

<b>METALS</b>	
<b>Test Description</b>	Determination of metals in water.
<b>Test Use</b>	Useful for evaluating drinking and non-drinking waters. May be applied to other aqueous matrices as well.
<b>Test Department</b>	Inorganic Chemistry: Phone 860-920-6666/6667 Fax 860-920-6670
<b>Methodology</b>	EPA Method 200.7: ICP/AES; EPA Method 200.8: ICP/MS
<b>Availability</b>	Year-round
<b>Sample Requirements</b>	One (1) sample collected in a pre-cleaned acid-washed plastic bottle
<b>Container type /Preservative</b>	500 mL plastic yellow top bottle. ~1.5 mL 1:1 Nitric Acid preservative to achieve pH < 2.
<b>Collection Instructions (Note 1)</b>	For taps, remove aerators and let water run 4-5 minutes. For outdoor locations, sampling location should be in accordance with a preapproved quality assurance project plan.
<b>Sample Holding Time &amp; Transport</b>	Samples must be preserved within 14 days of collection. Preserved samples must be analyzed within 6 months of collection.
<b>Unacceptable Conditions</b>	Incomplete requisition form. Insufficient sample volume. Samples received beyond the 14-day/6-month holding time.
<b>Requisition Form</b>	Use the Inorganic Chemistry form (Drinking Water, Stream Survey, or Non-Potable Water) as appropriate to the type of water collected.
<b>Required Information</b>	Fill out entire requisition form.
<b>Limitations</b>	
<b>Additional Comments</b>	To avoid the hazards of strong acids in the field, transport restrictions, and possible contamination, <u>samples may be returned to the laboratory within 14 days of collection and acid preserved upon receipt in the laboratory.</u>  As a general rule of thumb, EPA Method 200.8 can be used to achieve lower detection limits.  See <a href="#">Table 1</a> for list of metals which the CT PHL can determine using these methods.  Hardness is calculated from Calcium and Magnesium results (SM2340B).

Note 1: See *New England States Environmental Sampling Guide*, latest edition.

<https://www.epa.gov/sites/production/files/2015-06/documents/NE-States-Sample-Collection-Manual.pdf>

*Table 1. Metals Determinable by EPA Methods 200.7 and 200.8*

Metal Analyte	200.7	200.8
Aluminum	X	X
Antimony	X	X
Arsenic	X	X
Barium	X	X
Beryllium	X	X
Cadmium	X	X
Calcium	X	
Chromium	X	X
Cobalt	X	
Copper	X	X
Iron	X	
Gold		X
Lead	X	X
Magnesium	X	
Manganese	X	
Molybdenum	X	
Nickel	X	X
Potassium	X	
Selenium	X	X
Silver	X	X
Sodium	X	
Thallium	X	X
Tin	X	X
Titanium	X	
Uranium		X
Vanadium	X	
Zinc	X	
Zirconium	X	