

# Thiosulfate Titrets® Kit

**K-9705: 5 - 50 ppm**

## Test Procedure

1. Fill the sample cup to the 15 mL mark with the sample to be tested (fig. 1).
2. Add 5 drops of A-9700 Neutralizer Solution (fig. 2). Stir to mix the contents of the cup.
3. If there is a possibility that nitrite is present in the sample, add 4 drops of A-9600 Neutralizer Solution. Stir briefly and wait **30 seconds**.
4. Snap the tip of the ampoule at the black snap ring (fig. 3).  
**NOTE:** When the tip is snapped, the flexible tubing will remain in place on the neck of the ampoule.
5. Lift the control bar and insert the Titret assembly into the Titrettor (fig. 4).  
**NOTE:** The rigid sample pipe will extend approximately 1.5 inches beyond the body of the Titrettor.
6. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 5). The contents will turn **BLUE**. Wait **30 seconds**.  
**NOTE:** NEVER press the control bar unless the sample pipe is in the sample.
7. Press the control bar again to draw another small amount of sample into the ampoule (fig. 5).
8. Rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **BLUE to COLORLESS**.

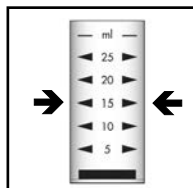


Figure 1

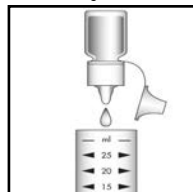


Figure 2



Figure 3

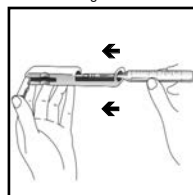


Figure 4



Figure 5

9. Repeat steps 7 and 8 until a permanent color change occurs.

10. When the color of the liquid in the ampoule changes to **COLORLESS**, remove the ampoule from the Titrettor. Hold the ampoule, **tip pointed upward**, and read the scale opposite the liquid level (fig. 6). Results are expressed in ppm (mg/Liter) thiosulfate.

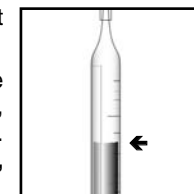


Figure 6

## Interpretation of Test Results

If the contents of the ampoule do not turn **blue** in Step # 6, the thiosulfate concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **colorless**, the thiosulfate concentration is below the test range.

## Test Method

The Thiosulfate Titrets®<sup>1</sup> test method employs an iodide-iodate titrant in an acid solution and a starch indicator<sup>2,3,4</sup>. The sample is treated with a formaldehyde solution to minimize interference from sulfite.

1. Titrets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 4,332,769
2. ASTM D 1339-84, Sulfite Ion in Water, Test Method C
3. APHA Standard Methods, 22nd ed., Method 4500-SO<sub>3</sub><sup>2-</sup>B -2000
4. EPA Methods for Chemical Analysis of Water and Wastes, method 377.1 (1983)

## Safety Information

Read SDS (available at [www.chemetrics.com](http://www.chemetrics.com)) before performing this test procedure. Wear safety glasses and protective gloves.

Visit [www.chemetrics.com](http://www.chemetrics.com) to view product demonstration videos.  
Always follow the test procedure above to perform a test.



[www.chemetrics.com](http://www.chemetrics.com)  
4295 Catlett Road, Midland, VA 22728 U.S.A.  
Phone: (800) 356-3072; Fax: (540) 788-4856  
E-Mail: [orders@chemetrics.com](mailto:orders@chemetrics.com)

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