SAMPLE PRESERVATIVES AND HOLD TIMES

DRINKING WATER

Method	Parameter	Amount	Container	Preservative	Hold Time
310, 305, SM2320	Alkalinity, Acidity	100 ml	1-500ml P	2-6° C	14 days
TEM	Asbestos	1000ml	1-1L P	2-6° C	48 hours
300.0, 375, 325	Chloride, Sulfate, Bromide	500 ml	1-500ml P	2-6° C	28 days
300.0, 353, SM4500	Nitrate, nitrite	100 ml	1-250 ml P	2-6° C	48 hours
353, SM4500	Nitrate+nitrite	100 ml	1-500 ml P	2-6° C, H_2SO_4, pH <2	28 days
335, SM4500	Cyanide	500 ml	1-500 ml P	2-6° C, ascorbic acid (if chlorinated), NaOH, pH>12	14 days
300.0, 340, SM4500	Fluoride	300 ml	1-250ml P	None	28 days
200.8	Lead and Copper	1000 ml	1-1L P	None, preserved at laboratory with HNO_3, pH<2	6 months
SM 2330B	Corrosivity	500 ml	1-250ml P	None	None
SM 9223	Total Coliform	100 ml	100ml P (sterile)	2-6°C, $Na_2S_2O_3$	30 hours
524.2	THMs	120 ml	2-40ml VOA vials	2-6° C, ascorbic acid, HCl in field	14 days
504.1	EDB/DBCP	80 ml	2-40ml VOA vials	2-6° C, $Na_2S_2O_3$	14 days
508	Pesticides	1000 ml	11L amber G	2-6° C, $Na_2S_2O_3$	7,14 days
515.1	Herbicides	1000 ml	1-1L amber G	2-6° C, $Na_2S_2O_3$	14,28 days
524.2	Volatiles	120 ml	2-40mL VOA vials	2-6° C, ascorbic acid, HCl in field	14 days
525.2	Semi-volatiles	2000 ml	2-1L amber G	2-6° C, Sodium sulfite, HCl in field	14 ,30 days
531.1	Carbamates	40 ml	1-40ml VOA vial	2-6° C, $Na_2S_2O_3$, MCA in field	28 days
547	Glyphosate	125 ml	1-125ml amber G	2-6° C, $Na_2S_2O_3$	14 days
548.1	Endothall	250 ml	2-250ml amber G	2-6° C, $Na_2S_2O_3$	7,14 days
549.1	Diquat/Paraquat	1000 ml	1-1L amber P	2-6 °C, $Na_2S_2O_3$	7,21 days
550	PAHs (PNAs)	2000 ml	2-1L amber G	2-6°C, $Na_2S_2O_3$, HCl	7days
551	D/DBP	80 ml	2-40mL G vials	2-6°C, Ammonium chloride, pH 4.5-5	14 days
552.1	Haloacetic Acids	150 ml	1-125ml amber G	2-6°C, Ammonium chloride	28 days

Notes: For holding time 7,30 (or X,Y) means 7 (X) days for extraction, plus 30 (Y) additional days for analysis.
P=Plastic, G=Glass AQ = aqueous
Na2S2O3 = Sodium thiosulfate H2SO4 = Sulfuric acid HCL = Hydorchloric acid MCA = Monochloroacetic acid

SAMPLE PRESERVATIVES AND HOLD TIMES
INORGANICS
Waste Water/ Surface Water/ Soils/ Oils/ Aqueous

Method	Parameter	Amount	Container	Preservative	Hold Time
2320, 310	Alkalinity	200 ml	1-500ml P	2-6°C	14 days
350, 351, 353, 365	Ammonia, TKN, total Phosphorus	500 ml AQ 50 g solid	1-500 ml P	2-6°C, H_2SO_4, pH<2 2-6°C	28 days
405.1	BOD	1000 ml	1-1 L P	2-6°C	48 hours
410.	COD	50 ml	1-500 ml P	2-6°C, H_2SO_4, pH<2	28 days
300.0, 325, 375, 340	Chloride, Sulfate, Bromide, Fluoride	50 ml AQ 20 g solid	1-500ml P 125 mL G	2-6°C	28 days
SM 9221	Coliform, Fecal	100 ml	125ml P-sterile	2-6°C, $Na_2S_2O_3$	8 hours
110.2	Color	50 ml	1-500ml P	2-6°C	24 hours
120.1	Conductivity	500 ml	1-500ml P	2-6°C	28 days
335,4500	Cyanide, amenable	500mL AQ 20g	1- 500 ml P 125 ml G	2-6°C, NaOH pH>12, 2-6°C	14 days
335,4500 9010	Cyanide, total	500mL, 20g	1- 500ml P 125 ml G	2-6°C, NaOH pH>12, 2-6°C	14 days
1010	Flashpoint	100mL, 50g	1 L G 125 ml G	2-6°C	7 days
425.1	MBAS (surfactants)	1000 mL	1-1L P	2-6°C	48 hours
300.0, 4500	Nitrate, nitrite	100mL AQ 20g solid	1-250 ml P 125 ml G	2-6°C	48 hours
353, 4500	Nitrate + Nitrite	100 mL	1- 250ml P	2-6°C, H_2SO_4, pH<2	28 days
140.1	Odor	500mL	1-500ml G	2-6°C	24 hours
413.1	Oil & grease	1000 mL	1-1 L G	2-6°C,H_2SO_4, pH<2	28 days
150.1	pH (water)	50 mL	1-250ml P	None	Immediately
9045	pH (soil)	50 mL	P,G	None	Immediately
420.1 9065	Phenol	500mL AQ 100g solid	1 L G 125 ml G	2-6°C, H_2SO_4, pH<2 2-6°C	28 days
365	Phosphorus, ortho.	100mL AQ 50g solid	1-500ml P 125 ml G	Filter on site, 2-6°C 2-6°C	48 hours
SM 9223	Quantitray	100 ml	125ml P-sterile	2-6°C, $Na_2S_2O_3$	6 – 30 hours
2540C	Solids, dissolved	100ml	1-500mlL P	2-6°C	7 days
160.5	Solids, settleable	1000 mL	1 L P	2-6°C	48 hours
160.2	Solids, suspended	1000 mL	1 L P	2-6°C	7 days
160.3	Solids, total	500mL,50g	1 L P	2-6°C	7 days
160.4	Solids, volatile	500 mL	1 L P	2-6°C	7 days
376.	Sulfide	500 mL AQ 50g solid	1 L P 125 ml G	2-6°C NaOH pH>9, ZnAC 2-6°C	7 days
415.1 9060	TOC	100mL AQ 50g Solid	250 ml G amb 125 ml G jar	2-6°C, H_2SO_4, pH<2 2-6°C	28 days
9020	TOX	500mL AQ 50g Solid	1 L G amb 125 mL G jar	2-6°C ,H_2SO_4 ,no head space 2-6°C	28 days
180.1	Turbidity	100 mL	1-500ml P	2-6°C	48 hours

