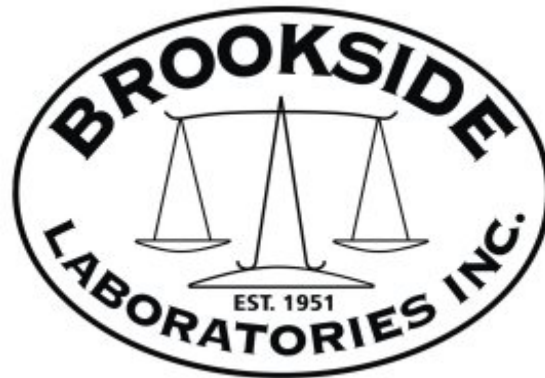


# ENVIRONMENTAL SERVICES TESTING PARAMETERS CATALOG



## **STATEMENT OF MISSION:**

The mission of Brookside is to provide the highest quality analytical services and support the development and success of the Brookside network of independent consultants by providing strategic leadership, training, research, and related services.

## **WARRANTY AND LIMITATION OF LIABILITY**

In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. We disclaim any other warranties, express or implied, including a Warranty of Fitness for Particular Purpose and Warranty of Merchantability.

We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by the company with any conditions that vary from these Standard Terms and Conditions.

If Brookside performs work requested by the client, conditions at variance to these Standard Terms and Conditions are not part of the contract.

### **LABORATORY SERVICES:**

- \* EPA Certified for Drinking Water
- \* Microbiology
- \* General Chemistry
- \* Complete Pesticides (Herbicides, Insecticides, Fungicides)
- \* Semi-Volatile Organics
- \* Volatile Organics
- \* EPA Priority Pollutants
- \* Trace Metals

### **MATRICES ANALYZED:**

- \* Drinking Water (Ohio, Indiana)
- \* Groundwater
- \* Soil
- \* Wastewater
- \* Hazardous Waste
- \* Sludge
- \* Oil
- \* Industrial Solids / Liquids
- \* Tissues / Feeds
- \* Manure
- \* Fertilizer / Lime

### **SAMPLE CONTAINERS**

Brookside can provide appropriate sample containers free of charge upon request.

### **SAMPLE SUBMISSION**

Samples should be accompanied with detailed instructions on Brookside Laboratories, Inc. chain of custody or on your letterhead/purchase order. Important information must be supplied with samples (sample type, source, analyses requested, time and date of collection). Fill out worksheets completely to insure appropriate testing (list test method and test code).

### **CHAIN OF CUSTODY**

Some samples may require strict chain or custody procedures. These samples must arrive at the laboratory accompanied by appropriate, completed, chain of custody forms.

### **STANDARD DELIVERY**

Standard turnaround time is 10 business days.

Rush fee:

- 24 Hour Rush - add 100%
- 3 Day Rush - add 50%
- 5 Day Rush - add 25%
- \* TCLP Rush - 3 Day – (Metals only) add 50%
- \* TCLP Rush - 5 Day – (Organics and Metals) add 50%

**\* For quantity discounts please request a quote.**

### **TERMS**

Credit terms are net 30 days. A 1.5% service charge is added to invoices beyond 30 days.

### **QA/QC**

For QA/QC Deliveries:

- Level 1 - includes: lab control spike with sample duplicate: \$30.00
- Level 2 - includes: lab control spike, matrix spike, and matrix spike duplicate: \$50.00
- Level 3 - includes: lab control spike, matrix spike, matrix spike duplicate with copies of chromatograms, calibration curve, extraction logs: \$100.00

## **A. Drinking Water Testing**

### **A1: Individual Tests**

- IA590 pH (SM4500-H+)
- IA800 Total Dissolved Solids (TDS) (SM2540-C)
- IA030 Alkalinity (SM2320-B)
- IA050 Alkalinity-Bicarbonate (SM2320-B)
- IA110 Alkalinity-Carbonate (SM2320-B)
- IA033 Alkalinity-Hydroxide (SM2320-B)
- IA112 Alkalinity-Phenolphthalein (SM2320-B)
  - Anions by Ion Chromatography (EPA 300.1) – see Appendix A1 for list of ions
- IA430 Nitrate + Nitrite Combo (EPA 300.1)
- IA647 Phosphate PO<sub>4</sub> as P (SM4500P-E)
- IA240 Cyanide (EPA 335.4)
  - Metals (EPA 200.7) – see Appendix A2 for list of metals
  - Primary Drinking Water Contaminant Metals (EPA 200.5) – see Appendix A2 for list of metals
- EE184 Lead and Copper Rule (EPA 200.5)
- IB170 Mercury (EPA 245.1)
- IB261 Thallium (EPA 200.9)
- EW037 Group A (EPA 525.2): Chlorinated and Nitrogen-Phosphorus Pesticides – see Appendix A3 for list of compounds
- EW029 Group B (EPA 531.1): N-Methylcarbamates – see Appendix A4 for list of compounds
- EW031 Group C (EPA 508): Chlorinated Pesticides – see Appendix A5 for list of compounds
- EW026 Group E (EPA 515.3): Chlorinated Herbicides – see Appendix A6 for list of compounds
- EW024 Group F (EPA 504.1): Ethylene Dibromide and Dibromochloropropane
- EW027 Group G (EPA 525.2): Di (2-ethylhexyl) adipate, Di (2-ethylhexyl) phthalate, Benzo (a) pyrene
- EW033 Group H (EPA 549.2): Diquat
- EW034 Group I (EPA 548.1): Endothall
- EW035 Group J (EPA 547): Glyphosate
- EW038 Group K (EPA 508A): Polychlorinated Biphenyls
- EW036 Group L (EPA1613): 2,3,4,8-TCDD (Dioxin)
- EE515 Total Trihalomethanes (THMs) – see Appendix A7 for list of compounds
- EE516 Volatile Organic Compounds (VOCs) – see Appendix A8 for list of compounds
- EE521 Haloacetic Acids (EPA 552.2) – see Appendix A9 for list of compounds
- IC060 Total Coliform by MMO-MUG (SM9223-B)
- IA828 Dissolved Organic Carbon (DOC)
- IA820 Total Organic Carbon (TOC)
- IA368 Gross Alpha
- IA365 Gross Beta
- IA369 Gross Alpha and Beta
- IA744 Radium 226
- IA746 Radium 228

- IA742 Radium 226 and 228  
EW022 Asbestos  
EE122 Hormones (EPA 539) – see Appendix C10 for list of compounds

### **A2: Drinking Water Packages**

- EW019 Indiana IOC Package – see Appendix A10 for list of compounds  
EW023 Indiana SOCs (no PCBs or Dioxin) – see Appendix A11 for list of compounds  
EW039 Indiana SOCs (no Glyphosate) – see Appendix A11 for list of compounds  
EE410 Basic Household Drinking Water – see Appendix A12 for list of compounds  
EE420 Full Household Drinking Water – see Appendix A12 for list of compounds  
EE430 FHA Loan – see Appendix A13 for list of compounds  
EE440 Priority Pollutants – see Appendix A14 for list of compounds  
EW019 MCL Inorganics – see Appendix A10 for list of compounds  
EW130 New Well Core – see Appendix A15 for list of compounds  
EW520 General Minerals – see Appendix A16 for list of ions and metals

## **B. Microbiological Testing**

- IC060 Total Coliform (MMO-MUG)  
IC070 Total Coliform (Quanti-Tray, MPN\*)  
IC010 Fecal Coliform (Quanti-Tray, MPN)  
IC005 Fecal Coliform (CFU\*\*) – low volume; by request only and depending on quantity  
IC075 *E. coli* (MPN)  
IC077 *E. coli* (CFU) – low volume; by request only, depending on quantity  
IC100 *E. coli* 0157:H7  
IC050 Standard Plate Count (MPN)  
IC101 Standard Plate Count (CFU)  
IC091 *Listeria* spp. (Positive/Negative)  
IC076 *Listeria monocytogenes* confirmation  
IC045 *Salmonella* spp. (Positive/Negative)  
IC040 *Staphylococcus aureus* (Positive/Negative with confirmation)  
IC051 Iron-related Bateria (mg/L)  
IC052 Sulfur-reducing Bacteria (mg/L)  
IC090 Yeast (CFU)  
IC030 Mold (CFU)

\*MPN = Most Probable Number

\*\*CFU = Colony Forming Units

## **C. Ground Water and Waste Water Testing**

### **C1: Individual Tests**

- IA060 Biochemical Oxygen Demand (BOD)  
IA100 Carbonaceous Biochemical Oxygen Demand (CBOD)

