laboao

Professional Laboratory Solution Provider

FTIR Spectrometer Catalogue

Zhengzhou Laboao Instrument Equipment Co., Ltd.

Benchtop FTIR Spectrometer LiCAN 9

ICAN 9 Fourier infrared spectrometer, introduce foreign advanced technology ,and independent research and development of a cost-effective meticulously Fourier transform infrared spectrometer, which can be widely used in pharmaceutical, chemical, food, petrochemical, jewelry, polymers, semiconductors, and materials science, and other industries, expand function is strong, can connect all kinds of conventional transmission, diffuse, ATR attenuated total reflection, non-contact accessories such as external reflection, both used in colleges and universities, research institutions, and is used in the industrial applications of QA/QC analysis, iCAN 9 will be your perfect choice.

Product features

1. Intelligent human-computer interaction design, whether you have been used about Fourier infrared software or not, can be quickly and skillfully operated;

2, equipped with intelligent humidity automatic remind device, reduce the workload of operators of equipment maintenance, electronic humidity digital visual display function, automatically remind user to replace desiccant, solve in the course of using the infrared biggest hidden danger;

3, interferometer: the latest maglev plane mirror electromagnetic driver, with 3d laser control, continuous automatic adjustment and DSP digital control, automatic optimization system energy, without manual adjustment.

4.Beam splitter: imported KBr substrate plating germanium.

5.Receiver: imported high performance DLATGS detector with moisture-proof film, which can be automatically identified by the instrument, is superior to the 24-bit high precision A/D converter of 500KHz to ensure fast and accurate collection of spectral data.

6. Data transmission interface: standard USB2.0 high-speed two-way communication

7. Support system: Windows XP, Windows Vista, Windows 7, Windows 8

8. Stronger software function: with self-diagnosis function, the instrument state and test parameters are ensured to be correct; Strong data processing and analysis software, easy to handle peak marking, peak area integration, baseline calibration and other operations; Infrared software: Chinese language 32 bit processing software. Including: infrared control, spectral processing, data conversion, multicomponent quantitative and other operating software; H2O/CO2 automatic compensation software, self-inspection software; Macro software;
9. Hardware real-time online diagnosis: hardware real-time online diagnosis: continuously and online monitoring of all optical components (laser, light source, detector, beam splitter); Ensure the instrument is always in the best working condition. The software H2O/CO2 automatic compensation software will automatically remove water and carbon dioxide from the air.
10. The whole sealing and drying design of the optical platform improves the transmission efficiency of light, and has excellent moisture-proof effect. It can adapt to various operating environments and reduce the influence of air absorption.
11. ICAN 9 Fourier infrared spectrometer with analysis software and can assemble standard transmission accessories, such as sample preparation accessories for liquid pools or KBr pressure plates. The sample warehouse can facilitate the installation of ATR accessories, accelerate sample preparation time, shorten cleaning time, and expand the function of the instrument.
12. It is equipped with a professional data analysis system of infrared spectrogram, automatic spectrogram retrieval and analysis of unknown samples, and can establish its own spectrogram database.
13. Light source: long-life, high-energy air-cooled medium infrared light source, pre-alignment, accurate positioning, external wireless access to the light source without opening the optical cover. No tool adjustment, 3 seconds to achieve stability. Exclusive with automatic sleep function, improve the life of light source.
14. Permanent collimation path: the optical platform adopts the design of permanent collimation path. All components adopt pin positioning mode, namely plug and play, which allows users to install and easily replace optical components. The optical mirror uses the whole cutting diamond.

Spectral range	7800 ~ 350 cm-1
Resolution	better than 1.0 cm-1, continuously adjustable.
100% т line tilt range	better than 0.5т% (2200 ~ 1900cm-1)
Signal to noise ratio	30000: 1 (P-P value, 4cm-1, one minute scan)
Beam splitter	imported KBr substrate with germanium plating
Light source	Imported high-energy, high-efficiency, long-life light source with automatic sleep function to increase the life of the light source.
Interferometer	Michelson interferometer with 30 degree incident angle
Receiver	Imported high-sensitivity DLATGS receiver with moisture-proof membrane
Data transmission interface	USB2.0
Supported systems	Windows XP, Windows Vista, Windows 7, Windows 8

The tabletting method is a traditional infrared spectroscopy sample preparation method, and only a thinner, an agate mortar, a tableting mold and a tableting machine can be used for sample preparation, which is a simple and easy method.

