

FTIR SPECTROMETER INFRA 3000E



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

►► Specifications :

| | |
|---------------------------|--|
| Wavelength range, IR | 7000 to 400 cm ⁻¹ (without ATR accessory) |
| Resolution, standard | 1 cm ⁻¹ |
| Resolution, option | 0.5 cm ⁻¹ |
| Interferometer | Pendulum roof mirror type |
| Beam diameter | 30 mm |
| Aperture ratio | f 3.2 |
| Beamsplitter, standard IR | Multicoated KBr |
| Beamsplitter, option | ZnSe |
| Frequency reference | VCSEL /HeNe laser |
| Sample chamber | Open architecture, optical axis 63.5 mm above the baseplate, wide 200 mm |
| Accessories | compatible with all of your favorite accessories |
| Beam at sample | 10 mm dia. |
| IR source | High intensity air cooled ceramic |
| Detector | low noise DLATGS |
| Data acquisition system | 18 bit, high speed |
| Dessiccant possibility | Yes |
| Operating system | Windows based |
| Interface | USB 2.0 |
| Power | 12 VDC, 30 W |
| Dimensions | W49xD39xH20 cm |
| Weight | 18 kg |
| Temp. environment | 15 - 28 °C |
| Humidity environment | Best below 65% |

►► General :

The infra 3000E of FTIR portable spectrometers represent a low cost Fourier transform infrared and near infrared portable spectrometers and employ a number of unique features that ensure high performance from a compact instrument.

The infra 3000E measures just 49 X 39 X 20 cm and is regarded as one of compact and versatile infrared FTIR spectrophotometers. The design of the infra 3000E is unique both in terms of optical design and the software and firmware designed specifically to significantly reduce overall analytical times.

The optical interferometer geometry is employing a new compact Michelson self compensating optical system that eliminates many of the optical alignment problems found in conventional type optical interferometers.

The infra 3000E design avoids the use of conventional corner cube optics and dynamic alignment. In practice this means that the instrument can be used in the research laboratory, in any university or college environment and if required, can also be used outside laboratory or in remote locations.

▶▶ Interferometer Performance :

All FTIR instruments offer high S:N ratios and can provide SNR up to 12000:1. Resolution in the infrared is available 2 cm^{-1} and programmable up to 32 cm^{-1} (option 0.5 and 1 cm^{-1}). The overall wavelength range is 7000 to 400 cm^{-1} (IR) or 15000 to 3850 cm^{-1} (NIR).

▶▶ The Sample Compartment

The sample compartment is using open optical path geometry. The height of the optical axis above the baseplate is 63.5 mm. This open sample compartment is 200 mm wide and can accommodate practically all of accessories supplied by specialist accessory manufacturers.

▶▶ Extending Wavelength Ranges

In order to facilitate the use of more than one beam splitter or detector , provision has been made to interchange the beam splitter and detector assemblies allowing the infra 3000E to be used at any wavelength from 15000 to 400 cm^{-1} .

| Beam Splitters | Range subject to coatings |
|------------------|----------------------------------|
| KBr | 7,000 to 400 cm ⁻¹ |
| ZnSe | 5,000 to 500 cm ⁻¹ |
| CaF ₂ | 10,000 to 1,000 cm ⁻¹ |
| Quartz | 15,000 to 3,000 cm ⁻¹ |

►► **Detector Options :**

The standard IR detector is a selected high sensitivity DLATGS pyroelectric design providing the highest possible signal to noise for all but the most demanding applications.

However there are many applications in infrared spectroscopy where high resolution analysis is required for materials with high absorption characteristics and for these applications cryogenically cooled MCT detector options are available each with a specific wavelength range.

In case of NIR spectral region two types of photodiodes are available: Si and InGaAs.

►► **Software :**

For Windows software is supplied on CD and provided with each system shipped. The software includes features for all standard analytical requirements including manipulation of spectral data, instrument control, plot with preview on the screen plus many others.

Also included are several facilities for analytical modelling of interferogrammes or spectra, with smoothing, and baseline correction, interactive editing and data manipulation. Also spectral subtraction, mixture subtraction, smoothing derivatives, plot with preview etc.

Data input and output is possible in ASCII or JCAMP. Other commercial programmes can be used including Thermo/Galactic GRAMS for features such as Library Search. The Interspec for Windows programme is written in 32 bit protected mode.

Our unique software has been designed specifically for multi function applications, it is easy to use and it is provided free of charge. The utility of the for Windows programme can be extended by adding other commercial programmes such as search, component identification, Kramers Kronig Transform, Chemometrics, etc. to suit individual requirements.

▶▶ **HPLC Servicing, Validation, Trainings and Preventive Maintenance :**

- HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.
- Trainings :We also take up preventive maintenance to reduce downtime of HPLC’s Trainings.
- AMC’s/CMC : We offer user training both in-House and at customer sites on PLC principles, operations, troubleshooting.
- Validations : We have protocols for carrying out periodic Validations as per GLP/ GMP/U SFDA norms.
- Instruments : We offer instruments/Renting Services Modules like pumps, detector etc. on Rent.



▶▶ **About Analytical Technologies**

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the globe. Analytical Technologies Limited is an ISO :9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

▶▶ **Our Products & Technologies**

| | | | | | | |
|--|---|---|---|--|---|---|
|  |  |  |  |  |  |  |
| UV/VIS Spectro 2080+ Double Beam | Infra FTIR | Optima Gas Chromatograph 3007 | Optima Gas Chromatograph 2979 Plus | Flash Chromatograph | Atomic Absorption Spectrophotometer | Liquid Partical Counter |
|  |  |  |  |  |  |  |
| Optical Emission Spectrophotometer | DSC/TGA | Semi Auto Bio Chemistry Analyzer | HEMA 2062 Hematology Analyzer | Micro Plate Reader/Washer | URINOVA 2800 Urine Analyzer | Total Organic Carbon 3800 |
|  |  |  |  |  |  |  |
| Fully Automated CLIA | NOVA-2100 Chemistry Analyzer | PCR/Gradient PCR/ RTPCR | TOC Analyzer | Laser Particle Size Analyzer | Ion Chromatograph | Water purification system |

▶▶ Regulatory compliances



▶▶ Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



Analytical Foundation

1. Research & Innovation Scientist's awards / QC Professional Award: Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

▶▶ Reach us @



HPLC Solutions MultipleLabs Analytical Bio-Med Analytical Distributors Analytical Foundation (Trust)

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E: info@hplctechnologies.com
info@multiplelabs.com
info@analyticalgroup.net
info@analyticalbiomed.com

W. www.ais-india.com
www.analycalgroup.net
www.hplctechnologies.com
www.multiplelabs.com

Sales & Support Offices:
across the country :
Distributors & Channel
partners World Wide

Note : Company reserves rights to add/delete/modify the contents /technical specifications of the catalogue without prior notice.