IA130 Chemical Oxygen Demand (COD)  
IA260 Dissolved Oxygen  
IA860 Total Solids (TS)  
IA870 Total Suspended Solids (TSS)  
IA800 Total Dissolved Solids (TDS)  
IA880 Total Volatile Solids (TVS)  
IA890 Turbidity  
IA010 Acidity  
IA050 Alkalinity-Bicarbonate  
IA110 Alkalinity-Carbonate  
IA033 Alkalinity-Hydroxide  
IA112 Alkalinity-Phenolphthalein  
IA030 Alkalinity-Total  
IA270 Conductivity  
IA200 Corrosivity – pH  
IA271 Resistivity  
IA676 Salinity  
IA710 Specific Gravity  
IA790 Temperature  
IA115 UV Absorbance at 254 nm  
IA561 Oil and Grease (by Solid-Phase Extraction)  
IA555 Oil and Grease (by Separatory Funnel)  
IA565 Oil and Grease – Silica Gel  
■ Anions by Ion Chromatography (EPA 300.0) – see Appendix A1 for list of anions  
IA430 Nitrate + Nitrite Combo (EPA 300.0)  
IA605 Orthophosphate  
IA606 Dissolved Orthophosphate  
IA647 Phosphate PO<sub>4</sub> as P  
IA691 Dissolved Phosphate PO<sub>4</sub> as P  
IA220 Cyanide – Free/Amenible  
IA240 Cyanide – Total  
IA150 Chlorine – Free  
IA160 Chlorine – Total Residual  
IB080 Hexavalent Chromium  
IA915 Hydrogen Peroxide  
IA987 Persulfate as Sodium Persulfate  
IB134 Iodide  
IA770 Methylene Blue Active Substances (Surfactants)  
IA585 Tannins (Colorimetric)  
IB215 Silica  
IA730 Sulfide  
IB220 Total Silicon

- IA828 Dissolved Organic Carbon (DOC)
- IA820 Total Organic Carbon (TOC)
- IA955 Chlorophyll
- IA501 Nitrogen – Organic (by calculation)
- IA521 Nitrogen – Total
- IA510 Nitrogen – Total Kjeldahl
- IA460 Nitrogen – Ammonia
  - Metals (EPA 200.7) – see Appendix A2 for a list of metals
  - Low Detection Limit (LDL) Metals (EPA 200.5) – see Appendix A2 for a list of LDL metals
- IB171 LDL Mercury
- IA852 TPH-Total (C4-C34)
- IA844 TPH-GasolineRange Organics (GRO) (C4-C10)
- IA842 TPH-DieselRange Organics (DRO) (C10-C20)
- IA848 TPH-LubeRange Organics (LRO) (C20-C34)
- IA853 TPH-DRO + LRO
- EE243 Volatile Organic Compounds (EPA 624, for waste waters) – see Appendix C1 for a list of compounds
- EE245 Volatile Organic Compounds (EPA 8260, for ground waters) – see Appendix C1 for a list of compounds
- EE502 BTEX (EPA 624 or EPA 8260): Benzene, Ethylbenzene, Toluene, Xylene-Total
- EE503 BTEX + Methyl tert-Butyl Ether (MtBE)
- CE330 Alcohols (EPA 8015B) – see Appendix C2 for list of compounds
- CE555 Glycols (EPA 8015B) – see Appendix C2 for list of compounds
- CE565 Alkylamines (Derivatization + GC-MS) – see Appendix C3 for a list of compounds
- CE440 Carboxylic Acids (Volatile Fatty Acids) (HPLC-UV) – see Appendix C4 for a list of compounds
- CE467 Carbonyl Compounds (EPA 8315A or EPA 556) – see Appendix C5 for a list of compounds
- EE270 Ethanolamines (HPLC-MS/MS) – see Appendix C6 for a list of compounds
- EE214 Base, Neutral, and Acid Extractible Semivolatile Organics (EPA 625 or EPA 8270) – see Appendix C7 for list of compounds
- EE178 Endocrine Disruptors (EPA 625M or EPA 8270M) – see Appendix C7E for list of compounds
- EE511 Polynuclear Aromatic Hydrocarbons – see Appendix C7C for list of compounds
- CE405 Explosives and Degradates (SIM-GC-MS) – see Appendix C8 for a list of compounds
- PE004 Phenols (EPA 625 or EPA 8270) – see Appendix C7A for a list of compounds
- PE006 N-Nitrosamines (HPLC-MS/MS) – see Appendix C7D for a list of compounds
- Perfluorinated Alkyl Acids (EPA 537) – see Appendix C9 for a list of compounds
- Quaternary Ammonium Compounds – inquire for a list of compounds
- EE122 Hormones (EPA 539) – see Appendix C10 for a list of compounds
- EE301 Pharmaceuticals and Personal Care Products (EPA 1694) – see Appendix C11 for a list of compounds
  - Fungicides, Herbicides, and Insecticides – see Appendix C12-C14 for compounds and additional information. Brookside Labs analyzes nearly 500 active compounds. Packages for common components are available. Individual active compounds are listed in Appendix C12-C14. Packages are customizable. Testing for metabolites is available upon request. Additional compounds not listed are available; additional charges for research and development may apply – contact the lab for information.
- EE524 Microcystins – see Appendix C15 for compounds and additional information

IQ065 Semivolatiles Mass Spectrometer Detector Scan

IQ066 Volatiles Mass Spectrometer Detector Scan

**C2: Waste Water and Ground Water Packages**

IB001 ICP Metals Scan #1 – see Appendix C16 for a list of metals

IB002 ICP Metals Scan #2 – see Appendix C17 for a list of metals

IB003 ICP Metals Scan #3 – see Appendix C18 for a list of metals

IB006 LDL Heavy Metals – see Appendix C19 for a list of metals

IB007 CFR Part 503 Metals – see Appendix C20 for a list of metals

IB007L CFR Part 503 Metals – LDL – see Appendix C20 for a list of metals

EE209 Total Toxic Organics (EPA 608, 624, and 625)

EE520 General Minerals – see Appendix A16 for list of ions and metals

EE549 Audubon Monitoring: Core monitoring parameters – see Appendix C21 for a list of compounds

EE522 Audubon Monitoring: Core parameters plus pesticides – see Appendix C21 for a list of compounds

**Microbiologicals** – see section B

**D. Biosolids (Sludge, Manure, Compost) and Soil Testing**

IA060 Biochemical Oxygen Demand (BOD)

IA100 Carbonaceous Biochemical Oxygen Demand (CBOD)

IA130 Chemical Oxygen Demand (COD)

IA860 Total Solids (TS)

IA880 Total Volatile Solids (TVS)

■ Anions by Ion Chromatography (EPA 300.0) – see Appendix A1 for list of anions

IA590 pH

IA676 Salinity

IA271 Resistivity

IA270 Conductivity

IA710 Specific Gravity

IA605 Orthophosphate (colorimetric)

IA647 Phosphate-PO<sub>4</sub> as P

IB215 Silica

IB220 Total Silicon

IA240 Cyanide-Total

IA460 Nitrogen-Ammonia

IA501 Nitrogen-Organic (by calculation)

IA521 Nitrogen-Total

IA510 Nitrogen-Total Kjeldahl

■ Metals (EPA 200.7) – see Appendix A2 for a list of metals

IB007 CFR Part 503 Metals – see Appendix C20 for a list of metals

IB007L CFR Part 503 Metals-LDL – see Appendix C20 for a list of metals

IB144 Mehlich 3 Lead

- EE260 Standard Sludge Package – This package includes Ammonia, Nitrate, Total Kjeldahl Nitrogen, pH, Total Phosphorus, Specific Gravity, Total Solids, and Potassium
- IA573 Paint Filter Test
- IA092 BTU per gallon
- IA090 BTU per pound
- IA350 Flash Point
- IA852 TPH-Total (C4-C34)
- IA844 TPH-GasolineRange Organics (GRO) (C4-C10)
- IA842 TPH-DieselRange Organics (DRO) (C10-C20)
- IA848 TPH-LubeRange Organics (LRO) (C20-C34)
- IA853 TPH-DRO + LRO
- IA561 Oil and Grease by hexane extraction
- EE525 Polychlorinated Biphenyls (PCBs) (EPA 8082)
- EE540 PCB Congeners (EPA 1886A)
- IN245 2,3,7,8-TCDD (Dioxin) (EPA 1613B)
- EE535 Dioxins and Furans (EPA 1613B)
- EE245 Volatile Organic Compounds (EPA 8260) – see Appendix C1 for a list of compounds
- EE214 Base, Neutral, and Acid Extractible Semivolatile Organics (EPA 8270) – see Appendix C7 for a list of compounds
- EE511 Polynuclear Aromatic Hydrocarbons – see Appendix C7C for a list of compounds
- EE301 Pharmaceuticals and Personal Care Products (EPA 1694) – see Appendix C11 for a list of compounds
- Fungicides, Herbicides, and Insecticides – see Appendix C12-C14 for compounds and additional information. Brookside Labs analyzes nearly 500 active compounds. Packages for common components are available. Individual active compounds are listed in Appendix C12-C14. Packages are customizable. Testing for metabolites is available upon request. Additional compounds not listed are available; additional charges for research and development may apply – contact the lab for information.
- CE405 Explosives (SIM-GC-MS) – see Appendix C8 for a list of compounds
- PE004 Phenols (HPLC-MS/MS) – see Appendix C7A for a list of compounds
- PE006 N-Nitrosamines (HPLC-MS/MS) – see Appendix C7D for a list of compounds
- EE178 Endocrine Disruptors – see Appendix C7E for list of compound
- EE122 Hormones (EPA 539) – see Appendix C10 for a list of compounds
- IQ065 Semivolatiles Mass Spectrometer Detector Scan
- IQ066 Volatiles Mass Spectrometer Detector Scan
- Microbiologicals** – see Section B

