Alkalinity Test Kit

AL-AP GPG (2444300)

DOC326.97.00106

Test preparation

CAUTION: ⚠ Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

- Hold the dropper vertically above the sample. Do not let the dropper touch the bottle during the titration.
- Rinse the tubes and bottles with sample before the test. Rinse the tubes and bottles with deionized water after the test.
- Alkalinity is the capacity of water to neutralize acids. Carbonates, bicarbonates and hydroxides are the primary sources of alkalinity in water. A high total alkalinity value makes water more resistant to pH changes.
- To verify the test accuracy, use a standard solution as the sample.
- To record the test result as mg/L $CaCO_3$, multiply the test result in gpg by 17.1.

Replacement items

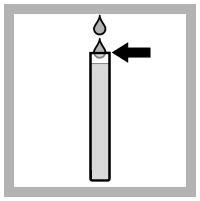
NOTE: Product and Article numbers may vary for some selling regions. Contact the appropriate distributor or refer to the company website for contact information.

Description	Unit	Item no.
Bromcresol Green-Methyl Red Indicator Powder Pillows	100/pkg	94399
Phenolphthalein Indicator Powder Pillows	100/pkg	94299
Sulfuric acid standard solution, 0.030 N	100 mL MDB	2620532
Bottle, square, 29 mL, with 10, 15, 20 and 23-mL marks	6/pkg	232706
Measuring tube, plastic, 5.83 mL	each	43800

Optional items

Description	Unit	Item no.
Alkalinity standard solution, 500 mg/L as $CaCO_3$	1 L	2826253
Water, deionized	500 mL	27249

Test procedure—Alkalinity, HR (0–20 gpg $CaCO_3$)

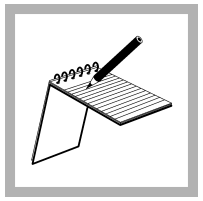


1. Fill the measuring tube with sample.

2. Pour the sample into the mixing bottle.

3. Add one Phenolphthalein Indicator Powder Pillow. Swirl to mix.
If the solution is colorless, the Phenolphthalein (P) alkalinity is zero. Go to step 6.

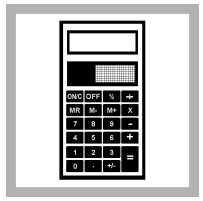
4. Add the Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from pink to colorless.



5. Record the number of drops. The number of drops is the phenolphthalein alkalinity result as gpg $CaCO_3$.

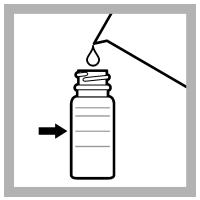
6. Add one Bromcresol Green-Methyl Red Powder Pillow. Swirl to mix.

7. Add the Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from green to pink.



8. Calculate the sum of the total number of drops from step 4 and step 7. The total number of drops is the total (methyl orange) alkalinity result as gpg $CaCO_3$.

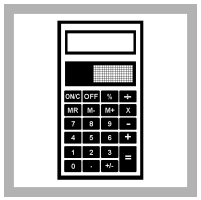
Test procedure—Alkalinity, LR (0–8 gpg $CaCO_3$)



1. Fill the bottle to the 15-mL mark with sample.

2. Add one Phenolphthalein Indicator Powder Pillow. Swirl to mix.
If the solution is colorless, the Phenolphthalein (P) alkalinity is zero. Go to step 5.

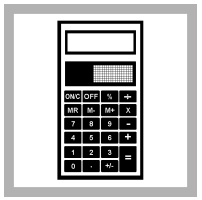
3. Add the Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from pink to colorless.



4. Divide the number of drops by 2.5 to get the phenolphthalein alkalinity result as gpg $CaCO_3$.

5. Add one Bromcresol Green-Methyl Red Powder Pillow. Swirl to mix.

6. Add the Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from green to pink.



7. Calculate the sum of the total number of drops from step 3 and step 6.

8. Divide the total number of drops by 2.5 to get the total (methyl orange) alkalinity result as gpg $CaCO_3$.