

Recommended Preservation and Container Guide

Parameter	Container	Lab Analysis Portion mL ⁽²⁾	Eurofins Preferred Preservation	Recommended Holding Times (HTs)
1,4-Dioxane	G	200	Sodium bisulfate (NaHSO ₃), Cool to less than 6°C	28 days
Acidity/Alkalinity	P or G	50	Cool to less than 6°C	14 days**
Alcohols (Methanol, Ethanol)	PT	2 x 40 mL VOA vials	pH<2 (HCl), Cool to less than 6°C, Zero headspace	14 days ⁽³⁾
BOD ₅	P or G	500	Cool to less than 6°C, Zero headspace	48 Hours
Bromate	P	50	Cool to less than 6°C	28 days
Bromide	P	50	Cool to less than 6°C	28 days
BTEX plus TRH (>C6-C10)	PT	2 x 40 mL VOA vials	pH<2 (HCl or H ₂ SO ₄), Cool to less than 6°C, Zero headspace	14 days ⁽³⁾
Dioxins/Furans/DL-PCBs/PBDEs	G	2x 1000	Cool to less than 6°C	12 months
Carbon, Total Organic (TOC)	G	40	pH<2 (H ₂ SO ₄ or HCl), Cool to less than 6°C	28 days
Carbon, Dissolved Organic (DOC)	G	40	Field filter at 0.45 µm then pH<2 (H ₂ SO ₄ or HCl), Cool to less than 6°C	28 days
Cations (Na, Mg, K, Ca)	P	50	Cool to less than 6°C, pH<2 (HNO ₃)	6 months ^{APHA}
Chlorate	P	50	Cool to less than 6°C	7 days
Chloride	P	50	Cool to less than 6°C	28 days
Chlorite	P	50	Cool to less than 6°C	24 hours ⁽⁵⁾
Chlorine (residual)	-	--	Field test	Note (5)
Chlorophyll-a (Vol' LOR dependant)	Dark P	500-2000	Unfiltered Dark, Cool to less than 6°C	48 Hours ^{##}
Chlorophyll-a (Vol' LOR dependant)	Dark P	500-2000	Field filter, Freeze ≤-20 °C residue	28 Days
Chromium VI (hexavalent Cr)	P	50	Cool to less than 6°C	1 day
Chromium VI (hexavalent Cr)	P	60	pH >12 (NaOH), cool to less than 6°C ⁽¹⁾	28 days ^{(1)APHA}
COD	G	100	pH<2 (H ₂ SO ₄), Cool to less than 6°C ⁽¹⁾	28 days
Colour	P	50	Dark, cool to less than 6°C	2 day ^{APHA}
Conductivity (EC) or Salinity	P	50	Cool to less than 6°C	28 days
Cyanide (Total/Amenable/Free/WAD)	P	60	If Sulfides are evident they must be removed prior to transportation	24 hours ⁽⁹⁾
Cyanide (Total/Amenable)	P	60	pH >12 (NaOH), Cool to less than 6°C Dark	14 days ⁽⁶⁾
Cyanide (Free / WAD)	P	60	Free neutral pH, WAD pH >12 (NaOH), Cool to less than 6°C Dark	14 days ^{(6)##}
Dissolved Oxygen	-	--	Field test	Note (5)
Explosives	G	200	Cool to less than 6°C	7 days*
Ferrous/Ferric Iron ⁽⁴⁾	P	60	Filtered pH <2 (HCl), Cool to less than 6°C, Dark, Zero Headspace	7 days ^{ISO}
Fluoride	P	50	Cool to less than 6°C	28 days
Formaldehyde	G	100	Cool to less than 6°C	7 days
Glyphosate & AMPA, Glufosinate	G, PET	250	Cool to less than 6°C - 0.008% Na ₂ S ₂ O ₃ ⁽⁶⁾	14 days
Hardness	P	50	pH<2 (HNO ₃)	6 months
Hardness	P	50	Cool to less than 6°C	7 days
Iodate	P	50	Cool to less than 6°C	1 month
Iodide	P	50	Cool to less than 6°C	1 month
Ion Balance	P	500-1000	See Individual Analytes in price book	--
Metals – Total (Recoverable)	P	50	pH <2 (HNO ₃)	6 months
Metals – Dissolved	P	50	Field Filter at 0.45 µm then pH<2 (HNO ₃)	6 months
Mercury – Total (Recoverable)	P	50	pH<2 (HNO ₃)	28 days
Mercury – Dissolved	P	50	Field Filter at 0.45 µm then pH<2 (HNO ₃)	28 days
Methane (Ethane/Ethene)	PT	2 x 40 mL vials	pH<2 (HCl or H ₂ SO ₄), Cool to less than 6°C, Zero headspace ⁽⁷⁾	14 days
Nitrogen: Ammonia	P	60	pH<2 (H ₂ SO ₄), Cool to less than 6°C ⁽¹⁾ /site filter and freeze	28 days
Nitrogen: TKN	P	60	pH<2 (H ₂ SO ₄), Cool to less than 6°C ⁽¹⁾	28 days
Nitrogen: Nitrate	P	60	pH<2 (H ₂ SO ₄), Cool to less than 6°C	28 days
Nitrogen: Nitrate	P	50	Unpreserved, Cool to less than 6°C	2 days
Nitrogen: Nitrite	P	50	Unpreserved, Cool to less than 6°C	2 days
Nitrogen: Total N	P	60	TKN and NOx sample bottles are required	28 days
Oil & Grease	G	2 x 250	pH<2 (H ₂ SO ₄ or HCl), Cool to less than 6°C	28 days
OC/OP Pesticides – see SVOCs	G	see SVOC	Cool to less than 6°C	7 days*
PAHs – see SVOCs below	G	see SVOC	Cool to less than 6°C	7 days*
Per- and Polyfluoroalkyl Substances (PFAS)	PET/HDPE	250 or 5x 10 mL	Cool to less than 6°C , no teflon (PTFE) liner	28 days ⁽¹¹⁾
Per- and Polyfluoroalkyl Substances (PFAS)	PET/HDPE	250 or 500	Freeze ≤-20 °C, no teflon liner ⁽¹⁰⁾	90 days
pH / free CO2 / total CO ₂	P or G	100	Field Test, Cool to less than 6°C	Note ⁽⁵⁾
Phenolics (total)	P or G	100	pH<2 (H ₂ SO ₄), Cool to less than 6°C	28 days ^{APHA}
Phenols – speciated	G	see SVOC	Cool to less than 6°C	7 days*
Phenoxy Acid Herbicides	G	200	Cool to less than 6°C, pH <1-2 HCl	14 days
Phosphate (ortho)	P	50	Cool to less than 6°C	2 days ^{##} 1 month filtered ^{ISO}
Phosphate (Total)	P	60	pH<2 (H ₂ SO ₄), Cool to less than 6°C	--
Solids (suspended, dissolved etc)	P	500-1000	Cool to less than 6°C	7 days
Sulfate	P	50	Cool to less than 6°C	28 days
Sulfide (Total)	P	60	Cool to less than 6°C (Zinc Acetate/NaOH pH>9) zero headspace	7 Days
Sulfide (Dissolved)	P	60	Cool to less than 6°C	24 hours
Sulfite	P or G	200	EDTA, zero headspace. Cool to less than 6 °C	2 Days
Surfactants – anionic (MBAS)	G	50	Cool to less than 6°C	2 days
SVOCs including – OCs, OPs, PCBs, PAHs, Phthalates (normal level) plus TRH (>C10-C40)	G	2 x 200	Cool to less than 6°C	7 days*
Low or Trace level Organics		4 x 500		
SVOC's (US EPA 8270 list)	G	see SVOC	Cool to less than 6°C	7 days*
Trip Spikes/Blanks for C6-C10/BTEX (prepared in the Lab)	G	Whole vial	pH<2 (HCl), Cool to less than 6°C, Zero headspace	14 days ⁽³⁾
TRH (>C6-C10)	PT	As for BTEX no additional vials needed	pH<2 (HCl), Cool to less than 6°C, Zero headspace	14 days ⁽³⁾
TRH (>C10-C40)	G	As for SVOC 'normal' no additional needed	Cool to less than 6°C	7 days*
Turbidity	P or G	100	Analyse Immediately, dark, Cool to less than 6°C	48 Hours
VOCs / VHCs / VACs / THMs / MTBE [^]	PT	2x vials	pH<2 (HCl or H ₂ SO ₄), Cool to less than 6°C, Zero headspace ⁽⁷⁾	14 days ⁽³⁾
Microbiological	PET/S	120	Cool to less than 6°C	24 hours
Micro' – (in Chlorinated Water) Coliforms - E.coli	PET/S	500 (4*120)	Cool to less than 6°C - 0.008% Na ₂ S ₂ O ₃	24 hours
Micro' – (in Chlorinated Water)	PET/S	120	Cool to less than 6°C - 0.008% Na ₂ S ₂ O ₃	24 hours

