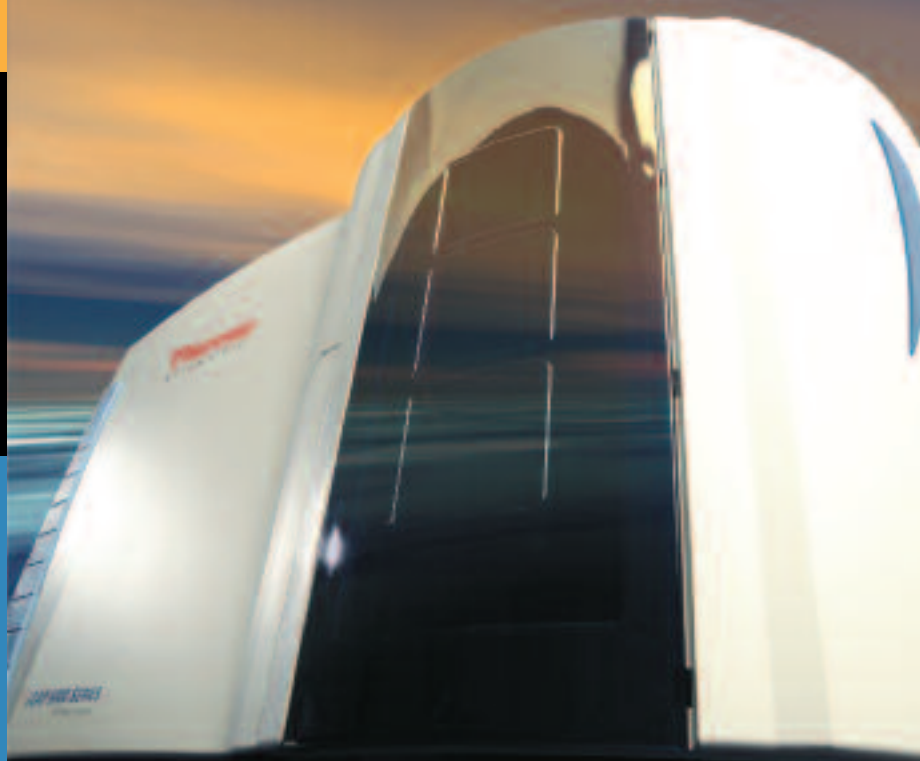


# Thermo Scientific iCAP 6000 Series ICP Emission Spectrometer



*Now everyone can experience  
dramatically different ICP ...*



Environmental



Metallurgical



Petrochemical



Food Safety

## Thermo Scientific iCAP 6000 Series ICP ...

The iCAP 6000 Series is a range of high performance ICP emission spectrometers which enables high sample throughput, application flexibility and low cost of ownership. The new extended iCAP 6000 Series harnesses the power of the award-winning Thermo Scientific design and technology to offer powerful ICP analysis which is now accessible to all.

Over 2000 customers in more than 40 countries rely on the iCAP 6000 Series for their demanding routine and research-based applications. The combination of unique technologies in the iCAP 6000 Series enables our customers to achieve the highest performance, most reliable and cost effective ICP analysis available.



# ... now everyone can experience dramatically different ICP

## Experience Powerful Performance

- High efficiency optical design enables simultaneous analysis of 66 elements with detection limits at less than 1 ppb
- Unique CID camera technology provides wide dynamic range and resistance to saturation
- Distributed optical purge significantly reduces gas consumption to enable the most cost efficient sample analysis
- Powerful Fullframe technology for fingerprinting and retrospective analysis.

## Experience Optimized Productivity

- Unique EMT Torch technology enables routine maintenance operations without switching off the plasma
- Intelligent hardware setup and source optimization tools automate the method development process
- High transmittance optical design enables simultaneous multi-element analyses in less than 20 seconds per sample
- Intelligent software tools auto-optimize the sample introduction system for enhanced sample throughput capability.

