APC 304 Ammonium-Nitrogen

DOC312.53.94070

0.015–2.0 mg/L NH_4-N or 0.02–2.5 mg/L NH_4 APC 304

Scope and application: For surface water, wastewater, drinking water and swimming-pool water.

Test preparation

Test storage

Storage temperature: 2–8 °C (35–46 °F)

pH/Temperature

The pH of the water sample must be between pH 4–9.

The temperature of the water sample and reagents must be 20 °C (68 °F).

Before starting

In case of not working at the right recommended temperature an incorrect result may be obtained.
Analyze the samples as soon as possible for best results.
Review safety information and expiration date on the package.
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.
Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

Interferences

The ions listed in the table have been individually checked against the given concentrations and do not cause interference. The cumulative effects and the influence of other ions have not been determined.

Primary amines are also determined and cause high-bias results. A 10000-fold excess of urea does not interfere. All reducing agents interfere and cause low-bias results.

A large excess of ammonium can cause result displays within the measuring range. It is advisable to carry out a plausibility check by making dilutions.

The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Interference level	Interfering substance
1000 mg/L	Cl^-, SO_4^{2-}
500 mg/L	K^+, Na^+, Ca^{2+}
50 mg/L	CO_3^{2-}, NO_3^-, Fe^{3+}, Cr^{3+}, Cr^{6+}, Zn^{2+}, Cu^{2+}, Co^{2+}, Ni^{2+}, Hg^{2+}
25 mg/L	Fe^{2+}
10 mg/L	Sn^{2+}
5 mg/L	Pb^{2+}
2 mg/L	Ag^+

Summary of method

Ammonium ions react at pH 12.6 with hypochlorite ions and salicylate ions in the presence of sodium nitroprusside as a catalyst to form indophenol blue.

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