

Instructions for: *DMRQA Demand (cat # PT-DEM-DMRQA)*

STANDARD DESCRIPTION

- The DMRQA Demand standard is provided in a vial that contains approximately 21 mL of concentrate.
- The DMRQA Demand Concentrate is preserved with 0.4% (v/v) sulfuric acid.
- Store the standard in the unopened vial refrigerated (at ~4°C).

ADDITIONAL INFORMATION

- The standard has been provided as a concentrate that must be diluted prior to analysis.
- After dilution per these instructions the acid concentration in the final sample will be ~0.004% and the pH will be less than 6.5. When analyzing for BOD and CBOD, please ensure that pH adjustments are completed to bring the sample to a pH between 6.5 and 7.5 per the requirements of methods used to determine these analytes.
- Seed dilutions of the DMRQA Demand standard prior to determination of BOD and CBOD.
- A nitrification inhibitor is recommended when determining CBOD.
- The standard should be analyzed as soon as possible after dilution.

STANDARD PREPARATION, ANALYSIS and STORAGE

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



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Instructions for: *DMRQA Demand (cat # PT-DEM-DMRQA) - Continued*

CONCENTRATION RANGE and PTRL

- After preparation per these instructions, the standard will contain the analytes in the following table at a certified Concentration within the ranges shown.
- The NELAC Proficiency Testing Reporting Limit (PTRL) is provided as guidance when analyzing NELAC PT standards. At a minimum, the laboratory should use a method that is sensitive enough to generate quantitative results at the PTRL shown.

| Analyte | Units | Concentration Range | PTRL |
|---------|-------|---------------------|------|
| BOD | mg/L | 15.0 - 250 | 4.50 |
| CBOD | mg/L | 15.0 - 250 | 3.70 |
| COD | mg/L | 30.0 - 250 | 17.0 |
| TOC | mg/L | 6.00 - 100 | 4.80 |