## **E. Food, Animal Feed, and Tissue Testing**

### **E1: Contaminants**

- Acrylamide (in-house LC-MS/MS)
- Antibiotics in Feed and Dairy Products (in-house HPLC-MS/MS) – inquire for list of compounds
- Biogenic amines in fish (in-house LC-MS/MS) – inquire for list of compounds
- Bis (2-ethylhexyl) phthalate (EPA 8270M)



- Fluoride (AOAC 944.08)
- Heavy metals (in-house ICP-OES)
- Fungicides, Herbicides, and Insecticides – see Appendix C12-C14 for compounds and additional information. Brookside Labs analyzes nearly 500 active compounds. Packages for common components are available. Individual active compounds are listed in Appendix C12-C14. Packages are customizable. Testing for metabolites is available upon request. Additional compounds not listed are available; additional charges for research and development may apply – contact the lab for information.
- Malachite Green (in-house LC-MS/MS)
- Melamine and analogs (in-house LC-MS/MS) – inquire for list of compounds
- Melengestrol acetate (AOAC 980.36)
- Mycotoxins (in-house LC-MS/MS) – see Appendix E1 for list of compounds
- Quaternary Ammonium Compounds (in-house LC-MS/MS) – inquire for list of compounds
- Trenbolone (in-house LC-MS/MS)
- Triphenylamine Dyes (in-house LC-MS/MS) – inquire for list of compounds
- **Microbiologicals** – see Section B

## **E2: Additives and Natural Composition**

- $\alpha$  and  $\beta$  acids in hops (AOAC 963.12)
- Artificial Sweeteners (in-house LC-MS/MS) – inquire for list of compounds
- Bioactives in Commodities and Supplements – see Appendix E2 for list of compounds and additional information
- Ethanol in beer, wine, and spirits (AOAC 983.13)
- Ethoxyquin (in-house GC-MS)
- Fatty Acids (AOAC 996.06) – inquire for list of compounds
- Flavorings and essential oils (in-house GC-MS) – inquire for list of compounds
- Nitrites in Meat (AOAC 973.31)
- Preservatives (AOAC 983.15) – inquire for list of compounds
- Quinic, Malic, and Citric Acids in juice (AOAC 986.13)
- Sugars (AOAC 971.18) – inquire for list of compounds
- Sulfites in Wine (AOAC 990.28)
- Tannin in wine and spirits (AOAC 952.03)
- Silicon in plant tissue (Alkaline digestion and colorimetry)

## **E3: Vitamins**

- Vitamin A (AOAC 2011.07)
- Vitamin B1 (Thiamine) (in-house LC-MS/MS)
- Vitamin B2 (Riboflavin) (in-house LC-MS/MS)
- Vitamin B5 (Pantothenic Acid) (AOAC 2012.16)
- Niacin (in-house LC-MS/MS)
- Vitamin B12 (Cyanocobalamin) (in-house LC-MS/MS)
- Vitamin C (AOAC 2012.21)
- Vitamin D2, D3 (AOAC 2011.13)

- Vitamin E (in-house HPLC-UV)
- Vitamin K (AOAC 992.27)

## **F. Toxicity Leaching Characteristic Procedure (TCLP) Testing**

EE167	Total TCLP Package
IA780	TCLP Bottle Extraction
IA920	TCLP ZHE Volatiles Extraction
EE165	TCLP Base/Neutral/Acid Extractible Compounds
EE123	TCLP Chlorinated Herbicides
EE124	TCLP Pesticides
EE173	TCLP Volatile Organic Compounds
EE120	TCLP Metals
IB023	TCLP Antimony
IB053	TCLP Beryllium
IB115	TCLP Cobalt
IB123	TCLP Copper
IB183	TCLP Molybdenum
IB193	TCLP Nickel
IB263	TCLP Thallium
IB306	TCLP Zinc

## **G. Industrial Solids and Liquids Testing**

IA005	Asbestos – Plum Bulk
IA090	BTU per pound
IA092	BTU per gallon
IA130	Chemical Oxygen Demand
IA350	Flash Point
IA860	Total Solids
IA710	Specific Gravity
IA590	pH
IA200	Corrosivity-pH
IA676	Salinity
IA271	Resistivity
■	Anions by Ion Chromatography – see Appendix A1 for a list of anions
IB080	Hexavalent Chromium
IB134	Iodide
IA730	Sulfide
IA240	Cyanide
IA561	Oil and Grease by hexane extraction
IA852	TPH-Total (C4-C34)

- IA844 TPH-GasolineRange Organics (GRO) (C4-C10)
- IA842 TPH-DieselRange Organics (DRO) (C10-C20)
- IA848 TPH-LubeRange Organics (LRO) (C20-C34)
- IA853 TPH-DRO + LRO
- IB007 CFR Part 503 Metals – see Appendix C25 for a list of metals
- IB007L CFR Part 503 Metals – LDL – see Appendix C26 for a list of metals
- IB220 Total Silicon
- EE245 Volatile Organic Compounds (EPA 8260) – see Appendix C9 for a list of compounds
- EE214 Base, Neutral, and Acid Extractible Semivolatile Organics (EPA 8270) – see Appendix C7 for a list of compounds
- CE405 Explosives (SIM-GC-MS) – see Appendix C8 for a list of compounds
- PE004 Phenolics (HPLC-MS/MS) – see Appendix C7A for a list of compounds
- PE006 N-Nitrosamines (HPLC-MS/MS) – see Appendix C7D for a list of compounds
- EE178 Endocrine Disruptors (HPLC-MS/MS) – see Appendix A7E for list of compounds
- Fungicides, Herbicides, and Insecticides – see Appendix C12-C14 for compounds and additional information. Brookside Labs analyzes nearly 500 active compounds. Screens for common components are available. Individual active compounds are listed in Appendix C12-C14. Screens are customizable. Testing for metabolites is available upon request. Additional compounds not listed are available; additional charges for research and development may apply – contact the lab for information.
- IQ065 Semivolatiles Mass Spectrometer Detector Scan
- IQ066 Volatiles Mass Spectrometer Detector Scan
- Microbiologicals** – see Section B

## APPENDICES

### APPENDIX A: Drinking Water Testing

#### Appendix A1: Anions

Code	Anion	Notes
IA080	Bromide	
IA140	Chloride	Difficult matrices may require titration method
IA360	Fluoride	Difficult matrices may require ion selective probe method
IB134	Iodide	
IA490	Nitrate	
IA492	Nitrite	
II020	Ortho-Phosphate	Must specify this code for IC method
IA720	Sulfate	Difficult matrices may require wet chemistry method

#### Appendix A2: Metals

Metal	EPA 200.7**	EPA 200.5	Soluble	Suspended
Aluminum	IB010	IB011	IB051	UE140
Antimony	IB020	IB021	IE141	UE134
Arsenic	IB030	IB031	IE140	UE145
Barium	IB040	IB041	IE145	UE149
Beryllium	IB050	IB051	IB052	UE154
Boron	IA070	-	IB046	UE160
Cadmium	IB060	IB061	IB065	UE169
Calcium	IB070	-	IB071	UE175

Chromium*	IB090	IB091	IB095	UE190
Cobalt	IB110	-	IB112	UE200
Copper	IB120	IB121	IB125	UE204
Hardness-Calcium	IA371	-	-	-
Hardness-Total	IA370	-	-	-
Iron	IB130	IB131	IB302	IB132
Lead	IB140	IB141	IB145	UE219
Lithium	IB146	-	-	-
Magnesium	IB150	-	IB155	IB152
Manganese	IB160	IB161	IB165	IB162
Molybdenum	IB180	IB181	IB184	UE240
Nickel	IB190	IB191	IB195	UE224
Phosphorus	IA640	-	IA642	UE250
Potassium	IB200	-	IB201	UE255
Selenium	IB210	IB211	IB214	UE260
Silica	IB220	-	-	-
Silver	IB230	IB231	IB235	UE270
Sodium	IB240	-	-	-
Sulfur	IA760	-	IB048	ME180
Strontium	IB250	-	-	-
Thallium	IB260	IB261	-	-
Tin	IB270	-	-	-
Titanium	IB280	-	-	-
Vanadium	IB290	IB291	IB292	VE265
Zinc	IB300	IB301	IB305	UE294

\* - speciation of trivalent and hexavalent chromium is not possible with this method. Chromium is reported as Chromium-Total.

\*\* - waters are reported by EPA method 200.7; solids are digested by EPA 3050B and analyzed by EPA 6010B.

### Appendix A3: Nitrogen-Phosphorus and Chlorinated Pesticides

These compounds are analyzed by EPA 525.2. They include both nitrogen-phosphorus pesticides and chlorinated pesticides. Not all of the compounds are included on the EPA Primary Drinking Water Contaminant list.

