

## Containers, Preservations, & Hold Times

### Metals Analysis

Samples must be submitted in plastic or glass containers. Holding time for preserved samples is six months, except mercury which is 28 days. The analytical holding time only applies if the preservation holding time is met.

Aqueous samples require 250 mL of sample; soils, oils, or solvents require 10 g.

Aqueous samples for total metals must be preserved with HNO<sub>3</sub> to pH <2.

### Microbiology

Micro samples being dropped off at the lab must be sampled in sterile containers and preserved with sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>). These sampling containers can be picked up from the lab prior to sampling.

Parameter	Container	Holding Time	Amount	Preservative
Bromine	P, G	15 minutes	125 mL	N/A
Chlorine	P, G	15 minutes	125 mL	N/A
Coliform, Fecal	P, G	30 hours	125 mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
Coliform, Total	P, G	30 hours	125 mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
Heterotrophic Plate Count	P, G	30 hours	125 mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>

Bromine and Chlorine levels of pool waters are sampled and analyzed at the sampling location. To schedule a sampling, please contact [info@e4mas.com](mailto:info@e4mas.com) or call 248-591-6660.

### Organic Chemistry

Parameter	Container	Preservative	Holding Time	Amount
<b>I. WATER &amp; AQUEOUS LIQUIDS MATRICES –</b>				
<b>Semi-volatile Organics</b>				
Organochlorine Pesticides & PCBs	G (amber)	4°C	7 days	(2) 1.0 L
Base / Neutral Extractables	G (amber)	4°C	7 days	1.0 L
Acid Extractables	G (amber)	4°C	7 days	1.0 L
Chlorinated Herbicides	G (amber)	4°C	7 days	1.0 L
TPH	G (amber)	4°C	7 days	1.0 L
<b>II. WATER &amp; AQUEOUS LIQUIDS MATRICES -</b>				
<b>Volatile Organics</b>				
Volatile Organics	G	4°C; HCl	7 days (14 if preserved in HCl)	(2) VOA, zero headspace
BTEX	G	4°C; HCl	7 days (14 if preserved in HCl)	(2) VOA, zero headspace

### III. SOLID, SOIL, & OIL (LIQUID) MATRICES – Semi-volatile

Organochlorine Pesticides & PCBs	G	4°C	14 days	100 g
Base / Neutral Extractables	G	4°C	14 days	100 g
Acid Extractables	G	4°C	14 days	100 g
Chlorinated Herbicides	G	4°C	14 days	100 g
PCB in Oil	G	4°C	14 days	100 g
TPH	G	4°C	14 days	100 g

### IV. SOLID, SOIL, & OIL (LIQUID) MATRICES – Volatile Organics

Volatile Organics, BTEX, Solvents, TPH Volatiles	G	4°C; Methanol	14 days	VOA with 10 g of sample
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### Toxicity Characteristic Leaching Procedure

Samples needing TCLP testing are non-preserved and stored in 32 oz containers. If samples require any TCLP organic testing, the sample container must be glass. Samples must be tumbled within 2 weeks of the collect date. For aqueous liquid samples requiring any TCLP organic testing, tumbling is not necessary.

### Wet Chemistry

Parameter	Container	Holding Time	Solids, Soils & Oils	Waters & Aqueous Liquids	
			Amount	Amount	Preservative
Alkalinity (Total, Bicarbonate, Carbonate)	P, G	14 days	N/A	250 mL	4°C
BOD	P, G	48 hours (comp) 24 hours (grab)	N/A	250 mL	4°C
BTU	P, G	28 days	100 g	250 mL	4°C
CBOD	P, G	48 hours (comp) 24 hours (grab)	N/A	250 mL	4°C
COD	P, G	28 days	N/A	250 mL	H <sub>2</sub> SO <sub>4</sub> to pH <2; 4°C
Chloride	P, G	28 days	100 g	250 mL	4°C
Chlorine-Residual	G	15 min	N/A	250 mL	4°C
Chromium, Hexavalent	P, G	24 hours (water) 30 days (soil)	100 g	250 mL	4°C
Conductivity	P, G	24 hours (unfiltered) 28 days (filtered)	N/A	500 mL	4°C
Cyanide					
- Amenable	P, G	14 days	100 g	250 mL	NaOH to pH >12; 4°C
- Available	G (amber)	14 days	N/A	100 mL	NaOH to pH >12; 4°C
- Reactive	P, G	14 days	100 g	250 mL	4°C
- Total	P, G	14 days	100 g	250 mL	NaOH to pH >12; 4°C
Flashpoint	G	14 days	100 g	250 mL	4°C
Hardness	P, G	6 months	100 g	250 mL	HNO <sub>3</sub> to pH <2; 4°C
N as Ammonia	P, G	28 days	100 g	250 mL	H <sub>2</sub> SO <sub>4</sub> to pH <2; 4°C
Nitrate	P, G	48 hours	100 g	250 mL	4°C

Nitrite	P, G	48 hours	100 g	250 mL	4°C
Oil & Grease/SGT-HEM/ TPH-Gravimetric	G	28 days	N/A	1.0 L	H <sub>2</sub> SO <sub>4</sub> to pH <2; 4°C
Paint Filter Test	P, G	N/A	200 g	200 g	4°C
pH	P, G	14 days	100 g	100 mL	4°C
pH - Field	P, G	15 min	N/A	100 mL	N/A
Phenols-Total (4AAP)	G (amber)	14 days	N/A	100 mL	H <sub>2</sub> SO <sub>4</sub> to pH <2; 4°C
Phenols-Total	G (amber)	14 days	100 g	500 mL	4°C
Phosphorus-Total	P, G	28 days	N/A	250 mL	H <sub>2</sub> SO <sub>4</sub> to pH <2; 4°C
Sulfate	P, G	28 days	100 g	250 mL	4°C
Sulfide	P, G	7 days	N/A	250 mL	Z(OAc) <sub>2</sub> + NaOH to pH >9; 4°C
TDS	P, G	7 days	N/A	500 mL	4°C
TS	P, G	7 days	100 g	500 mL	4°C
TSS	P, G	7 days	N/A	250 mL	4°C