Palintest
Water Analysis Technologies

Photometer Method

AUTOMATIC WAVELENGTH SELECTION

0 – 100 mg/l

MAGNESIUM (MAGNECOL)

TEST FOR MAGNESIUM IN WATER

Magnesium is a widely occurring natural element and is found in most water supplies. Magnesium salts contribute to the hardness of water and higher levels of magnesium will be found therefore in hard water areas. Scale formation in heating and steam raising equipment is promoted by the presence of magnesium salts in the water. Magnesium salts do however have a lower scale forming tendency than calcium salts.

The Palintest Magnecol test provides a simple means of measuring magnesium levels in water over the range 0 - 100 mg/l Mg.

Method

The Palintest Magnecol test is based on a simple colorimetric procedure. Magnesium reacts with an organic reagent to produce an orange coloured complex. The reagent itself is yellow and thus over the range of the test a series of colours from yellow through to orange are produced.

The colour produced in the test is indicative of the magnesium concentration and is measured using a Palintest Photometer.

Reagents and Equipment

Palintest Magnecol Tablets
Palintest Automatic Wavelength Selection Photometer
Round Test Tubes, 10 ml glass (PT 595)
Measuring Syringe, 1 ml (PT 361)

Test Procedure

1 Using the measuring syringe take a 1 ml sample of the water under test. Transfer to the round test tube and make up to the 10 ml mark with deionised water.
2 Add one Magnecol tablet, crush and mix to dissolve.
3 Stand for five minutes to allow full colour development and the slight turbidity to clear.
4 Select Phot 21 on Photometer for result as mg/l Mg. Select Phot 61 for result as magnesium hardness, mg/l $CaCO_3$.
5 Take photometer reading in usual manner (see Photometer instructions).

Note: To convert mg/l Mg to magnesium hardness as $CaCO_3$, multiply by 4.2.