

Method Abstract #52

Nitrate by ISE

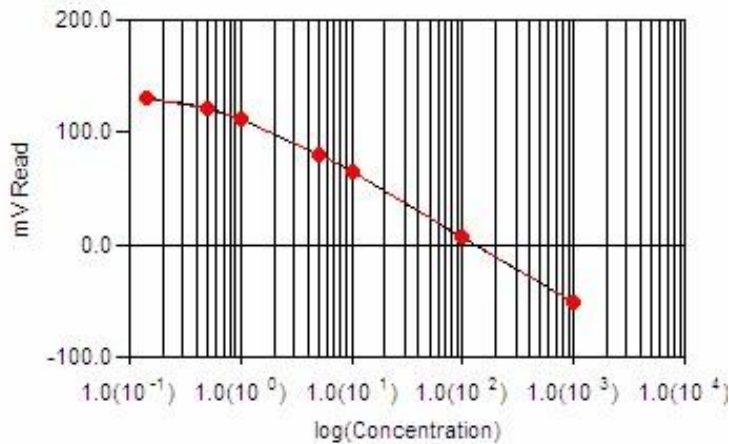
Scope and Application

This method is a variation of Standard Methods 4500-NO₃⁻ D. It determines the concentration of nitrate ions in a water sample.

Method Summary

The concentration of nitrate is determined by a nitrate ion selective electrode. After calibrating with known standards, the sample's response can be compared to the calibration curve and a concentration determined. Both the standards and the samples are pre-treated with ionic strength adjuster (ammonium sulfate) to ensure that the background response from each sample is similar.

Sample Calibration Curve



Method Performance

Parameter	Specification
Measuring Range*	0.14 – 62000
MDL**	0.14ppm
RSD @ 0.14ppm	11.33% or +/- 0.01ppm
RSD @ 1ppm	2.98% or +/- 0.03ppm
RSD @ 10ppm	0.59% or +/- 0.06ppm
RSD @ 100ppm	0.87% or +/- 0.87ppm
RSD @ 1000ppm	0.91% or +/- 9.1ppm

*Data for this measuring range was obtained using laboratory prepared standards formulated from potassium nitrate. The measuring range may be increased by using auto-dilution.

**The Method Detection Limit (MDL) was determined based on data obtaining a coefficient of variance better than 30%. Results may differ depending on laboratory practices and sample matrix.