

Manganese 0.8

Range(s): 0-0.80 ppm Mn



Procedure

Note: Glassware that has not been properly cleaned may contaminate the sample and affect test results. If metal contamination is suspected, clean glassware thoroughly before use with Nitric Acid 1N (R-0801); then rinse thoroughly with DI Water (R-0833) or sample water.

1. Turn on the Colorimeter.
2. Select a test menu (ALL TESTS, RECENT TESTS, or FAVORITES) containing Manganese 0.8 using ◀▶.
3. Select Manganese 0.8 using ▲▼; then press ENTER ⊙.
4. Rinse and fill 25 mm sample cell to 10 mL mark with DI Water (R-0833), or manganese-free water; then cap and set aside. (This will be the blank sample cell.)
5. Rinse and fill a second sample cell to 10 mL mark with sample water. (This will be the sample.)
6. Using the 0.05 g dipper spoon, add 1 level dipper Manganese 0.8 - Reagent A to each cell; then cap and swirl to dissolve powder.
7. Add 0.5 mL Manganese 0.8 - Reagent B to each cell; then swirl to mix.
8. Add 0.5 mL Manganese 0.8 - Reagent C to each cell; then swirl to mix.
9. Add 0.5 mL Manganese 0.8 - Reagent D to each cell; then cap and swirl to mix thoroughly.
10. Insert blank sample cell into sample cell compartment. Align marks per User's Manual.

11. Select ZERO using ◀▶; then press ENTER ⊙. Zero will be displayed.
12. Remove blank sample cell from sample cell compartment.
13. Insert sample cell into sample cell compartment. Align marks.
14. Select READ using ◀▶; then press ENTER ⊙. The instrument will read the sample and the result will be displayed.

Interferences

Alkalinity, Total (CaCO_3) \geq 300 ppm – positive interference
 To remove interference: Fill dilution vial to 50 mL mark and adjust pH to 7-7.5 with Sulfuric Acid N (R-0686).
 Take a 10 mL portion and follow test procedure above.

Biguanide (as product) \geq 250 ppm – positive interference
 Bromine \geq 20 ppm – negative interference

Chloride \geq 1000 ppm – positive interference
 Chlorine \geq 10 ppm – negative interference
 Copper \geq 5 ppm – positive interference
 Cyanuric Acid \geq 200 ppm – positive interference
 Hardness, Calcium (CaCO_3) \geq 1000 ppm – positive interference

Hardness, Magnesium (CaCO_3) \geq 300 ppm – positive interference
 Iron, Ferrous \geq 2 ppm – positive interference
 Permanganate \geq 0.6 ppm – negative interference

Test Method

PAN (1-(2-Pyridylazo)-2-naphthol)

Under basic conditions PAN chelates with manganese to produce a rust-colored complex that is proportional to the concentration of manganese in a sample.

**Estimated
Detection Limit**

0.02 ppm Mn

Precision

Using two lots of reagent and a standard solution of 0.400 ppm Mn, an individual analyst obtained a standard deviation with the instrument of ± 0.02 ppm Mn.

Application

Recreational Water

Ordering Info

Reagent Pack

K-8034 Manganese 0.8

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

Reagent Pack Components

R-8034A Manganese 0.8 - Reagent A

R-8034B Manganese 0.8 - Reagent B

R-8034C Manganese 0.8 - Reagent C

R-8034D Manganese 0.8 - Reagent D

Required Reagents & Accessories

R-0833 DI Water

Optional Reagents & Accessories

R-0686 Sulfuric Acid N

R-0801 Nitric Acid 1N



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