

## Photometer Method

# pH (PHENOL RED)

**AUTOMATIC  
WAVELENGTH  
SELECTION**

**TEST FOR pH VALUE OF WATER  
AND AQUEOUS SOLUTIONS**

**6.8 – 8.4**

pH measurement is one of the tests most frequently carried out on water and aqueous solutions. The phenol red indicator method provides a simple colorimetric means of pH determination for neutral and slightly alkaline waters over the range 6.8 - 8.4 units. The Phenol Red pH test is particularly applicable to testing swimming pools and spas.

## Method

The Palintest Phenol Red test uses a tablet reagent containing the precise amount of phenol red indicator required for the test. Phenol red reacts in water at different pH values over the range 6.8 - 8.4 to produce a distinctive range of colours from yellow to red. The colour of the test solution is indicative of the pH value and is measured using a Palintest Photometer.

Phenol red tablets contain a dechlorinating agent so that the test can be carried out in water containing normal levels of chlorine or other disinfectant residuals.

## Reagents and Equipment

Palintest Phenol Red Clear Tablets  
Palintest Automatic Wavelength Selection Photometer  
Round Test Tubes, 10 ml glass (PT 595)

## Test Procedure

- 1 Fill test tube with sample to the 10 ml mark.
- 2 Add one Phenol Red tablet, crush and mix to dissolve.
- 3 Select Phot 27 on Photometer.
- 4 Take Photometer reading in usual manner (see Photometer instructions).

## Notes

- 1 The colour range of the phenol red test is yellow, through orange, to red. The formation of an intense purple coloration shows that the indicator has been affected by high chlorine or other disinfectant residuals. In such cases the result should be disregarded.
  - 2 Phenol red does not show any further colour change at pH values below 6.8 or above 8.4. Note therefore that when such values are recorded this could indicate that the sample has a much lower or much higher pH value.
  - 3 Ionic strength, temperature and other water factors may have an effect on pH readings. This test has been calibrated for conditions most likely to be encountered in a typical swimming pool at 30°C.
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