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Note 1: Refer to 40 CFR 136 Table II – Required Containers, Preservation Techniques, and Holding Times – and the specific "Sample Collection, Preservation, and Handling" section of the approved methods. The footnotes to Table II include additional requirements.

Note 2: Where "Cool to ≤ 6°C" is stated, samples are not to be frozen. Refer to footnote 18 to 40 CFR 136 Table II for further details, too. The preservation temperature does not apply to (not required for) samples that are analyzed immediately (less than 15 minutes). Also, ELAP does not certify for any parameters with hold times of less than 15 minutes. Refer to Item 249 for additional information on analyze immediate parameters.

Note 3: For metals tests, an aqueous sample may be collected and shipped without acid preservation. However, acid must be added at least 24 hours before analysis to dissolve any metals that adsorb to the container walls.

ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
Inorganic Tests:			
Acidity	P,FP,G	Separate bottle completely filled to the exclusion of air, Cool to ≤ 6°C	14 days
Alkalinity	P,FP,G	Separate bottle completely filled to the exclusion of air, Cool to ≤ 6°C	14 days
Aluminum	P,FP,G	HNO_3 to pH<2	6 months
Ammonia	P,FP,G	Cool to ≤ 6°C, H_2SO_4 to pH<2	28 days
Antimony	P,FP,G	HNO_3 to pH<2	6 months
Arsenic	P,FP,G	HNO_3 to pH<2	6 months
Barium	P,FP,G	HNO_3 to pH<2	6 months
Beryllium	P,FP,G	HNO_3 to pH<2	6 months
Biochemical Oxygen Demand (BOD)	P,FP,G	Cool to ≤ 6°C	48 hours
Boron	P,FP,Quartz	HNO_3 to pH<2	6 months
Bromide	P,FP,G	None	28 days
Cadmium	P,FP,G	HNO_3 to pH<2	6 months
Calcium	P,FP,G	HNO_3 to pH<2	6 months
Carbonaceous BOD (CBOD)	P,FP,G	Cool to ≤ 6°C	48 hours
Chemical Oxygen	P,FP,G	Cool to ≤ 6°C, H_2SO_4	28 days

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ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
Demand		to pH<2	
Chloride	P,FP,G	None	28 days
Chlorine Residual	P,G	None	Analyze within 15 minutes
Chromium	P,FP,G	HNO_3 to pH<2	6 months
Chromium VI	P,FP,G	Cool to ≤ 6°C	24 hours
		Plus pH 9.3-9.7 with $(NH_4)_2SO_4$	28 days
Cobalt	P,FP,G	HNO_3 to pH<2	6 months
Color	P,FP,G	Cool to ≤ 6°C	48 hours
Copper	P,FP,G	HNO_3 to pH<2	6 months
Cyanide, Total or Available (Amendable) (or CATC) and free	P,FP,G	Cool to ≤ 6°C, NaOH to pH>10 (if no sulfide present)	48 hours
		Plus mitigation treatment (if interferences present)	14 days
Fluoride	P	None	28 days
Gold	P,FP,G	HNO_3 to pH<2	6 months
Hardness	P,FP,G	HNO_3 or H_2SO_4 to pH<2	6 months
Hydrogen Ion (pH)	P,FP,G	None	Analyze within 15 minutes
Iron	P,FP,G	HNO_3 to pH<2	6 months
Kjeldahl and Organic Nitrogen	P,FP,G	Cool to ≤ 6°C, H_2SO_4 to pH<2	28 days
Lead	P,FP,G	HNO_3 to pH<2	6 months
Magnesium	P,FP,G	HNO_3 to pH<2	6 months
Manganese	P,FP,G	HNO_3 to pH<2	6 months
Mercury (CVAA)	P,FP,G	HNO_3 to pH<2	28 days
Mercury (CVAFS)	FP,G; and FP-lined cap	5 mL/L 12N HCl or 5 mL/L BrCl within 48 hours of collection; if oxidized extended to 28 days	90 days
		If for dissolved, filter within 24 hours of collection	

