Sample Preservation and Handling Instructions

Parameter	Minimum Volume (mL)	Sample (g)	Container Type		Preservation [+]	Maximum [++] Holding Time
			Liquid	Soil / Sediment		
Alkalinity	100		* Polyethylene		Refrigerate	ASAP 14 day max.
Ammonia	100	25	Glass of PET	Glass	4°C, H_2SO_4, < pH 2	10 days
Anions	50		* Polyethylene	Glass or PET	Refrigerate	28 days
BOD	500		* Polyethylene or Glass		Refrigerate	ASAP (2 days)
BTEX	40 mL x 2	50	^ Glass (amber) No headspace	^ Glass (amber) No headspace	4°C, H_2SO_4, < pH 2, No headspace	14 days, store at 4°C
Carbon, total organic (TOC)	50	100	* Polyethylene or ^ Glass (amber) No headspace	Glass	4°C, H_2SO_4 or HCl < pH 2	28 days
Chlorine, total residual	50		* Polyethylene		Analyze immediately	---
Chromium VI	100		* Polyethylene		4°C	24 hours
C.O.D.	50	50	* Polyethylene	Glass	4°C, H_2SO_4, < pH 2	28 days
Total Coliform, E. Coli, Fecal Coliform, Heterotrophic Plate Count	125		* Polyethylene (Sterile)		Na_2SO_4 Precharged	ASAP
Colour	50		* Polyethylene		4°C	48 hours
Conductivity	50	100	* Polyethylene	Glass	4°C	28 days
Cyanide	50	100	* Polyethylene	Glass	NaOH > pH 12	14 days
Dissolved Metals	30		* Polyethylene		Filter (0.45 microns) ** HNO_3 pH < 2	28 days
DOC	50	100	Glass	Glass	4°C, H_2SO_4, < pH 2	14 days
Geosmin & Methyl Isoborneal	40 mL x 2	50	^ Glass (amber)		4°C	7 days, store at 4°C
Hardness	50		* Polyethylene		4°C, HNO_3 < pH 2	28 days
Hydrogen Sulphide	100		Glass or * Polyethylene		0.5 mL Zn Acetate followed by $NaCO_3$ to pH 10	7 days
Total Metals (ICP-MS / ICP-OES)	100	50	* Polyethylene	Ziploc or Soil Envelope	** HNO_3 to pH < 2	30 days
Mercury	100	25	Glass (amber)	*** Ziploc or Soil Envelope	1 mL 1:1 HCl	28 days
Nitrite & Nitrate	50	100	Glass or PET	Glass	4°C	48 hours
Nitrogen (organic, kjeldahl)	20	100	* Polyethylene	Glass	4°C, H_2SO_4, < pH 2	28 days
Oil and Grease	1,000	250	^ Glass (amber)	Glass	4°C, H_2SO_4, < pH 2	28 days
Organic Volatiles	40 mL x 2		Glass (fill to overflowing)		4°C, H_2SO_4, < pH 2	7 days, store at 4°C
PAH / PNA	40 mL x 2	50	^ Glass (amber)	^ Glass (amber) No headspace	4°C, store in dark	14 days, analyzed within days of extraction
PCB	40 mL x 2		^ Glass (amber)		4°C	14 days, analyzed within 30 days of extraction
Pesticides / Herbicides	40 mL x 2		^ Glass (amber)		4°C	14 days, analyzed within 30 days of extraction
pH	50	100	* Polyethylene	Plastic bag	None	ASAP (within 72 hours of receipt)
Phenols (by GC)	40 mL x 2		^ Glass (amber)		4°C	7 days
Total Phenol (by 4AAP)	40 mL x 2		^ Glass (amber)		4°C, H_2SO_4, < pH 2	10 days
Propylene & Ethylene Glycol, Ethanol	40 mL x 2	50	^ Glass (amber)		4°C	7 days, analyzed within 40 days of extraction
Reactive Silica	40		* Polyethylene		4°C, H_2SO_4, < pH 2	28 days
Residue (solids)	100		* Polyethylene		4°C	7 days
Semi-volatiles	1,000		^ Glass (amber)		4°C	7 days
Sulfide	250		* Polyethylene		2N Zn acetate	7 days
Surfactants	500		* Polyethylene		4°C	48 hours
TPH or TEH	40 mL x 2		^ Glass (amber)	^ Glass (amber) No headspace	4°C, H_2SO_4, < pH 2	14 days, analyzed within 30 days of extraction
Total Solids	500		* Polyethylene		4°C	7 days
Total Dissolved Solids	500		* Polyethylene		4°C	7 days
Total Suspended Solids	500		* Polyethylene		4°C	7 days
Turbidity	50		* Polyethylene		4°C	48 hours

Notes:

* We recommend Nalgene brand screw-cap containers
** 0.6% HNO_3 (6 mL concentrated Ultrex HNO_3/litre. The amount will be varied depending on acid strength and volume of sample collected e.g., preservative 20% HNO_3-80% H_2O, for volume of 100 mL add 1 mL of preservative)
*** For Hg on soil or sediment, we recommend drying below 40°C
^ Teflon-lined cap
[+] If no temperatures are listed, then room temperatures apply
[++] Holding times for soils are indefinite

Additional information on sample containers is available by contacting Actlabs.