Code	Compound	Notes
IO020	Alachlor	Primary Drinking Water Contaminant
IQ011	Aldrin	
IO010	Atrazine	Primary Drinking Water Contaminant
IO036	Butachlor	
IN100	Dieldrin	
IM020	Hexachlorobenzene	Primary Drinking Water Contaminant
IM040	Hexachlorocyclopentadiene	Primary Drinking Water Contaminant
IO240	Methoxychlor	Primary Drinking Water Contaminant
IO245	Metolachlor	
IH075	Metribuzin	
IO310	Propachlor	
IO290	Simazine	Primary Drinking Water Contaminant

### Appendix A4: N-Methylcarbamates

Code	Compound	Notes
IH074	4-Hydroxycarbofuran	
IH071	Aldicarb	
IH072	Aldicarb Sulfone	
IH073	Aldicarb Sulfoxide	
IH077	Carbaryl	
IO115	Carbofuran	Primary Drinking Water Contaminant
IH081	Methomyl	

IH076	Oxamyl	Primary Drinking Water Contaminant
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#### Appendix A5: Chlorinated Pesticides

This method also screens for PCBs. If PCBs are found they are analyzed by 508A and reported as Total PCB (Decachlorobiphenyl)

Code	Compound	Notes
IN060	Chlordane	Primary Drinking Water Contaminant
IN140	Endrin	Primary Drinking Water Contaminant
IN160	Heptachlor	Primary Drinking Water Contaminant
IN170	Heptachlor Epoxide	Primary Drinking Water Contaminant
IN050	Lindane	Primary Drinking Water Contaminant
IN250	Toxaphene	Primary Drinking Water Contaminant

#### Appendix A6: Chlorinated Acid Herbicides

Code	Compound	Notes
IO130	2,4-D	Primary Drinking Water Contaminant
IO410	2,4,5-TP (Silvex)	Primary Drinking Water Contaminant
IO137	Dalapon	Primary Drinking Water Contaminant
IO040	Dicamba	
IO139	Dinoseb	Primary Drinking Water Contaminant
IG080	Pentachlorophenol	Primary Drinking Water Contaminant
IG085	Picloram	Primary Drinking Water Contaminant

#### Appendix A7: Trihalomethanes

Code	Compound
ID011	Bromodichloromethane
ID021	Bromoform
ID071	Chloroform
ID111	Dibromochloromethane

#### Appendix A8: Volatile Organic Compounds

Code	Compound
IP743	1,1,1,2-Tetrachloroethane
ID240	1,1,1-Trichloroethane
ID250	1,1,2,2-Tetrachloroethane
ID260	1,1,2-Trichloroethane
ID160	1,1-Dichloroethane
ID180	1,1-Dichloroethene
IP194	1,1-Dichloropropene
IP775	1,2,3-Trichlorobenzene
ID275	1,2,3-Trichloropropane
IM060	1,2,4-Trichlorobenzene
IP781	1,2,4-Trimethylbenzene
ID130	1,2-Dichlorobenzene
ID170	1,2-Dichloroethane
ID190	1,2-Dichloropropane
IP782	1,3,5-Trimethylbenzene
ID140	1,3-Dichlorobenzene
IP191	1,3-Dichloropropane
ID150	1,4-Dichlorobenzene
IP192	2,2-Dichloropropane

IP153	2-Chlorotoluene
IP157	4-Chlorotoluene
IP456	4-Isopropyltoluene
IE010	Benzene
IP036	Bromobenzene
IP034	Bromochloromethane
ID011	Bromodichloromethane
ID021	Bromoform
ID030	Bromomethane
ID040	Carbon Tetrachloride
ID050	Chlorobenzene
ID060	Chloroethane
ID071	Chloroform
ID090	Chloroform
ID219	cis-1,2-Dichloroethene
ID100	cis-1,3-Dichloropropene
ID111	Dibromochloromethane
ID115	Dibromomethane
ID120	Dichlorodifluoromethane
IE030	Ethyl Benzene
IM030	Hexachlorobutadiene
IP455	Isopropylbenzene
ID200	Methylene Chloride
IK140	Naphthalene
IP101	n-Butylbenzene
IP695	n-Propylbenzene
IP111	sec-Butylbenzene
ID207	Styrene
IP112	tert-Butylbenzene
ID210	Tetrachloroethene
IE040	Toluene
ID220	trans-1,2-Dichloroethene
ID095	trans-1,3-dichloropropene
ID270	Trichloroethene
ID280	Trichlorofluoromethane
ID290	Vinyl Chloride
IP810	Xylene-Total

#### Appendix A9: Haloacetic Acids

Code	Compound
IA935	Bromochloroacetic Acid
IA934	Dibromoacetic Acid
IA931	Dichloroacetic Acid
IA933	Monobromoacetic Acid
IA930	Monochloroacetic Acid
IA932	Trichloroacetic Acid

#### Appendix A10: MCL Inorganics/Indiana IOC Packages

Code	Compound
IA240	Cyanide-Total
IA360	Fluoride

IB021	Antimony-LDL
IB031	Arsenic-LDL
IB040	Barium
IB051	Beryllium-LDL
IB061	Cadmium-LDL
IB091	Chromium-LDL
IB170	Mercury
IB191	Nickel-LDL
IB211	Selenium-LDL
IB261	Thallium-LDL

**Appendix A11: Indiana SOCs Packages**

Code	Compound	Comment
IG080	Pentachlorophenol	
IG085	Picloram	
IH070	Di(2-ethylhexyl)adipate	
IH076	Oxamyl	
IH078	Diquat	
IH079	Endothall	
IH080	Di(2-ethylhexyl)phthalate	
IK050	Benzo(a)pyrene	
IM020	Hexachlorobenzene	
IM040	Hexachlorocyclopentadiene	
IN050	Lindane	
IN060	Chlordane	
IN140	Endrin	
IN160	Heptachlor	
IN170	Heptachlor Epoxide	
IN250	Toxaphene	
IO010	Atrazine	
IO020	Alachlor	
IO115	Carbofuran	
IO130	2,4-D	
IO137	Dalapon	
IO139	Dinoseb	
IO240	Methoxychlor	
IO290	Simazine	
IO367	Glyphosate	EW039 excludes glyphosate
IO410	2,4,5-TP	
IP186	Dibromochloropropane (EDB)	
IP187	Ethylenedibromide (EDB)	

**Appendix A12: Household Drinking Water Packages**

Code	Compound	Basic	Full
IA140	Chloride		X
IA360	Fluoride		X
IA370	Hardness-Total		X
IA430	Nitrate + Nitrite		X
IA490	Nitrate	X	X
IA492	Nitrite		X

IA720	Sulfate		X
IA800	Total Dissolved Solids		X
IB031	Arsenic-LDL	X	X
IB130	Iron		X
IB141	Lead-LDL		X
IB160	Manganese		X
IB240	Sodium		X
IC060	Total Coliform	X	X

**Appendix A13: FHA Loan Testing Package**

Code	Compound
IA430	Nitrate + Nitrite
IA490	Nitrate
IA492	Nitrite
IB141	Lead-LDL
IC060	Total Coliform

**Appendix A14: Priority Pollutants Package**

Code	Compound
IA370	Hardness-Total
IA930	Monochloroacetic Acid
IA931	Dichloroacetic Acid
IA932	Trichloroacetic Acid
IA933	Monobromoacetic Acid
IA934	Dibromoacetic Acid
IA935	Bromochloroacetic Acid
IA936	Total HAA5
IB031	Arsenic-LDL
IB130	Iron
IB141	Lead-LDL
IB160	Manganese
IB240	Sodium
ID011	Bromochloromethane
ID021	Bromoform
ID071	Chloroform
ID111	Dibromochloromethane
IH070	Di(2-ethylhexyl)adipate
IH070	Di(2-ethylhexyl)phthalate
IO010	Atrazine
IO020	Alachlor
IO290	Simazine

**Appendix A15: New Well Core Package**

Code	Compound
IA030	Alkalinity-Total
IA140	Chloride
IA240	Cyanide-Total
IA360	Fluoride
IA368	Gross Alpha
IA430	Nitrate + Nitrite



IA490	Nitrate
IA492	Nitrite
IA590	pH
IA720	Sulfate
IA800	Total Dissolved Solids
IB021	Antimony-LDL
IB031	Arsenic-LDL
IB040	Barium
IB051	Beryllium-LDL
IB061	Cadmium-LDL
IB070	Calcium
IB091	Chromium-LDL
IB120	Copper
IB130	Iron
IB141	Lead-LDL
IB150	Magnesium
IB160	Manganese
IB170	Mercury
IB191	Nickel-LDL
IB211	Selenium-LDL
IB231	Silver-LDL
IB240	Sodium
IB261	Thallium-LDL
IB300	Zinc
IP746	Radium 228
IO010	Atrazine
IO020	Alachlor
IO290	Simazine
	VOCs (see Appendix A8)

**Appendix A16: General Minerals Package**

<b>Code</b>	<b>Compound</b>
IA030	Alkalinity-Total
IA050	Alkalinity-Bicarbonate
IA110	Alkalinity-Carbonate
IA140	Chloride
IA270	Conductivity
IA370	Hardness-Total
IA490	Nitrate
IA492	Nitrite
IA590	pH
IA647	Phosphate (PO <sub>4</sub> ) as P
IA720	Sulfate
IA800	Total Dissolved Solids
IB070	Calcium
IB120	Copper
IB130	Iron
IB150	Magnesium
IB160	Manganese
IB200	Potassium

