

## Laboratory Water Quality<sup>12</sup>

Laboratory pure water is used for rinsing, diluting, making standards and media. It may be purchased in batch lots from a reputable source or prepared in-house. At the end of this section, there's a lab water flow chart for guidance.

A) **Prepared In-house**: The quality of this water must be tested to assure it meets minimum requirements of the test being performed.

### 1) General Reagent Water

a) The tests listed below are to be performed on general reagent water used for rinsing, dilutions and making standards (not agar, urea substrate or BOD dilution water – see Section 2).

<u>Tests</u>	<u>Monitoring Freq.</u>	<u>Limit</u>
Conductivity	monthly	<2 umhos/cm @ 25°C
Chlorine	daily	< detection limit

Total chlorine residual must be analyzed to insure that the lab water used for biochemical oxygen demand and total chlorine residual analysis is acceptable. The residual value obtained from the chlorine test should be less than the detection limit (generally in the range of 0.00-0.05 mg/L).

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b) Reagent water used in microbiological analyses as well as general use.

<u>Tests</u>	<u>Monitoring Freq.</u>	<u>Limit</u>
Conductivity	Monthly	<2 umhos/cm @ 25°C
T. Residual Chlorine	Monthly	< detection limit
Heavy Metals, single <sup>3</sup> (Cd, Cr, Cu, Ni, Pb, Zn)	Annually	<0.05 mg/L
Heterotrophic Plate Count Water Quality Test <sup>4</sup>	Monthly	<500 CFU/mL

<sup>1</sup> Manual for the Certification of Laboratories Analyzing Drinking Water, EPA/570/9-90/008, April 1990.

<sup>2</sup> See Standard Methods 19<sup>th</sup> edition, Section 1080

<sup>3</sup> Totally, no greater than 0.1 mg/L

<sup>4</sup> See Standard Methods 19<sup>th</sup> Edition, Section 9020B 3(c), for more details.

(Biosuitability)

Annually

0.8 - 3.0 ratio

**B) Purchased Reagent Water:**

- 1) If the facility purchases a batch lot (all containers have the same package lot number) of reagent water, you must ask the supplier to submit a copy of the test results for your record. The quality of this water must be tested for the parameters noted above in A.1.a. and/or A.1.b. to assure it meets minimum requirements of the test being performed. The analyses are typically performed each year by the supplier and the facility must have the most recent analytical report kept on file. **If there are parameters not tested by the supplier, then the facility must test the water for those missing parameters described above.**

Attach a copy of your purchase invoice with the analytical report.

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