# Arsenic (As)

## 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 method is based on oxidation of As(III) into As(IV). Afterwards, when the required reagents are added, As (IV) reacts with molybdic acid to form an arsenomolybdate complex. It is reduced to develop a blue color which is proportional to arsenic concentration.

## Interferences

Phosphate

## Specifications

Range: From 0 to 100 ppb / 500 ppb.
Adjustable higher concentrations with internal dilution. Accuracy: ±4%
Repeatability: ±4%
Resolution: 0.1 ppb
Analysis time: around 45 minutes
Calibration: two point
LED Wavelength: 710 nm

## Reagents consumption

- Reagent 1: 3.20 ml / analysis — 2.50L / month
- Reagent 2: 2.16 ml / analysis — 1.75L / month
- Reagent 3: 0.43 ml / analysis — 0.50L / month

Monthly consumption calculated assuming 1 analysis per hour.

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