Oxygen CHEMets® Kit

K-7512: 1 - 12 ppm

Sampling

The most critical part of any dissolved oxygen test is sampling. It is difficult to obtain an aliquot which accurately reflects the oxygen content of a sample. Exposure to the high oxygen content of "air" will cause a sample to approach saturation. Biological activity may cause rapid oxygen depletion. Dipping and pouring operations should be performed with as little agitation as possible.

Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig 1).
2. Place the ampoule in the sample cup. Snap the tip by pressing the ampoule against the side of the cup. The ampoule will fill, leaving a small bubble to facilitate mixing (fig. 2).
3. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end. Dry the ampoule and wait **2 minutes** for color development.
4. Hold the comparator in a nearly horizontal position while standing directly beneath a source of light. Place the ampoule between the color standards moving it from left to right along the comparator until the best color match is found (fig 3). If the color of the ampoule is between two color standards, a concentration estimate can be made.

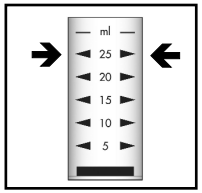

Figure 1

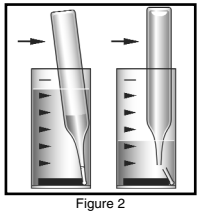
Figure 2

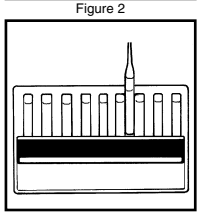
Figure 3

Test Method

The Oxygen CHEMets®[1] test kit employs the indigo carmine method[2,3]. In an acidic solution, oxygen oxidizes the yellow-green colored leuco form of indigo carmine to form a highly colored blue dye. The resulting blue color is proportional to the dissolved oxygen concentration in the sample. Test results are expressed in ppm (mg/Liter) oxygen as O_2.

1. CHEMets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,634,038
2. ASTM D 888 - 87, Dissolved Oxygen in Water, Test Method A
3. Gilbert, T. W., Behymer, T. D., Castaneda, H. B., "Determination of Dissolved Oxygen in Natural and Wastewaters," American Laboratory, pp. 119-134, March 1982

Safety Information

Read MSDS before performing this test. Wear safety glasses and disposable gloves.

Important Note

The CHEMet ampoules contain a light sensitive reagent. They will remain stable only if stored in the dark.

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