclor 1248	2.0-10 µg/L
Aroclor 1254	2.0-10 µg/L
Aroclor 1260	2.0-10 µg/L



## Semi-Volatiles

### WP Acids

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule. Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA methods 604, 625, 8041 and 8270.

Part Numbers	PT	<a href="#">PT-ACIDS-WP</a>
	QC	<a href="#">QC-ACIDS-WP</a>
	RR	<a href="#">RR-ACIDS-WP</a>

Analyte	Concentration
Benzoic acid	50-200 µg/L
4-Chloro-3-methylphenol	30-200 µg/L
2-Chlorophenol	30-200 µg/L
2,4-Dichlorophenol	30-200 µg/L
2,6-Dichlorophenol	30-200 µg/L
2,4-Dimethylphenol	40-200 µg/L
2,4-Dinitrophenol	100-200 µg/L
2-Methyl-4,6-Dinitrophenol	40-200 µg/L
2-Methylphenol	40-200 µg/L
4-Methylphenol (and/or 3-Methylphenol)	50-200 µg/L
2-Nitrophenol	50-200 µg/L
3-Nitrophenol	100-180 µg/L
4-Nitrophenol	100-200 µg/L
Phenol	100-200 µg/L
Pentachlorophenol	40-200 µg/L
2,3,4,6-Tetrachlorophenol	50-200 µg/L
2,4,5-Trichlorophenol	30-200 µg/L
2,4,6-Trichlorophenol	30-200 µg/L

### WP Base Neutrals

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule. Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA methods 625 and 8270.

Part Numbers	PT	<a href="#">PT-BN-WP</a>
	QC	<a href="#">QC-BN-WP</a>
	RR	<a href="#">RR-BN-WP</a>

Analyte	Concentration
Acenaphthene	10-200 µg/L
Acenaphthylene	10-200 µg/L
Aniline	30-120 µg/L
Anthracene	10-200 µg/L
Benzidine	200-1000 µg/L
Benzo(a)anthracene	10-200 µg/L
Benzo(b)fluoranthene	20-200 µg/L
Benzo(k)fluoranthene	20-200 µg/L
Benzo(g,h,i)perylene	10-200 µg/L
Benzo(a)pyrene	10-200 µg/L
Benzyl alcohol	50-200 µg/L
4-Bromophenyl-phenylether	20-200 µg/L
Butyl benzyl phthalate	50-200 µg/L
Carbazole	10-120 µg/L
4-Chloroaniline	50-200 µg/L
bis(2-Chloroethoxy) methane	20-200 µg/L
bis(2-Chloroethyl) ether	20-200 µg/L
2,2'-Oxybis(1-chloropropane)	30-200 µg/L
1-Chloronaphthalene	10-200 µg/L
2-Chloronaphthalene	20-200 µg/L
4-Chlorophenyl-phenylether	20-200 µg/L
Chrysene	10-200 µg/L
Dibenzo(a,h)anthracene	20-200 µg/L
Dibenzofuran	30-200 µg/L
Di-n-butylphthalate	40-200 µg/L



## WP Base Neutrals *cont'd*

Analyte	Concentration
1,2-Dichlorobenzene	20-200 µg/L
1,3-Dichlorobenzene	20-200 µg/L
1,4-Dichlorobenzene	20-200 µg/L
3,3'-Dichlorobenzidine	50-200 µg/L
Diethyl phthalate	50-200 µg/L
Dimethyl phthalate	50-200 µg/L
2,4-Dinitrotoluene	20-200 µg/L
2,6-Dinitrotoluene	20-200 µg/L
Di-n-octylphthalate	30-200 µg/L
p-Dioxane	10-200 µg/L
bis(2-ethylhexyl) phthalate	20-200 µg/L
Fluoranthene	30-200 µg/L
Fluorene	10-200 µg/L
Hexachlorobenzene	20-200 µg/L
Hexachlorobutadiene	50-200 µg/L
Hexachlorocyclopentadiene	50-200 µg/L
Hexachloroethane	50-200 µg/L
Indeno(1,2,3-cd)pyrene	30-200 µg/L
Isophorone	20-200 µg/L
1-Methylnaphthalene	30-190 µg/L
2-Methylnaphthalene	20-200 µg/L
Naphthalene	20-200 µg/L
2-Nitroaniline	10-120 µg/L
3-Nitroaniline	10-120 µg/L
4-Nitroaniline	10-120 µg/L
Nitrobenzene	20-200 µg/L
N-Nitrosodiethylamine	30-140 µg/L
N-Nitrosodimethylamine	75-200 µg/L
N-Nitrosodiphenylamine	30-200 µg/L
N-Nitroso-di-n-propylamine	30-200 µg/L
Pentachlorobenzene	30-120 µg/L
Phenanthrene	10-200 µg/L
Pyrene	10-200 µg/L
Pyridine	30-120 µg/L
1,2,4,5-Tetrachlorobenzene	30-120 µg/L
o-Toluidine	30-120 µg/L
1,2,4-Trichlorobenzene	20-200 µg/L

## WP PAHs - Low Level

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA HPLC methods 610 and 8310 and GC/MS method 8270 (SIM mode).

Part Numbers	
PT	<a href="#">PT-PAH-WP</a>
QC	<a href="#">QC-PAH-WP</a>
RR	<a href="#">RR-PAH-WP</a>
Analyte	Concentration
Acenaphthene	2.0-20 µg/L
Acenaphthylene	2.0-20 µg/L
Anthracene	0.50-5.0 µg/L
Benzo(a)anthracene	0.50-5.0 µg/L
Benzo(b)fluoranthene	0.50-5.0 µg/L
Benzo(k)fluoranthene	0.50-5.0 µg/L
Benzo(g,h,i)perylene	0.50-5.0 µg/L
Benzo(a)pyrene	0.50-5.0 µg/L
Chrysene	0.50-5.0 µg/L
Dibenz(a,h)anthracene	0.50-5.0 µg/L
Fluoranthene	0.50-5.0 µg/L
Fluorene	2.0-10 µg/L
Indeno(1,2,3-cd)pyrene	0.50-5.0 µg/L
Naphthalene	2.0-10 µg/L
Phenanthrene	0.50-5.0 µg/L
Pyrene	0.50-5.0 µg/L

## WP PAHs - High Level

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA GC methods 610, 8100, and GC/MS method 8270.

Part Numbers	
PT	<a href="#">PT-PAHGC-WP</a>
QC	<a href="#">QC-PAHGC-WP</a>
RR	<a href="#">RR-PAHGC-WP</a>

Analyte	Concentration
Acenaphthene	10-200 µg/L
Acenaphthylene	10-200 µg/L
Anthracene	10-200 µg/L
Benzo(a)anthracene	10-200 µg/L
Benzo(b)fluoranthene	20-200 µg/L
Benzo(k)fluoranthene	20-200 µg/L
Benzo(g,h,i)perylene	10-200 µg/L
Benzo(a)pyrene	10-200 µg/L
Chrysene	10-200 µg/L
Dibenz(a,h)anthracene	20-200 µg/L
Fluoranthene	30-200 µg/L
Fluorene	10-200 µg/L
Indeno(1,2,3-cd)pyrene	30-125 µg/L
Naphthalene	20-200 µg/L
Phenanthrene	10-200 µg/L
Pyrene	10-200 µg/L

## WP Glycols (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with EPA method 8015.

Part Numbers	
PT	<a href="#">PT-GLYCOLS-WP</a>
QC	<a href="#">QC-GLYCOLS-WP</a>
RR	<a href="#">RR-GLYCOLS-WP</a>

Analyte	Concentration
Propylene glycol	75-200 mg/L
Ethylene glycol	75-200 mg/L
Diethylene glycol	75-200 mg/L
Triethylene glycol	75-200 mg/L
Tetraethylene glycol	75-200 mg/L

## Volatiles

### WP EPA 8011 EDB/DBCP/TCP

Store at 4 °C

Provided as a > 1mL concentrate in methanol flame sealed in 2mL amber ampoule.

Use with EPA methods 8011.

Part Numbers	PT	PT-8011-WP
	QC	QC-8011-WP
	RR	RR-8011-WP

Analyte	Concentration
1,2-Dibromo-3-chloropropane (DBCP)	0.2-20 µg/L
1,2-Dibromoethane (EDB)	0.2-20 µg/L
1,2,3-Trichloropropane	0.2-20 µg/L

### WP Volatiles

Store at 4 °C

Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA methods 601/602, 8021, 624 and 8260.

Part Numbers	PT	PT-VOA-WP
	QC	QC-VOA-WP
	RR	RR-VOA-WP

Analyte	Concentration
Acetone	20-200 µg/L
Acetonitrile	5.0-200 µg/L
Acrolein	5.0-200 µg/L
Acrylonitrile	5.0-200 µg/L
Benzene	10-120 µg/L
Bromobenzene	10-300 µg/L
Bromochloromethane	5.0-200 µg/L
Bromodichloromethane	10-100 µg/L
Bromoform	10-100 µg/L
Bromomethane	20-120 µg/L
2-Butanone (MEK)	5.0-200 µg/L
n-Butylbenzene	10-300 µg/L
sec-Butylbenzene	10-300 µg/L
tert-Butylbenzene	10-300 µg/L
Carbon disulfide	5.0-200 µg/L
Carbon tetrachloride	15-150 µg/L
Chlorobenzene	10-120 µg/L
Chloroethane	20-120 µg/L
2-Chloroethylvinylether	5.0-200 µg/L
Chloroform	10-100 µg/L
Chloromethane	20-120 µg/L
2-Chlorotoluene	5.0-200 µg/L
4-Chlorotoluene	10-300 µg/L
Dibromochloromethane	10-100 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	15-150 µg/L
1,2-Dibromoethane (EDB)	10-120 µg/L
Dibromomethane	10-120 µg/L
1,2 Dichlorobenzene	10-120 µg/L
1,3 Dichlorobenzene	10-120 µg/L
1,4 Dichlorobenzene	10-120 µg/L
Dichlorodifluoromethane	5.0-200 µg/L
1,1-Dichloroethane	10-150 µg/L
1,2 Dichloroethane	15-150 µg/L
1,1 Dichloroethene	10-150 µg/L
cis-1,2-Dichloroethene	10-150 µg/L
trans-1,2-Dichloroethene	10-120 µg/L
Dichlorofluoromethane	5.0-200 µg/L
1,2-Dichloropropane	10-150 µg/L
1,3-Dichloropropane	10-300 µg/L
2,2-Dichloropropane	10-300 µg/L
1,1-Dichloropropene	5.0-200 µg/L
cis-1,3-Dichloropropene	10-120 µg/L
trans-1,3-Dichloropropene	10-120 µg/L
Ethylbenzene	10-120 µg/L
Hexachlorobutadiene	50-200 µg/L
Hexachloroethane	50-200 µg/L
2-Hexanone	20-200 µg/L

## WP Volatiles cont'd

Analyte	Concentration
Isopropylbenzene	10-300 µg/L
p-Isopropyltoluene	10-300 µg/L
Methylene Chloride	10-120 µg/L
Methyl tert-butyl ether	15-150 µg/L
Methyl-2-pentanone (MIBK)	20-220 µg/L
Methyl-tert-butyl ether (MTBE)	15-150 µg/L
Naphthalene	15-150 µg/L
Nitrobenzene	10-120 µg/L
Nitroethane	20-200 µg/L
o-Xylene	10-150 µg/L
p-Xylene	10-150 µg/L
Styrene	20-100 µg/L
Trichloroethylene	20-120 µg/L
1,1,2,2-Tetrafluoroethane	15-150 µg/L
1,2,4-Trimethylbenzene	10-120 µg/L
1,3,5-Trimethylbenzene	10-120 µg/L
Vinyl acetate	5.0-200 µg/L
Vinyl chloride	20-120 µg/L
m+p-Xylene	10-150 µg/L
o-Xylene	10-150 µg/L
Xylenes, total	20-300 µg/L

### WP VOA-GC

Store at 4 °C

Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

This standard will contain 100% of all analytes. Use with EPA methods 602 and 8021.

Part Numbers	PT	PT-VOAGC-WP
	QC	QC-VOAGC-WP
	RR	RR-VOAGC-WP

Analyte	Concentration
Benzene	10-120 µg/L
Chlorobenzene	10-120 µg/L
1,2 Dichlorobenzene	10-120 µg/L
1,3 Dichlorobenzene	10-120 µg/L
1,4 Dichlorobenzene	10-120 µg/L
Ethylbenzene	10-120 µg/L
Isopropylbenzene	10-300 µg/L
Methyl tert-butyl ether (MTBE)	15-150 µg/L
Naphthalene	15-150 µg/L
Toluene	10-120 µg/L
1,2,4-Trimethylbenzene	10-120 µg/L
1,3,5-Trimethylbenzene	10-120 µg/L
m+p-xylene	10-150 µg/L
o-xylene	10-150 µg/L
Xylenes, total	20-300 µg/L

### WP BTEX

Store at 4 °C

Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Use with EPA methods 8260, 624, 602 and 8021.

Part Numbers	PT	PT-BTEX-WP
	QC	QC-BTEX-WP
	RR	RR-BTEX-WP

Analyte	Concentration
Benzene	10-120 µg/L
Ethylbenzene	10-120 µg/L
Methyl tert-butyl ether (MTBE)	15-150 µg/L
Toluene	10-120 µg/L
m+p-xylene	10-150 µg/L
o-xylene	10-150 µg/L
Xylenes, total	20-300 µg/L





# Water Supply

## INORGANIC

Phenova WS Inorganic Standards are provided as concentrates ready to dilute to produce your final samples in sufficient amounts for at least two methods, unless otherwise noted. All standards are compliant with EPA, TNI and/or state specific criteria.

# Inorganic Standards

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
<b>WS Anions Set</b>	<a href="#">PT-ANSET-WS</a>		<a href="#">QC-ANSET-WS</a>		<a href="#">RR-ANSET-WS</a>		<b>Q</b>	24
WS Anions 1	<a href="#">PT-AN1-WS</a>		<a href="#">QC-AN1-WS</a>		<a href="#">RR-AN1-WS</a>		<b>Q</b>	24
WS Anions 2 - Nitrite as N	<a href="#">PT-AN2-WS</a>		<a href="#">QC-AN2-WS</a>		<a href="#">RR-AN2-WS</a>		<b>Q</b>	24
WS Corrosivity (Langelier Index)	<a href="#">PT-CORR-WS</a>		<a href="#">QC-CORR-WS</a>		<a href="#">RR-CORR-WS</a>		<b>Q</b>	25
WS Cyanide	<a href="#">PT-CN-WS</a>		<a href="#">QC-CN-WS</a>		<a href="#">RR-CN-WS</a>		<b>Q</b>	26
WS Hexavalent Chromium	<a href="#">PT-CR6-WS</a>		<a href="#">QC-CR6-WS</a>		<a href="#">RR-CR6-WS</a>		<b>Q</b>	23
<b>WS IDB Set</b>	<a href="#">PT-IDBSET-WS</a>		<a href="#">QC-IDBSET-WS</a>		<a href="#">RR-IDBSET-WS</a>		<b>Q</b>	24
WS IDB 1 - Bromide & Bromate	<a href="#">PT-IDB1-WS</a>		<a href="#">QC-IDB1-WS</a>		<a href="#">RR-IDB1-WS</a>		<b>Q</b>	24
WS IDB 2 - Chlorate & Chlorite	<a href="#">PT-IDB2-WS</a>		<a href="#">QC-IDB2-WS</a>		<a href="#">RR-IDB2-WS</a>		<b>Q</b>	24
<b>WS Minerals Set</b>	<a href="#">PT-MINSET-WS</a>		<a href="#">QC-MINSET-WS</a>		<a href="#">RR-MINSET-WS</a>		<b>Q</b>	23
WS Minerals - 1	<a href="#">PT-MIN-WS</a>		<a href="#">QC-MIN-WS</a>		<a href="#">RR-MIN-WS</a>		<b>Q</b>	23
WS Conductivity	<a href="#">PT-COND-WS</a>		<a href="#">QC-COND-WS</a>		<a href="#">RR-COND-WS</a>		<b>Q</b>	23-25
WS Perchlorate	<a href="#">PT-PERC-WS</a>		<a href="#">QC-PERC-WS</a>		<a href="#">RR-PERC-WS</a>		<b>Q</b>	26
WS pH	<a href="#">PT-PH-WS</a>		<a href="#">QC-PH-WS</a>		<a href="#">RR-PH-WS</a>		<b>Q</b>	26
WS Residual Chlorine	<a href="#">PT-CL-WS</a>		<a href="#">QC-CL-WS</a>		<a href="#">RR-CL-WS</a>		<b>Q</b>	26
WS Silica	<a href="#">PT-SIO2-WS</a>		<a href="#">QC-SIO2-WS</a>		<a href="#">RR-SIO2-WS</a>		<b>Q</b>	26
WS Solids	<a href="#">PT-SOL-WS</a>		<a href="#">QC-SOL-WS</a>		<a href="#">RR-SOL-WS</a>		<b>Q</b>	25
WS Surfactants as MBAS	<a href="#">PT-MBAS-WS</a>		<a href="#">QC-MBAS-WS</a>		<a href="#">RR-MBAS-WS</a>		<b>Q</b>	26
WS TOC and DOC	<a href="#">PT-TOC-WS</a>		<a href="#">QC-TOC-WS</a>		<a href="#">RR-TOC-WS</a>		<b>Q</b>	23
<b>WS Trace Metals Set</b>	<a href="#">PT-TMSET-WS</a>		<a href="#">QC-TMSET-WS</a>		<a href="#">RR-TMSET-WS</a>		<b>Q</b>	23
WS Trace Metals 1	<a href="#">PT-TM-WS</a>		<a href="#">QC-TM-WS</a>		<a href="#">RR-TM-WS</a>		<b>Q</b>	23
WS Mercury	<a href="#">PT-HG-WS</a>		<a href="#">QC-HG-WS</a>		<a href="#">RR-HG-WS</a>		<b>Q</b>	23
WS Turbidity	<a href="#">PT-TURB-WS</a>		<a href="#">QC-TURB-WS</a>		<a href="#">RR-TURB-WS</a>		<b>Q</b>	25
WS Uranium	<a href="#">PT-U-WS</a>		<a href="#">QC-U-WS</a>		<a href="#">RR-U-WS</a>		<b>Q</b>	23
WS UV 254	<a href="#">PT-UV-WS</a>		<a href="#">QC-UV-WS</a>		<a href="#">RR-UV-WS</a>		<b>Q</b>	25
<b>Non-TNI and State Specific Standards</b>								
WS Color	<a href="#">PT-COL-WS</a>		<a href="#">QC-COL-WS</a>		<a href="#">RR-COL-WS</a>		<b>Q</b>	25
WS Perchlorate-Massachusetts (MA)	<a href="#">PT-MAPERC-WS</a>		<a href="#">QC-MAPERC-WS</a>		<a href="#">RR-MAPERC-WS</a>		<b>Jan Only</b>	26

## PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Q	✓			✓			✓			✓	



## Metals

### WS Trace Metals Set

This complete set includes WS Trace Metals 1 and Mercury vials.

Part Numbers	PT	<a href="#">PT-TMSET-WS</a>
	QC	<a href="#">QC-TMSET-WS</a>
	RR	<a href="#">RR-TMSET-WS</a>

### WS Trace Metals 1

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 4% HNO<sub>3</sub> (v/v) contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TM-WS</a>
	QC	<a href="#">QC-TM-WS</a>
	RR	<a href="#">RR-TM-WS</a>

Analyte	Concentration
Aluminum	130-1000 µg/L
Antimony	6.0-50 µg/L
Arsenic	5.0-50 µg/L
Barium	500-3000 µg/L
Beryllium	2.0-20 µg/L
Boron	800-2000 µg/L
Cadmium	2.0-50 µg/L
Chromium	10-200 µg/L
Copper	50-2000 µg/L
Iron	100-1800 µg/L
Lead	5.0-100 µg/L
Manganese	40-900 µg/L
Molybdenum	15-130 µg/L
Nickel	10-500 µg/L
Selenium	10-100 µg/L
Silver	20-300 µg/L
Thallium	2.0-10 µg/L
Vanadium	50-1000 µg/L
Zinc	200-2000 µg/L

### WS Trace Metals Mercury

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with approximately 1%-2% (v/v) nitric acid (HNO<sub>3</sub>)+ 10 ppm hexavalent chromium contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-HG-WS</a>
	QC	<a href="#">QC-HG-WS</a>
	RR	<a href="#">RR-HG-WS</a>

Analyte	Concentration
Mercury	0.50-10 µg/L

### WS Hexavalent Chromium

Store at 20-25 °C

Provided as a > 20 mL concentrate in water contained in a 23 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-CR6-WS</a>
	QC	<a href="#">QC-CR6-WS</a>
	RR	<a href="#">RR-CR6-WS</a>

Analyte	Concentration
Chromium VI	5.0-50 µg/L

### WS Uranium

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 2% HNO<sub>3</sub> (v/v) contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-U-WS</a>
	QC	<a href="#">QC-U-WS</a>
	RR	<a href="#">RR-U-WS</a>

Analyte	Concentration
Uranium	3.0-104 µg/L

## Minerals/ Nutrients

### WS Total & Dissolved Organic Carbon

Store at 4 °C

Provided as a >20 mL concentrate in water preserved with trace H<sub>2</sub>SO<sub>4</sub> contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TOC-WS</a>
	QC	<a href="#">QC-TOC-WS</a>
	RR	<a href="#">RR-TOC-WS</a>

Analyte	Concentration
Total Organic Carbon	1.3-13 mg/L
Dissolved Organic Carbon (DOC)	1.3-13 mg/L

### WS Minerals/Conductivity Set

This complete set includes both WS Minerals 1 and Conductivity bottles.

Part Numbers	PT	<a href="#">PT-MINSET-WS</a>
	QC	<a href="#">QC-MINSET-WS</a>
	RR	<a href="#">RR-MINSET-WS</a>

### WS Minerals 1

Store at 20 - 25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-MIN-WS</a>
	QC	<a href="#">QC-MIN-WS</a>
	RR	<a href="#">RR-MIN-WS</a>

Analyte	Concentration
Alkalinity as CaCO <sub>3</sub>	25-200 mg/L
Calcium	30-90 mg/L
Calcium Hardness as CaCO <sub>3</sub>	75-225 mg/L
Total Hardness as CaCO <sub>3</sub>	83-307 mg/L
Magnesium	2-20 mg/L
Potassium	10-40 mg/L
Sodium	12-50 mg/L
Total Filterable Residue	100-1000 mg/L

### WS Conductivity

Store at 20 - 25 °C

Provided as a 100 mL ready to use standard in water contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-COND-WS</a>
	QC	<a href="#">QC-COND-WS</a>
	RR	<a href="#">RR-COND-WS</a>

Analyte	Concentration
Specific Conductance	130-1300 µmhos/cm

## Anions / Disinfection By-Products

### WS Inorganic Disinfections By-Products Set

This complete set includes WS IDB 1 and 2 vials.

Part Numbers	PT	<a href="#">PT-IDBSET-WS</a>
	QC	<a href="#">QC-IDBSET-WS</a>
	RR	<a href="#">RR-IDBSET-WS</a>

### WS IDB 1 - Bromide and Bromate

Store at 4 °C

Provided as a >20mL concentrate in water contained in a 24mL amber glass vial.

Part Numbers	PT	<a href="#">PT-IDB1-WS</a>
	QC	<a href="#">QC-IDB1-WS</a>
	RR	<a href="#">RR-IDB1-WS</a>

Analyte	Concentration
Bromate	7.0-50 µg/L
Bromide	50-300 µg/L

### WS IDB 2 - Chlorite and Chlorate

Store at 4 °C

Provided as a >20mL concentrate in water contained in a 24mL amber glass vial.

Part Numbers	PT	<a href="#">PT-IDB2-WS</a>
	QC	<a href="#">QC-IDB2-WS</a>
	RR	<a href="#">RR-IDB2-WS</a>

Analyte	Concentration
Chlorite	100-1000 µg/L
Chlorate	60-180 µg/L

### WS Anions Set

This complete set includes WS Anions 1 vial and WS Anions 2 ampoule.

