

Nitrate VACUettes®

0 - 90 ppm

Test Procedure

1. Fill the 25 mL dilutor snapper cup to the **top edge** with **nitrate free water**.
2. Fill the 5 mL sample cup to the 5 mL mark with **your sample**.
3. Empty the contents of one Cadmium Foil Pack into the sample cup (fig 1). Cap the cup and shake it vigorously for exactly **3 minutes**. Allow the sample to sit undisturbed for **2 minutes**.
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 sample cup (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 **10 minutes** for color development.

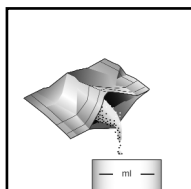


Figure 1

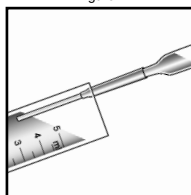


Figure 2

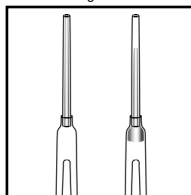


Figure 3

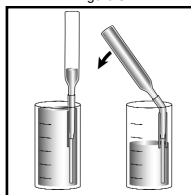


Figure 4

9. Hold the comparator in a nearly horizontal position while standing directly beneath a bright source of light. Place the VACUette ampoule between the color standards moving it from left to right along the comparator until the best color match is found (fig 5). If the color of the VACUette ampoule is between two color standards, a concentration estimate can be made.

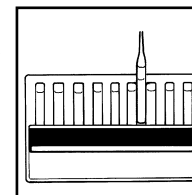


Figure 5

Test Method

The Nitrate VACUettes®¹ test method employs the cadmium reduction method.^{2,3,4} Results are expressed in ppm (mg/Liter) NO₃-N. Samples containing nitrite will give erroneous, high test results. Samples containing in excess of 2000 ppm chloride will give low test results. Certain metals, chlorine, oil and grease will also give low test results.

1. VACUettes is a registered trademark of CHEMetrics, Inc. U.S. Patent Nos. 4,537,747 & 4,596,780
2. APHA Standard Methods, 20th ed., p. 4-117, method 4500-NO₃-E (1998)
3. ASTM D 3867 - 04, Nitrite-Nitrate in Water, Test Method B
4. EPA Methods for Chemical Analysis of Water and Wastes, method 353.3 (1983)

Safety Information

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

Reorder Information

Cat. No.

<i>Test Kit, complete</i>	<i>K-6904D</i>
<i>Refill, 30 VACUette ampoules & 30 cadmium foil packs</i>	<i>R-6902D</i>
<i>Dilutor Snapper Cup, 25 mL, package of six</i>	<i>A-0018</i>
<i>Sample Cup with Top, 5 mL, package of six</i>	<i>A-0105</i>
<i>Comparator, 0-90 ppm</i>	<i>C-6904D</i>

CHEMetrics, Inc., 4295 Catlett Road, Calverton, VA 20138-0214 U.S.A.
 Phone: (800) 356-3072; Fax: (540) 788-4856; E-Mail: orders@chemetrics.com
www.chemetrics.com