

# Manganese 30

Range(s): 0-30.0 ppm Mn



## 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 Manganese 30 using ◀▶.
3. Select Manganese 30 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.
6. Select ZERO using ◀▶; then press ENTER Ⓞ. Zero will be displayed.
7. Remove sample cell from sample cell compartment; then remove cap.
8. Add 2 mL Manganese 30 - Reagent A; then swirl to mix thoroughly.
9. Using the 0.05 g dipper spoon, add 1 level dipper Manganese 30 - Reagent B; then cap and swirl to mix thoroughly.

Note: A few small crystals may remain undissolved. This is acceptable and will not interfere with the test.

10. Insert sample cell into sample cell compartment.
11. Select TIMER using ◀▶; then press ENTER Ⓞ.
12. Select START using ◀▶; then press ENTER Ⓞ. (A 1-minute [01:00] countdown will begin.) Immediately select AUTO using ◀▶; then press ENTER Ⓞ.
13. When the timer beeps, the instrument will automatically 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 value:

Alkalinity, Total ( $\text{CaCO}_3$ ) – 1000 ppm  
 Azole (BT) – 5 ppm  
 Azole (TT) – 5 ppm  
 Bromine – 5 ppm  
 Chloride – 1000 ppm

Chlorine – 5 ppm  
 Copper – 5 ppm  
 Fluoride – 10 ppm  
 Hardness, Calcium ( $\text{CaCO}_3$ ) – 1000 ppm  
 Iron, Ferric – 10 ppm  
 Molybdate – 10 ppm  
 Nitrate – 2000 ppm  
 Nitrite – 10 ppm

Phosphate – 100 ppm  
 Phosphonate – 20 ppm  
 Polymer – 1000 ppm  
 Polyphosphate – 5 ppm  
 Silica – 150 ppm  
 Sulfate – 1000 ppm  
 Sulfite – 100 ppm  
 Zinc – 5 ppm

**Test Method**

Persulfate

At a controlled pH, manganese is oxidized by periodate to produce permanganate. The characteristic purple-pink permanganate color is proportional to the concentration of manganese in a sample.

**Estimated  
Detection Limit**

0.2 ppm Mn

**Precision**

Using a single lot of reagent and a standard solution of 12.5 ppm Mn, an individual analyst obtained a standard deviation with the instrument of  $\pm 0.1$  ppm Mn.

**Application**

Industrial Water

**Ordering Info****Reagent Pack**

K-8017 Manganese 30

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

**Reagent Pack Components**

R-8017A Manganese 30 - Reagent A

R-8017B Manganese 30 - Reagent B



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