P=Plastic, G=Glass AQ = aqueous

TABLE 1 SAMPLE PRESERVATIVES AND HOLD TIMES
METALS

Method	Parameter	Amount	Container	Preservative	Hold Time
200, 6010, 6020, 7000	All metals except Cr(VI) and Hg	200 ml 20 g Solid	1-500ml P 250ml G	HNO_3,pH<2	6 months
245, 7470, 7471	Mercury	200 ml, 20 g Solid	1-500ml P 250ml G	HNO_3,pH<2	28 days
218, 3500 7196, 7197	Chromium hex.	200 ml 20 g Solid	1 L P 250mL G	2-6°C	24 hours

Organics

Method	Parameter	Amount	Container	Preservative	Hold Time
8015A W	Non-halogenated Volatiles	80mL	2-40mL G vials	2-6°C, 1:1 HCl	14 days
8015A S	Non-halogenated Volatiles	100g	1-4oz jar	2-6°C	14 days
8041 W	Phenols	1000mL	1-1L G amber	2-6°C	7,40 days
8041 S	Phenols	100g	1-8 oz G jar	2-6° C	14 days
8061A W	Phthalate esters	1000mL	1-1L G amber	2-6°C	7,40 days
8061A S	Phthalate esters	100g	1-8oz G jar	2-6°C	14 days
608,8081W	Pesticides	1000 mL	2-1L G amber	2-6° C, $Na_2S_2O_3$, if chlorinated, pH: 5-9	7,40 days
8081A (oil)	Pesticides	80mL	2-40mL G vials	2-6°C	7,40 days
8081A S	Pesticides	100g	1-8oz G jar	2-6°C	14 days
8082 W	PCB's	1000 mL	2-1L G amber	2-6° C, pH: 5-9	7,40 days
8082 (oil)	PCB's	80mL	2-40mL G vials	2-6°C	7,40 days
8082 S	PCB's	100g	1-8oz G jar	2-6°C	14 days
8091 W	Nitroaromatics & Ketones	1000mL	1-1L G amber	2-6°C	7,40 days
8100 S	PNA's	100g	1-8oz G jar	2-6°C	7,40 days
8100 S	PNA's	1000mL	1-1L G amber	2-6°C	14 days
614,8141W	Organophosphorus pesticides	1000mL	2-1L G amber	2-6°C	7,40 days
8141A S	Organophosphorus pesticides	100g	1-8oz G amber	2-6°C	14,40 days
615, 8151A W	Chlorinated herbicides	1000 mL	2-1L G amber	2-6°C	7,30 days
8151A S	Chlorinated herbicides	100g	1-8oz G jar	2-6°C	14 days
624, 8260B W	Volatile Organics (GC/MS)	80mL	2-40mL G vials	2-6°C, $Na_2S_2O_3$, if chlorinated, 1:1 HCl	14 days
8260B S	Volatile Organics (GC/MS)	100g	1-8oz G jar	2-6°C	14 days
625, 8270C W	Semi-volatiles	1000 mL	2-1L G amber	2-6°C, $Na_2S_2O_3$ if chlorinated	7,40 days
8270C S	Semi-volatiles	100g	1-8oz G jar	2-6°C	14,40 days
418.1 W	TPH in water	1000mL	1-1L G amber	2-6°C, 1:1 H_2SO_4	14 days
418.1AZ S	TPH	100g	1-8oz G jar	2-6°C	14 days

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TABLE 1 SAMPLE PRESERVATIVES AND HOLD TIMES
RADIONUCLIDES

Method	Parameter	Amount	Container	Preservative	Hold Time
900	Radiological, all except Rn222 and Tritium	1 Gallon 50 g solid	2-1/2 Gallon P 250 mL G jar	None None	6 months 6 months
RN-222	Radon 222	80 ml	2x40 mL amber G	None	72 hours
906.0	Tritium (H_3)	250 ml AQ 300 g (Sample size varies with solid moisture content)	1-250 mL G 2 - 250 mL G jar	None None	6 months 6 months

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