IB240	Sodium
IB300	Zinc

## APPENDIX C: Waste Water and Ground Water Testing

### Appendix C1: Volatile Organic Compounds

Code	Compound	624	8260	BTEX
IP743	1,1,1,2-Tetrachloroethane	X	X	
ID240	1,1,1-Trichloroethane	X	X	
ID250	1,1,2,2-Tetrachloroethane	X	X	
ID260	1,1,2-Trichloroethane	X	X	
ID160	1,1-Dichloroethane	X	X	
ID180	1,1-Dichloroethene	X	X	
IP194	1,1-Dichloropropene		X	
IP775	1,2,3-Trichlorobenzene		X	
ID275	1,2,3-Trichloropropane		X	
IM060	1,2,4-Trichlorobenzene		X	
IP781	1,2,4-Trimethylbenzene		X	
IP181	1,2-Dibromo-3-Chloropropane		X	
IP182	1,2-Dibromomethane		X	
ID130	1,2-Dichlorobenzene	X	X	
ID170	1,2-Dichloroethane	X	X	
ID190	1,2-Dichloropropane	X	X	
IP782	1,3,5-Trimethylbenzene		X	
ID140	1,3-Dichlorobenzene	X	X	
IP191	1,3-Dichloropropane		X	
ID150	1,4-Dichlorobenzene	X	X	
IP192	2,2-Dichloropropane		X	
ID080	2-Chloroethyl Vinyl Ether	X	X	
IP153	2-Chlorotoluene		X	
ID197	2-Hexanone		X	
IP650	2-Nitropropane		X	
IP157	4-Chlorotoluene		X	
IP456	4-Isopropyltoluene		X	
IP010	Acetone		X	
IF010	Acrolein	X	X	
IF020	Acrylonitrile	X	X	
IP495	Allyl Chloride		X	
IE010	Benzene	X	X	X
IP036	Bromobenzene		X	
IP034	Bromochloromethane		X	
ID011	Bromodichloromethane	X	X	
ID021	Bromoform	X	X	
ID030	Bromomethane	X	X	
IP135	Carbon Disulfide		X	
ID040	Carbon Tetrachloride	X	X	
ID050	Chlorobenzene	X	X	
ID060	Chloroethane	X	X	
ID090	Chloroform	X	X	
ID090	Chloromethane	X	X	
IP901	Chloroprene		X	

ID219	cis-1,2-Dichloroethene		X	
ID100	cis-1,3-Dichloropropene	X	X	
IP673	cis-1,4-Dichloro-2-butene		X	
ID111	Dibromochloromethane		X	
ID115	Dibromomethane		X	
ID120	Dichlorodifluoromethane	X	X	
IP215	Diethyl ether		X	
IP908	Ethyl Methacrylate		X	
IE030	Ethylbenzene	X	X	X
IM030	Hexachlorobutadiene		X	
ID198	Iodomethane		X	
IP430	Isobutyl Alcohol		X	
IP455	Isopropylbenzene		X	
ID199	Methacrylonitrile		X	
IP672	Methyl Acrylate		X	
IP570	Methyl Ethyl Ketone		X	
IP590	Methyl Isobutyl Ketone		X	
IP908	Methyl Methacrylate		X	
ID200	Methylene Chloride	X	X	
IK140	Naphthalene		X	
IP101	n-Butylbenzene		X	
PE187	Nitrobenzene		X	
IP695	n-Propylbenzene		X	
IP674	Pentachloroethane		X	
IP111	sec-Butylbenzene		X	
ID207	Styrene		X	
IP112	tert-Butylbenzene		X	
ID210	Tetrachloroethene	X	X	
IE040	Toluene	X	X	X
ID220	trans-1,2-Dichloroethene	X	X	
ID095	trans-1,3-Dichloropropene	X	X	
ID121	trans-1,4-Dichloro-2-butene		X	
ID270	Trichloroethene	X	X	
ID280	Trichlorofluoromethane	X	X	
IP795	Vinyl Acetate		X	
ID290	Vinyl Chloride	X	X	
IP810	Xylene-Total		X	X

## Appendix C2: Alcohols

These compounds are available as a package as references in the list above or individually. All of the compounds listed below are analyzed by EPA 8015B (Gas Chromatography-Flame Ionization Detection)

Code	Compound	Notes
IP500	Allyl Alcohol	
IP291	Amyl Alcohol (n-Pentanol)	
IP050	Butanol	
IP260	Ethanol	
IP346	Ethylene Glycol	Also in Glycols Package
IO652	Glycerol (Glycerin)	Also in Glycols Package
IP972	Isoamyl Alcohol	
IO722	Isopropanol (2-Propanol)	
IP490	Methanol	

IP845	Methyl Cellosolve (2-Methoxyethanol)	Only available individually
IP700	Propanol (1-Propanol, n-Propanol)	
IP137	Propylene Glycol	Also in Glycols Package

### Appendix C3: Alkylamines

Alkylamines are derivatized in aqueous solution and analyzed by GC-MS. The amines are quantitated against matrix-matched standards. This group is available as a package. Refer to the codes in the chart below when filling out your chain of custody if you wish to have single compounds analyzed.

Code	Compound
IP847	Diethylamine
IP280	Dimethylamine
IP081	Ethylamine
IP220	Isopropylamine
IP041	Methylamine
IP210	n-Propylamine
IP848	Triethylamine
IP480	Trimethylamine

### Appendix C4: Volatile Fatty Acids (Short-chain Carboxylic Acids)

Code	Compound
IA583	Acetic Acid (Ethanoic Acid)
IA587	Butyric Acid (n-Butyric Acid, Butanoic Acid)
IA589	Caproic Acid (Hexanoic Acid)
IA586	Formic Acid (Methanoic Acid)
IA584	Propionic Acid (Propanoic Acid)
IA588	Valeric Acid (n-Valeric Acid, n-Pentanoic Acid)

### Appendix C5: Carbonyl Compounds (Aldehydes and Ketones)

Code	Compound	EPA 556	EPA 8315	PKG
IO627	2,5-Dimethylbenzaldehyde		X	
IO622	Acetaldehyde	X	X	X
IO623	Benzaldehyde	X	X	X
IO624	Butyraldehyde	X	X	X
IO625	Crotonaldehyde	X	X	X
IO268	Cyclohexanone	X	X	X
IO626	Decanal	X	X	X
IO269	Ethanedial (Glyoxal)	X		
IP335	Formaldehyde	X	X	X
IO628	Heptanal	X	X	X
IO629	Hexanal	X	X	X
IO630	Isovaleraldehyde		X	
PE137	Methyl Glyoxal (2-Oxopropanal)	X		
IO635	m-Tolualdehyde		X	
IO631	Nonanal	X	X	X
IO632	Octanal	X	X	X
IO636	o-Tolualdehyde		X	
IO633	Pentanal	X	X	X
IO634	Propanal	X	X	X
IO637	p-Tolualdehyde		X	

### Appendix C6: Ethanolamines

Code	Compound
IO153	Diethanolamine
IA982	Ethanolamine
IA620	N-Ethyldiethanolamine

IA615	N-Methyldiethanolamine
IO713	Triethanolamine

**Appendix C7: Base, Neutral and Acid Extractible Compounds (Semivolatile Organic Compounds)**

Code	A. Phenolics:	BNA Scrn.	Notes
IP745	2,3,4,6-Tetrachlorophenol	X	Also by LC-MS/MS in a separate screen
IP785	2,4,5-Trichlorophenol	X	Also by LC-MS/MS in a separate screen
IG100	2,4,6-Trichlorophenol	X	Also by LC-MS/MS in a separate screen
IG030	2,4-Dichlorophenol	X	Also by LC-MS/MS in a separate screen
IG040	2,4-Dimethylphenol	X	Also by LC-MS/MS in a separate screen
IP922	2,6-Dichlorophenol	X	Also by LC-MS/MS in a separate screen
IG010	2-Chlorophenol	X	Also by LC-MS/MS in a separate screen
IP154	2-Methylphenol	X	Also by LC-MS/MS in a separate screen
IP158	3+4-Methylphenol	X	Also by LC-MS/MS in a separate screen
IG020	4-Chloro-3-methylphenol	X	Also by LC-MS/MS in a separate screen
IG080	Pentachlorophenol	X	Also by LC-MS/MS in a separate screen
IG090	Phenol	X	Also by LC-MS/MS in a separate screen
	<b>B. Nitro Compounds:</b>		
IP929	1,3,5-Trinitrobenzene	X	
IP927	1,3-Dinitrobenzene	X	
IG050	2,4-Dinitrophenol	X	
IJ010	2,4-Dinitrotoluene	X	
IJ020	2,6-Dinitrotoluene	X	
IP640	2-Nitrophenol	X	
IG060	4,6-Dinitro-2-methylphenol	X	
IG070	4-Nitrophenol	X	
IP951	5-Nitro-o-toluidine	X	
IJ040	Nitrobenzene	X	
	<b>C. Polynuclear Aromatic Hydrocarbons:</b>		
IP643	2-Methylnaphthalene	X	
IP937	3-Methylcholanthrene		
IP925	7,12-Dimethylbenzo(a)anthracene		
IK010	Acenaphthene	X	
IK020	Acenaphthylene	X	
IK030	Anthracene	X	
IK040	Benzo (a) anthracene	X	
IK050	Benzo (a) pyrene	X	
IK060	Benzo (b) fluoranthene	X	
IK080	Benzo (k) fluoroanthene	X	
IK070	Benzo(ghi)perylene	X	
IK090	Chrysene	X	
IK100	Dibenz(ah)anthracene	X	
IP921	Dibenzofuran	X	
IK110	Fluoranthene	X	
IK120	Fluorene	X	
IK130	Indeno(1,2,3-cd)pyrene	X	
IK140	Naphthalene	X	
IK150	Phenanthrene	X	
IK160	Pyrene	X	
	<b>D. Nitrosamines:</b>		
IP946	N-Nitrosodibutylamine		Also by LC-MS/MS in a separate screen

