

EDINBURGH
ANALYTICAL



IA30 FTIR SPECTROMETER

www.edinburghanalytical.com

EXCELLENCE IN SPECTROSCOPY

PRECISION IN EVERY MEASUREMENT

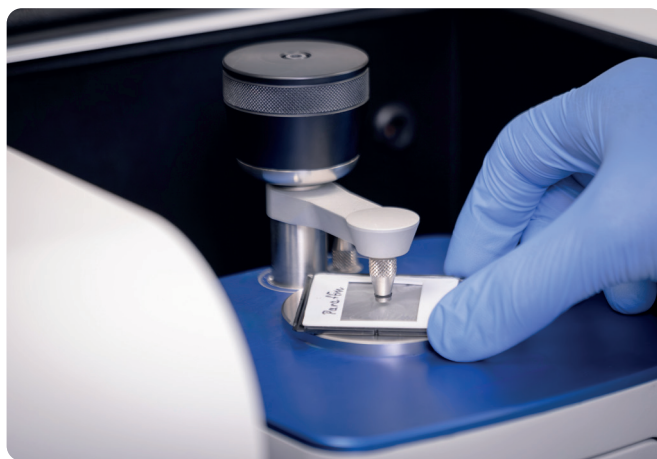
EDINBURGH ANALYTICAL

Edinburgh Analytical focuses on providing cutting-edge solutions and support for general and analytical laboratories while maintaining the core values and culture of excellence that define Edinburgh Instruments.

EDINBURGH INSTRUMENTS

Edinburgh Instruments has been providing high performance instrumentation to the Molecular Spectroscopy market for over 50 years.

Our photoluminescence, Raman, and transient absorption spectrometers are always designed with a focus on their applications, from routine analysis in industry to demanding research.



IA30 APPLICATIONS



Pharmaceuticals



Food



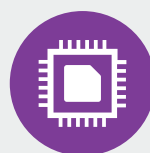
Forensics



Chemistry



Polymers



Semiconductors



Petrochemical

MOLECULAR SPECTROSCOPY | UV-Vis | FTIR | Fluorescence



INTRODUCING IA30 HIGH PERFORMANCE BENCHTOP FTIR SPECTROMETER



The IA30 is a high-performance benchtop Fourier Transform Infrared (FTIR) spectrometer from Edinburgh Analytical.

The IA30 is the perfect choice for analytical and research applications such as polymer, semiconductor, and pharmaceutical samples, offering simple operation as well as fast and accurate results. IR absorption, transmission, and reflectance can all be measured in the IA30 using the modern and easy to use software package, Miracle™.



KEY FEATURES

- > Outstanding Performance – High sensitivity and spectral resolution
- > User-friendly – Simple to operate and suitable for all user levels, from beginner to advanced
- > Maintenance-Free – No maintenance required with moisture control technology
- > Miracle Software – Modern, powerful and intuitive software



PERFORMANCE & UPGRADE

HIGH PERFORMANCE GUARANTEED

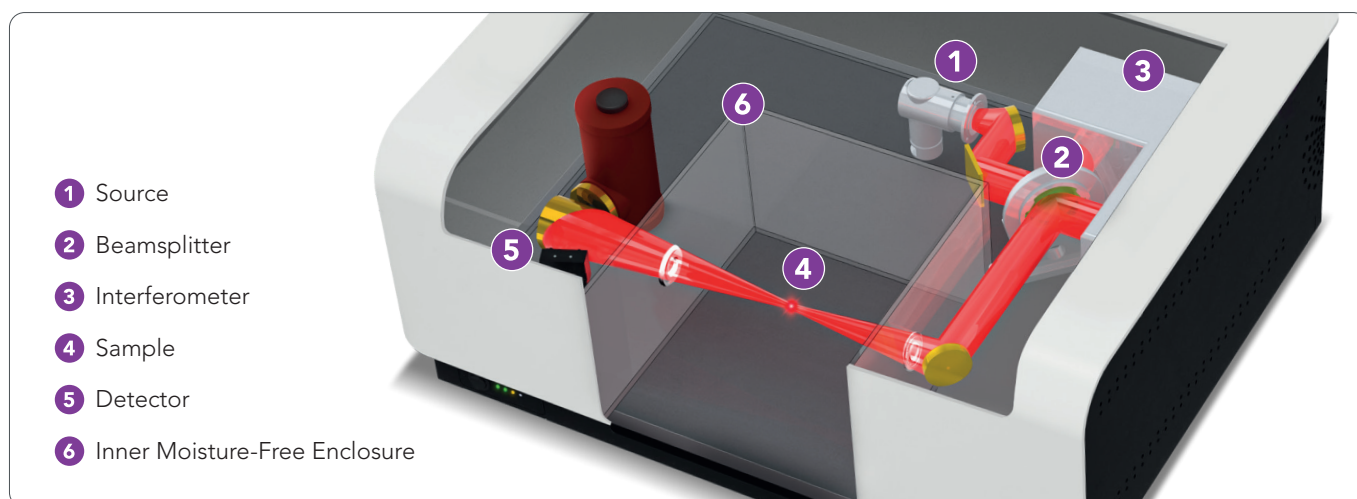
The IA30 is a modern benchtop FTIR instrument with guaranteed hardware and software performance.

