Ammonia (NH_3)

Method - ISE

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

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 Eo to be calculated. The difference between this value of the potential and the first potential value measured is used 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 result is based on the difference of mV, any change on the matrix sample is corrected. It can be used with brine up to 300 g/L of NaCl.

Specifications

Range: From 0 to 0.5ppm / 2ppm / 5ppm / 20ppm / 100ppm / 500ppm.
Adjustable higher concentrations with internal dilution.
Resolution: ±2%
Repeatability: ±2%
Analysis time: around 10 minutes
Calibration: one point
ISE: Ammonia NH3 electrode

Applications

- Potable Water Treatment Plants (PWTP)
- Waste Water Treatment Plants (WWTP)
- Fish farming
- Chlor-Alkali Industry
- Desalination Plants
- Food and Beverage

And more...

Reagents consumption

- Reagent 1: 0.5 ml / analysis — 0.5L / month
- Reagent 2: 0.5 ml / analysis — 0.5L / month

Monthly consumption calculated assuming 1 analysis per hour.

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Ammonia (NH_3)

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