



PRODUCT  
DATASHEET '24

# ADVANCE ANALYTIK

REVOLUTIONIZING ONLINE MONITORING SOLUTIONS



## OPTICS 1000 - SILICA

**SILICA High Range (SiO<sub>2</sub>)**

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# Optics 1000 Series

SILICA LR (SiO<sub>2</sub>)

## 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

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



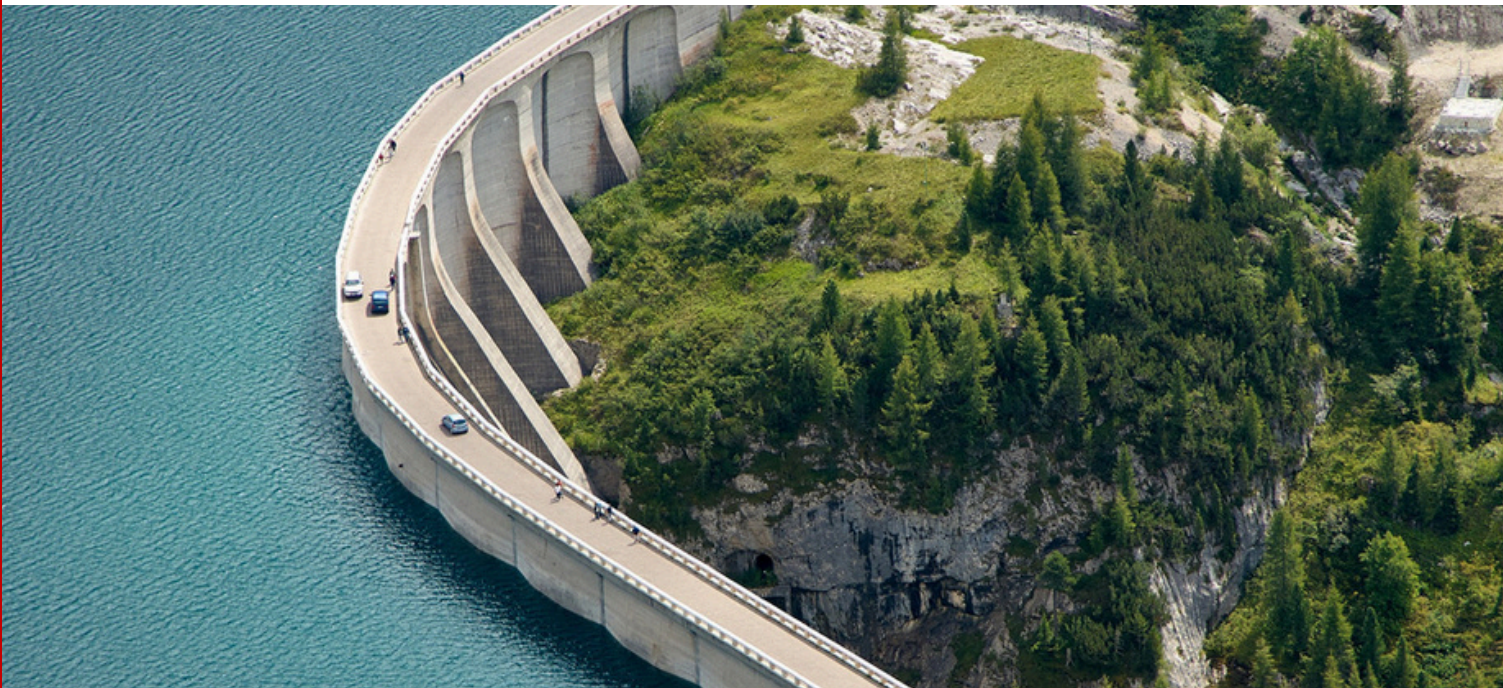
**Power Plants**



**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](mailto:sales@advanceanalytik.com).*



# LET'S CONNECT !

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



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