

## iCE 3000 Series Atomic Absorption Spectrometers



*Refreshingly different Atomic Absorption ... just add iCE*



Food & Agriculture



Environmental



Clinical & Pharmaceutical



Metals & Materials

The Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers are refreshingly different from any other atomic absorption instrument. They are compact, stylish and designed with ease of use as a priority.

Thermo Fisher Scientific is the leading provider of analytical instruments, equipment, reagents and consumables, software and services for research, analysis, discovery and diagnostics.

- 50 years of AA experience
- Award winning innovators in Atomic Absorption
- True dual atomization
- World wide service and applications support
- Pioneers of the ground breaking iCAP ICP

### Refreshingly different

- **Ergonomically designed**  
Easily accessible lamp carousel, quick fit lamps and flame compartment tray, speed up simple instrument tasks
- **Unique integrated furnace vision system**  
For effective and easy furnace method development
- **New improved burner design**  
Even with the most difficult samples, operation is prolonged and trouble free
- **Enhanced software**  
Renowned for its usability, extensive help functions and cookbook, the iCE SOLAAR software is now better than ever
- **New and extended wizards**  
Enables effective system utilization for quick, high productivity
- **Extensive auto optimization procedures**  
Let the instrument optimize critical parameters, saving you time







### Ease of use

It's crystal clear why an iCE 3000 Series instrument is so easy to use

- ✓ Compact and user-friendly
- ✓ Wizard software
- ✓ New improved atomizer design
- ✓ Integrated furnace vision system
- ✓ Self-checking iSQ tests
- ✓ Extended life time cuvettes
- ✓ Language options
- ✓ Sealed optics
- ✓ Quick to set up
- ✓ Auto-optimization
- ✓ Ergonomic design
- ✓ Intelligent lamp operation
- ✓ USB connection
- ✓ Comprehensive cookbook
- ✓ User configurable auto-sampler
- ✓ Automatic flame/furnace changeover

## Flame Analysis

### Optimization of flame system

Optimization routines can be included as part of your method so that the parameters are truly optimal.

### Unbeatable flame performance

Superior detection limits and a fully inert sample system.

### Safe and easy gas control

The gas control system is fully automatic thus ensuring repeatable flame conditions and safety.

### Fully customizable auto-sampler

Configure the solutions to your personal preference.

### Deuterium background correction for easy analysis

Deuterium background correction is provided by a unique Quadline D<sub>2</sub> source which gives guaranteed background correction.

### Optics designed for precision and ease-of-use

Self-calibrating monochromators and auto-aligning lamps ensure simple optical setup and optimum light throughput.

## Furnace Analysis

### Integrated furnace vision tool

Enables vital information to be gained on sample injection and behaviour and is now a standard feature on selected instruments.

### New furnace wizard

Guides you through the important steps required to achieve a fully optimized method with minimum effort.

### Configurable furnace auto-sampler

Define where you would like samples, standards and modifiers to be positioned according to your requirements.

### Optical feedback temperature control

The software will automatically control cuvette heating meaning that results will be drift free, accurate and repeatable.

### Long life cuvettes

A wide range of cuvette types are available for all analysis needs, including Extended Lifetime Cuvettes (ELC).

### Zeeman background correction option

Provides correction at the same wavelength as the analyte.

### Gas flow

Two independently controlled gas streams are intelligently controlled via the software.







## Thermo Scientific iCE SOLAAR Software

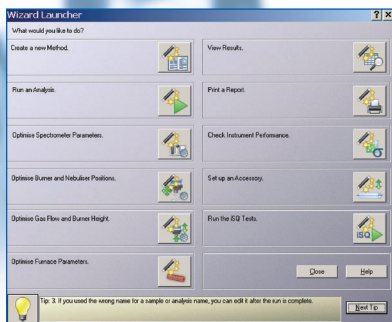
The iCE SOLAAR AA software package is intuitive and helpful. Extensive wizards guide you through various operational procedures making start-up exceptionally quick and simple.

The help text and cookbook provide additional information on the operational conditions for any elemental analysis. Application tips for sample preparation, matrix modifiers and many other important factors are available in the software. This support will give you the confidence to perform a successful analysis, no matter how difficult your samples seem.

There are many wizards available to walk you through various operations to achieve complete instrument and method set up.