## Experience Uncompromised Versatility

- Fully integrated accessories for gas, liquid & solid sample introduction
- Dedicated radial and duo plasma view configurations for uncompromised analytical performance enabling instrument configurations to be tailored to your applications
- Modular software provides options for simplicity, enhanced accessory flexibility and regulatory compliance
- Customizable reporting templates provide unrivalled flexibility for data publishing and export.



## High performance configurations for any laboratory requirement

We understand that all laboratories are different. Some require low cost, routine analytical solutions, whilst others demand flexibility for varied and demanding applications. To address the requirements of all ICP customers, the iCAP 6000 Series has now been extended with the introduction of the Thermo Scientific iCAP 6200. The new enhanced range delivers the full spectrum of routine to research analysis solutions offering an ideal iCAP 6000 Series ICP to meet the needs of every type of laboratory.


### INTRODUCING...

## The NEW Thermo Scientific iCAP 6200

### *Affordable, analysis-ready simplicity for routine liquids analysis*

- Powerful performance and cost efficiency for routine analyses with standard sample throughput
- Duo plasma viewing for optimized management of sensitivity and interferences
- Ready-optimized sample introduction for consistent performance and ease of use
- User selectable method templates avoid the requirement for method development
- Future proof technology with field upgradeability to the iCAP 6300 model.





## Thermo Scientific iCAP 6300

### *Powerful productivity for routine liquids analysis*

- Powerful performance and cost efficiency for routine analyses with high sample throughput
- Dedicated radial or duo plasma viewing options for enhanced application flexibility
- Intuitive software tools for optimized liquid sample introduction
- Advanced gas flow control for optimized liquid sample introduction
- Flexible data acquisition tools for routine method development operations.



## Thermo Scientific iCAP 6500

### *Unrivalled productivity and versatility for liquids & solids analysis*

- Powerful performance and cost efficiency for highly demanding applications
- Dedicated radial or duo plasma viewing options for enhanced application flexibility
- Intelligent software tools for powerful auto-optimization of the sample introduction system
- Advanced 'Timescan' and 'Speed' modes for ultimate data acquisition capability
- Comprehensive accessory compatibility for liquid and solid sampling.

# Advanced iCAP 6000 Series design and technology

**The advanced design and technology of the iCAP 6000 Series enables the powerful performance, cost efficiency and ease of use that characterizes the range.**

