

Table 6-1. Sample Requirements for Analytical Testing

Low-Concentration Samples					
Matrix	Parameter ¹	Container ^{2,3}	Preservation	Maximum Holding Times ⁴	
				Extraction	Analysis
Water	Volatiles	2 x 40-mL ⁵ G, Septa Vial	Ice to 4°C 4 drops conc. HCl or sodium bisulfate (NaHSO ₄) to pH<2	---	14 days
Water	SVOCs	2 x 1-L ^{5,6} amber G	Ice to 4°C	7 days	40 days
Water	Metals ⁶	1 x 1-L P	Nitric acid (HNO ₃) to pH<2		6 months ⁷
Water	TPH –gas TPH – diesel	2 x 40-mL ⁵ G, Septa Vial 2 x 1-L G	Ice to 4°C		14 days
Water	Common parameters	1 x 1-L ⁸ G	Ice to 4°C		28 days ⁸
Soils/Sediments	Volatiles	3 – 5 gram Encore	Ice to 4°C		48 hr, 14 days frozen
Soils/Sediments	SVOCs, PCBs, pesticides	1 x 8-oz G	Ice to 4°C	14 days	40 days
Soils/Sediments	Metals, cyanide, TPH	1 x 8-oz G 5-gram Encore for TPH-gas	Ice to 4°C		6 months, ⁷ 14 days, 48 hr, 14 days frozen
Medium-Concentration Samples					
Water/Liquid	Volatiles	2 x 40-mL G	Ice to 4°C ⁵		14 day
Water/Liquid	SVOCs ⁵	2 x 32-oz wide- mouth jars, G	Ice to 4°C ⁵	7 days	40 days
Water/Liquid	PCBs ⁵ , pesticides	2 x 32-oz wide- mouth jar G	Ice to 4°C ⁵	7 days	40 days
Water/Liquid	Metals	1 x 16-oz wide- mouth jar, G	HNO ₃ to pH<2		6 months ⁷
Water/Liquid	Explosives	2 x 1-L amber G	Ice to 4°C	7 days	40 days
Water/Liquid	Cyanide	1 x 1- L P	Sodium hydroxide (NaOH) to pH>12 Ice to 4°C		14 days
Soils/Sediments	Volatiles	3- 5 gram Encore	Ice to 4°C		48 hr, 14 days frozen
Soils/Sediments	SVOCs, PCBs, pesticides	1 x 8-oz wide- mouth jar, G	Ice to 4°C	14 days	40 days
Soils/Sediments	Metals, cyanide, TPH	1 x 8-oz wide- mouth jar, G 5-gram Encore for TPH-gas	Ice to 4°C		6 months, ⁷ 14 days, 48 hr, 14 days frozen
Liquid	All organic and inorganic analyses	1 x 8-oz wide- mouth jar, G		See comment 9	
Solids	All organic and inorganic analyses	2 x 8-oz wide- mouth jars, G		See comment 9	

Table 6-1. Sample Requirements for Analytical Testing (concluded)

1	B/N/A = base/neutral/acid extractables
2	All containers must have Teflon-lined seals (Teflon-lined septa for volatile organic analysis [VOA] vials).
3	L = liter; G = glass; P = high-density polyethylene. Sample preservation will be done in the field immediately upon sample collection. If water samples are filtered in the field, differential pressure methods using 45-micron filters will be used, and preservatives added after filtration. VOA samples should never be filtered.
4	When only one holding time is given, it implies total holding time from sampling until analysis.
5	Samples with residual chlorine present will be dechlorinated with sodium thiosulfate as specified in SW-846 (third edition).
6	Three bottles are required on at least 5 to 10 percent (but at least one) sample so that the laboratory can perform all method quality control checks for SW-846 method.
7	Total recoverable metals for water samples. Holding time for mercury is 28 days in glass; for hexavalent chromium is 24 hours.
8	Chlorine, bromine, fluorine, nitrate, nitrite, phosphate, sulfate; 1 L for each method; orthophosphate requires filtration. Holding time for extraction is 48 hours for nitrate, nitrite, and phosphate if not preserved with sulfuric acid to pH<2.
9	Holding times for medium-concentration samples are the same as those specified for low-concentration samples.