

# 2029 Iron Process Analyzer

## From Metrohm Process Analytics

**Iron is the fourth most common element in the Earth's crust. It is mainly used for the production of steel but also for waste water purification. Iron is added as a nutrient in certain foods since it is essential for red blood cells. In the industry, iron present in water can cause problems like scaling in boilers. In drinking water, higher concentrations have effects on the taste.**

Iron concentrations which are too high or low can have negative effects, and have to be measured in several types of water (surface, boiler, potable). One of the most commonly used methods to measure iron is photometric detection. The **2029 Iron process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

### About the Iron application

Iron is determined photometrically with TPTZ which forms a blue complex with ferrous iron ( $\text{Fe}^{2+}$ ), measured at a wavelength of 590 nm. Ferric iron ( $\text{Fe}^{3+}$ ) is reduced to ferrous iron with a reducing agent. The analyzer is able to handle a wide range of iron concentrations, from  **$\mu\text{g/L}$  to  $\text{mg/L}$** .



## 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 hazardous environments
- Save money by reducing downtime: analyzer sends alarms for out-of-specification values which inform the operator sooner

## Applications for Fe(II/III)

- ... in groundwater for beverage production / (food/beverage)
- ... in zinc and steel production / (steel/galvanic/metals)
- ... in chemical production / (industrial wastewater)
- ... in coal-fired power plant processes / (energy/power)
- ... in wastewater treatment plants / (environmental)
- ... in drinking water / (potable water)
- ... in boiler feed water / (energy/power)

## Fe(II/III) analysis performed safely online

- Iron 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](http://www.metrohm.com)

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