



# Sample Handling Guide

Inorganic Parameters									
Parameters	Method	Water				Soil/Sludge			
		Preservative	Holding Time	Container	Min. Vol.*	Preservative	Holding Time	Container	Min. Vol.*
Acidity	E305.1, SM2310B	≤6°C	14 Days	250 mL/P,G	50 mL	≤6°C	N/A	4 oz WMG	20g
Alkalinity	E310.1, SM2320B	≤6°C	14 Days	250 mL/P,G	50 mL	N/A	N/A	N/A	20g
Ammonia	SM4500NH3 B, F, & D	≤6°C, H2SO4 to pH <2	28 Days	250 mL/P,G	50 mL	≤6°C	28 Days	4 oz WMG	20g
Anions – Sulfate, Bromide, Chloride, Fluoride	E300, SW9056 A	≤6°C	28 Days	125 mL/P,G	10 mL	≤6°C	28 Days**	4 oz WMG	10g
Anions – Nitrate, Nitrite, Phosphate, Ortho	E300.0, SW9056A	≤6°C	48 Hours	125 mL/P,G	10 mL	≤6°C	48 Hours**	2 oz WMG	20g
Anions – Nitrate-Nitrite	E300.0, SW9056A	≤6°C, H2SO4 to pH <2	28 Days	125 mL/P,G	10 mL	≤6°C	28 Days**	2 oz WMG	20g
Biochemical Oxygen Demand (BOD)/ Carbonaceous BOD (CBOD)	E405.1, SM5210B	≤6°C	48 Hours	1000 mL/P,G	500 mL	N/A	N/A	N/A	N/A
Burn Rate	SW1030	N/A	N/A	N/A	N/A	≤6°C	28 Days	4 oz WMG	30g
Chemical Oxygen Demand (COD)	E410.4, HACH8000	≤6°C, H2SO4 to pH <2	28 Days	125 mL/P,G	10 mL	N/A	N/A	N/A	N/A
Chlorine, Residual	SM4500-Cl F	≤6°C	15 Minutes	125 mL/P,G1	100 mL	N/A	N/A	N/A	N/A
Chromium VI (Hexavalent Cr)	SM3500-Cr, SW7196	≤6°C	24 Hours	250 mL/P,G	50 mL	≤6°C	24 H from Pr	4 oz WMG	20g
Color	E110.2, SM2120 B	≤6°C	48 Hours	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
Cyanide, Total & Cyanide, Amenable	E335.2, E335.3, E335.4, SW9010, SW9012, SW9014	≤6°C, H2SO4 to pH <2, Ascorbic Acid	14 Days	250 mL/P,G	50 mL	≤6°C	14 Days	4 oz WMG	20g
Dissolved Oxygen	E360.1, SM5210B	≤6°C	15 Minutes	1000 mL/P,G	500 mL	N/A	N/A	N/A	N/A
Ferrous Iron	SM3500FE B	≤6°C, HCL	48 Hours	250 mL/P,G	50 mL	≤6°C	14 Days	4 oz WMG	20g
Flashpoint	SW1010A	≤6°C	28 Days	500 mL/P,G	80 mL	N/A	N/A	N/A	N/A
Fluoride	E 4500-F BC	≤6°C	28 Days	125 mL/P,G	10 mL	≤6°C	28 Days**	4 oz WMG	20g
Hardness	SM2340 B	≤6°C, HNO3 to pH <2	6 Months	250 mL/P,G	100 mL	≤6°C	6 Months	2 oz WMG	N/A
Metals	E200.8, SW6020A	HNO3 to pH <2	6 Months	250 mL/P,G	100 mL	≤6°C	6 Months	2 oz WMG	20g
