

ACCURATE, RELIABLE, COST-EFFECTIVE ELEMENTAL ANALYSIS FOR ENERGY AND CHEMICAL SAMPLES

The Measure of Confidence

AA. MP-AES. ICP-OES. ICP-MS. ICP-QQQ

Maximize product quality and profitability

Trace elements may be present in energy and chemical samples as contaminants or performance additives. Accurately determining the concentration of these trace elements is critical to understanding the quality and performance of the product, and for maximizing efficiency and cost-effectiveness in their manufacture.

Agilent atomic spectroscopy solutions

- Accurate, reliable, low-system-cost atomic absorption spectrometers (AA) are ideal for low numbers of samples or where only a few elements are measured.
- The Agilent microwave plasma atomic emission spectrometer (MP-AES) runs on air, enabling unattended multi-element analysis without flammable and expensive gases – an ideal cost-effective alternative to AA.
- The Agilent inductively coupled plasma optical emission spectrometer (ICP-OES) provides simultaneous elemental analysis and industry-leading sample throughput.
- Agilent ICP mass spectrometers (ICP-MS and ICP-QQQ) have the broadest elemental coverage, lowest detection limits, and support speciated analysis with chromatography coupling.



FREE ON-DEMAND WEBINAR

Watch this quick on-demand webinar to learn about our portfolio of Energy & Chemical solutions, and discover how the unique Agilent MP-AES is a cost-effective multi-element alternative to AA.

Visit:
www.agilent.com/chem/elemental_energy

Agilent Technologies



Atomic absorption spectroscopy (AA)

- Low system cost
- Low to moderate productivity
- High ppb to %
- Approximately 3% total dissolved solids

The Agilent low-cost AA is used for a variety of petrochemical analyses, such as measuring Si, Sn, and Ti in jet engine oil. Flame AA with the SIPS accessory is used for determining Mg, Ca, and K in brines. It has unique fast sequential capability, simplicity of operation, and very good sensitivity.



Microwave plasma atomic emission spectroscopy (MP-AES)

- Moderate to high productivity
- Medium ppb to %
- Low running cost
- Approximately 3% total dissolved solids

The Agilent MP-AES saves you money because it runs on air. MP-AES offers accurate and reliable performance for samples such as biofuels, diesel fuel, and contaminant elements in chemical samples such as plating bath solutions and formation waters.



Inductively coupled plasma optical emission spectroscopy (ICP-OES)

- Highest productivity (<30s per sample) with SVS 2+
- Low ppb to %
- Up to 30% total dissolved solids

The Agilent 5100 ICP-OES is the world's most productive ICP-OES. Utilizing a vertical plasma for axial and radial emissions, it delivers excellent sensitivity and high matrix capability. Common applications include analysis following ASTM D5185 for wear metals like Fe, Ni, and Cr and for analyzing Pd in acid-digested gelatin.





Inductively coupled plasma mass spectrometry (ICP-MS and ICP-QQQ)

- High productivity (<60s per sample) with ISIS 3
- Low ppq to %
- Up to 25% total dissolved solids

The Agilent 7900 ICP-MS offers superior detection limits, wider dynamic range, and high matrix tolerance. The Agilent 8800 ICP-QQQ with MS/MS mode provides ultimate accuracy for advanced applications. Common applications include the analysis of trace metallic impurities in hydrocarbon biofuels, and the measurement of trace contaminants in solar silicon wafers and process chemicals.

For more information:
Contact your local Agilent representative or visit:
www.agilent.com/chem/energy

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