

# Sulfide CHEMets®

## 0 - 1 & 1 - 10 ppm

### Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample (fig 1).

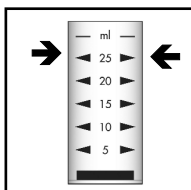


Figure 1

2. Add 3 drops of A-9500 Activator Solution (fig 2). Stir quickly with the tip of the ampoule to mix the contents of the cup.

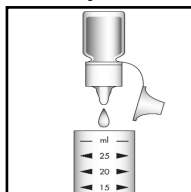


Figure 2

**NOTE:** Store the A-9500 Activator Solution in the glass bottle when not in use.

3. **Immediately** snap the tip in the sample by pressing the ampoule against the side of the cup. The ampoule will fill leaving a small bubble to facilitate mixing (fig 3).

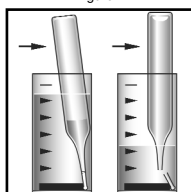


Figure 3

4. 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 **5 minutes** for color development.

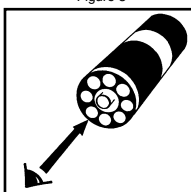


Figure 4

5. Use the appropriate comparator to determine the level of sulfide in the sample. If the color of the CHEMet ampoule is between two color standards, a concentration estimate can be made.

- a. Place the CHEMet ampoule, flat end down into the center tube of the low range comparator. Direct the top of the comparator up toward a source of bright light while viewing from the bottom. Rotate the comparator until the color standard below the CHEMet 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 CHEMet ampoule between the color standards moving it from left to right along the comparator until the best color match is found (fig 5).

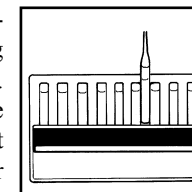


Figure 5

### Test Method

The Sulfide CHEMets®<sup>1</sup> test method employs the methylene blue chemistry.<sup>2,3</sup> In an acidic solution, sulfide reacts with N,N-dimethyl-p-phenylenediamine and ferric chloride to produce methylene blue. The resulting blue color is directly proportional to the sulfide concentration. Results are expressed in ppm (mg/Liter) S.

Strong reducing agents, including high levels of sulfide, will cause low results. Sulfide is very volatile, especially when the sample is acidified. It is essential to analyze the sample as quickly as possible.

1. CHEMets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,634,038
2. APHA Standard Methods, 20th ed., p. 4-165, method 4500-S<sup>2-</sup> D (1998)
3. EPA Methods for Chemical Analysis of Water and Wastes, method 376.2 (1979)

### Safety Information

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

### Reorder Information

### Cat. No.

<i>Test Kit, complete</i> . . . . .	<i>K-9510</i>
<i>Refill, 30 CHEMet ampoules</i> . . . . .	<i>R-9510</i>
<i>Activator Solution, six 10 mL bottles</i> . . . . .	<i>A-9500</i>
<i>Sample Cup, 25 mL, package of six</i> . . . . .	<i>A-0013</i>
<i>Comparator, 0-1 ppm</i> . . . . .	<i>C-9501</i>
<i>Comparator, 1-10 ppm</i> . . . . .	<i>C-9510</i>

CHEMetrics, Inc., 4295 Catlett 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) 2185-5