Metals (Dissolved - not field filtered)	E200.8, SW6020A	HNO3 to pH <2	2 Days to Filter	250 mL/P,G	100 mL	N/A	N/A	N/A	N/A
Mercury	E245.1, SW7470A, SW7471B	HNO3 to pH <2	28 Days	250 mL/P,G	40 mL	≤6°C	28 Days	2 oz WMG	20g
Nitrogen, Kjeldahl (TKN)	E351.3, SM4500-NH3 D	≤6°C, H2SO4 to pH <2	28 Days	250 mL/P,G	25 mL	≤6°C	28 Days	2 oz WMG	20g
Oil and Grease	E1664A, E1664B, SW9070A, SW9071B	≤6°C, H2SO4/HCL to pH <2	28 Days	1000 mL/WMG	1000 mL***	≤6°C	28 Days	2 oz WMG	20g
Phenolics	E420.1, E420.4, SW9065, SW9066	≤6°C, H2SO4 to pH <2	28 Days	250 mL/G, Amber	50 mL	≤6°C	28 Days**	2 oz WMG	20g
Phosphorous, Total	E365.3	≤6°C, H2SO4 to pH <2	28 Days	250 mL/P,G	50 mL	≤6°C	28 Days	2 oz WMG	20g
Phosphate, Ortho	E365.3	≤6°C	48 Hours	250 mL/P,G	50 mL	≤6°C	48 Hours**	2 oz WMG	20g
pH	E150.1, SM4500-H+B SW9040C, SW9045D	≤6°C	15 Minutes	125 mL/P,G	25 mL	≤6°C	48 Hours**	2 oz WMG	20g
Silica	SM4500-SiD	≤6°C	28 Days	100 mL/P	50 mL	≤6°C	28 Days**	2 oz WMG	20g
Solids, Dissolved (TDS)	E160.1, SM2540 C	≤6°C	7 Days	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
Solids, Suspended (TSS)	E160.2, SM2540 D	≤6°C	7 Days	1000 mL/P,G	1000 mL	N/A	N/A	N/A	N/A
Solids, Volatile (TVS)	E160.4	≤6°C	7 Days	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
Solids, Total (TS)	E160.3, SM2540 B	≤6°C	7 Days	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
Specific Conductance	E120.1, SM9050	≤6°C	28 Days	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
Sulfide	E376.1, SM4500 S F, WS 9030	≤6°C, ZnAc, NaOH to pH <9	7 Days	500 mL/P,G	200 mL	≤6°C, ZnAc to Moist	7 Days	2 oz WMG	20g
Sulfite	377.1, 4500S03B	≤6°C	15 Minutes	250 mL/P,G	100 mL	≤6°C	48 Hours**	2 oz WMG	20g
Surfactants (MBAS)	425.1, 5540C	≤6°C	48 Hours	500 mL/P,G	400 mL	N/A	N/A	N/A	N/A
Total Organic Carbon (TOC)	E415.1, SW9060, Walkley Black(S)	≤6°C, H2SO4 to pH <2	28 Days	2 x 40 mL vials	40 mL	≤6°C	28 Days	2 oz WMG	20g
Turbidity	E180.1	≤6°C	48 Hours	250 mL/P,G	50 mL	N/A	N/A	N/A	N/A
LA29B	N/A	N/A	N/A	N/A	N/A	≤6°C	N/A	32 oz WMG	500g