REFERENCES: APHA, US EPA SW846, ISO 5667.3, EPA Vic. IWRG701 and AS/NZS 5667.1 US EPA Methods 537.1, 533 & 1633. Please note Maximum HT's may vary upon the guideline document referenced.

- NOTES:**
- (1) This test may not require preservation if received and analysed within 24 hours of sampling; this must be pre-arranged with the laboratory.
- (2) We recommend that you provide additional sample on the 1st, 11th, 21st, 31st etc sample for performance of Duplicates / Matrix Spikes. (Note however that Matrix Spike determinations are not appropriate for all tests).
- (3) US EPA recommends 14 days, Australian Standard recommends 7 days.
- (4) Ferrous Iron samples must be field filtered.
- (5) This analyte should be determined in the field, these tests will not be measured for compliance to holding time but are analysed on receipt
- (6) Holding Time is reduced to 24hrs with the presence of sulfides. Contact the laboratory if the presence of sulfides is suspected
- (7) Sodium Bisulfate is an alternative preservation for VOC analysis upon request
- (8) If residual chlorine is present then add 0.008% Na₂S₂O₃
- (9) Contact the laboratory for instructions.
- (10) Do not fill the bottle past the shoulder, to allow room for expansion during frozen storage.
- (11) When stored at 0 - 6 °C and protected from the light with the caveat that issues were observed with certain perfluorooctane sulfonamide ethanols and perfluorooctane after 7 days. These issues are more likely to elevate the observed concentrations of other PFAS compounds via the transformation of these precursors if they are present in the sample.

* Requires the samples to be extracted within 7 days and the extract analysed within 40 days.

** Eurofins | Environment Testing aim is to perform these analyses within 2 days (where sufficient time available).

The holding times may be extended to 28 days if the sample is filtered then frozen.

^ Excepting vinyl chloride, styrene or 2-chloroethyl vinyl ether, for which the holding time is 7 days with the same preservation

CONTAINERS:

P = Plastic (HDPE or equivalent, all teflon lined),

PT = Purge & Trap 40 mL VOA Vial (with teflon liner),

PET = Plastic (polyethyleneterephthalate)

PP = Plastic (polypropylene, no Teflon),

G = Glass (all teflon lined)

PET/S = Plastic Sterile

Liquid samples are discarded 2 weeks from the date received unless otherwise arranged.