SAMPLE RECEIVING AND STORAGE INFORMATION

Sampling Requirements for Metals

Soil samples must be preserved at 4°C

EPA 1311: for TCLP metals liquids use 500mL, for solids collect at least 250g (4 oz WMCG). Do NOT acid-preserve.

Analysis	Method				Container Type and Size to be used for Sampling		Preservation (Water)	Holding Time
	FLAA	GFAA	ICP	ICP/MS	Water	Solid		
Aluminum			EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Antimony	EPA 7040	EPA 200.9 / 7041		EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Arsenic		EPA 200.9 / 7041	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Barium	EPA 7080A		EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Beryllium	EPA 7090	EPA 200.9 / 7041	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Boron			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Cadmium	EPA 7130A	EPA 200.9 / 7131A	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Calcium			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Chromium	EPA 7190	EPA 200.9 / 7191	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Cobalt			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Copper	EPA 7210	EPA 200.9 / 7211	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Gold			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Iron	EPA 7380		EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Lead	EPA 7420	EPA 200.9 / 7421	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Lead in Paint			ASTM D3335		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Lithium			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Magnesium			EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Manganese	EPA 7460		EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Mercury (cold Vapor)		EPA 7470A/ 7471A	EPA 245.1		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Molybdenum	EPA 7480		EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Nickel	EPA 7520	EPA 200.9	EPA 200.7 / 6010B	EPA 200.8	500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months
Phosphorous			EPA 200.7 / 6010B		500 mL HDPE	4 oz. WMCG	HNO_3 to pH<2	14 days / 6 months

Sampling Requirements for Microbiology

Analysis	Method	Container Type & Size to be used for Sampling		Preservation	Holding Time	
		Liquid	Solid		Regulatory	Non-regulatory
Total Coliform and E-Coli	SM 9223 B	150 mL HDPE, Sterile		NA2S2O3, 4°C	8 hours for Source Water, 30 hours, up to 48 hours with ADEC waiver	30 hours
Fecal Coliform in Wastewater	SM 9221 E SM 9222 D	150 mL HDPE, Sterile		NA2S2O3, 4°C	6-24 hours NPDES Permit	24 hours
Mixed Liquor	Microscope Exam	125 mL HDPE		None		a.s.a.p.

Analysis	Method		Container Type and Size to be used for Sampling		Preservation (Water)	Holding Time
	Liquid	Solid	Liquid	Solid		
Total Solids Residue, Total	SM 2540 B		250 mL HDPE or G		4°C	7 days
Total Volatile Suspended Solids, TVSS	SM 2540 E EPA 160 4		1 L HDPE or G		4°C	7 days
Settleable Solids	SM 2540 F		1 L HDPE or G		4°C	48 hours
Salinity (Determination by SM2510, conductivity)	SM 25540 B		250 mL HDPE		Analyze immediately or use wax seal, 4°C	6 months with wax seal
Surfactants (MBAS)	SM 5540 C		250 mL HDPE or G		4°C	48 hours
Specific Gravity	SM 2710 F		250 mL HDPE or G		None	28 days
Sulfate	EPA 300.0		125 mL HDPE		None	28 days
Sulfide	SM 4500 – S^2 B EPA 9030	EPA 9030	1 LAG		4 drops 2n ZnOAc, NaOH to pH>9, No headspace, 4˚C	7 days
Total Organic Carbon	SM 5310 B		60 mL AG		HCl, H_3PO_4, or H_2SO_4 to pH<2, 4˚C	28 days
Dissolved Organic	SM 5310 B		60mLAg	H_2504 if filtered	Filtered, HCl, H_3PO_4, or H_2SO_4 to pH<2, 4˚C	28 days

Turbidity	SM 2130 B EPA 180.1		125 mL HDPE or G		4˚C, dark	48 hours
Ultraviolet 254	SM 5910		60 mL AG		4˚C, dark	48 hours