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ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
Molybdenum	P,FP,G	HNO_3 to pH<2	6 months
Nickel	P,FP,G	HNO_3 to pH<2	6 months
Nitrate	P,FP,G	Cool to ≤ 6°C	48 hours
Nitrate-Nitrite	P,FP,G	Cool to ≤ 6°C, H_2SO_4 to pH<2	28 days
Nitrite	P,FP,G	Cool to ≤ 6°C	48 hours
Oil and Grease	G	Cool to ≤ 6°C, HCl or H_2SO_4 to pH<2	28 days
Organic Carbon	P,FP,G	Cool to ≤ 6°C, HCl, H_2SO_4, or H_3PO_4 to pH<2	28 days
Orthophosphate	P,FP,G	Filter within 15 minutes, Cool to ≤ 6°C	48 hours
Oxygen, Dissolved Probe	G, Bottle and top	None	Analyze within 15 minutes
Oxygen, Dissolved Winkler	G, Bottle and top	Fix on site and store in dark	8 hours
Palladium	P,FP,G	HNO_3 to pH<2	6 months
Phenols	G	Cool to ≤ 6°C H_2SO_4 to pH<2	28 days
Phosphorus (Elemental)	G	Cool to ≤ 6°C	48 hours
Phosphorus, Total	P,FP,G	Cool to ≤ 6°C, H_2SO_4 to pH<2	28 days
Platinum	P,FP,G	HNO_3 to pH<2	6 months
Residue, Total	P,FP,G	Cool to ≤ 6°C	7 days
Residue, Filterable	P,FP,G	Cool to ≤ 6°C	7 days
Residue, Non-Filterable (TSS)	P,FP,G	Cool to ≤ 6°C	7 days
Residue, Settleable	P,FP,G	Cool to ≤ 6°C	48 hrs
Residue, Volatile	P,FP,G	Cool to ≤ 6°C	7 days
Silica	P,Quartz	Cool to ≤ 6°C	28 days
Silver	P,FP,G	HNO_3 to pH<2	6 months
Specific Conductance	P,FP,G	Cool to ≤ 6°C	28 days
Sulfate	P,FP,G	Cool to ≤ 6°C	28 days
Sulfide	P,FP,G	Cool to ≤ 6°C, add zinc acetate plus NaOH to pH>9	7 days
Sulfite	P,FP,G	None	Analyze within 15

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ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
			minutes
Surfactants	P,FP,G	Cool to ≤ 6°C	48 hours
Temperature	P,FP,G	None	Analyze immediately
Thallium	P,FP,G	HNO_3 to pH<2	6 months
Tin	P,FP,G	HNO_3 to pH<2	6 months
Titanium	P,FP,G	HNO_3 to pH<2	6 months
Turbidity	P,FP,G	Cool to ≤ 6°C	48 hours
Vanadium	P,FP,G	HNO_3 to pH<2	6 months
Zinc	P,FP,G	HNO_3 to pH<2	6 months
Organic Tests:* **			
Purgeable Halocarbons plus Benzyl Chloride and Epichlorohydrin	G, FP-lined septum	Cool to ≤ 6°C, 0.008%$Na_2S_2O_3$, See EPA 624.1, Section 9.	14 days
Purgeable Aromatic Hydrocarbons	G, FP-lined septum	Cool to ≤ 6°C, 0.008%$Na_2S_2O_3$ for residual chlorine, HCl to pH 2	14 days (7 days if not preserved to pH 2)
Acrolein and Acrylonitrile	G, FP-lined septum	Cool to ≤ 6°C, 0.008%$Na_2S_2O_3$ for residual chlorine, pH to 4-5 for acrolein	14 days (3 days for acrolein if not adjusted to pH 4-5)
Phenols	G, FP-lined cap	Cool to ≤ 6°C, 0.008% $Na_2S_2O_3$ for residual chlorine	7 days until extraction, 40 days after extraction
Benzidines	G, FP-lined cap	Cool to ≤ 6°C, 0.008% $Na_2S_2O_3$ for residual chlorine	7 days until extraction, extracts may be stored up to 30 days at < 0°C
Phthalate Esters	G, FP-lined cap	Cool to ≤ 6°C	7 days until extraction, 40 days after extraction

