

# Hardness Calcium 800

Range(s): 0-800 ppm CaCO<sub>3</sub>, 0-320 ppm Ca



## 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 DI 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<sub>3</sub>) – 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

**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.

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**Estimated  
Detection Limit**

4 ppm calcium hardness as CaCO<sub>3</sub>

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**Precision**

Using two lots of reagent and a standard solution of 300 ppm calcium hardness as CaCO<sub>3</sub>, an individual analyst obtained a standard deviation with the instrument of  $\pm 7$  ppm calcium hardness as CaCO<sub>3</sub>.

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**Application**

Industrial Water and Recreational Water

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**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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