

Slurry Analyzer

Process optimization starts with real-time measurements.

The Blue Cube in-line slurry analyzer delivers more information, faster, and in a safer manner than traditional in-process analyzers.



In-line measurement

Small footprint, easy to integrate. No sample streams, sample pumps, or multiplexers.



Unmatched range

Measures both light and heavy elements, minerals, particle size and % solids, all in one instrument.



Low maintenance

Mechanically simple: only two moving parts, no high-wear components.



Fast response

15-second updates to all parameters, simultaneously.



Inherently safe

No radioactive sources or high intensity lasers.



Proven

100+ analyzers deployed worldwide.



What it is

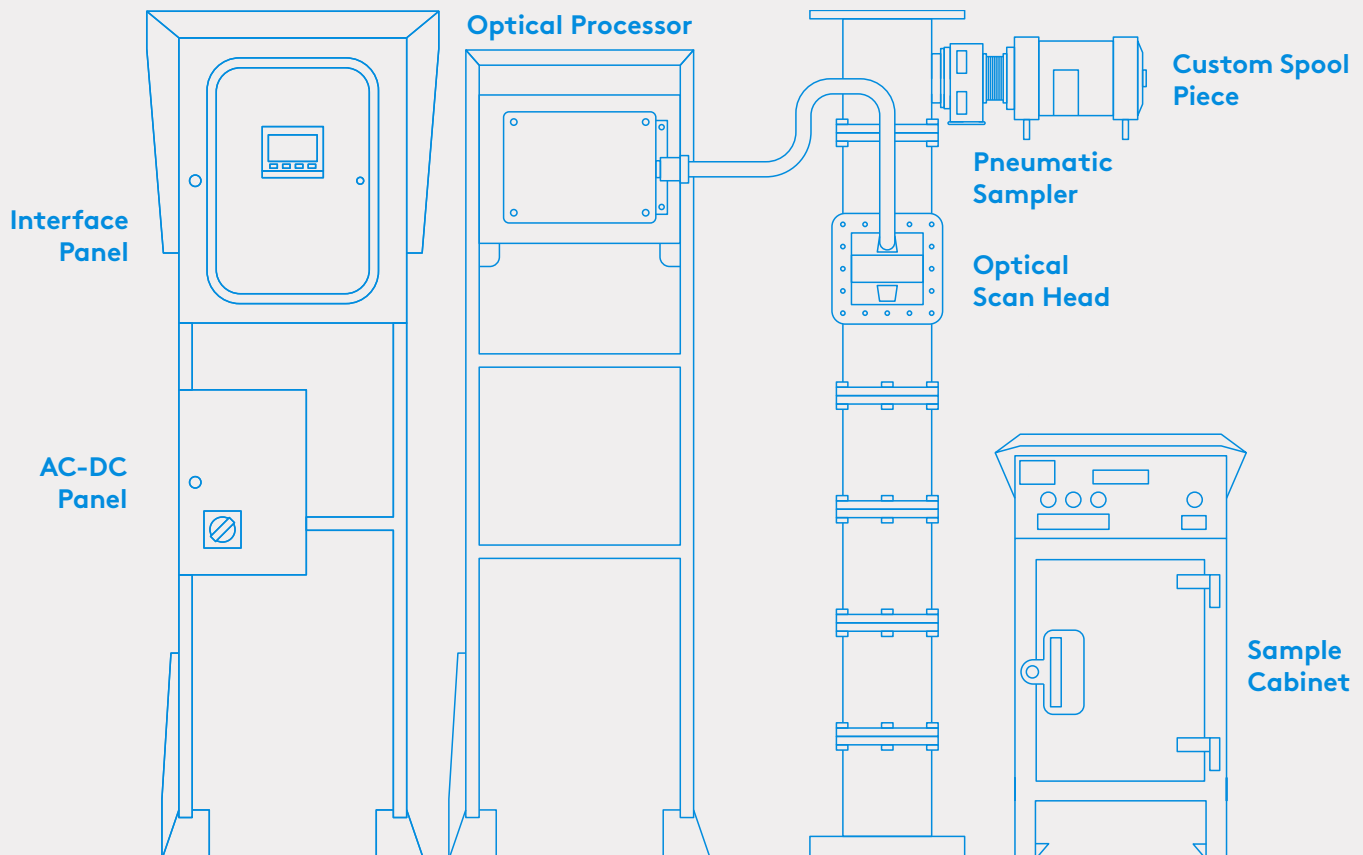
The **Blue Cube** is an in-line instrument that measures the composition of slurry streams in real-time. The analyzer continuously scans the contents of the process stream directly without removing it from the pipe, resulting in a measurement that is truly representative of the real process.

Our diffuse reflectance spectroscopy (DRS) analytical technique uses a broad band of light from ultraviolet, through visible, and into near-infrared, together with state-of-the-art **machine learning techniques**, to determine grade and other process parameters based on the spectra reflected from particles in the slurry.

DRS covers a much broader range of electromagnetic frequencies than XRF-based analyzers, capturing more information at much shorter integration periods. This allows the **Blue Cube analyzer** to measure the grade of both light and heavy elements, minerals, as well as other process parameters such as particle size. Our optical technology can be applied to any quantifiable property that affects the spectra in this broad range of light.

