Boron Low Range (B)

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

Thanks the buffer reagent, the sample is adjusted to pH between 5 and 6. Then, the addition of Azomethine-H & Ascorbic acid, they react with Boron giving a green-yellow color that is measured at 420nm.

Advantages of the method

The method is accurate and sensitive. The range is linear up to 2 ppm and higher ranges can be obtained diluting the sample.

Specifications

Range: From 0 to 100 ppb / 500 ppb / 1000 ppb / 2000 ppb.
Adjustable higher concentrations adjusting reagents concentrations.
Accuracy: ±2%
Repeatability: ±2%
Resolution: 0,1 ppb
Analysis time: around 30 minutes
Calibration: two point
LED Wavelength: 420 nm

Applications

• Semiconductor industry
And more...

Reagents consumption

• Reagent 1: 2.2 ml / analysis — 2.0L / month
• Reagent 2: 4.2 ml / analysis — 3.5L / month
Monthly consumption calculated assuming 1 analysis per hour.

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