Borate 80ppm

Range(s): 0 – 80 ppm Borate (B)

Procedure

Note: When testing multiple samples simultaneously, a separate sample cell with an unreacted sample of the water tested must be used to zero the colorimeter. Please note that varying the test procedure from the original can affect the precision of the test.

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Borate using ◀▶.
3. Select Borate using ▲▼; then press ENTER ⊙.
4. Rinse and fill 25 mm sample cell to 10 mL mark with sample; then cap.
5. Add 1.0 mL Borate Buffer - Reagent A; then swirl to mix.
6. Insert sample cell into sample cell compartment. Align marks per User's Manual.
7. Select ZERO using ◀▶; then press ENTER ⊙. Zero will be displayed.
8. Remove sample cell from sample cell compartment; then remove cap.
9. Add 1.0 mL Borate Indicator - Reagent B; then cap and swirl to mix thoroughly.
10. Insert sample cell into sample cell compartment. Align marks.
11. Select TIMER using ◀▶; then press ENTER ⊙.
12. Select START using ◀▶; then press ENTER ⊙. (A 1-minute [01:00] countdown will begin.) Immediately select AUTO using ◀▶; then press ENTER ⊙.
13. When the timer beeps, the instrument will read the sample and the result will be displayed.

Interferences

Bromine > 20 ppm – Negative interference
To remove interference: Add 1 drop Thiosulfate N/10 (R-0007) to sample cell prior to testing.

Chlorine > 10 ppm – Negative interference
To remove interference: Add 1 drop Thiosulfate N/10 (R-0007) to sample cell prior to testing.

The following analytes were tested to the levels listed and found not to cause any interference up to the specified values:

Alkalinity, Total ($CaCO_3$) – 150 ppm
Biguanide – 25 ppm
Bromine – 10 ppm
Chloride – 5000 ppm
Copper – 2.4 ppm
Cyanuric Acid – 200 ppm
Ferrous Iron – 2 ppm
Ferric Iron – 2 ppm
Hardness, Calcium ($CaCO_3$) – 1000 ppm
Hydrogen Peroxide – 30 ppm
Hardness, Magnesium (CaCO3) – 300 ppm
Manganese, Mn – 2.5 ppm
Nitrate – 10 ppm
Phosphate – 10 ppm
Polyquat – 20 ppm

Test Method

Alizarin Red

Borate reacts with Alizarin Red S indicator to form a red-orange color that is proportional to the concentration of borate within a sample.

(over)

Estimated Detection Limit

1.25 ppm Borate

Precision

Using a single lot of each reagent and a standard solution of 40 ppm Borate (B), an individual analyst obtained a standard deviation with the instrument of ± 3.9 ppm Borate (B).

Application

Pool Water

Ordering Info

Reagent Pack

K-8048 Borate 80ppm

Formulated for exclusive use with Taylor's TTi® Colorimeter.

Reagent Pack Components

R-8048A Borate Buffer - Reagent A

R-8048B Borate Indicator - Reagent B

Optional Reagents & Accessories

R-0833 DI Water

R-0007 Thiosulfate N/10

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