

TUBETESTS® AMMONIA/12N/50N (INDOPHENOL)

TEST FOR AMMONIA IN NATURAL,
SEA AND WASTE WATER

Photometer Method

**AUTOMATIC
WAVELENGTH
SELECTION**

**0 – 12 mg/L N
0 – 50 mg/L N**

Ammonia occurs as a breakdown product of nitrogenous material in natural waters. It is also found in domestic effluents and certain industrial waste waters. Ammonia is harmful to fish and other forms of aquatic life, and the ammonia level must be carefully controlled in water used for fish farms and aquariums. Ammonia tests are routinely applied for the monitoring of natural water, sea water; and for pollution control on effluents and waste waters.

The Palintest Tubetests Ammonia/12N/50N (Indophenol) test provides a simple method of measuring ammonia (ammoniacal nitrogen) over the ranges 0 - 12 mg/L and 0 - 50 mg/L N.

Method

The Palintest Tubetests Ammonia/12N/50N (Indophenol) test is based on the Indophenol Blue method. Ammonia reacts with alkaline salicylate in the presence of chlorine to form a green-blue indophenol complex. Catalysts are incorporated to ensure complete and rapid colour development. The reagents are provided in the form of a predispensed tube and a tablet for maximum convenience. The test is simply carried out by adding a sample of the water and a tablet to a tube.

The intensity of the colour produced in the test is proportional to the ammonia concentration and is measured using a Palintest Photometer.

Reagents and Equipment

Palintest Tubetests Ammonia/12N/50N (Indophenol) Tubes
Palintest Tubetests Ammonia (Indophenol) Tablets
Palintest Automatic Wavelength Selection Photometer
Palintest Pipettor, 0.2 mL (PT 570) or 1 mL (PT 574)

Test Instructions

- 1 Remove the cap of the Tubetests Ammonia/12N/50N (Indophenol) tube and add 0.2 mL (0 - 50 mg/L range) or 1.0 mL (0 - 12 mg/L range) of sample using a pipettor. Swirl tube to mix.
- 2 Add one Tubetests Ammonia (Indophenol) tablet, crush and mix to dissolve. Replace cap.
- 3 Stand for exactly 10 minutes to allow colour development. (See Note 2).
- 4 Select Phot 85 on Photometer for 0 – 50 mg/L range. Select Phot 86 on Photometer for 0 – 12 mg/L range.
- 5 Take photometer reading in usual manner (see Photometer instructions). Use an unused Tubetests Ammonia/12N/50N (Indophenol) Tube to set the blank on the photometer. Alternatively, a Tubetests tube containing deionised water only may be used.
- 6 The Ammonia Nitrogen result is displayed as mg/L N.

Notes

- 1 At low temperatures the rate of colour development in the test is substantially slower. Colour development should be carried out between 18 and 22°C. To ensure correct conditions for the test, the Tubetests tubes should be brought within this temperature range prior to use.
 - 2 It is important to observe the standing period of 10 minutes \pm 1 minute for optimum test results. Any continuing colour development or colour change after this period should be ignored.
 - 3 Ammonia concentrations can be expressed in a number of different ways. The following factors may be used for the conversion of readings :-
To convert from N to NH₄ multiply by 1.3
To convert from N to NH₃ multiply by 1.2
 - 4 Tubetests tubes are light sensitive. Store in the original packs and keep the lid closed.
 - 5 Interferences. Any substances that consume chlorine may lead to low results.
 - 6 The test can be used on sea or salt water without the need for pretreatment of the sample.
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