Hardness Calcium 800

Range(s): 0-800 ppm $CaCO_3$, 0-320 ppm Ca

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Procedure

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Hardness Calcium 800 using ◀▶.
3. Select Hardness Calcium 800 using ▲▼; then press ENTER ⊙.
4. Rinse and fill 25 mm sample cell to 15 mL mark with Dl Water (R-0833) or calcium-free water.
5. Add 0.5 mL sample water; then swirl to mix.
6. Add 0.5 mL Hardness Calcium 800 - Reagent A; then swirl to mix.
7. Add 0.5 mL Hardness Calcium 800 - Reagent B; then swirl to mix.
8. Add 0.5 mL Hardness Calcium 800 - Reagent C; cap and swirl to mix.
9. Insert sample cell into sample cell compartment. Align marks per User's Manual.
10. Select ZERO using ◀▶; then press ENTER ⊙. Zero will be displayed.
11. Remove sample cell from sample cell compartment; then remove cap.
12. Add 0.5 mL Hardness Calcium 800 - Reagent D; then cap and swirl to mix thoroughly.
13. Insert sample cell into sample cell compartment. Align marks.
14. Select READ using ◀▶; then press ENTER ⊙. The instrument will read the sample and the result will be displayed.

Interferences

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

Alkalinity, Total ($CaCO_3$) – 1000 ppm
Azole (BT) – 5 ppm
Azole (TT) – 5 ppm
Biguanide (as product) – 200 ppm
Bromine – 20 ppm
Chloride – 8000 ppm
Chlorine – 20 ppm
Chromate – 200 ppm
Copper – 10 ppm
Cyanuric Acid – 300 ppm
Fluoride – 20 ppm
Iron, Ferric – 20 ppm
Iron, Ferrous – 20 ppm
Magnesium – 250 ppm
Manganese – 1 ppm
Molybdate – 200 ppm
Nickel – 80 ppm
Nitrate – 4000 ppm
Nitrite – 2000 ppm
Phosphate – 160 ppm
Phosphonate (HEDP) – 100 ppm
Phosphonate (PBTC) – 200 ppm
Polymer – 200 ppm
Polyphosphate – 24 ppm
Silica – 1000 ppm
Sulfate – 2000 ppm
Sulfite – 200 ppm
Zinc – 200 ppm

(over)

Test Method

Alizarin Red

Under basic conditions, alizarin red reacts with calcium to form a purple color proportional to the concentration of calcium hardness in a sample.

Estimated Detection Limit

4 ppm calcium hardness as $CaCO_3$

Precision

Using two lots of reagent and a standard solution of 300 ppm calcium hardness as $CaCO_3$, an individual analyst obtained a standard deviation with the instrument of ± 7 ppm calcium hardness as $CaCO_3$.

Application

Industrial Water and Recreational Water

Ordering Info

Reagent Pack

K-8030 Hardness Calcium 800

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

Reagent Pack Components

R-8030A Hardness Calcium 800 - Reagent A
R-8030B Hardness Calcium 800 - Reagent B
R-8030C Hardness Calcium 800 - Reagent C
R-8030D Hardness Calcium 800 - Reagent D

Required Reagents & Accessories

R-0833 DI Water

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