

Sample holding times and preservation

Inorganics Parameters in Water

Analyte	Bottle type	Preservation	Storage	Maximum storage recommended	Regulatory Limits	Lab holding times (Minimum)
Alkalinity, acidity	UP	Unpreserved	≤ 6°C	24 hours	14 days	4 weeks
BOD	BOD	Unpreserved	≤ 6°C	6 hours	48 hours	2 weeks frozen
Bromide	UP	Unpreserved	none	28 days	28 days	4 weeks
Chloride	UP	Unpreserved	none	28 days	28 days	4 weeks
Chlorine /Chloramines	UP	Unpreserved	≤ 6°C	0.25 hours	Analyse immediately	4 weeks
Chromium VI	C100	Sodium hydroxide preserved	≤ 6°C pH>12	28 days	28 days	4 weeks
COD	S100	Sulphuric acid preserved	≤ 6°C pH < 2	7 days	28 days	4 weeks
Colour	UP	Unpreserved	≤ 6°C	24 hours	24 hours	4 weeks
Conductivity	UP	Unpreserved	≤ 6°C	28 days	28 days	4 weeks
Cyanide	C100	Sodium hydroxide preserved	≤ 6°C pH>12	24 hours if sulphide present	14 days	4 weeks
Fluoride	UP	Unpreserved	none	28 days	28 days	4 weeks
Metals (excl. CrVI) – total & total recoverable & field filtered soluble	N100 or FN100	Nitric acid preserved	pH < 2	6 months	6 months	4 weeks
Metals – lab filtered for soluble	UPT100	Unpreserved	≤ 6°C	6 months	Filter ASAP 6 months	4 weeks
Nitrogen - Ammonia	UP	Unpreserved	≤ 6°C	7 days	ASAP 28 days	4 weeks
Nitrogen - Nitrate & Nitrite	UP	Unpreserved	≤ 6°C	ASAP	48 hours	4 weeks
Nitrogen - TKN	S100	Sulphuric acid preserved	≤ 6°C pH < 2	7 days	28 days	4 weeks
Oxyhalides - chlorite	EDA100	Ethylene diamine preserved	≤ 6°C	24 hours	24 hours	4 weeks
Oxyhalides – chlorate & bromate	EDA100	Ethylene diamine preserved	≤ 6°C	1 week	1 week	4 weeks
pH	UP	Unpreserved	≤ 6°C	0.25 hours	Immediate	4 weeks

Phosphorus - dissolved reactive	UP	Unpreserved	$\leq 6^{\circ}\text{C}$	48 hours	Filter ASAP 48 hours	4 weeks
Phosphorus - total	UP	Unpreserved	$\leq 6^{\circ}\text{C}$ $\text{pH} < 2$	28 days	28 days	4 weeks
Silica	UP	Unpreserved	none	28 days	28 days	4 weeks
Sulphate	UP	Unpreserved	none	28 days	28 days	4 weeks
Sulphide	Z100	Zinc acetate $\text{pH} > 12$	$\leq 6^{\circ}\text{C}$	28 days	7 days	4 weeks
Sulphite	E250	EDTA preserved	$\leq 6^{\circ}\text{C}$	ASAP	2 days	4 weeks
Suspended solids & Total dissolved solids	UP1L	Unpreserved	$\leq 6^{\circ}\text{C}$	7 days	24 hours	4 weeks
Total solids	UP1L	Unpreserved	$\leq 6^{\circ}\text{C}$	2-7 days	7 days	4 weeks
Turbidity	UP	Unpreserved	$\leq 6^{\circ}\text{C}$	24 hours	48 hours	4 weeks

Note: Holding times have been taken from APHA "Standard methods for the Examination of Water and Wastewater", 22ndnd edition Pages 1-44, 1-45, except for Sulphite and Oxyhalides which are from AS/NZS 5667.1:1998 Pages 31 – 42.