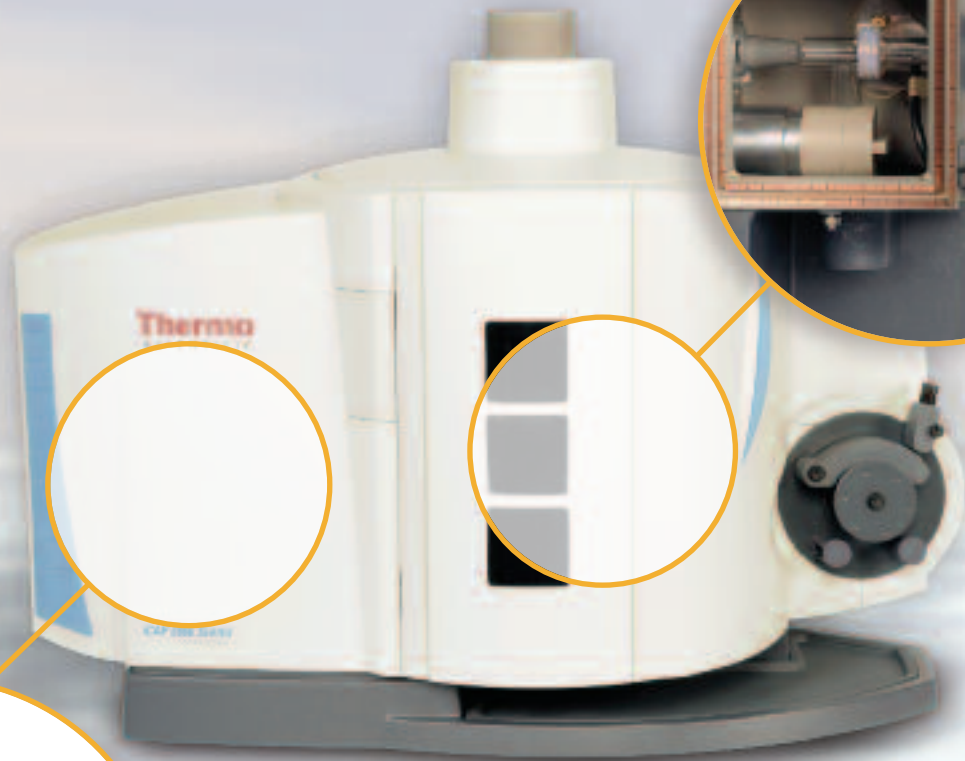
## Ergonomic Sample Introduction System

An open architecture sample introduction system enables easy access to the peristaltic pump, nebulizer, spray chamber and torch configuration in the iCAP 6000 Series.

A unique Drain Sensor is integrated within the sample introduction system to ensure the plasma is extinguished safely and the liquid flow is controlled in the event of a blockage or leak.

The self-aligning Enhanced Matrix Tolerance torch employs an integral orientation lock to establish reliable plasma gas connections automatically and is optimized to operate with almost 20 % lower argon usage than typical ICPs.

A screw threaded centre tube enables rapid disassembly from the torch body without removing the torch from the torch box and facilitates fast and efficient maintenance without switching off the plasma.



## Innovative Optical Design

The elegant fore-optic and polychromator design employs only four moving optical components to enable exceptional analytical stability and sensitivity across the entire wavelength range.

Compact echelle-based spectrometer design with unique all-spherical mirror configuration achieves exceptional analytical resolution over the entire area of the detector chip.

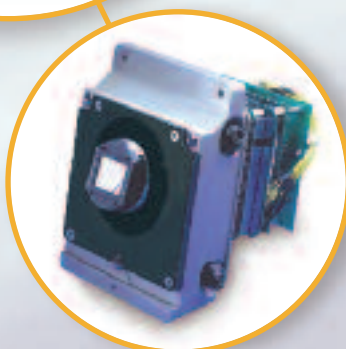
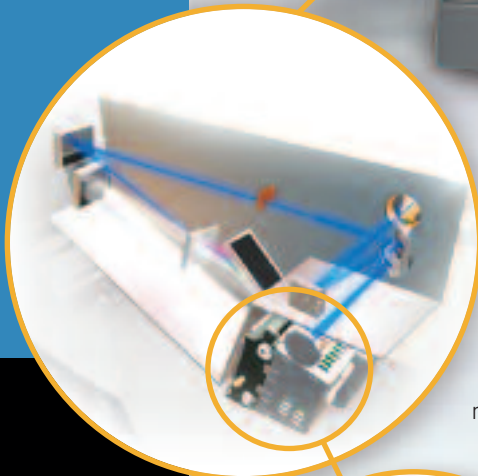
The polychromator features a highly efficient gas distribution system to purge air from the optical tank and plasma interface, ensuring maximum UV wavelength transmission whilst reducing purge gas costs.

## Advanced CID Camera Technology

The fourth generation Charge Injection Device (CID) complements the optical design and enables access to over 50,000 analytical wavelengths.

Inherently non-blooming non-destructive readout capability delivers increased signal to background ratios to achieve exceptional sensitivity and analyte detection limits, whilst enabling wide dynamic range.

Powerful simultaneous data acquisition capability enables the display of a two dimensional CID image of the entire spectrum for 'live' or post run processing and fast, efficient generation of qualitative and semi-quantitative data for any element.



