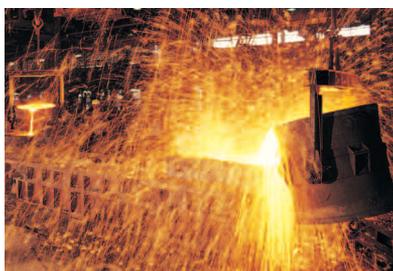


The Thermo Scientific iCAP 6000 Series is relied upon for routine and demanding elemental analysis by over 1000 customers worldwide. Its advanced optical design assures unrivalled performance and reliable analysis; sample after sample.

iCAP 6300 ICP Spectrometer

Pure Performance, Simplified



The Thermo Scientific iCAP 6300 is a compact and fully field-proven ICP system that provides the highest levels of ICP performance for routine use, with the minimum of user set-up and maintenance. Utilizing the latest design techniques, this instrument has the core advantages of the iCAP 6000 Series platform - stability, performance and economical operation - and is able to expand its capabilities as circumstances dictate.

Performance

A 3-channel, 12-roller pump, with its unique drain sensor, provides smooth, low noise signals and safe operation.

Our efficient 27.12 MHz solid state RF plasma generator has the high power and stability needed to cope with even the most difficult samples and has been field-proven in over 1000 customer installations.

The high resolution echelle spectrometer has a unique optical layout, resulting in high efficiency light transmission, enhancing overall sensitivity and detection capability. This produces a very compact spectrometer that minimizes the requirement for laboratory space and reduces purge gas consumption.

An upgraded CID86 chip (Charge Injection Device) allows free choice of wavelengths over the complete 166 – 847 nm range. It is more stable, has less noise and better dynamic range than previous designs and its non-destructive readout allows optimum signal-to-noise measurements at all concentration levels.

Simplicity

The iCAP 6300 uses a simple pressure-controlled nebulizer gas flow, or an optional factory-fitted nebulizer gas mass flow controller is available for improved long term stability.

A comprehensive range of liquid sample handling kits are available to enable simple and effective configuration of the iCAP 6300 for optimum analytical performance with your required sample matrices.

Radial or Duo (Radial/Axial) view versions of the instrument are available, depending on your sample type and elements of interest.

Productivity

The large sample compartment and ergonomically designed components ensure the simplest, most reliable installation and adjustment of the torch and sampling kits, making maintenance simpler and increasing up-time and productivity.

Ducted airflows and a water-cooled polychromator (controlled to within 0.1 °C) ensure an extremely stable spectrometer, enabling extended analytical runs with fewer re-calibrations.

Comprehensive quality control checks may be programmed at intervals in the analysis to guarantee data quality. Automatic recalibration and repeat samples analyses are possible.

Technical Specification

Spectrometer	Echelle type 52.91 grooves/mm ruled grating 383 mm effective focal length 9.5 ° UV fused silica cross dispersion prism
Wavelength range	166 - 847 nm
Spectral bandpass	7 µm at 200 nm
Detector	High performance CID86 chip
RF source	27.12 MHz solid state 750 - 1500 watts output power (Duo restricted to 1350 watts)
Sample pump	3-channel, 12 roller peristaltic Speed 0 - 125 rpm
Plasma gas	Fixed 12 L/min, argon
Nebulizer gas	Pressure control, from 0 - 0.4 MPa
Auxiliary gas	4 fixed flows, 0, 0.5, 1.0 and 1.5 L/min
Standard sampling kit	Concentric glass nebulizer Glass cyclone spray chamber Semi-demountable EMT torch 1.5 mm bore quartz injector (Radial) 2 mm bore quartz injector (Duo)
Dimensions	840 W x 750 D x 590 H

Ordering information

Required items

iCAP 6300 Radial view	8423 100 50011 or 8423 100 50111 (N. America)
or iCAP 6300 Duo view	8423 100 50021 or 8423 100 50121 (N. America)
Water recirculator (50 Hz or 60 Hz version)	9423 393 97005/97003 (or user supplied equivalent)
Datastation (110 or 220 V)	8423 140 50003/50004 (or user supplied equivalent)

