

### TOTAL PHOSPHATE

#### **DIRECTION FOR USE: (Range: 2.5,5,12,25,35 & 50 ppm as PO<sub>4</sub>)**

1. Take 40 ml water sample in 5-50 ml test jar and transfer it to a 100 ml glass beaker.
2. Add 10 drops of PHOSPHATE -1, mix well. Add 4 flat spoonful of PHOSPHATE -2. Mix well till powder dissolves.
3. Now boil this solution gently for about 60 minutes keeping the volume to be about 25-35 ml with the addition of distilled water. Let it cool to room temperature.
4. Transfer this solution to 5-50ml Jar and make it up to 40ml mark with distilled water. Close the cap and mix well.
5. Now take 1.2 ml of above solution (from step no.4) in to 10 ml glass jar and dilute it up to 10 ml mark with distilled or deionized water.
6. Add 10 drops of PHOSPHATE-LP1, Mix well.
7. Add 2 drops of PHOSPHATE –LP2, Mix well.
8. After 5 minutes place the glass jar on a colour card and match with different colours. (view from topside vertically downwards.)
9. Note down the ppm level of TOTAL PHOSPHATE as PO<sub>4</sub> after colour comparison.

### TOTAL INORGANIC PHOSPHATE

#### **DIRECTIONS FOR USE:(Range: 2.5,5,12,25,35 & 50 ppm as PO<sub>4</sub>)**

1. Take 40 ml water sample in 5-50 ml test jar and transfer it to a 100 ml glass beaker.
2. Add 10 drops of PHOSPHATE -1, mix well.
3. Now boil this solution gently for about 60 minutes keeping the volume to be about 25-35 ml with the addition of distilled water. Let it cool to room temperature.
4. Transfer this solution to 5-50 ml Jar & make it up to 40 ml mark with distilled water. Close the cap & mix well.
5. Now take 1.2 ml of above solution (from step no.4) in to 10 ml glass jar and dilute it up to 10 ml mark with distilled or deionized water.
6. Add 10 drops of PHOSPHATE-LP1, Mix well.
7. Add 2 drops of PHOSPHATE –LP2, Mix well.
8. After 5 minutes place the glass jar on a colour card and match with different colours. (view from topside vertically downwards.)
9. Note down the ppm level of TOTAL INORGANIC PHOSPHATE (Ortho, poly, pyro & meta phosphate) as PO<sub>4</sub> after colour comparison.

#### **CALCULATIONS:**

1) Organic phosphate = Total Phosphate – Total Inorganic Phosphate

2) Meta phosphate (In absence of poly & pyro phosphate) = Total Inorganic Phosphate – Ortho phosphate

**Note:** To determine Ortho phosphate follow directions for use given at the backside of the colour card.

If phosphate level in sample is more than 50 ppm, then take 0.6 ml sample in step no.5 instead of 1.2 ml sample and multiply obtained reading by 2.