

Holding Times and Preservation AS and ISO

Analyte:	ARL Method No:	Bottle Type	Recommended Holding Times		Notes:
			AS5667.1 (1998)	ISO5667.3 (2003)	
Acidic Herbicides	054	1l glass acidified (HCl - pH 1-2)	2 weeks	2 weeks	Extract container - quench chlorine if present
Acidity / Alkalinity	021, 037	Plastic Unpreserved - Refrigerate	24 hours	24 hours	Fill container to exclude air
Aluminium	024, 029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Ammonia	035, 303	Plastic - filter and freeze	1 month	1 month	
Antimony	066, 402	P/G acidified to pH 1-2 (HCl)*	1 month	1 month	HCl for hydride generation
Arsenic	040, 402	P/G acidified to pH 1-2 (HCl)*	1 month	1 month	HCl for hydride generation
Asbestos	087	G or LDPE	2 days	2 days	
Barium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Beryllium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
BN Pesticides	042	Glass - Refrigerate	1 week	on site ext	Do not completely fill - extract container - quench chlorine if chlorinated
BOD	011	Glass - Refrigerate	24 hours	Freeze - 1 month	Fill container to exclude air
Boron	022, 307, 402	Plastic unpreserved	1 month	1 month	
Bromide	137	P/G unpreserved - Refrigerate	1 month	1 month	Store in Dark
Cadmium	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Calcium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Chloride	018, 305	Plastic unpreserved	1 month	1 month	
Chlorophyll-a	Sub-contracted	P/G unpreserved - Refrigerate	24 hours	24 hours	Filter through 0.45u filter and freeze residue - 1 month
Cobalt	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
COD	020	Glass - Refrigerate acidified (sulphuric pH 1 to 2)	1 week	Freeze - 1 month	
Colour	310	Plastic Unpreserved - Refrigerate	48 hours	5 days	
Conductivity	019	Plastic Unpreserved - Refrigerate	1 month	1 week	Fill container to exclude air
Copper	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Cyanide Species	060, 061, 062, 063	Plastic - NaOH to pH > 12	24 hours	7 days	
Dissolved Oxygen	012, 013	Plastic or Glass	Field / 1 day	4 days	Fill container to exclude air
Fluoride	043	Plastic unpreserved	1 month	1 month	

Recommended Holding Times and Sample Containers for Water Sampling

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Hexavalent Chromium	050, 316	Plastic Unpreserved - Refrigerate	24 hours	24 hours	
Iron	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Iron (II) - Ferrous	121	P/G acidified to pH 1-2 (HCl)	24 hours	7 days	
Lead	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Magnesium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
MAHs (BTEX)	007	40ml vials - refrigerate acidify (HCl to pH 1-2)	1 week	1 week	
Manganese	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
MBAS	025	Glass - Refrigerate	2 days	2 days	Fill container to exclude air, preserve with sulphuric acid (2 days), formaldehyde (4 days)
Mercury	039, 029	Glass - acidified nitric and potassium dichromate added	1 month	1 month	
Metals not listed	024, 029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Molybdenum	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Nickel	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Nitrate	033, 313	Plastic - filter and freeze	1 month	1 month	
Nitrite	032, 311	Plastic - freeze	2 days	2 days	
OC/OP Pesticides	002	Glass - Refrigerate	1 week	on site ext	Do not completely fill - extract container - quench chlorine if chlorinated
Organotins	100	Glass Refrigerate	on site ext	on site ext	
Hydrocarbons, Oil and Grease	009, 015, 130	Glass acidified (HCl or sulphuric acid to pH 1-2)	1 month	1 month	Do not completely fill container - extract container
PAHs	005	Glass - Refrigerate	1 week	1 week	Do not completely fill - extract container - quench chlorine if chlorinated
PCBs	002	Glass - Refrigerate	1 week	1 week	Do not completely fill - extract container - quench chlorine if chlorinated
pH	014	Plastic Unpreserved - Refrigerate	6 hours	6 hours	
Phenolics	044, 056	1l glass acidified (HCl - pH 1-2)	3 weeks	3 weeks	Quench chlorine if present, ISO 5667-3 recommends phosphoric acid

