

MANGANESE-HIGH RANGE

PERIODATE METHOD • CODE 3669-SC

QUANTITY	CONTENTS	CODE
10 g	Manganese Buffer Reagent	6310-D
15 g	*Manganese Reagent	*6311-E
1	Spoon, 0.1 g, plastic	0699
1	Spoon, 0.15 g, plastic	0727

*WARNING: Reagents marked with an * are considered hazardous substances. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or our web site. To obtain a printed copy, contact us by e-mail, phone or fax.

Manganese is present in ground water in the divalent state due to the lack of oxygen. In surface waters, manganese may be in various oxidation states as soluble complexes or as suspended compounds. Manganese is rarely present in excess of 1 mg/L. It may impart an objectionable taste or cause staining problems in laundry, but manganese levels normally encountered in water seldom produce any health hazards. Manganese is removed from water by various means, including chemical precipitation, pH adjustment, aeration, superchlorination and the use of ion exchange resins.

APPLICATION: Drinking and surface waters, domestic and industrial wastewaters.

RANGE: 0.0–15.0 Manganese

METHOD: Periodate oxidizes soluble manganous compounds into permanganate.

SAMPLE HANDLING & PRESERVATION: Manganese may oxidize readily in a neutral water and precipitate from solution. It may adhere to or be absorbed by container walls, especially glass. Acidified samples can be stored in plastic.

INTERFERENCES: Reducing substances capable of reacting with periodate or permanganate must be removed or destroyed before the periodate oxidation is attempted.

PROCEDURE

1. Press and hold **ON** button until colorimeter turns on.
2. Press **ENTER** to start.
3. Press **ENTER** to select TESTING MENU.
4. Select ALL TESTS (or another sequence containing 56 Manganese H) from TESTING MENU.
5. Scroll to and select 56 Manganese H from menu.
6. Rinse a tube (0290) with sample water. Fill to the 10 mL line with sample.
7. Insert tube into chamber, close lid and select SCAN BLANK.
8. Remove tube from colorimeter. Use the 0.1 g spoon (0699) to add two measures of Manganese Buffer Reagent (6310). Cap and mix until powder dissolves.
9. Use the 0.15 g spoon (0727) to add one measure of *Manganese Periodate Reagent (6311). Cap and shake for one minute. An undissolved portion of the reagent may remain in the bottom of the tube without adversely affecting the test results. Wait two minutes for maximum color development. Solution will turn pink if manganese is present.
10. At the end of the two minute waiting period, mix, insert tube into chamber, close lid and select SCAN SAMPLE. Record result.
11. Press **OFF** button to turn colorimeter off or press **EXIT** button to exit to a previous menu or make another menu selection.