Part Numbers	PT	<a href="#">PT-ANSET-WS</a>
	QC	<a href="#">QC-ANSET-WS</a>
	RR	<a href="#">RR-ANSET-WS</a>

### WS Anions 1

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-AN1-WS</a>
	QC	<a href="#">QC-AN1-WS</a>
	RR	<a href="#">RR-AN1-WS</a>

Analyte	Concentration
Chloride	20-160mg/L
Fluoride	1.0-8.0mg/L
Nitrate as N	3.0-10 mg/L
Nitrate and Nitrite as N	3.0-10mg/L
Orthophosphate as P	0.50-5.5 mg/L
Sulfate	25-250mg/L

### WS Anions 2 - Nitrite as N

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-AN2-WS</a>
	QC	<a href="#">QC-AN2-WS</a>
	RR	<a href="#">RR-AN2-WS</a>

Analyte	Concentration
Nitrite as N	0.40-2.0 mg/L

## Properties

### WS UV 254

Store at 4 °C  
Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-UV-WS</a>
	QC	<a href="#">QC-UV-WS</a>
	RR	<a href="#">RR-UV-WS</a>

Analyte	Concentration
UV 254 Absorbance	0.050-0.70 cm-1

### WS Turbidity

Store at 20-25 °C  
Provided as a >20 mL concentrate in water preserved with trace NaOCl contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TURB-WS</a>
	QC	<a href="#">QC-TURB-WS</a>
	RR	<a href="#">RR-TURB-WS</a>

Analyte	Concentration
Turbidity	0.50-8.0 NTU

### WS Solids

Store at 20-25 °C  
Provided as a 500mL ready to use standard in water contained in a 500mL poly bottle.

Part Numbers	PT	<a href="#">PT-SOL-WS</a>
	QC	<a href="#">QC-SOL-WS</a>
	RR	<a href="#">RR-SOL-WS</a>

Analyte	Concentration
Total Filterable Residue	100-1000 mg/L
Non-Filterable Residue (TSS)	23-100 mg/L
Total Solids	223-1100 mg/L

WS Conductivity  
Store at 20 - 25 °C  
Provided as a 100 mL ready to use standard in water contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-COND-WS</a>
	QC	<a href="#">QC-COND-WS</a>
	RR	<a href="#">RR-COND-WS</a>

Analyte	Concentration
Specific Conductance	130-1300 µmhos/cm

### WS Color (Non-TNI/State Specific)

Store at 20 - 25 °C  
Provided as a 24mL clear glass vial containing at a minimum 21mL of standard concentrate. The standard is preserved with 1%-7% hydrochloric acid (HCL).

Part Numbers	PT	<a href="#">PT-COL-WS</a>
	QC	<a href="#">QC-COL-WS</a>
	RR	<a href="#">RR-COL-WS</a>

Analyte	Concentration
Color	10-75 CU

### WS Corrosivity (Langelier Index)

Store at 20-25 °C  
Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-CORR-WS</a>
	QC	<a href="#">QC-CORR-WS</a>
	RR	<a href="#">RR-CORR-WS</a>

Analyte	Concentration
Corrosivity (Langelier Index)	-4.0- +4.0 SI units



## Miscellaneous

### WS Cyanide

Store at 4 °C

Provided as a 20 mL concentrate in water preserved with approximately 0.20% (w/v) potassium hydroxide (KOH) contained in a 20 mL amber glass vial.

Part Numbers	PT	<a href="#">PT-CN-WS</a>
	QC	<a href="#">QC-CN-WS</a>
	RR	<a href="#">RR-CN-WS</a>

Analyte	Concentration
Cyanide (simple)	0.10-0.50 mg/L

### WS Residual Chlorine

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-CL-WS</a>
	QC	<a href="#">QC-CL-WS</a>
	RR	<a href="#">RR-CL-WS</a>

Analyte	Concentration
Residual Free Chlorine	0.50-3.0 mg/L
Total Residual Chlorine	0.50-3.0 mg/L

### WS pH

Store at 20-25 °C

Provided as a 100mL ready to use standard in water contained in a 125mL poly bottle.

Part Numbers	PT	<a href="#">PT-PH-WS</a>
	QC	<a href="#">QC-PH-WS</a>
	RR	<a href="#">RR-PH-WS</a>

Analyte	Concentration
pH	5.0-10SI Units.

### WS Surfactants as MBAS

Store at 20-25 °C

Provided as a > 20 mL concentrate in water contained in a 23 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-MBAS-WS</a>
	QC	<a href="#">QC-MBAS-WS</a>
	RR	<a href="#">RR-MBAS-WS</a>

Analyte	Concentration
Surfactants - MBAS	0.10-1.0 mg/L

### WS Silica

Store at 20-25 °C

Provided as a 250 mL ready to use standard in water contained in a 250 mL poly bottle.

Part Numbers	PT	<a href="#">PT-SIO2-WS</a>
	QC	<a href="#">QC-SIO2-WS</a>
	RR	<a href="#">RR-SIO2-WS</a>

Analyte	Concentration
Silica as SiO <sub>2</sub>	5.0-75 mg/L

### WS Perchlorate

Store at 4 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-PERC-WS</a>
	QC	<a href="#">QC-PERC-WS</a>
	RR	<a href="#">RR-PERC-WS</a>

Analyte	Concentration
Perchlorate	4.0-20 µg/L

### WS Perchlorate-Massachusetts (Non-TNI/State Specific)

Store at 20-25 °C

Provided as 2x100mL ready to use standards in water each contained in a 125mL poly bottle.

Part Numbers	PT	<a href="#">PT-MAPERC-WS</a>
	QC	<a href="#">QC-MAPERC-WS</a>
	RR	<a href="#">RR-MAPERC-WS</a>

Analyte	Concentration
Perchlorate	0.80-1.5 µg/L





# Water Supply

## ORGANIC

Phenova WS Organic Standards are provided as concentrates ready to dilute to produce your final samples in sufficient amounts for at least two methods, unless otherwise noted. All standards are compliant with EPA, TNI and/or state specific criteria.



## Herbicides

### WS Herbicides

Store at 4 °C

Provided as a 2mL concentrate in acetonitrile flame sealed in a 2mL amber ampoule. Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA methods 515 and 555.

Part Numbers	PT	<a href="#">PT-HERB-WS</a>
	QC	<a href="#">QC-HERB-WS</a>
	RR	<a href="#">RR-HERB-WS</a>

Analyte	Concentration
Acifluorfen	10-100 µg/L
Bentazon	10-140 µg/L
Chloramben	20-100 µg/L
2,4-D	10-100 µg/L
2,4-DB	20-120 µg/L
Dacthal diacid (DCPA)	20-100 µg/L
Dalapon	10-100 µg/L
Dicamba	20-100 µg/L
3,5-Dichlorobenzoic acid	10-100 µg/L
Dichlorprop	10-100 µg/L
Dinoseb	7.0-70 µg/L
5-Hydroxydicamba	1.0-100 µg/L
4-Nitrophenol	1.0-100 µg/L
Pentachlorophenol	1.0-25 µg/L
Picloram	10-100 µg/L
2,4,5-T	10-100 µg/L
2,4,5-TP (Silvex)	10-100 µg/L

## Organic Disinfection By-Products

### WS Organic Disinfection By-Products

Store at 4 °C

Provided as a >1.2mL concentrate in MTBE flame sealed in a 2mL amber ampoule. Contains all of the EPA and TNI analytes. Use with EPA methods 551 and 552.

Part Numbers	PT	<a href="#">PT-ODB-WS</a>
	QC	<a href="#">QC-ODB-WS</a>
	RR	<a href="#">RR-ODB-WS</a>

Analyte	Concentration
Bromochloroacetic Acid	5.0-50 µg/L
Dibromoacetic Acid	5.0-50 µg/L
Dichloroacetic Acid	5.0-50 µg/L
Monobromoacetic Acid	5.0-50 µg/L
Monochloroacetic Acid	10-50 µg/L
Trichloroacetic Acid	5.0-50 µg/L

## Polychlorinated Biphenyls (PCBs)

### WS PCBs as Decachlorobiphenyl

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains one Aroclor randomly selected. Use with EPA quantitative method 508A or methods 505, 508 and 508.1.

Part Numbers	PT	<a href="#">PT-DECA-WS</a>
	QC	<a href="#">QC-DECA-WS</a>
	RR	<a href="#">RR-DECA-WS</a>

Analyte	Concentration
PCBs as decachlorobiphenyl	0.50-5.0 µg/L
PCB Aroclor Identification	N/A
Aroclor 1016	0.26-2.6 µg/L
Aroclor 1221	0.19-1.9 µg/L
Aroclor 1232	0.23-2.3 µg/L
Aroclor 1242	0.26-2.60 µg/L
Aroclor 1248	0.299-2.99 µg/L
Aroclor 1254	0.329-3.29 µg/L
Aroclor 1260	0.36-3.6 µg/L

## Pesticides

### WS Pesticides

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA methods 505, 507, 508 and 525.

Part Numbers	PT	<a href="#">PT-PEST-WS</a>
	QC	<a href="#">QC-PEST-WS</a>
	RR	<a href="#">RR-PEST-WS</a>

Analyte	Concentration
Alachlor	2.0-20 µg/L
Aldir	0.2-2.5 µg/L
Atrazine	2.0-20 µg/L
Bromacil	2.0-20 µg/L
Butachlor	2.0-20 µg/L
Chlorothalonil	0.50-30 µg/L
Diazinon	0.50-30 µg/L
Dieldrin	0.50-2.5 µg/L
Dimethoate	0.50-30 µg/L
Endrin	0.20-2.5 µg/L
Heptachlor	0.20-2.5 µg/L
Heptachlor Epoxide (beta)	0.20-2.5 µg/L
Hexachlorobenzene	0.50-5.0 µg/L
Hexachlorocyclopentadiene	2.0-20 µg/L
Lindane	0.20-2.5 µg/L
Methoxychlor	2.0-20 µg/L
Metolachlor	2.0-20 µg/L
Metribuzin	2.0-20 µg/L
Molinate	5.0-50 µg/L
Prometon	0.50-30 µg/L
Prometryn	0.50-30 µg/L
Propachlor	1.0-10 µg/L
Simazine	2.0-20 µg/L
Thiobencarb	0.50-30 µg/L
Trifluralin	1.0-10 µg/L

### WS Chlordane

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
Use with EPA methods 505, 508 and 525.

Part Numbers	PT	<a href="#">PT-CHLR-WS</a>
	QC	<a href="#">QC-CHLR-WS</a>
	RR	<a href="#">RR-CHLR-WS</a>

Analyte	Concentration
Chlordane (total)	2.0-20 µg/L

### WS Carbamates

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains all of the EPA and TNI analytes listed below. Use with EPA methods 531.1 and 531.2.

Part Numbers	PT	<a href="#">PT-CARB-WS</a>
	QC	<a href="#">QC-CARB-WS</a>
	RR	<a href="#">RR-CARB-WS</a>

Analyte	Concentration
Aldicarb	15-100 µg/L
Aldicarb Sulfone	15-100 µg/L
Aldicarb Sulfoxide	15-80 µg/L
Baygon	30-140 µg/L
Carbaryl	15-100 µg/L
Carbofuran	15-150 µg/L
3-Hydroxycarbofuran	15-80 µg/L
Methiocarb	30-140 µg/L
Methomyl	15-100 µg/L
Oxamyl (Vydate)	15-100 µg/L

### WS Toxaphene

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
Use with EPA methods 505, 508 and 525.

Part Numbers	PT	<a href="#">PT-TXP-WS</a>
	QC	<a href="#">QC-TXP-WS</a>
	RR	<a href="#">RR-TXP-WS</a>

Analyte	Concentration
Toxaphene (total)	2.0-20 µg/L



## Semi-Volatiles

### WS Semi-Volatiles 1

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
Contains Benzo(a)pyrene, Di(2-ethylhexyl)phthalate, and other analytes randomly selected.  
Use with EPA methods 506, 525, and 550.

Part Numbers	PT	<a href="#">PT-SV1-WS</a>
	QC	<a href="#">QC-SV1-WS</a>
	RR	<a href="#">RR-SV1-WS</a>

Analyte	Concentration
Acenaphthene	1.0-10 µg/L
Acenaphthylene	1.0-10 µg/L
Anthracene	1.0-10 µg/L
Benzo(a)anthracene	1.0-10 µg/L
Benzo(b)fluoranthene	1.0-10 µg/L
Benzo(k)fluoranthene	1.0-10 µg/L
Benzo(g,h,i)perylene	1.0-10 µg/L
Benzo(a)pyrene	0.20- 2.5 µg/L
Butyl benzyl phthalate	10-50 µg/L
Chrysene	1.0-10 µg/L
Di-n-butylphthalate	10-50 µg/L
Dibenz(a,h)anthracene	1.0-10 µg/L
Di(2-ethylhexyl)adipate	8.0-50 µg/L
Di(2-ethylhexyl)phthalate	5.0-50 µg/L
Diethylphthalate	10-50 µg/L
Dimethylphthalate	10-50 µg/L
Fluoranthene	1.0-10 µg/L
Fluorene	1.0-10 µg/L
Indeno(1,2,3-cd)pyrene	1.0-10 µg/L
1-Methylnaphthalene	10-50 µg/L
2-Methylnaphthalene	10-50 µg/L
Naphthalene	2.0-50 µg/L
Di-n-octylphthalate	10-50 µg/L
Phenanthrene	1.0-10 µg/L
Pyrene	1.0-10 µg/L

### WS Semi-Volatiles 2 - Herbicides

Store at 4 °C

Provided as a 2mL concentrate in water flame sealed in a 2mL amber ampoule.  
Use with EPA methods 547, 548 and 549.

Part Numbers	PT	<a href="#">PT-SV2HERB-WS</a>
	QC	<a href="#">QC-SV2HERB-WS</a>
	RR	<a href="#">RR-SV2HERB-WS</a>

Analyte	Concentration
Endothall	80-500 µg/L
Glyphosate	375-800 µg/L
Diquat	8.0-40 µg/L
Paraquat	8.0-100 µg/L

### WS Chloral Hydrate (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in acetonitrile flame sealed in a 2mL amber ampoule.  
Use with EPA method 551.

Part Numbers	PT	<a href="#">PT-CH-WS</a>
	QC	<a href="#">QC-CH-WS</a>
	RR	<a href="#">RR-CH-WS</a>

Analyte	Concentration
Chloral Hydrate	4.0-30 µg/L

### WS Dioxin

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed amber ampoule.  
Use with EPA method 1613.

Part Numbers	PT	<a href="#">PT-DIOX-WS</a>
	QC	<a href="#">QC-DIOX-WS</a>
	RR	<a href="#">RR-DIOX-WS</a>

Analyte	Concentration
2-3-7-8-TCDD	20-100 pg/L



## Volatiles

### WS EDB/DBCP/TCP

Store at 4 °C

Provided as a > 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Use with EPA methods 504, 524, and 551.

Part Numbers	PT	<a href="#">PT-EDBCP-WS</a>
	QC	<a href="#">QC-EDBCP-WS</a>
	RR	<a href="#">RR-EDBCP-WS</a>

Analyte	Concentration
1,2-Dibromo-3-chloropropane (DBCP)	0.10-2.0 µg/L
Ethylene Dibromide (EDB)	0.050-2.0 µg/L
1,2,3-Trichloropropane	0.20-2.0 µg/L

### WS Gasoline Additives (Non-TNI/State Specific)

Store at 4 °C

Provided as a > 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Contains all analytes listed below. Use with EPA methods 524.

Part Numbers	PT	<a href="#">PT-ADD-WS</a>
	QC	<a href="#">QC-ADD-WS</a>
	RR	<a href="#">RR-ADD-WS</a>

Analyte	Concentration
DIPE	5.0-50 µg/L
ETBE	5.0-50 µg/L
Freon 11	5.0-50 µg/L
Freon 113	5.0-50 µg/L
MTBE	5.0-50 µg/L
1-Phenylpropane	5.0-50 µg/L
TAME	5.0-50 µg/L
tert-Butyl-alcohol	5.0-50 µg/L

### WS Unregulated Volatiles

Store at 4 °C

Provided as a > 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA methods 502 and 524.

Part Numbers	PT	<a href="#">PT-UNRVOA-WS</a>
	QC	<a href="#">QC-UNRVOA-WS</a>
	RR	<a href="#">RR-UNRVOA-WS</a>

Analyte	Concentration
Bromobenzene	2.0-20 µg/L
Bromochloromethane	2.0-20 µg/L
Bromomethane	5.0-50 µg/L
n-Butylbenzene	2.0-20 µg/L
sec-Butylbenzene	2.0-20 µg/L
tert-Butylbenzene	2.0-20 µg/L
Chloroethane	5.0-50 µg/L
Chloromethane	5.0-50 µg/L
2-Chlorotoluene	2.0-20 µg/L
4-Chlorotoluene	2.0-20 µg/L
Dibromomethane	2.0-20 µg/L
1,3-Dichlorobenzene	2.0-20 µg/L
Dichlorodifluoromethane	5.0-50 µg/L
1,1-Dichloroethane	2.0-20 µg/L
1,3-Dichloropropane	2.0-20 µg/L
2,2-Dichloropropane	2.0-20 µg/L
1,1-Dichloropropene	2.0-20 µg/L
cis-1,3-Dichloropropene	2.0-20 µg/L
trans-1,3-Dichloropropene	2.0-20 µg/L
Fluorotrichloromethane	5.0-50 µg/L
Hexachlorobutadiene	5.0-50 µg/L
Isopropylbenzene	2.0-20 µg/L
4-Isopropyltoluene	2.0-20 µg/L
Methyl-tert-butyl ether (MTBE)	5.0-50 µg/L
Naphthalene	5.0-50 µg/L
n-Propylbenzene	2.0-20 µg/L
1,1,1,2-Tetrachloroethane	2.0-20 µg/L
1,1,2,2-Tetrachloroethane	2.0-20 µg/L
1,2,3-Trichlorobenzene	5.0-50 µg/L
1,2,3-Trichloropropane	2.0-20 µg/L
1,2,4-Trimethylbenzene	2.0-20 µg/L
1,3,5-Trimethylbenzene	2.0-20 µg/L

### WS Regulated Volatiles

Store at 4 °C

Provided as a > 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Use with EPA methods 502 and 524

Part Numbers	PT	<a href="#">PT-RVOA-WS</a>
	QC	<a href="#">QC-RVOA-WS</a>
	RR	<a href="#">RR-RVOA-WS</a>

Analyte	Concentration
Benzene	2.0-20 µg/L
Carbon Tetrachloride	2.0-20 µg/L
Chlorobenzene	2.0-20 µg/L
1,2-Dichlorobenzene	2.0-20 µg/L
1,4-Dichlorobenzene	2.0-20 µg/L
1,2-Dichloroethane	2.0-20 µg/L
1,1-Dichloroethylene	2.0-20 µg/L
cis-1,2-Dichloroethylene	2.0-20 µg/L
trans-1,2-Dichloroethylene	2.0-20 µg/L
Dichloromethane (Methylene Chloride)	2.0-20 µg/L
1,2-Dichloropropane	2.0-20 µg/L
Ethylbenzene	2.0-20 µg/L
Styrene	2.0-20 µg/L
Tetrachloroethylene	2.0-20 µg/L
Toluene	2.0-20 µg/L
1,2,4-Trichlorobenzene	2.0-20 µg/L
1,1,1-Trichloroethane	2.0-20 µg/L
1,1,2-Trichloroethane	2.0-20 µg/L
Trichloroethylene	2.0-20 µg/L
Vinyl Chloride	2.0-50 µg/L
Total Xylenes	2.0-50 µg/L

### WS Trihalomethanes

Store at 4 °C

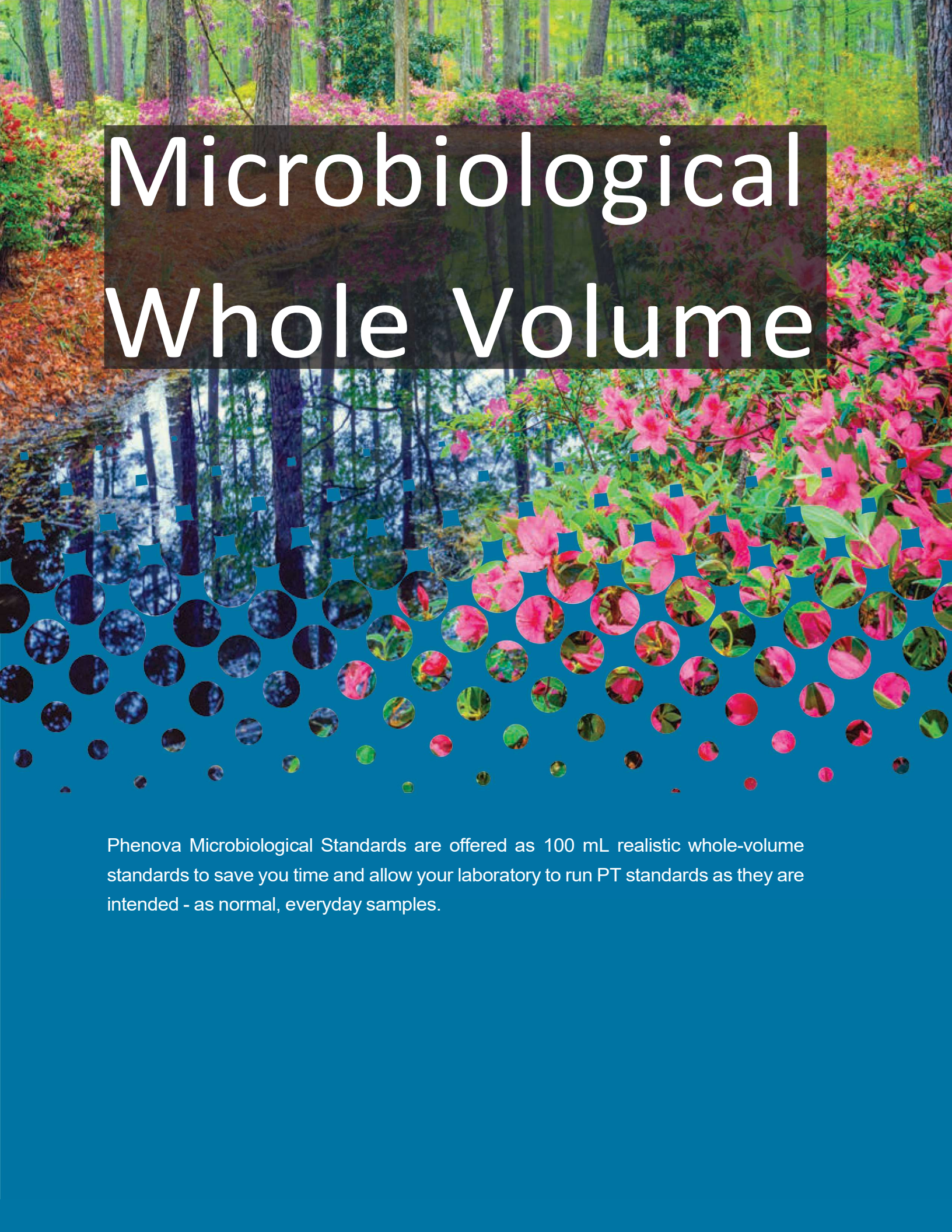
Provided as a > 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Use with EPA methods 502, 524 and 551.

Part Numbers	PT	<a href="#">PT-THM-WS</a>
	QC	<a href="#">QC-THM-WS</a>
	RR	<a href="#">RR-THM-WS</a>

Analyte	Concentration
Bromodichloromethane	5.0-50 µg/L
Bromoform	5.0-50 µg/L
Chlorodibromomethane	5.0-50 µg/L
Chloroform	5.0-50 µg/L
Total Trihalomethanes	20-200 µg/L





# Microbiological Whole Volume

Phenova Microbiological Standards are offered as 100 mL realistic whole-volume standards to save you time and allow your laboratory to run PT standards as they are intended - as normal, everyday samples.

