

Alkalinity Total 250

Range(s): 0-250 ppm CaCO_3 , 0-305 ppm HCO_3^- , 0-150 ppm CO_3^{2-}



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 Alkalinity Total 250 using \blacktriangleleft .
3. Select Alkalinity Total 250 using \blacktriangledown ; then press ENTER \odot .

4. Select a chemical form (CaCO_3 , HCO_3^- , CO_3^{2-}) for expression of test results using \blacktriangleup .
5. Rinse and fill 25 mm sample cell to 10 mL mark with sample; then cap.
6. Insert sample cell into sample cell compartment. Align marks per User's Manual.
7. Select ZERO using \blacktriangleleft ; then press ENTER \odot . Zero will be displayed.
8. Remove sample cell from sample cell compartment; then remove cap.

9. Add 1 drop Alkalinity Total 250 - Reagent A; then swirl to mix thoroughly.
10. Add 1 mL Alkalinity Total 250 - Reagent B; then cap and swirl to mix thoroughly.
11. Insert sample cell into sample cell compartment. Align marks.
12. Select READ using \blacktriangleleft ; then press ENTER \odot . 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:

Biguanide – 50 ppm
 Bromine – 10 ppm
 Chlorine – 10 ppm
 Copper – 0.5 ppm

Hardness, Calcium (CaCO_3) – 1000 ppm
 Iron, Ferric – 0.5 ppm
 Iron, Ferrous – 0.5 ppm

Test Method

Bromocresol Green

Bromocresol green, a pH-dependent indicator, is used to determine concentrations of alkalinity. Differing concentrations of alkalinity alter the pH and therefore change the color of the bromocresol green. This color change is proportional to the concentration of alkalinity in a sample. Common substances that contribute to total alkalinity include carbonates, bicarbonates, hydroxides, borates, phosphates, silicates, and cyanurates.

Estimated Detection Limit

2 ppm total alkalinity as CaCO_3

Precision

Using two lots of reagent and an alkalinity standard solution of 100 ppm total alkalinity as CaCO_3 , an individual analyst obtained a standard deviation with the instrument of ± 1 ppm total alkalinity as CaCO_3 .

Application

Recreational Water

Ordering Info

Reagent Pack

K-8024 Alkalinity Total 250

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

Reagent Pack Components

R-8024A Alkalinity Total 250 - Reagent A

R-8024B Alkalinity Total 250 - Reagent B