Optional accessories

Autosampler	
- CETAC ASX260 (up to 180 samples)	9423 470 04002
- CETAC ASX520 (up to 360 samples)	9423 470 04001
- CETAC EXR8 (up to 720 samples)	8423 470 04003
- CETAC ASX1400 Stirring autosampler	842347004004
- CETAC APS1650 Automated Prep Station and Oils Dilutor	842347004005
- ESI SC4 Autosampler	842347004006
- ESI FAST Component for SC4 Autosampler	842347004007
- ESI Internal Standard Kit option for use with FAST Component	842347004008
Sample handling kits for Radial and Duo systems	
- Organics (Radial/Duo)	8423 120 51701/51801
- Volatile organics (Radial/Duo)	8423 120 51711/51811
- HF resistant (Radial/Duo)	8423 120 51721/51821
- High solids (Radial/Duo)	8423 120 51731/51831
- Aqueous (Radial/Duo)	8423 120 51791/51891
CETAC U5000AT+ ultrasonic nebuliser	8423 180 51001
Argon humidifier	8423 120 51301
Online Hydride Generation Accessory	8423 180 50001

iTEVA software

iTEVA software for the iCAP 6300 is intuitive and familiar, making it simple and quick to learn and use. Running routine analyses is made simple with the use of pre-defined methods. All that is required on a daily basis is to create an autosampler loading list (either manually, or by importing a sample list from a LIMS) or to enter sample information (for manual operation). Then simply ignite the plasma, wait for stabilization, run the analysis and print out or electronically export the results. Setting up a method is an extremely simple operation since it is possible to start the analytical run following simple element selection. iTEVA software uses intelligent default settings which rarely require editing. All results are stored using Microsoft's SQL Server™, together with the method used to measure them. Comprehensive data reporting is provided via Crystal Reports. This offers full-flexibility reporting of data, including the availability of several standard reporting templates. Customized report templates can also be set up, as dictated by the requirements of your laboratory. Use of an autosampler enables the laboratory to maximize efficiency when larger numbers of samples are analyzed. Multiple sequences of instrument conditions can be run in a single analysis in order to obtain optimum data for certain analytes or sample types. Comprehensive quality control (QC) checking may be performed at intervals in the analysis to guarantee data quality. Automatic recalibration and repeat sample analyses are possible, reducing the need for next-day sample re-runs. Full autosampler flexibility allows for samples and calibrations to be added/deleted/moved whilst the autosampler is running.

Accessories

Choose from a comprehensive range of CETAC & ESI autosampler accessories that allow you to run from 180 to 720 samples, unattended.

The CETAC U5000AT⁺ ultrasonic nebulizer improves sample aerosol transport efficiency, thus achieving sub-ppb detection limits for many elements.

The CETAC APS 1650 sample preparation accessory enables fast, automated off-line sample dilutions and is ideally suited to oils and viscous liquid matrices.

An on-line hydride generation accessory is available, yielding sub-ppb performance for hydride forming elements such as As, Bi, Hg, Sb, Se, Sn and Te.

Specific sample handling kits are available for organic and volatile organic solvent-based solutions.

Further sampling kits allow use of hydrofluoric acid solutions or high solids solutions containing up to 25 % dissolved solids and an argon humidifier minimizes blockages with glass concentric nebulizers when used to analyze samples containing high dissolved solids.

The use of an Inductively Coupled Plasma source (ICP) is the accepted and most powerful technique for the analysis and quantification of trace elements in both solid and liquid samples. Its applications range from routine environmental analyses to the materials industry, geological applications to clinical research and from the food industry to the semiconductor industry.

Thermo Fisher Scientific is the only instrument manufacturer to offer the full range of Inductively Coupled Plasma Spectrometers (ICP, Quadrupole and Sector ICP-MS) to satisfy every aspect of plasma spectrometry from routine to highly demanding research applications.

Develop your lab from the easy-to-use iCAP ICP to the high performance XSERIES 2 Quadrupole ICP-MS and up to the ultra-sophisticated ELEMENT2 and NEPTUNE Sector ICP-MS instruments. Each instrument combines leading-edge technology, fit for purpose and affordability with a tradition of quality, longevity, accuracy and ease of use.

**Thermo Scientific
iCAP ICP**



**Thermo Scientific
XSERIES 2 ICP-MS**



**Thermo Scientific
ELEMENT2 HR-ICP-MS**



**Thermo Scientific
NEPTUNE Multi-collector ICP-MS**



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