# Microbiological Whole Volume Standards

## Water Pollution

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
WP Micro Quantitative	<a href="#">PT-MIC-WP</a>		<a href="#">QC-MIC-WP</a>		<a href="#">RR-MIC-WP</a>		<b>M</b>	35
WP Enterococci/Fecal Streptococci	<a href="#">PT-ENT-WP</a>		<a href="#">QC-ENT-WP</a>		<a href="#">RR-ENT-WP</a>		<b>M</b>	35
<b>Non-TNI and State Specific Standards</b>								
WP Heterotrophic Plate Count	<a href="#">PT-HPC-WP</a>		<a href="#">QC-HPC-WP</a>		<a href="#">RR-HPC-WP</a>		<b>M</b>	35
Biosolids Micro - Class A	<a href="#">PT-MICA-WP</a>		<a href="#">QC-MICA-WP</a>		<a href="#">RR-MICA-WP</a>		<b>Q</b>	35
Biosolids Micro - Class B	<a href="#">PT-MICB-WP</a>		<a href="#">QC-MICB-WP</a>		<a href="#">RR-MICB-WP</a>		<b>Q</b>	35

## Water Supply

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
WS Heterotrophic Plate Count	<a href="#">PT-HPC-WS</a>		<a href="#">QC-HPC-WS</a>		<a href="#">RR-HPC-WS</a>		<b>M</b>	36
WS Micro Presence/Absence	<a href="#">PT-MIC-WS</a>		<a href="#">QC-MIC4-WS</a>		<a href="#">RR-MIC-WS</a>		<b>M</b>	36
WS Micro P/A Quantitative Set	<a href="#">PT-MICQSET-WS</a>		<a href="#">QC-MICQSET-WS</a>		<a href="#">RR-MICQSET-WS</a>		<b>M</b>	36
WS Source Water	<a href="#">PT-SW-WS</a>		<a href="#">QC-SW-WS</a>		<a href="#">RR-SW-WS</a>		<b>M</b>	36
<b>Non-TNI and State Specific Standards</b>								
WS Enterococci-MA Compliant	<a href="#">PT-ENTMA-WS</a>		<a href="#">QC-ENTMA-WS</a>		<a href="#">RR-ENTMA-WS</a>		<b>Q</b>	36

### PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Q	✓			✓			✓			✓	



**Water Pollution Microbiological Studies between January & May can be used in lieu of DMR-QA Microbiology.**



## Water Pollution Micro (WPM)

### WP Micro Quantitative

Store at 4 °C

Provided as a 100mL whole volume, ready to use standard in a 100mL sterile clear plastic bottle. Used with all promulgated methods including MF, MPN, multiple tube, Quantitray, Colilert, Colisure and chromogenic methods.

Part Numbers	PT	PT-MIC-WP
	QC	QC-MIC-WP
	RR	RR-MIC-WP

Analyte	Concentration
Fecal Coliform, MF	20-2400 CFU/100 mL
Total Coliform, MF	20-2400 CFU/100 mL
<i>E. Coli</i> , MF	20-2400 CFU/100 mL
Fecal Coliform, MPN	20-2400 MPN/100 mL
Total Coliform, MPN	20-2400 MPN/100 mL
<i>E. Coli</i> , MPN	20-2400 MPN/100 mL

### WP Enterococci/Fecal Streptococci

Store at 4 °C

Provided as a 100mL whole volume, ready to use standard in a 100mL sterile clear plastic bottle. May be analyzed for enterococci and/or fecal streptococci.

Part Numbers	PT	PT-ENT-WP
	QC	QC-ENT-WP
	RR	RR-ENT-WP

Analyte	Concentration
Enterococci, MF	20-1000 CFU/100 mL
Enterococci, MPN	20-1000 MPN/100 mL
Fecal streptococci, MF	20-1000 CFU/100 mL
Fecal streptococci, MPN	20-1000 MPN/100 mL

### WP Heterotrophic Plate Count (Non-TNI/State Specific)

Store at 4 °C

Provided as a 100mL whole volume, ready to use standard in a 100mL sterile clear plastic bottle. Quantitative sample for standard plate count methods. Can be used with both pour plate and Simplate methods.

Part Numbers	PT	PT-HPC-WP
	QC	QC-HPC-WP
	RR	RR-HPC-WP

	Concentration
Heterotrophic Plate Count (MF, PP)	5.0-500 CFU/mL
Heterotrophic Plate Count (MPN)	5.0-500 MPN/mL

### Biosolids Micro - Class A (Non-TNI/State Specific)

Store at 4 °C

Provided as 100mL micro spiking media in a 100mL sterile clear plastic bottle along with 10g biosolid blank matrix also in a 100mL sterile, clear, plastic bottle. Standard can be used with all promulgated methods.

Part Numbers	PT	PT-MICA-WP
	QC	QC-MICA-WP
	RR	RR-MICA-WP

Analyte	Concentration
Fecal Coliform, MF	50-1000 CFU/g
Total Coliform, MF	50-1000 CFU/g
<i>E. Coli</i> , MF	50-1000 CFU/g
Fecal Coliform, MPN	50-1000 MPN/g
Total Coliform, MPN	50-1000 MPN/g
<i>E. Coli</i> , MPN	50-1000 MPN/g

### Biosolids Micro - Class B (Non-TNI/State Specific)

Store at 4 °C

Provided as 100mL micro spiking media in a 100mL sterile clear plastic bottle along with 10g biosolid blank matrix also in a 100mL sterile, clear, plastic bottle. Standard can be used with all promulgated methods.

Part Numbers	PT	PT-MICB-WP
	QC	QC-MICB-WP
	RR	RR-MICB-WP

Analyte	Concentration
Fecal Coliform, MF	50000-500000 CFU/g
Total Coliform, MF	50000-500000 CFU/g
<i>E. Coli</i> , MF	50000-500000 CFU/g
Fecal Coliform, MPN	50000-500000 MPN/g
Total Coliform, MPN	50000-500000 MPN/g
<i>E. Coli</i> , MPN	50000-500000 MPN/g



## Water Supply Micro (WSM)

### WS Heterotrophic Plate Count

Store at 4 °C

Provided as a 100mL whole volume, ready to use standard in a 100mL sterile clear plastic bottle. Quantitative sample for standard plate count methods. Can be used with both pour plate and Simplate methods.

Part Numbers	PT	<a href="#">PT-HPC-WS</a>
	QC	<a href="#">QC-HPC-WS</a>
	RR	<a href="#">RR-HPC-WS</a>

Analyte	Concentration
Heterotrophic Plate Count (MF, PP)	5.0-500 CFU/mL
Heterotrophic Plate Count (MPN)	5.0-500 MPN/mL

### WS Micro Presence/Absence Quantitative Set

Set comprised of a Micro Presence/Absence set and a WS Source Water standard. Provided as 100 mL whole volume ready to use standard in a 100 mL sterile clear plastic bottle.

Part Numbers	PT	<a href="#">PT-MICQSET-WS</a>
	QC	<a href="#">QC-MICQSET-WS</a>
	RR	<a href="#">RR-MICQSET-WS</a>

### WS Micro Presence/Absence

Provided as a 10 set of 100mL whole volume, ready to use standards in 100mL sterile clear plastic bottles. Used with all promulgated methods including MF, MPN, Quantitray, Colilert, Colisure and chromogenic methods. QC version is a 4 sample set.

Part Numbers	PT	<a href="#">PT-MIC-WS</a>
	QC	<a href="#">QC-MIC4-WS</a>
	RR	<a href="#">RR-MIC-WS</a>

### WS Source Water

Store at 4 °C

Provided as a 100mL whole volume, ready to use standard in a 100mL sterile clear plastic bottle. Used with all promulgated methods including MF, MPN, Quantitray, Colilert, Colisure and chromogenic methods.

Part Numbers	PT	<a href="#">PT-SW-WS</a>
	QC	<a href="#">QC-SW-WS</a>
	RR	<a href="#">RR-SW-WS</a>

Analyte	Concentration
Fecal Coliform, MF	20-200 CFU/100 mL
<i>E. Coli</i> , MF	20-200 CFU/100mL
Total Coliform, MF	20-200 CFU/100 mL
Fecal Coliform, MPN	20-200 MPN/100 mL
<i>E. Coli</i> , MPN	20-200 MPN/100mL
Total Coliform, MPN	20-200 MPN/100 mL

### WS Enterococci-Massachusetts Compliant (Non-TNI/State Specific)

Store at 4 °C

Provided as a 10 set of 100 mL whole volume, ready to use standards. Compliant with Massachusetts requirement for ground water monitoring as specified in the Federal Ground Water Rule. QC version supplied as a three sample set. *Reported as Absence/Presence for 10 standards.*

Part Numbers	PT	<a href="#">PT-ENTMA-WS</a>
	QC	<a href="#">QC-ENTMA-WS</a>
	RR	<a href="#">RR-ENTMA-WS</a>



# DMR-QA

## **Chemistry, Micro and WET standards from one source!**

Phenova is one of the few approved providers that offers every Discharge Monitoring Report- Quality Assurance (DMR-QA) standard that you need. We manufacture and analytically verify every DMR-QA standard we sell and manage every aspect of the program from our headquarters in Colorado. Our control over the entire DMR-QA process from start to finish is your assurance of unsurpassed quality and customer service.



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DMR-QA Hexavalent Chromium	<a href="#">PT-CR6-DMRQA</a>		<a href="#">QC-CR6-DMRQA</a>		39
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DMR-QA Minerals 2 - Hardness	<a href="#">PT-MIN2-DMRQA</a>		<a href="#">QC-MIN2-DMRQA</a>		40
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## DMR-QA 2019 Schedule

	Study ID	Open	Close
CHEM	DMR-QA 39	Mar-22-19	Jul-5-19
WET	DMR-QA 39	Mar-22-19	Jul-5-19
MICRO	DMR-QA 39	Mar-22-19	Jul-5-19

Learn more at

[www.phenova.com/dmrqa](http://www.phenova.com/dmrqa)



# Chemistry Standards

## Demand

### DMR-QA Demand

Store at 4 °C

Provided as a minimum 21 mL of standard concentrate preserved with 0.5% (v/v) H<sub>2</sub>SO<sub>4</sub> contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-DEM-DMRQA
	QC	QC-DEM-DMRQA
	RR	

Analyte	Concentration
BOD	18-230 mg/L
CBOD	18-230 mg/L
COD	30-250 mg/L
TOC	6.0-100 mg/L

## Metals

### DMR-QA Trace Metals Set

This complete set includes DMR-QA Trace Metals 1 and Mercury vials.

Part Numbers	PT	PT-TMSET-DMRQA
	QC	QC-TMSET-DMRQA
	RR	

### DMR-QA Trace Metals 1

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 2% HNO<sub>3</sub> (v/v) contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-TM1-DMRQA
	QC	QC-TM1-DMRQA
	RR	

Analyte	Concentration
Aluminum	200-4000 µg/L
Antimony	90-900 µg/L
Arsenic	90-900 µg/L
Barium	100-2500 µg/L
Beryllium	50-500 µg/L
Boron	800-2000 µg/L
Cadmium	100-1000 µg/L
Chromium	100-1000 µg/L
Cobalt	100-1000 µg/L
Copper	100-1000 µg/L
Iron	200-4000 µg/L
Lead	100-1500 µg/L
Manganese	200-2000 µg/L
Molybdenum	60-600 µg/L
Nickel	200-2000 µg/L
Selenium	100-1000 µg/L
Silver	100-1000 µg/L
Strontium	50-500 µg/L
Thallium	80-800 µg/L
Vanadium	50-2000 µg/L
Zinc	300-2000 µg/L

### DMR-QA Mercury

Store at 20-25 °C

Provided as a > 20 mL concentrate preserved with approximately 1% (v/v) nitric acid (HNO<sub>3</sub>) + 10 ppm hexavalent chromium contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-HG-DMRQA
	QC	QC-HG-DMRQA
	RR	

Analyte	Concentration
Mercury	3.0-30 µg/L

### DMR-QA Mercury - Low Level

Store at 20-25 °C

Provided as a >20 mL concentrate in water preserved with 1-2% HNO<sub>3</sub> (v/v) + 10 ppm Cr<sup>6+</sup> contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-HGLL-DMRQA
	QC	QC-HGLL-DMRQA
	RR	

Analyte	Concentration
Mercury	20-100 ng/L

### DMR-QA Hexavalent Chromium

Store at 20 - 25 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-CR6-DMRQA
	QC	QC-CR6-DMRQA
	RR	

Analyte	Concentration
Chromium VI	90-900 µg/L

## Minerals/ Nutrients

### DMR-QA Minerals Set

This complete set includes



DMR-QA Conductivity Standard is found on page 28.

Part Numbers	PT	<a href="#">PT-MINSET-DMRQA</a>
	QC	<a href="#">QC-MINSET-DMRQA</a>
	RR	

### DMR-QA Minerals 1

Store at 20-25 °C

Provided as a 500mL ready to use standard in water contained in a 500mL polybottle. This standard is not preserved.

Part Numbers	PT	<a href="#">PT-MIN1-DMRQA</a>
	QC	<a href="#">QC-MIN1-DMRQA</a>
	RR	

Analyte	Concentration
Total Alkalinity (CaCO <sub>3</sub> )	25-400 mg/L
Bromide	1.0-10 mg/L
Chloride	35-275 mg/L
Fluoride	0.40-4.0 mg/L
Sulfate	5.0-125 mg/L
Total Inorganic Carbon	2.5-100 mg/L

### DMR-QA Minerals 2

Store at 20-25 °C

Provided as a 500mL ready to use standard in water contained in a 500mL polybottle. This standard is not preserved with acid.

Part Numbers	PT	<a href="#">PT-MIN2-DMRQA</a>
	QC	<a href="#">QC-MIN2-DMRQA</a>
	RR	

Analyte	Concentration
Calcium	10-110 mg/L
Calcium Hardness (as CaCO <sub>3</sub> )	25-250 mg/L
Magnesium	4.0-40 mg/L
Potassium	4.0-40 mg/L
Sodium	10-100 mg/L
Total Hardness (as CaCO <sub>3</sub> )	40-415 mg/L

### DMR-QA Conductivity

Store at 20-25 °C

Provided as a 100mL ready to use standard in water contained in a 125mL poly bottle.

Part Numbers	PT	<a href="#">PT-COND-DMRQA</a>
	QC	<a href="#">QC-COND-DMRQA</a>
	RR	<a href="#">RR-COND-DMRQA</a>

Analyte	Concentration
Specific Conductance (25° C)	200-1200 µmhos/cm

### DMR-QA Nutrients Set

This complete set includes DMR-QA Nutrients 1 (Simple), 2 (Complex), and 3 (Nitrite).

Part Numbers	PT	<a href="#">PT-NUTSET-DMRQA</a>
	QC	<a href="#">QC-NUTSET-DMRQA</a>
	RR	

### DMR-QA Nutrients 1 - Simple Nutrients

Store at 4 °C

This standard is packaged in a 24mL clear glass vial containing at a minimum 21 mL of standard concentrate. The standard is not preserved.

Part Numbers	PT	<a href="#">PT-NUT1-DMRQA</a>
	QC	<a href="#">QC-NUT1-DMRQA</a>
	RR	

Analyte	Concentration
Ammonia as N	1.0-20 mg/L
Dissolved Nitrogen	0.25-60 mg/L
Nitrate as N	2.0-25 mg/L
Nitrate and Nitrite as N	2.5-25 mg/L
Orthophosphate as P	0.5-5.5 mg/L
Total Dissolved Phosphorous	0.5-5.5 mg/L
Total Nitrogen	0.25-60 mg/L

### DMR-QA Nutrients 2 - Complex Nutrients

Store at 4 °C

The standard is packaged in a 24 mL amber glass vial containing approximately 20 mL of standard concentrate. The standard is preserved to a pH of 8 with NaOH.

Part Numbers	PT	<a href="#">PT-NUT2-DMRQA</a>
	QC	<a href="#">QC-NUT2-DMRQA</a>
	RR	

Analyte	Concentration
Total Kjeldahl Nitrogen (TKN)	3.0-35 mg/L
Total Phosphorus	0.5-10 mg/L

### DMR-QA Nutrients 3 - Nitrite

Store at 4 °C

Provided as a 5 mL concentrate in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-NUT3-DMRQA</a>
	QC	<a href="#">QC-NUT3-DMRQA</a>
	RR	

Analyte	Concentration
Nitrite as N	0.40-4.0 mg/L

## Oil & Grease

### DMR-QA Oil & Grease

Store at 20-25 °C

Provided as a > 20 mL concentrate in n propanol contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-OGR-DMRQA</a>
	QC	<a href="#">QC-OGR-DMRQA</a>
	RR	

Analyte	Concentration
Oil & Grease	20-200 mg/L

### DMR-QA Oil & Grease 1L

Store at 20-25 °C

Provided as a 1 L ready to use standard in water preserved with 0.1% HCl contained in a 32 oz clear glass bottle.

Part Numbers	PT	<a href="#">PT-OGR1L-DMRQA</a>
	QC	<a href="#">QC-OGR1L-DMRQA</a>
	RR	

Analyte	Concentration
Oil & Grease	20-200 mg/L

## Properties

### DMR-QA Settleable Solids

Store at 20-25 °C

Provided as a solid material in a 40 mL vial.

Part Numbers	PT	<a href="#">PT-SSOL-DMRQA</a>
	QC	<a href="#">QC-SSOL-DMRQA</a>
	RR	

Analyte	Concentration
Settleable Solids	5.0-50 mL/L

### DMR-QA Solids

Store at 20-25 °C

Provided as a 500 mL ready to use standard in water 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-SOL-DMRQA</a>
	QC	<a href="#">QC-SOL-DMRQA</a>
	RR	

Analyte	Concentration
Total Dissolved Solids at 180° (TFR)	140-800 mg/L
Total Solids	140-800 mg/L
Non-Filterable Residue (TSS)	20-100 mg/L

### DMR-QA Turbidity

Store at 20-25 °C

Provided as a minimum 21 mL concentrate preserved with trace NaOCl contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-TURB-DMRQA</a>
	QC	<a href="#">QC-TURB-DMRQA</a>
	RR	

Analyte	Concentration
Turbidity	2.0-30 NTU

### DMR-QA Conductivity

Store at 20-25 °C

Provided as a 100mL ready to use standard in water contained in a 125mL poly bottle.

Part Numbers	PT	<a href="#">PT-COND-DMRQA</a>
	QC	<a href="#">QC-COND-DMRQA</a>
	RR	

Analyte	Concentration
Specific Conductance (25° C)	200-1200 µmhos/cm

## Miscellaneous

### DMR-QA Total Cyanide

Store at 20-25 °C

Provided as a >20mL concentrate in water preserved with NaOH to pH > 10 contained in a 24 mL amber glass vial.

Part Numbers	PT	<a href="#">PT-CN-DMRQA</a>
	QC	<a href="#">QC-CN-DMRQA</a>
	RR	

Analyte	Concentration
Total Cyanide	0.10-1.0 mg/L

### DMR-QA pH

Store at 20-25 °C

Provided as a minimum 100mL ready to use standard in water contained in a 125mL poly bottle.

Part Numbers	PT	<a href="#">PT-PH-DMRQA</a>
	QC	<a href="#">QC-PH-DMRQA</a>
	RR	

Analyte	Concentration
pH	5.0-10 SI Units

### DMR-QA Phenolics

Store at 4 °C

Provided as a 2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-PHEN-DMRQA</a>
	QC	<a href="#">QC-PHEN-DMRQA</a>
	RR	

Analyte	Concentration
Total Phenolics (4AAP)	0.50-5 mg/L

### DMR-QA Residual Chlorine

Store at 4 °C

Provided as a minimum 4mL concentrate in water flame sealed in a 5mL amber glass ampoule.

Part Numbers	PT	<a href="#">PT-CL-DMRQA</a>
	QC	<a href="#">QC-CL-DMRQA</a>
	RR	

Analyte	Concentration
Total Residual Chlorine	0.50-3.0 mg/L

### DMR-QA Residual Chlorine - Low Level

Store at 4 °C

Provided as a minimum 4mL concentrate in water flame sealed in a 5mL amber glass ampoule.

Part Numbers	PT	<a href="#">PT-CLLL-DMRQA</a>
	QC	<a href="#">QC-CLLL-DMRQA</a>
	RR	

Analyte	Concentration
Total Residual Chlorine	50-250 µg/L

## Micro Standards

### Micro

#### DMR-QA Microbiology Total & Fecal

Part Numbers	PT	PT-MIC-DMRQA
	QC	QC-MIC-DMRQA
	RR	

Analyte	Concentration
Fecal Coliform, MF	20-2400 CFU/100mL
Total Coliform, MF	20-2400 CFU/100mL
E. Coli, MF	20-2400 CFU/100mL
Fecal Coliform, MPN	20-2400 MPN/100mL
Total Coliform, MPN	20-2400 MPN/100mL
E. Coli, MPN	20-2400 MPN/100mL

## WET Standards

### Fathead Minnow

#### WET Fathead Minnow Test 13/Method 2000

Store at 20-25 °C  
48-hr acute, non-renewal, 25 °C, mod-hard synthetic freshwater.  
Provided as a 125mL concentrate contained in a 125mL poly bottle.

Part Numbers	PT	PT-13-WET
	QC	QC-13-WET
	RR	

Analyte	Concentration
Fathead Minnow Acute MHSF 25° - LC50	6.25-100S.U.

#### WET Fathead Minnow Test 14/Method 2000

Store at 20 - 25 °C  
48 hour acute, non-renewal, 25 °C, 20% diluted mineral water.  
Provided as a 125mL concentrate contained in a 125mL poly bottle.

Part Numbers	PT	PT-14-WET
	QC	QC-14-WET
	RR	

Analyte	Concentration
Fathead Minnow Acute 20% DMW 25 °-LC50	6.25-100S.U.

#### WET Fathead Minnow Test 15 / Method 1000

Store at 20-25 °C  
7-day short-term chronic, daily renewal, mod-hard syn freshwater.  
Provided as a 500 mL concentrate in water contained in a 500 mL poly bottle.

Part Numbers	PT	PT-15-WET
	QC	QC-15-WET
	RR	

Analyte	Concentration
Fathead Minnow Chronic MHSF - Survival NOEC	6.25-100S.U.
Fathead Minnow Chronic MHSF - Growth IC25 (ON)	6.25-100 S.U.
Fathead Minnow Chronic MHSF - Growth NOEC (ON)	6.25-100 S.U.

#### WET Fathead Minnow Test 16 / Method 1000

Store at 20 - 25 °C  
7-day short-term chronic, daily renewal, 20% diluted mineral water.  
Provided as a 500mL concentrate in water contained in a 500mL poly bottle.

Part Numbers	PT	PT-16-WET
	QC	QC-16-WET
	RR	

Analyte	Concentration
Fathead Minnow Chronic 20% DMW - Survival NOEC	6.25-100 S.U.
Fathead Minnow Chronic 20% DMW - Growth IC25 (ON)	6.25-100 S.U.
Fathead Minnow Chronic 20% DMW - Growth NOEC (ON)	6.25-100 S.U.





**Ceriodaphnia Dubia****WET Ceriodaphnia Test 19/Method 2002**

Store at 20-25 °C

48-hr acute, renewal, 25 °C, mod-hard synthetic freshwater.  
Provided as a 125 mL concentrate contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-19-WET</a>
	QC	<a href="#">QC-19-WET</a>
	RR	

Analyte	Concentration
<i>Ceriodaphnia</i> Acute MHSF 25° - LC50	6.25-100 S.U.

**WET Ceriodaphnia Test 20/Method 2002**

Store at 20-25 °C

48-hr acute, renewal, 25 °C, 20% diluted mineral water.  
Provided as a 125 mL concentrate contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-20-WET</a>
	QC	<a href="#">QC-20-WET</a>
	RR	

Analyte	Concentration
<i>Ceriodaphnia</i> Acute 20% DMW 25° - LC50	6.25-100 S.U.

