



Thermo Scientific iCE 3500 AAS

# High performance, dual atomizer, double beam AA Spectrometer

## Benefits

- Double beam optics for exceptional optical stability
- Quadline background correction with guaranteed performance
- Universal titanium burner for high solids capability
- Dual atomizer for simple flame and furnace analysis

## Keywords

Background correction, Dual atomizer, Ease of use, Elemental analysis, Flame AAS, Furnace Analysis, GFTV, Single element analysis

The Thermo Scientific™ iCE™ 3500 AAS provides unrivalled performance, flexibility and simplicity. The innovative dual atomizer design enables safe, software-controlled switching between flame and furnace analysis with a single mirror movement. The high precision, double beam optics, combined with an Echelle monochromator produce low detection limits and long term analytical stability. Unique Quadline deuterium background correction with guaranteed performance is provided as standard.

The flame atomizer design incorporates a 50 mm titanium burner with improved solids capability to increase the efficiency and accuracy of your flame analysis

The furnace atomizer includes GFTV, a furnace vision system which improves efficiency and simplifies method development by providing a high definition, real time video of the inside of the cuvette. There is capability to choose a deuterium only furnace, or a Zeeman and deuterium background correction furnace, for the ultimate in flexibility and interference free analysis. To extend the long term performance of analysis extended lifetime cuvettes (ELCs) can be used.

The comprehensive user-friendly software wizard-driven Thermo Scientific SOLAAR™ software guides you through every aspect of an analysis ensures that running samples and developing methods is easy. The Thermo Scientific SOLAAR Security software and validation packages provide tools to aid with 21 CFR part 11, GLP and GALP compliance.

The flame sensitivity is achieved by high efficiency nebulization into a fully inert spray chamber with impact bead and spoiler. The finned 50 mm universal titanium burner ensures exceptional atomization even with the most difficult samples. The fully automatic gas box uses a mass flow controller 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 AAS 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 °C 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.

The Extended Lifetime Cuvettes (ELC) provide up to 10 times 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 SOLAAR Software 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 SOLAAR software.

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

**Table 1.**

Thermo Scientific iCE 3500 AAS	
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 Mass Flow Control (MFC)
PC Software	Included as standard
Security Package	Optional
Validation Package	Optional

Find out more at [thermofisher.com/AAS](http://thermofisher.com/AAS)

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