Sulfite Titrets® Kit

K-9602: 2 - 20 ppm
K-9605: 5 - 50 ppm
K-9610: 10 - 100 ppm
K-9650: 50 - 500 ppm

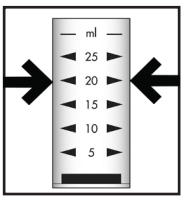

Figure 1

Sample Temperature

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

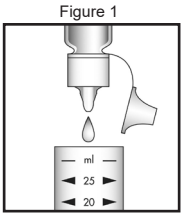

Figure 2

Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig.1).
2. Add 5 drops of S-9600 Neutralizer Solution (fig. 2). Stir to mix the contents of the cup. Wait **30 seconds.**
3. Slide the open end of the valve assembly over the tapered tip of the Titret so that it fits snugly to the white reference line (fig. 3).
4. Snap the tip of the ampoule at the black snap ring (fig. 4).
   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. 5).
   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. 6). The contents will turn **BLUE to VERY DARK BLUE** (black). Wait 30 seconds.
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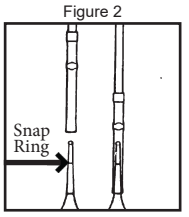
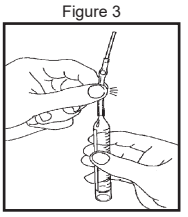


Figure 3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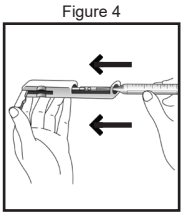
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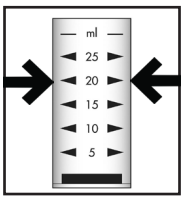

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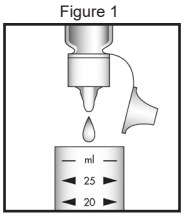

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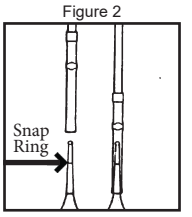

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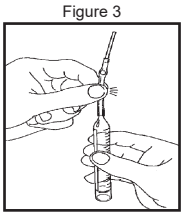
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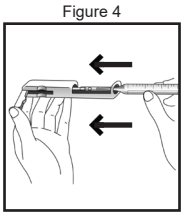
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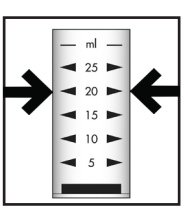

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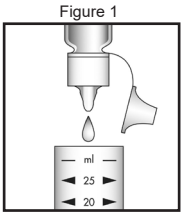

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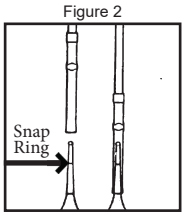

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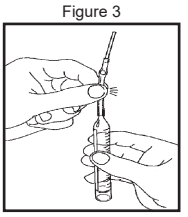
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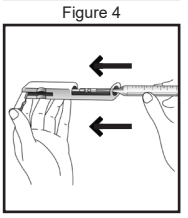
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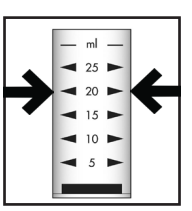

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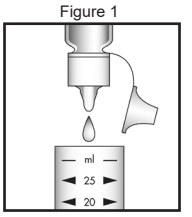

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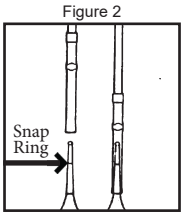

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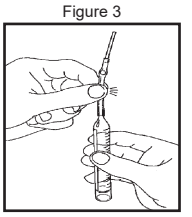
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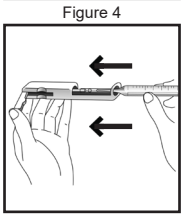
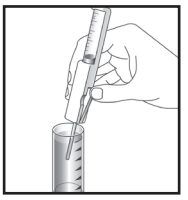


Figure 5

8. Rock the entire assembly to mix the contents of the ampoule. Watch for a colorchange from **BLUE to COLORLESS** (may be cloudy).
9. Repeat Steps # 7 and 8 until a permanent color change (persists at least 30 seconds).
10. When the color of the liquid in the ampoule changes to **COLORLESS** (maybe cloudy), remove the ampoule from the Titrettor. Hold the ampoule, tip pointed upward, and read the scale opposite the liquid level (fig. 7). Results are expressed in ppm (m/Liter) sulfite (SO_3).



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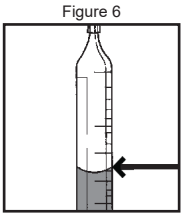

Figure 7

K-9602 only: multiply scale unit by 2.
K-9610 only: multiply scale unit by 10.
K-9650 only: Multiply scale unit by 50.

Interpretation of Test Results

If the contents of the ampoule do not turn blue in Step # 6, the sulfite concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **COLORLESS** (may be cloudy), the sulfite concentration is below the test range.

Test Method

Sulfite

The Sulfite Titrets®[1] test kits employ the Iodometric chemistry. In an acidic solution, sulfite is titrated with an iodide-iodate titrant and a starch indicator[2,3,4]. Sulfamic acid is added to the sample to prevent interference from nitrite.

Thiosulfate

CHEMetrics Free Sulfite kits can test for both thiosulfate and sulfite, but will not distinguish between the two. Multiply the test result in ppm sulfite (SO_3) by 2.8 to convert to ppm thiosulfate (S_2O_3).

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, 23rd ed., Method 4500-SO_3^{2-} B - 2000
4. EPA Methods for Chemical Analysis of Water and Wastes, method 377.1 (1983)

Safety Information

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Feb. 25, Rev. 29

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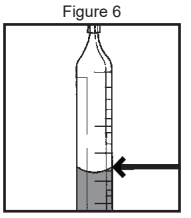

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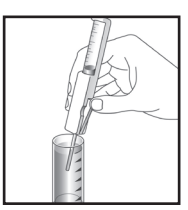

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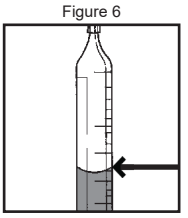

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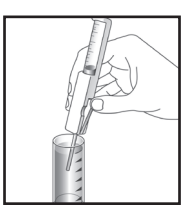

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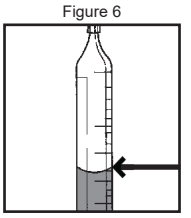

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