**WET Ceriodaphnia Test 21/Method 1002**

Store at 20-25 °C

7-day short-term chronic daily renewal, mod-hard syn freshwater.  
Provided as a 500 mL concentrate contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-21-WET</a>
	QC	<a href="#">QC-21-WET</a>
	RR	

Analyte	Concentration
<i>Ceriodaphnia</i> Chronic MHSF - Survival NOEC	6.25-100 S.U.
<i>Ceriodaphnia</i> Chronic MHSF - Reproduction IC25	6.25-100 S.U.
<i>Ceriodaphnia</i> Chronic MHSF - Reproduction NOEC	6.25-100 S.U.

**WET Ceriodaphnia Test 22/Method 1002**

Store at 20-25 °C

7-day short-term chronic renewal, 20% diluted mineral water.  
Provided as a 500 mL concentrate contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-22-WET</a>
	QC	<a href="#">QC-22-WET</a>
	RR	

Analyte	Concentration
<i>Ceriodaphnia</i> Chronic 20% DMW - Survival NOEC	6.25-100 S.U.
<i>Ceriodaphnia</i> Chronic 20% DMW - Reproduction IC25	6.25-100 S.U.
<i>Ceriodaphnia</i> Chronic 20% DMW - Reproduction NOEC	6.25-100 S.U.

**Daphnia****WET Daphnia Test 32/Method 2021**

Store at 20-25 °C

48-hr acute, non-renewal, 25 °C, mod-hard synthetic freshwater.  
Provided as a 125 mL concentrate contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-32-WET</a>
	QC	<a href="#">QC-32-WET</a>
	RR	

Analyte	Concentration
<i>Daphnia</i> Magna Acute MHSF 25° - LC50	6.25-100 S.U.

**WET Daphnia Test 38/Method 2021**

Store at 20-25 °C

48-hr acute, non-renewal, 25 °C, mod-hard synthetic freshwater.  
Provided as a 125 mL concentrate contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-38-WET</a>
	QC	<a href="#">QC-38-WET</a>
	RR	

Analyte	Concentration
<i>Daphnia</i> Pulex Acute MHSF 25° - LC50	6.25-100 S.U.

**Mysid****WET Mysid Test 42/Method 2007**

Store at 20-25 °C

48-hr acute, non-renewal, 25 °C, 40 fathoms artificial seawater.  
Provided as a 125 mL concentrate in water contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-42-WET</a>
	QC	<a href="#">QC-42-WET</a>
	RR	

Analyte	Concentration
<i>Mysid</i> Acute 40 F 25° - LC50	6.25-100 S.U.

**WET Mysid Test 43/Method 1007**

Store at 20-25 °C

7-day short-term chronic, daily renewal, 40 fathoms artificial seawater.  
Provided as a 500 mL concentrate in water contained in a 500 mL poly bottle.

Part Numbers	PT	<a href="#">PT-43-WET</a>
	QC	<a href="#">QC-43-WET</a>
	RR	

Analyte	Concentration
<i>Mysid</i> Chronic 40 F - Survival NOEC	6.25-100 S.U.
<i>Mysid</i> Chronic 40 F - Growth IC25 (ON)	6.25-100 S.U.
<i>Mysid</i> Chronic 40 F - Growth NOEC (ON)	6.25-100 S.U.

# WET Standards (cont'd)

## Menidia

### WET Menidia Test 44/Method 2006

Store at 20-25 °C

48-hr acute, non-renewal, 25 °C, 40 fathoms artificial seawater.

Provided as a 125 mL concentrate in water contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-44-WET</a>
	QC	<a href="#">QC-44-WET</a>
	RR	

Analyte	Concentration
Menidia Acute 40 F 25° - LC50	6.25-100 S.U.

### WET Menidia Test 45/Method 1006

Store at 20-25 °C

7-day short-term chronic, daily renewal, 40 fathoms artificial seawater.

Provided as a 1000mL concentrate in water contained in a 1000mL poly bottle.

Part Numbers	PT	<a href="#">PT-45-WET</a>
	QC	<a href="#">QC-45-WET</a>
	RR	

Analyte	Concentration
Menidia Chronic 40 F - Survival NOEC	6.25-100 S.U.
Menidia Chronic 40 F - Growth IC25 (ON)	6.25-100 S.U.
Menidia Chronic 40 F - Growth NOEC (ON)	6.25-100 S.U.

## Sheepshead Minnow

### WET Sheepshead Minnow Test 46 / Method 2004

Store at 20-25 °C

48-hr acute, non-renewal, 25 °C, 40 fathoms artificial seawater.

Provided as a 250 mL concentrate in water contained in a 250 mL poly bottle.

Part Numbers	PT	<a href="#">PT-46-WET</a>
	QC	<a href="#">QC-46-WET</a>
	RR	

Analyte	Concentration
Sheepshead Minnow Acute 40 F 25° - LC50	6.25-100 S.U.

### WET Sheepshead Minnow Test 47/Method 1004

Store at 20-25 °C

7-day short-term chronic, daily renewal, 40 fathoms artificial seawater.

Provided as a 1 L concentrate in water contained in a 1 L poly bottle.

Part Numbers	PT	<a href="#">PT-47-WET</a>
	QC	<a href="#">QC-47-WET</a>
	RR	

Analyte	Concentration
Sheepshead Minnow Chronic 40 F Survival NOEC	6.25-100 S.U.
Sheepshead Minnow Chronic 40 F Growth IC25 (ON)	6.25-100 S.U.
Sheepshead Minnow Chronic 40 F Growth NOEC (ON)	6.25-100 S.U.



# Biosolids/ Sludge

Biosolids are falling under more environmental regulation both internationally and domestically. The Phenova Whole-Volume Biosolids Studies allow your laboratory to work with the same sample type that you see daily. The analyte lists include anions, and trace metals. Our matrix preparation ensures that each standard is homogenous, both in terms of the matrix and the fortified analytes, so you aren't left to wonder if it is a true biosolids sample.

# Biosolids /Sludge

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
Biosolid Anions	<a href="#">PT-AN-SLD</a>		<a href="#">QC-AN-SLD</a>		<a href="#">RR-AN-SLD</a>		Q	47
Biosolid Corrosivity/pH	<a href="#">PT-CORR-SLD</a>		<a href="#">QC-CORR-SLD</a>		<a href="#">RR-CORR-SLD</a>		Q	47
Biosolid Nutrients	<a href="#">PT-NUT-SLD</a>		<a href="#">QC-NUT-SLD</a>		<a href="#">RR-NUT-SLD</a>		Q	47
Biosolid Solids	<a href="#">PT-SOL-SLD</a>		<a href="#">QC-SOL-SLD</a>		<a href="#">RR-SOL-SLD</a>		Q	47
Biosolid Trace Metals	<a href="#">PT-MET-SLD</a>		<a href="#">QC-MET-SLD</a>		<a href="#">RR-MET-SLD</a>		Q	47

PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Q	✓			✓			✓			✓	



## Chemistry

### Biosolids Anions (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-AN-SLD</a>
	QC	<a href="#">QC-AN-SLD</a>
	RR	<a href="#">RR-AN-SLD</a>

Analyte	Concentration
Bromide	10-50000 mg/kg
Chloride	10-50000 mg/kg
Fluoride	100-50000 mg/kg
Nitrate as N	10-50000 mg/kg
Orthophosphate as P	10-50000 mg/kg
Sulfate	10-50000 mg/kg

## Properties

### Biosolids Corrosivity/pH (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-CORR-SLD</a>
	QC	<a href="#">QC-CORR-SLD</a>
	RR	<a href="#">RR-CORR-SLD</a>

Analyte	Concentration
Corrosivity (pH)	2.0-12 SI Units

### Biosolids Solids (Non-TNI/State Specific)

Store at 4 °C

Provided as a 40 g pre-spiked biosolids matrix in a 4 oz glass jar.

Part Numbers	PT	<a href="#">PT-SOL-SLD</a>
	QC	<a href="#">QC-SOL-SLD</a>
	RR	<a href="#">RR-SOL-SLD</a>

Analyte	Concentration
Total Solids	50.0-95.0 %
Percent Moisture	5.0-90.0 %
Volatile Solids	2.5-70.0 %
Fixed Solids	5.0-90.0 %

## Nutrients / Minerals

### Biosolids Nutrients (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-NUT-SLD</a>
	QC	<a href="#">QC-NUT-SLD</a>
	RR	<a href="#">RR-NUT-SLD</a>

Analyte	Concentration
Ammonia as N	1000-30000 mg/kg
Total Kjeldahl Nitrogen (TKN)	15000-200000 mg/kg
Total Phosphorous	15000-100000 mg/kg

## Metals

### Biosolids Trace Metals (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 10 g pre-spiked biosolids matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-MET-SLD</a>
	QC	<a href="#">QC-MET-SLD</a>
	RR	<a href="#">RR-MET-SLD</a>

Analyte	Concentration
Aluminum	1000-50000 mg/kg
Antimony	80-300 mg/kg
Arsenic	40-400 mg/kg
Barium	59-3000 mg/kg
Beryllium	30-400 mg/kg
Boron	80-800 mg/kg
Cadmium	40-400 mg/kg
Calcium	1500-50000 mg/kg
Chromium	40-400 mg/kg
Cobalt	30-400 mg/kg
Copper	40-2500 mg/kg
Iron	1000-50000 mg/kg
Lead	40-400 mg/kg
Magnesium	1200-25000 mg/kg
Manganese	100-2000 mg/kg
Mercury	1.0-50 mg/kg
Molybdenum	5.0-300 mg/kg
Nickel	40-500 mg/kg
Potassium	1400-25000 mg/kg
Selenium	40-400 mg/kg
Silver	20-250 mg/kg
Sodium	150-15000 mg/kg
Thallium	40-400 mg/kg
Tin	75-250 mg/kg
Vanadium	40-400 mg/kg
Zinc	70-1500 mg/kg





# Soil/ Hazardous Waste

## INORGANIC

Phenova Soil/HW PT standards are 100% dry weight, so percent moisture analysis is not required. In addition to saving time with these convenient standards, your lab can also decrease costs by switching to Phenova Soil/HW PT standards. These standards are provided in sufficient amounts for at least two methods unless otherwise noted. All standards are compliant with EPA, TNI and/or state specific criteria.

# Inorganic Standards

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
SOIL/HW Anions	<a href="#">PT-AN-SOIL</a>		<a href="#">QC-AN-SOIL</a>		<a href="#">RR-AN-SOIL</a>		Q	53
SOIL/HW Corrosivity/pH	<a href="#">PT-CORR-SOIL</a>		<a href="#">QC-CORR-SOIL</a>		<a href="#">RR-CORR-SOIL</a>		Q	52
SOIL/HW Cyanide	<a href="#">PT-CN-SOIL</a>		<a href="#">QC-CN-SOIL</a>		<a href="#">RR-CN-SOIL</a>		Q	53
SOIL/HW Flash Point	<a href="#">PT-FP-SOIL</a>		<a href="#">QC-FP-SOIL</a>		<a href="#">RR-FP-SOIL</a>		Q	52
SOIL/HW Hexavalent Chromium	<a href="#">PT-CR6-SOIL</a>		<a href="#">QC-CR6-SOIL</a>		<a href="#">RR-CR6-SOIL</a>		Q	51
SOIL/HW Metals	<a href="#">PT-MET-SOIL</a>		<a href="#">QC-MET-SOIL</a>		<a href="#">RR-MET-SOIL</a>		Q	51
SOIL/HW Nutrients	<a href="#">PT-NUT-SOIL</a>		<a href="#">QC-NUT-SOIL</a>		<a href="#">RR-NUT-SOIL</a>		Q	52
SOIL/HW Oil and Grease	<a href="#">PT-OGR-SOIL</a>		<a href="#">QC-OGR-SOIL</a>		<a href="#">RR-OGR-SOIL</a>		Q	52
SOIL/HW TPH	<a href="#">PT-TPH-SOIL</a>		<a href="#">QC-TPH-SOIL</a>		<a href="#">RR-TPH-SOIL</a>		Q	52
<b>Non-TNI and State Specific Standards</b>								
SOIL/HW Amenable Cyanide	<a href="#">PT-CNA-SOIL</a>		<a href="#">QC-CNA-SOIL</a>		<a href="#">RR-CNA-SOIL</a>		Q	53
SOIL/HW California WET Metals	<a href="#">PT-CAWETMET-SOIL</a>		<a href="#">QC-CAWETMET-SOIL</a>		<a href="#">RR-CAWETMET-SOIL</a>		Q	51
SOIL/HW Nitrite as N	<a href="#">PT-NO2-SOIL</a>		<a href="#">QC-NO2-SOIL</a>		<a href="#">RR-NO2-SOIL</a>		Q	52
SOIL/HW Particle Size	<a href="#">PT-PSA-SOIL</a>		<a href="#">QC-PSA-SOIL</a>		<a href="#">RR-PSA-SOIL</a>		Q	52
SOIL/HW Perchlorate	<a href="#">PT-PERC-SOIL</a>		<a href="#">QC-PERC-SOIL</a>		<a href="#">RR-PERC-SOIL</a>		Q	53
SOIL/HW Reactive Cyanide	<a href="#">PT-CNR-SOIL</a>		<a href="#">QC-CNR-SOIL</a>		<a href="#">RR-CNR-SOIL</a>		Q	53
SOIL/HW Reactive Sulfide	<a href="#">PT-S2R-SOIL</a>		<a href="#">QC-S2R-SOIL</a>		<a href="#">RR-S2R-SOIL</a>		Q	53
SOIL/HW Sand, Silt, and Clay	<a href="#">PT-SSC-SOIL</a>		<a href="#">QC-SSC-SOIL</a>		<a href="#">RR-SSC-SOIL</a>		Q	52
SOIL/HW Solids	<a href="#">PT-SOL-SOIL</a>		<a href="#">QC-SOL-SOIL</a>		<a href="#">RR-SOL-SOIL</a>		Q	52
TCLP Metals	<a href="#">PT-TCLPMET-SOIL</a>		<a href="#">QC-TCLPMET-SOIL</a>		<a href="#">RR-TCLPMET-SOIL</a>		Q	51
SOIL/HW Total Organic Halides (TOX)			<a href="#">QC-TOX-SOIL</a>		<a href="#">RR-TOX-SOIL</a>		RR	53
SOIL/HW Total Sulfide	<a href="#">PT-S2T-SOIL</a>		<a href="#">QC-S2T-SOIL</a>		<a href="#">RR-S2T-SOIL</a>		Q	53

## PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Q	✓			✓			✓			✓	
RR	Product only available as a Rapid Return and Quality Control standard										





# Metals

## SOIL/HW Trace Metals

Store at 20-25 °C

Part Numbers	PT	<a href="#">PT-MET-SOIL</a>
	QC	<a href="#">QC-MET-SOIL</a>
	RR	<a href="#">RR-MET-SOIL</a>

Analyte	Concentration
Aluminum	2500- 25000 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	1500-25000 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	1-250 mg/kg
Magnesium	1200-25000 mg/kg
Manganese	100-2000 mg/kg
Mercury	1.0-35 mg/kg
Molybdenum	30-300 mg/kg
Nickel	40-500 mg/kg
Potassium	1400-25000 mg/kg
Selenium	40-400 mg/kg
Silver	20-100 mg/kg
Sodium	150-15000 mg/kg
Strontium	40-400 mg/kg
Thallium	40-400 mg/kg
Tin	50-250 mg/kg
Titanium	40-1000 mg/kg
Uranium	20-100 mg/kg
Vanadium	40-400 mg/kg
Zinc	100-1000 mg/kg

## SOIL/HW Hexavalent Chromium

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-CR6-SOIL</a>
	QC	<a href="#">QC-CR6-SOIL</a>
	RR	<a href="#">RR-CR6-SOIL</a>

Analyte	Concentration
Chromium VI	40-300 mg/kg

## SOIL/HW California WET Metals (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a >20g Ottawa sand matrix in a 40mL vial with a >20 mL spiking solution in water preserved with 2% HNO<sub>3</sub> (v/v) contained in a 24mL clear glass vial.

Part Numbers	PT	<a href="#">PT-CAWETMET-SOIL</a>
	QC	<a href="#">QC-CAWETMET-SOIL</a>
	RR	<a href="#">RR-CAWETMET-SOIL</a>

Analyte	Concentration
Aluminum	1.0-40 mg/L
Antimony	0.80-10 mg/L
Arsenic	0.70-10 mg/L
Barium	0.9-25 mg/L
Beryllium	0.050-10 mg/L
Boron	7.0-20 mg/L
Cadmium	0.050-10 mg/L
Chromium	0.10-10 mg/L
Cobalt	0.20-10 mg/L
Copper	0.40-10 mg/L
Iron	1.0-40 mg/L
Lead	0.50-30 mg/L
Manganese	0.50-40 mg/L
Molybdenum	0.50-6.0 mg/L
Nickel	0.50-30 mg/L
Selenium	0.50-20 mg/L
Silver	0.20-10 mg/L
Strontium	0.30-5.0 mg/L
Thallium	0.50-10 mg/L
Vanadium	0.50-20 mg/L
Zinc	1.0-20 mg/L

## SOIL/TCLP Metals (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a > 100 mL concentrate in water preserved with 2% HNO<sub>3</sub> contained in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-TCLPMET-SOIL</a>
	QC	<a href="#">QC-TCLPMET-SOIL</a>
	RR	<a href="#">RR-TCLPMET-SOIL</a>

Analyte	Concentration
Antimony	1.0-5.0 mg/L
Arsenic	1.0-5.0 mg/L
Barium	1.0-5.0 mg/L
Beryllium	1.0-5.0 mg/L
Boron	1.0-5.0 mg/L
Cadmium	1.0-5.0 mg/L
Chromium	1.0-5.0 mg/L
Cobalt	1.0-5.0 mg/L
Copper	1.0-5.0 mg/L
Lead	1.0-5.0 mg/L
Mercury	0.10-3.0 mg/L
Nickel	1.0-5.0 mg/L
Selenium	1.0-5.0 mg/L
Silver	1.0-5.0 mg/L
Thallium	1.0-5.0 mg/L
Zinc	1.0-5.0 mg/L

## Minerals/ Nutrients

### SOIL/HW Nitrite as N (Non-TNI/State Specific)

Store at 4 °C

Provided as a 20g Ottawa sand matrix in a 40mL vial with a 5mL spiking solution in water flame sealed in a 5 mL amber ampoule.

Part Numbers	PT	<a href="#">PT-NO2-SOIL</a>
	QC	<a href="#">QC-NO2-SOIL</a>
	RR	<a href="#">RR-NO2-SOIL</a>

Analyte	Concentration
Nitrite as N	10-500 mg/kg

### SOIL/HW Nutrients

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-NUT-SOIL</a>
	QC	<a href="#">QC-NUT-SOIL</a>
	RR	<a href="#">RR-NUT-SOIL</a>

Analyte	Concentration
Ammonia as N	300-3000 mg/kg
Total Kjeldahl Nitrogen (TKN)	400-4000 mg/kg
Total Organic Carbon (TOC)	1000-15000 mg/kg
Total Phosphorous	300-3000 mg/kg

## Oil & Gease/TPH

### SOIL/HW Oil & Grease

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-OGR-SOIL</a>
	QC	<a href="#">QC-OGR-SOIL</a>
	RR	<a href="#">RR-OGR-SOIL</a>

Analyte	Concentration
Oil & Grease (n-Hexane Extractable material)	300-3000 mg/kg

### SOIL/HW Total Petroleum Hydrocarbons

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-TPH-SOIL</a>
	QC	<a href="#">QC-TPH-SOIL</a>
	RR	<a href="#">RR-TPH-SOIL</a>

Analyte	Concentration
Total Petroleum Hydrocarbons	300-3000 mg/kg

## Properties

### SOIL/HW Corrosivity/pH

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-CORR-SOIL</a>
	QC	<a href="#">QC-CORR-SOIL</a>
	RR	<a href="#">RR-CORR-SOIL</a>

Analyte	Concentration
Corrosivity (pH)	2.0-12 SI Units

### SOIL/HW Flash Point

Store at 20-25 °C

Provided as a 90mL ready to use standard contained in three 40mL vials, each vial containing 30 mL of the standard.

Part Numbers	PT	<a href="#">PT-FP-SOIL</a>
	QC	<a href="#">QC-FP-SOIL</a>
	RR	<a href="#">RR-FP-SOIL</a>

Analyte	Concentration
Ignitability (flashpoint)	100-200 °F

### SOIL/HW Particle Size (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 100 g ready to use standard in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-PSA-SOIL</a>
	QC	<a href="#">QC-PSA-SOIL</a>
	RR	<a href="#">RR-PSA-SOIL</a>

Analyte	Concentration
Sand (>75 µm)	1.0-50 %

### SOIL/HW Sand, Silt, and Clay (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 100 g ready to use standard in a 125 mL poly bottle.

Part Numbers	PT	<a href="#">PT-SSC-SOIL</a>
	QC	<a href="#">QC-SSC-SOIL</a>
	RR	<a href="#">RR-SSC-SOIL</a>

Analyte	Concentration
Sand	1.0-99 %
Silt	1.0-99 %
Clay	1.0-99 %

### SOIL/HW Solids (Non-TNI/State Specific)

Store at 4 °C

Provided as a 40 g pre-spiked soil matrix in a 4 oz glass jar.

Part Numbers	PT	<a href="#">PT-SOL-SOIL</a>
	QC	<a href="#">QC-SOL-SOIL</a>
	RR	<a href="#">RR-SOL-SOIL</a>

Analyte	Concentration
Total Solids	70-90 %
Fixed Solids	50-100 %
Volatile Solids	5.0-20 %
Percent Moisture	10-30 %

## Miscellaneous

### SOIL/HW Total Organic Halides (Non-TNI/State Specific)

Store at 4 °C

Provided as a 20g pre-spiked soil matrix flame sealed in a >20mL amber ampoule.

Part Numbers	PT	
	QC	<a href="#">QC-TOX-SOIL</a>
	RR	<a href="#">RR-TOX-SOIL</a>

Analyte	Concentration
Total Organic Halides (TOX)	50-500 mg/kg

### SOIL/HW Anions

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-AN-SOIL</a>
	QC	<a href="#">QC-AN-SOIL</a>
	RR	<a href="#">RR-AN-SOIL</a>

Analyte	Concentration
Bromide	10-100mg/kg
Chloride	200-1000 mg/kg
Fluoride	25-500 mg/kg
Nitrate as N	25-500 mg/kg
Orthophosphate as P	25-500 mg/kg
Sulfate	25-2000 mg/kg

### SOIL/HW Cyanide

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-CN-SOIL</a>
	QC	<a href="#">QC-CN-SOIL</a>
	RR	<a href="#">RR-CN-SOIL</a>

Analyte	Concentration
Cyanide, total	20-200 mg/kg

### SOIL/HW Amenable Cyanide (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 40g Ottawa sand matrix in a 40 mL vial with a >20 mL spiking solution in water contained in a 23 mL amber glass vial.

Part Numbers	PT	<a href="#">PT-CNA-SOIL</a>
	QC	<a href="#">QC-CNA-SOIL</a>
	RR	<a href="#">RR-CNA-SOIL</a>

Analyte	Concentration
Amenable Cyanide	10 -50 mg/kg

### SOIL/HW Reactive Cyanide (Non-TNI/State Specific)

Store at 4 °C

Provided as a 40g Ottawa sand matrix in a 40 mL vial with a >20mL spiking solution in water contained in a 23 mL amber glass vial.

Part Numbers	PT	<a href="#">PT-CNR-SOIL</a>
	QC	<a href="#">QC-CNR-SOIL</a>
	RR	<a href="#">RR-CNR-SOIL</a>

Analyte	Concentration
Reactive Cyanide	10-50 mg/kg

### SOIL/HW Reactive Sulfide (Non-TNI/State Specific)

Store at 4 °C

Provided as a 20g Ottawa sand matrix in a 40 mL vial with a >20mL spiking solution in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-S2R-SOIL</a>
	QC	<a href="#">QC-S2R-SOIL</a>
	RR	<a href="#">RR-S2R-SOIL</a>

Analyte	Concentration
Reactive Sulfide	50-1500 mg/kg

### SOIL/HW Total Sulfide (Non-TNI/State Specific)

Store at 4 °C

Provided as a 20g Ottawa sand matrix in a 40 mL vial with a >20mL spiking solution in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-S2T-SOIL</a>
	QC	<a href="#">QC-S2T-SOIL</a>
	RR	<a href="#">RR-S2T-SOIL</a>

Analyte	Concentration
Total Sulfide	200-1000 mg/kg

### SOIL/HW Perchlorate (Non-TNI/State Specific)

Store at 20-25 °C

Provided as a 40 g pre-spiked soil matrix in a 2 oz glass jar.