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Potassium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Reactive Phosphorus	036, 309	Plastic - filter and freeze	1 month	1 month	
Redox Potential	119	Plastic / Glass Refrigerate	-	-	Not listed in reference documents
Selenium	065, 402	P/G acidified to pH 1-2 (HCl)*	1 month	1 month	HCl for hydride generation
SVOCs	070, 080, 086	Glass - Refrigerate	1 week	1 week	
Silica	067, 315	Plastic - filter and refrigerate	1 month	1 month	
Silver	024, 029, 038, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Sodium	029, 402	Plastic unpreserved	1 month	1 month	
Sulphate	028, 301	Plastic Unpreserved - Refrigerate	1 week	1 month	
TDS	017	P/G unpreserved - Refrigerate	24 hours	24 hours	Fill container to exclude air
THMs	041	40 ml vials with ascorbic acid - refrigerate	2 weeks	2 weeks	Fill container to exclude air
Tin	402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
TKN	034, 330	Plastic - freeze	1 month	1 month	
TN	034, 330	Plastic - freeze	1 month	1 month	
TOC	Sub-contracted	Glass - Refrigerate acidified (sulphuric pH 1 to 2)	1 week	Freeze - 1 month	
Total Chromium	024, 029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Total Phosphorus	036, 308, 330	Plastic - freeze	1 month	1 month	
Total Sulphide	021	Plastic preserved with zinc acetate solution	1 week	1 week	
TSS	016	P/G unpreserved - Refrigerate	24 hours	2 days	
Turbidity	045	Plastic unpreserved	24 hours	24 hours	
Uranium	402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
Vanadium	029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	
VOCs	079, 132	40ml vials - refrigerate acidify (HCl to pH 1-2)	1 week	1 week	Fill container to exclude air - Quench chlorine if present
Zinc	024, 029, 402	P/G acidified to pH 1-2 (Nitric)*	1 month	1 month	

* denotes field filtering required if dissolved metals. Acid is added at the laboratory in accordance with the US EPA 200 series of methods for metal analysis.

Recommended Holding Times and Sample Containers for Soil Samples

As per NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soils - December 1999 and US EPA SW-846

Analyte	ARL Method No	Container	Recommended Sample Holding Time Prior to Extraction (Days)
ASLP or TCLP	069	as for analyte of interest	as for analyte of interest
Moisture	135	Plastic or glass	7
pH	138	Plastic or glass	7
Conductivity	140	Plastic or glass	7
Total Organic Carbon	064, 068	Glass - store in dark	7
Metals and metalloids other than mercury and hexavalent chromium	027, 030, 031, 040, 065, 066, 401	Plastic	180
Mercury	027, 030, 031, 039	Plastic - store in dark	28
Hexavalent chromium	051	Plastic - store in dark	28
Soluble Chloride	046, 306	Plastic or glass	7
Cyanide	063	Plastic or glass (store in dark)	7
Fluoride	048	Plastic	7
Soluble Sulphate	302	Plastic or glass	7
Soluble Nitrate	114, 314	Plastic or glass	7
Total Nitrogen	118	Plastic or glass	7
Phosphorus	118, 120	Plastic or glass	7
MAHs - including BTEX	008, 089, 133	Glass - store in dark	14
Halogenated Hydrocarbons	089, 133	Glass - store in dark	14
Other VOCs	089, 133	Glass - store in dark	14
Polynuclear (polycyclic) aromatic hydrocarbons (PAH)*	006	Glass - store in dark	14
Pesticides, organochlorine (OC)	003	Glass - store in dark	14
Pesticides organophosphate (OP) and herbicides	053, 055, 126, 131, 156	Glass - store in dark	14
Polychlorinated biphenyls (PCB)	003	Glass - store in dark	14
Petroleum Hydrocarbons*	010, 111	Glass - store in dark	14
Phenols*	052, 057	Glass - store in dark	14
Other Semivolatiles	070, 122, 128	Glass - store in dark	14
Asbestos	ARL ASBID	Plastic or glass	Indefinite