Sample Bottle, Preservation and Holding Time Requirements for Environmental Samples

Information provided on this form generally follows MOE, Standard Methods for the Examination of Water and Wastewater or US EPA Methods, to meet Regulatory Requirements please check appropriate regulation.

Water

Inorganic

Parameter	Min. Volume (mL)	Sample Bottle	Preservative	Holding Time (days)
Alkalinity	100	P	None	14
Ammonia	50	P	None / H_2SO_4	3/10
Anions	100	P	None	28
BOD / cBOD	500	P	None	4
COD	25	P	None / H_2SO_4	4/30
Chloride	25	P	None	28
Chromium VI	125	P	None, NaOH/NH3 buffer pH 9-10	5 /28
Coliform(Total/Fecal)	250	Str. P	$Na_2S_2O_3$ (#)	48 hrs
Colour	50	P	None	14
Conductivity	50	P	None	4
Cyanide(Total)	125	P	NaOH	7
Cyanide(free)	125	P	NaOH	7
DOC* / TOC	100	P	None / H_2SO_4	3/10
E. Coli	250	Str. P	$Na_2S_2O_3$ (#)	48 hrs
Fluoride	25	P	None	28
Mercury	100	P	$K_2Cr_2O_7$+ HNO_3	7
Metals - Total	100	P	HNO3	60
Nitrate + Nitrite (NO_2 + NO_3)	125	P	None	5
Oil & Grease (T/A-V/M)	1000	AG	None / HCl	7/28
Phosphate* (SolP)	100	P	None	4
pH	50	P	None	4
Phenolics (4AAP)	100	AG	H_2SO_4	28
Solids - TSS / TDS TS/ VS / VSS	1000	P	None	7
Sulphate	100	P	None	30
Sulphide (H2S)	250	AG(PrC)	ZnAc + NaOH	7
Total Kjeldahl Nitrogen (TKN)	100	P	None / H_2SO_4	3/10
Total Phosphorus (TP)	100	P	None / H_2SO_4	14/30
Turbidity	50	P	None	2
Shedule 23 Drinking Water	100	P	HNO3	60
	100	G	$K_2Cr_2O_7$+ HNO_3	7

Organic

Parameter	Min. Volume (mL)	Sample Bottle	Preservative	Holding Time (days)
Acid, Base/Neutral Ext. (SVOCs)	2x1000	AG	None	14
BTEX / VOC / F1	2x40ml	*AGV*	None / $NaHSO_4$ or HCl	7/14
(Chlorinated)			$Na_2S_2O_3$	14
Dioxin And Furons	1000	AG	None	30
F1	2x40ml	*AGV*	None / $NaHSO_4$ or HCl	7/14
F2-F4	1000	AG	None / $NaHSO_4$ or HCl	7/40
HAAs	2x40ml	*AGV*	None	28
Herbicides	1000	AG	None	14
MPCA	1000	AG	$Na_2S_2O_3$	28
NDMA	2x1000	AG	None	10
NTA	125	P	None	30
PAH's	1000	AG	None	14
PCBs/OC Pestic. (Chlorinated)	1000	AG	None	14
			$Na_2S_2O_3$	14
Pesticides (OP)	1000	AG	None	14
PFOS	1000	P	None	30
Phenols	1000	AG	None	14
SVOC	2x1000	AG	None	14
THMs(Chlorinated)	2x1000	AG	None($Na_2S_2O_3$)	7 / 14
VOCs/BTEX (Chlorinated)	3x40ml	*AGV*	None / HCl	7 / 14
			$Na_2S_2O_3$	14
Schedule 24 Drinking Water	5x1000	AG	None	14
	1000	P	$Na_2S_2O_3$	14
	3x40ml	*AGV*	$Na_2S_2O_3$	14

Other

Parameter	Min. Volume (mL)	Sample Bottle	Preservative	Holding Time (days)
Toxicity (Daphnia/Trout)	25 L	Lined Pail	None	5
Radionuclides Short-L	1000	P	None / HNO3	10d/6m
Long-L	3x1000	P	None / HNO3	10d/6m
Microcystin-LR (Chlorinated)	1000	AG	$Na_2S_2O_3$	7

Soil

Inorganic/Organic

Parameter	Min. Volume (mL)	Sample Bottle	Preservative	Holding Time (days)
Anions	180 ml	AGJ	None	30
BTEX / VOC	2x40ml	GV	Methanol (preweighed)	14
Chromium VI	180 ml	AGJ	None	30
Cyanide	180 ml	AGJ	None	14
Dioxin And Furons	180 ml	AGJ	None	Indefinite
F1	2x40ml	GV	Methanol (preweighed)	14
F2-F4	180 ml	AGJ	None	14
Herbicides	180 ml	AGJ	None	60
Metals - Total	180 ml	AGJ	None	180
Oil & Grease	180 ml	AGJ	None	14
PAHs	180 ml	AGJ	None	60
PCBs/Pecticides	180 ml	AGJ	None	60
Pesticides/Herbi.	180 ml	AGJ	None	60
Phenols	180 ml	AGJ	None	60
SVOC	180 ml	AGJ	None	60
TOC	180 ml	AGJ	None	28
VOC / BTEX	2x40ml	GV	Methanol (preweighed)	14

All Samples Should be Stored at 4 +/- 3 C°

Preservatives

ZnAc - 2N
HCl - (50%) to pH <2
H_2SO_4 - (50%) to pH <2
NaOH = (50%) to pH >9
HNO_3 - (50%) to pH <2
$Na_2S_2O_3$ - 100 mg/L
NaHSO4 - 100 mg/L
(#) Do not freeze
* Filter ASAP

Sample Containers

G = Glass
GV = Glass Vial
AG = Amber Glass with teflon cap
AGJ= Amber Glass Jar with Teflon-lined Cap
AGV= Amber Glass Vial, no Head Space
P = Plastic (PET) or High Density Polyethylene (HDPE)
Str. = Sterile
PrC = Bottle should be pre-charged with preservative

Note

Tests needing the same kind of preservative and the same type of bottle can share a container. However, enough containers should be submitted to meet the minimum volume requirement for each test.