Total Alkalinity Titrets® Kit

K-9810: 10 - 100 ppm
K-9815: 50 - 500 ppm
K-9820: 100 - 1000 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 6 drops of S-9800 Activator Solution (fig. 2). Stir to mix the contents of the cup.
   NOTE: The sample should now be **GREEN**. If it is **PINK**, total alkalinity is 0 ppm. There is no need to continue.
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 tapered 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 **PINK.**
   NOTE: **NEVER** press the control bar unless the sample pipe is in the sample.

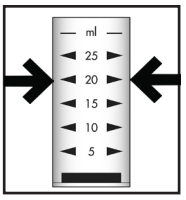

Figure 1

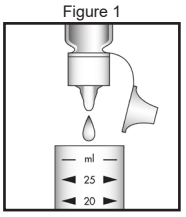

Figure 2

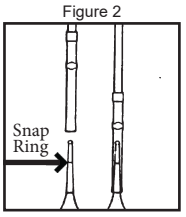

Figure 3

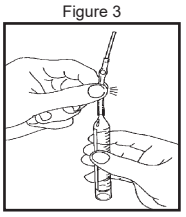
Figure 4

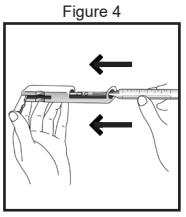
Figure 5

Total Alkalinity Titrets® Kit

K-9810: 10 - 100 ppm
K-9815: 50 - 500 ppm
K-9820: 100 - 1000 ppm

Sample Temperature

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Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig. 1).
2. Add 6 drops of S-9800 Activator Solution (fig. 2). Stir to mix the contents of the cup.
   NOTE: The sample should now be **GREEN**. If it is **PINK**, total alkalinity is 0 ppm. There is no need to continue.
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).
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   NOTE: When the tip is snapped, the flexible tubing will remain in place on the tapered neck of the ampoule.
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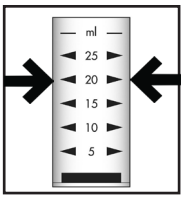
   NOTE: The rigid sample pipe will extend approximately 1.5 inches beyond the body of the Titrettor.
6. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 6). The contents will turn **PINK.**
   NOTE: **NEVER** press the control bar unless the sample pipe is in the sample.



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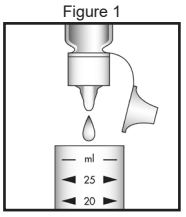

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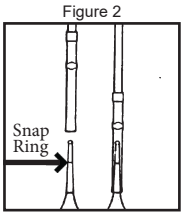

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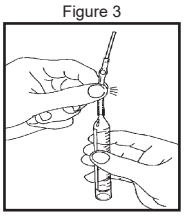
Figure 4

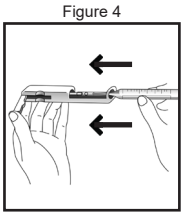
Figure 5

Total Alkalinity Titrets® Kit

K-9810: 10 - 100 ppm
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K-9820: 100 - 1000 ppm

Sample Temperature

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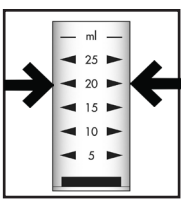
Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig. 1).
2. Add 6 drops of S-9800 Activator Solution (fig. 2). Stir to mix the contents of the cup.
   NOTE: The sample should now be **GREEN**. If it is **PINK**, total alkalinity is 0 ppm. There is no need to continue.
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 tapered 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 **PINK.**
   NOTE: **NEVER** press the control bar unless the sample pipe is in the sample.



