



ENVIROLAB RECOMMENDED PRESERVATION & HOLDING TIMES - WATERS

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Bottle Label	Test	Bottle	Volume	Preservation (Bottles are colour coded see label)	RHT	Reference	Bottle Label
	Alkalinity / Acidity	P/G	100 ml	Cool to 4°C	14 d	APHA	
	AOX	G	1000 ml	pH <2 (HNO ₃) + Cool to 4°C + Dark	3 d	AS	
	BOD	P/G	500 ml	Cool to 4°C	2 d	APHA	
	Boron	P	50 ml	Nil, no headspace	28 d	AS	
	Bromide	P/G	50 ml	Cool to 4°C + Dark	28 d	AS	
	BTEX+C6-C9	Vial	2 x 40ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	14 d	USEPA	
	Carbon-TOC/DOC	P/G	50 ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	28 d	APHA	
	Carbon-TOC/DOC	P/G	50 ml	Cool to 4°C + Dark	28 d	USEPA	
	Chlorophyll-a	P/G	500 ml	Cool 4°C + Dark or Filter/ Freeze	2 d/28d	APHA	
	Chlorine-Residual	P/G	20 ml	Analyse immediately	15 min	APHA	
	Chloride	P/G	100 ml	Nil	28 d	APHA	
	COD	P/G	100 ml	pH <2 (H ₂ SO ₄) + Cool to 4°C	28 d	APHA	
	Colour	P/G	100 ml	Cool to 4°C + Dark	2 d	APHA	
	Conductivity	P/G	20 ml	Cool to 4°C	28 d	USEPA	
	Cyanides	P/G	50 ml	pH (>12 NaOH) + Cool to 4°C + Dark	14 d	APHA	
	Dioxins	G	2000 ml	Cool to 4°C + 0.008% Na ₂ S ₂ O ₃	30 d *	USEPA	
	Explosives	G	1000 ml	Cool to 4°C	7 d	USEPA	
	Ferrous Iron	P/G	100 ml	pH <2 (HCl), no headspace	1 d	AS	
	Fluoride	P	20 ml	Nil	28 d	AS	
	Hardness	P	50 ml	pH <2 (HNO ₃)	28 d	APHA	
	Herbicides	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	Hexavalent Cr	P/G	100 ml	Cool to 4°C	1 d	AS	
	Iodide	P/G	50 ml	Cool to 4°C	28 d	AS	
	MBAS	G	100 ml	Cool to 4°C	2 d	APHA	
	Micro (in natural)	P	100 ml	Cool to 4°C	1 d	AS	
	Micro (in tap)	P	100ml	Cool to 4°C + Sodium Thiosulphate	1 d	AS	
	Metals	P/G	50 ml	pH <2 (HNO ₃)	6 m	USEPA	
	Mercury	P/G	50 ml	pH <2 (HNO ₃)	28 d	USEPA	
	N – Ammonia	P/G	20 ml	pH <2 (H ₂ SO ₄) + Cool to 4°C	28 d	APHA	
	N – Ammonia	P/G	20 ml	Site filter & cool / site filter & freeze	1d/28d	AS	
	N – Nitrate	P/G	20 ml	Cool to 4°C	2 d	APHA	
	N – Nitrate	P/G	20 ml	Filter on site & freeze	28 d	AS	
	N – Nitrite	P/G	20 ml	Cool to 4°C	2 d	APHA	
	N – TKN	P/G	100 ml	pH <2 (H ₂ SO ₄) + Cool to 4°C	28 d	APHA	
	N – Total	P/G	120 ml	Freeze	28 d	AS	
	OC/OP or PCB *	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	Oil & Grease	G	500 ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	28 d	APHA	
	pH	P/G	20 ml	Cool to 4°C	6 hrs	AS	
	Phenols – species	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	Phenols - total	P/G	250 ml	pH <2 (H ₂ SO ₄) + Cool to 4°C	28 d	APHA	
	Phenoxy Herbs	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	Phosphorus - T	P/G	50 ml	pH <2 (HNO ₃) + Cool to 4°C	28 d	APHA	
	Phosphorus - T	P/G	50 ml	Freeze	28 d	AS	
	Phosphate	P/G	20 ml	Filter & Cool to 4°C	2 d	APHA	
	Phosphate	P/G	20 ml	Filter & Freeze	28 d	AS	
	PAH's or Phthalates	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	Sulphate	P/G	100 ml	Cool to 4°C	28 d	APHA	
	Sulfite	P/G	100 ml	1ml EDTA/100ml (2.5g EDTA to 100ml)	2d	AS	
	Sulphide (total)	P/G	100 ml	Cool + add 4 drops 2N Zn ac/100ml	7 d	APHA	
	Sulphide (diss)	P	100 ml	Filter & add 10ml Cu 2,4 DMP	12 hrs	AS	
	SVOC's	G	1000 ml	Cool to 4°C	7 d *	USEPA	
	TSS or TDS	P/G	100 ml	Cool to 4°C	7 d	APHA	
	TPH (C10-36)	G	500 ml	Cool to 4°C	7 d *	Nil	
	TPH (C6-9)	Vial	2 x 40ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	14 d	USEPA	
	Trihalomethanes *	Vial	2 x 40ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	14 d	USEPA	
	Turbidity	P/G	50 ml	Store in Dark	2 d	APHA	
	VOC's	Vial	2 x 40ml	pH <2 (H ₂ SO ₄ or HCl) + Cool to 4°C	14 d	USEPA	