IP947	N-Nitrosodiethylamine	X	Also by LC-MS/MS in a separate screen
IP941	N-Nitrosodimethylamine		Also by LC-MS/MS in a separate screen
II030	N-Nitrosodiphenylamine		Also by LC-MS/MS in a separate screen
II010	N-Nitrosodipropylamine		Also by LC-MS/MS in a separate screen
IP948	N-Nitrosomethylethylamine		Also by LC-MS/MS in a separate screen
PE156	N-Nitrosomorpholine		Also by LC-MS/MS in a separate screen
IP949	N-Nitrosopiperidine		Also by LC-MS/MS in a separate screen
IP950	N-Nitrosopyrrolidine		Also by LC-MS/MS in a separate screen
	<b>E. Endocrine Disruptors:</b>		
PE140	4-Heptylphenol		Also by LC-MS/MS in a separate screen
PE141	4-Hexylphenol		Also by LC-MS/MS in a separate screen
PE142	4-Nonylphenol		Also by LC-MS/MS in a separate screen
PE143	4-Octylphenol		Also by LC-MS/MS in a separate screen
IH070	Bis (2-ethylhexyl) adipate	X	Also by LC-MS/MS in a separate screen
IH010	Bis(2-ethylhexyl) phthalate	X	Also by LC-MS/MS in a separate screen
IO277	Bisphenol A		Also by LC-MS/MS in a separate screen
IH020	Butyl Benzyl Phthalate	X	Also by LC-MS/MS in a separate screen
IH050	Diethyl Phthalate	X	Also by LC-MS/MS in a separate screen
IH060	Dimethyl Phthalate	X	Also by LC-MS/MS in a separate screen
IH030	Di-n-Butyl Phthalate	X	Also by LC-MS/MS in a separate screen
IH040	Di-n-Octyl Phthalate	X	Also by LC-MS/MS in a separate screen
	<b>F. Benzidines:</b>		
IP926	3,3'-Dichlorobenzidine	X	
IP185	3,3'-Dimethylbenzidine	X	
IO741	4,4'-Diaminobiphenyl	X	
	<b>G. Chlorinated Hydrocarbons</b>		
IP958	1,2,4,5-Tetrachlorobenzene	X	
IM060	1,2,4-Trichlorobenzene	X	
IM020	Hexachlorobenzene	X	
IM030	Hexachlorobutadiene	X	
IM040	Hexachlorocyclopentadiene	X	
IM050	Hexachloroethane	X	
IP963	Hexachloropropene	X	
IP952	Pentachlorobenzene	X	
IP674	Pentachloroethane	X	
IO285	Pentachloronitrobenzene	X	
	<b>H. Haloethers:</b>		
IL040	4-Bromophenyl phenyl ether	X	
IL050	4-Chlorophenyl phenyl ether	X	
IL020	Bis (2-chloroethyl) ether	X	
IL030	Bis (2-chloroisopropyl) ether	X	
	<b>I. Miscellaneous BNAs:</b>		
IP940	1,4-Naphthoquinone		
IP941	1-Naphthylamine		
IP913	2-Acetylamino fluorene		
IM010	2-Chloronaphthalene		
IP942	2-Naphthylamine		
IP914	4-Aminobiphenyl		
IP912	Acetophenone	X	
IP494	Benzoic Acid	X	
IP931	Benzyl Alcohol	X	

IL010	Bis (2-chloroethoxy) methane		
IO424	Carbazole	X	
IP928	Diphenylamine	X	
IP932	Ethyl Methanesulfonate		
IP371	Hexachlorophene		
IJ030	Isophorone		
IP934	Isosafrole		
IO638	Juglone		Analyzed by LC-MS/MS
IP936	Methapyrilene		
IP954	Phenacetin		
IP741	Pyridine	X	
IP957	Safrole		

#### Appendix C8: Explosives and Degradates Package

Code	Compound
IP927	1,3-Dinitrobenzene
IP929	1,3,5-Trinitrobenzene
IO117	2-Amino-2,6-Dinitrotoluene
IP150	2-Nitrotoluene
IJ010	2,4-Dinitrotoluene
IJ020	2,6-Dinitrotoluene
IO747	2,4,6-Trinitrotoluene (TNT)
PE105	3-Nitrotoluene
IO235	3,5-Dinitroaniline
IP147	4-Amino-2,6-Dinitrotoluene
PE106	4-Nitrotoluene
IO748	Cyclonite (RDX)
IJ040	Nitrobenzene
IP148	Tetryl

#### Appendix C9: Perfluorinated Alkyl Acids

Code	Compound
CE310	N-ethyl perfluorooctanesulfonamidoacetic acid
CE315	N-methyl perfluorooctanesulfonamidoacetic acid
CE320	Perfluorobutanesulfonic acid
CE325	Perfluorodecanoic acid
CE332	Perfluorododecanoic acid
CE333	Perfluoroheptanoic acid
CE335	Perfluorohexanesulfonic acid
CE337	Perfluorohexanoic acid
CE340	Perfluorononanoic acid
CE345	Perfluorooctanesulfonic acid
CE350	Perfluorooctanoic acid
CE355	Perfluorotetradecanoic acid
CE360	Perfluorotridecanoic acid
CE365	Perfluoroundecanoic acid

## Appendix C10: Hormones

The following hormones are analyzed by EPA 539 (ESI-HPLC-MS/MS). They are not yet part of the EPA primary drinking water contaminant list, but drinking waters can be monitored for these compounds. Waste water and ground water can also be analyzed without problems. Analysis of hormones in other matrices requires considerable method modification.

Code	Compound
FE150	Estriol
FE155	17 $\beta$ -Estradiol
FE160	17 $\alpha$ -Ethinylestradiol
FE165	Testosterone
FE170	Estrone
FE175	4-Androstene-3,17-dione
FE180	Equilin

## Appendix C11: Pharmaceuticals

Code	Compound
NM110	Acetaminophen
IP001	Acyclovir
NM120	Albuterol
IP015	Amoxicillin
NM130	Ampicillin
IP030	Atenolol
IP035	Atorvastatin
NM140	Azithromycin
IA960	Caffeine
NM150	Carbadox
NM160	Carbamazepine
IP038	Cefixime
NM170	Cefotaxime
IP039	Celecoxib
NM180	Chlortetracycline
NM190	Cimetidine
NM200	Ciprofloxacin
IP040	Citalopram
NM210	Clarithromycin
IP042	Clopidogrel
NM230	Cloxacillin
NM240	Codeine
NM250	Cotinine
IP043	Diazepam
NM300	Diltiazem
NM310	Diphenhydramine
NM320	Doxycycline
NM330	Enrofloxacin
NM340	Erythromycin
IP044	Escitalopram
IP045	Famotidine
IP047	Fexofenadine
NM370	Fluoxetine
IP048	Fluticasone
IP049	Furosemide



NM380	Gemfibrozil
IP060	Glyburide
IP090	Hydrocodone
NM390	Ibuprofen
IP100	Levetiracetam
IP102	Levofloxacin
IP103	Lidocaine
NM420	Metformin
IP110	Metoprolol
NM430	Miconazole
IP120	Mirtazapine
NM450	Naproxen
IP121	Nitrofurantoin
NM530	Penicillin V
NM550	Ranitidine
IP125	Risperidone
IP130	Simvastatin
OE180	Sulfacetamide
OE130	Sulfadiazine
OE135	Sulfadimethoxine
OE181	Sulfadoxine
OE155	Sulfamethoxazole
IP145	Temazepam
NM580	Tetracycline
IP146	Topiramate
IP152	Tramadol
NM610	Triclosan
NM620	Trimethoprim
IP155	Vancomycin
IP156	Verapamil