Part Numbers	PT	<a href="#">PT-PERC-SOIL</a>
	QC	<a href="#">QC-PERC-SOIL</a>
	RR	<a href="#">RR-PERC-SOIL</a>

Analyte	Concentration
Perchlorate	100-500 µg/kg





**SOIL/HAZARDOUS WASTE**  
(INORGANIC)



A vibrant field of sunflowers under a clear blue sky with a few wispy clouds. The sunflowers are in full bloom, with bright yellow petals and dark brown centers. The field stretches to the horizon. A dark, semi-transparent rectangular overlay is positioned in the upper left, containing the title text in white.

# Soil/ Hazardous Waste

## ORGANIC

Phenova Soil/HW PT standards are 100% dry weight, so percent moisture analysis is not required. In addition to saving time with these convenient standards, your lab can also decrease costs by switching to Phenova Soil/HW PT standards. All standards are compliant with EPA, TNI and/or state specific criteria. TCLP standards include RCRA specified analytes. These standards are provided in sufficient amounts for at least two methods, unless otherwise noted.

# Organic Standards

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
<b>TNI Standards</b>								
SOIL/HW BNAs	<a href="#">PT-BNA-SOIL</a>		<a href="#">QC-BNA-SOIL</a>		<a href="#">RR-BNA-SOIL</a>		Q	59
SOIL/HW BTEX	<a href="#">PT-BTEX-SOIL</a>		<a href="#">QC-BTEX-SOIL</a>		<a href="#">RR-BTEX-SOIL</a>		Q	58
SOIL/HW Chlordane	<a href="#">PT-CHLR-SOIL</a>		<a href="#">QC-CHLR-SOIL</a>		<a href="#">RR-CHLR-SOIL</a>		Q	60
SOIL/HW Diesel	<a href="#">PT-DIES-SOIL</a>		<a href="#">QC-DIES-SOIL</a>		<a href="#">RR-DIES-SOIL</a>		Q	63
SOIL/HW Gasoline	<a href="#">PT-GAS-SOIL</a>		<a href="#">QC-GAS-SOIL</a>		<a href="#">RR-GAS-SOIL</a>		Q	63
SOIL/HW Herbicides	<a href="#">PT-HERB-SOIL</a>		<a href="#">QC-HERB-SOIL</a>		<a href="#">RR-HERB-SOIL</a>		Q	61
SOIL/HW PAHs	<a href="#">PT-PAH-SOIL</a>		<a href="#">QC-PAH-SOIL</a>		<a href="#">RR-PAH-SOIL</a>		Q	62
SOIL/HW PCBs	<a href="#">PT-PCB-SOIL</a>		<a href="#">QC-PCB-SOIL</a>		<a href="#">RR-PCB-SOIL</a>		Q	62
SOIL/HW PCBs in Oil	<a href="#">PT-PCBO-SOIL</a>		<a href="#">QC-PCBO-SOIL</a>		<a href="#">RR-PCBO-SOIL</a>		Q	62
SOIL/HW Pesticides	<a href="#">PT-PEST-SOIL</a>		<a href="#">QC-PEST-SOIL</a>		<a href="#">RR-PEST-SOIL</a>		Q	61
SOIL/HW Toxaphene	<a href="#">PT-TXP-SOIL</a>		<a href="#">QC-TXP-SOIL</a>		<a href="#">RR-TXP-SOIL</a>		Q	61
SOIL/HW Volatiles	<a href="#">PT-VOA-SOIL</a>		<a href="#">QC-VOA-SOIL</a>		<a href="#">RR-VOA-SOIL</a>		Q	57
SOIL/HW Medium Level Volatile	<a href="#">PT-VOAM-SOIL</a>		<a href="#">QC-VOAM-SOIL</a>		<a href="#">RR-VOAM-SOIL</a>		Q	58
SOIL/HW VOA-GC	<a href="#">PT-VOAGC-SOIL</a>		<a href="#">QC-VOAGC-SOIL</a>		<a href="#">RR-VOAGC-SOIL</a>		Jan/Jul	57
SOIL/HW VOA-GC Medium Level	<a href="#">PT-VOAMGC-SOIL</a>		<a href="#">QC-VOAMGC-SOIL</a>		<a href="#">RR-VOAMGC-SOIL</a>		Jan/Jul	58
<b>Non-TNI and State Specific Standards</b>								
SOIL/HW Carbamates			<a href="#">QC-CARB-SOIL</a>		<a href="#">RR-CARB-SOIL</a>		RR	60
SOIL/HW Explosives	<a href="#">PT-EXP-SOIL</a>		<a href="#">QC-EXP-SOIL</a>		<a href="#">RR-EXP-SOIL</a>		Q	63
SOIL/HW Explosives by 8330B	<a href="#">PT-8330B-SOIL</a>		<a href="#">QC-8330B-SOIL</a>		<a href="#">RR-8330B-SOIL</a>		Q	63
SOIL/HW Gasoline Additives	<a href="#">PT-ADD-SOIL</a>		<a href="#">QC-ADD-SOIL</a>		<a href="#">RR-ADD-SOIL</a>		Q	63
SOIL/HW Glycols	<a href="#">PT-GLYCOL-SOIL</a>		<a href="#">QC-GLYCOL-SOIL</a>		<a href="#">RR-GLYCOL-SOIL</a>		Q	59
Soil/HW Nitrogen and Triazine Pesticide Set	<a href="#">PT-NPESTSET-SOIL</a>		<a href="#">QC-NPESTSET-SOIL</a>		<a href="#">RR-NPESTSET-SOIL</a>		Q	60
Soil/HW Nitrogen	<a href="#">PT-NPEST-SOIL</a>		<a href="#">QC-NPEST-SOIL</a>		<a href="#">RR-NPEST-SOIL</a>		Q	60
Soil/HW Triazine	<a href="#">PT-TRIAZINE-SOIL</a>		<a href="#">QC-TRIAZINE-SOIL</a>		<a href="#">RR-TRIAZINE-SOIL</a>		Q	60
Soil/HW NJ EPH	<a href="#">PT-NJEPH-SOIL</a>		<a href="#">QC-NJEPH-SOIL</a>		<a href="#">RR-NJEPH-SOIL</a>		Apr/Oct	63
SOIL/HW Organic Phosphorous Pesticides	<a href="#">PT-OPP-SOIL</a>		<a href="#">QC-OPP-SOIL</a>		<a href="#">RR-OPP-SOIL</a>		Q	60
SOIL/HW PCB Congeners	<a href="#">PT-CNG-SOIL</a>		<a href="#">QC-CNG-SOIL</a>		<a href="#">RR-CNG-SOIL</a>		Apr/Oct	62
SOIL/HW TCLP Herbicides	<a href="#">PT-TCLPHERB-SOIL</a>		<a href="#">QC-TCLPHERB-SOIL</a>		<a href="#">RR-TCLPHERB-SOIL</a>		Q	64
SOIL/HW TCLP Pesticides	<a href="#">PT-TCLPPEST-SOIL</a>		<a href="#">QC-TCLPPEST-SOIL</a>		<a href="#">RR-TCLPPEST-SOIL</a>		Q	64
SOIL/HW TCLP Semivolatiles	<a href="#">PT-TCLPBNA-SOIL</a>		<a href="#">QC-TCLPBNA-SOIL</a>		<a href="#">RR-TCLPBNA-SOIL</a>		Q	64
SOIL/HW TCLP Volatiles	<a href="#">PT-TCLPVOA-SOIL</a>		<a href="#">QC-TCLPVOA-SOIL</a>		<a href="#">RR-TCLPVOA-SOIL</a>		Q	64

## PT Availability Legend

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

Q    ✓                    ✓                    ✓                    ✓

RR    Product only available as a Rapid Return and Quality Control standard

# Volatiles

## SOIL/HW Volatiles

Store at 4 °C

Provided as a >10g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA methods 8021 and 8260.

Part Numbers	PT	<a href="#">PT-VOA-SOIL</a>
	QC	<a href="#">QC-VOA-SOIL</a>
	RR	<a href="#">RR-VOA-SOIL</a>

Analyte	Concentration
Acetone	200-1000 µg/kg
Acetonitrile	50-200 µg/kg
Acrolein	20-200 µg/kg
Acrylonitrile	20-200 µg/kg
Benzene	20-200 µg/kg
Bromobenzene	40-200 µg/kg
Bromochloromethane	20-200 µg/kg
Bromodichloromethane	20-200 µg/kg
Bromoform	20-200 µg/kg
Bromomethane	80-200 µg/kg
2-Butanone (MEK)	100-500 µg/kg
n-Butylbenzene	20-200 µg/kg
sec-Butylbenzene	20-200 µg/kg
tert-Butylbenzene	20-200 µg/kg
Carbon disulfide	20-200 µg/kg
Carbon tetrachloride	20-200 µg/kg
Chloroacetaldehyde	20-200 µg/kg
Chlorobenzene	20-200 µg/kg
Chlorodibromomethane	20-200 µg/kg
Chloroethane	80-200 µg/kg
bis(2-Chloroethyl)ether	20-200 µg/kg
bis(2-Chloroethoxy)methane	20-200 µg/kg
bis(2-Chloroisopropyl)ether	20-200 µg/kg
2-Chloroethylvinylether	20-200 µg/kg
Chloroform	20-200 µg/kg
Chloromethane	80-200 µg/kg
2-Chlorotoluene	20-200 µg/kg
4-Chlorotoluene	20-200 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	40-200 µg/kg
1,2-Dibromoethane (EDB)	40-200 µg/kg
Dibromomethane	20-200 µg/kg
1,2-Dichlorobenzene	20-200 µg/kg
1,3-Dichlorobenzene	20-200 µg/kg
1,4-Dichlorobenzene	20-200 µg/kg
Dichlorodifluoromethane	80-200 µg/kg
1,1-Dichloroethane	20-200 µg/kg
1,2-Dichloroethane	20-200 µg/kg
1,1-Dichloroethene	40-200 µg/kg
cis-1,2-Dichloroethene	40-200 µg/kg
trans-1,2-Dichloroethene	40-200 µg/kg
1,2-Dichloropropane	20-200 µg/kg
1,3-Dichloropropane	20-200 µg/kg
2,2-Dichloropropane	20-200 µg/kg
1,1-Dichloropropene	20-200 µg/kg
cis-1,3-Dichloropropene	40-200 µg/kg
trans-1,3-Dichloropropene	40-200 µg/kg
DIPE	20-200 µg/kg

## Analyte

Analyte	Concentration
Ethylbenzene	20-200 µg/kg
Hexachloroethane	20-200 µg/kg
Hexachlorobutadiene	20-200 µg/kg
2-Hexanone	80-400 µg/kg
Isopropylbenzene	40-200 µg/kg
p-Isopropyltoluene	20-200 µg/kg
Methylene chloride (Dichloromethane)	20-200 µg/kg
Methyl-tert-butyl ether (MTBE)	20-200 µg/kg
4-Methyl-2-pentanone (MIBK)	80-400 µg/kg
Naphthalene	40-200 µg/kg
n-Propylbenzene	20-200 µg/kg
Styrene	40-200 µg/kg
TAME	20-200 µg/kg
1,1,1,2-Tetrachloroethane	20-200 µg/kg
1,1,2,2-Tetrachloroethane	20-200 µg/kg
Tetrachloroethene	20-200 µg/kg
Toluene	20-200 µg/kg
1,2,3-Trichlorobenzene	20-200 µg/kg
1,2,4-Trichlorobenzene	40-200 µg/kg
1,1,1-Trichloroethane	20-200 µg/kg
1,1,2-Trichloroethane	20-200 µg/kg
Trichloroethene	20-200 µg/kg
Trichlorofluoromethane	80-200 µg/kg
1,2,3-Trichloropropane	40-200 µg/kg
1,2,4-Trimethylbenzene	20-200 µg/kg
1,3,5-Trimethylbenzene	20-200 µg/kg
Vinyl acetate	20-200 µg/kg
Vinyl chloride	80-200 µg/kg
m+p-Xylene	20-200 µg/kg
o-Xylene	20-200 µg/kg
Xylenes, total	40-400 µg/kg

## SOIL/HW VOA-GC

Store at 4 °C

Provided as a >10g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Use with EPA method 8021.

Part Numbers	PT	<a href="#">PT-VOAGC-SOIL</a>
	QC	<a href="#">QC-VOAGC-SOIL</a>
	RR	<a href="#">RR-VOAGC-SOIL</a>

## Analyte

Analyte	Concentration
Benzene	20-200 µg/kg
Chlorobenzene	20-200 µg/kg
1,2-Dichlorobenzene	20-200 µg/kg
1,3-Dichlorobenzene	20-200 µg/kg
1,4-Dichlorobenzene	20-200 µg/kg
Ethylbenzene	20-200 µg/kg
Isopropylbenzene	40-200 µg/kg
Methyl-tert-butyl ether (MTBE)	20-200 µg/kg
Naphthalene	40-200 µg/kg
1,2,4-Trimethylbenzene	20-200 µg/kg
1,3,5-Trimethylbenzene	20-200 µg/kg
Toluene	20-200 µg/kg
m+p-Xylene	20-200 µg/kg
o-Xylene	20-200 µg/kg
Xylenes, total	40-400 µg/kg





## Volatiles cont'd

### SOIL/HW Medium Level Volatiles

Store at 4 °C

Provided as a 5g pre-spiked soil matrix and 5mL methanol flame sealed in a 10mL amber ampoule. Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA methods 8021 and 8260.

Part Numbers	PT	<a href="#">PT-VOAM-SOIL</a>
	QC	<a href="#">QC-VOAM-SOIL</a>
	RR	<a href="#">RR-VOAM-SOIL</a>

Analyte	Concentration
Acetone	4000-20000 µg/kg
Acetonitrile	5000-15000 µg/kg
Acrolein	1000-15000 µg/kg
Acrylonitrile	1000-10000 µg/kg
Benzene	1000-10000 µg/kg
Bromobenzene	2000-10000 µg/kg
Bromochloromethane	1000-10000 µg/kg
Bromodichloromethane	1000-10000 µg/kg
Bromoform	1000-10000 µg/kg
Bromomethane	2000-10000 µg/kg
2-Butanone (MEK)	4000-20000 µg/kg
n-Butylbenzene	1000-10000 µg/kg
sec-Butylbenzene	1000-10000 µg/kg
tert-Butylbenzene	1000-10000 µg/kg
Carbon disulfide	1000-15000 µg/kg
Carbon tetrachloride	1000-10000 µg/kg
Chloroacetaldehyde	1000-15000 µg/kg
Chlorobenzene	1000-10000 µg/kg
Chlorodibromomethane	1000-10000 µg/kg
Chloroethane	2000-10000 µg/kg
bis(2-Chloroethyl)ether	1000-15000 µg/kg
bis(2-Chloroethoxy)methane	1000-15000 µg/kg
2,2'-Oxybis(1-chloropropane)	1000-15000 µg/kg
2-Chloroethylvinylether	1000-15000 µg/kg
Chloroform	1000-10000 µg/kg
Chloromethane	2000-10000 µg/kg
2-Chlorotoluene	1000-10000 µg/kg
4-Chlorotoluene	1000-10000 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	2000-10000 µg/kg
1,2-Dibromoethane(EDB)	2000-10000 µg/kg
Dibromomethane	2000-10000 µg/kg
1,2-Dichlorobenzene	1000-10000 µg/kg
1,3-Dichlorobenzene	1000-10000 µg/kg
1,4-Dichlorobenzene	1000-10000 µg/kg
Dichlorodifluoromethane	2000-10000 µg/kg
1,1-Dichloroethane	1000-10000 µg/kg
1,2-Dichloroethane	1500-10000 µg/kg
1,1-Dichloroethene	2000-10000 µg/kg
cis-1,2-Dichloroethene	2000-10000 µg/kg
trans-1,2-Dichloroethene	2000-10000 µg/kg
1,2-Dichloropropane	2000-10000 µg/kg
1,3-Dichloropropane	1000-10000 µg/kg
2,2-Dichloropropane	1000-10000 µg/kg
1,1-Dichloropropene	1000-10000 µg/kg
cis-1,3-Dichloropropene	2000-10000 µg/kg
trans-1,3-Dichloropropene	2000-10000 µg/kg
DIPE	1000-10000 µg/kg
Ethylbenzene	1000-10000 µg/kg
Freon 113	1000-15000 µg/kg
Hexachlorobutadiene	1500-15000 µg/kg
Hexachloroethane	1500-15000 µg/kg
2-Hexanone	4000-20000 µg/kg
Isopropylbenzene	2000-10000 µg/kg
p-Isopropyltoluene	1000-10000 µg/kg
Methylene chloride (Dichloromethane)	1000-10000 µg/kg
2-Methylnaphthalene	1000-12000 µg/kg

Analyte	Concentration
Methyl-tert-butyl ether (MTBE)	2000-10000 µg/kg
4-Methyl-2-pentanone (MIBK)	4000-20000 µg/kg
Naphthalene	2000-10000 µg/kg
Nitrobenzene	1500-15000 µg/kg
n-Propylbenzene	1000-15000 µg/kg
Styrene	2000-10000 µg/kg
TAME	1000-10000 µg/kg
1,1,1,2-Tetrachloroethane	1000-10000 µg/kg
1,1,2,2-Tetrachloroethane	1500-10000 µg/kg
Tetrachloroethene	1000-10000 µg/kg
Toluene	1000-10000 µg/kg
1,2,3-Trichlorobenzene	1000-10000 µg/kg
1,2,4-Trichlorobenzene	2000-10000 µg/kg
1,2,3-Trichloropropane	1500-10000 µg/kg
1,1,1-Trichloroethane	1000-10000 µg/kg
1,1,2-Trichloroethane	1000-10000 µg/kg
Trichloroethene	1000-10000 µg/kg
Trichlorofluoromethane	2000-10000 µg/kg
1,2,4-Trimethylbenzene	1000-10000 µg/kg
1,3,5-Trimethylbenzene	1000-10000 µg/kg
Vinyl acetate	1000-15000 µg/kg
Vinyl chloride	2000-10000 µg/kg
m+p-Xylene	1000-10000 µg/kg
o-Xylene	1000-10000 µg/kg
Total Xylenes	2000-20000 µg/kg

### SOIL/HW VOA-GC Medium Level

Store at 4 °C

Provided as a 5g pre-spiked soil matrix and 5mL methanol flame sealed in a 10mL amber ampoule. Use with EPA method 8021.

Part Numbers	PT	<a href="#">PT-VOAMGC-SOIL</a>
	QC	<a href="#">QC-VOAMGC-SOIL</a>
	RR	<a href="#">RR-VOAMGC-SOIL</a>

Analyte	Concentration
1,2,4-Trimethylbenzene	1000-10000 µg/kg
1,2-Dichlorobenzene	1000-10000 µg/kg
1,3,5-Trimethylbenzene	1000-10000 µg/kg
1,3-Dichlorobenzene	1000-10000 µg/kg
1,4-Dichlorobenzene	1000-10000 µg/kg
Benzene	1000-10000 µg/kg
Chlorobenzene	1000-10000 µg/kg
Ethylbenzene	1000-10000 µg/kg
Isopropylbenzene	2000-10000 µg/kg
Methyl-tert-butyl ether (MTBE)	2000-10000 µg/kg
Naphthalene	2000-10000 µg/kg
Toluene	1000-10000 µg/kg
m+p-Xylene	1000-10000 µg/kg
o-Xylene	1000-10000 µg/kg
Xylenes, total	2000-10000 µg/kg

### SOIL/HW BTEX

Store at 4 °C

Provided as a > 10 g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Use with EPA method 8021.

Part Numbers	PT	<a href="#">PT-BTEX-SOIL</a>
	QC	<a href="#">QC-BTEX-SOIL</a>
	RR	<a href="#">RR-BTEX-SOIL</a>

Analyte	Concentration
Benzene	20-200 µg/kg
Ethylbenzene	20-200 µg/kg
Methyl-tert-butyl ether (MTBE)	20-200 µg/kg
Toluene	20-200 µg/kg
m+p-Xylene	20-200 µg/kg
o-Xylene	20-200 µg/kg
Xylenes, total	40-400 µg/kg



## Semi-Volatiles

### SOIL/HW BNAs

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame-sealed in 20mL amber ampoules. Contains at least 60% of the EPA and TNI analytes randomly selected. Use with EPA method 8270.

Part Numbers	PT	<a href="#">PT-BNA-SOIL</a>
	QC	<a href="#">QC-BNA-SOIL</a>
	RR	<a href="#">RR-BNA-SOIL</a>

Analyte	Concentration
Acenaphthene	1000-12000 µg/kg
Acenaphthylene	1000-12000 µg/kg
2-Amino-1-methylbenzene	500-10000 µg/kg
Aniline	500-10000 µg/kg
Anthracene	1000-12000 µg/kg
Benzo(a)anthracene	1000-12000 µg/kg
Benzo(b)fluoranthene	1000-12000 µg/kg
Benzo(k)fluoranthene	1000-12000 µg/kg
Benzo(g,h,i)perylene	1000-12000 µg/kg
Benzo(a)pyrene	1000-12000 µg/kg
Benzidine	500-10000 µg/kg
Benzoic acid	500-10000 µg/kg
Benzotrichloride	500-10000 µg/kg
Benzyl alcohol	500-10000 µg/kg
Benzyl chloride	500-10000 µg/kg
4-Bromophenyl-phenylether	1500-15000 µg/kg
Butyl benzyl phthalate	1500-15000 µg/kg
Carbazole	500-10000 µg/kg
4-Chloroaniline	500-10000 µg/kg
4-Chloro-3-methylphenol	1500-15000 µg/kg
Bis(2-chloroethoxy)methane	1500-15000 µg/kg
Bis(2-chloroethyl)ether	1500-15000 µg/kg
2,2'-Oxybis(1-chloropropane)	1500-15000 µg/kg
1-Chloronaphthalene	500-10000 µg/kg

Chrysene	1000-12000 µg/kg
Dibenzo(a,h)anthracene	1000-12000 µg/kg
Dibenzofuran	1500-15000 µg/kg
Di-n-butylphthalate	1500-15000 µg/kg
1,2-Dichlorobenzene	1500-15000 µg/kg
1,3-Dichlorobenzene	1500-15000 µg/kg
1,4-Dichlorobenzene	1500-15000 µg/kg
3,3'-Dichlorobenzidine	500-10000 µg/kg
2,4-Dichlorophenol	1500-15000 µg/kg
2,6-Dichlorophenol	1500-15000 µg/kg
Diethylphthalate	1500-15000 µg/kg
2,4-Dimethylphenol	3000-15000 µg/kg
Dimethylphthalate	1500-15000 µg/kg
2,4-Dinitrophenol	3000-15000 µg/kg
2,4-Dinitrotoluene	1500-15000 µg/kg
2,6-Dinitrotoluene	1500-15000 µg/kg
Di-n-octylphthalate	1500-15000 µg/kg
Bis(2-ethylhexyl)phthalate	1500-15000 µg/kg
Fluoranthene	1000-12000 µg/kg
Fluorene	1000-12000 µg/kg
Hexachlorobenzene	1500-15000 µg/kg
Hexachlorobutadiene	1500-15000 µg/kg
Hexachlorocyclohexane	500-10000 µg/kg
Hexachlorocyclopentadiene	1500-15000 µg/kg
Hexachloroethane	1500-15000 µg/kg
Indeno(1,2,3-cd)pyrene	1000-12000 µg/kg
Isophorone	1500-15000 µg/kg
2-Methyl-4,6-Dinitrophenol	3000-15000 µg/kg
2-Methylnaphthalene	1000-12000 µg/kg
2-Methylphenol	3000-15000 µg/kg
4-Methylphenol (and/or 3-Methylphenol)	3000-15000 µg/kg

Analyte	Concentration
Naphthalene	1000-12000 µg/kg
2-Nitroaniline	500-10000 µg/kg
3-Nitroaniline	500-10000 µg/kg
4-Nitroaniline	500-10000 µg/kg
Nitrobenzene	1500-15000 µg/kg
2-Nitrophenol	3000-15000 µg/kg
3-Nitrophenol	500-10000 µg/kg
4-Nitrophenol	3000-15000 µg/kg
N-Nitrosodiethylamine	1500-15000 µg/kg
N-Nitrosodimethylamine	1500-15000 µg/kg
N-Nitrosodiphenylamine	1500-15000 µg/kg
N-Nitroso-di-n-propylamine	1500-15000 µg/kg
Pentachlorobenzene	500-10000 µg/kg
Pentachlorophenol	3000-15000 µg/kg
Phenanthrene	1000-12000 µg/kg
Phenol	1500-15000 µg/kg
Pyrene	1000-12000 µg/kg
Pyridine	500-10000 µg/kg
1,2,3,4-Tetrachlorobenzene	500-10000 µg/kg
1,2,3,5-Tetrachlorobenzene	500-10000 µg/kg
1,2,4,5-Tetrachlorobenzene	500-10000 µg/kg
2,3,4,5-Tetrachlorophenol	500-10000 µg/kg
2,3,4,6-Tetrachlorophenol	500-10000 µg/kg
1,2,3-Trichlorobenzene	500-10000 µg/kg
1,2,4-Trichlorobenzene	1500-15000 µg/kg
1,3,5-Trichlorobenzene	500-10000 µg/kg
2,4,5-Trichlorophenol	1500-15000 µg/kg
2,4,6-Trichlorophenol	1500-15000 µg/kg

### SOIL/HW Glycols (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix sealed in 20mL amber ampoules. Use with EPA method 8015.

