thermo scientific

iCE 3000 Series Atomic Absorption Spectrometers

Flame and furnace AAS analysis for routine laboratories

ThermoFisher SCIENTIFIC

iCE 3000 Series AAS

Simple, automated, single element analysis by flame or graphite furnace AAS from ppb to %

The Thermo Scientific™ iCE™ 3000 Series AAS enables simple measurement of elements in a wide range of samples. The flame atomizer is ideal for the measurement of high concentration samples, whilst the furnace atomizer achieves sub ppb detection. The dual atomizer system with Stockdale optics incorporates advanced background correction with a unique quadline deuterium source and optional Zeeman correction to ensure accurate analysis.

- Easy-access lamp carousel (with quick-fit lamps) speeds up everyday tasks
- Automated optimization wizards enable experienced and novice users to achieve optimal performance

Flame analysis

The iCE 3000 Series AAS flame instruments provide ideal analysis solutions for laboratories requiring wide detection capability for over 60 elements and enable rapid, robust and reliable analysis.

- Self-calibrating monochromator and auto-aligning lamps ensure optimum light throughput for maximum sensitivity
- Robust burner offers extended analysis when analyzing challenging samples
- Fully automatic gas control ensures repeatable flame conditions and safety
- Flame optimization routines incorporated into daily analysis ensure parameters are optimal

Furnace analysis

The dedicated furnace atomizers of the iCE 3000 Series AAS allow for unattended analysis of low concentration samples. The analysis is simplified by a wizard driven workflow which guides the user through the process of method development, ensuring optimal parameters for a specific analysis.

- Integrated Graphite Furnace Television (GFTV) enables vital information to be gathered on sample injection and allows optimization
- Configure how standards, samples and modifiers are used and located in the autosampler to suit your workflow
- Automatic optical control of the cuvette heating ensures repeatable heating, eliminating drift
- Extended life and platform cuvettes ensure maximum cuvette life-time for your sample type

Thermo Scientific iCE 3500 AAS.

Laboratory optimization

Simplify your AAS analysis without compromising performance

The iCE 3000 Series AAS enhances analytical performance and automation through the use of advanced accessories controlled by Thermo Scientific SOLAAR Software. The accessories enable the most challenging samples to be analyzed, whilst meeting the demands of a high-performance laboratory.

Flame auto-sampler
Supporting a range of auto-samplers, the iCE 3000 Series AAS enables operators to achieve demanding volume workloads through automation. The auto-samplers can also be used in combination with a range of additional accessories.

Flame dilution – ID100
This offers speed and accuracy by automatically preparing standards from a master stock solution. High-speed intelligent dilution ensures out-of-range samples are diluted into the calibration range.

Vapor generation – VP100
Software-controlled, this system is a simple and cost-effective solution for reaching lower detection limits in the Arsenic group elements.

Validator packages
Offering a comprehensive log book with pre-printed forms, detailed SOPs and integrated software, these packages provide 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 instrument performance criteria and provides a simple, convenient pass and fail report.

Thermo Scientific™ iCE SOLAAR™ software
The intuitive, easy-to-use iCE SOLAAR AAS Software has extensive wizards to guide you through various operational procedures, making start-up exceptionally quick and simple. The ‘help’ text and ‘cookbook’ provide additional information about 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 combines to give you confidence in performing successful analyses, 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.

They 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

Thermo Scientific SOLAAR security
SOLAAR Security secures data for compliance purposes and good practice. It provides all the tools required to comply with the FDA 21 CFR part 11 ruling by adding e-signatures, event logs, audit trails and access controls.

Sample analysis

Instruments and accessories to perform analysis of a wide range of sample types

Environmental analysis

The powerful detection capabilities of the iCE 3000 Series AAS graphite furnace and hydride generation systems are ideal for the targeted monitoring of trace elements in a range of environmental samples. This applies either in response to a specific environmental event or as a part of routine monitoring. The wizard-driven software simplifies method development for new analytes.

Food safety

You can measure key elements for food labeling applications using the flame atomizer and monitor toxic elements using the graphite furnace or hydride generation system for enhanced sensitivity. This combination allows concentration ranges from sub ppb to % to be accurately measured for compliance with international food safety and labeling standards. You can also use the intelligent spectrometer qualification tool to optimize the instrument's daily performance prior to analysis.

Pharmaceutical and nutraceutical compliance

Ensure you have a qualified instrument to comply with current and future legislation, including the new General Chapters and one Supplemental General Chapter of the United States Pharmacopeia:

<232> Elemental Impurities – Limits

<233> Elemental Impurities – Procedures

<2232> Elemental contaminants in dietary supplements

SOLAAR Security Software allows for full traceability of the results, with features to support compliance of CFR 21 Part 11 such as electronic signature and audit trail. Dedicated validation and qualification packages ensure fast installation and qualification of the instrument in your laboratory.

Industrial QA/QC

With a wide measurement range, the iCE 3000 Series AAS is well suited to a quality control environment. It has the ability to measure major elements in products as well as key contaminants that may pose a risk to product quality. The simplified wizard-driven software is suited to a production environment too, guiding users of any skill level through the analytical procedure from sample to result.

iCE 3000 Series AAS

Uncomplicated flame and furnace AAS analysis for routine laboratories

iCE 3300 AAS

A simple, versatility single atomizer AAS with fully automatic gas box.
A Complete solution for laboratories with a main need to perform flame analysis but with occasional furnace samples.

iCE 3400 AAS

Achieve challenging detection limits with a single graphite furnace atomizer and interference removal with Zeeman and D_2 background correction.

iCE 3500 AAS

A unique dual atomizer AAS with standard or Zeeman furnace option.
Essential furnace vision tool for simple instrument optimsation.
Ideal for high through put environments.

Find out more at **thermofisher.com/AAS**

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