

Water Quality Parameters NH3 Ammonia

NH3 Online Analyzer

Blue Unit NH3 by instran®

Method ISE

The standard known addition (SKA) technique is used to perform the analyses. During the process, two readings are done. The difference between both and slope found during calibration are used to calculate the concentration. Possible changes on the matrix sample are corrected due to this both lectures, as reference to calculate the result is the relative difference of mV and not the absolute values. This avoids external interference.

Principle of measurement

The sodium hydroxide solution as well as acting as an ionic strength adjuster neutralizes the solution to ensure that all the ammonium ion is present as ammonia. The addition of the SKA solution providing a known added concentration of ammonium ion allows the current E_0 to be calculated. The difference between this value of potential and the first potential value measured as to calculate the concentration of ammonia in the sample solution.

Advantages of the method

The method is very simple and is fairly specific as the ammonium electrode has little cross interference from other ions. Moreover, how the results is based on the difference of mV, any change on the matrix is corrected. **It can be used with brine up to 300g/L if NaCl.**

Specifications

Range: from 0 to 0,5ppm / 2ppm / 5ppm / 20ppm/ 100ppm. Adjusted to higher concentrations with internal dilution.

Resolution: $\pm 2\%$

Repeatability: $\pm 2\%$

Analysis time: around 10 minutes

Calibration: one point

ISE: Ammonia NH3 electrode

Reagents consumption

- Reagent 1: 0,5ml / analysis – 0,5L / month
- Reagent 2: 0,5ml / analysis – 0,5L / month

Monthly consumption calculated assuming 1 analysis per hour.