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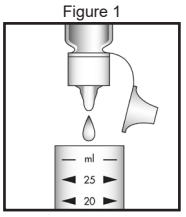

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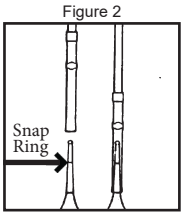

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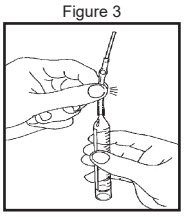
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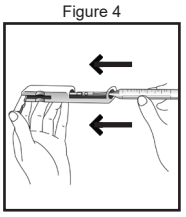
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Total Alkalinity Titrets® Kit

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K-9820: 100 - 1000 ppm

Sample Temperature

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Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample to be tested (fig. 1).
2. Add 6 drops of S-9800 Activator Solution (fig. 2). Stir to mix the contents of the cup.
   NOTE: The sample should now be **GREEN**. If it is **PINK**, total alkalinity is 0 ppm. There is no need to continue.
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).
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   NOTE: When the tip is snapped, the flexible tubing will remain in place on the tapered neck of the ampoule.
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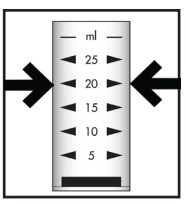
   NOTE: The rigid sample pipe will extend approximately 1.5 inches beyond the body of the Titrettor.
6. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 6). The contents will turn **PINK.**
   NOTE: **NEVER** press the control bar unless the sample pipe is in the sample.



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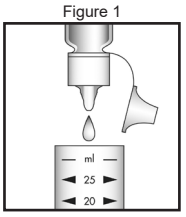

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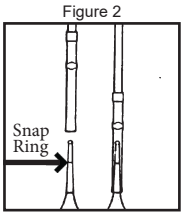

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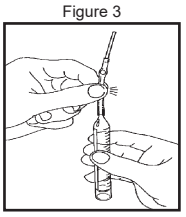
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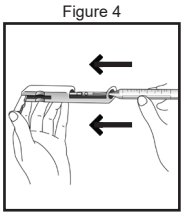
Figure 5

7. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).
8. Rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **PINK to BRIGHT GREEN.**
9. Repeat Steps # 7 and 8 until a permanent color change occurs.
10. When the color of the liquid in the ampoule changes to **GREEN**, 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 (mg/Liter) calcium carbonate ($CaCO_3$).

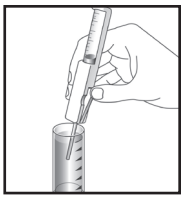
Figure 6

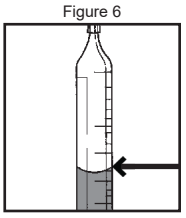
Figure 7

K-9810 only: multiply scale unit by 10.

K-9815 only: multiply scale unit by 50.

K-9820 only: multiply scale unit by 100

Interpretation of Test Results

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

Test Method

The Total Alkalinity Titrets®[1] test kit employs an acid titrant and a mixed pH indicator.[2,3,4]

1. Titrets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 4,332,769
2. ASTM D 1067 - 06, Acidity or Alkalinity of Water, Test Method B
3. APHA Standard Methods, 23rd ed., Method 2320 B -1997
4. EPA Methods for Chemical Analysis of Water and Wastes, method 310.1 (1983)

Safety Information

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

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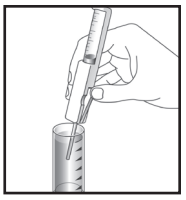
7. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).
8. Rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **PINK to BRIGHT GREEN.**
9. Repeat Steps # 7 and 8 until a permanent color change occurs.
10. When the color of the liquid in the ampoule changes to **GREEN**, 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 (mg/Liter) calcium carbonate ($CaCO_3$).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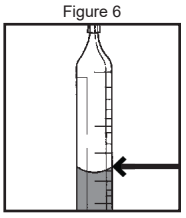
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K-9810 only: multiply scale unit by 10.

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7. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).
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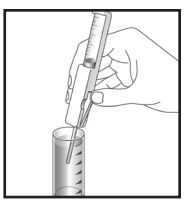
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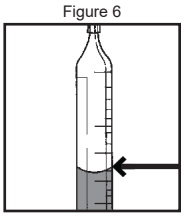
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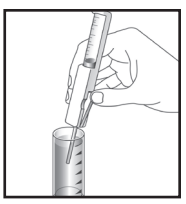
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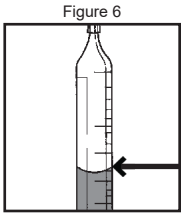
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