

# Iron 4

Range(s): 0-4.00 ppm Fe



## Procedure

Note: To obtain total iron, 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 Iron 4 using ◀▶.
3. Select Iron 4 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 Iron 4 - Reagent A; then swirl to mix.
9. Add 1 mL Iron 4 - 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 2-minute [02:00] 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

Alkalinity, Total ( $\text{CaCO}_3$ ) > 200 ppm – negative interference  
 ATMP, all levels – negative interference  
 Copper > 1.0 ppm – negative interference  
 EDTA, all levels – negative interference  
 HEDP > 1.0 ppm – negative interference (all levels interfere when iron is < 1 ppm)  
 Zinc > 2.5 ppm – negative interference

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

Azole (BT, TT) – 5 ppm  
 Biguanide – 50 ppm  
 Bromine – 10 ppm

Chloride – 1000 ppm  
 Chlorine – 10 ppm  
 Cyanuric Acid – 200 ppm  
 Ethylene Glycol – 60%  
 Fluoride – 10 ppm  
 Hardness, Calcium ( $\text{CaCO}_3$ ) – 1000 ppm  
 Magnesium – 500 ppm  
 Molybdate – 10 ppm  
 Nitrate – 2000 ppm  
 Nitrite – 2000 ppm  
 NTA – 20 ppm as  $\text{CaCO}_3$   
 PBTC – 20 ppm

Phosphate – 100 ppm  
 Phosphonate – 20 ppm  
 Polymer – 1000 ppm  
 Polyphosphate – 5 ppm  
 Polyquat – 30 ppm  
 Propylene Glycol – 50%  
 Quat – 100 ppm  
 Silica – 150 ppm  
 Sulfate – 1000 ppm  
 Sulfite – 100 ppm  
 Zinc – 5 ppm

## ***Instruction #5448***

### **Test Method**

TPTZ (tripyridyl-s-triazine)

Ferric iron in a sample is reduced to ferrous iron. The ferrous iron then reacts with TPTZ to form a deep blue-purple complex that is proportional to the concentration of ferrous iron in a sample.

### **Estimated Detection Limit**

0.10 ppm Fe

### **Precision**

Using two lots of reagent and a standard solution of 2.00 ppm Fe, an individual analyst obtained a standard deviation with the instrument of  $\pm 0.02$  ppm Fe.

### **Application**

Industrial Water and Recreational Water

### **Ordering Info**

#### **Reagent Pack**

K-8009    Iron 4

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

#### **Reagent Pack Components**

R-8009A    Iron 4 - Reagent A

R-8009B    Iron 4 - Reagent B



31 Loveton Circle, Sparks, MD 21152 U.S.A.  
800-TEST KIT (837-8548) • 410-472-4340  
customerservice@taylortechnologies.com