Calcium Hardness Titrets® Kit

K-1705: 50 - 500 ppm

Sample Temperature

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

Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig. 1).
2. Add 3 drops of S-1700 Indicator Solution (fig. 2). Stir to mix the contents of the cup.
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).
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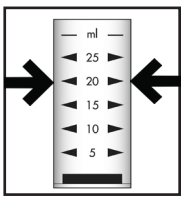

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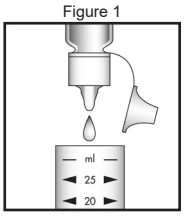

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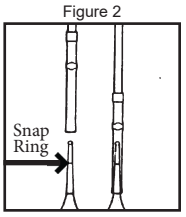

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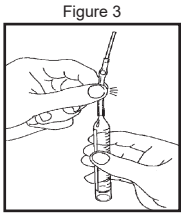
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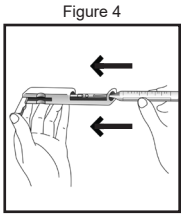
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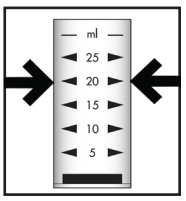

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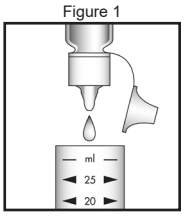

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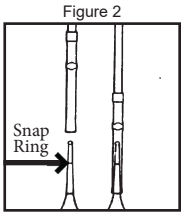

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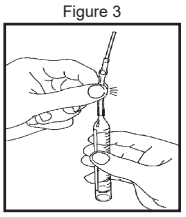
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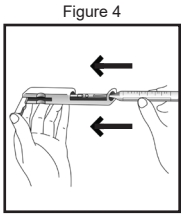
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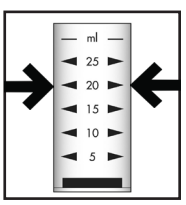

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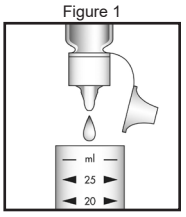

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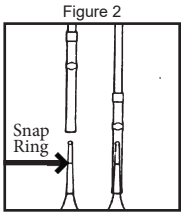

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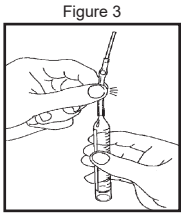
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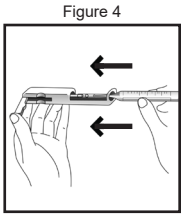
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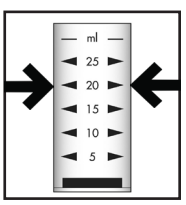

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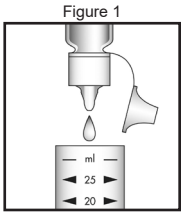

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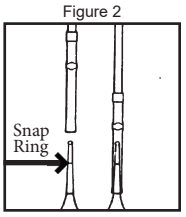

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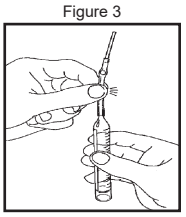
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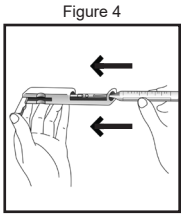
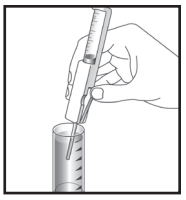


Figure 5

8. Rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **ORANGE to BLUE**.
9. Repeat Steps # 7 and 8 until a permanent color change occurs.
10. When the color of the liquid in the ampoule changes to **BLUE**, remove the ampoule from the Titrettor. Hold the ampoule, **tip pointed upward**, and read the scale opposite the liquid level (fig. 7).
11. Multiply scale unit by 50 for test results in ppm (mg/Liter) calcium carbonate ($CaCO_3$).

NOTE: To convert to grains per gallon, divide test result by 17.16.



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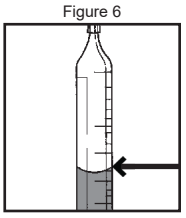

Figure 7

Interpretation of Test Results

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

Test Method

The Calcium Hardness Titrets®[1] test method employs the ethyleneglycol-bis(2-aminoethylether)-,N,N',N'-tetraacetic acid(EGTA) titrimetric chemistry[2].

1. Titrets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 4,332,769
2. West, T.S., DSC, PhD., Complexometry with EDTA and Related Reagents, 3rd ed., p. 46, 164 (1969)

Safety Information

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Feb. 25, Rev. 14

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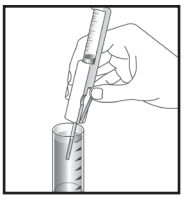

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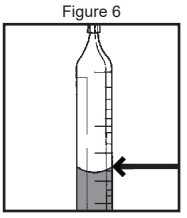

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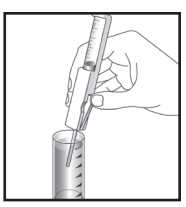

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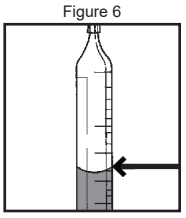

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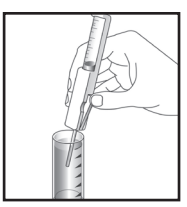

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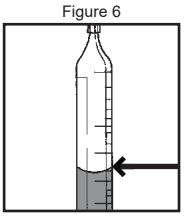

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