

2029 Silica Process Analyzer

From Metrohm Process Analytics

Silica is used in a variety of applications, from microelectronics (in wafer production) to components used in the food industry. In the power industry, Si is not held in such high regard and is considered a major impurity, responsible for boiler scale and deposits on steam turbine blades. Due to increasing industry demands for more efficient energy production as well as the increase in operating pressures in modern boilers, the necessity to measure and control Si concentrations is more crucial than ever. Silica also plays an important process control role at the demineralization plant where demi-water is produced and polished from groundwater or surface water.

Because of its role in many different (production) processes, it is of vital importance to closely monitor the concentration. The **2029 Silica process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

About the Silica application

Soluble silica (Si^{4+}) is determined photometrically on the 2029 Process Photometer with the molybdenum blue method, ranging 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 hazardous environments
- Save money by reducing downtime: analyzer sends alarms for out-of-specification values which inform the operator sooner

Si^{4+} analysis performed safely online

- Silica can be measured in 1 or 2 sample streams
- Compact footprint for tight industrial spaces: $326 \times 273 \text{ mm}$
- 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 Si^{4+}

- ... in boiler feed production / (chemical/petrochemical)
- ... in steam production / (energy/power)
- ... in demineralized water / (potable/surface/groundwater)
- ... in phosphate fertilizer production / (chemical)
- ... in paper production / (pulp & paper)
- ... in manganese production / (mining)
- ... in make-up water for solar cell production / (semicon)