Part Numbers	PT	<a href="#">PT-GLYCOL-SOIL</a>
	QC	<a href="#">QC-GLYCOL-SOIL</a>
	RR	<a href="#">RR-GLYCOL-SOIL</a>

Analyte	Concentration
Propylene glycol	75-200 µg/kg
Ethylene glycol	75-200 µg/kg
Diethylene glycol	75-200 µg/kg
Triethylene glycol	75-200 µg/kg
Tetraethylene glycol	75-200 µg/kg



## Pesticides

### SOIL/HW Carbamates (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame sealed in 20mL amber ampoules.

Contains a random selection of analytes listed below. Use with EPA methods 8318 and 8321.

Part Numbers	PT	<a href="#">PT-CARB-SOIL</a>
	QC	<a href="#">QC-CARB-SOIL</a>
	RR	<a href="#">RR-CARB-SOIL</a>

Analyte	Concentration
Aldicarb	25-5000 µg/kg
Aldicarb sulfone	25-5000 µg/kg
Aldicarb sulfoxide	25-5000 µg/kg
Carbaryl	25-5000 µg/kg
Carbofuran	25-5000 µg/kg
Dioxacarb	25-5000 µg/kg
Diuron	25-5000 µg/kg
3-Hydroxycarbofuran	25-5000 µg/kg
Methiocarb	25-5000 µg/kg
Methomyl	25-5000 µg/kg
Oxamyl	25-5000 µg/kg
Propham	25-5000 µg/kg
Promecarb	25-5000 µg/kg
Propoxur	25-5000 µg/kg

### SOIL/HW Chlordane

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame sealed in 20mL amber ampoules.

Use with EPA method 8081.

Part Numbers	PT	<a href="#">PT-CHLR-SOIL</a>
	QC	<a href="#">QC-CHLR-SOIL</a>
	RR	<a href="#">RR-CHLR-SOIL</a>

Analyte	Concentration
Chlordane	100-1000 µg/kg

### Soil/HW Nitrogen and Triazine Pesticide Set (Non-TNI/State Specific)

Store at 4 °C

This complete set includes both Soil Nitrogen and Triazine Pesticides.

Part Numbers	PT	<a href="#">PT-NPESTSET-SOIL</a>
	QC	<a href="#">QC-NPESTSET-SOIL</a>
	RR	<a href="#">RR-NPESTSET-SOIL</a>

Analyte	Concentration
Ametryn	500-5000 µg/kg
Anilazine	1000-6000 µg/kg

### SOIL/HW Nitrogen Pesticides (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame sealed in 20mL amber ampoules.

Contains a random selection of analytes listed below. Use with EPA method 8141.

Part Numbers	PT	<a href="#">PT-NPEST-SOIL</a>
	QC	<a href="#">QC-NPEST-SOIL</a>
	RR	<a href="#">RR-NPEST-SOIL</a>

Analyte	Concentration
Alachlor	500-5000 µg/kg
Bromacil	500-5000 µg/kg
Butachlor	500-5000 µg/kg
Butylate	500-5000 µg/kg
EPTC (Eptam, s-ethyl-dipropyl thio carbamate)	500-5000 µg/kg
Hexazinone	500-5000 µg/kg
Metolachlor	500-5000 µg/kg
Metribuzin	500-5000 µg/kg
Napropamide	500-5000 µg/kg
Pronamide (Kerb)	500-5000 µg/kg
Propachlor (Ramrod)	500-5000 µg/kg
Terbacil	500-5000 µg/kg
Trifluralin	500-5000 µg/kg

### SOIL/HW Triazine Pesticides (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x30g of pre-spiked standard in a 20mL flame sealed ampoule.

Contains analytes randomly selected. Use with EPA method 8141.

Part Numbers	PT	<a href="#">PT-TRIAZINE-SOIL</a>
	QC	<a href="#">QC-TRIAZINE-SOIL</a>
	RR	<a href="#">RR-TRIAZINE-SOIL</a>

Analyte	Concentration
Ametryn	500-5000 µg/kg
Anilazine	1000-6000 µg/kg
Atraton	500-5000 µg/kg
Atrazine	500-5000 µg/kg
Cyanazine	500-5000 µg/kg
Deethyl atrazine	500-5000 µg/kg
Deisopropyl atrazine	500-5000 µg/kg
Diamino atrazine	500-5000 µg/kg
Prometon	500-5000 µg/kg
Prometryn	500-5000 µg/kg
Propazine	500-5000 µg/kg
Simazine	500-5000 µg/kg

### SOIL/HW OPPs (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x30g of pre-spiked standard in a 20mL flame sealed ampoule.

Contains analytes randomly selected. Use with EPA method 8141.

Part Numbers	PT	<a href="#">PT-OPP-SOIL</a>
	QC	<a href="#">QC-OPP-SOIL</a>
	RR	<a href="#">RR-OPP-SOIL</a>

Analyte	Concentration
Azinphos-methyl (Guthion)	100-1000 µg/kg
Chlorpyrifos	100-1000 µg/kg
Demeton-o	100-1000 µg/kg
Demeton-s	100-1000 µg/kg
Demeton O & S	200-2000 µg/kg
Diazinon	100-1000 µg/kg
Dichlorvos	100-1000 µg/kg
Disulfoton	100-1000 µg/kg
Malathion	100-1000 µg/kg
Parathion, ethyl	100-1000 µg/kg
Parathion, methyl	100-1000 µg/kg
Phorate	100-1000 µg/kg
Ronnel	100-1000 µg/kg
Stirophos	100-1000 µg/kg
Terbufos	100-1000 µg/kg

## SOIL/HW Pesticides

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame sealed in 20mL amber ampoules. Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA method 8081.

Part Numbers	PT	<a href="#">PT-PEST-SOIL</a>
	QC	<a href="#">QC-PEST-SOIL</a>
	RR	<a href="#">RR-PEST-SOIL</a>

Analyte	Concentration
Aldrin	50-500 µg/kg
alpha-BHC	50-500 µg/kg
beta-BHC	50-500 µg/kg
delta-BHC	50-500 µg/kg
gamma-BHC (Lindane)	50-500 µg/kg
alpha-Chlordane	50-500 µg/kg
gamma-Chlordane	50-500 µg/kg
4,4'-DDD	50-500 µg/kg
4,4'-DDE	50-500 µg/kg
4,4'-DDT	50-500 µg/kg
Dieldrin	50-500 µg/kg
Endosulfan I	50-500 µg/kg
Endosulfan II	50-500 µg/kg
Endosulfan sulfate	50-500 µg/kg
Endrin	50-500 µg/kg
Endrin aldehyde	50-500 µg/kg
Endrin ketone	50-500 µg/kg
Heptachlor	50-500 µg/kg
Heptachlor epoxide	50-500 µg/kg
Methoxychlor	50-500 µg/kg

## SOIL/HW Toxaphene

Store at 4 °C

Provided as 2x30g of pre-spiked standard in a 20mL flame sealed ampoule. Use with EPA method 8081.

Part Numbers	PT	<a href="#">PT-TXP-SOIL</a>
	QC	<a href="#">QC-TXP-SOIL</a>
	RR	<a href="#">RR-TXP-SOIL</a>

Analyte	Concentration
Toxaphene	200-2000 µg/kg

## Herbicides

### SOIL/HW Herbicides

Store at 4 °C

Provided as 2x30g pre-spiked soil matrix flame sealed in 20mL amber ampoules. Contains all of the EPA and TNI analytes and other randomly selected analytes. Use with EPA method 8151. *Note: 4-Nitrophenol is not within the TNI ranges.*

Part Numbers	PT	<a href="#">PT-HERB-SOIL</a>
	QC	<a href="#">QC-HERB-SOIL</a>
	RR	<a href="#">RR-HERB-SOIL</a>

Analyte	Concentration
Acifluorfen	100-1000 µg/kg
Bentazon	100-1000 µg/kg
Chloramben	100-1000 µg/kg
2,4-D	100-1000 µg/kg
Dacthal (DCPA diacid)	100-1000 µg/kg
Dalapon	100-1000 µg/kg
2,4-DB	100-1000 µg/kg
Dicamba	100-1000 µg/kg
3,5-Dichlorobenzoic acid	100-1000 µg/kg
Dichloroprop (Dichloroprop)	100-1000 µg/kg
Dinoseb	100-1000 µg/kg
MCPA	1000-50000 µg/kg
MCPP	1000-50000 µg/kg
4-Nitrophenol	100-1000 µg/kg
Pentachlorophenol	100-1000 µg/kg
Picloram	100-1000 µg/kg
2,4,5-T	100-1000 µg/kg
2,4,5-TP (Silvex)	100-1000 µg/kg



## Polychlorinated Biphenyls (PCBs)

### SOIL/HW PCBs

Store at 4 °C

Provided as 2x30g of pre-spiked standard in a 20mL flame sealed ampoule. Contains one Aroclor randomly selected. Use with EPA method 8082.

Part Numbers	PT	<a href="#">PT-PCB-SOIL</a>
	QC	<a href="#">QC-PCB-SOIL</a>
	RR	<a href="#">RR-PCB-SOIL</a>

Analyte	Concentration
Aroclor 1016	1-50 mg/kg
Aroclor 1221	1-50 mg/kg
Aroclor 1232	1-50 mg/kg
Aroclor 1242	1-50 mg/kg
Aroclor 1246	1-50 mg/kg
Aroclor 1254	1-50 mg/kg
Aroclor 1260	1-50 mg/kg
Total PCBs	1-50 mg/kg

### SOIL/HW PCBs in Oil

Store at 20-25 °C

Provided as a 10mL flamed sealed ampoule containing approximately 5g of spiked transformer oil. Use with EPA method 8082.

Part Numbers	PT	<a href="#">PT-PCBO-SOIL</a>
	QC	<a href="#">QC-PCBO-SOIL</a>
	RR	<a href="#">RR-PCBO-SOIL</a>

Analyte	Concentration
Aroclor 1016	10-50-mg/kg
Aroclor 1242	10-50-mg/kg
Aroclor 1254	10-50-mg/kg
Aroclor 1260	10-50-mg/kg

### Soil/HW PCB Congeners (Non-NELAC/State Specific)

Store at 4 °C

The standard is provided as 2x20g of pre-spiked soil in 40mL vials. Contains a random selection of analytes listed. Use with EPA methods 1668 and 8082.

Part Numbers	PT	<a href="#">PT-CNG-SOIL</a>
	QC	<a href="#">QC-CNG-SOIL</a>
	RR	<a href="#">RR-CNG-SOIL</a>

Analyte	Concentration
2,4'-Dichlorobiphenyl (PCB 8)	1.0 - 40 µg/kg
2,2',5'-Trichlorobiphenyl (PCB 18)	1.0 - 40 µg/kg
2,4,4'-Trichlorobiphenyl (PCB 28)	1.0 - 40 µg/kg
2,2',3,5'-Tetrachlorobiphenyl (PCB 44)	1.0 - 40 µg/kg
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	1.0 - 40 µg/kg
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	1.0 - 40 µg/kg
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	1.0 - 40 µg/kg
3,4,4',5'-Tetrachlorobiphenyl (PCB 81)	1.0 - 40 µg/kg
2,2',4,5,5'-Pentachlorobiphenyl (PCB 101)	1.0 - 40 µg/kg
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	1.0 - 40 µg/kg
2,3,4,4',5'-Pentachlorobiphenyl (PCB 114)	1.0 - 40 µg/kg
2,3',4,4',5'-Pentachlorobiphenyl (PCB 118)	1.0 - 40 µg/kg
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	1.0 - 40 µg/kg
3,3',4,4',5'-Pentachlorobiphenyl (PCB 126)	1.0 - 40 µg/kg
2,2',3,3',4,4'-Hexachlorobiphenyl (PCB 128)	1.0 - 40 µg/kg
2,2',3,4,4',5'-Hexachlorobiphenyl (PCB 138)	1.0 - 40 µg/kg
2,2',4,4',5,5'-Hexachlorobiphenyl (PCB 153)	1.0 - 40 µg/kg
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 156)	1.0 - 40 µg/kg
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	1.0 - 40 µg/kg
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	1.0 - 40 µg/kg
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	1.0 - 40 µg/kg
2,2',3,3',4,4',5'-Heptachlorobiphenyl (PCB 170)	1.0 - 40 µg/kg
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	1.0 - 40 µg/kg
2,2',3,4',5,5',6'-Heptachlorobiphenyl (PCB 187)	1.0 - 40 µg/kg
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	1.0 - 40 µg/kg
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 195)	1.0 - 40 µg/kg
2,2',3,3',4,4',5,5',6'-Nonachlorobiphenyl (PCB 206)	1.0 - 40 µg/kg
Decachlorobiphenyl (PCB 209)	1.0 - 40 µg/kg
Total PCBs	1.0 - 720 µg/kg

## Polycyclic Aromatic Hydrocarbons (PAHs)

### SOIL/HW PAHs

Store at 4 °C

Provided as 2x30g of pre-spiked standard in a 20mL flame sealed ampoule. Contains at least 80% of the EPA and TNI analytes randomly selected. Use with EPA method 8310 and 8270.

Part Numbers	PT	<a href="#">PT-PAH-SOIL</a>
	QC	<a href="#">QC-PAH-SOIL</a>
	RR	<a href="#">RR-PAH-SOIL</a>

Analyte	Concentration
Acenaphthene	150-1000 µg/kg
Acenaphthylene	150-1000 µg/kg
Anthracene	100-1000 µg/kg
Benzo(a)anthracene	50-500 µg/kg
Benzo(b)fluoranthene	50-500 µg/kg
Benzo(k)fluoranthene	50-500 µg/kg
Benzo(g,h,i)perylene	100-1000 µg/kg
Benzo(a)pyrene	50-500 µg/kg
Chrysene	50-500 µg/kg
Dibenz(a,h)anthracene	50-500 µg/kg
Fluoranthene	100-1000 µg/kg
Fluorene	50-500 µg/kg
Indeno(1,2,3-cd)pyrene	50-500 µg/kg
2-Methylnaphthalene	50-500 µg/kg
Naphthalene	150-1000 µg/kg
Phenanthrene	100-1000 µg/kg
Pyrene	50-500 µg/kg



## Petroleum Hydrocarbons / Fuels

### SOIL/HW Gasoline

Store at 4 °C

Provided as a > 1g soil matrix in a 40mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2mL amber ampoule. Use with modified EPA method 8015 GC/FID with purge and trap.

Part Numbers	PT	<a href="#">PT-GAS-SOIL</a>
	QC	<a href="#">QC-GAS-SOIL</a>
	RR	<a href="#">RR-GAS-SOIL</a>

Analyte	Concentration
Gasoline Range Organics (GRO)	100-2000 mg/kg
Benzene	1-300 mg/kg
Toluene	1-300 mg/kg
Ethylbenzene	1-300 mg/kg
m+p-Xylene	0.5-150 mg/kg
o-Xylene	0.5-150 mg/kg
Xylenes, Total	1-300 mg/kg

### SOIL/HW Gasoline Additives (Non-TNI/State Specific)

Store at 4 °C

Provided as a > 10g soil matrix in a 40mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Use with EPA method 8260.

Part Numbers	PT	<a href="#">PT-ADD-SOIL</a>
	QC	<a href="#">QC-ADD-SOIL</a>
	RR	<a href="#">RR-ADD-SOIL</a>

Analyte	Concentration
Methyl-tert-butyl ether (MTBE)	20-200 µg/kg
DIPE	20-200 µg/kg
ETBE	20-200 µg/kg
Freon 11	20-200 µg/kg
Freon 113	20-200 µg/kg
1-Phenylpropane	20-200 µg/kg
TAME	20-200 µg/kg
tert-Butyl alcohol	100-500 µg/kg

### SOIL/HW Diesel

Store at 4 °C

Provided as 2x20g pre-spiked soil matrix flame sealed in 20mL amber ampoules. Use with EPA modified EPA 8015 GC/FID method.

Part Numbers	PT	<a href="#">PT-DIES-SOIL</a>
	QC	<a href="#">QC-DIES-SOIL</a>
	RR	<a href="#">RR-DIES-SOIL</a>

Analyte	Concentration
Diesel Range Organics (DRO)	300-3000-mg/kg

### NJ EPH (Non-TNI State Specific)

Store at 4±2°C.

The standard is provided as 2x20.0 ± 0.2g of pre-spiked soil in 20mL flame sealed ampoules.

Part Numbers	PT	<a href="#">PT-NJEPH-SOIL</a>
	QC	<a href="#">QC-NJEPH-SOIL</a>
	RR	<a href="#">RR-NJEPH-SOIL</a>

Analyte	Concentration
C9 to C12 Aliphatic Hydrocarbons	10.0-2000 mg/kg
C12 to C16 Aliphatics	10.0-2000 mg/kg
C16 to C21 Aliphatics	10.0-2000 mg/kg
C21 to C40 Aliphatics	10.0-2000 mg/kg
Total Aliphatics	40.0-8000 mg/kg
C10 to C12 Aromatics	10.0-2000 mg/kg
C12 to C16 Aromatics	10.0-2000 mg/kg
C16 to C21 Aromatics	10.0-2000 mg/kg
C21 to C36 Aromatics	10.0-2000 mg/kg
Total Aromatics	40.0-8000 mg/kg
Total EPH	80.0-16000 mg/kg

## Explosives

### SOIL/HW Explosives (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x10g of pre-spiked standard in a 20mL flame sealed ampule. Contains a random selection of analytes listed. Use with EPA methods 8330 and 8091.

Part Numbers	PT	<a href="#">PT-EXP-SOIL</a>
	QC	<a href="#">QC-EXP-SOIL</a>
	RR	<a href="#">RR-EXP-SOIL</a>

Analyte	Concentration
4-amino-2,6-dinitrotoluene	500-5000 µg/kg
2-amino-4,6-dinitrotoluene	500-5000 µg/kg
3,5-Dinitroaniline	500-5000 µg/kg
1,3-Dinitrobenzene	500-5000 µg/kg
2,4-Dinitrotoluene	500-5000 µg/kg
2,6-Dinitrotoluene	500-5000 µg/kg
HMX	500-5000 µg/kg
Nitrobenzene	500-5000 µg/kg
Nitroglycerin	500-5000 µg/kg
2-Nitrotoluene	500-5000 µg/kg
3-Nitrotoluene	500-5000 µg/kg
4-Nitrotoluene	500-5000 µg/kg
Pentaerythritoltetranitrate (PETN)	500-5000 µg/kg
RDX	500-5000 µg/kg
Tetryl	500-5000 µg/kg
1,3,5-Trinitrobenzene	500-5000 µg/kg
2,4,6-Trinitrotoluene	500-5000 µg/kg

### SOIL/HW Explosives by 8330B (Non-TNI/State Specific)

Store at 4 °C

Provided as a 500 g pre-spiked soil matrix in a 1 L amber glass bottle.

Contains a random selection of analytes listed below. Use with EPA method 8330B.

Part Numbers	PT	<a href="#">PT-8330B-SOIL</a>
	QC	<a href="#">QC-8330B-SOIL</a>
	RR	<a href="#">RR-8330B-SOIL</a>

Analyte	Concentration
4-amino-2,6-dinitrotoluene	500-5000 µg/kg
2-amino-4,6-dinitrotoluene	500-5000 µg/kg
3,5-Dinitroaniline	500-5000 µg/kg
1,3-Dinitrobenzene	500-5000 µg/kg
2,4-Dinitrotoluene	500-5000 µg/kg
2,6-Dinitrotoluene	500-5000 µg/kg
HMX	500-5000 µg/kg
Nitrobenzene	500-5000 µg/kg
Nitroglycerin	500-5000 µg/kg
2-Nitrotoluene	500-5000 µg/kg
3-Nitrotoluene	500-5000 µg/kg
4-Nitrotoluene	500-5000 µg/kg
Pentaerythritoltetranitrate (PETN)	500-5000 µg/kg
RDX	500-5000 µg/kg
Tetryl	500-5000 µg/kg
1,3,5-Trinitrobenzene	500-5000 µg/kg
2,4,6-Trinitrotoluene	500-5000 µg/kg

## Soil / HW TCLP

### SOIL/HW TCLP Herbicides (Non-TNI/State Specific)

Store at 4 °C

Provided as a >2mL concentrate in acetonitrile flame sealed in a 2mL amber ampoule. Contains a random selection of analytes listed below. listed below. Use with EPA method 8151.

Part Numbers	PT	<a href="#">PT-TCLPHERB-SOIL</a>
	QC	<a href="#">QC-TCLPHERB-SOIL</a>
	RR	<a href="#">RR-TCLPHERB-SOIL</a>

Analyte	Concentration
2,4-D	10-1000 µg/L
Dalapon	10-1000 µg/L
2,4-DB	10-1000 µg/L
Dicamba	10-1000 µg/L
Dinoseb	10-1000 µg/L
MCPP	10-1000 µg/L
Pentachlorophenol	100-500 µg/L
2,4,5-T	10-1000 µg/L
2,4,5-TP (Silvex)	10-1000 µg/L

### SOIL/HW TCLP Pesticides (Non-TNI/State Specific)

Store at 4 °C

Provided as a >2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains a random selection of analytes listed below. Use with EPA method 8081.

Part Numbers	PT	<a href="#">PT-TCLPPEST-SOIL</a>
	QC	<a href="#">QC-TCLPPEST-SOIL</a>
	RR	<a href="#">RR-TCLPPEST-SOIL</a>

Analyte	Concentration
gamma-BHC (Lindane)	10-100 µg/L
Endrin	10-100 µg/L
Heptachlor	10-100 µg/L
Heptachlor Epoxide	10-100 µg/L
Methoxychlor	10-100 µg/L

### SOIL/HW TCLP Volatiles (Non-TNI/State Specific)

Store at 4 °C

Provided as a >1 mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains a random selection of analytes listed below. Use with EPA methods 8021 and 8260.