A robust interferometer is at the core of the IA30, which is built on an anti-vibration frame to minimise any influence from the environment. The interferometer features a solid-state reference laser with a long operating life.

The combination of a stable high-intensity IR source and broadband DLaTGS detector ensures repeatability and accuracy. The result is a robust and reliable instrument giving data that you can trust.

High spectral resolution from 0.5 cm⁻¹ is available for measurements of narrow infrared lines, up to a resolution of 32 cm⁻¹ for recording of fast kinetic processes.

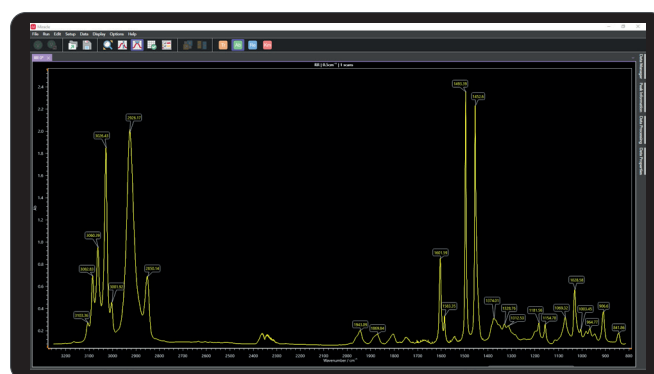
All IA30 specifications are guaranteed and every unit goes through rigorous validation procedures to ensure that your spectrometer is up to the high standards of Edinburgh Analytical.



MAINTENANCE-FREE

The IA30 does not require any consumables for routine operation and has minimal running costs. It has multiple features to help you maintain it:

- > Built-in humidity control system so you don't need to exchange desiccant.
- > Status indication lights on the instrument: on, off, standby, scanning.
- > Hardware and software display of temperature and humidity for peace of mind.
- > User-friendly software wizards for performance verification.
- > Autocalibration of wavenumber.



Performance is easily verified by the user with a polystyrene sample

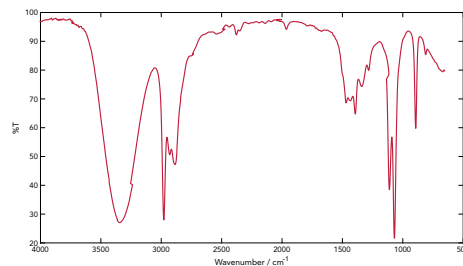


ACCESSORIES

STANDARD SAMPLE HOLDER

Transmission sample holder for 50 mm x 50 mm filters and slides included with every IA30.

This holder also serves as a mount for a variety of vertical liquid and film holders and may also be used to support gas cells.

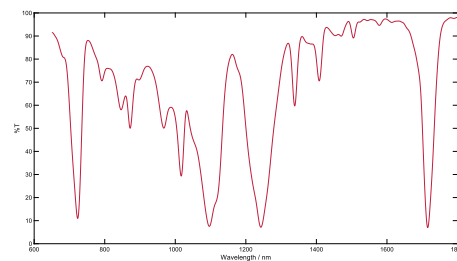
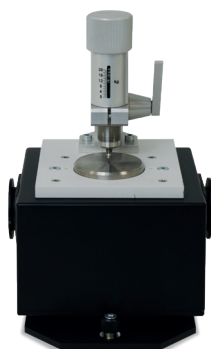


FTIR spectrum of CO₂ gas at low wavenumbers

ATR SAMPLING ACCESSORIES

A variety of ATR options are offered for powder, liquid, film and bulk samples.

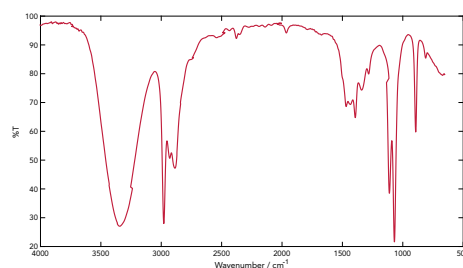
Single and multiple reflection ATR crystals are available such as diamond, germanium and ZnSe, as well as sandwich materials including ZnSe/diamond.



ATR-FTIR spectrum of PET film

LIQUID SAMPLE HOLDER

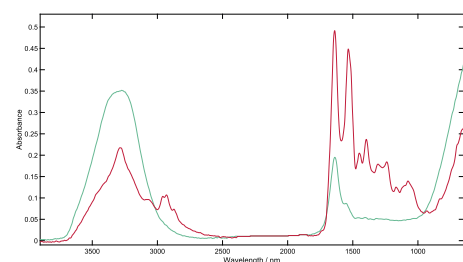
Accessory for routine measurement of liquids which accommodates horizontal liquid holders with a variety of optical path lengths.