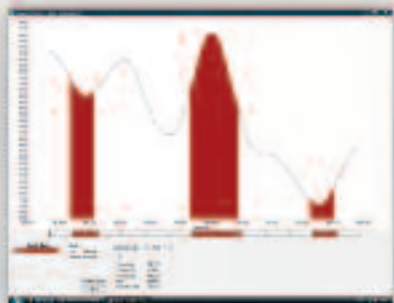
# Software and accessories

The Thermo Scientific iTEVA software makes routine tasks simple, and along with a range of accessories, adds scalable automation and application flexibility.

## Powerful & Intuitive Software Control

iTEVA software provides powerful tools to enable intuitive and efficient instrument operation using a browser-like interface with task specific toolbars, application tabs, navigation panel, status bar and synchronized scrolling of data.

Method development is simplified using intelligent auto-optimization tools and analytical interferences can be minimized and often completely avoided simply by optimizing the background and central pixel positions in the analyte subarray plots.



Automated runs are very straightforward to implement and the integral sequence automation tools enable full flexibility to add, delete and move samples in a live sample sequence.



Intelligent data acquisition and accessory control functions minimize time delays between samples for optimized sample throughput and cost efficiency.

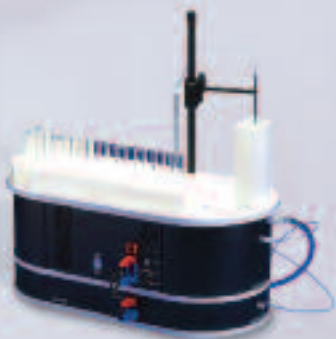
Quality Control routines are effectively maintained with multiple options for failure actions including automated recalibration and re-analysis routines whilst employing time saving techniques to enable re-analysis of only the failed analytical lines.

*Security* software provides a modular upgrade option and enables analyses in compliance with the 21 CFR Part 11 framework.

## Comprehensive range of Accessories

The iCAP 6000 Series integrates seamlessly with a comprehensive range of accessories that enable the versatile introduction of almost any sample matrix.

- Fully automated liquid sampling options, offering productivity-enhancing sample handling capabilities with a wide range of sample handling capacities
- Integrated hydride generation accessory with high efficiency micro-porous membrane gas liquid separator offers sub-ppb detection limits for As, Bi, Hg, Sb, Se, Sn and Te
- Ultrasonic nebulizer technology for improved sample transport efficiency enabling multi-element analysis capabilities with sub-ppb detection limits
- The Separate Sample & Excitation Accessory (SSEA) provides rugged sampling for direct analysis of solid metal and other electrically conductive samples
- A high energy 266nm Nd YAG laser provides advanced sampling for direct analysis of conductive and non-conductive solid samples.



## Laboratory Solutions Backed by Worldwide Service and Support

### iCAP 6000 Series Model Characteristics

	iCAP 6200	iCAP 6300	iCAP 6500
Plasma viewing	Duo	Radial or Duo	Radial or Duo
Detection capability*	<1 -ppb	<1 ppb	<1 ppb
Sample throughput	Standard	High	Very high
Matrix tolerance	High	High	High
Application suitability	Routine liquid applications	Demanding liquid applications	Demanding liquid and solid sampling applications
Method development tools	Standard and Method-ready	Advanced	Advanced and enhanced automated

\* For most elements when measured at their optimum wavelength.

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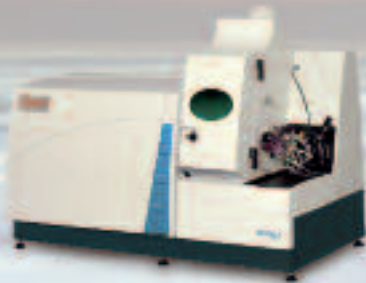
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### Thermo Scientific XSERIES 2 ICP Mass Spectrometers



### Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers



### Thermo Scientific iCAP 6000 Series ICP Emission Spectrometers



**iCAP 6000 Series ICP Winner of the Queen's Award for Enterprise 2009 – Innovation**

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