#### Appendix C12: Fungicides

Code	Compound	Fung Screen
HA135	Acibenzolar-S-methyl	
HA140	Ametoctradin	
HA145	Anilazine	
IO565	Azoxystrobin	X
IH085	Benalaxyl	X
IO038	Benomyl	X
HA160	Benthiavalicarb-isopropyl	
HA150	Benthiazole	
HA155	Bitertanol	
IO033	Boscalid	X
HA165	Bromuconazole	
HA170	Bupirimate	X
HA175	Captafol	
IO110	Captan	X
HE130	Carbendazim **	
HA180	Carboxin	
IO116	Chloroneb	X

IO118	Chlorothalonil	X
HA182	Chlozolinate	
IH086	Cyazofamid	X
HA185	Cymoxanil	
HA190	Cyproconazole	
IO735	Cyprodinil	X
HA195	Dicloran	
HA200	Diethofencarb	
IO729	Difenoconazole	X
IH089	Dimethomorph	
HA210	Diniconazole	
IP928	Diphenylamine (DPA)	
HE105	Dodine	X
HE106	Epoxiconazole	
IO429	Ethoxyquin	X
IO283	Etridiazole	
HE108	Famoxadone	
HE109	Fenamidone	
IO336	Fenarimol	X
HE110	Fenbuconazole	
HE111	Fenhexamid	X
HE112	Fenpropimorph	
IH090	Fluazinam	X
IO047	Fludioxonil	X
HA205	Fluopicolide	
HE113	Fluopyram	
HE115	Fluoxastrobin	
HE119	Fluquinconazole	
HE120	Flusilazole	
IO171	Flutolanil	X
HE121	Flutriafol	
HE122	Fluxapyroxad	
IH088	Folpet	
IO032	Fosetyl-Aluminum	
IM020	Hexachlorobenzene	X
IO221	Hexaconazole	
IO664	Imazalil	X
HE123	Ipconazole	
IO113	Iprodione	X
HE124	Iprovalicarb	
HE125	Kresoxim-methyl	X
IO231	Mancozeb	
HE131	Mandipropamid	
HE132	Mepanipyrim	
IO234	Metalaxyl/Mefenoxam *	X
IO430	Metconazole	X
IO615	Myclobutanil	X
IO620	o-Phenylphenol	
HE133	Oxadixyl	
HE134	Oxythioquinox	
HE135	Penconazole	

IH093	Pencycuron	X
HE136	Penflufen	
HE137	Penthiopyrad	
HE138	Piperalin	
HE139	Prochloraz	
HE140	Procymidone	
IO525	Propamocarb hydrochloride	X
IO321	Propiconazole	X
HE141	Prothioconazole	
IO661	Pyraclostrobin	X
HE142	Pyrimethanil	X
IO734	Quinoxifen	X
IO285	Quintozene (PCNB)	X
HE143	Spiroxamine	
IO617	Tebuconazole	X
HE144	Tecnazene	
HE145	Tetraconazole	X
IO618	Thiabendazole	X
IO371	Thiophanate-methyl+Carbendazim**	X
IO422	Thiram	
HE146	Tolclofos-methyl	
HE149	Tolyfluanid	
IO737	Triadimefon	X
HE150	Triadimenol	
IP195	Trifloxystrobin	X
IO619	Triflumizole	
HE151	Triforine	
IO037	Triticonazole	X
IO710	Uniconazole	
IO419	Vinclozolin	X
HE152	Ziram	
HE155	Zoxamide	

\* - Metalaxyl and Mefenoxam exist in combinations of inseparable isomers and must be reported as a pair

\*\* - Thiophanate-methyl degrades into Carbendazim in unpredictable proportions and must be reported as a pair with Carbendazim

#### Appendix C13: Herbicides

Code	Compound	Hrb Screen
IO130	2,4-D	
IO016	Acetochlor	X
IO550	Acifluorfen	
IO020	Alachlor	X
IO001	Allidochlor	
IO002	Alloxydim	X
IO026	Ametryn	X
IO003	Amicarbazone	
HE237	Aminocyclopyrachlor (Imprelis)	
IO368	Aminomethylphosphonic acid (AMPA)	
IO460	Aminopyralid	
IO004	Amitrole	

IO027	Atraton	X
IO010	Atrazine	X
IO025	Barban	
IO080	Benfluralin	
IO030	Bensulfuron-methyl	
IO070	Bensulide	X
IO050	Bentazon	
IO035	Bifenox	
IO746	Bispyribac-Sodium	
IO105	Bromacil	X
IO091	Bromoxynil	
IO036	Butachlor	X
IO060	Butralin	
IO107	Butylate	X
IO604	Carfentrazone-ethyl	X
IO119	Chloramben	
IO106	Chloridazon	
IO125	Chlorimuron-ethyl	X
IO111	Chlormequat	
IO127	Chloroxuron	
IO136	Chloroxynil	
IO150	Chlorpropham	
IO121	Chlorsulfuron	
IO165	Chlorthal	
IO606	Cloransulam-methyl	X
IO173	Cinidon-ethyl	
IO605	Clethodim	X
IO470	Clodinafop-propargyl	X
IO175	Clofencet	
IO126	Clomazone	X
IO366	Clopyralid	
IO739	Cumyluron	
IO100	Cyanazine	X
IO335	Cycloate	
IO724	Cycloxydim	X
IO177	Cyhalofop-butyl	
IO337	Dachthal (DCPA)	
IO137	Dalapon	
IO715	Daminozide	
IO190	Desmedipham	
IO341	Diallate	
IO040	Dicamba	
IO134	Dichlobenil	
IO138	Dichlorprop	
IO392	Diclofop-methyl	
IO399	Difenzoquat	
IO403	Diflufenzopyr	
IO133	Dimethenamid	
IO406	Dinitramine	
IO139	Dinoseb	
IO408	Diphenamid	

IH078	Diquat	
IO141	Dithiopyr	X
IO140	Diuron	X
IH079	Endothall	
IO155	Eptam (EPTC )	X
IO160	Ethalfuralin	X
HE222	Ethephon	
IO409	Ethofumesate	
IO410	Fenoprop	
IO013	Fenoxaprop-P-ethyl	X
IO411	Fenuron	
IO412	Florasulam	
IO515	Fluazifop-P-butyl	X
IO731	Flucarbazone	
IO170	Fluchloralin	
IH091	Flufenacet	
IO645	Flumetralin	
IO603	Flumetsulam	X
IO413	Flumiclorac-pentyl	
IO607	Flumioxazin	X
IO414	Fluometuron	
IK125	Fluridone	X
IO416	Fluroxypyr-meptyl	
IO417	Fluthiacet-methyl	
IO732	Fomesafen	X
IO663	Foramsulfuron	X
IO418	Forchlorfenuron	
EE552	Glufosinate	
IO367	Glyphosate	
IO640	Halosulfuron-methyl	X
IO423	Haloxypyr	
IO185	Hexazinone	X
IO426	Imazamethabenz	
IO668	Imazamox	X
IO609	Imazapic	X
IO500	Imazapyr	X
IO373	Imazaquin	X
IO334	Imazethapyr	X
IO491	Indaziflam	X
IO738	Iodosulfuron-methyl-sodium	
IO431	loxynil	
IO432	Isopropalin	
IO450	Isoproturon	
IO176	Isoxaben	X
IO726	Isoxaflutole	
IP037	Lactofen	
IP134	Lenacil	
IO220	Linuron	
IO235	MCPA	
IP140	MCPB	
IO236	Mecoprop (MCP)	

IO570	Mefluidide	X
IO733	Mepiquat	
IP159	Mesosulfuron-methyl	
IO642	Mesotrione	X
IP160	Metazachlor	
IO245	Metolachlor	X
IH075	Metribuzin	X
IO381	Metsulfuron-methyl	X
IO346	Molinate	X
IO260	Monuron	
IP165	Napropamide	
IP180	Naptalam	
IP184	Neburon	
IO580	Nicosulfuron	
IP188	Nitrofen	
IO251	Norflurazon	X
IO372	Oryzalin	X
IO270	Oxadiazon	X
IO180	Oxyfluorfen	X
IO712	Paclobutrazol	
IO288	Paraquat	
IO193	Pebulate	X
IO330	Pendimethalin	X
IP189	Phenmedipham	
IG085	Picloram	
IO295	Prodiamine	X
IP190	Profluralin	
IP193	Profoxydim	
IO714	Prohexadione	
IO300	Prometon	X
IO305	Prometryn	X
IO195	Pronamide (Propyzamide)	X
IO310	Propachlor	X
IO144	Propanil	
IP200	Propaquizafop	
IO320	Propazine	X
IP206	Propham	
IP205	Propoxycarbazone	
IP240	Prosulfuron	
IP245	Pyraflufen-ethyl	
IP250	Pyrasulfotole	
IO200	Pyrazon	
IO205	Pyroxsulam	
IO653	Quinchlorac	
IO210	Quinmerac	
IO723	Quizalofop-P-ethyl	X
IO639	Rimsulfuron	X
IO736	Saflufenacil	X
IO445	Sethoxydim	X
IO727	Siduron	
IO290	Simazine	X

