

# ICP-MS (Inductively Coupled Plasma Mass Spectrometry)

ICPMS has become one of the most important techniques for elemental analysis. At the heart of the ICPMS instrument is the torch, where Inductively Coupled Plasma (ICP) atomises and ionises the sample at extremely high temperatures. These ions are then sorted according to mass and charge by the Mass Spectrometer (MS) part of the instrument. It is the coupling of these two unique instruments that gives ICPMS its exceptional qualities in terms of detection, sensitivity and accuracy. The Inductively Coupled Plasma minimises interferences by offering exceptional ionisation, while modern mass spectrometers such as the quadrupole allow superb resolution.

ICPMS has applications across a number of industries from pharmaceutical to food and environmental as it has now become the benchmark standard method for elemental determination in most sectors.

## Examples of uses:

- Heavy metal analysis in soil and water
- Mineral analysis in food products
- Quality control in food and pharmaceutical analysis
- Biomass screening