The powerful combination of in-line measurement and **DRS** allows our analyzers to update all measured parameters simultaneously, every 15 seconds.

By providing reliable, real-time insights, our analyzer enables faster, more informed decision-making to optimize product grade and recovery.



Applications

Au Gold Sulphides, S, Cu, Fe, As, Au, CaCO ₃ , Pb, Zn, Ni, % Solids, Particle Size (P80, -74um)	Cu Copper Total Cu, Acid Soluble Cu, Co, Mg, Ca, Fe, Si, Cu, S, SiO ₂ , MgO, Zn, Pb, % Solids, Insolubles	Ni Nickel Ni, Fe, MgO, As, S, SiO ₂ , Co, Cr ₂ O ₃ , Cu, Al ₂ O ₃ , Pentlandite, Pyrrhotite, Chalcopyrite, Troilite, Talc, Serpentine	Zn Zinc Zn, Pb, Cu, Fe, Cd, H ₂ SO ₄ , Mn, CaCO ₃
Pt Platinum PGM (PGE), Cr ₂ O ₃ , SiO ₂ , % Solids, Particle Size	Cr Chrome Cr ₂ O ₃ , SiO ₂ , FeO	Fe Iron Fe, SiO ₂ , Al ₂ O ₃ , S, P, Mn, K ₂ O, Ba	Pb Lead Pb, Zn, Cu, Ag, As, % Solids, P150, Fe
Cg Graphite C, S, Particle Size, % Solids	Mn Manganese Mn, Cr ₂ O ₃ , SiO ₂ , FeO	P Phosphate P ₂ O ₅ , BPL, SiO ₂ , Al ₂ O ₃ , MgO, CaO, Particle Size	* M, U, Mg ZrO ₂ , TiO ₂ , B ₂ O ₃ , SO ₄ , CaO, U ₃ O ₈ , Ilmenite, Rutile, Zircon

What it does

Measure

Measures various parameters such as mineral grade, elemental grade, particle size fraction and percentage solids in-line, continuously, every 15 seconds.

Installed on pumped, upward-flowing process lines of any diameter greater than 25mm.

Control

Rapid measurement updates enable effective process stabilization through automatic process control.

Automatic manipulation of air addition, pulp levels and reagents are suggested for the control of grade and recovery in typical flotation circuits.

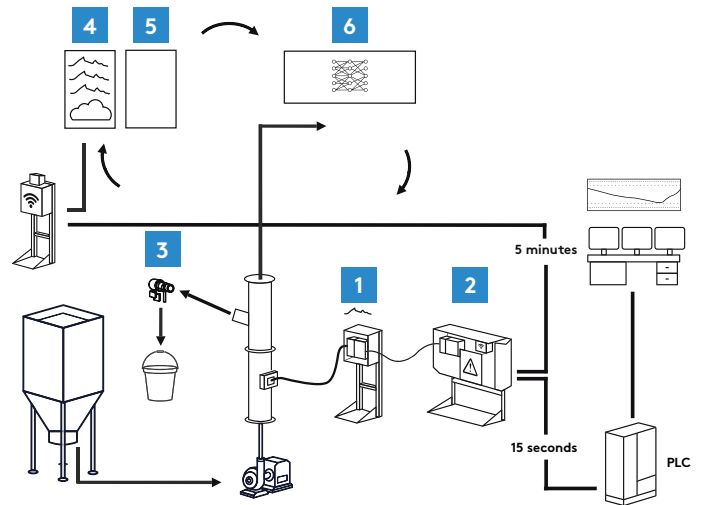
Optimize

With the availability of real-time data, the effect of process changes can be tracked without having to do full plant surveys.

Blue Cube analyzers can be used together with a mass flow indication to optimize recovery. Product grade can be optimized, and the impurity content minimized to eliminate penalties.

How it works

- 1 Ultraviolet, visible, and near infrared light is directed through a sapphire window onto the slurry as it passes through the pipe and the light reflected by the slurry particles is captured.
- 2 The reflected light is digitized and used together with a calibration model to extract spectral features of interest and provides 15-second updates to the measured parameters.
- 3 The analyzer monitors the process and automatically extracts one calibration sample per day when process conditions are appropriate using the integrated pneumatic sampler.
- 4 The spectra are captured while the calibration sample is extracted and are recorded and uploaded.
- 5 The laboratory assays of the calibration samples (emailed to Draslovka weekly) are used together with the uploaded spectra to monitor performance and fine-tune the calibration model.
- 6 The refined calibration model is automatically downloaded to the instrument to ensure accuracy is maintained through drifts in process conditions and lithology. This process is repeated on an ongoing basis.



About Draslovka

- Draslovka has been reimagining what's possible with the CN family of chemicals for more than 100 years.
- We are a Czech-based company, driven by an international team working across the world with a conscious ambition to be the best at what they do.
- As a global leader in cyanide-based chemical specialties, we have 700+ staff across 14 countries and serve the largest mines in the world, with 95% of our clients recommending us.
- Our wide range of solutions includes Glycine Leaching Technology, reagents such as sodium cyanide, in-line mineral analyzers, and AI-based setpoint recommendation tools.
- We provide industry-transforming methods to extract metals at a lower unit cost, with reduced ESG impacts and an enhanced social license to operate.

