

Chromate VACUettes®

0 - 30 & 30 - 300 ppm

Test Procedure

1. Fill the dilutor snapper cup to the **top edge** with **chromate free water**.
2. Add **5 drops** of A-2800 Acidifier 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.

9. Use the appropriate comparator to determine the level of hexavalent chromium in the sample. If the color of the VACUette ampoule is between two color standards, a concentration estimate can be made.

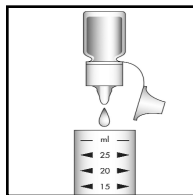


Figure 1

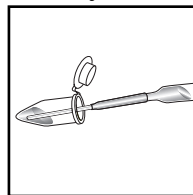


Figure 2

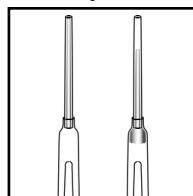


Figure 3

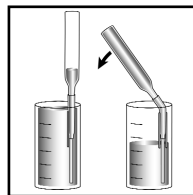


Figure 4

- a. Place the VACUette ampoule, flat end downward into the center tube of the low range 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).

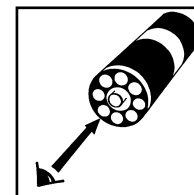


Figure 5

- b. Hold the high range 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 6).

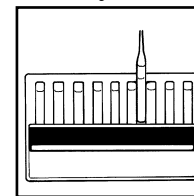


Figure 6

Test Method

The Chromate VACUettes®¹ test method employs the diphenylcarbazide chemistry.^{2,3} In an acidic solution, hexavalent chromium reacts with diphenylcarbazide to form a red-violet colored complex in direct proportion to the hexavalent chromium concentration. Results are expressed in ppm (mg/Liter) CrO₄.

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. 3-66, method 3500-Cr B (1998)

3. ASTM D 1687 - 02, Chromium in Water, Test Method A

Safety Information

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

Reorder Information

Cat. No.

Test Kit, complete	K-2810D
Refill, 30 VACUette ampoules	R-2810D
Activator Solution, six 10 mL bottles	A-2800
Dilutor Snapper Cup, 25 mL, package of six	A-0018
Micro-Test Tube, package of ten	A-0015
Comparator, 0-30 ppm	C-2801D
Comparator, 30-300 ppm	C-2810D

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