

Instructions for: *WS Trace Metals (Cat # PT-TM-WS)*

STANDARD DESCRIPTION

- The WS Trace Metals standard is provided in a vial that contains approximately 21 mL of concentrate.
- The WS Trace Metals vial is preserved with nitric acid.
- Store the standard in the unopened vial at room temperature (~ 20 - 25°C).

ADDITIONAL INFORMATION

- The standard has been provided as a concentrate that must be diluted prior to analysis.
- After diluting the standard per the instructions below, the standard will contain approximately 1.0% nitric acid. You may add a different amount of acid during the dilution of the concentrate than the suggested 10 mL to matrix-match the sample to your calibration standards.
- Although it is not necessary to digest the diluted sample prior to analysis, if your normal procedure calls for digesting samples, we recommend that you follow your normal procedure.

STANDARD PREPARATION, ANALYSIS, and STORAGE

1. For best results, the PT standards should be stored at room temperature (~ 20 - 25°C).
2. Add approximately 900 mL of ASTM Type 1 water to a 1000 mL Class A volumetric flask.
3. Carefully add 10.0 mL of nitric acid to the flask as a preservative.
4. Transfer exactly 10.0 mL of the PT standard concentrate to the flask using a Class A volumetric pipette.
5. Bring the flask to volume with ASTM Type 1 water.
6. Mix the solution by inverting the volumetric flask a minimum of three times.
7. The standard is now ready for preparation and analysis per the selected method(s).
8. The sample should be analyzed as soon as possible after dilution,
9. Report all results in µg/L per the reporting instructions contained in this booklet.
10. Store the diluted standard and any remaining concentrate at room temperature (~ 20 - 25°C).

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Water Supply Proficiency Testing Concentration Ranges and PTRLs

Definitions:

PTRL

NELAC Proficiency Testing Reporting Limits (PTRLs) are provided as guidance to laboratories analyzing NELAC PT samples. At a minimum, the laboratory should use a method that is sensitive enough to generate quantitative results at the PTRLs shown. (REF: NELAC PT FOT Tables)

NA

Not Applicable (NA) has been applied to analytes where a PTRL is not applicable and to state specific analytes that have not had a PTRL determined by the applicable accrediting agency.

Trace Metals (PT-TM-WS)

NELAC Code	Analyte	Units	Concentration Range	PTRL
1000	Aluminum	µg/L	130 - 1000	104
1005	Antimony	µg/L	6.00 - 50.0	4.20
1010	Arsenic	µg/L	5.00 - 50.0	3.50
1015	Barium	µg/L	500 - 3000	420
1020	Beryllium	µg/L	2.00 - 20.0	1.70
1025	Boron	µg/L	800 - 2000	680
1030	Cadmium	µg/L	2.00 - 50.0	1.60
1040	Chromium	µg/L	10.0 - 200	8.50
1055	Copper	µg/L	50.0 - 2000	45.0
1070	Iron	µg/L	100 - 1800	80.0
1075	Lead	µg/L	5.00 - 100	3.50
1090	Manganese	µg/L	40.0 - 900	34.0
1100	Molybdenum	µg/L	15.0 - 130	13.0
1105	Nickel	µg/L	10.0 - 500	8.50
1140	Selenium	µg/L	10.0 - 100	8.00
1150	Silver	µg/L	20.0 - 300	14.0
1165	Thallium	µg/L	2.00 - 10.0	1.40
1185	Vanadium	µg/L	50.0 - 1000	42.0
1190	Zinc	µg/L	200 - 2000	170