2026 Copper Process Analyzer

From Metrohm Process Analytics

Copper is one of the top 3 recycled metals globally, and is mostly mined or extracted in the form of copper sulfides. It is estimated that 80% of all copper ever mined is still in use today. The major applications of copper are to produce electrical wire, in roofing and plumbing, and for industrial machinery. There are many economic and ecological reasons to remove copper from waste water streams after different production processes. This is especially the case during the mining process and in the production of printed circuit boards (PCBs).

Because of its role in many different (production) processes, it is of vital importance to closely monitor the concentration. The **2026 Copper process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

About the Copper application

Copper(II) is reduced to copper(I) by addition of an excess of iodide. The iodine which is produced is titrated with thiosulfate, and the detection is performed with a robust, low-maintenance Pt electrode. The analyzer is able to handle a wide range of copper concentrations, from **mg/L to g/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 Cu^{2+}

- … in nickel purification process / (mining)
- … in electrolysis bath / (galvanic/surface finishing)
- … in electroless copper plating / (semiconductor)
- … in copper electrolysis cells / (steel/metal)
- … in metal recovery processes / (mining)
- … in zinc production / (mining)
- … in etching baths / (semiconductor)

Cu^{2+} analysis performed safely online

- Copper(II) 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

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

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