Table 3-4. Sample Containers, Preservation, and Hold Times

Analyte/Analytical Group	Matrix	EPA Analytical Method	Container Size/Type[a]	Preservation	Preparation Holding Time[b]
VOCs	Groundwater	8260C	(3) 40-mL glass VOA vials, PTFE septum caps; no air bubbles	HCL to pH <2; chill to ≤6°C.	14 days (preserved)
TAL Total Metals and mercury (unfiltered)	Groundwater	6010C/6020A/ 7470A	(1) 500-mL HDPE bottle; unfiltered	HNO_3 to pH <2	180 days from sample collection to analysis
TAL dissolved metals and mercury (filtered)	Groundwater	6010C/6020A/ 7470A	(1) 500-mL HDPE bottle; filtered	HNO_3 to pH <2	180 days from sample collection to analysis
Explosives	Groundwater	8330B	(2) 500-mL amber glass bottles	≤6°C	7 days to extraction; 40 days to analysis
Semi-volatile Organic Compounds (select)	Groundwater	8270E SIM	(2) 500-mL amber glass bottles	≤6°C	7 days to extraction; 40 days to analysis
Nitrite/Nitrate	Groundwater	9056A	(1) 250 mL HDPE Bottle	H2SO4, pH < 2 Cool to 4 ± 2 °C	28 days from sample collection to analysis.
Perchlorate	Groundwater	6860A	(1) 125-mL poly	≤6°C	7 days to extraction

Notes:

[a] = minimum sample size is based on analysis allowing for sufficient sample for reanalysis. Additional volume is needed for the laboratory MS/MSD sample analysis

[b] = maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted

Acronyms and Abbreviations:

< = less than
≤ = less than or equal to
°C = degree Celsius
EPA = U.S. Environmental Protection Agency
HCl = hydrochloric acid
HDPE = high-density polyethylene
HNO_3 = nitric acid
mL = milliliter
MS = matrix spike
MSD = matrix spike duplicate
poly = polypropylene
pH = potential hydrogen
PFTE = Teflon™
TAL = target analyte list
VOA = volatile organic analysis
VOC = volatile organic compound

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