Alkalinity ezSample™ Field Titrator (EZ-2340)

10–100 ppm (mg/L) $CaCO_3$

Safety Information

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

Sample Pretreatment

If the sample is turbid, it must be filtered prior to performing this test procedure.

Test Procedure

1. Fill the sample cup to the 20 mL mark with the sample (Figure 1).

2. Add 6 drops of A-9800 Activator Solution (Figure 2). Stir briefly to mix the contents of the sample cup.

   NOTE: The sample should now be green. If it is pink, total alkalinity is 0 ppm. There is no need to continue.

3. Gently snap the tip of the ezSample Snap Vial (ampoule) at the white ring nearest the end of the tapered tip (Figure 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 ampoule assembly into the titrator (Figure 4).

   NOTE: The rigid sample pipe will extend approximately 1.5 inches beyond the body of the titrator.

5. Hold the titrator with the sample pipe in the sample and press the control bar firmly, but briefly, to pull in a small amount of sample (Figure 5). The contents will turn a PINK color.

   NOTE: NEVER press the control bar unless the sample pipe is immersed 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.

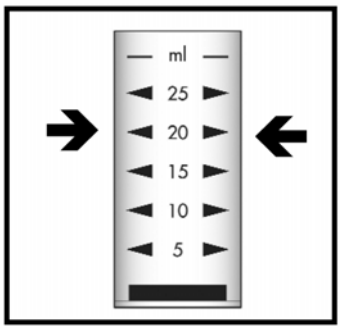

Figure 1

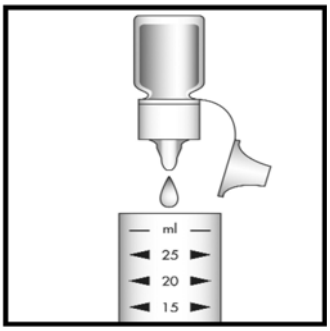

Figure 2

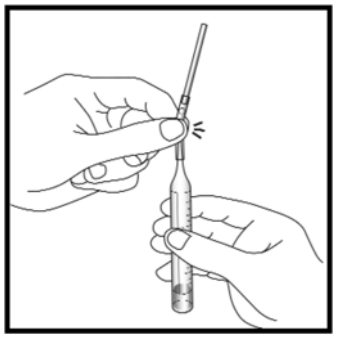
Figure 3

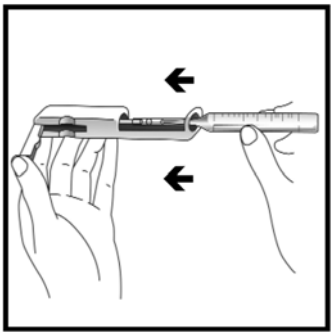
Figure 4

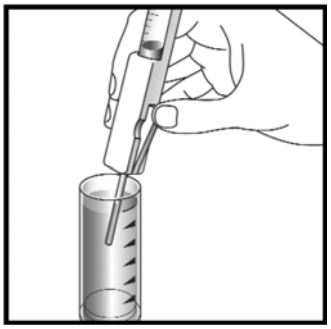
Figure 5

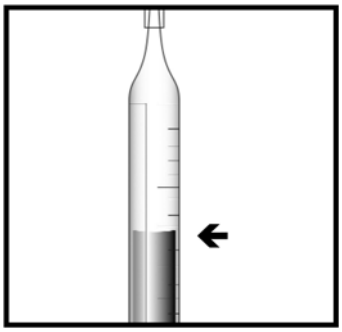
Figure 6

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

8. Repeat steps 6 and 7 until a permanent color change occurs.

9. When the color of the liquid in the ampoule changes to **GREEN**, remove the ampoule from the Titrator. Hold the ampoule in a vertical position and read the scale opposite the liquid level (Figure 6).

Test Method Description

The alkalinity ezSample test method employs an acid titrant and a mixed pH indicator.[1–3] Results are expressed as calcium carbonate ($CaCO_3$).

NOTE: Because the ampoules have nonlinear scales, the accuracy of the ezSample field titrator kit varies with the analyte concentration. At the low end of the test range, the accuracy is ± 5%. At the high end of the range, the accuracy falls to ± 20%.

References

1. Acidity or Alkalinity of Water. ASTM D. 1067-92 (1996).
2. Method 2320 B. APHA Standard Methods, 20th ed., p. 2-27, (1998).
3. Method 310.1. EPA Methods for Chemical Analysis of Water and Wastes. (1983).