Product Specifications

The Thermo Scientific iCE 3500 Atomic Absorption Spectrometer is a unique, dual atomizer instrument that provides unrivalled levels of performance in an innovative, user-friendly package.

The Thermo Scientific iCE 3500 Atomic Absorption Spectrometer

High performance, dual atomizer, double beam AA Spectrometer

The refreshingly different iCE 3500 Atomic Absorption Spectrometer provides unrivalled performance, flexibility and simplicity. A new, innovative burner design improves solids capacity and accuracy during flame analysis. Superior optics, innovative design and guaranteed background correction ensures unrivalled analytical performance. The unique dual atomizer design allows automatic, efficient and safe switching between flame and furnace analysis with no user intervention. The user friendly, Wizard driven Thermo Scientific SOLAAR Software guides new users through every aspect of an analysis and adds extra functionality for experienced users.

- Unique dual atomizer design enables safe, software-controlled switching between flame and furnace analysis with a single mirror movement
- High precision, double beam optics, combined with an Echelle monochromator produce stunningly low detection limits and incredible analytical stability
- New universal 50 mm titanium burner with improved solids capability increases the efficiency and accuracy of your flame analysis
- Unique Quadline deuterium background correction with guaranteed performance as standard
- Superior furnace vision system included as standard improves efficiency and simplifies method development by providing a high definition, real time video of the inside of the cuvette
- Improved efficient design minimises the footprint of the instrument and ensures that day-to-day analysis and maintenance is simple
- Enhanced, user-friendly software and comprehensive Wizard driven interface guides you through every aspect of an analysis
- Safety comes as standard with integrated software and hardware safety features and automatic gas control
- Simple installation and operation of the pre-aligned furnace and autosampler module
- Choose a deuterium only furnace, or a Zeeman AND deuterium background correction furnace, for the ultimate in flexible, interference free analysis
- Unique, state-of-the-art extended lifetime cuvettes (ELCs) provide vastly extended lifetimes, improving efficiency and saving you money
- Security software and validation packages allow complete 21 CFR part 11, GLP and GALP compliance (optional upgrades)

Unrivalled flame sensitivity is achieved by high efficiency nebulization into a fully inert spray chamber with impact bead and spoiler. The new finned 50 mm universal titanium burner ensures exceptional atomization even with the most difficult samples. The fully automatic gas box uses binary flow control for safe, reliable and repeatable flame conditions.

All critical parameters can be automatically optimized if required – burner height, gas flows and even optical instrument parameters.

The iCE 3500 Atomic Absorption Spectrometer accepts the Thermo Scientific GFS35 and the GFS35Z Integrated Graphite Furnace and Auto-sampler Module. Offer the ultimate in detection limits with minimum interferences. The GFS35Z provides a choice of Zeeman or Deuterium background correction for guaranteed performance. Dynamic optical temperature feedback ensures accurate heating rates of up to 3000 ºC per second, regardless of cuvette age. The unique GFTV furnace vision system is provided as standard, giving you the ultimate in effective and easy furnace method development.

The GFS35/GFS35Z offers unrivalled graphite furnace automation. Huge capacity and multiple solution preparation facilities cater for all needs. With automated ash/atomize temperature optimization, autosampler loading guides and the background correction options, furnace analysis has never been easier. The autosampler remains permanently in alignment with the furnace completely eliminating the need to re-align the probe and furnace head.

Thermo Fisher Scientific are the only supplier offering Extended Lifetime Cuvettes (ELC) with up to 10 x more lifetime than alternatives. Couple this with features such as pre-heated cuvette injection, cooling water temperature compensation and fast furnace operation, then you know you are making a safe choice.

The Thermo Scientific SOLAAR Software package is both intuitive and easy to use. Extensive wizards are able to guide the user through various operational procedures making start-up a simple and quick process.

Additional information on the operational conditions for any elemental analysis is available in the help text and cookbook. Application tips for sample preparation, matrix modifiers and many other important factors are also available within The Thermo Scientific SOLAAR software.

In addition, a full range of accessories are available to permit flame auto-sampling, intelligent dilution, vapour analysis and validation.

Technical Specification

Optics	Double beam
Monochromator	Echelle type
Lamp Carousel	6 Lamp Coded, auto-aligning
Photomultiplier	Wide range (180 nm to 900 nm)
Flame Atomiser	Universal system (uses 50 mm Finned Ti burner)
Furnace Atomiser options	GFS35 or GFS35(Z) combined module
Furnace Vision System	As standard
Background Correction	Guaranteed Quadline deuterium or AC Zeeman systems
Gas Management	Automatic binary control
PC Software	Included as standard
Security Package	Optional
Validation Package	Optional

The Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers comprising of:-

iCE 3300 Atomic Absorption Spectrometer:
Single flame atomizer AAS with fully automatic gas box

iCE 3400 Atomic Absorption Spectrometer:
Single furnace atomizer AAS with Zeeman and D_2 background correction

iCE 3500 Atomic Absorption Spectrometer:
Dual flame and furnace system AAS with Standard or Zeeman furnace option

The iCE 3000 Series Atomic Absorption Spectrometers provides an unrivalled range of solutions from Thermo Fisher Scientific; the award winning innovator in Atomic Absorption Spectrometry.

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Thermo Electron Manufacturing Ltd (Cambridge) is ISO Certified.

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