Sulfite in Wine Titrets® Kit

K-9610W: 10 - 100 ppm

Sample Temperature

Sample temperatures that deviate significantly from 20°C (68°F) may introduce test result bias.

Test Procedure

1. Collect the sample in any clean container.
2. Push a valve assembly 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 (fig. 4).
   NOTE: Dispose of sample after testing.
9. Multiply scale unit by 10 for test results in ppm (mg/Liter) free SO_2.

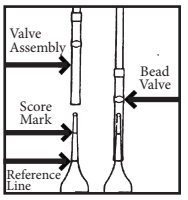

Figure 1

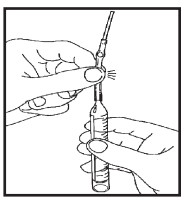
Figure 2

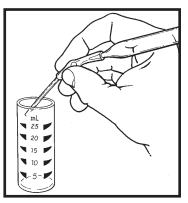
Figure 3

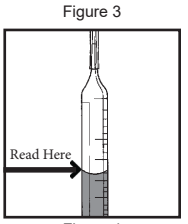

Figure 4

Sulfite in Wine Titrets® Kit

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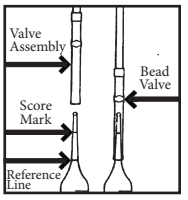

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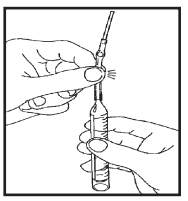
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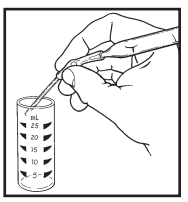
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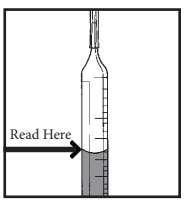

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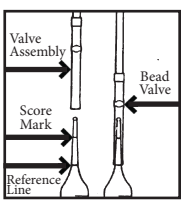

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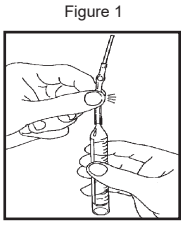
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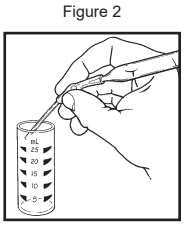
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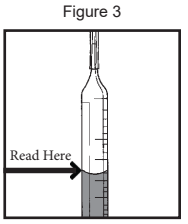

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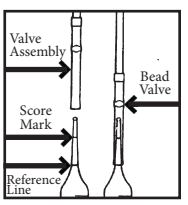

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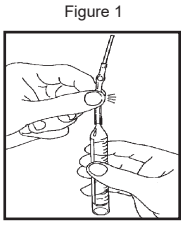
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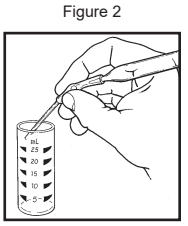
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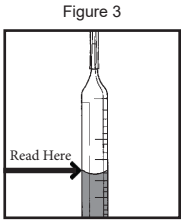

Figure 4

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®[1] test is based on the "Ripper" chemistry which employs an iodide-iodate titrant in an acid solution and a starch indicator[2,3,4]. 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 AquaPhoenix Scientific LLC 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_3^{2-}-B - 2000
4. EPA Methods for Chemical Analysis of Water and Wastes, Method 377.1 (1983)

Safety Information

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

CHEMetrics®
By AquaPhoenix Scientific

Feb. 25, Rev. 26

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