Part Numbers	PT	<a href="#">PT-TCLPVOA-SOIL</a>
	QC	<a href="#">QC-TCLPVOA-SOIL</a>
	RR	<a href="#">RR-TCLPVOA-SOIL</a>

Analyte	Concentration
Benzene	50-2000 µg/L
2-Butanone (MEK)	50-2000 µg/L
Carbon tetrachloride	50-2000 µg/L
Chlorobenzene	50-2000 µg/L
Chloroform	50-2000 µg/L
1,4-Dichlorobenzene	50-2000 µg/L
1,2-Dichloroethane	50-2000 µg/L
1,1-Dichloroethene	50-2000 µg/L
Tetrachloroethene	50-2000 µg/L
Trichloroethene	50-2000 µg/L
Vinyl chloride	50-2000 µg/L

### SOIL/HW TCLP Semi-Volatiles (Non-TNI/State Specific)

Store at 4 °C

Provided as a >2mL concentrate in methanol flame sealed in a 2mL amber ampoule. Contains a random selection of analytes listed below. Use with EPA method 8270.

Part Numbers	PT	<a href="#">PT-TCLPBNA-SOIL</a>
	QC	<a href="#">QC-TCLPBNA-SOIL</a>
	RR	<a href="#">RR-TCLPBNA-SOIL</a>

Analyte	Concentration
1,4-Dichlorobenzene	1000-2000 µg/L
2,4-Dinitrotoluene	1000-2000 µg/L
Hexachlorobenzene	1000-2000 µg/L
Hexachlorobutadiene	1000-2000 µg/L
Hexachloroethane	1000-2000 µg/L
2-Methylphenol	1000-2000 µg/L
4-Methylphenol (and/or 3-Methylphenol)	1000-2000 µg/L
Nitrobenzene	1000-2000 µg/L
Pentachlorophenol	1000-2000 µg/L
Pyridine	1000-2000 µg/L
2,4,5-Trichlorophenol	1000-2000 µg/L
2,4,6-Trichlorophenol	1000-2000 µg/L





# UST

## Underground Storage Tank

The Phenova UST Program encompasses virtually all of the various state-specific UST programs. From Massachusetts to Alaska and Iowa to Arizona – not to mention TX 1005 – Phenova UST standards can meet your needs. For labs analyzing gasoline and diesel ranges organics, Phenova offers standards compliant with the relevant TNI programs. All Phenova UST Standards are offered as Rapid Return™ and Quality Control standards to provide you with the quickest delivery possible.

# Underground Storage Tank

Description	Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price		
UST Alaska BTEX in Water	<a href="#">QC-AKBTEX-USTW</a>		<a href="#">RR-AKBTEX-USTW</a>		RR	67
UST Alaska DRO in Water	<a href="#">QC-AKDRO-USTW</a>		<a href="#">RR-AKDRO-USTW</a>		RR	67
UST Alaska GRO in Water	<a href="#">QC-AKGRO-USTW</a>		<a href="#">RR-AKGRO-USTW</a>		RR	67
UST Iowa BTEX in Water	<a href="#">QC-IABTEX-USTW</a>		<a href="#">RR-IABTEX-USTW</a>		RR	67
UST Iowa Diesel in Water	<a href="#">QC-IADIES-USTW</a>		<a href="#">RR-IADIES-USTW</a>		RR	67
UST Iowa Gasoline in Water	<a href="#">QC-IAGAS-USTW</a>		<a href="#">RR-IAGAS-USTW</a>		RR	67
UST MA/NC/WA EPH in Water	<a href="#">QC-EPH-USTW</a>		<a href="#">RR-EPH-USTW</a>		RR	68
UST MA/NC/WA VPH in Water	<a href="#">QC-VPH-USTW</a>		<a href="#">RR-VPH-USTW</a>		RR	68
UST Texas Method 1005 in Water Set	<a href="#">QC-TX1005-USTW</a>		<a href="#">RR-TX1005-USTW</a>		RR	67
UST Wisconsin DRO in Water	<a href="#">QC-WIDRO-USTW</a>		<a href="#">RR-WIDRO-USTW</a>		RR	68
UST Wisconsin GRO in Water	<a href="#">QC-WIGRO-USTW</a>		<a href="#">RR-WIGRO-USTW</a>		RR	68

Description	Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price		
UST Alaska BTEX in Soil	<a href="#">QC-AKBTEX-USTS</a>		<a href="#">RR-AKBTEX-USTS</a>		RR	69
UST Alaska DRO in Soil	<a href="#">QC-AKDRO-USTS</a>		<a href="#">RR-AKDRO-USTS</a>		RR	69
UST Alaska GRO in Soil	<a href="#">QC-AKGRO-USTS</a>		<a href="#">RR-AKGRO-USTS</a>		RR	69
UST Alaska RRO in Soil	<a href="#">QC-AKRRO-USTS</a>		<a href="#">RR-AKRRO-USTS</a>		RR	69
UST Arizona TPH in Soil	<a href="#">QC-AZHC-USTS</a>		<a href="#">RR-AZHC-USTS</a>		RR	69
UST Iowa BTEX in Soil	<a href="#">QC-IABTEX-USTS</a>		<a href="#">RR-IABTEX-USTS</a>		RR	69
UST Iowa Diesel in Soil	<a href="#">QC-IADIES-USTS</a>		<a href="#">RR-IADIES-USTS</a>		RR	69
UST Iowa Gasoline in Soil	<a href="#">QC-IAGAS-USTS</a>		<a href="#">RR-IAGAS-USTS</a>		RR	69
UST MA/NC/WA EPH in Soil	<a href="#">QC-EPH-USTS</a>		<a href="#">RR-EPH-USTS</a>		RR	70
UST MA/NC/WA VPH in Soil	<a href="#">QC-VPH-USTS</a>		<a href="#">RR-VPH-USTS</a>		RR	70
UST Texas Method 1005 in Soil Set	<a href="#">QC-TX1005-USTS</a>		<a href="#">RR-TX1005-USTS</a>		RR	70



# UST - Water Standards

## Alaska

### UST Alaska BTEX in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a > 1 mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with method AK101.

Part Numbers	PT
	QC <a href="#">QC-AKBTEX-USTW</a>
	RR <a href="#">RR-AKBTEX-USTW</a>

Analyte	Concentration
Benzene	5.0-30 µg/L
Ethylbenzene	5.0-30 µg/L
Toluene	5.0-30 µg/L
Xylenes, total	5.0-30 µg/L

### UST Alaska DRO in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with method AK102.

Part Numbers	PT
	QC <a href="#">QC-AKDRO-USTW</a>
	RR <a href="#">RR-AKDRO-USTW</a>

Analyte	Concentration
Diesel Range Organics	800-2300 µg/L

### UST Alaska GRO in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a > 1 mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with method AK101.

Part Numbers	PT
	QC <a href="#">QC-AGRO-USTW</a>
	RR <a href="#">RR-AGRO-USTW</a>

Analyte	Concentration
Gasoline Range Organics	100-500 µg/L

## Iowa

### Iowa BTEX in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 15 g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2mL amber ampoule. Use with EPA method 802 and OA-1.

Part Numbers	PT
	QC <a href="#">QC-IABTEX-USTW</a>
	RR <a href="#">RR-IABTEX-USTW</a>

Analyte	Concentration
Benzene	5-1000 µg/L
Ethylbenzene	5-1000 µg/L
Toluene	5-1000 µg/L
Xylenes, total	5-1000 µg/L

### UST Iowa Diesel in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with method OA-2.

Part Numbers	PT
	QC <a href="#">QC-IADIES-USTW</a>
	RR <a href="#">RR-IADIES-USTW</a>

Analyte	Concentration
Diesel	500-100000 µg/L

### UST Iowa Gasoline in Water (Non-TNI/State Specific)

Store at 4 °C  
 Provided as a > 1mL concentrate in methanol flame sealed in a 2mL amber ampoule.  
 Use with method OA-1.

Part Numbers	PT
	QC <a href="#">QC-IAGAS-USTW</a>
	RR <a href="#">RR-IAGAS-USTW</a>

Analyte	Concentration
Gasoline	500-100000 µg/L

## Texas

### UST Texas Method 1005 in Water Set (Non-TNI/State Specific)

This complete set includes low level and high level standards for TX Method 1005.

Part Numbers	PT
	QC <a href="#">QC-TX1005-USTW</a>
	RR <a href="#">QC-TX1005-USTW</a>



## MA/ WA

### UST MA/WA EPH in Water (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Part Numbers	PT
	QC <a href="#">QC-EPH-USTW</a>
	RR <a href="#">RR-EPH-USTW</a>

**Analyte** **Concentration**

#### Massachusetts / North Carolina

C9 - C18 Aliphatic Hydrocarbons	300-3000 µg/L
C19 - C36 Aliphatic Hydrocarbons	300-3000 µg/L
C11-C22 Aromatic Hydrocarbons	300-3000 µg/L

#### Massachusetts Target Analytes

Acenaphthene	50-1000 µg/L
Acenaphthylene	50-1000 µg/L
Anthracene	50-1000 µg/L
Benzo(a)anthracene	50-1000 µg/L
Benzo(b)fluoranthene	50-1000 µg/L
Benzo(k)fluoranthene	50-1000 µg/L
Benzo(g,h,i)perylene	50-1000 µg/L
Benzo(a)pyrene	50-1000 µg/L
Chrysene	50-1000 µg/L
Dibenz(a,h)anthracene	50-1000 µg/L
Fluoranthene	50-1000 µg/L
Fluorene	50-1000 µg/L
Indeno(1,2,3-cd)pyrene	50-1000 µg/L
Naphthalene	50-1000 µg/L
Phenanthrene	50-1000 µg/L
Pyrene	50-1000 µg/L

#### Washington

C8 - C10 Aliphatic Hydrocarbons	300-3000 µg/L
>C10 - C12 Aliphatic Hydrocarbons	300-3000 µg/L
>C12 - C16 Aliphatic Hydrocarbons	300-3000 µg/L
>C16 - C21 Aliphatic Hydrocarbons	300-3000 µg/L
>C21 - C34 Aliphatic Hydrocarbons	300-3000 µg/L
C8 - C10 Aromatic Hydrocarbons	300-3000 µg/L
>C10 - C12 Aromatic Hydrocarbons	300-3000 µg/L
>C12 - C16 Aromatic Hydrocarbons	300-3000 µg/L
>C16 - C21 Aromatic Hydrocarbons	300-3000 µg/L
>C21 - C34 Aromatic Hydrocarbons	300-3000 µg/L

### UST MA/WA VPH in Water (Non-TNI/State Specific)

Store at 4 °C

Provided as a >1mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Part Numbers	PT
	QC <a href="#">QC-VPH-USTW</a>
	RR <a href="#">RR-VPH-USTW</a>

**Analyte** **Concentration**

#### Massachusetts

C5 - C8 Aliphatic Hydrocarbons	300-3000 µg/L
C9 - C12 Aliphatic Hydrocarbons	300-3000 µg/L
C9 - C10 Aromatic Hydrocarbons	300-3000 µg/L

#### Massachusetts Target Analytes

Benzene	50-1000 µg/L
Ethylbenzene	50-1000 µg/L
Methyl-ter-butyl-ether (MTBE)	50-1000 µg/L
Toluene	50-1000 µg/L
m+p-Xylene	25-500 µg/L
o-Xylene	25-500 µg/L
Xylenes, total	50-1000 µg/L

#### North Carolina

C5 - C8 Aliphatic Hydrocarbons	300-3000 µg/L
C9 - C12 Aliphatic Hydrocarbons	300-3000 µg/L
C9 - C10 Aromatic Hydrocarbons	300-3000 µg/L

#### Washington

C5 - C8 Aliphatic Hydrocarbons	300-3000 µg/L
>C6 - C8 Aliphatic Hydrocarbons	300-3000 µg/L
>C8 - C10 Aliphatic Hydrocarbons	300-3000 µg/L
>C10 - C12 Aliphatic Hydrocarbons	300-3000 µg/L
C8 - C10 Aromatic Hydrocarbons	300-3000 µg/L
>C10 - C12 Aliphatic Hydrocarbons	300-3000 µg/L
>C12 - C13 Aromatic Hydrocarbons	300-3000 µg/L

## Wisconsin

### UST Wisconsin DRO in Water (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2 mL concentrate in acetone flame sealed in a 2 mL amber ampoule.

Part Numbers	PT
	QC <a href="#">QC-WIDRO-USTW</a>
	RR <a href="#">RR-WIDRO-USTW</a>

**Analyte** **Concentration**

Diesel Range Organics (DRO)	200-800 µg/L
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### UST Wisconsin GRO in Water (Non-TNI/State Specific)

Store at 4 °C

Provided as a > 1mL concentrate in methanol flame sealed in a 2 mL amber ampoule.

Part Numbers	PT
	QC <a href="#">QC-WIGRO-USTW</a>
	RR <a href="#">RR-WIGRO-USTW</a>

**Analyte** **Concentration**

Gasoline Range Organics (GRO)	200-600 µg/L
Benzene	20-75 µg/L
Ethylbenzene	20-75 µg/L
Methyl tert-butyl ether (MTBE)	20-75 µg/L
Toluene	20-75 µg/L
1,2,4-Trimethylbenzene	20-75 µg/L
1,3,5-Trimethylbenzene	20-75 µg/L
Xylenes, total	20-150 µg/L

# UST - Soil Standards

## Alaska

### UST Alaska BTEX in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as a 10 g pre-spiked soil matrix and 10 mL of ethanol flame sealed in a 20 mL amber ampoule. Use with method AK101.

Part Numbers	PT	
	QC	<a href="#">QC-AKBTEX-USTS</a>
	RR	<a href="#">RR-AKBTEX-USTS</a>

Analyte	Concentration
Benzene	5.0-100 mg/kg
Ethylbenzene	5.0-100 mg/kg
Toluene	5.0-100 mg/kg
Xylenes, total	5.0-100 mg/kg

### UST Alaska DRO in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as 2 x 20.0 ± 0.2 g of pre-spiked soil in 20 mL flame sealed ampoules. Use with method AK102.

Part Numbers	PT	
	QC	<a href="#">QC-AKDRO-USTS</a>
	RR	<a href="#">RR-AKDRO-USTS</a>

Analyte	Concentration
Diesel Range Organics	30-1500 mg/kg

### UST Alaska GRO in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as a 10 g pre-spiked soil matrix and 10 mL of methanol flame sealed in a 20 mL amber ampoule. Use with method AK101.

Part Numbers	PT	
	QC	<a href="#">QC-AKGRO-USTS</a>
	RR	<a href="#">RR-AKGRO-USTS</a>

Analyte	Concentration
Gasoline Range Organics	30-1500 mg/kg

### UST Alaska RRO in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as 2 x 20.0 ± 0.2 g of pre-spiked soil in 20 mL flame sealed ampoules. Use with method AK103.

Part Numbers	PT	
	QC	<a href="#">QC-AKRRO-USTS</a>
	RR	<a href="#">RR-AKRRO-USTS</a>

Analyte	Concentration
Residual Range Organics	150-2000 mg/kg
C28-C38	150-2000 mg/kg

## Arizona

### UST Arizona TPH in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as 2 x 10 g pre-spiked soil matrix flame sealed in 10 mL amber ampoules. Use with method 8015AZ.

Part Numbers	PT	
	QC	<a href="#">QC-AZHC-USTS</a>
	RR	<a href="#">RR-AZHC-USTS</a>

Analyte	Concentration
Diesel Fraction (C10 - C22)	30-3000 mg/kg
Oil Range Organics (C22 - C32)	100-10000 mg/kg
Total Petroleum Hydrocarbons (C10 - C32)	130-13000 mg/kg

## Iowa

### Iowa BTEX in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as a 15 g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Use with method OA-1.

Part Numbers	PT	
	QC	<a href="#">QC-IABTEX-USTS</a>
	RR	<a href="#">RR-IABTEX-USTS</a>

Analyte	Concentration
Benzene	0.25-10 mg/kg
Ethylbenzene	0.25-10 mg/kg
Toluene	0.25-10 mg/kg
Xylenes, total	0.25-10 mg/kg

### Iowa Diesel in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as 2 x 20 g pre-spiked soil matrix flame sealed in 20 mL amber ampoules. Use with method OA-2.

Part Numbers	PT	
	QC	<a href="#">QC-IADIES-USTS</a>
	RR	<a href="#">RR-IADIES-USTS</a>

Analyte	Concentration
Diesel	10-2000 mg/kg

### Iowa Gas in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as a 15 g soil matrix in a 40 mL VOA vial with a > 1 mL spiking solution in methanol flame sealed in a 2 mL amber ampoule. Use with method OA-1.

Part Numbers	PT	
	QC	<a href="#">QC-IAGAS-USTS</a>
	RR	<a href="#">RR-IAGAS-USTS</a>

Analyte	Concentration
Gasoline	1.0-2000 mg/kg

## MA/WA

### UST MA/WA EPH in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as 2x 20g pre-spiked soil matrix/flame sealed in 20mL amber ampoules.

Part Numbers	PT
	QC <a href="#">QC-EPH-USTS</a>
	RR <a href="#">RR-EPH-USTS</a>

Analyte	Concentration
<b>Massachusetts / North Carolina</b>	
C9 - C18 Aliphatic Hydrocarbons	100-1500 mg/kg
C19 - C36 Aliphatic Hydrocarbons	100-1500 mg/kg
C11-C22 Aromatic Hydrocarbons	100-1500 mg/kg
<b>Massachusetts Target Analytes</b>	
2-Methylnaphthalene	1.0-250 mg/kg
Acenaphthene	1.0-250 mg/kg
Acenaphthylene	1.0-250 mg/kg
Anthracene	1.0-250 mg/kg
Benzo(a)anthracene	1.0-250 mg/kg
Benzo(b)fluoranthene	1.0-250 mg/kg
Benzo(k)fluoranthene	1.0-250 mg/kg
Benzo(g,h,i)perylene	1.0-250 mg/kg
Benzo(a)pyrene	1.0-250 mg/kg
Chrysene	1.0-250 mg/kg
Dibenz(a,h)anthracene	1.0-250 mg/kg
Fluoranthene	1.0-250 mg/kg
Fluorene	1.0-250 mg/kg
Indeno(1,2,3-cd)pyrene	1.0-250 mg/kg
Naphthalene	1.0-250 mg/kg
Phenanthrene	1.0-250 mg/kg
Pyrene	1.0-250 mg/kg
<b>Washington</b>	
C8 - C10 Aliphatic Hydrocarbons	100-1500 mg/kg
>C10 - C12 Aliphatic Hydrocarbons	100-1500 mg/kg
>C12 - C16 Aliphatic Hydrocarbons	100-1500 mg/kg
>C16 - C21 Aliphatic Hydrocarbons	100-1500 mg/kg
>C21 - C34 Aliphatic Hydrocarbons	100-1500 mg/kg
C8 - C10 Aromatic Hydrocarbons	100-1500 mg/kg
>C10 - C12 Aromatic Hydrocarbons	100-1500 mg/kg
>C12 - C16 Aromatic Hydrocarbons	100-1500 mg/kg
>C16 - C21 Aromatic Hydrocarbons	100-1500 mg/kg
>C21 - C34 Aromatic Hydrocarbons	100-1500 mg/kg

### UST MA/WA VPH in Soil (Non-TNI/State Specific)

Store at 4 °C

Provided as a 15g soil matrix in a 40mL VOA vial with a > 1mL spiking solution in methanol/flame sealed in a 2mL amber ampoule.

Part Numbers	PT
	QC <a href="#">QC-VPH-USTS</a>
	RR <a href="#">RR-VPH-USTS</a>

Analyte	Concentration
<b>Massachusetts</b>	
C5 - C8 Aliphatic Hydrocarbons	100-1500 mg/kg
C9 - C12 Aliphatic Hydrocarbons	100-1500 mg/kg
C9 - C10 Aromatic Hydrocarbons	100-1500 mg/kg
<b>Massachusetts Target Analytes</b>	
Benzene	1.0-50 mg/kg
Ethylbenzene	1.0-50 mg/kg
Methyl-ter-butyl-ether (MTBE)	1.0-50 mg/kg
Naphthalene	1.0-50 mg/kg
Toluene	1.0-50 mg/kg
m+p-Xylene	1.0-25 mg/kg
o-Xylene	1.0-25 mg/kg
Xylenes, total	1.0-50 mg/kg
<b>North Carolina</b>	
C5 - C8 Aliphatic Hydrocarbons	100-1500 mg/kg
C9 - C12 Aliphatic Hydrocarbons	100-1500 mg/kg
C9 - C10 Aromatic Hydrocarbons	100-1500 mg/kg
<b>Washington</b>	
C5 - C6 Aliphatic Hydrocarbons	100-1500 mg/kg
>C6 - C8 Aliphatic Hydrocarbons	100-1500 mg/kg
>C8 - C10 Aliphatic Hydrocarbons	100-1500 mg/kg
>C10 - C12 Aliphatic Hydrocarbons	100-1500 mg/kg
C8 - C10 Aliphatic Hydrocarbons	100-1500 mg/kg
>C10 - C12 Aliphatic Hydrocarbons	100-1500 mg/kg
>C12 - C13 Aromatic Hydrocarbons	100-1500 mg/kg

## Texas

### UST Texas Method 1005 in Soil Set (Non-TNI/State Specific)

This complete set includes low level and high level standards for TX Method 1005.

Part Numbers	PT
	QC <a href="#">QC-TX1005-USTS</a>
	RR <a href="#">RR-TX1005-USTS</a>



A photograph of an industrial facility, likely a power plant or refinery, with several tall smokestacks and large storage tanks. The facility is situated near a body of water, and the sky is a mix of blue and orange, suggesting dusk or dawn. The image is overlaid with a dark grey semi-transparent box containing the title text.

# Air & Emissions

## INORGANIC

Phenova air studies encompass both ambient and stack testing methods. The studies are offered quarterly in a variety of different formats, including impinger solutions, filters, and SUMMA canisters – for both organic and inorganic analytes. The AE studies provide ISO 17043 accredited PT standards for you to verify your laboratory's quality program or to seek STAC accreditation. The AE program allows any laboratory performing these analyses to challenge, monitor, and control their quality program.

