

# Phosphate VACUettes®

## 0 - 60 & 60 - 600 ppm

### Test Procedure

1. Fill the dilutor snapper cup to the **top edge** with **phosphate free water**.
2. Add **2 drops** of A-8500 Activator Solution (fig 1). Cap the cup and shake it to mix the contents well.
3. Fill the micro-test tube approximately halfway with **your sample** (fig 2).

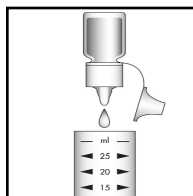


Figure 1

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).

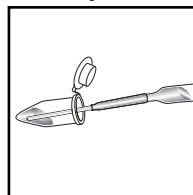


Figure 2

- NOTE:** The capillary tip will fill completely with sample.
6. Place the VACUette in the dilutor snapper cup and snap the tip (fig 3). The ampoule will fill leaving a bubble to facilitate mixing.
  7. 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 **2 minutes** for color development.

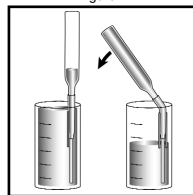


Figure 3

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

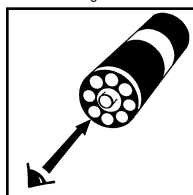


Figure 4

- 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 4).

- 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 5).

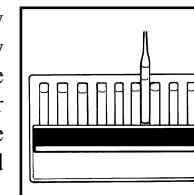


Figure 5

### Test Method

The Phosphate VACUettes®<sup>1</sup> test method employs the stannous chloride chemistry.<sup>2</sup> Results are expressed in ppm (mg/Liter) PO<sub>4</sub>.

Condensed phosphates (pyro-, meta- and other polyphosphates) and organically bound phosphates do not respond to this test. Sulfide, thiosulfate, and thiocyanate will cause 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. 4-145, method 4500-P D (1998)

### Safety Information

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

### Reorder Information

### Cat. No.

<i>Test Kit, complete</i> . . . . .	<i>K-8510A</i>
<i>Refill, 30 VACUette ampoules</i> . . . . .	<i>R-8510A</i>
<i>Activator Solution, six 10 mL bottles</i> . . . . .	<i>A-8500</i>
<i>Dilutor Snapper Cup, 25 mL, package of six</i> . . . . .	<i>A-0018</i>
<i>Sample Cup Top, package of six</i> . . . . .	<i>A-0014</i>
<i>Micro-Test Tube, package of ten</i> . . . . .	<i>A-0015</i>
<i>Comparator, 0-60 ppm</i> . . . . .	<i>C-8501A</i>
<i>Comparator, 60-600 ppm</i> . . . . .	<i>C-8510A</i>

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

[www.chemetrics.com](http://www.chemetrics.com)

Oct. 06, Rev. 4