

Phenols VACUettes®

0 - 30 & 0 - 350 ppm

Test Procedure

1. Fill the dilutor snapper cup to the **top edge** with **phenol free water**.

2. Dissolve the crystals on the tip of the ampoule by stirring for **10 seconds** with the ampoule tip (fig 1).

NOTE: Some of the orange crystals may still be on the tip coating. Gently use a tissue to remove the remaining tip coating.

3. Fill the micro-test tube approximately halfway with **your sample** (fig 2).

4. Place a VACUette tip firmly onto 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 **5 minutes** for color development.

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

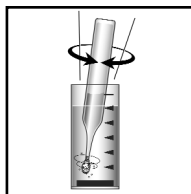


Figure 1

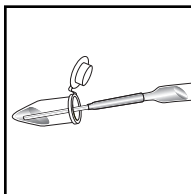


Figure 2

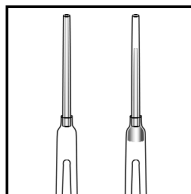


Figure 3

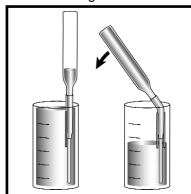


Figure 4

- 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).

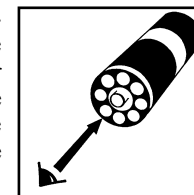


Figure 5

- 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).

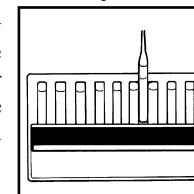


Figure 6

Test Method

The Phenols VACUettes®¹ test method employs the 4-aminoantipyrine chemistry.^{2,3,4} Test results are expressed in ppm (mg/Liter) "equivalent phenol" as C₆H₅OH. Most parasubstituted phenols do not produce a color with this reagent. Ferrous iron causes a blue color which can be eliminated by adding several drops of 1% EDTA to the sample before dissolving the tip coating. Sulfide, in excess of 100 ppm, causes a yellow turbidity. Highly contaminated waste waters may require distillation to separate phenols from nonvolatile impurities.

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. 574, method 510 C (1975)
3. ASTM D 1783 - 01, Phenolic Compounds in Water, Test Method B
4. EPA Methods for Chemical Analysis of Water and Wastes, method 420.1 (1983)

Safety Information

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

Reorder Information

Cat. No.

<i>Test Kit, complete</i>	<i>K-8012D</i>
<i>Refill, 30 VACUette ampoules</i>	<i>R-8012D</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, 0-30 ppm</i>	<i>C-8001D</i>
<i>Comparator, 0-350 ppm</i>	<i>C-8012D</i>

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