\* Please note the minimum volume should be used only in limited sample situations. \*\* Soil/Sludge holding time for anions is based upon aqueous HT and the time of preparation of aqueous deionized water leachate (10x typical) from the submitted soil/sludge.





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Organic Parameters									
Parameters	Method	Water				Soil/Sludge			
		Preservative	Holding Time	Container	Min. Volume	Preservative	Holding Time	Container	Min. Vol.
TPH – Texas Method	TX1005 and TX1006	≤6°C, HCl to pH <2	14 / 14 Days	3 x 40 mL	3 x 40 mL VOA	≤6°C or ≤-10°C	14 / 14 Days	2 oz WMG or Terra Core Kit	10g
Total Petroleum Hydrocarbons***	SW8015C	≤6°C	7 / 40 Days	2 x 1000 mL – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	8 oz WMG	30g
DRO, ORO Low Volume***	SW8015C	≤6°C	7 / 40 Days	3 x 40 mL / G – Amb	1 x 40 mL / G – Amb	N/A	N/A	N/A	N/A
DRO, ORO***	SW8015C	≤6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
GRO**	SW8015C	≤6°C, HCl to pH <2	7 / 14 Days	3 x 40 mL VOA	1 x 40 mL VOA	≤6°C	14 Days	4 oz WMG	5g
GRO**	SW8015C/SW5035A	N/A	N/A	N/A	N/A	≤-10°C	14 Days	Terra Core Kit / 3 – Encore	5g
Methane, Ethane, Ethene	RSK-175	6°C, HCl to pH <2	7 / 14 Days	3 x 40 mL VOA	1 x 40 mL VOA	N/A	N/A	N/A	N/A
Glycols	SW8015C	≤6°C	14 Days	3 x 40 mL VOA	1 x 40 mL VOA	≤6°C	14 Days	4 oz WMG	30g
Explosives***	SW8330A/B	≤6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
BTEX / MTBE**	SW8021B	6°C, HCl to pH <2	7 / 14 Days	3 x 40 mL VOA	1 x 40 mL VOA	≤6°C	14 Days	2 oz WMG	5g
BTEX / MTBE	SW8021B, SW5035A	N/A	N/A	N/A	N/A	≤-10°C	14 Days	Terra Core Kit / 3 – Encore	5g
Volatile Organics**	E624, SW8260C	4°C, H2SO4/HCl to pH <2	7 / 14 Days	3 x 40 mL VOA	1 x 40 mL VOA	≤6°C	14 Days	2 oz WMG	5g
Volatile Organics	8260C/SW5035A	N/A	N/A	N/A	N/A	≤-10°C	14 Days (5035A)*	Terra Core Kit / 3 – Encore	5g
Organochlorine Pesticides****	E608, 8081B	6°C, pH 5-8	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days or 1 year	4 oz WMG	30g
PCB****	E608, SW8082	6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days or 1 year	4 oz WMG	30g
PCB Wipe	40CFR Part 761/8082	N/A	N/A	N/A	N/A	C6 (Hexane)	7 / 40 Days	250 mL or 500 mL G Jar	N/A
Organophosphorous Pesticides****	SW8270D	6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
EDB, DBCP***	8011	6°C, H2SO4/HCl to pH <2	7 / 14 Days	3 x 40 mL VOA	1 x 40 mL / G – TLS	N/A	N/A	N/A	N/A
Chlorinated Herbicides****	8151A	≤6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
Polynuclear Aromatic Hydrocarbons****	8270D	≤6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
SVOC (Base/Neutrals/Acids)****	E625, 8270D	≤6°C	7 / 40 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
Formaldehyde	SW8315	≤6°C	3 Days	1000 mL / G	500 mL	≤6°C	3 Days	4 oz WMG	20g
Dioxins and Furans	E1613, SW8280, SW8290	≤6°C	30 / 45 Days	2 x 1000 mL / G – Amb	1000 mL or calc on avail	≤6°C	14 / 40 Days	4 oz WMG	30g
Reactive Sulfide and Cyanide <sup>1</sup>	SW-846, Caphater 7	≤6°C	28 Days	125 mL / P,G	5 g	≤6°C	28 Days	2 oz WMG	5g

\*Must be frozen or preserved within 48 hours of collection; \*\*Holding Time – 7/14 days – not preserved/preserved; \*\*\* Holding Time – 7/14/14 days – not preserved/preserved/after extracted; \*\*\*\* Holding Time – 7/40 days – not preserved/after extracted  
\*\*\*\*\*Holding Time – 7/40 days or 1 year (check state reg); <sup>1</sup> Samples analyzed by ALS Holland

TCLP Parameters					
Parameters	Holding Time from Collection to TCLP Extraction	Preservative	Holding Time from TCLP Extraction to Preparative Extraction	Holding Time from TCLP/Preparative Extraction to Analysis	Total Elapsed Time
Volatiles	14 Days	≤6°C	Not Applicable	14 Days	28 Days
Semivolatiles	14 Days	≤6°C	7	40 Days	61 Days
Organochlorine Pesticides and PCBs	14 Days	≤6°C	7	40 Days	61 Days
Chlorinated Herbicides	14 Days	≤6°C	7	40 Days	61 Days
Organophosphorous Pesticides	14 Days	≤6°C	7	40 Days	61 Days
Mercury	28 Days	≤6°C	Not Applicable	28 Days	56 Days
Metals	180 Days	≤6°C	Not Applicable	180 Days	360 Days

Acronym Definitions		Preservative
CLP - Contract Laboratory Program	H - Hours	H2SO4 - Sulfuric Acid
G - Glass	D - Days	HN03 - Nitric Acid
V-TLC - Glass Vial Teflon-lined Cap	M - Months	HCl - Hydrochloric acid
V-TLS - Glass Vial Teflon-lined Septum	T - TCLP	NaOH - Sodium Hydroxide
P - Polyethylene	Pr - Prep. Extraction	ZnAc - Zinc Acetate
Amb - Amber	A - Analysis	Asca - Ascorbic Acid
WMG - Wide Mouth Glass Jar	C - CLP	NaHSO4 - Sodium Bisulfate

