

**ALKALINITY (P & M)**

K-0029

1. Fill the reaction vial with the water sample to the 25 ml mark.
2. Add 5 drops of the Phenolphthalein indicator solution (R-1070).
3.
  - a. If the water does not change color, P alkalinity is zero.
  - b. If the water turns pink or red, proceed to step 4.
4. Add the Sulfuric acid solution (R-9011 for 1=10 or R9013 for 1=50), drop by drop, shaking the vial between each drop, counting the drops, until the pink/red color turns to colorless.

P alkalinity as ppm of  $\text{CaCO}_3$  = no. of drops x 10 if using R-9011 or x 50 if using R-9013.

5. To the same sample add 5 drops of the Methyl Orange indicator solution (R-1055).
6. If the water turns orange, M alkalinity is equal to P alkalinity.
7. If the water turns yellow, proceed to step 8.
8. Add the Sulfuric acid solution (R-9011 for 1=10 or R9013 for 1=50), drop by drop, shaking the vial between each drop, counting the drops, until the yellow color turns to orange.

M alkalinity as ppm of  $\text{CaCO}_3$  = Total no. of drops (step 4 +8) x 10 if using R-9011 or x 50 if using R-9013

**Replacement Reagents and Parts**

R-9011/2oz	-	Sulfuric acid solution (1 drop = 10 ppm $\text{CaCO}_3$ / 25 ml)
R-9013/2oz		Sulfuric acid solution (1 drop = 50 ppm $\text{CaCO}_3$ / 25 ml)
R-1070/2oz	-	Phenolphthalein indicator solution w/nasal plug
R-1055/2oz	-	Methyl Orange Indicator (M Indicator) w/nasal plug
P-1045	-	Graduated reaction vial w/cap, 25 ml
P-1110	-	Test kit box with foam insert and bottom foam pad