

FTIR - 3990

FT-IR Spectrometer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

►► Introduction

FTIR 3990 Fourier transform infrared spectrometer is an independent research and development of products, it is the most competitive FTIR convenient installation, simple use, convenient maintenance, our FTIR is widely used by materials science, bio-pharmaceutical, petrochemical, food safety and other industry analysis instruments, it's also adopted by university laboratory for scientific research and teaching.

Wave number Range	7800 ~ 375 cm ⁻¹
Interferometer	Michelson interferometer with 30 degrees of incidence angle
100% line tilt range	Better than 0.5% (2200~1900cm ⁻¹)
Resolution	1 cm ⁻¹
Wave Number Repeatability	1 cm ⁻¹
Wave Number Accuracy	0.01 cm ⁻¹
Signal Noise Ratio	30000:1 (DLATGS, resolution@4cm ⁻¹ . sample and background scan for 1 min@2100cm ⁻¹)
Detector	High resolution DLATGS detector with Moisture-proof coating
Beamsplitter	KBr coated with Ge(Made in USA)
Light Source	Long life, air cooled IR light source(Made in USA)
Electronic System	A/D converter of 24 bits at 500MHz, USB 2.0
Power	110-220V AC, 50-60Hz
Dimension	450mm×350mm×235 mm
Weight	14Kg

►► Principle

The FTIR with Michelson interferometer principle, the light emitted by the light source by Michelson interferometer to optical interference, let interference illumination samples, the receiver receives the interference light with sample information, and then by the computer software by transform to obtain the spectra of the samples.

►► Reliable optical system

- The design integrates main components to an optical bench machined from a cast aluminum, accessories will be mounted by needle positioning, no need to adjust.
- Sealed Michelson interferometer, combined with moisture proof beam splitter and bigger Moisture proof agent box to get 5 times moisture proof ability.
- The temperature observation window adopts 7 degree forward design, which conforms to the principle of human engineering, easy to observe and convenient to replace the molecular sieve.
- The design of push pull type sample bin can greatly reduce the interference of water and carbon dioxide in the air on the test results, and it's designed larger to access various accessories.
- Working power less than 30W, green environmental protection.