A blank film made of potassium bromide or potassium chloride is used to record the spectrogram. The

baseline should be about 75% transmittance. Except for 3440cm-1 and 1630cm-1, there are certain absorption peaks due to residual or attached water. There should be no absorption bands greater than 3% transmission in the area.

(1) Solid powder tableting method-operation steps

① Quantity of test product: about 1.0 ~ 1.5mg (drying);

② Amount of thinner: about 200 ~ 300mg (drying);

③ Grinding process: Fully grind (no obvious particles are suitable);

④ Sample preparation: Put it into the tabletting mold, evenly lay it, make it under normal pressure or vacuum (excluding air and moisture), close the hydraulic valve, pressurize to 8 ~ 10MPa, let it stand for 10-15s, and press it ;

⑤ Test piece requirements: visual inspection should be uniform and transparent, without obvious particles.

Matters needing attention

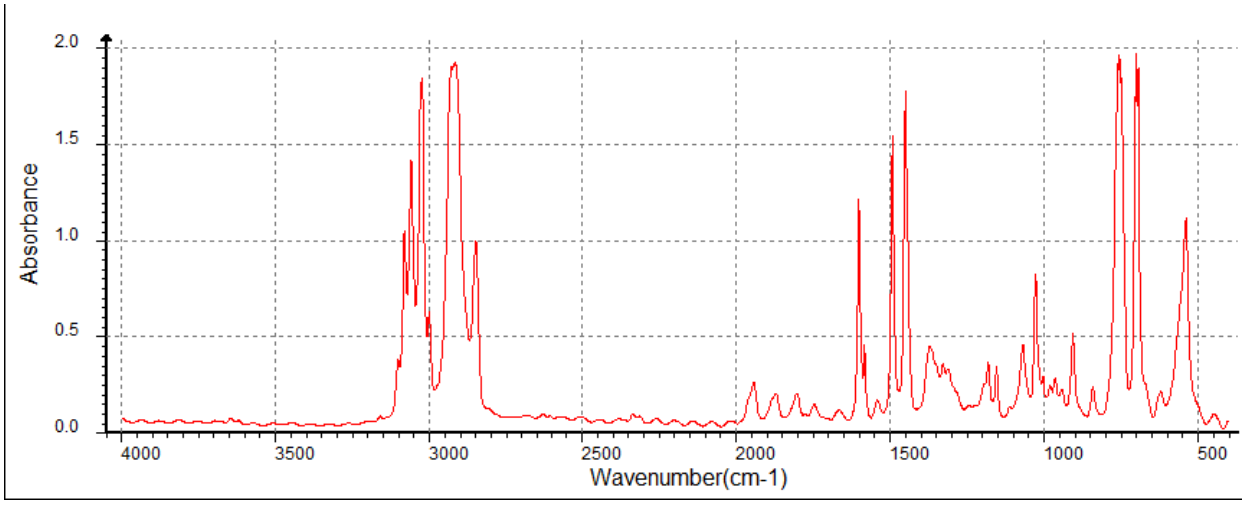
① Samples and thinners need to be dried before preparation (to prevent the influence of water);

② The sample and potassium bromide should be ground evenly (to prevent scattering phenomenon);

