Oxygen CHEMets® Kit

K-7518/ R-7518: 5 - 180 ppm
K-7540/ R-7540: 0 - 40 ppm
K-7599/ R-7540: 0 - 100 ppm

Sampling

The most critical part of any dissolved oxygen test is sampling. Incorrect sampling technique will cause false positive test results. For guidance on appropriate sampling protocol, view the video on the specific product page on the website.

The sample stream must be completely leak-free. To accomplish this, the sampling tube is vertically mounted with a tube of inert material connecting the sample point to the bottom of the sampling tube. Use stainless steel, type 304 or 316, or glass tubing with short neoprene connections. Do not use copper tubing, long sections of neoprene or other polymeric tubing.

Test Procedure

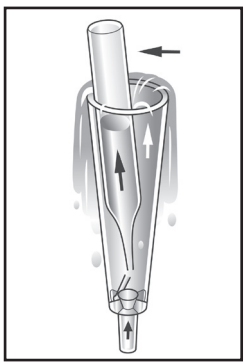

Figure 1

1. To remove trapped air bubbles, the system should be purged with water that is flowing at the fastest possible rate, and has a temperature of 180 - 210°F (80 - 100°C). New sampling systems should be purged for several hours, while those used routinely may require only a few minutes. **When the system is fully purged, reduce the flow to 500 - 1000 mL per minute and cool the sample to ambient temperature.**
2. Place the CHEMet ampoule, tip first, into the sampling tube. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig 1).
3. Gently invert the ampoule several times, allowing the bubble to travel from end to end.
4. Dry the ampoule. Obtain a test result **within 30 seconds** after snapping the tip.
5. Obtain a test result by gently placing 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 (fig 2).

Figure 2

Test Method

The Oxygen CHEMets®[1] test kit employs the Rhodazine D™ Method.[2,3,4,5] Dissolved oxygen reacts with the pale yellow colored leuco form of Rhodazine D to produce a deep rose color. The resulting color is proportional to the dissolved oxygen concentration in the sample.

1. CHEMets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 3,634,038
2. Rhodazine D methodology was developed by and is a trademark of AquaPhoenix Scientific, LLC
3. ASTM D 5543 - 15, Low Level Dissolved Oxygen in Water
4. ASTM Power Plant Manual, 1st ed., p. 169 (1984)
5. Department of the Navy, Final Report of NAVSECPHILADIV Project A-1598; Evaluation of CHEMetrics Feedwater Dissolved Oxygen Test Kit (1975)

Safety Information

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

CHEMetrics®
By AquaPhoenix Scientific

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