

# Glycol CHEMets®

## 1 - 15 ppm

### Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample (fig 1).
2. Add 5 drops of A-4400 Activator Solution (fig 2). Cap the sample cup and shake it to mix the contents well. Wait **5 minutes**.
3. Add 6 drops of A-4401 Activator Solution and 4 drops of A-4402 Activator Solution (fig 2). Cap the sample cup and shake it to mix the contents.
4. Place the CHEMet 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 3).
5. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end each time. Wipe all liquid from the exterior of the ampoule. Wait **12 minutes** for color development.
6. Hold the comparator in a nearly horizontal position while standing directly beneath a bright source of light. Place the CHEMet ampoule between the color standards moving it from left to right along the comparator until the best color match is found (fig 4). If the color of the CHEMet ampoule is between two color standards, a concentration estimate can be made.

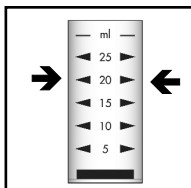


Figure 1

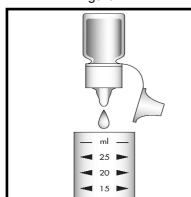


Figure 2

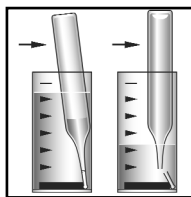


Figure 3

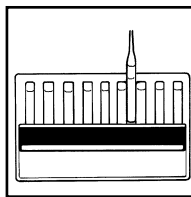


Figure 4

### Activator Solution Preparation

Fill the A-4401 Activator Solution bottle to the shoulder with distilled water. Shake the bottle until the dry chemical dissolves completely. If the solution will be stored at room temperature, label the bottle with an expiration date **6 weeks** from the date of preparation. If it will be stored in the refrigerator, label it with a **4 month** expiration date.

### Test Method

The Glycol CHEMets®<sup>1</sup> test method employs the Purpald®<sup>2</sup> chemistry. Periodic acid oxidizes ethylene glycol and propylene glycol to formaldehyde. In a highly alkaline solution, and in conjunction with an oxidizing agent, formaldehyde reacts with Purpald to form a purple colored complex. Results are expressed in ppm (mg/Liter) ethylene glycol. For test results in ppm (mg/Liter) propylene glycol, multiply the final test result by a factor of 2.

This test procedure is somewhat temperature dependent. For best results, samples should be less than 100°F. Certain aldehydes and alcohols will cause high test results.

1. CHEMets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,634,038
2. Purpald is a registered trademark of Aldrich Chemical Company. The reagent methodology was developed by Aldrich Chemical Company.

### Safety Information

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

### Reorder Information

### Cat. No.

<i>Test Kit, complete</i> . . . . .	<i>K-4815</i>
<i>Refill, 30 CHEMet ampoules</i> . . . . .	<i>R-4815</i>
<i>Activator Solution, six 10 mL bottles</i> . . . . .	<i>A-4400</i>
<i>Activator Solution, six 20 mL bottles</i> . . . . .	<i>A-4401</i>
<i>Activator Solution, six 10 mL bottles</i> . . . . .	<i>A-4402</i>
<i>Sample Cup, 25 mL, package of six</i> . . . . .	<i>A-0013</i>
<i>Sample Cup Top, package of six</i> . . . . .	<i>A-0014</i>
<i>Comparator, 1-15 ppm</i> . . . . .	<i>C-4815</i>

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