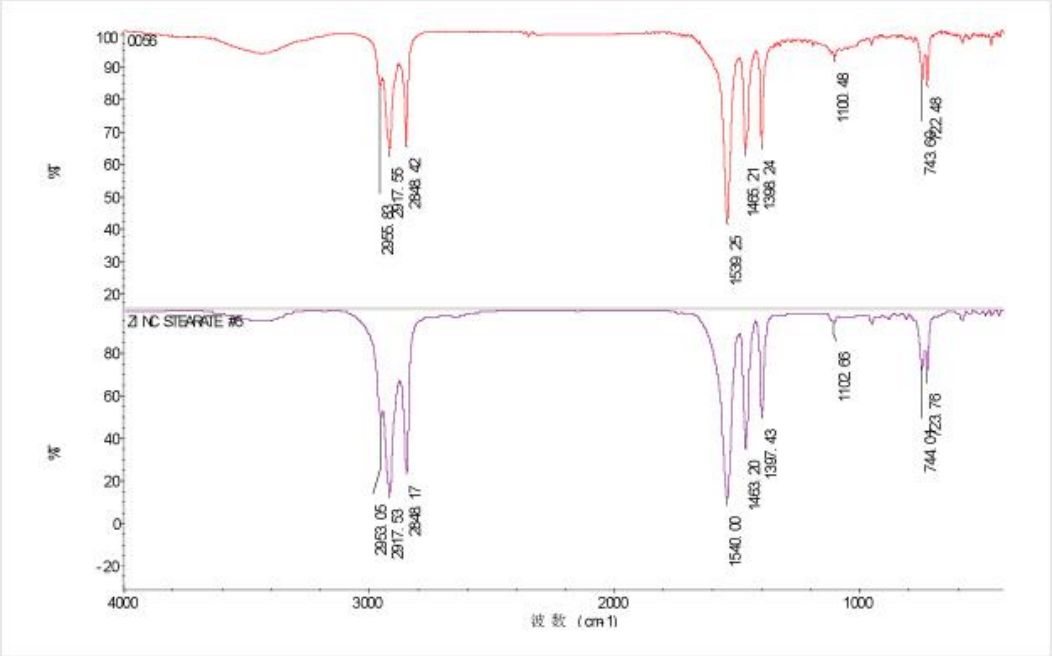
③ After the tablet is formed, it needs to be slowly decompressed (to prevent cracks in the tablet);

④ After the mold is used, wipe it with an alcohol cotton ball first, then wipe it with a clean, dry soft paper or soft cloth, and save it (to prevent the mold from rusting);

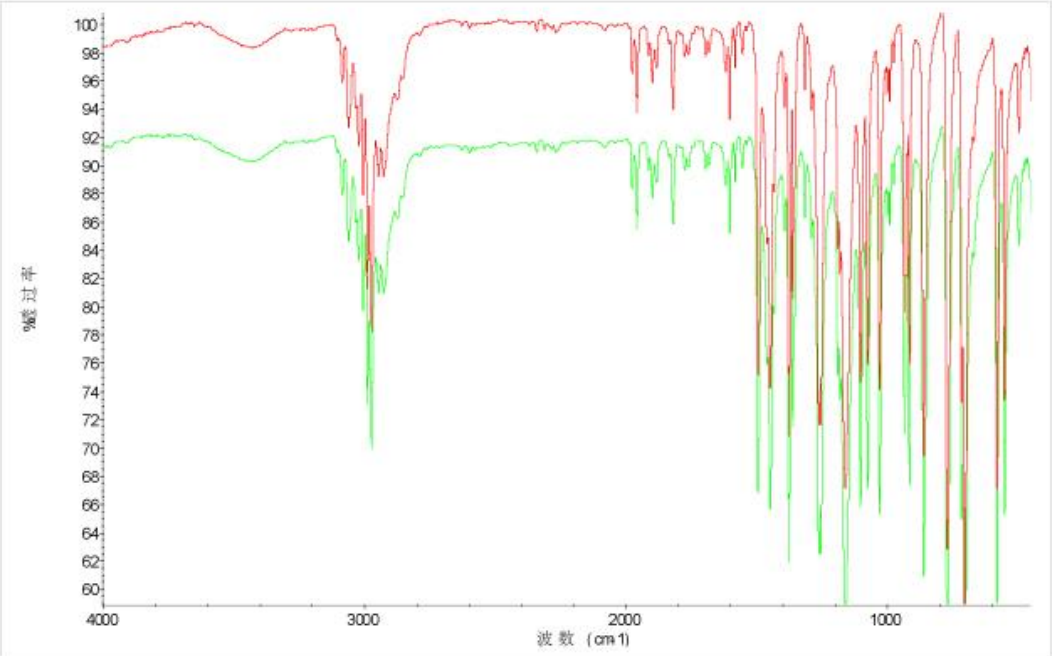
⑤ For samples containing chlorine, potassium chloride should be used for comparison test. If the spectrum is completely consistent, potassium bromide should be used. If the spectrum is inconsistent, potassium chloride must be used to prevent ionization. exchange).

