Alkalinity
Code : XL-103
Range : ***5 - 100 & 50 – 1,000 ppm as $CaCO_3$***

AQUA-XL
Water Analysing Kits

Directions for use - I : (P. Alkalinity & Total Alkalinity)

1. Take 10 ml of water sample to be tested in the Test jar.
2. Add 2 drops of Reagent ALK-1. Mix contents well.
3. If pink colour appears, it indicates presence of P. Alkalinity. (If pink colour does not appear then P.Alkalinity is zero & hence follow Directions for Use-II given at the reverse).
4. Now add Reagent ALK-3 drop wise, counting the number of drops while mixing until **the PINK colour disappears (say X drops).**
5. To this solution, add 2 drops of Reagent ALK-2. The sample will turn Yellowish Orange.
6. Now drop wise add reagent ALK-3, counting the number of drops while mixing until **the colour changes from YELLOWISH ORANGE TO PINK ORANGE (say Y drops).**

If the expected Alkalinity of the sample is more than 100 ppm then use Reagent ALK-4 instead of Reagent ALK-3.

Calculations :

P. Alkalinity ppm as $CaCO_3$ = 5 x 'X' drops of Reagent ALK-3.
= 50 x 'X' drops of Reagent ALK-4.

Total Alkalinity ppm as $CaCO_3$ = 5 x (X+Y) drops of Reagent ALK-3.
= 50 x (X+Y)drops of Reagent ALK-4.

Alkalinity
Code : XL-103
Range : ***5 - 100 & 50 – 1,000 ppm as $CaCO_3$***

AQUA-XL
Water Analysing Kits

Directions for use - II : (**For Total Alkalinity only)**

1. Take 10 ml of water sample to be tested in the Test jar.
2. Add 2 drops of Reagent ALK-2. The sample will turn **Yellowish Orange**
3. Now add reagent ALK-3 drop wise, counting the number of drops while mixing until **the colour changes from YELLOWISH ORANGE TO PINK ORANGE.**

If the expected Alkalinity of the sample is more than 100 ppm then use Reagent ALK-4 instead of Reagent ALK-3.

Calculations :

Total Alkalinity as ppm $CaCO_3$ = 5 x Number of drops of Reagent ALK-3
= 50 x Number of drops of Reagent ALK-4

Calculation of Caustic (Hydroxide), Carbonate & Bicarbonate Alkalinity from Total Alkalinity (T) & Phenolphthalein Alkalinity (P)

Value of P & T	Caustic Alkalinity	Carbonate Alkalinity	Bicarbonate Alkalinity
P = 0	0	0	T
P < ½ T	0	2P	T – 2 P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0

Alkalinity
Code : XL-113
Range : 10 - *200 & 100 – 2,000 ppm as $CaCO_3$*

AQUA-XL
Water Analysing Kits

Directions for use – I : (**P. Alkalinity & Total Alkalinity)**

1. Take 10 ml of water sample to be tested in the Test jar.
2. Add 2 drops of Reagent ALK-1. Mix contents well.
3. If pink colour appears, it indicates presence of P. Alkalinity .(If pink colour does not appear then P.Alkalinity is zero & hence follow Directions for Use-II given at the reverse).
4. Now add Reagent ALK-5 drop wise, counting the number of drops while mixing until **the PINK colour disappears (say X drops).**
5. To this solution, add 2 drops of Reagent ALK-2. The sample will turn Yellowish Orange
6. Now drop wise add reagent ALK-5, counting the number of drops while mixing until **the colour changes from YELLOWISH ORANGE TO PINK ORANGE (say Y drops).**

If the expected Alkalinity of the sample is more than 200 ppm then use Reagent ALK-6 instead of Reagent ALK-5.

Calculations :

P. Alkalinity ppm as $CaCO_3$ = 10 x 'X' drops of Reagent ALK-5.
= 100 x 'X' drops of Reagent ALK-6.

Total Alkalinity ppm as $CaCO_3$ = 10 x (X+Y) drops of Reagent ALK-5.
= 100 x (X+Y)drops of Reagent ALK-6.

Alkalinity
Code : XL-113
Range : 10 - *200 & 100 – 2,000 ppm as $CaCO_3$*

AQUA-XL
Water Analysing Kits

Directions for use - II : (For Total Alkalinity only)

1. Take 10 ml of water sample to be tested in the Test jar.
2. Add 2 drops of Reagent ALK-2. The sample will turn **Yellowish Orange.**
3. Now add reagent ALK-5 drop wise, counting the number of drops while mixing until **the colour changes from YELLOWISH ORANGE TO PINK ORANGE.**

If the expected Alkalinity of the sample is more than 200 ppm then use Reagent ALK-6 instead of Reagent ALK-5.

Calculations :

Total Alkalinity as ppm as $CaCO_3$ = 10 x Number of drops of Reagent ALK-5
= 100 x Number of drops of Reagent ALK-6

Calculation of Caustic (Hydroxide), Carbonate & Bicarbonate Alkalinity from Total Alkalinity (T) & Phenolphthalein Alkalinity (P)

Value of P & T	Caustic Alkalinity	Carbonate Alkalinity	Bicarbonate Alkalinity
P = 0	0	0	T
P < ½ T	0	2P	T – 2 P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0