



# Maine Environmental Laboratory

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Analyte	SOLID SAMPLES			AQUEOUS SAMPLES		
	Container <sup>1</sup>	Preservation <sup>2</sup>	Hold Time <sup>3</sup>	Container <sup>1</sup>	Preservation <sup>2</sup>	Hold Time <sup>3</sup>
	INORGANICS					
Metals <sup>4</sup> (except Hg) & Hardness	8 oz G/P (need 1 gram min.)	n/a	6 months	250 mL P/G	HNO <sub>3</sub> to pH<2	6 months
Mercury <sup>4</sup>	8 oz G/PP	≤6°C	28 days	125 mL P/G	HNO <sub>3</sub> to pH<2	28 days
Alkalinity	4 oz G	≤6°C	n/a	1 L P/G	≤6°C	14 days
Ammonia-N <sup>5</sup>	4 oz G/P	≤6°C	28 days	250 mL P/G	H <sub>2</sub> SO <sub>4</sub> to pH<2, ≤6°C & pre-test kit <sup>5</sup>	28 days
<b>BOD<sub>5</sub>/CBOD<sub>5</sub></b>	Not available for solid samples			1 L P/G	≤6°C	<b>24 hours</b>
Boron	8 oz P	≤6°C	6 months	125 mL P	HNO <sub>3</sub> to pH<2	6 months
Bromide	8 oz G/P	≤6°C	n/a	60 mL P/G	≤6°C	28 days
Chloride	8 oz G/P	≤6°C	n/a	60 mL P/G	≤6°C	28 days
COD	Not available for solid samples			60 mL P/G	H <sub>2</sub> SO <sub>4</sub> to pH<2, ≤6°C	28 days
<b>Coliform (Total or Fecal), E. coli, Enterococci</b>	Not available for solid samples			P – sterile bottle	≤10°C, Sodium thiosulfate	<b>30 hours - DW, 8 hours - NPDES</b>
<b>Color</b>	Not available for solid samples			125 mL P/G	≤6°C	<b>24 hours</b>
Conductivity/Sp. Cond.	8 oz G	≤6°C	28 days	125 mL P/G	≤6°C	28 days
Cyanide (total + free.)	4 oz G/P	≤6°C	14 days	100 mL Amb. G	≤6°C, NaOH	14 days
Cyanide (amenable)	4 oz G/P	≤6°C	14 days	2x 250 mL P	≤6°C, NaOH	14 days
Flashpoint (aqueous) or Ignitability (solid)	8 oz G, filled to the top	n/a	n/a	8 oz G, filled to top	n/a	n/a
Fluoride	8 oz P	≤6°C	28 days	60 mL P	≤6°C	28 days
Hardness <sup>4</sup>	4 oz G/P	n/a	6 months	125 mL P/G	HNO <sub>3</sub> to pH<2 <sup>6</sup>	6 months
<b>Hexavalent Chromium</b>	4 oz G + 60 mL P	≤6°C	28 days	500 mL P/G	≤6°C	<b>24 hours<sup>9</sup></b>
<b>Legionella pneumophila</b>	Sterile bottle	Ambient temp.	<b>48 hours</b>	Sterile bottle	Ambient temp.	<b>48 hours</b>
<b>Nitrate (NO<sub>3</sub>)</b>	4 oz G/P	≤6°C	28 days	60 mL P/G	≤6°C	<b>48 hours</b>
<b>Nitrate (NO<sub>2</sub>)</b>	4 oz G/P	≤6°C	28 days	60 mL P/G	≤6°C	<b>48 hours</b>
Oil and Grease + Non-Polar Material (SGT)	1 L Amb. G	≤6°C	n/a	1 L Amb. G	≤6°C, H <sub>2</sub> SO <sub>4</sub> or HCl to pH<2	28 days
<b>Orthophosphate + Total Reactive Phosphorus</b>	Not available for solid samples			250 mL P/G	Filter immediately, ≤6°C	<b>48 hours</b>
Paint Filter	2x 8 oz G	n/a	n/a	Not available for aqueous samples		
<b>pH</b>	4 oz G/P	n/a	n/a	125 mL P/G	n/a	<b>Immediately</b>
<b>Radon</b>	Not available for solid samples			2x 125 mL G, no headspace	n/a	<b>3 days</b>
Total Phosphorus	8 oz G/P	n/a	6 months	250 mL P/G	≤6°C, H <sub>2</sub> SO <sub>4</sub> to pH<2	28 days
Reactivity, Cyanide	4 oz G	≤6°C	14 days	250 mL P	≤6°C	14 days
Reactivity, Sulfide	4 oz G	≤6°C	14 days	251 mL P	≤6°C	14 days
Sulfate	4 oz G/P	≤6°C	28 days	60 mL P/G	≤6°C	28 days

Analytes marked with G and P can be collected in either glass or plastic (first letter is preferred).