FTIR spectrum of ethanol with a 50 µm path length

TEMPERATURE-CONTROLLED ATR

Temperature-dependent FTIR measurements on films, liquid, powders and bulk samples can be performed using temperature-controlled ATR accessories, from room temperature up to >100°C.



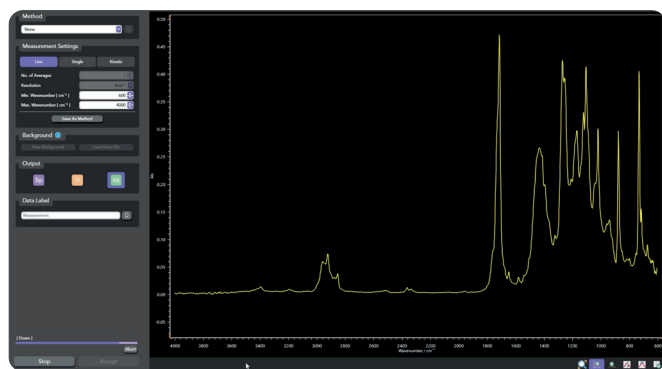
ATR FTIR of human serum albumin before and after drying at 50°C



USER FRIENDLY SOFTWARE

MIRACLE® PC-CONTROLLED SOFTWARE

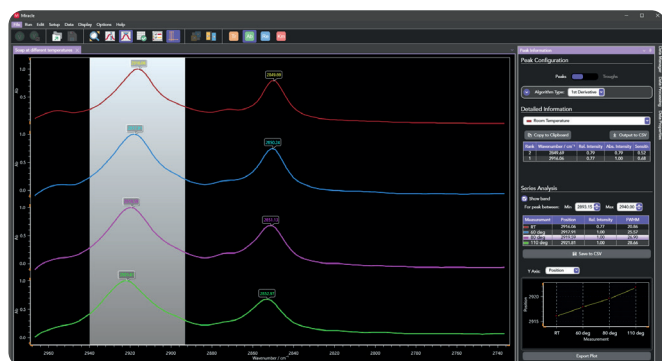
The Miracle software package is designed specifically for the IA30 spectrometer with a focus on ease of use and smooth workflow. Miracle controls every aspect of your experiment, from instrument setup to data acquisition, analysis and reporting, ensuring intuitive operation at every step.



Two user levels are offered in Miracle making it suitable to a wide range of applications. Standard user mode is optimal for analysis and teaching labs where routine experiments are carried out.

Advanced user mode unlocks instrument configuration options and complex analysis functions, suitable for R&D and the most demanding applications.

Data analysis in Miracle is highly flexible: it is possible to undo or rearrange processing steps, so you can access the raw data and fine-tune your analysis. The software allows you to reapply apodization with a different function, for better comparison with other spectra.



MIRACLE KEY FEATURES

- + Measurement types to suit every accessory: Transmission, Absorption, Reflection, Kubelka-Munk
- + Selection of spectral resolution and wavenumber range
- + Live signal monitoring, single scan, kinetic series
- + Pre-programmed methods for repeating routine analysis
- + Advanced user mode for complex applications
- + Instrument validation wizards
- + Autocalibration
- + Data operations including choice of apodization, baseline subtraction, arithmetical operations, cropping, smoothing, interpolation, etc.
- + Comprehensive peak analysis wizard with a range of peak parameters and fitting algorithms
- + User-configurable layout and data presentation
- + Export data into CSV and TXT
- + File format compatible with FTIR databases



SPECIFICATIONS

Standard Configuration	Spectral Range	8000 - 350 cm ⁻¹
	Sensitivity	SNR ≥ 20,000:1
	Resolution	0.5 cm ⁻¹ , 1 cm ⁻¹ , 2 cm ⁻¹ , 4 cm ⁻¹ , 8 cm ⁻¹ , 16 cm ⁻¹ , 32 cm ⁻¹
	Accuracy	0.5 cm ⁻¹
	Source	High-intensity ceramic source
	Detector	DLaTGS
	Beamsplitter	Germanium coated KBr
	Hygroscopic Integrity	Integrated desiccants, electronic dry-membrane, embedded LCD and software hygrometers for maintenance-free operation
	Windows	KBr window exchangeable by user
	Operating Voltage	Universal mains input 100-240 VAC, 47-63 Hz
Sample Accessories	Transmission Sample Holder	Compatible with films and cuvettes
	Attenuated Total Reflectance (ATR)	Basic and advanced ATR models available with a choice of crystal (diamond, Ge, ZnSe)
	Others	Diffuse reflectance, custom and third-party accessories available
Software	Miracle	Powerful and intuitive software for data acquisition, analysis and presentation, full control of all interferometer, amplifier, temperature and humidity monitoring
	Measurement Types	Transmission, Absorption, Reflection, Kubelka-Munk
	Acquisition Modes	Live signal monitoring, single scan (including user-defined methods), kinetic series
Dimensions	W x D x H	660 mm x 540 mm x 300 mm
	Weight	37 kg



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SCAN ME

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Customer support is available worldwide

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