Product Code: SP-KS-095

Boiler Water Test Set Parameters: PHOSPHATE, CHLORIDE, ALKALINITY, PH

PHOSPHATE TEST:

Phosphates (Sensitivity 0, 5 – 30 mg/l(ppm) PO_4^{-3}) Method :

1) Rinse the test tube with the water to be tested and fill to the 5 ml mark.
2) Add 2 drops PO4 – A indicator and shake the test tube 10 seconds very well, then add 2 drops PO4 – B indicator and shake 30 seconds very well.
3) Compare the blue color to color reference color chart to determine concentration of orthophosphate in mg/l (ppm)
4) Color comparison must be completed within 5 minutes.

CHLORIDE TEST:

Chloride (Sensitivity 1 drop = 30 mg/l (ppm)) Method :

1) Rinse the test tube with the water to be tested and fill it using 5 ml injector.
2) Add 3 drops Chloride Indicator Solution and see color changes to yellow
3) Add drop by drop Silver Nitrate Solution until color changes to reddish brown.
4) Total drops of titration solution x 30 = Concentration of chloride (Cl^-) in mg/l(ppm)

ALKALINITY TEST:

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) 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

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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.

pH TEST:

Use pH papers (0-14).