Silica
High Range (SiO_2)

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%
Repeatability: ±2%
Resolution: 0,01 ppm
Analysis time: around 15 minutes
Calibration: two point
LED Wavelength: 650 nm

Applications

- Power plants

And more...

Reagents consumption

- Reagent 1: 0.5 ml / analysis — 0.5 L / month
- Reagent 2: 0.5 ml / analysis — 0.5 L / month

Monthly consumption calculated assuming 1 analysis per hour.

Visit our web

Instru | INSTRUMENTACIÓN ANALÍTICA Instran®

Solutions
for those
moving the world

www.instran.net

Instru office
c/ Penedés, 46
08820 El Prat de Llobregat
Barcelona • Tel.+34 934 787 161
instran@instran.net
c.salinas@instran.net

Instran®

On-line Analyzer
Water quality parameters

Silica
High Range
(SiO_2)

We offer you all the solutions you need to keep moving the world forward