

Copper 3

Range(s): 0-3.00 ppm Cu



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: To obtain total copper, a sample digestion must first be performed. Refer to Part 2 of the User's Manual for procedure.

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Copper 3 using ◀▶.

3. Select Copper 3 using ▲▼; then press ENTER ⊙.
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 ◀▶; then press ENTER ⊙. Zero will be displayed
7. Remove sample cell from sample cell compartment; then remove cap.
8. Add 0.5 mL Copper 3 - Reagent A; then swirl to mix.

9. Add 0.5 mL Copper 3 - 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 5-minute [05:00] 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

Aluminum > 80 ppm – negative interference

ATMP > 2 ppm – negative interference

EDTA, all levels – negative interference

Hardness, Calcium (CaCO₃) > 1000 ppm – positive interference

Lead > 3 ppm – positive interference

NTA > 2 ppm – negative interference

Polymer > 55 ppm – positive interference

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

Alkalinity, Total (CaCO₃) – 200 ppm

Azole (BT) – 20 ppm

Biguanide – 50 ppm

Bromine – 10 ppm

Chloride – 400 ppm

Chlorine – 10 ppm

Cyanuric Acid – 200 ppm

Ethylene Glycol – 60%

Fluoride – 80 ppm

Iron, Ferrous – 6 ppm

Iron, Total – 1 ppm

Magnesium – 500 ppm

Manganese – 45 ppm

Molybdate – 20 ppm

Phosphate – 100 ppm

Phosphonate (HEDP) – 20 ppm

Phosphonate (PBTC) – 20 ppm

Polyphosphate – 30 ppm

Polyquat – 30 ppm

Propylene Glycol – 50%

Quat – 100 ppm

Zinc – 10 ppm

Test Method

Cuprizone

In a buffered solution, soluble, uncomplexed copper reacts with cuprizone to produce a blue complex proportional to the concentration of copper in a sample.

**Estimated
Detection Limit**

0.05 ppm Cu

Precision

Using two lots of reagent and a standard solution of 1.50 ppm Cu, an individual analyst obtained a standard deviation with the instrument of ± 0.05 ppm Cu.

Application

Industrial Water and Recreational Water

Ordering Info

Reagent Pack

K-8012 Copper 3

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

Reagent Pack Components

R-8012A Copper 3 - Reagent A

R-8012B Copper 3 - Reagent B



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