Zinc 3

Range(s): 0-3.00 ppm Zn

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Procedure

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Zinc 3 using ◀▶.
3. Select Zinc 3 using ▲▼; then press ENTER ◉.
4. Rinse and fill 25 mm sample cell to 10 mL mark with sample.
5. Add 1 mL Zinc 3 - Reagent A; then swirl to mix.
6. Using the 0.15 g dipper spoon, add 2 level dippers Zinc 3 - Reagent B; then cap and invert to mix.
7. Remove cap and add 1 mL Zinc 3 - Reagent C; then cap and swirl to mix thoroughly.
8. Insert sample cell into sample cell compartment. Align marks per User's Manual.
9. Select ZERO using ◀▶; then press ENTER ◉. Zero will be displayed.
10. Remove sample cell from sample cell compartment; then remove cap.
11. Add 6 drops Zinc 3 - Reagent D; then cap and swirl to mix thoroughly.
12. Insert sample cell into sample cell compartment. Align marks.
13. Select READ using ◀▶; then press ENTER ◉. The instrument will read the sample and the result will be displayed.

Interferences

Note: Zinc coprecipitated with insoluble metal hydroxides or metal oxides (i.e., iron oxide) will not be measured.

Note: Combined concentration of Cu^{2+}, Ni^{2+}, and Zn^{2+} must not exceed 6 ppm.

Aluminum ≥ 3 ppm – negative interference
Cadmium ≥ 4 ppm – negative interference
Copper ≥ 4 ppm – negative interference
EDTA, all levels – negative interference
Hardness, Calcium ($CaCO_3$) ≥ 1000 ppm – positive interference
Iron, Ferric ≥ 3 ppm – negative interference
Iron, Ferrous ≥ 3 ppm – negative interference
Manganese ≥ 2 ppm – negative interference
Nickel ≥ 3 ppm – negative interference
NTA, all levels – negative interference
Phosphonate (ATMP) ≥ 1 ppm – negative interference
Phosphonate (DTPMP) ≥ 40 ppm – negative interference
Phosphonate (HEDP) ≥ 40 ppm – negative interference

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

Alkalinity, Total ($CaCO_3$) – 500 ppm
Chlorine – 10 ppm
Chromate – 10 ppm
Molybdate – 10 ppm
Nitrite – 2000 ppm
Phosphate – 20 ppm
Phosphonate (K_6HDTMP) – 80 ppm
Phosphonate (PBTC) – 80 ppm
Polymer – 20 ppm
Polyphosphate – 6 ppm

Test Method

Zincon

Under basic conditions, zinc reacts with zincon to produce a blue-colored complex that is proportional to the zinc concentration in a sample.

(over)

Estimated Detection Limit

0.04 ppm Zn

Precision

Using two lots of reagent and a standard solution of 2.00 ppm Zn, an individual analyst obtained a standard deviation with the instrument of ± 0.04 ppm Zn.

Application

Industrial Water

Ordering Info

Reagent Pack

K-8019 Zinc 3

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

Reagent Pack Components

R-8019A Zinc 3 - Reagent A
R-8019B Zinc 3 - Reagent B
R-8019C Zinc 3 - Reagent C
R-8019D Zinc 3 - Reagent D

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