Water Quality Parameters NO3- Nitrate

NO3- Online Analyzer

Blue Unit NO_3^- 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

Reagent 1 is added to activate the electrode before the analyses. After that, a first measurement is done. Subsequently, a small volume of high volume of a high concentrated nitrate solution is added. Finally, a second lecture of mV takes place to calibrate the results. When the extracting solution is used, a cleaning solution of ammonia is needed after each analysis to eliminate cross-contamination.

Advantages of the method

Almost all probes are affected by nitrite and chloride interferences. However, an extracting solution is used at the beginning to eliminate totally the issues caused by these ions, being thus NO3 ions the only ones that causes changes on the electrode.

Specifications

Range: from 0 to 5ppm / 10ppm / 20ppm/ 100ppm. Adjusted to higher concentrations with internal dilution.

Accuracy: ±2% Full Scale

Repeatability: ±2%

Resolution: 0,01 ppm or 0,1ppm

Analysis time: around 12 minutes

Calibration: one point

ISE: Nitrate NO3 electrode

Reagents consumption

- Reagent 1: 0,5ml / analysis – 0,5L / month
- Reagent 2: 0,5ml / analysis – 0,5L / month
- Reagent 3: 2ml / analysis – 1,5L / month
- Cleaning solution: 6ml / analysis – 4,5L / month

Monthly consumption calculated assuming 1 analysis per hour.

BLUE UNIT
stable water quality