

ALKALINITY TEST KIT:

1. Rinse the test tube with the water to be tested and fill to the 5 ml mark using injector.
 2. Add 3 drops **P (FF, phenolphthalein) Indicator** and shake. The solution must turn pink, otherwise determine M value on step 4 th.
 3. Add alkalinity Titration Solution drop by drop till the pink color turns to colorless. Titration is completed when it turns to colorless. Reported P alkalinity is total drops of titration solutions.
- 1 drop TITRATION SOL = 50 ppm Phenol (p) Alkalinity.
4. Add 3 drops MR indicator to the same test tube. The solution must turn green.
 5. Add TITRATION SOLUTION drop by drop till it turns green to grey-red, count the titration solutions drops while the test solutions color changes green to grey-red. Reported **M Alkalinity is total drops of these steps.**

1 drop TITRATION SOL = 50 ppm Total (M) Alkalinity

Total Alkalinity= P alkalinity+M alkalinity

1 drop TITRATION SOL = 50 ppm Total (M) Alkalinity

Total Alkalinity= P alkalinity+M alkalinity

| VALUES | HYDROXIDES | CARBONATES | BICARBONATES |
|-----------------|-------------|---------------|--------------|
| P=0 | - | - | m |
| P=m | m | - | |
| 2p=m | - | m | - |
| 2p>m | 2p-m | 2(m-p) | - |
| 2p< m | - | 2p | m-2p |

Note :

p = 0 alkalinity is caused by bicarbonate.

p = m alkalinity is caused by hydroxide.

2p = m alkalinity is caused by carbonate.

2p > m alkalinity is caused by carbonate and hydroxide.

2p < m alkalinity is caused by carbonate and bicarbonate.