### Wizards get you productive fast by:

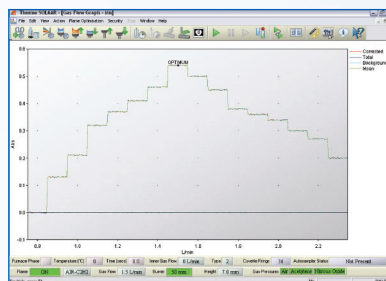
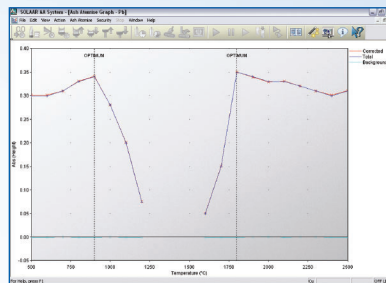
- Providing step by step guides to routine activities
- Allowing more advanced facilities to be explored as experience grows
- Demonstrating the correct sequence of operations to achieve a specific objective
- Giving users an opportunity to learn



## Thermo Scientific SOLAAR Security

SOLAAR Security is able to secure your data for compliance purposes or just for good practice.

Provides all the tools you need to comply with the FDA 21 CFR part 11 ruling by adding e-signatures, event logs, audit trails and access controls.





# Thermo Scientific iCE 3000 Series Product Range

## Thermo Scientific iCE 3300

Single flame atomizer AAS with fully automatic gas box.

*Complete solution for laboratories with a main need to perform flame analysis but with occasional furnace samples.*

- Simple flame system but with incredible versatility
- Six lamp auto-aligning carousel
- Double beam optics and self-calibrating Ebert monochromator.



## Thermo Scientific iCE 3400

Single furnace atomizer AAS with Zeeman and  $D_2$  background correction.

*When challenging detection limits are critical.*

- Six lamp auto-aligning carousel
- Furnace vision
- Echelle dual prism and and grating monochromator
- Vapour system and electrically heated cell can be utilised in this instrument

## Thermo Scientific iCE 3500

Dual flame and furnace AAS with standard or Zeeman furnace option. Essential furnace vision tool included as standard.

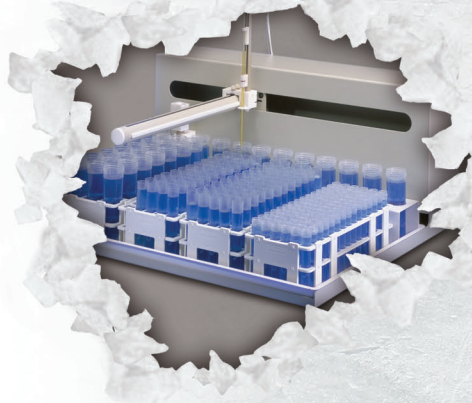
*Ideal for high throughput environments with a requirement for quick and regular flame and furnace analysis.*

- Software-controlled changeover from flame to furnace analysis without the operator even being in the room!
- Six lamp auto-aligning carousel for maximum light throughput
- $D_2$  background correction for flame and furnace analysis
- Zeeman background correction option available for furnace work
- Double beam optics with a dual monochromator consisting of an echelle prism and a grating





# Thermo Scientific AA Accessories



## Flame Auto-Sampler

iCE 3000 Series instruments support a range of auto-samplers made by CETAC to fulfill your more demanding volume workloads.

## Flame Dilution - ID100

This accessory can make standards from a master solution quickly and accurately. High-speed intelligent dilution will bring out of range samples into the calibration range.



## Vapor Generation - VP100

This fully software controlled system is a simple and cost effective way to reach lower detection limits for the Arsenic group elements. The optional EC90 electrically heated cell can offer improved performance and safety.

## Validator Packages

A comprehensive log book with pre-printed forms, detailed SOP's and integrated software. Providing all you need from specification, design and installation qualification to operational and performance qualification.



## Intelligent Spectrometer Qualification (iSQ)

A calibrated module is used to test various performance criteria of your instrument and provides the user with a simple and convenient pass and fail report.