Analytes marked with either a single G or P should only be collected in that type of container.

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	Container <sup>1</sup>	Preservation <sup>2</sup>	Hold Time <sup>3</sup>	Container <sup>1</sup>	Preservation <sup>2</sup>	Hold Time <sup>3</sup>
	INORGANICS (cont.)					
Sulfide	4 oz G/P	≤6°C	7 days	250 mL P/G	Zn Acetate, NaOH to pH>9, ≤6°C	7 days
Settleable Solids	Not available for solid samples			2x 1 L (widemouth) P/G	≤6°C	<b>48 hours</b>
Total Dissolved Solids (TDS)	Not available for solid samples			1 L P/G	≤6°C	7 days
Total Suspended Solids (TSS)	Not available for solid samples			1 L P/G	≤6°C	7 days
Total Solids (TS)	4 oz G/P	≤6°C	7 days	250 mL P/G	≤6°C	7 days
Total Volatile Solids (TVS) or Loss on Ignition (LOI)	8 oz G/P	≤6°C	7 days	250 mL P/G	≤6°C	7 days
Tannin & Lignan	Not available for solid samples			250 mL P	≤6°C	n/a
Total Kjeldahl Nitrogen (TKN)	4 oz G/P	≤6°C	28 days	125 mL P/G	≤6°C, H <sub>2</sub> SO <sub>4</sub> to pH<2	28 days
Total Organic Carbon	4 oz G/P	≤6°C	28 days	2x 40 mL G	≤6°C, H <sub>2</sub> SO <sub>4</sub> to pH<2	28 days
<b>Turbidity</b>	Not available for solid samples			250 mL P/G (do not combine)	≤6°C	<b>48 hours</b>
Analyte	ORGANICS					
Volatile Organic Compounds (VOCs) 524.2, 8260	20 mL G with plunger	≤6°C, methanol	14 days	3x 40 mL, no headspace	≤6°C, HCL to pH<2	14 days
<b>VOCs 624</b>	Not available for solid samples			4x 40 mL, no headspace (EAI)	1 vial w/ HCL 3 vials ≤6°C	<b>72 hours</b>
Semi Volatile Organic Compounds (SVOC/ABN)	8 oz AG	≤6°C	14 days	1 L Amb. G (EAI)	≤6°C	7 days
VPH	20 mL G with plunger	≤6°C, methanol	28 days	3x 40 mL G, no headspace	≤6°C, HCL to pH<2	14 days
EPH and TEPH	4 oz G	≤6°C	14 days	1 L Amb. G	≤6°C, HCL to pH<2	14 days
TPH – Gas (GRO-8015)	20 mL G with plunger	≤6°C, methanol	14 day	3x 40 mL G, no headspace	≤6°C, HCL to pH<2	14 days
TPH – diesel	4 oz G	≤6°C	14 days	1 L Amb. G	≤6°C	7 days
Herbicides	8 oz G	≤6°C	14 days	1 L Amb. G	≤6°C	7 days
PCBs	8 oz G	≤6°C	14 days	1 L Amb. G	≤6°C	7 days
Pesticides	8 oz G	≤6°C	14 days	1 L Amb. G	≤6°C	7 days
Total Organic Halogens (TOX)	8 oz G	≤6°C	28 days	250 mL Amb. G	≤6°C, H <sub>2</sub> SO <sub>4</sub> to pH<2	28 days
Methane – RSK175	Not available for solid samples			3x 40 mL G, no headspace	≤6°C, H <sub>2</sub> SO <sub>4</sub> to pH<2	28 days
Glycols	Not available for solid samples			2x 40 mL G	≤6°C	14 days
PFAS	2 P	≤6°C, clean cooler	14 days	2 P	≤6°C, clean cooler	14 days
Analyte	TCLP					
<b>TCLP Metals</b>	110g in G/P	≤6°C (if Hg needed)	6 months (with Hg, 28 days)	250 mL P	n/a	6 months (with Hg, 28 days)
<b>TCLP VOCs</b>	4 oz G - do not combine	≤6°C, no headspace	14 days	4x 40 mL G, no headspace	≤6°C	14 days
<b>TCLP SVOCs, Herb., and Pest.</b>	1 L G	≤6°C	14 days to ext., then 7 days	2x 8 oz G	≤6°C	7 days