Bacterial Parameters in Water

Analyte	Bottle type	Preservation	Storage	Maximum storage recommended	Regulatory Limits	Lab holding times (Minimum)
Total & Faecal Coliforms	Ster	Thiosulphate for chlorinated samples or Unpreserved	4°C	Analyse immediately	24 hours	Nil
E.coli	Ster	Thiosulphate for chlorinated samples or Unpreserved	4°C	Analyse immediately	24 hours	Nil
Enterococci	Ster	Thiosulphate for chlorinated samples or Unpreserved	4°C	Analyse immediately	24 hours	Ni

Note: Holding times have been taken from APHA "Standard methods for the Examination of Water and Wastewater", 22ndnd edition.

Organic Parameters in Water

Analyte	Bottle type	Preservation	Storage	Holding Time	Lab holding times
Acid herbicides	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Acrylamide	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Alkyl quats DDAC/IPBC	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
BTEX	VOC40 (x2)	Ascorbic acid	$\leq 4^{\circ}\text{C}$	14 days	4 weeks
Carbon – total/dissolved	TOC125	Unpreserved	$\leq 4^{\circ}\text{C}$	28 days	4 weeks
Formaldehyde	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	3 days	4 weeks
Gases in groundwater (ethane, methane, ethene)	GGW40 (x2)	Sulphuric acid preserved	$\leq 4^{\circ}\text{C}$	14 days	4 weeks
Geosmin	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	3 days	4 weeks
Glyphosate	UP	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Halogenated Acetic Acids HAA	 HAA120	Ammonium chloride	$\leq 4^{\circ}\text{C}$	14 days until extraction, 21 days after extraction	4 weeks
Halogenated Volatile Disinfection By-products & Chlorinated solvents HVDB/THM	 HVDB40 (x2)	Buffer/Ammonium chloride	$\leq 4^{\circ}\text{C}$	14 days until extraction, 14 days after extraction	4 weeks
Oil & Grease	OAG	Sulphuric acid preserved	$\leq 4^{\circ}\text{C}$	28 days	All used in analysis
Organochlorine, Organonitrogen & Organophosphorus Pesticides	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Phenols - total	UP	Sulphuric acid preserved	$\leq 4^{\circ}\text{C}$	28 days until extraction, 2 days after extraction	4 weeks
Phenols - individual	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Polychlorinated Biphenyls / PCB	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	none	4 weeks

Polyaromatic hydrocarbons / PAH	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Paraquat/Diaquat	UP	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Semi-volatile Organic Compounds / SVOC	Org500	Unpreserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Total Petroleum Hydrocarbons / TPH	TPH250 & VOC40 (x2)	Sulphuric acid preserved	$\leq 4^{\circ}\text{C}$	7 days until extraction, 40 days after extraction	4 weeks
Volatile Fatty Acids / VFA	UPfrz	Unpreserved	Freeze $<0^{\circ}\text{C}$	14 days	4 weeks
Volatile Organic Compounds / VOC	VOC40 (x2)	Ascorbic acid	$\leq 4^{\circ}\text{C}$	14 days	4 weeks

Note: Holding times have been taken from APHA "Standard methods for the Examination of Water and Wastewater", 22ndnd edition or relevant EPA SW-846 methods.

Inorganic and Organic Parameters in Soil

Analyte	Bottle Type	Container Used	Storage	Holding Time	Lab holding time
Metals & Minerals	P	Psoil250	$\leq 4^{\circ}\text{C}$	6 months	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient
Nutrients	P	Psoil250	$\leq 4^{\circ}\text{C}$	14 days	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient
Polychlorinated Buphenyls (PCBs)	Glass	Gsoil300	$\leq 4^{\circ}\text{C}$	None	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient
Polyaromatic hydrocarbons / PAH	Glass	Gsoil300	$\leq 4^{\circ}\text{C}$	14 days until extraction, 40 days after extraction	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient
Semi-volatile Organic Compounds / SVOC	Glass	Gsoil300	$\leq 4^{\circ}\text{C}$	14 days until extraction, 40 days after extraction	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient
Volatile Organic Compounds / VOC (includes BTEX & TPH)	Glass	Gsoil300	$\leq 4^{\circ}\text{C}$	14 days	3 weeks $\leq 4^{\circ}\text{C}$ & 5 weeks ambient

Note: Holding times have been taken from EPA SW-846 methods.