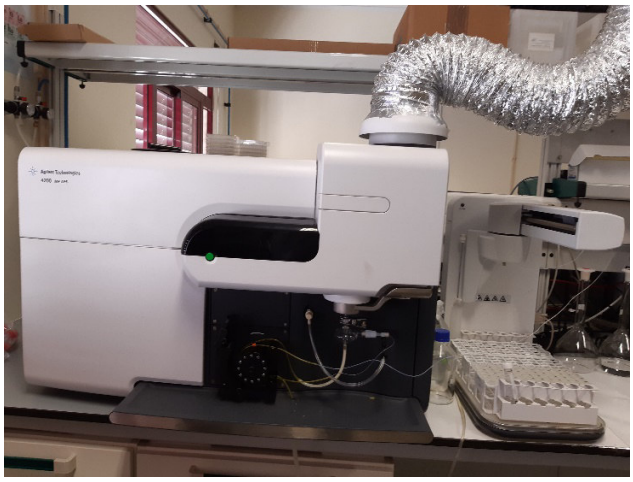
Microwave Plasma - Atomic Emission Spectrometer (MPAES)



TECHNICAL DETAILS

Manufacturer: Agilent

Model: 4200

Extras: -

HOW IT WORKS?

MP-AES Agilent - 4200 is used for simultaneous multi-analyte determination of major and minor elements. MP-AES employs microwave energy to produce a plasma discharge using nitrogen.

Samples are typically nebulized prior to interaction with the plasma in MP-AES measurements.
The atomized sample passes through the plasma and electrons are promoted to the excited state.

The light emitted electrons return to the ground state light is separated into a spectrum and the intensity of each emission line measured at the detector.

The elements can be measured with a working range of ppm to ppb. MP-AES is a technique comparable to traditional AA and AES but with several potential advantages including lower cost of operation and elimination of the requirement for flammable gasses.

Allow quantification of metals in different type of materials, after digestion / solubilization in specific organic solvents.

APPLICATIONS

The system has been used in analysis of geological samples, vegetal samples, soils, sediments, foods, beverages and wastewater and waste products, biodiesel, and others.

ANALYSIS REQUIREMENTS

Aqueous and organic (dissolve in methanol) solution. The volume required depends of the number of elements to be determined. At least 1 ml of solution per five elements in same curve calibration is required for analysis. In case of method development, it will be required a minimum of 15 ml solution per five elements for the same curve calibration

ACCESS CONDITIONS

Remote