PiCOEXPLORER PAS-110-YU

Evaluation of nitrite ion concentration with PiCOEXPLORER using N-(1-naphthyl) ethylenediamine method

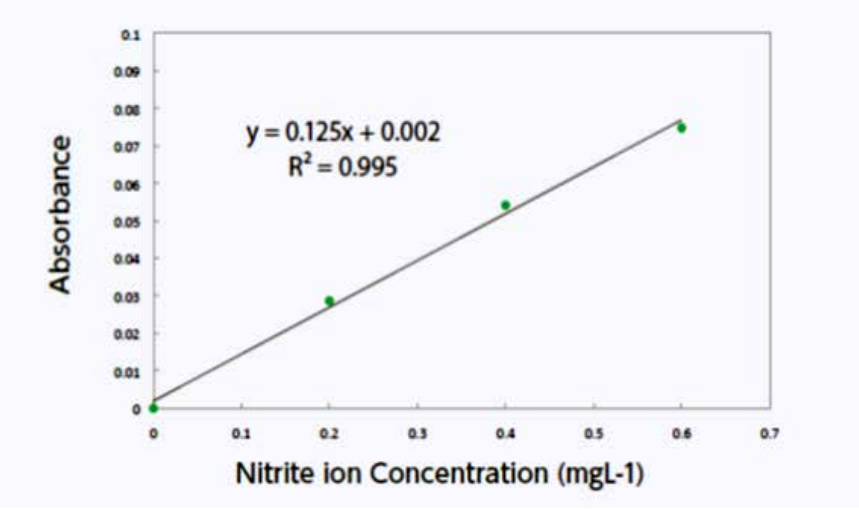
Overview

Nitrite ion concentration was quantified with PiCOEXPLORER using the N-(1-naphthyl) ethylenediamine method as specified by the Japan Industrial Standard K0102-43.1.1.

Procedure

1) Prepare nitrite ion solutions at concentrations of 0, 0.2, 0.4, and 0.6 ppm.
2) Add hydrochloric acid sulfanilamide solution and shake to mix. Allow to stand.
3) Then, add N-(1-naphthyl)ethylenediamine solution and shake to mix. Allow to stand for 20 min. at room temperature.
4) Analyze with PiCOEXPLORER and generate the calibration curves accordingly.
*Wavelength range (Color sensor R) : 575-660 nm

Calibration Curves



Result

PiCOEXPLORER is applicable to the N-(1-naphthyl)ethylenediamine method for evaluation of nitrite ion concentration.

Measurement Partner

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The partner for this study was a biomaterials and environmental chemistry laboratory at the Aichi Institute of Technology that studies mainly the flow injection analysis (FIA) method. FIA has been implemented to provide water quality index and was adopted in JIS standards in 2011. FIA has been used as the official method since 2014. In this experiment, nitrite ion concentration, one of the parameters tested in river water quality analysis, was quantified with PiCOEXPLORER and the reproducibility was demonstrated.

Features of PiCOEXPLORER

- Boost Lab Productivity. Absorbance measurement with PiCOEXPLORER. Wavelength range: 400-660 nm
- Your portable, personal tool for Lab work and Field work.
  Analyze directly in unopened PCR tube (0.2 ml). No sample loss, easy to dispose.
- Free app for quick results and calibration curves on your smartphone, tablets.
  Save raw data (absorbance, concentration, intensity) in Excel file on your PC.