

Combined Flame and Graphite Furnace Solutions from the Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers

Dual atomizer design with flexible background correction options

The Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers provide the complete trace elemental analysis package, offering stunning simplicity, innovative design and superior analytical performance

The technique of Atomic Absorption Spectrometry has an unlimited number of applications and is still a popular choice for uncomplicated trace elemental analysis. Flame Atomic Absorption Spectrometry (FAAS) is widely accepted in many industries which continue to utilize the unique and specific benefits of the technique. Graphite Furnace Atomic Absorption Spectrometry (GFAAS) is an established technique for measuring elements at parts per billion concentrations with incredibly low sample volumes.

Combined flame and furnace solutions from the Thermo Scientific iCE 3000 Series Atomic Absorption Spectrometers are exceptional instruments which allow maximum functionality and flexibility. Both systems have a dedicated flame compartment with automatic control and set-up through the software. Complete user safety and confidence can be ensured with a wide range of safety interlocks, fully automatic gas box and automatic shut down features.



When furnace analysis is required the unique dual atomizer design of the iCE 3500 provides a second sample compartment where the furnace can be left permanently aligned and ready for use. Switch over between the two compartments is software controlled with absolutely no user intervention required and so maximum productivity is achieved.

The full SOLAAR software suite is provided with every AA spectrometer. There are a variety of wizards, simple guides and comprehensive help text to assist in operation and provide the answer to questions immediately.

Thermo
SCIENTIFIC

Combined Flame and Graphite Furnace Atomic Absorption Spectrometers

Flame systems provide the ideal solutions for laboratories requiring percent level to parts per million detection of a wide range of elements. Furnace systems offer incredibly low detection limits in the ppb range and the analysis can be fully automated.

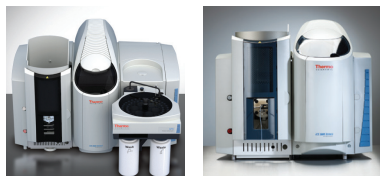
The ICE 3000 Series Atomic Absorption Spectrometers provides two options for those users requiring flame and furnace capabilities:

1. The **Thermo Scientific iCE 3300 AA** Spectrometer with GFS33 Graphite Furnace and Autosampler

2. The **Thermo Scientific iCE 3500 AA** Spectrometer with GFS35 or GFS35Z Graphite Furnace and Autosampler

Features and Accessories

- The universal 50 mm finned titanium burner allows use of both air/acetylene and nitrous oxide/acetylene flame types and maintains a stable, reproducible flame.



- Accuracy and precision of sample injection is ensured with the furnace autosampler. It can prepare multiple standards from a single master standard, intelligently dilute over-range samples and adds matrix modifiers to complex samples.
- A combined Flame and Furnace Validator package is available, providing Installation Qualification (IQ) and fully automated Operational Qualification (OQ). (Optional).

Table 1. Summary of the flame and furnace solutions from the iCE 3000 Series Atomic Absorption Spectrometers

	iCE3300	iCE3500
Capability	Flame and/or Furnace	Flame and Furnace
General		
Number of sample compartments	1	2
PC Control	Yes	Yes
Software	Included as Standard	Included as Standard
Lamp carousel	Auto aligning	Auto aligning
Lamp capacity	6	6
Lamp type	Coded and Uncoded Single and Multi Element	Coded and Uncoded Single and Multi Element
Optics		
Monochromator	Ebert	Echelle
Spectral Bandwidths	0.2, 0.5 and 1.0 nm	0.1 (below 400 nm), 0.2, 0.5 and 1.0 nm
Reciprocal Linear Dispersion	2.0 nm/mm at 200 nm	0.5 nm/mm at 200 nm
Grating	1800 lines/mm	2D Spectrum
Optical set up	Automatic	Automatic
Wavelength range	180–900 nm	180–900 nm
Drift Correction	Double Beam	Double Beam
Flame Features		
Banner type	Choose 50 mm finned universal burner OR 100 mm burner	Choose 50 mm finned universal burner OR 100 mm burner
Gas Box	Fully Automatic	Fully Automatic
Flame background correction	Deuterium	Deuterium
Flame autosampler	Compatible with Cetac 260 , Cetac 520	Compatible with Cetac 260, Cetac 520
Furnace Features		
Furnace model	GFS33	GFS35 or GFS35Z
Furnace vision system (GFTV)	As Standard	As Standard
Furnace background correction	Deuterium	Deuterium
Automatic Flame to Furnace change over	No	Yes
Cuvettes	Normal, Coated, Extended life (ELC), Platform	Normal, Coated, Extended life (ELC), Platform
Options		
Vapor Upgrade	Yes	Yes
Validator Packages	Yes	Yes
Security Software	Yes	Yes

The full range of iCE 3000 Series Atomic Absorption Spectrometers including dedicated flame, dedicated furnace and dual atomizer options. Discover them all at www.thermoscientific.com/ice

thermofisher.com

©2016 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific 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.

Africa-Other +27 11 570 1840

Australia +61 3 9757 4300

Austria +43 810 282 206

Belgium +32 53 73 42 41

Canada +1 800 530 8447

China 800 810 5118 (free call domestic)
400 650 5118

Denmark +45 70 23 62 60

Europe-Other +43 1 333 50 34 0

Finland +358 9 3291 0200

France +33 1 60 92 48 00

Germany +49 6103 408 1014

India +91 22 6742 9494

Italy +39 02 950 591

Japan +81 45 453 9100

Latin America +1 561 688 8700

Middle East +43 1 333 50 34 0

Netherlands +31 76 579 55 55

New Zealand +64 9 980 6700

Norway +46 8 556 468 00

Russia/CIS +43 1 333 50 34 0

Singapore +65 6289 1190

South Africa +27 11 570 1840

Spain +34 914 845 965

Sweden +46 8 556 468 00

Switzerland +41 61 716 77 00

UK +44 1442 233555

USA +1 800 532 4752

Thermo
SCIENTIFIC

Part of Thermo Fisher Scientific