



# Alkalinity Test Kit

AL-AP MG/L (2444301)

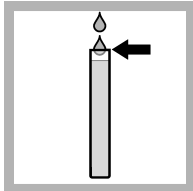
DOC326.97.00105

## 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 gpg (grains per gallon), multiply the LR test result by 0.3 and the HR test result by 1.2

## Test procedure—Alkalinity (0–400 mg/L CaCO<sub>3</sub>)



1. Fill the measuring tube with sample.



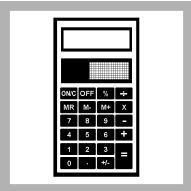
2. Pour the sample into the mixing bottle.



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.



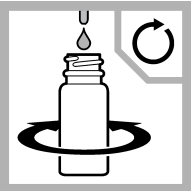
4. Add the 0.035 N Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from pink to colorless.



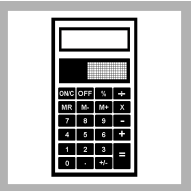
5. Multiply the number of drops by 20 to get the phenolphthalein alkalinity result as CaCO<sub>3</sub>.



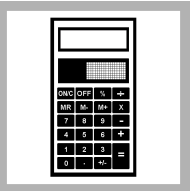
6. Add one Bromocresol Green-Methyl Red Indicator Powder Pillow. Swirl to mix.



7. Add the 0.035 N Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from green to pink.



8. Calculate the total number of drops from step 4 and step 7.



9. Multiply the total number of drops by 20 to get the total (methyl orange) alkalinity result as CaCO<sub>3</sub>.

## Replacement items

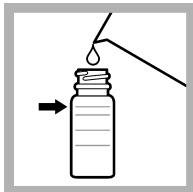
**NOTE:** Product and Article numbers may vary for some selling regions. Contact the appropriate distributor or refer to the company website for contact information.

Description	Unit	Item no.
Alkalinity Reagent Set, drop count titration, 0–400 mg/L as CaCO <sub>3</sub> (Includes: one each 94299, 94399, 2349732)	100 tests	2437401
Bromocresol Green-Methyl Red Indicator Powder Pillows	100/pkg	94399
Phenolphthalein Indicator Powder Pillows	100/pkg	94299
Sulfuric acid standard solution, 0.035 N	100 mL MDB	2349732
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 <sub>3</sub>	1 L	2826253
Water, deionized	500 mL	27249

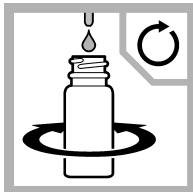
## Test procedure—Alkalinity (0–100 mg/L CaCO<sub>3</sub>)



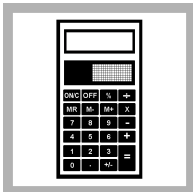
1. Fill the bottle to the 23-mL mark with sample.



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.



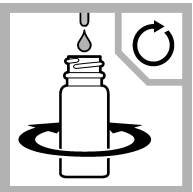
3. Add the 0.035 N Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from pink to colorless.



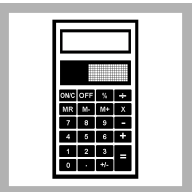
4. Multiply the number of drops by 5 to get the phenolphthalein alkalinity result as CaCO<sub>3</sub>.



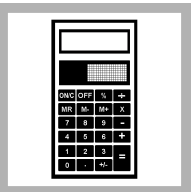
5. Add one Bromocresol Green-Methyl Red Powder Pillow. Swirl to mix.



6. Add the 0.035 N Sulfuric Acid Standard Solution by drops. Mix after each drop. Count the drops until the color changes from green to pink.



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



8. Multiply the total number of drops by 5 to get the total (methyl orange) alkalinity result as CaCO<sub>3</sub>.

