

AMMONIA

TEST FOR AMMONIA IN NATURAL, DRINKING AND WASTE WATERS

Photometer Method

AUTOMATIC WAVELENGTH SELECTION

0 – 1.0 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 pollution control on effluents and waste waters, and for the monitoring of drinking water supplies.

The Palintest Ammonia Test provides a simple method of measuring ammonia (ammoniacal nitrogen) over the range 0 - 1.0 mg/l N.

Method

The Palintest Ammonia test is based on an indophenol 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 two tablets for maximum convenience. The test is simply carried out by adding one of each tablet to a sample of the water.

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 Ammonia No 1 Tablets

Palintest Ammonia No 2 Tablets

Palintest Automatic Wavelength Selection Photometer

Round Test Tubes, 10 ml glass (PT 595)

Test Instructions

- 1 Fill test tube with sample to the 10 ml mark.
- 2 Add one Ammonia No 1 tablet and one Ammonia No 2 tablet, crush and mix to dissolve.
- 3 Stand for ten minutes to allow colour development.
- 4 Select Phot 4 on Photometer to measure Ammonia mg/l N **or** select Phot 62 on Photometer to measure Ammonium mg/l NH_4 .
- 5 Take Photometer reading in usual manner (see Photometer instructions).

Sea Water Samples

Palintest Ammonia Conditioning Reagent is required when testing sea water or brackish water samples to prevent precipitation of salts. The reagent is supplied in a special 'spoon pack' to aid measuring out the powder.

Fill the test tube with sample to the 10 ml mark, and add one level spoonful of conditioning reagent. Mix to dissolve reagent then continue the test as described in the above test instructions. If turbidity still forms in the test, repeat using two level spoonfuls of conditioning reagent.

Notes

- 1 At low temperatures the rate of colour development in the test may be slower. If the sample temperature is below 20°C allow 15 minutes for the colour to develop.
 - 2 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 NH_4 multiply by 1.3.
 - To convert from N to NH_3 multiply by 1.2.
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