Analysis	Method		Container Type and Size to be used for Sampling		Preservation (Water)	Holding Time
	Liquid	Solid	Liquid	Solid		
Nitrite-Nitrate-N	SM 4500-NO_3 E	EPA 9200	125mL HDPE or G		H_2SO_4 to pH<2, 4° C	28 days 48 hours if unpreserved
Nitrogen, Kjeldahl	SM 4500 - Norg B		I L HDPE or G		H_2SO_4 to pH<2, 4°C	28 days
Nitrogen, Total Calculation	SM 4500 N		P,G		4°C, H_2SO_4 to pH<2	2-28 days
Odor	SM 2150 B		500 mL G		4ºC	24 days
Oil and Grease	EPA 1664	EPA 1664	1L AG	4 oz. WMGC	H_2SO_4 or HCl to pH<2, 4°C	28 days
Oxygen, Dissolved	SM4500-O G		1 L HDPE or G		4°C	Immediate
Paint Filter Liquids Test	EPA 9095		125 mL G	4 oz	4°C	
Particle Size Count	SM 2560		1 L G		4°C, Avoid any harsh movement of sample, which can change particle size distribution	Immediate
Total Petroleum Hydrocarbons	EPA 1664	EPA 1664	1 L AG	4 oz WMGC	H2SO4 or HCl to pH<2, 4°C	28 days
pH	EPA 150.1, SM 4500 h	EPA 9045B	125 mL HDPE	4 oz. WMGC	None	Immediate
Ph Paper Method		EPA 9041C		4 0z WMGC	None	24 hours
Phosphate-P, Ortho	SM 4500-P E		250 mL HDPE or G		Filter immediately, 4°C	48 hours
	EPA 300.0		60 mL HDPE		4°C	48 hours
Phosphate- P, Total	SM 4500- P E	250 ml	P,G		4°C, H2SO4 to pH<2	28 days
Reserve Alkalinity	ASTM D 1121-78	125 ml	P,G		4°C	14 days
Total Dissolved Solids (TDS), Reside, filterable	SM 2540 C		250 mL HDPE or G		4°C	7 days
Total Suspended Solids (TSS) Residue, non-filterable	SM 2540D / EPA 160.2		1 L HDPE or G		4°C	7 days

Analysis	Method		Container Type & Size to be used for Sampling		Preservation (Water)	Holding Time
	Liquid	Solid	Liquid	Solid		
Cyanide, Weak Acid Diss.	SM 4500-CN 1		1 L HDPE or G		4°C, NaOH to pH>12, dark	14 days
Cyanide, Total **	SM 4500-CN E		1 L HDPE or G		4°C, NaOH to pH>12, dark	14 days, 24 hours if sulfide present
Fluoride	EPA 300.0		60mL HDPE		None	28 days
Flash Point	EPA 1010, EPA 1020		250 ml / 8oz G		4°C	14 days
Freezing Point	Refractometer		60mL HDPE or G		None	Not specified
Glycols	ASTM D 3695	ASTM 3695	40 mL VOA vial	4 oz. WMGC	None	14 days
% Glycol in Glycol	Refractometer		125 mL HDPE or G		None	Not specified
	Note: Lab needs to know from client if Ethylene or Propylene Glycol					
Hardness (calculation from separate determination of Ca & Mg)	SM 2340 B		125 mL HDPE		HNO_3 to pH<2	6 months
Langlier Index (calculation from separate determination of alkalinity, Ca, pH, TDS, temperature)	SM 2330 B		500 mL HDPE plus 60 ml HDPE for Ca		4°C	See individual determination
Nitrogen, Ammonia	SM 4500-NH3 F		500 mL HDPE or G		H_2SO_4 to pH<2, 4° C	28 days
Nitrogen, Nitrate	EPA 300.0		60 mL HDPE		4°C	48 hours
	SM 4500-NO_3 E		125 mL HDPE or G		H_2SO_4 to pH,2, 4°C	48 h unpreserved 28 d preserved ***
Nitrogen, Nitrate	EPA 300.0		125 ml HDPE or G		4°C	48 hours
	SM 4500 - NO_2 B		125 mL HDPE or G		4˚C	48 hours

Sampling Requirements for Inorganic and Wet Chemistry

Analysis	Method		Container Type & Size to be used for Sampling		Preservation (Water)	Holding Time
	Liquid	Solid	Liquid	Solid		
Acidity as CaCO3	SM2310 B		250 mL HDPE		4 °C	14 days
Alkalinity as CaCO3	SM2320 B		250 mL HDPE		4 °C	14 days
Biochemical oxygen Demand (BOD)	SM5210 B		1 L HDPE or G		4 °C	48 hours
BOD, Soluble	SM5210 B		1 L HDPE or G		After Filtration, 4 °C	48 hours
Boiling Point	Refractometer		60 mL HDPE or G		None	None
Bromide	EPA 300.0		60 mL HDPE		None	28 days
Calcium Hardness	SM3500-CA EPA 200.7 EPA 6010B		250 mL HDPE		HNO3, pH<2	6m
Chloride	EPA 300.0		60mL HDPE		None	28 days
Chlorine, Residual	SM4500-Cl G		125 mL HDPE		None	Immediate
Chemical Oxygen Demand (COD)	SM 5220C		125 mL HDPE		H2so4 to pH<2, 4 °C	28 days
COD, Soluble	SM 5330C		125 mL HDPE		After Filtration H2SO4 pH<2, 4 °C	28 days
Color, Apparent	SM 2120B		125 mL HDPE or G		4 °C	48 hours
Color, True	SM 2120B		125 mL HDPE or G		4 °C	48 hours
Conductance, Specific	SM2510 B EPA 9050		250 mL HDPE		4 °C	28 days
Conductivity	SM 2510B		250 mL HDPE		4 °C	28 days
Corrosion Coupons	ASTM GI-72				None	Not specified