# A refreshingly different Atomic Absorption

The Thermo Scientific iCE 3000 Series AAS is the clear and safe choice of instrument to complete your elemental analysis needs.

	iCE 3300	iCE 3400	iCE 3500
Atomizer type	Flame / furnace option	Furnace	Flame and furnace
Simple software	Yes	Yes	Yes
Full set of Wizards	Yes	Yes	Yes
Ergonomic design	Yes	Yes	Yes
New improved flame atomizer	Yes	Not applicable	Yes

## Thermo Fisher Scientific AA, ICP and ICP-MS

The use of Atomic Absorption (AA), Inductively Coupled Plasma (ICP) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) are the accepted and most powerful techniques for the analysis and quantification of trace elements in both solid and liquid samples.

Thermo Fisher Scientific is the only instrument manufacturer to offer AA, ICP and ICP-MS (Quadrupole and Sector) spectrometers to satisfy every aspect of routine to highly demanding research applications.

Develop your lab from the easy-to-use iCE Series AAS and high performance iCAP ICP or XSERIES 2 Quadrupole ICP-MS and up to the ultra-sophisticated ELEMENT2 HR-ICP-MS instrument. All instruments are designed with cutting-edge technology and are ideal for a wide range of applications including: environmental, materials, geological, food safety, clinical, semi-conductor, metallurgy and petrochemicals.



iCE 3000 Series AAS



iCAP 6000 Series ICP



XSERIES 2 ICP-MS



ELEMENT2 HR-ICP-MS

*In addition to these offices, Thermo Fisher Scientific maintains a network of representative organizations throughout the world.*

### Africa

+43 1 333 5034 127 • [analyze.emea@thermo.com](mailto:analyze.emea@thermo.com)

### Australia

+61 2 8844 9500 • [analyze.au@thermo.com](mailto:analyze.au@thermo.com)

### Austria

+43 1 333 50340 • [analyze.at@thermo.com](mailto:analyze.at@thermo.com)

### Belgium

+32 2 482 30 30 • [analyze.be@thermo.com](mailto:analyze.be@thermo.com)

### Canada

+1 800 530 8447 • [analyze.ca@thermo.com](mailto:analyze.ca@thermo.com)

### China

+86 10 5850 3588 • [analyze.cn@thermo.com](mailto:analyze.cn@thermo.com)

### Denmark

+45 70 23 62 60 • [analyze.dk@thermo.com](mailto:analyze.dk@thermo.com)

### Europe - Other

+43 1 333 5034 127 • [analyze.emea@thermo.com](mailto:analyze.emea@thermo.com)

### France

+33 1 60 92 48 00 • [analyze.fr@thermo.com](mailto:analyze.fr@thermo.com)

### Germany

+49 6103 408 1014 • [analyze.de@thermo.com](mailto:analyze.de@thermo.com)

### India

+91 22 6742 9434 • [analyze.in@thermo.com](mailto:analyze.in@thermo.com)

### Italy

+39 02 950 591 • [analyze.it@thermo.com](mailto:analyze.it@thermo.com)

### Japan

+81 45 453 9100 • [analyze.jp@thermo.com](mailto:analyze.jp@thermo.com)

### Latin America

+1 608 276 5659 • [analyze.la@thermo.com](mailto:analyze.la@thermo.com)

### Middle East

+43 1 333 5034 127 • [analyze.emea@thermo.com](mailto:analyze.emea@thermo.com)

### Netherlands

+31 76 579 55 55 • [analyze.nl@thermo.com](mailto:analyze.nl@thermo.com)

### South Africa

+27 11 570 1840 • [analyze.sa@thermo.com](mailto:analyze.sa@thermo.com)

### Spain

+34 914 845 965 • [analyze.es@thermo.com](mailto:analyze.es@thermo.com)

### Sweden / Norway / Finland

+46 8 556 468 00 • [analyze.se@thermo.com](mailto:analyze.se@thermo.com)

### Switzerland

+41 61 48784 00 • [analyze.ch@thermo.com](mailto:analyze.ch@thermo.com)

### UK

+44 1442 233555 • [analyze.uk@thermo.com](mailto:analyze.uk@thermo.com)

### USA

+1 800 532 4752 • [analyze.us@thermo.com](mailto:analyze.us@thermo.com)

**[www.thermo.com](http://www.thermo.com)**



FM 09032

Thermo Electron Manufacturing Ltd (Cambridge) is ISO Certified.

©2008 Thermo Fisher Scientific Inc. All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.

Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

BR40795\_E 01/08C

**Thermo**  
SCIENTIFIC