

Inductively Coupled Plasma - Atomic Emission Spectrometry

Purpose: As environment health and safety is getting widespread international attention, needs for high sensitivity analysis are increasing. ICP-AES is short for optical emission spectrometry with inductively coupled plasma. The sample is carried into the plasma in an acidified aqueous solution by argon gas flow. On reaching the plasma, the sample is vaporized and ionized at temperatures ranging from 6,000K. The subsequent spectral emissions are measured. This ICP-AES can measure 73 elements, and the detection limits are typically at the $\mu\text{g/L}$ level in aqueous solutions.

Main use:

- 1) High sensitivity quantitative analysis ($\mu\text{g/L}$ level) of major and trace elements in groundwater, waste, plant bodies and so on
- 2) Quick quality evaluation of samples by multi-elemental analysis

Main Specifications:

- 1) Inductively Coupled Plasma - Atomic Emission Spectrometry
High resolution; achieved 0.0045 nm resolution
Sequential scanning type; measurement wavelength 160 to 750nm
- 2) Accessory
Ultrasonic nebulizer
Hydride generator
Statistics analysis software

Location and Date of Installation:

Environmental Science Research Laboratory, March 2004



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