

Carbon Dioxide Titrets® Kit

K-1910: 10 - 100 ppm
K-1920: 100 - 1000 ppm
K-1925: 250 - 2500 ppm

Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig. 1).
2. Add 2 drops of A-1900 Activator Solution to the sample (fig. 2). Stir to mix the contents of the cup.
NOTE: If the sample turns pink, carbon dioxide is 0 ppm. There is no need to continue.
3. Gently 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 tapered neck of the ampoule.
4. 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.
5. 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 a **PINK** color.
NOTE: NEVER press the control bar unless the sample pipe is in the sample.
6. With the sample pipe in the sample, press the control bar again briefly to allow another small amount of sample to be drawn into the ampoule.

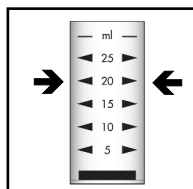


Figure 1

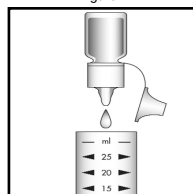


Figure 2

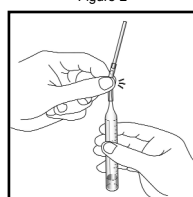


Figure 3

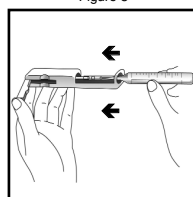


Figure 4

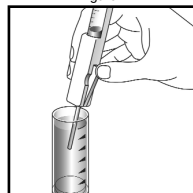


Figure 5

7. After each addition, rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **PINK to COLORLESS**.

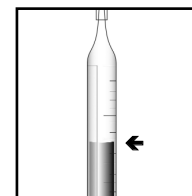


Figure 6

8. Repeat steps 6 and 7 until a permanent color change occurs.
9. When the color of the liquid in the ampoule changes to **COLORLESS**, remove the ampoule from the Titrettor. Hold the ampoule in a vertical position and read the scale opposite the liquid level (fig. 6). Results are expressed in ppm (mg/Liter) carbon dioxide as CO₂.

Test Method

The Carbon Dioxide Titrets®¹ test kit employs a caustic titrant with pH indicator method.^{2,3} Results are expressed in ppm (mg/Liter) carbon dioxide as CO₂. Sulfide interferes with this test. Using this test on a sample that contains sulfide requires the addition of neutralizer solution to the sample prior to performing the test procedure. Use the following formula to calculate the volume of neutralizer solution that is required for a 20 mL volume of sample to be tested.

K-1910: $\text{ppm sulfide} \div 10 = \# \text{ ml of A-1905 solution required}$

K-1920: $\text{ppm sulfide} \div 100 = \# \text{ mL of A-1910 solution required}$

K-1925: $\text{ppm sulfide} \div 500 = \# \text{ mL of A-1925 solution required}$

1. Titrets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 4,332,769
2. APHA Standard Methods, 21st ed., method 4500-CO₂ C (2005)
3. ASTM D 513 - 82, Total and Dissolved Carbon Dioxide In Water, Test Method E

Safety Information

Read MSDS before performing this test procedure. Wear safety glasses and disposable gloves.



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