

Hardness Total SW 500

Range(s): 0-500 ppm CaCO_3



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.

Note: This test was developed to test total hardness in pool/spa waters with a salt level of 2000-8000 ppm NaCl that utilize chlorine generators to produce chlorine.

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Hardness Total SW 500 using $\blacktriangleleft\blacktriangleright$.
3. Select Hardness Total SW 500 using $\blacktriangle\blacktriangledown$; then press ENTER $\odot$.
4. Rinse and fill 25 mm sample cell to 10 mL mark with sample; then cap.
5. Insert sample cell into sample cell compartment. Align marks per User's Manual.
6. Select ZERO using $\blacktriangleleft\blacktriangleright$; then press ENTER $\odot$. Zero will be displayed.
7. Remove sample cell from sample cell compartment; then remove cap.
8. Add 1 mL Hardness Total 500 - Reagent A; then swirl to mix.

9. Add 1 mL Hardness Total 500 - Reagent B; then swirl to mix.
10. Add 1 mL Hardness Total 500 - Reagent C; then cap and swirl to mix thoroughly.
11. Insert sample cell into sample cell compartment. Align marks.
12. Select READ using $\blacktriangleleft\blacktriangleright$ then press ENTER $\odot$. The instrument will read the sample and the result will be displayed.

Interferences

Biguanide (as product) > 20 ppm – negative interference
 Chloride (NaCl) < 2000 ppm – negative interference
 > 8000 ppm – positive interference

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

Alkalinity, Total (CaCO_3) – 1000 ppm
 Bromine – 10 ppm
 Chlorine – 10 ppm
 Copper – 0.5 ppm

Cyanuric Acid – 200 ppm
 Iron, Ferric – 0.5 ppm
 Iron, Ferrous – 0.5 ppm
 Zinc – 0.5 ppm

Test Method

Calmagite

Under basic conditions, Calmagite reacts with hardness to form a red color proportional to the concentration of total hardness in a sample.

**Estimated
Detection Limit**

15 ppm total hardness as CaCO_3

Precision

Using two lots of reagent and a standard solution of 300 ppm total hardness as CaCO_3 , an individual analyst obtained a standard deviation with the instrument of ± 9 ppm total hardness as CaCO_3 .

Application

Recreational Water

Ordering Info**Reagent Pack**

K-8029 Hardness Total SW 500

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

Reagent Pack Components

R-8029A Hardness Total 500 - Reagent A

R-8029B Hardness Total 500 - Reagent B

R-8029C Hardness Total 500 - Reagent C



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