

2029 Nickel Process Analyzer

From Metrohm Process Analytics

Nickel is a silvery – white heavy metal that is extremely hard, corrosion resistant, and ductile. Because of these remarkable characteristics, the metal is readily used in coatings and surface engineering with many applications, such as in electroplating, casting coins, production of stainless steels, electronic products, and many more. Nickel plating is the most common methodology used to deposit nickel-alloys to the surface of a solid. However, the longer the bath is used, the electrolyte becomes overloaded with reaction products, which negatively affects the surface and layer characteristics of the workpieces. Online monitoring of nickel increases the quality of the final product and reduces operation costs.

To maintain product quality and improve chemical usage, it is of vital importance to closely monitor the nickel concentration. The **2029 Nickel process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

About the Nickel application

Ni²⁺ is determined photometrically based on the dimethylglyoxime method, measured at a wavelength of 440 nm. The analyzer is able to measure a wide range of nickel concentrations, from **µg/L to %**.

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

Ni²⁺ analysis performed safely online

- Nickel can be measured in 1 or 2 sample streams
- Compact footprint for tight industrial spaces: 326 × 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



Applications for Ni²⁺

- ... in surface water monitoring / (environmental)
- ... in PCB production / (semiconductors)
- ... in coin casting / (galvanic)
- ... in waste incineration treatment / (automotive)
- ... in electroplating / (chemical)
- ... in steel production/ (steel/metal)



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