Chromium VI (Cr)

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

The chromium (VI) reacts with the diphenylcarbazide reagent to form a pik complex. The reaction is specific for chromium (VI) and there are no interference compounds.

Advantages of the method

The method is very simple, very specific and is very sensitive because of the high absorbance of the diphenylcarbazide-chromium(VI) complex formed.

Specifications

Range: From 0 to 200 ppb. Adjustable higher concentrations
with internal dilution.
Accuracy: ±2%
Repeatability: ±2%
Resolution: 0,1 ppb Analysis time: around 10 minutes
Calibration: two point
LED Wavelength: 545 nm

Reagents consumption

• Reagent 1: 0,8 ml / analysis — 0.75 L / month
Monthly consumption calculated assuming 1 analysis per hour.

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