

2029 Nitrate/Nitrite Analyzer

From Metrohm Process Analytics

The importance of nitrogen removal from effluent water streams has increased over the past decade to minimize water pollution and eutrophication of water bodies. During wastewater treatment, nitrogen compounds like ammonium are oxidized to nitrates (NO_3^-) and nitrites (NO_2^-), to subsequently being converted to nitrogen gas, which is then harmlessly released into the atmosphere. Therefore, it is really important to measure the NO_2^- and NO_3^- concentrations continuously to ensure complete nitrogen gas conversion and meet effluent requirements imposed by legislation.

To ensure that the concentrations of nitrate/nitrite do not exceed the limits, constant monitoring of the waste water is important for many industries. The **2029 Nitrate/Nitrite process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

About the Nitrate/Nitrite application

NO_2^- is determined photometrically with NEDD which forms a purple complex in acid medium, measured at a wavelength of 540 nm. NO_3^- is reduced to NO_2^- with hydrazine and a catalyst. The analyzer is able to measure a wide range of $\text{NO}_2^-/\text{NO}_3^-$ concentrations, from $\mu\text{g/L}$ to mg/L .

Benefits for online analysis

- Protect expensive company assets by monitoring your processes
- Process data available at your fingertips 24/7 means no waiting for slow, manual laboratory methods
- Increased safety for employees – no manual sampling necessary, no exposure to dangerous environments
- Save money by reducing downtime: analyzer sends alarms for out-of-specification values which inform the operator sooner



Applications for $\text{NO}_3^-/\text{NO}_2^-$

- ... in drinking water treatment / (potable water)
- ... in PCB production / (semiconductor)
- ... in soya production / (food & beverage)
- ... in salt (NaCl) production / (chemical)
- ... in paper production / (pulp and paper)
- ... in steel production / (steel/metal)
- ... in wastewater treatment plants / (environmental)

$\text{NO}_2^-/\text{NO}_3^-$ analysis performed safely online

- Nitrates and Nitrites can be measured in 1 or 2 sample streams
- Compact footprint for tight industrial spaces: 326 x 273 mm
- Safe, rugged enclosure designed to IP66 specifications is ideal for process environments
- A 7" full color touchscreen shows trend graphs and allows action modifications
- Remote access and control via Ethernet and Modbus TCP/IP, with USB for data export
- Easy maintenance due to simplicity of the layout
- Automatic data and/or alarm transfer to a DCS system



For more information, visit our website: www.metrohm.com

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