

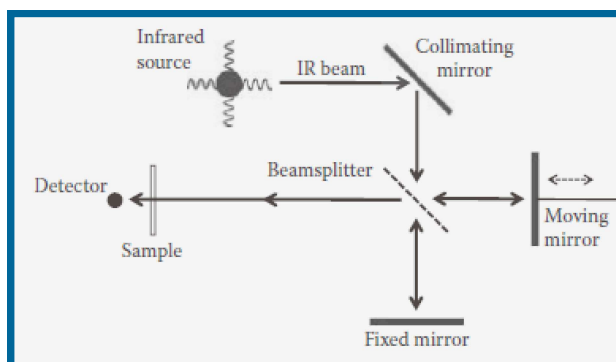
FTIR-990 FT-IR Spectrometer



Labor FTIR-990 Fourier transform infrared spectrometer is an independent research and development of products, it is the most competitive FTIR on the world, 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.

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.



Specifications

Wavenumber Range	7800~375 cm ⁻¹	100%τ Line Tilt Range	Better than 0.5%τ (2200-1900cm ⁻¹)
Interferometer	Michelson interferometer with 30 degree of	Detector	High resolution DLATGS detector with Moisture-proof coating
Signal Noise Ratio	30000:1 (DLATGS, resolution@4cm ⁻¹ . one min scan @ 2100cm ⁻¹)	Electronic system	A/D converter of 24 bits at 500MHz, USB 2.0
Resolution	1.0 cm ⁻¹	Power	110-220V AC, 50-60Hz
Light Source	Long life, air cooled IR light source (Made in USA)	Dimension	450mm×350mm×235mm
Beamsplitter	KBr coated with Ge (Made in USA)	Weight	14.2 Kg

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.

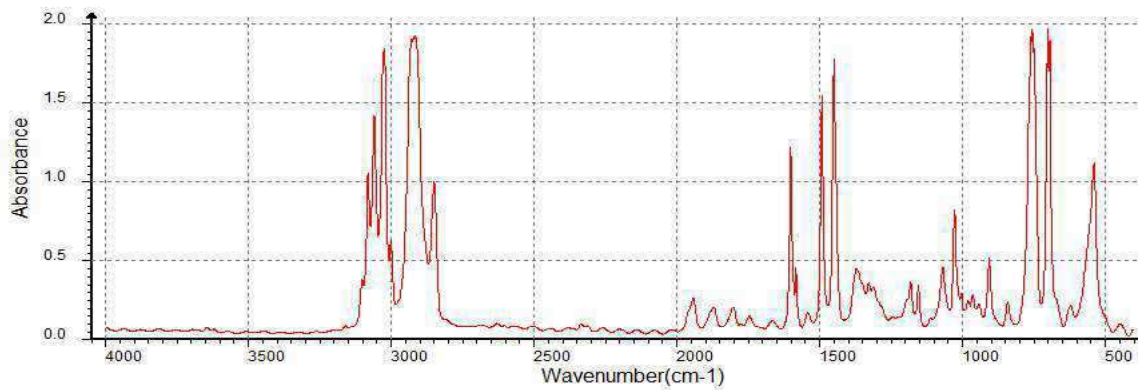
High stable components

- * With high performance long life ceramic light source the luminous efficiency is as high as 80%.
- * VCSEL laser
- * High sensitive DLATGS detector
- * 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.
- * We also can provide a variety of professional infrared Atlas (220000 pieces), covering a variety of industries, to meet the general retrieval, users can customize the new spectral database retrieval, flexible and convenient. The fingerprint library includes: the national pharmacopoeia library, National Veterinary Pharmacopoeia library, rubber library, gas spectrum Gallery, molecular spectrum Gallery, protein and amino acid spectrum library, judicial Library (dangerous goods, chemicals, pharmaceuticals etc.), inorganic organic spectral library, library, solvent spectrum library, library of food additives flavor library, paint, library etc. (As appendix).
- * Software with GB/T 21186-2007 national standard calibration function and JJF 1319-2011 infrared calibration standard calibration function.

Spectrum sample



Polystyrene Film Infrared Absorption Spectrum

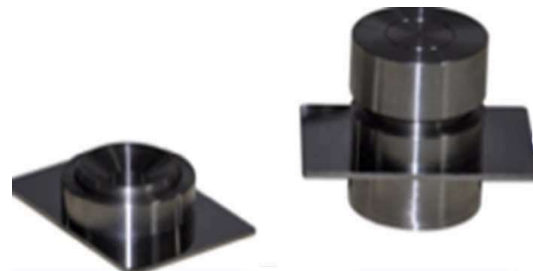
Usual optical parts

Znse Crystal ATR



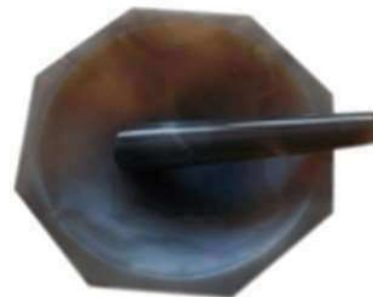
Sheet Mold

Press the powder into a window in order to test.
Diameter 13mm, thickness 0.1-0.5mm, without
demoulding.



Agate mortar

Grand solid sample into powder
Diameter 70mm



IR oven

Temperature 70 ~ 250°C



Press

(We suggest you buy it locally because it' s heavy)



Liquid Cell

For liquid sample

Kbr window, deliquescent, wavelength range

7000-400cm⁻¹

Light transmittance range 2.5µm~25µm



Appendix

IR Spectrum Data Base(Optical)

Aldrich FT-IR Collection Edition II-----	18454
HR Aldrich FT-IR Collection Edition I-----	10505
HR Aldrich Hydrocarbons-----	1199
HR Hummel Polymer and Additives-----	2011
HR Industrial Coatings-----	1961
HR Nicolet Sampler Library-----	842
HR Polymer Additives and Plasticizers-----	1799
HR Rubber Compounding Materials-----	350
HR Specta Polymers and Plasticizers by ATR-----	204
HR Specta Polymers and Plasticizers by ATR-corrected-----	204
HR Sprouse Polymer Additives-----	325
HR Sprouse Polymer by ATR-----	500
HR Sprouse Polymer by Transmission-----	600
Polymer Additives and Plasticizers-----	1799
Aldrich Polymers Library -----	275
Sigma Steroids-----	3011
Sigma Sugars and Carbohydrates-----	614