

Phosphate CHEMetrics® Kit

K-8510/R-8510: 0 - 1 & 1 - 10 ppm PO₄

Safety Information

Read SDS before performing this test procedure. Wear safety glasses and protective gloves.

Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 2 drops of S-8500 Activator Solution (fig. 2). Cap the sample cup and shake it to mix the contents well.
3. Place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 3).
4. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
5. Dry the ampoule. Obtain a test result **2 minutes** after snapping the tip.
6. Obtain a test result using the appropriate comparator.

- a. **Low Range Comparator (fig. 4):** Place the ampoule, flat end first, into the comparator. Hold the comparator up toward a source of light and view from the bottom. Rotate the comparator until the best color match is found.

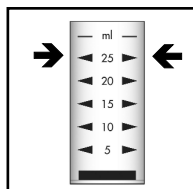


Figure 1

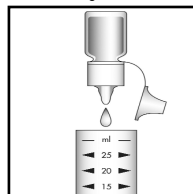


Figure 2

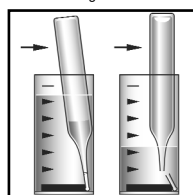


Figure 3

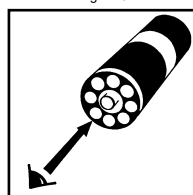


Figure 4

- b. **High Range Comparator (fig. 5):** Place the ampoule between the color standards until the best color match is found.

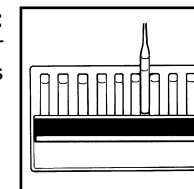


Figure 5

Test Method

The Phosphate CHEMetrics®¹ test kit employs the stannous chloride chemistry.² In an acidic solution, ortho-phosphate reacts with ammonium molybdate to form molybdophosphoric acid, which is then reduced by stannous chloride to the intensely colored molybdenum blue. The resulting blue color is directly proportional to the phosphate concentration.

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. CHEMetrics is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 3,634,038
2. APHA Standard Methods, 23rd ed., Method 4500-P D - 2005

