Nickel (Ni)

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

An acetate buffer is used to achieve the optimal pH conditions in order Br-PADAP could react with Nickel, forming an intense pink color proportional to Nickel concentration.

Advantages of the method

The pink color that is formed could stain the measurement cell, interfering on the following analysis, but thanks to the cleaning solution used by the Instran, this possible interference is removed.

Interferences

Cobalt

Specifications

Range: From 0 to 250 ppb / 500 ppb / 1000 ppb.
Adjustable higher concentrations with internal dilution. Accuracy: ±2%
Repeatability: ±2%
Resolution: 0.1 ppb
Analysis time: around 15 minutes
Calibration: two point
LED Wavelength: 545 nm

Reagents consumption

- Reagent 1: 0.5 ml / analysis — 0.5L / month
- Reagent 2: 0.5 ml / analysis — 0.5L / month
- Reagent 3: 1.35 ml / analysis — 1.0L / month

Monthly consumption calculated assuming 1 analysis per hour.

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