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## **Notes:**

- 1- P = high density polyethylene, pre-cleaned (HDPE); G = glass, pre-cleaned. Solids "P" may use Ziploc bags if not too runny. The volumes listed may be reduced or increased depending on analyte combinations, detection limits, and sample-specific quality control. Contact the laboratory for minimum volumes for specific analytical combinations.
- 2- Grab samples: immediate preservation in the field is preferred. Composite samples: preserve each aliquot at time of collection, if possible. When using an automatic sampler, cool sampler to 4°C until compositing is completed.
- 3- Holding times listed are the maximum that the samples may be held before analysis or extraction must begin. Holding times start at time of sampling for grab samples and end of composite period for composites.
- 4- Testing for dissolved metals requires filtration (0.45 micron) prior to preservation. Immediate filtration and preservation in the field is preferred. If this is not possible, deliver samples to the laboratory unpreserved as soon as possible for filtration and preservation. DW metals must be preserved within 14 days of sampling.
- 5- Use test kit prior to preserving in the field. Request a kit and pre-test instructions with your bottle order.
- 6- EPA defines "immediately" as within 15 minutes of collection. Holding time exceedances must be noted on lab report.
- 7- Fill container(s) to top with NO HEADSPACE (no air). Invert sample to check for presence of air bubbles. Shoot for none, but 1 pea-sized bubble is ok.
- 8- Holding time is 7 days when sample is not preserved with HCl to pH <2. VOC 624 hold time is 72 hours for certain compounds on list.
- 9- AQ Hexavalent chromium is subcontracted to a certified lab, with 24-hr hold time. Deliver to sub-lab directly.

## **Sample Acceptance Criteria**

### **Sample Condition**

Samples will be reviewed for sample acceptance criteria upon receipt. This includes full documentation, sufficient volume, proper chemical and/or temperature preservation, appropriate sample containers, and receipt of sample within hold time. If any non-compliant conditions are identified, the client will be notified for continuation or cancellation instructions. Should the client wish to proceed with analysis, the non-compliant conditions will be noted on the Chain of Custody (COC) form, the report's narrative page, and by flagging the data on the final report.

### **Sample Integrity**

Shipping containers received with custody seals are checked for tampering upon receipt. Containers are checked for leaks or any conditions which might compromise the integrity of the samples. Custody seals are available from the laboratory.

### **Sample Documentation**

The laboratory provides COCs for complete documentation including sample-specific comments, and the following information: client information, sampler name, sample ID, sampling date and time, sample matrix, type of container and preservation, analytical parameters requested, and custody signatures with date and time.

### **Sample Labeling**

Sampling containers should be labeled with permanent ink. Black Sharpie® works well. Include at a minimum the sample ID, date and time of sampling, and any preservation included. At the lab, samples will be assigned a unique identifier matched to samples on the COC form.

### **Sample Preservation**

Refer to the previous pages for specific preservation requirements. Thermal preservation 0-6° C, but not frozen.

### **Suggestions for chilling samples**

To ensure samples are received within the accepted range of 0-6°C (fridge temp), use double bagged ice or completely frozen gel ice packs. Match the amount of ice at least 1:1 to the volume of sample. In cases where the sample is hand-delivered to the lab immediately after sampling, evidence that the chilling process has begun is sufficient and will be documented. When shipping a sample to the lab, waterproof coolers are recommended to maintain required temperatures. Add extra ice if the sample might sit in a UPS/Fed Ex/USPS truck or warehouse of the weekend.

**Questions? Don't see what you're looking for? Call us at 207-846-6569, or email us at [info@mel-lab.com](mailto:info@mel-lab.com)**