

# Sulfite in Wine Titrets® Kit

K-9610W: 10 - 100 ppm

## Test Procedure

1. Collect the sample in any clean container.
2. Push a valve assembly (located in the tray behind the ampoule) onto the Titret ampoule tip until it fits snugly (fig. 1).

**NOTE:** The valve assembly should reach the reference line on the neck of the ampoule.

3. Snap the tip of the ampoule at the score mark (fig. 2).
4. With the tip of the valve assembly immersed in the sample, squeeze the bead valve briefly to add a small amount of sample to the Titret (fig. 3). The contents will turn **DEEP BLUE** (fig. 3). Wait **30 seconds**.

**NOTE:** NEVER squeeze the bead valve unless the tip of the valve assembly is immersed in the sample.

5. Squeeze the bead valve again to draw in another small amount of sample.
6. Rock the Titret to mix the contents.
7. Repeat steps 5 and 6 until the liquid in the Titret turns from **BLUE TO COLORLESS** (or the color of your sample).
8. When the color of the liquid in the Titret permanently changes to **COLORLESS** (or the color of your sample), the end point has been reached. Hold the Titret, **tip pointed upward**, and read the scale opposite the liquid level to obtain a test result in ppm (mg/L) free SO<sub>2</sub> (fig. 4).

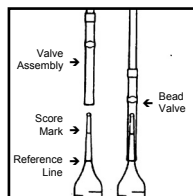


Figure 1

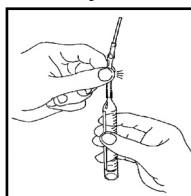


Figure 2

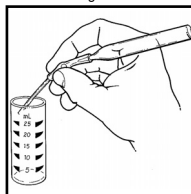


Figure 3

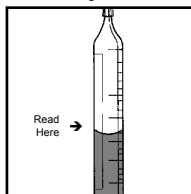


Figure 4

## Interpretation of Test Results

If the contents of the ampoule do not turn **blue** in Step # 4, the sulfite concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **colorless** (or the color of the sample), the sulfite concentration is below the test range.

## Test Method

The Sulfite in Wine Titrets®<sup>1</sup> test is based on the "Ripper" chemistry which employs an iodide-iodate titrant in an acid solution and a starch indicator<sup>2,3,4</sup>. The "Ripper" chemistry is used as a screening method throughout the wine making industry for determining the sulfite content in wines.

Results for this test kit are acceptable for white wines although they can have an error of up to 10 ppm. This test kit is not recommended for use with red wines or white wines containing ascorbic acid or tannin. These wines often give false high test results. As a rule, a test result of greater than 40 ppm free sulfite for any wine should be considered suspect and an alternative sulfite determination method should be employed.

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.



Simplicity in Water Analysis

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