

# Manganese VACUettes®

## 0 - 50 ppm

### Test Procedure

1. Fill the dilutor snapper cup to the **top edge** with **manganese free water**.
2. Add **10 drops** of A-6500 Activator Solution (fig 1). Stir briefly to mix the contents of the cup.
3. Fill the micro-test tube approximately halfway with **your sample** (fig 2).
4. Make sure that the VACUette tip is firmly attached to the ampoule tip.
5. Holding the VACUette almost horizontally, touch the tip to the contents of the micro-test tube (fig 2).

NOTE: The capillary tip will fill completely with sample.

6. Pull the VACUette into a vertical position. A small portion of the collected sample should fall into the sleeve of the VACUette tip (fig 3).
- NOTE: If none of the sample falls, a light tap near the shoulder of the ampoule will accomplish this.

7. Place the VACUette in the dilutor snapper cup and snap the tip (fig 4). The ampoule will fill leaving a bubble to facilitate mixing.
8. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end. Dry the exterior of the ampoule and wait **1 minute** for color development.

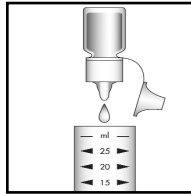


Figure 1

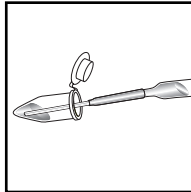


Figure 2

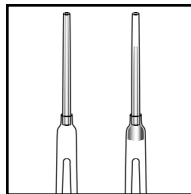


Figure 3

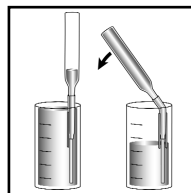


Figure 4

9. Place the VACUette ampoule, flat end downward into the center tube of the comparator. Direct the top of the comparator up toward a bright source of light while viewing from the bottom. Rotate the comparator until the color standard below the ampoule shows the closest match (fig 5). If the color of the VACUette ampoule is between two color standards, a concentration estimate can be made.

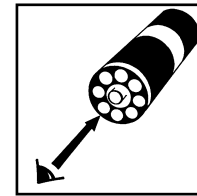


Figure 5

### Test Method

The Manganese VACUettes®<sup>1</sup> test method employs the periodate oxidation chemistry.<sup>2</sup> Soluble manganous compounds are oxidized by periodate in a slightly acidic solution to form permanganate ion. The resulting pink color is proportional to the manganese concentration in the sample. Results are expressed in ppm (mg/Liter) Mn.

1. VACUettes is a registered trademark of CHEMetrics, Inc. U.S. Patent Nos. 4,537,747 & 4,596,780
2. APHA Standard Methods, 14th ed., p.227, method 314C (1975).

### Safety Information

Read MSDS before performing this test procedure. Wear safety glasses.

### Reorder Information

### Cat. No.

<i>Test Kit, complete</i> . . . . .	<i>K-6502D</i>
<i>Refill, 30 VACUette ampoules</i> . . . . .	<i>R-6502D</i>
<i>Activator Solution, six 20 mL bottles</i> . . . . .	<i>A-6500</i>
<i>Dilutor Snapper Cup, 25 mL, package of six</i> . . . . .	<i>A-0018</i>
<i>Micro-Test Tube, package of ten</i> . . . . .	<i>A-0015</i>
<i>Comparator, 0-50 ppm</i> . . . . .	<i>C-6502D</i>

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