

Table 6-1. Sample Requirements for Analytical Testing

Low-Concentration Samples					
Matrix	Parameter <sup>1</sup>	Container <sup>2,3</sup>	Preservation <sup>3</sup>	Maximum Holding Times <sup>4</sup>	
				Extraction	Analysis
Water	Volatiles	2 x 40-mL <sup>5</sup> G, Septa Vial	Ice to 4°C 4 drops concentrated hydrochloric acid (HCl) or sodium bisulfate (NaHSO <sub>4</sub> ) to pH<2	—	14 days
Water	SVOCs	2 x 1-L <sup>5,6</sup> amber G	Ice to 4°C	7 days	40 days
Water	Metals <sup>7</sup>	1 x 1-L P	Nitric acid (HNO <sub>3</sub> ) to pH<2		6 months <sup>7</sup>
Water	TPH-gas TPH-diesel	2 x 40-mL <sup>6</sup> G, Septa Vial 2 x 1-L G	Ice to 4°C		14 days
Water	Common parameters	1 x 1-L <sup>5</sup> G	Ice to 4°C		28 days <sup>8</sup>
Soils/Sediments	Volatiles	3- to 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, <sup>7</sup> 14 days, 48 hr, 14 days frozen
Medium-Concentration Samples					
Water/Liquid	Volatiles	2 x 40-mL G	Ice to 4°C <sup>8</sup>		14 days
Water/Liquid	SVOCs <sup>6</sup>	2 x 32-oz wide- mouth jars, G	Ice to 4°C <sup>8</sup>	7 days	40 days
Water/Liquid	PCBs <sup>5</sup> , pesticides	2 x 32-oz wide- mouth jar G	Ice to 4°C <sup>8</sup>	7 days	40 days
Water/Liquid	Metals	1 x 16-oz wide- mouth jar, G	HNO <sub>3</sub> to pH<2		6 months <sup>7</sup>
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- to 5-gram Encore for TPH- gas	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, <sup>7</sup> 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<sup>®</sup>-lined seals (Teflon<sup>®</sup>-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 5-10 percent (but at least one) sample so that the laboratory can perform all method QC 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.