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ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
Nitrosamines	G, FP-lined cap	Cool to ≤ 6°C, store in dark, 0.008% $Na_2S_2O_3$ for residual chlorine. For diphenylnitrosamine add 0.008% $Na_2S_20_3$ and adjust pH 7-10 with NaOH within 24 hours of sampling	7 days until extraction, 40 days after extraction
Nitroaromatics and Isophorone	G, FP-lined cap	Cool to ≤ 6°C, 0.008% $Na_2S_2O_3$ for residual chlorine, store in dark	7 days until extraction, 40 days after extraction
PCBs	G, FP-lined cap	Cool to ≤ 6°C	1 year until extraction, 1 year after extraction
Pesticides	G, FP-lined cap	Cool to ≤ 6°C	72 hours
		Cool to ≤ 6°C, pH 5-9, 0.008% $Na_2S_2O_3$ for residual chlorine if aldrin is to be determined	7 days until extraction, 40 days after extraction
Polynuclear Aromatic Hydrocarbons	G, FP-lined cap	Cool to ≤ 6°C, 0.008%$Na_2S_2O_3$ for residual chlorine, store in dark	7 days until extraction, 40 days after extraction
Haloethers	G, FP-lined cap	Cool to ≤ 6°C, 0.008%$Na_2S_2O_3$ for residual chlorine	7 days until extraction, 40 days after extraction
Alkylated Phenols	G	Cool to < 6°C, H_2SO_4 to pH<2	28 days until extraction, 40 days after extraction
Adsorbable Organic Halides (AOX)	G	Cool to < 6°C, 0.008% $Na_2S_2O_3$, HNO_3 to pH<2	Hold at least 3 days, but not more than 6 months
Chlorinated Hydrocarbons	G, FP-lined cap	Cool to ≤ 6ºC	7 days until extraction, 40 days after extraction

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ANALYTE	CONTAINER P=Plastic, G=Glass FP=Teflon	PRESERVATION	MAXIMUM HOLDING TIME
Chlorinated Phenolics	G, FP-lined cap	Cool to < 6°C, 0.008% $Na_2S_2O_3$, H_2SO_4 to pH<2	30 days until acetylation, 30 days after acetylation
2,3,7,8-Tetrachlorodi-benzo-p-Dioxin	G, FP-lined cap	Cool to ≤ 6°C, 0.008% $Na_2S_2O_3$ for residual chlorine	7 days until extraction, 40 days after extraction

***When the extractable analytes of concern fall within a single chemical category, the specified preservative and maximum holding times should be observed to safeguard sample integrity (i.e., use all necessary preservatives and hold for the shortest time listed). When the analytes fall within two or more chemical categories, the sample may be preserved by cooling to ≤ 6°C, reducing residual chlorine with 0.008% $Na_2S_2O_3$, storing in the dark, and adjusting the pH to 6-9; samples preserved in this manner may be held for 7 days before extraction and for 40 days after extraction. Exceptions to this procedure are noted in footnotes to 40 CFR 136 Table II (i.e., 5, 12, and 13) and the approved methods.

Radiological Tests:			
Gross Alpha	P,FP,G	HNO_3 to pH<2	6 months
Gross Beta	P,FP,G	HNO_3 to pH<2	6 months
Strontium-89	P,FP,G	HCl or HNO_3 to pH<2	6 months
Strontium-90	P,FP,G	HCl or HNO_3 to pH<2	6 months
Radium-226	P,FP,G	HNO_3 to pH<2	6 months
Radium-228	P,FP,G	HNO_3 to pH<2	6 months
Radon-222	G, FP-lined septum	Cool to ≤ °C**	**3 days***
Radioactive Cesium	P,FP,G	HCl to pH<2	6 months
Iodine-131	P,FP,G	None	7 days
Tritium	G	None	6 months
Uranium	P,FP,G	HCl or HNO_3 to pH<2	6 months
Photon Emitters	P,FP,G	HCl or HNO_3 to pH<2	6 months

*** Hold time varies based on the method used. If using Standard Methods, the hold time is 4 days. If using the EPA method, the hold time is 3 days.**
**** Regardless of the method used, the samples are to be stored in a cooler or equivalent insulated container.**