



Guide to Analyses: Methods, Holding Times, and Bottleneck

Analysis	Method		Holding Time		Container	Preservative (Water)	Recommended Sample Volume	
	Soil	Water	Soil	Water			Soil	Water
Organic Analysis								
Alcohols / Glycols	8015D	8015D	14 days	14 days ⁽¹⁾	G	HCl < 2	90 grams	2, 40-mL vials
Dissolved Gases	N/A	RSK-175	N/A	14 days	GTLS	HCl < 2	N/A	3, 40-mL vials
DRO	8015D	8015D	14 days ⁽²⁾	14 days ⁽²⁾	G	HCl < 2	50 grams	2, 1-Liter
EDB / DBCP	N/A	8011	N/A	14 days ⁽¹⁾	GTLS	HCl < 2	N/A	3, 40-mL vials
EPH	NJDEP EPH 10/08 Revision 3	NJDEP EPH 10/08 Revision 3	14 days ⁽²⁾	14 days ⁽²⁾	G	HCl < 2	100 grams	2, 1-Liter
GRO	8260C/8015D	8260C/8015D	14 days	14 days ⁽¹⁾	G	HCl < 2	100 grams	3, 40-mL vials
Herbicides	8151A	8151A	14 days ⁽²⁾	7 days ⁽²⁾	GTLC	none	150 grams	2, 1-Liter
PCBs	8082A	608/8082A	14 days ⁽²⁾	7 days ⁽²⁾	GTLC	none	100 grams	2, 1-Liter
Pesticides	8081B	608/8081B	14 days ⁽²⁾	7 days ^(2,3)	GTLC	none	100 grams	2, 1-Liter
Semi-Volatile Organics	8270D	625/8270D	14 days ⁽²⁾	7 days ⁽²⁾	GTLC	none	100 grams	2, 1-Liter
1,4 Dioxane (NJGWQS)	N/A	8270D	N/A	7 days ⁽²⁾	GTLC	none	N/A	2, 1-Liter
TPH	OQA-QAM-025 Rev. 7 / 8015D	OQA-QAM-025 Rev. 7 / 8015D	14 days ⁽²⁾	14 days ⁽²⁾	G	HCl < 2	100 grams	2, 1-Liter
Volatile Organics (potable) (Sub)	N/A	524.2	N/A	14 days ⁽⁴⁾	GTLS	HCl < 2 ⁽⁵⁾	N/A	3, 40-mL vials
Volatile Organics (soil)	8260C	N/A	48 hours to lab prep / 14 days ⁽⁶⁾	N/A	Encore or Terra core	N/A	3, 5-gram En Cores	N/A
Volatile Organics (water)	N/A	624 / 8260C	N/A	14 days ⁽¹⁾	GTLS	HCl < 2	N/A	3, 40-mL vials
Volatile Organics (Acrolein & Acrylonitrile)	N/A	624 / 8260C	N/A	3 days	GTLS	none	N/A	2, 40-mL vials
Volatile Organics (low-level)	N/A	8260C SIM	N/A	14 days ⁽¹⁾	GTLS	HCl < 2	N/A	2, 40-mL vials
Inorganic Analysis								
Acidity	N/A	SM 2310B	N/A	14 days	G	none	N/A	2, 60-mL vials
Alkalinity	N/A	SM2320B	N/A	14 days	G	4 C	N/A	3, 60-mL vials
Ammonia-N	SM 4500-NH3B+D.	SM 4500-NH3B+D	28 days	28 days	P	H ₂ SO ₄ < 2	50 grams	50 mL
BOD / CBOD	N/A	SM 5210B	N/A	48 hours	P	none	N/A	1 Liter
Bromide	9056A	300.0	N/A	28 days	P	none	25 grams	50 mL
Chloride	9056A	300.0	N/A	28 days	P	none	25 grams	50 mL
COD	N/A	Hach 8000	N/A	28 days	P	H ₂ SO ₄ < 2	N/A	50 mL
Cyanide, Available	OIA-1677 Mod.	OIA-1677	14 days	24 hours ⁽⁷⁾ / 14 days	G	unpreserved amber & NaOH > 12	50 grams	500 mL per bottle
Cyanide, Total	9012B	335.4	14 days	14 days	G	amber / NaOH > 12	50 grams	50 mL
Cyanide, WAD	9012B	9012B	14 days	14 days	G	amber / NaOH > 12	50 grams	50 mL
Ferrous Iron	N/A	SM 3500-Fe B	N/A	15 Minutes	P	amber	N/A	500 mL
Fluoride	9056A	300.0	N/A	28 days	P	none	25 grams	50 mL
Hardness (Total, as CaCO ₃)	N/A	200.7	N/A	6 months	G	HNO ₃ < 2	N/A	200 mL
Hexavalent Chromium	3060A / 7196A	SM 3500-Cr B	30 days ⁽⁸⁾	24 hours	P	none	25 grams	100 mL
Mercury	7471B	7470A / 245.1	28 days	28 days	G (soil) / P (water)	HNO ₃ < 2	25 grams	200 mL
Metals (except Mercury)	6010C 6020A	200.7 200.8	6 months	6 months	G (soil) / P (water)	HNO ₃ < 2	25 grams	500 mL
Nitrate-N (NO ₃)	9056A	300.0	N/A	48 hours	P	none	25 grams	50 mL
Nitrite-N (NO ₂)	9056A	300.0	N/A	48 hours	P	none	25 grams	50 mL
NPM/SGT-HEM	N/A	1664B	N/A	28 days	G	HCl < 2	N/A	2, 1-Liter
Oil & Grease/HEM	9071B	1664B	28 days	28 days	G	HCl < 2	100 grams	2, 1-Liter
Ortho Phosphate	9056A	SM 4500-P E	N/A	48 hours	P	none	25 grams	100 mL
pH	9040C / 9045D	SM 4500-H B	ASAP	15 minutes	G (soil) / P (water)	none	75 grams	50 mL
Phenol, Total	9065	420.1	28 days	28 days	G	H ₂ SO ₄ < 2	25 grams	50 mL
Phosphorus, Total	SM 4500-P (SUB)	SM 4500-P E or F	N/A	28 days	P	H ₂ SO ₄ < 2	N/A	500 mL
Salinity	N/A	SM 2520B	N/A	28 days	P	none	N/A	50 mL