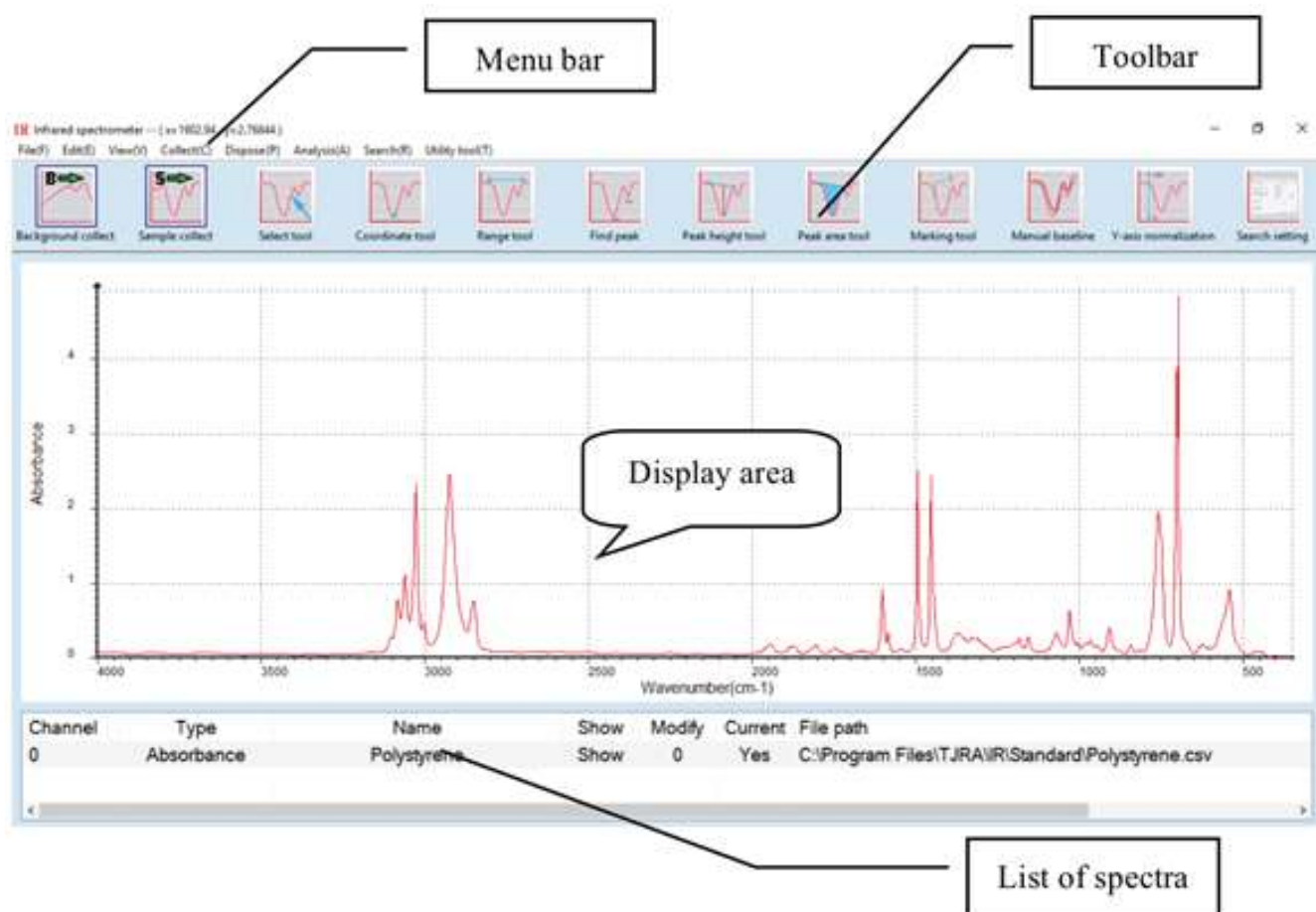
►► High stable components

- The sealing interferometer uses USA imported gold cube corner reflector with high reflectivity and angular accuracy.
- With high performance long life ceramic light source imported from USA, the luminous efficiency is as high as 80%.
- VCSEL laser imported from USA with high performance.
- High sensitive DLATGS detector imported from USA.
- It's off axis mirror using SPDT cutting process, with excellent optical efficiency and system consistency.
- The imported special steel rail, heavy load, low friction, ensure data stability and repeatability.

►► Powerful intelligent software

- Intelligent human-computer interaction and operation guide design, you can quickly get started and skilled whether you have contacted the FTIR software.
- Unique spectral data acquisition monitoring preview mode, land acquisition process.
- Provide standard library of approximately 1800 spectra for free, include most common Compounds, drugs, oxides.
- Software with GB / T 21186-2007 national standard calibration function and JJF 1319-2011 infrared calibration standard calibration function.

►► Spectrum sample



►► Usual Optional Parts

<p>ATR</p> <p>Znse or Diamond crystal optional Sampling for solid, polymer, rubber, powder, liquid, paste and gel.</p> <p>High pressure lamp with a maximum pressure of 18kg (40 /bs)</p> <p>Crystal diameter of 1.8mm with a pressure of 10,141PSI</p> <p>Swivel,flat and concave tips for various types of samples</p> <p>Liquids sampling accessories</p>	
<p>Sheet Mold</p> <p>A mold can fix to the press, then press the powder into a window in order to test by FTIR.</p> <p>Diameter 13mm, thickness 0.1-0.5mm, without demoulding.</p>	
<p>Agate mortar</p> <p>Grand solid sample and KBR crystal together into powder, then fill the sample into sheet mold to press.</p> <p>Diameter 70mm</p>	

<p>Press</p> <p>FTIR solid sample treatment, tablet power sample into window to test.</p> <p>Pressure Range 0-15T (0-30MPa)</p> <p>Working Area 85×85×150mm</p> <p>Dimension 260×190×430mm</p> <p>Gross weight 29kg</p>	
<p>Liquid Cell</p> <p>For liquid sample</p> <p>Kbr window, deliquescent, wavelength range 7000-400cm⁻¹</p> <p>Light transmittance range 2.5μm~25μm</p>	
<p>Gas Cell</p> <p>Normally it's used under one standard atmospheric pressure. The gas cell adopts KBr or CaF₂ material as window, with the transmission wavelength of 2.5-25 μ m and optical path of 100 or 50mm.</p> <p>It can also be equipped with CaF₂, NaCl, krs-5 and other materials.</p>	
<p>Intelligent electronic moisture-proof cabinet</p> <p>Remove the humidity in the cabinet, can protect FTIR from moisture, <i>highly recommended if additional freight cost accepted.</i></p> <p>Dimension 650*560*370mm</p> <p>Power6W/H(MAX: 42W)</p> <p>Weight 20kg</p>	

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HPLC Servicing :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.

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3007



Optima Gas
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Counter



Optical Emission
Spectrophotometer



DSC/TGA



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Chemistry Analyzer



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Analyzer



Micro Plate
Reader/Washer



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Total Organic
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system

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