IO374	Simetryne	X
IO215	Sulcotrione	
IO250	Sulfallate	
IO535	Sulfentrazone	X
IO402	Sulfometuron-methyl	
IO255	Sulfosulfuron	
IO370	Tebuthiuron	X
IO267	Tefuryltrione	
IP860	Tembotrione	
IO284	Tepraloxydim	
IO350	Terbacil	
IO375	Terbutylazine	X
IO376	Terbutryn	X
IO340	Thiazopyr	
IO365	Thidiazuron	
IO725	Thiencarbazone-methyl	X
IO379	Thifensulfuron-methyl	X
IO369	Thiobencarb	
IO480	Topramezone	
IO377	Tralkoxydim	
IO428	Triallate	
IO378	Triasulfuron	
IO380	Tricamba	
IO401	Triclopyr	
IO390	Tridiphane	
IO658	Trifloxysulfuron	
IO420	Trifluralin	X
IO575	Trinexapac-ethyl	X
IO415	Vernolate	X

#### Appendix C14: Insecticides

Code	Compound	Ins. Scrn.
IH074	3-Hydroxycarbofuran	X
IN070	4,4'-DDD	X
IN080	4,4'-DDE	X
IN090	4,4'-DDT	X
IH082	Acephate	X
IA017	Acequinocyl	X
IA020	Acetamiprid	X
IH071	Aldicarb	X
IH072	AldicarbSulfone	
IH073	AldicarbSulfoxide	
IQ011	Aldrin	X
IA301	Allethrin	X
IA061	Avermectin	
IO186	Azinphos-methyl	X
IO530	Bendiocarb	X
IA062	Bifenazate	
IO647	Bifenthrin	
IN300	Buprofezin	X
IA073	Butocarboxim	

IH077	Carbaryl	X
IO115	Carbofuran	X
IO039	Chlorantraniliprole	X
IO120	Chlorpyrifos	X
IA095	Clofentezine	X
IO046	Clothianidin	X
IO404	Coumaphos	X
IO648	Cyfluthrin	X
IO646	Cyhalothrin	X
IH084	Cypermethrin	X
IA101	Cyphenothrin	X
IN097	Deltamethrin	X
IO339	Demeton	X
IP183	Diazinon	X
IA102	Dichlofluanid	
IO407	Dichlorvos	X
IP970	Dicofol	
IN100	Dieldrin	X
IA103	Diflubenzuron	X
IO142	Dimethoate	
IO744	Dinotefuran	X
IO143	Disulfoton	X
IA104	Emamectin	
IN130	Endosulfan Sulfate	X
IN140	Endrin	X
IN150	Endrin Aldehyde	
IN155	Endrin Ketone	
IA106	Esfenvalerate	X
IA412	Ethiofencarb	
IO162	Ethoprophos	X
IO266	Fenamiphos	X
IA111	Fenchlorfos	X
IA113	Fenpropathrin	
IA120	Fenpyroximate	
IA122	Fensulfothion	X
IA122	Fenthion	X
IO601	Fipronil	X
IA131	Flonicamid	X
IN301	Flubendiamide	X
IA142	Fluvalinate	
IO166	Fonofos	X
IN160	Heptachlor	X
IN170	Heptachlor Epoxide	X
IO187	Imidacloprid	X
IA170	Imiprothrin	
IA172	Indoxacarb	
IO191	Isofenphos	X
IA175	Ivermectin	
IO230	Malathion	X
IO257	Methamidophos	X
IO242	Methiocarb	X



IH081	Methomyl	X
IO240	Methoxychlor	X
IA185	Mevinphos	X
IN175	Mirex	
IA411	Moxydectin	
IA190	Naled	X
IA250	Novaluron	
IH076	Oxamyl	X
IO281	Parathion-ethyl	X
IO282	Parathion-methyl	X
IO286	Permethrin	X
IA265	Phenothrin	
IO287	Phorate	X
IA300	Pirimicarb	
IA305	Prallethrin	
IO311	Propoxur	X
IA310	Prothiofos	X
IA320	Pyridaben	
IA330	Resmethrin	
IA340	Rotenone	X
IA352	Spinosad	
IO745	Spirotetramat	X
IA361	Sulprofos	
IA367	Tebufenozide	X
IA375	Tefluthrin	
IO427	Terbufos	X
IA381	Tetrachlorvinphos	X
IA382	Tetradifon	
IA385	Tetramethrin	X
IA386	Thiaclopid	
IO667	Thiamethoxam	X
IA387	Thiodicarb	
IA400	Tralomethrin	X
IO395	Trichlorfon	X
IN110	$\alpha$ -Endosulfan	X
IN020	$\alpha$ -HCH	X
IN120	$\beta$ -Endosulfan	X
IN030	$\beta$ -HCH	X
IN050	$\gamma$ -HCH (Lindane)	X
IN040	$\delta$ -HCH	X

#### Appendix C15:

This method is suitable for all drinking, ground, and waste waters. It measures all Microcystin LR, RR, and YR including dissolved and cellular-bound forms by HPLC-MS/MS. This method is not suitable for matrices other than water.

Code	Compound
IA822	Microcystin RR
IA823	Microcystin LR
IA824	Microcystin YR

**Appendix C16: ICP Scan #1**

This package includes Aluminum, Beryllium, Boron, Calcium, Cobalt, Copper, Iron, Magnesium, Manganese, Molybdenum, Phosphorus, Potassium, Sodium, Sulfur, and Zinc.

**Appendix C17: ICP Scan #2**

This package includes Arsenic, Barium, Cadmium, Chromium, Lead, Nickel, and Selenium.

**Appendix C18: ICP Scan #3**

This package includes Cadmium, Chromium, Copper, Lead, Nickel, Silver, and Zinc.

**Appendix C19: LDL Heavy Metals**

This package includes Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, and Selenium

**Appendix C20: CFR Part 503 Metals**

This package includes Arsenic, cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc for the IB007 code. For IB007L Arsenic and Selenium are low detection limit.

**Appendix C21: Audubon Monitoring Packages**

Code	Parameter	Core	Extended
IA260	Dissolved Oxygen	X	X
IA270	Conductivity	X	X
IA590	pH	X	X
IA460	Ammonia	X	X
IA490	Nitrate	X	X
IA647	Phosphorus as PO <sub>4</sub>	X	X
IA791	Field Temperature		X
	Pesticides: Choose three, see App. C12-C14 for codes		X

**APPENDIX E: Food Testing****Appendix E1: Mycotoxins**

Code	Compound
FE001	Patulin
FE002	Nivalenol
FE003	Deoxynivalenol
FE004	Zearalenone
FE005	Aflatoxin G2
FE006	Aflatoxin G1
FE007	Aflatoxin B2
FE105	Aflatoxin B1
FE110	HT2 Toxin
FE115	T2 Toxin
FE120	Fuminosin B1
FE125	Fuminosin B2
FE130	Ochratoxin A
FE135	Verruculogen
FE140	Fusarenone-X

## Appendix E2: Bioactives in Supplements and Raw Materials

The compounds listed below are available for testing. However, many are low sample volume tests. Please contact the laboratory before sending sample for information on pricing (including quantity discounts), reference codes, and turn around time. Projects involving these compounds are welcome.

Commodity or Supplement	Active(s)	Method Instrument
Aloe	Barbaloin	HPLC-UV
Apples, Echinacea	Chlorogenic Acid, Epicatechin, Phloretin, Quercetin, Caffeic Acid	HPLC-MS/MS
Banaba	Corosolic Acid	HPLC-UV
Cacao, Coffee, Tea, Guarana	Caffeine	HPLC-MS/MS
Cinnamon	Coumarin	HPLC-UV
Citrus	Hesperidin	HPLC-UV
Cough Drops	Menthol	GC-MS
Devil's Claw	Harpagoside	HPLC-UV
Dong Quai	Ligustalide, Ferulic Acid	HPLC-UV
Eucalyptus	Cineol	GC-MS
Feverfew	Parthenolide	HPLC-UV
Garlic	Allicin	HPLC-UV
Ginseng	Ginsenosides: Rg1, Re, Rf, Rb1, Rc, Rb2, Rd	HPLC-MS/MS
Goldenseal	Hydrastine, Berberine	HPLC-UV
Kudzu	Puerarin, Daidzin, Glycitin, Genistin, Daidzein, Glycitein, Genis	HPLC-UV
Licorice	Glycyrrhizic Acid	HPLC-UV
Magnolia	Magnolol	HPLC-UV
Mexican Yam	Diosgenin	HPLC-UV
Milk Thistle	Silychristin, Silydianin, Silybin A, Silybin B, Isofilybin A, Isosilybin B	HPLC-UV
Oregano	Carvacrol	GC-MS
Pepper (Black and White)	Piperine	HPLC-UV
Peppers ( <i>Capsicum</i> )	Capsaicin	GC-MS
Rosemary	Carnosol, Carnosic Acid, Rosmarinic Acid	HPLC-UV
Rosemary	1,8-Cineol, Camphor, Safrole	GC-MS
Stevia	Stevioside, Rebaudioside	HPLC-UV
Tomatoes	Lycopene	HPLC-UV
Various	Ephedrine	HPLC-MS/MS
Various	Lutein	HPLC-UV
Various	Theobromine	HPLC-UV
Various	Zeaxanthin	HPLC-UV