

Phenols HR CHEMets® Kit

K-8020D/R-8012: 0 - 300 ppm

Sample Temperature

Sample temperatures that deviate significantly from 20°C (68°F) may introduce test result bias.

Test Procedure

1. Using the syringe provided, obtain **1 mL** of the sample to be tested, and then dispense it into the empty sample cup.
2. Dilute the contents of the sample cup to the **25 mL mark with distilled water** (fig. 1).
3. Dissolve the crystals on the tip of the ampoule in the sample by stirring the sample briefly with the ampoule tip (fig. 2).
4. Place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 3).
5. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
6. Dry the ampoule. Obtain a test result **1 minute** after snapping the tip.
7. Obtain a test result by placing the ampoule between the color standards until the best color match is found (fig. 4).

NOTE: Use the 0 - 300 ppm concentration scale on the comparator label.

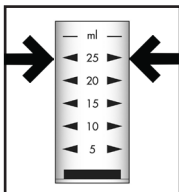


Figure 1

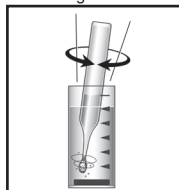


Figure 2

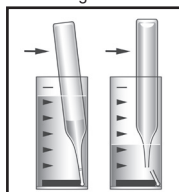


Figure 3

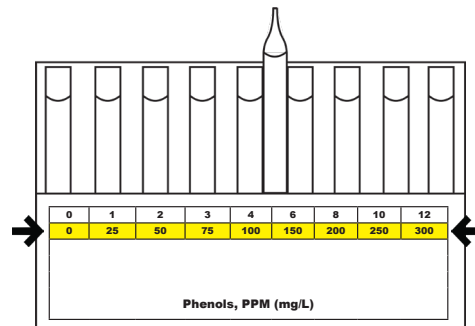


Figure 4

Test Method

The Phenols CHEMets®¹ test kit employs the 4-aminoantipyrene chemistry.^{2,3,4} In an alkaline solution, phenols react with 4-aminoantipyrene to produce a red colored complex. The color forming reaction is initiated by potassium ferricyanide (tip coating). 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. CHEMets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 3,634,038
2. APHA Standard Methods, 14th ed., 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 SDS before performing this test procedure. Wear safety glasses and protective gloves.