

ADVANCE ANALYTIK

REVOLUTIONIZING ONLINE MONITORING SOLUTIONS



OPTICS 1000 - SILICA

SILICA High Range (SiO₂)

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Optics 1000 Series

SILICA LR (SiO₂)

Method - Colorimetric

After adding the sample into the measurement cell, some reagents are added in order to adjust the solution to the desired conditions (pH, valence's elements, etc.). Then, a blank is done to correct any temperature or turbidity disturbance. Subsequently, a last reagent is added, and it reacts with solution developing a color, which is measured using a correct wavelength. Thanks to the photometer used, the result achieves a great accuracy.



Principle of measurement

Silica reacts with molybdate reagent in acid media to form a yellow silicomolybdate complex. This complex is reduced by ascorbic acid to form the molybdate blue color. The color intensity is proportional to the silica concentration.



Advantages of the method

The blue color developed is so intense and it provides a high accuracy and repeatability. The method allows to measure really low values of concentrations (lower than 50 ppb).



Interferences

Phosphate and Tannin interferences can be removed thanks to oxalic acid.

Hydrogen sulfide and large amounts of iron are also an interference.

Specifications

RANGE	From 0 to 1 ppm / 5 ppm / 10 ppm. Adjustable higher concentrations with internal dilution.
ACCURACY	±2%
FULL SCALE REPEATABILITY	±2%
RESOLUTION	0,01 ppb
ANALYSIS TIME	around 15 minutes
CALIBRATION	two point
LED WAVELENGTH	650 nm

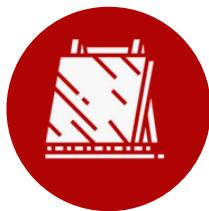
Reagents consumption

- Reagent 1: 4 ml / analysis - 3.0L / month
- Reagent 2: 3 ml / analysis - 2.25L / month
- Reagent 3: 4 ml / analysis - 3.0L / month

Monthly consumption calculated assuming 1 analysis per hour.



Applications



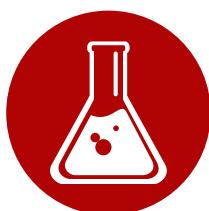
Glass Manufacturing



Pulp and Paper



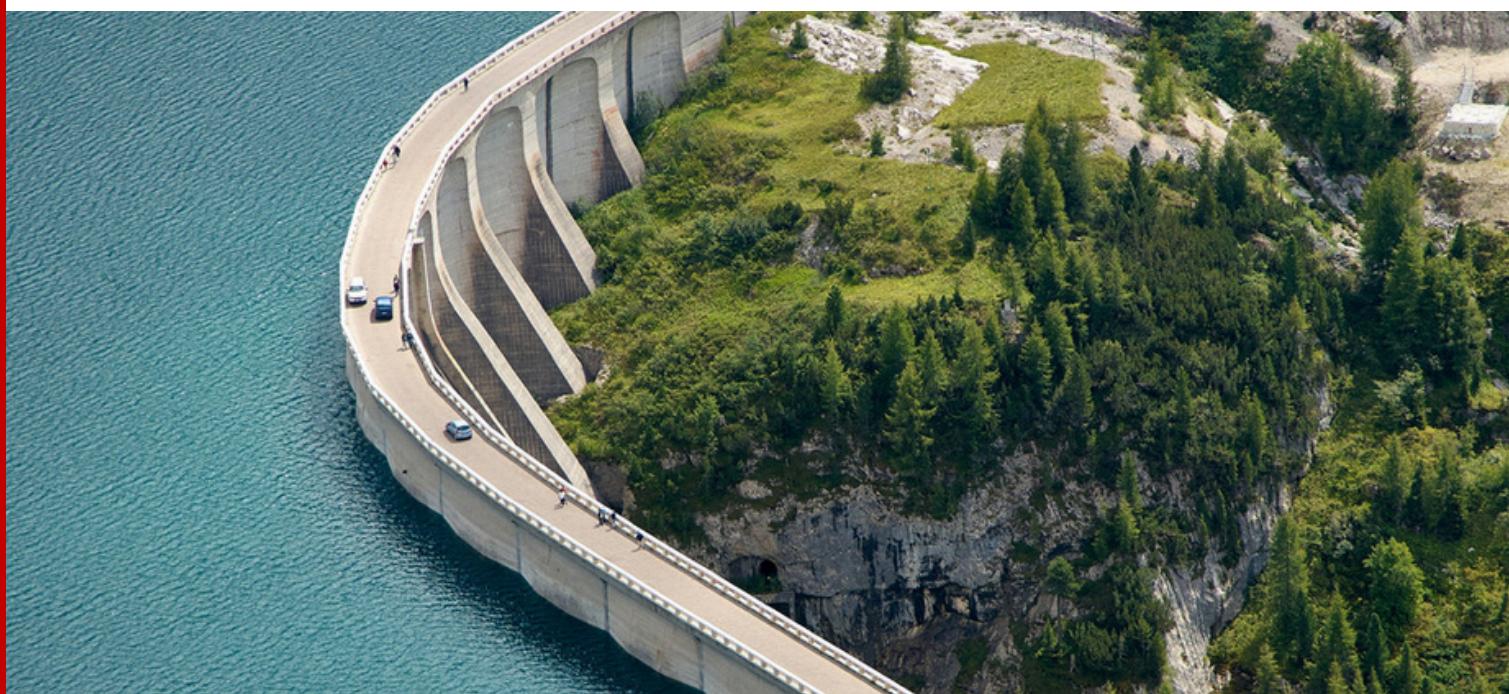
Power Plants



Chemical Manufacturing



CETP - Common Effluent Treating Plant



Note -

This data sheet serves as general information about the Optics 1000 - Silica (HR) . For specific technical details, installation guidelines, and troubleshooting assistance, please refer to the official user manual provided with the product.

For inquiries and detailed technical information, please contact sales@advanceanalytik.com.



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Let's work together to find a solution that
works for you



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