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	Soil	Water	Soil	Water			Soil	Water
Inorganic Analysis (Cont'd.)								
Solids, Settleable (Sub)	N/A	SM 2540F	N/A	48 hours	P	none	N/A	1 Liter
Solids, Total	SM 2540G	SM 2540B	7 days	7 days	P	none	50 grams	250 mL
Solids, Total Dissolved	N/A	SM 2540C	N/A	7 days	P	none	N/A	250 mL
Solids, Total Suspended	N/A	SM 2540D	N/A	7 days	P	none	N/A	250 mL
Solids, Total Volatile (% LOI)	ASTM D2974	SM2540E/160.4	N/A	7 days	P	none	50 grams	250 mL
Specific Conductance	N/A	SM 2510B/9050A	N/A	28 days	P	none	N/A	250 mL
Sulfate (SO ₄)	9056A	300.0	N/A	28 days	P	none	50 grams	50 mL
Sulfide, Total	9030B / 9034	SM 4500S F	7 days	7 days	P	ZnAc + NaOH > 9	50 grams	500 mL
TKN (Sub)	351.2	351.2	28 days	28 days	G (soil) / P (water)	H ₂ SO ₄ < 2	50 grams	200 mL
TOC	Lloyd Kahn	9060A / SM 5310B	14 days	28 days	G	amber / H ₂ SO ₄ < 2	25 grams	50 mL
Total Organic Halide, EOX (Sub AQ)	9023	9020	28 days	28 days	G	H ₂ SO ₄ < 2	25 grams	250 mL
Turbidity	N/A	SM 2130B	N/A	48 hours	G	none	N/A	50 mL
Waste Characterization								
Corrosivity (pH)	9040C/9045D/9041A	SM 4500-H B	ASAP	15 minutes	G (soil) / P (water)	none	75 grams	50 mL
Ignitability	1030	N/A	N/A	N/A	G	N/A	100 grams	N/A
Flash Point	N/A	1010A	N/A	N/A	G	none	N/A	200 mL
Paint Filter Test / Free Liquids	9095B	N/A	N/A	N/A	G	N/A	100 grams	N/A
Reactive Cyanide	7.3 / 9012B	7.3 / 9012B	ASAP	N/A	G	N/A	50 grams	50 mL
Reactive Sulfide	7.3 / 9034	7.3 / 9034	ASAP	N/A	G	N/A	50 grams	50 mL
TCLP Herbicides	1311 / 8151A	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
TCLP Mercury	1311 / 7470A	N/A	28 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
TCLP Metals	1311 / 6010C	N/A	6 months ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
TCLP Pesticides	1311 / 8081B	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
TCLP Semi-Volatiles	1311 / 8270D	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
TCLP Volatiles	1311 / 8260C	N/A	14 days ⁽⁹⁾	N/A	G	N/A	50 grams	N/A
SPLP Analysis								
SPLP Volatiles	1312 / 80260C	N/A	48 hours to lab prep / 14 days ⁽⁶⁾	N/A	Encore	N/A	2-25 gram Encores	N/A
SPLP Semi-Volatiles	1312 / 8270D	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
SPLP Pesticides	1312 / 8081B	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
SPLP Metals	1312/6010C/6020A/7470A	N/A	6 months ⁽⁹⁾	N/A	G	N/A	150 grams	N/A
SPLP PCBS	1312/8082A	N/A	14 days ⁽⁹⁾	N/A	G	N/A	150 grams	N/A

All samples to be maintained at 4 degrees Celsius.
 Yellow-highlighted cells indicate short hold parameters.

DW = Drinking Water; G = Glass; GTLC = Glass with Teflon-lined cap; GTLS = Glass with Teflon-lined septum; P = Polyethylene; WW = Waste Water

- (1) = 7 days if not preserved with HCl or if pH > 2.
- (2) = Holding time once sample is extracted is 40 days.
- (3) = If pH is not between 5 and 9, 72-hour hold time unless pH is adjusted.
- (4) = 24 hours if not preserved.
- (5) = If source is chlorinated vials, should be preserved with Ascorbic Acid.
- (6) = 48 hours to lab prep En Cores or Terra Cores (e.g., in NJ, NY, and PA), then 14-day hold time applies.
- (7) = The unpreserved portion of sample should be treated with lead carbonate for Sulfide interferences and then filtered within 24 hours of collection.
- (8) = Hexavalent Chromium in soil: 30 days for extraction, then 7 days for analysis.
- (9) = Days for TCLP/SPLP extraction, then follow method holding times.

Information is subject to change based on federal and state method updates and regulations.