ENVIROLAB RECOMMENDED PRESERVATION & HOLDING TIMES - SOILS

Test	Jar	Qty	Preservation	RHT	Ref
Asbestos	Bag	50 g	Nil	N/A	AS
BTEX+C6-C9	G	20 g	Cool to 4°C	14 d	USEPA
Carbon – TOC	G	20 g	Air Dry	7 d	NEPM
Chloride	P/G	20 g	Air dry or Field moist	7 d	NEPM
Conductivity	P/G	20 g	Air dry	7 d	NEPM
Cyanides	P/G	20 g	Field moist	7 d	NEPM
Fluoride	P	20 g	Air dry or Field moist	7 d	NEPM
Hexavalent Cr	P/G	20 g	Cool to 4°C	28 d	USEPA
Herbicides	G	20 g	Cool to 4°C	14 d	USEPA
Metals	P/G	20 g	Nil	6 m	USEPA
Mercury	P/G	20 g	Cool to 4°C	28 d	USEPA
Moisture	P/G	20 g	Cool to 4°C	7 d	NEPM
OC/OP's	G	20 g	Cool to 4°C	14 d *	USEPA
pH	P/G	20 g	Air dry	7 d	NEPM
PCB's	G	20 g	Cool to 4°C	14 d *	USEPA
Phenols	G	20 g	Cool to 4°C	14 d *	USEPA
PAH's	G	20 g	Cool to 4°C	14 d *	USEPA
Sulphate	P/G	20 g	Air dry or Field moist	7 d	NEPM
SPOCAS	P	100 g	Remove air and freeze	ASAP	
SVOC's	G	20 g	Cool to 4°C	14 d *	USEPA
Sulfide	P/G	20 g	Field moist + 2M Zn acetate to cover	7 d	NEPM
TCLP	P/G	50 g	As per analyte of interest		
TPH (C6-9)	G	20 g	Cool to 4°C	14 d	USEPA
TPH (C10-36)	G	20 g	Cool to 4°C	14 d	USEPA
VOC's	G	20 g	Cool to 4°C	14 d	USEPA

Soil Comments:

- One 250ml size jar will cover most determination in soil.
- Asbestos should be sampled in it's own plastic bag and should be about 1 large handful
- SPOCAS should be supplied in it's own plastic bag, air removed and frozen if possible.
- * Semi-volatiles – 14 days till extraction, 40 days till analysis.
- * Metals – NEPM recommends that metals be sampled in Plastic, however, ELIG studies show that glass is acceptable.

Water Comments:

- * Dioxins – 30 days till extraction. 45 days after extraction.
- * Semi-volatiles – 7 days till extraction, 40 days after extraction.
- * THM's – add 10% thiosulfate if residual chlorine present.
- * TPH (C10-C36) – no reference, treat as a semi-volatile.
- For dissolved metals (such as groundwaters) samples should be 0.45µm filtered into a HNO₃ preserved bottle.
- For dissolved metals that are not field filtered and acidified, Envirolab will filter on receipt from an unpreserved sample container then acidify. There will be a filtration charge and some elements may be affected by this process.
- For total recoverable metals (such as surface waters) samples should be placed unfiltered into a HNO₃ preserved bottle.
- For total recoverable metals that are not field preserved, Envirolab will sub sample from the unpreserved bottle on receipt and acidify with HNO₃. Sample will stand overnight before analysis can begin.

The above preservation techniques have been chosen by Envirolab as suitable for most situations. There are other preservation techniques available – please contact David Springer on 02 9958 5801 for other options.

References:

AS = Australian Standard 5667.1:1998, Water Quality Sampling, APHA = Standard Methods for the Examination of Water & Wastewater, 20th Ed. USEPA = USEPA SW846, NEPM = Schedule B(3) 1999.