

TOTAL CHLORINE

TEST FOR TOTAL CHLORINE IN WATER

Photometer Method

AUTOMATIC WAVELENGTH SELECTION

0 – 5.0 mg/l Cl₂

Chlorine and chlorine release compounds are widely used for the disinfection of water. When dissolved in water chlorine forms hypochlorous acid and hypochlorite ions. Chlorine remaining in the water in this form is known as the free chlorine residual.

Chlorine does however react with ammonia and nitrogen-based species to form chloramines. The Palintest DPD Total Chlorine method provides a simple means of measuring free chlorine and combined chlorines as a single Total Chlorine value.

Method

The Palintest Total Chlorine test uses the DPD method. This method is internationally recognised as the standard method of testing for chlorine and other residuals. In the Palintest method the reagents are provided in tablet form for maximum convenience and simplicity of use.

Free chlorine reacts with diethyl-p-phenylene diamine (DPD) in buffered solution to produce a pink coloration. Inclusion of potassium iodide induces further reaction with any combined chlorine present over a period of two minutes. The increase in colour intensity is therefore proportional to the Total Chlorine concentration.

The colour intensity is measured using a Palintest Photometer.

Reagents and Equipment

Palintest DPD 4 Tablets

Palintest Automatic Wavelength Selection Photometer

Round Test Tubes, 10 ml glass (PT 595)

Test Procedure

- 1 Rinse test tube with sample leaving a few drops in the tube.
 - 2 Add and then crush the DPD 4 tablet in the few drops of the water sample until the tablet is thoroughly crushed.
 - 3 Add the 10ml test solution, mix and seal the tube with the cap
 - 4 Wait for 2 minutes.
 - 5 Select Phot 8 on photometer.
 - 6 Take photometer reading in usual manner - see photometer instructions.
 - 7 The result represents the Total Chlorine value as mg/l Cl₂.
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