

## Flett Research - Recommended Sample Holding Time

Matrix	Preservation	Total Mercury	Methyl Mercury	Nuclides & Other Analyses
<b>Fresh Water</b>	Unpreserved (in Teflon or Glass bottles)	2 days if BrCl is not being added directly to original sample bottle; 28 days if BrCl will be added directly to original sample bottle	48 hr @ 1-6°C in darkness	n/a
	Preserved (in Teflon or Glass bottles) • BrCl added (TotHg ONLY) • or acidified 0.2–0.4% HCl	Nominally 90 days (EPA) Acid should be added within 2 days if BrCl is not being added to the original bottle.	180 days in dark and cool (~20°C)	n/a
	Frozen (colder than -15°C) <sup>4</sup>	180 days in dark <sup>1</sup> We quickly add BrCl to frozen samples and reseal so as to trap any volatile Hg(0) that may be present <sup>2</sup>	180 days in dark <sup>1</sup>	n/a
<b>Salt/Sea Water</b>	Acidified (in Teflon or Glass bottles)	180 days in dark and cool - preserved with 2 mL/L 9 M H <sub>2</sub> SO <sub>4</sub> for sample with [Cl] > 500 PPM	180 days in dark and cool - preserved with 2 mL/L 9 M H <sub>2</sub> SO <sub>4</sub> for sample with [Cl] > 500 PPM	n/a
<b>Sediments/ Sand/Peat</b>	Wet and Frozen (colder than -15°C) <sup>4</sup>	180 days <sup>1</sup>	180 days <sup>1</sup>	Indefinite if hermetically sealed against water loss <sup>1</sup>
	Wet @ 1-6°C	28 days	28 days	365 days if hermetically sealed against water loss <sup>1</sup>
	Dry @ ~20°C	Indefinite in dark <sup>3</sup>	Indefinite in dark <sup>3</sup>	Indefinite <sup>1</sup>
<b>Fish and other animal tissue</b>	Fresh @ 1-6°C	5 days	5 days	n/a
	Frozen (colder than -15°C) <sup>4</sup>	180 days	180 days	n/a
	Freeze-dried @ ~20°C	Indefinite in dark <sup>3</sup>	Indefinite in dark <sup>3</sup>	n/a
<b>Others</b>		Consult chief scientist or designate	Consult chief scientist or designate	Consult chief scientist or designate

<sup>1</sup> Estimate

<sup>2</sup> Bloom suggested that there may be some loss of inorganic Hg during freezing.

<sup>3</sup> Estimate based on stability of freeze-dried reference materials

<sup>4</sup> Long term storage at -20°C or colder is recommended, with no average weekly temperature warmer than -15°C.

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