Cyanide (CN-)

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

After adding a buffer to establish the desired pH conditions to reactions takes place, Chloramine-T reagent reacts with cyanide ion to form cyanogen chloride. Afterwards, this compound reacts with the reagent color to form a blue colored complex. The intensity of the blue color developed is proportional to the concentration of cyanide in sample.

Advantages of the method

The sample conditions established before adding the reagents that react with Cyanide permits that the method is specific for cyanide determination. Although the last reaction needs around 25-30 minutes to be finished, a technique used by Instran enables to reduce considerably the analysis time.

Specifications

Range: From 0 to 200 ppb. Adjustable higher concentrations with internal dilution.
Accuracy: ±2%
Repeatability: ±2%
Resolution: 0,1 ppb
Analysis time: around 20 minutes
Calibration: two point
LED Wavelength: 588 nm

Reagents consumption

- Reagent 1: 1 ml / analysis — 0.75L / month
- Reagent 2: 1 ml / analysis — 0.75L / month
- Reagent 3: 2 ml / analysis — 1.50L / month

Monthly consumption calculated assuming 1 analysis per hour.

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