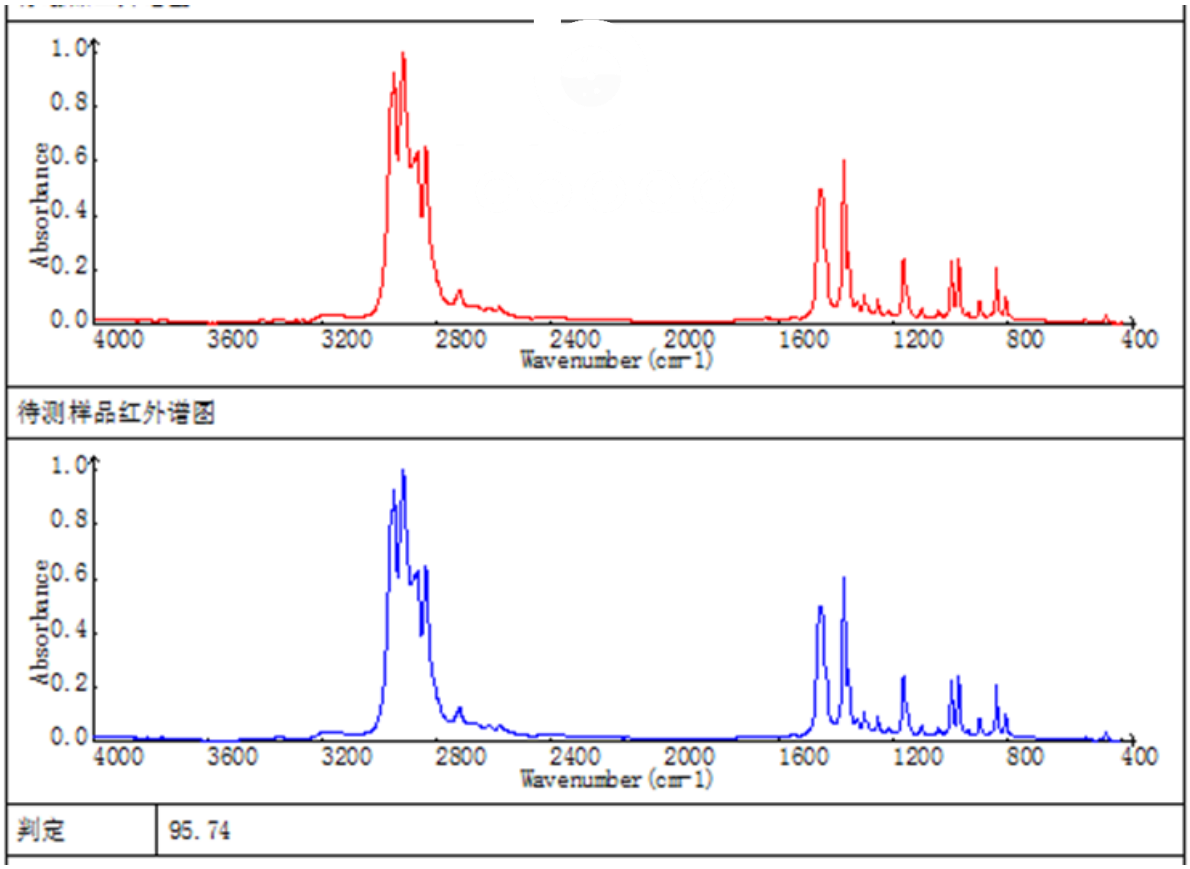


1.特征红外吸收峰辅助进行化合物定性



2、待测试样与对比标准样品红外谱图比对，确定差异程度





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