eurofins | Environment Testing

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 ($NaHSO_4$), 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_2SO_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_2SO_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_2SO_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_2SO_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% $Na_2S_2O_3$[8]	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_2SO_4), Cool to less than 6°C, Zero headspace[7]	14 days
Nitrogen: Ammonia	P	60	pH<2 (H_2SO_4), Cool to less than 6°C[1] /site filter and freeze	28 days
Nitrogen: TKN	P	60	pH<2 (H_2SO_4), Cool to less than 6°C[1]	28 days
Nitrogen: Nitrate	P	60	pH<2 (H_2SO_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_2SO_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_2SO_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_2SO_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_2SO_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 - Ecoli	PET/S	500 (4*120)	Cool to less than 6°C - 0.008% $Na_2S_2O_3$.	24 hours
Micro' – (in Chlorinated Water)	PET/S	120	Cool to less than 6°C - 0.008% $Na_2S_2O_3$.	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% $Na_2S_2O_3$
(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 ºC 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.