# Air & Emissions

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
Air Anions/Filter Paper	<a href="#">PT-AN-AIR</a>		<a href="#">QC-AN-AIR</a>		<a href="#">RR-AN-AIR</a>		Q	74
Air Hexavalent Cr/Filter Paper	<a href="#">PT-CR6-AIR</a>		<a href="#">QC-CR6-AIR</a>		<a href="#">RR-CR6-AIR</a>		Q	74
Air Lead/Filter Paper	<a href="#">PT-PB-AIR</a>		<a href="#">QC-PB-AIR</a>		<a href="#">RR-PB-AIR</a>		Q	74
Air Mercury/Filter Paper	<a href="#">PT-HG-AIR</a>		<a href="#">QC-HG-AIR</a>		<a href="#">RR-HG-AIR</a>		Q	74
Air Metals/Filter Paper	<a href="#">PT-MET-AIR</a>		<a href="#">QC-MET-AIR</a>		<a href="#">RR-MET-AIR</a>		Q	74
Air Particulates/Filter Paper	<a href="#">PT-PTC-AIR</a>		<a href="#">QC-PTC-AIR</a>		<a href="#">RR-PTC-AIR</a>		Q	74
Air Fluoride/Impinger Solution	<a href="#">PT-F-AIR</a>		<a href="#">QC-F-AIR</a>		<a href="#">RR-F-AIR</a>		Q	73
Air H <sub>2</sub> SO <sub>4</sub> /Impinger Solution	<a href="#">PT-SO4-AIR</a>		<a href="#">QC-SO4-AIR</a>		<a href="#">RR-SO4-AIR</a>		Q	74
Air Mercury/Impinger Solution	<a href="#">PT-HGS-AIR</a>		<a href="#">QC-HGS-AIR</a>		<a href="#">RR-HGS-AIR</a>		Q	73
Air NOX/Impinger Solution	<a href="#">PT-NOX-AIR</a>		<a href="#">QC-NOX-AIR</a>		<a href="#">RR-NOX-AIR</a>		Q	73
Air Particulates/Impinger Solution	<a href="#">PT-PTS-AIR</a>		<a href="#">QC-PTS-AIR</a>		<a href="#">RR-PTS-AIR</a>		Q	73
Air SO <sub>2</sub> /Impinger Solution	<a href="#">PT-SO2-AIR</a>		<a href="#">QC-SO2-AIR</a>		<a href="#">RR-SO2-AIR</a>		Q	73
Air Trace Metals/Impinger Solution	<a href="#">PT-TMS-AIR</a>		<a href="#">QC-TMS-AIR</a>		<a href="#">RR-TMS-AIR</a>		Q	73

### PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Q	✓			✓			✓			✓	

## Easily Find the Best AE Standard for Your Method

Product	Catalog Number	Method Reference
Air Anions/Filter Paper	<a href="#">PT-AN-AIR</a>	EPA 13A, 13B, 14
Air Hexavalent Cr	<a href="#">PT-CR6-AIR</a>	CARB 039, CARB 425
Air Lead/Filter Paper	<a href="#">PT-PB-AIR</a>	EPA 12
Air Mercury/Filter Paper	<a href="#">PT-HG-AIR</a>	EPA 29
Air Metals/Filter Paper	<a href="#">PT-MET-AIR</a>	EPA 29
Air Particulates/Filter Paper	<a href="#">PT-PTC-AIR</a>	EPA 5
Air H <sub>2</sub> SO <sub>4</sub> /Impinger Solution	<a href="#">PT-SO4-AIR</a>	EPA 8
Air Mercury/Impinger Solution	<a href="#">PT-HGS-AIR</a>	EPA 29/101/101A
Air NOX/Impinger Solution	<a href="#">PT-NOX-AIR</a>	EPA 7
Air Particulates/Impinger Solution	<a href="#">PT-PTS-AIR</a>	EPA 5
Air SO <sub>2</sub> /Impinger Solution	<a href="#">PT-SO2-AIR</a>	EPA 6
Air Trace Metals/Impinger Solution	<a href="#">PT-TMS-AIR</a>	EPA 29

# Inorganic Standards

## Impinger

### Air Mercury, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a >20 mL concentrate in water preserved with 1% (v/v) nitric acid (HNO<sub>3</sub>) + 10 ppm hexavalent chromium contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-HGS-AIR
	QC	QC-HGS-AIR
	RR	RR-HGS-AIR

Analyte	Concentration
Mercury	0.9-200 ng/mL

### Air Trace Metals, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a >20 mL concentrate in water preserved with 2% HNO<sub>3</sub> (v/v) contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-TMS-AIR
	QC	QC-TMS-AIR
	RR	RR-TMS-AIR

Analyte	Concentration
Aluminum	0.01-25 µg/mL
Antimony	0.01-25 µg/mL
Arsenic	0.01-25 µg/mL
Barium	0.01-25 µg/mL
Beryllium	0.01-25 µg/mL
Boron	0.01-25 µg/mL
Cadmium	0.01-25 µg/mL
Chromium	0.01-25 µg/mL
Cobalt	0.01-25 µg/mL
Copper	0.01-25 µg/mL
Iron	0.01-25 µg/mL
Lead	0.01-25 µg/mL
Manganese	0.01-25 µg/mL
Molybdenum	0.01-25 µg/mL
Nickel	0.01-25 µg/mL
Phosphorus	0.01-25 µg/mL
Selenium	0.01-25 µg/mL
Silver	0.01-25 µg/mL
Strontium	0.01-25 µg/mL
Thallium	0.01-25 µg/mL
Vanadium	0.01-25 µg/mL
Zinc	0.01-25 µg/mL

### Air NO<sub>x</sub>, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a > 20 mL concentrate in water contained in a 23 mL clear glass vial.

Part Numbers	PT	PT-NOX-AIR
	QC	QC-NOX-AIR
	RR	RR-NOX-AIR

Analyte	Concentration
NO-x (as NO <sub>2</sub> )	100-2000 mg/dscm

### Air Particulates, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a 500 mL ready to use standard in water contained in a 500 mL poly bottle.

Part Numbers	PT	PT-PTS-AIR
	QC	QC-PTS-AIR
	RR	RR-PTS-AIR

Analyte	Concentration
Particulates	140-800 mg/L

### Air SO<sub>2</sub>, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-SO2-AIR
	QC	QC-SO2-AIR
	RR	RR-SO2-AIR

Analyte	Concentration
Sulfur dioxide (SO <sub>2</sub> )	5.0-2000 mg/dscm

### Air Fluoride, Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a > 20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	PT-F-AIR
	QC	QC-F-AIR
	RR	RR-F-AIR

Analyte	Concentration
Fluoride	1.0-50 mg/dscm



# Inorganic Standards

## Non-Impinger

### Air Metals on Filter Paper (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a pre-spiked, ready to use filter.

Part Numbers	PT	<a href="#">PT-MET-AIR</a>
	QC	<a href="#">QC-MET-AIR</a>
	RR	<a href="#">RR-MET-AIR</a>

Analyte	Concentration
Aluminum	20-400 µg/filter
Antimony	9.0-90 µg/filter
Arsenic	9.0-90 µg/filter
Barium	10-250 µg/filter
Beryllium	5.0-50 µg/filter
Boron	80-200 µg/filter
Cadmium	10-100 µg/filter
Chromium	10-100 µg/filter
Cobalt	10-100 µg/filter
Copper	10-100 µg/filter
Iron	20-400 µg/filter
Lead	10-150 µg/filter
Manganese	20-200 µg/filter
Molybdenum	6-60 µg/filter
Nickel	20-200 µg/filter
Phosphorus	5.0-500 µg/filter
Selenium	10-100 µg/filter
Silver	10-100 µg/filter
Strontium	5.0-50 µg/filter
Thallium	8.0-80 µg/filter
Vanadium	5.0-200 µg/filter
Zinc	30-200 µg/filter

### Air Mercury on Filter Paper (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a 45 mm glass fiber filter and a spiking solution contained in a 24 mL screw top vial. The concentrate is preserved with ~ 2% HNO<sub>3</sub> and 10 ppm hexavalent chromium in water.

Part Numbers	PT	<a href="#">PT-HG-AIR</a>
	QC	<a href="#">QC-HG-AIR</a>
	RR	<a href="#">RR-HG-AIR</a>

Analyte	Concentration
Mercury	0.03-0.30 µg/filter

### Air Hexavalent Chromium on Filter Paper (Non-TNI/State Specific)

Store at 20 -25 °C

The Hexavalent Chromium on Filter Paper standard is provided as a spiking concentrate in a 24 mL screw-top vial. The standard has been provided as a concentrate to be spiked onto the filter media your laboratory uses for normal hexavalent chromium on filter samples.

Part Numbers	PT	<a href="#">PT-CR6-AIR</a>
	QC	<a href="#">QC-CR6-AIR</a>
	RR	<a href="#">RR-CR6-AIR</a>

Analyte	Concentration
Chromium VI	1.0-50 µg/filter

### Air Lead on Filter Paper (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a 45 mm glass fiber filter and a spiking solution contained in a 24 mL screw top vial. The concentrate is preserved with ~ 2% HNO<sub>3</sub> in water.

Part Numbers	PT	<a href="#">PT-PB-AIR</a>
	QC	<a href="#">QC-PB-AIR</a>
	RR	<a href="#">RR-PB-AIR</a>

Analyte	Concentration
Lead	20-350 µg/filter

### Air Particulates on Filter Paper (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a pre-spiked, ready to use filter.

Part Numbers	PT	<a href="#">PT-PTC-AIR</a>
	QC	<a href="#">QC-PTC-AIR</a>
	RR	<a href="#">RR-PTC-AIR</a>

Analyte	Concentration
Particulates	50-2500 mg/filter

### Air H<sub>2</sub>SO<sub>4</sub> Impinger Solution (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a >20 mL concentrate in water contained in a 24 mL clear glass vial.

Part Numbers	PT	<a href="#">PT-SO4-AIR</a>
	QC	<a href="#">QC-SO4-AIR</a>
	RR	<a href="#">RR-SO4-AIR</a>

Analyte	Concentration
Sulfuric Acid	5.0-150 mg/dscm

### Air Anions on Filter (Non-TNI/State Specific)

Store at 20 -25 °C

Provided as a pre-spiked, ready to use filter plus filter blank.

Part Numbers	PT	<a href="#">PT-AN-AIR</a>
	QC	<a href="#">QC-AN-AIR</a>
	RR	<a href="#">RR-AN-AIR</a>

Analyte	Concentration
Chloride	200-1600 µg/HVF
Fluoride	10-80 µg/HVF
Nitrate as N	30-100 µg/HVF
Sulfate	200-2500 µg/HVF





# Air & Emissions

## ORGANIC

Phenova AE Studies encompass both ambient and stack testing methods. The studies are offered quarterly in a variety of different formats – impinger solutions, filters, and SUMMA canisters – for both organic and inorganic analytes. The AE studies provide ISO 17043 accredited PT standards for you to verify your laboratory's quality program or to seek STAC accreditation. The AE program allows any laboratory performing these analyses to challenge, monitor, and control their quality program.

# Air & Emissions

Description	Proficiency Testing		Quality Control		Rapid Return™		PT Availability	Page No.
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price		
Air Formaldehyde/Sorbent Tube	<a href="#">PT-FORM-AIR</a>		<a href="#">QC-FORM-AIR</a>		<a href="#">RR-FORM-AIR</a>		Q	77
Air PAHs/PUF Cartridge	<a href="#">PT-PAH-AIR</a>		<a href="#">QC-PAH-AIR</a>		<a href="#">RR-PAH-AIR</a>		Q	77
Air Volatiles/Charcoal Tube	<a href="#">PT-VOAC-AIR</a>		<a href="#">QC-VOAC-AIR</a>		<a href="#">RR-VOAC-AIR</a>		Q	77
Air Volatiles/TD Tube	<a href="#">PT-VOATD-AIR</a>		<a href="#">QC-VOATD-AIR</a>		<a href="#">RR-VOATD-AIR</a>		Q	78
Air Volatiles/Summa Canister	<a href="#">PT-VOAS-AIR</a>		<a href="#">QC-VOAS-AIR</a>		<a href="#">RR-VOAS-AIR</a>		Q	78

### PT Availability Legend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Q	✓			✓			✓			✓	

## Easily Find the Best AE Standard for Your Method

Product	Catalog Number	Method Reference
Air Formaldehyde/Sorbent Tube	<a href="#">PT-FORM-AIR</a>	CARB 430, TO-11A
Air PAHs/PUF Cartridge	<a href="#">PT-PAH-AIR</a>	TO-13A
Air Volatiles/Charcoal Tube	<a href="#">PT-VOAC-AIR</a>	NIOSH 1501
Air Volatiles/ TD Tube	<a href="#">PT-VOATD-AIR</a>	TO-17, Method 0030-0031
Air Volatiles/Summa Canister	<a href="#">PT-VOAS-AIR</a>	TO-14, TO-15

## Semi-Volatiles

### Air Formaldehyde on Sorbent Tube (Non-TNI/State Specific)

Store at 4 °C

Provided as a > 1 mL concentrate in water flame sealed in a 2mL amber ampoule.

Part Numbers	PT	PT-FORM-AIR
	QC	QC-FORM-AIR
	RR	RR-FORM-AIR

Analyte	Concentration
Formaldehyde	0.50-20 µg/tube

### Air PAHs, PUF Cartridge (Non-TNI/State Specific)

Store at 4 °C

Provided as a 2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

This sample is not preserved.

Part Numbers	PT	PT-PAH-AIR
	QC	QC-PAH-AIR
	RR	RR-PAH-AIR

Analyte	Concentration
Acenaphthene	10-500 µg/PUF
Acenaphthylene	10-500 µg/PUF
Anthracene	10-500 µg/PUF
Benzo(a)anthracene	10-500 µg/PUF
Benzo(b)fluoranthene	10-500 µg/PUF
Benzo(k)fluoranthene	10-500 µg/PUF
Benzo(g,h,i)perylene	10-500 µg/PUF
Benzo(a)pyrene	10-500 µg/PUF
Chrysene	10-500 µg/PUF
Dibenz(a,h)anthracene	10-500 µg/PUF
Fluoranthene	10-500 µg/PUF
Fluorene	10-500 µg/PUF
Indeno(1,2,3-cd)pyrene	10-500 µg/PUF
Naphthalene	10-500 µg/PUF
Phenanthrene	10-500 µg/PUF
Pyrene	10-500 µg/PUF

## Volatiles

### Air Volatiles, Charcoal Tube (Non-TNI/State Specific)

Store at 4 °C

Provided as a 1.2 mL concentrate in methanol flame sealed in a 2 mL amber ampoule.

Part Numbers	PT	PT-VOAC-AIR
	QC	QC-VOAC-AIR
	RR	RR-VOAC-AIR

Analyte	Concentration
Acetone	5.0-100 µg/tube
Acetonitrile	5.0-100 µg/tube
Acrolein	5.0-100 µg/tube
Acrylonitrile	5.0-100 µg/tube
Benzene	5.0-100 µg/tube
Bromobenzene	5.0-100 µg/tube
Bromodichloromethane	5.0-100 µg/tube
Bromoform	5.0-100 µg/tube
Bromomethane	5.0-100 µg/tube
2-Butanone (MEK)	5.0-100 µg/tube
Carbon disulfide	5.0-100 µg/tube
Carbon tetrachloride	5.0-100 µg/tube
Chlorobenzene	5.0-100 µg/tube
Chloroethane	5.0-100 µg/tube
2-Chloroethylvinylether	5.0-100 µg/tube
Chloroform	5.0-100 µg/tube
Chloromethane	5.0-100 µg/tube
Dibromochloromethane	5.0-100 µg/tube
1,2-Dibromo-3-chloropropane (DBCP)	5.0-100 µg/tube
1,2-Dibromoethane (EDB)	5.0-100 µg/tube
Dibromomethane	5.0-100 µg/tube
1,2 Dichlorobenzene	5.0-100 µg/tube
1,3 Dichlorobenzene	5.0-100 µg/tube
1,4 Dichlorobenzene	5.0-100 µg/tube
Dichlorodifluoromethane	5.0-100 µg/tube
1,1-Dichloroethane	5.0-100 µg/tube
1,2 Dichloroethane	5.0-100 µg/tube
cis-1,2-Dichloroethene	5.0-100 µg/tube
1,1-Dichloroethene	5.0-100 µg/tube
trans-1,2-Dichloroethene	5.0-100 µg/tube
1,2-Dichloropropane	5.0-100 µg/tube
cis-1,3-Dichloropropylene	5.0-100 µg/tube
trans-1,3-Dichloropropene	5.0-100 µg/tube
Ethylbenzene	5.0-100 µg/tube
2-Hexanone	5.0-100 µg/tube
Isopropylbenzene	5.0-100 µg/tube
Naphthalene	5.0-100 µg/tube
Methylene Chloride	5.0-100 µg/tube
Methyl tert-butyl ether (MTBE)	5.0-100 µg/tube
4-Methyl-2-pentanone (MIBK)	5.0-100 µg/tube
Styrene	5.0-100 µg/tube
1,1,1,2-Tetrachloroethane	5.0-100 µg/tube
1,1,2,2-Tetrachloroethane	5.0-100 µg/tube
Tetrachloroethene	5.0-100 µg/tube
Toluene	5.0-100 µg/tube
1,2,3-Trichlorobenzene	5.0-100 µg/tube
1,2,4-Trichlorobenzene	5.0-100 µg/tube
1,1,1-Trichloroethane	5.0-100 µg/tube
1,1,2-Trichloroethane	5.0-100 µg/tube
Trichloroethene	5.0-100 µg/tube
1,2,3-Trichloropropane	5.0-100 µg/tube
1,2,4-Trimethylbenzene	5.0-100 µg/tube
1,3,5-Trimethylbenzene	5.0-100 µg/tube
Trichlorofluoromethane	5.0-100 µg/tube
Vinyl acetate	5.0-100 µg/tube
Vinyl chloride	5.0-100 µg/tube
m/p-Xylene	5.0-100 µg/tube
o-Xylene	5.0-100 µg/tube
Xylenes, total	5.0-200 µg/tube



## Volatiles cont'd

### Air Volatiles, Thermal Desorption Tube (Non-TNI/State Specific)

Store at 4 °C

Provided as a 1.2mL concentrate in methanol flame sealed in a 2mL amber ampoule.

Part Numbers	
PT	<a href="#">PT-VOATD-AIR</a>
QC	<a href="#">QC-VOATD-AIR</a>
RR	<a href="#">RR-VOATD-AIR</a>

Analyte	Concentration
Acetonitrile	5.0-100 ng/tube
Acrolein	5.0-100 ng/tube
Acrylonitrile	5.0-100 ng/tube
Benzene	5.0-100 ng/tube
Bromobenzene	5.0-100 ng/tube
Bromodichloromethane	5.0-100 ng/tube
Bromoform	5.0-100 ng/tube
Bromomethane	5.0-100 ng/tube
2-Butanone (MEK)	5.0-100 ng/tube
Carbon disulfide	5.0-100 ng/tube
Carbon tetrachloride	5.0-100 ng/tube
Chlorobenzene	5.0-100 ng/tube
Chloroethane	5.0-100 ng/tube
2-Chloroethylvinylether	5.0-100 ng/tube
Chloroform	5.0-100 ng/tube
Chloromethane	5.0-100 ng/tube
Dibromochloromethane	5.0-100 ng/tube
1,2-Dibromo-3-chloropropane (DBCP)	5.0-100 ng/tube
1,2-Dibromoethane (EDB)	5.0-100 ng/tube
Dibromomethane	5.0-100 ng/tube
1,2 Dichlorobenzene	5.0-100 ng/tube
1,3 Dichlorobenzene	5.0-100 ng/tube
1,4 Dichlorobenzene	5.0-100 ng/tube
Dichlorodifluoromethane	5.0-100 ng/tube
1,1-Dichloroethane	5.0-100 ng/tube
1,2 Dichloroethane	5.0-100 ng/tube
1,1-Dichloroethene	5.0-100 ng/tube
cis-1,2-Dichloroethene	5.0-100 ng/tube
trans-1,2-Dichloroethene	5.0-100 ng/tube
1,2-Dichloropropane	5.0-100 ng/tube
cis-1,3-Dichloropropylene	5.0-100 ng/tube
trans-1,3-Dichloropropene	5.0-100 ng/tube
Ethylbenzene	5.0-100 ng/tube
Hexachlorobutadiene	5.0-100 ng/tube
2-Hexanone	5.0-100 ng/tube
Isopropylbenzene	5.0-100 ng/tube
Methylene Chloride	5.0-100 ng/tube
Methyl tert-butyl ether (MTBE)	5.0-100 ng/tube
4-Methyl-2-pentanone (MIBK)	5.0-100 ng/tube
Naphthalene	5.0-100 ng/tube
Styrene	5.0-100 ng/tube
1,1,1,2-Tetrachloroethane	5.0-100 ng/tube
1,1,2,2-Tetrachloroethane	5.0-100 ng/tube
Tetrachloroethene	5.0-100 ng/tube
Toluene	5.0-100 ng/tube
1,1,1-Trichloroethane	5.0-100 ng/tube
1,1,2-Trichloroethane	5.0-100 ng/tube
Trichloroethene	5.0-100 ng/tube
1,2,3-Trichlorobenzene	5.0-100 ng/tube
1,2,4-Trichlorobenzene	5.0-100 ng/tube
1,2,3-Trichloropropane	5.0-100 ng/tube
1,2,4-Trimethylbenzene	5.0-100 ng/tube
1,3,5-Trimethylbenzene	5.0-100 ng/tube
Trichlorofluoromethane	5.0-100 ng/tube
Vinyl acetate	5.0-100 ng/tube
Vinyl chloride	5.0-100 ng/tube
m/p-Xylene	5.0-100 ng/tube
o-Xylene	5.0-100 ng/tube
Xylenes, total	5.0-200 ng/tube

### Air Volatiles, Summa Canister (Non-TNI/State Specific)

Store at 20 -25 °C

Provided in your pre-cleaned and evacuated Summa canister as a ready to use standard.

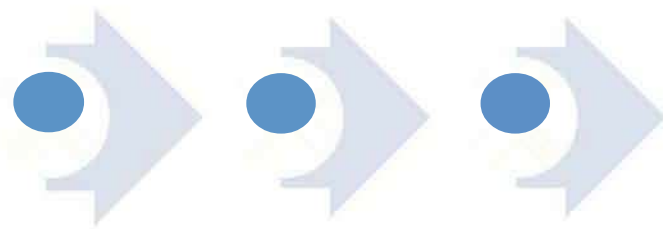
Part Numbers	
PT	<a href="#">PT-VOAS-AIR</a>
QC	<a href="#">QC-VOAS-AIR</a>
RR	<a href="#">RR-VOAS-AIR</a>

Analyte	Concentration
Acetone	5.0-65 ppbv
Acetonitrile	5.0-65 ppbv
Acetylene	5.0-65 ppbv
Acrolein (Propenal)	5.0-65 ppbv
Acrylonitrile	5.0-65 ppbv
Benzene	5.0-65 ppbv
Bromochloromethane	5.0-65 ppbv
Bromodichloromethane	5.0-65 ppbv
Bromoform	5.0-65 ppbv
Bromomethane	5.0-65 ppbv
1,3-Butadiene	5.0-65 ppbv
2-Butanone (Methyl ethyl ketone, MEK)	5.0-65 ppbv
Carbon disulfide	5.0-65 ppbv
Carbon tetrachloride	5.0-65 ppbv
Chlorobenzene	5.0-65 ppbv
Chloroethane	5.0-65 ppbv
Chloroform	5.0-65 ppbv
Chloromethane	5.0-65 ppbv
Chloromethylbenzene	5.0-65 ppbv
Chloroprene	5.0-65 ppbv
Cyclohexane	5.0-65 ppbv
1,2-Dibromoethane (EDB, Ethylene dibromide)	5.0-65 ppbv
Dibromochloromethane	5.0-65 ppbv
Dichlorodifluoromethane	5.0-65 ppbv
1,2 Dichlorobenzene	5.0-65 ppbv
1,3 Dichlorobenzene	5.0-65 ppbv
1,4 Dichlorobenzene	5.0-65 ppbv
1,1-Dichloroethane	5.0-65 ppbv
1,2 Dichloroethane	5.0-65 ppbv
1,1-Dichloroethene	5.0-65 ppbv
cis-1,2-Dichloroethene	5.0-65 ppbv
trans-1,2-Dichloroethene	5.0-65 ppbv
1,2-Dichloropropane	5.0-65 ppbv
cis-1,3-Dichloropropene	5.0-65 ppbv
trans-1,3-Dichloropropene	5.0-65 ppbv
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.0-65 ppbv
Ethyl acetate	5.0-65 ppbv
Ethyl acrylate	5.0-65 ppbv
Ethylbenzene	5.0-65 ppbv
Ethyl-t-butylether (ETBE)	5.0-65 ppbv
4-Ethyltoluene	5.0-65 ppbv
n-Heptane	5.0-65 ppbv
Hexachlorobutadiene	5.0-65 ppbv
Hexane	5.0-65 ppbv
Isopropanol	5.0-65 ppbv
Methyl tert-butyl ether (MTBE)	5.0-65 ppbv
Methylene chloride	5.0-65 ppbv
Methyl isobutyl ketone (Hexone)	5.0-65 ppbv
Methyl methacrylate	5.0-65 ppbv
n-Octane	5.0-65 ppbv
Propylene	5.0-65 ppbv
Styrene	5.0-65 ppbv
T-amylmethylether (TAME)	5.0-65 ppbv
Tetrachloroethene	5.0-65 ppbv
1,2,4-Trichlorobenzene	5.0-65 ppbv
1,1,1-Trichloroethane	5.0-65 ppbv
1,1,2-Trichloroethane	5.0-65 ppbv
1,1,2,2-Tetrachloroethane	5.0-65 ppbv
Trichloroethene	5.0-65 ppbv
Trichlorofluoromethane	5.0-65 ppbv
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0-65 ppbv
1,2,4-Trimethylbenzene	5.0-65 ppbv
1,3,5-Trimethylbenzene	5.0-65 ppbv
Toluene	5.0-65 ppbv
Vinyl bromide	5.0-65 ppbv
Vinyl chloride	5.0-65 ppbv
m+p-Xylene	5.0-65 ppbv
o-Xylene	5.0-65 ppbv
Xylenes, total	5.0-130 ppbv



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