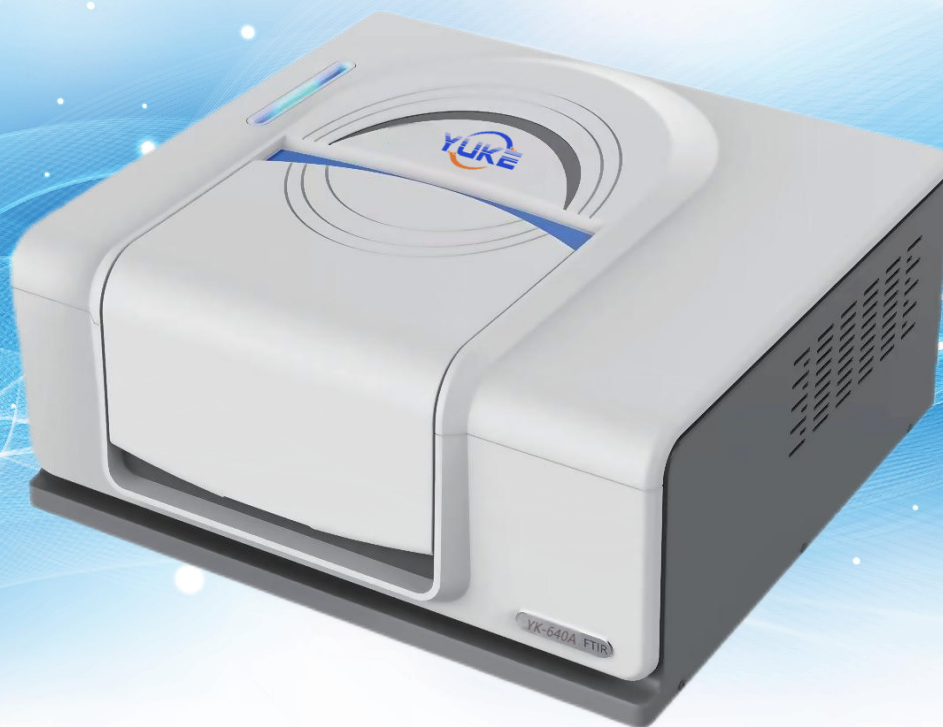


FT-IR SPECTROMETER

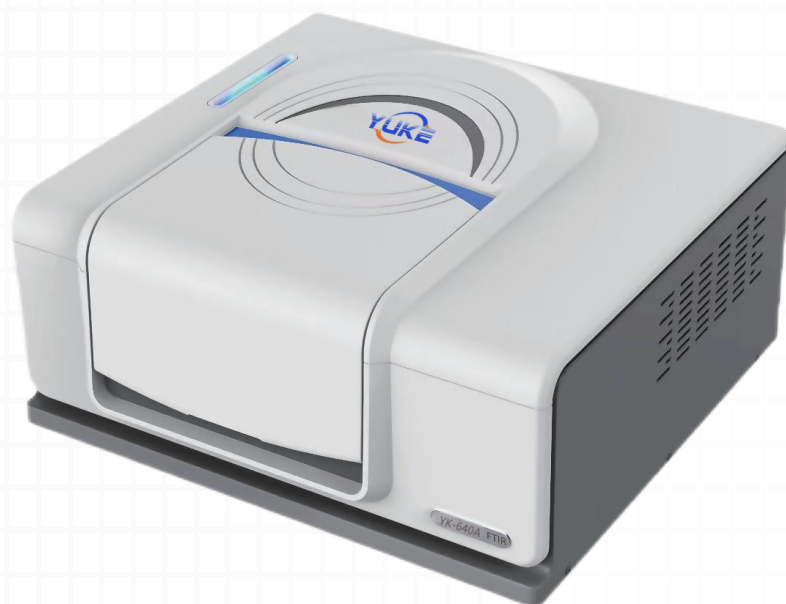
YK-640A/Pro



Shanghai Yuke Industry Co.,Ltd

YK-640A / Pro

FT-IR SPECTROMETER



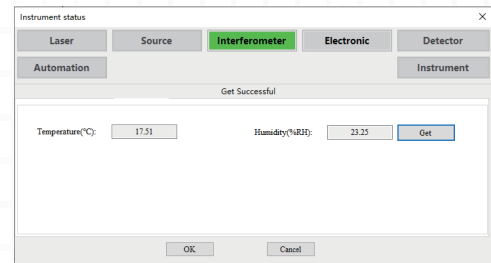
- High sensitivity and stability
- Intelligent real-time monitoring of instrument status
- Multiple interfaces
- Flexible and convenient testing
- Powerful software workstation

Based on more than thirty years' experience in FTIR R&D and manufacturing, BFRL has launched a new type FTIR Spectrometer yk-640A/Pro with fully independent intellectual property rights. Adhering to consistent excellent quality and superior performance, the new model obtains the best balance between intelligence and convenient operation, advance performance and low operation and maintenance cost. It is a good choice for basic science research analysis, production quality control , testing and detection in various fields.

Innovations

Real-time diagnosis of instrument status

- Real-time monitoring of instrument working status, performance and communication status.



Multiples detector options

- Besides conventional normal temperature pyroelectric detector, temperature-stabilized pyroelectric detector and semiconductor refrigeration MCT detector can also be selected to meet the needs of different customers.

"Wire + Wireless" multi-communication mode

- Adopting Ethernet and WIFI dual-mode communication to adapt the development trend of "Internet + testing" instruments. Building a basic platform for users to conduct interconnection testing, remote operation and maintenance, data cloud computing, etc.

Large sample room

- With the large sample chamber design, besides the conventional liquid cell, ATR and other commercially available conventional accessories, it can also be equipped with special accessories such as thermal red combination, microscope, etc. At the same time, it also reserves space for users to choose new accessories.



Brand-new powerful MainFTOS Suite software workstation

All versions Windows OS compatible, including Windows XP, Windows 7, Windows 8, Windows 8.1, Windows 10 and Windows 11(32 bits and 64 bits)

Modular platform design
With data collection, processing and analysis, report print out functions, and different special software functional module options

Standard data format

IEEE Floating Point Standard (*.A?F)
IUJPAC JCAMTP-DX (*.dx)
Thermo Scientific OMNIC(*.spa)

FDA 21 CFR PART 11 compliance

With functions as access control, authority assignment, audit trail, digital signature etc.meet GLP/GMP and CFDA <The ComputerizedSystem> requirements

Language switch over

between Chinese and English

Automatic software updating

Getting the latest software version from the updating center

Touch control operation

Satisfying Windows 10's touch control function

Real-time instrument status diagnosis

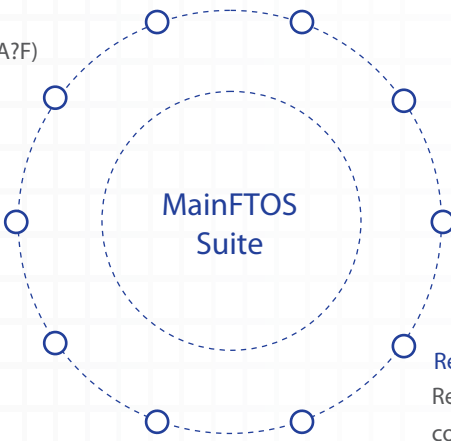
Real-time monitor of working status, specifications and communication status

Specialized IR libraries

Providing various specialized IR libraries.

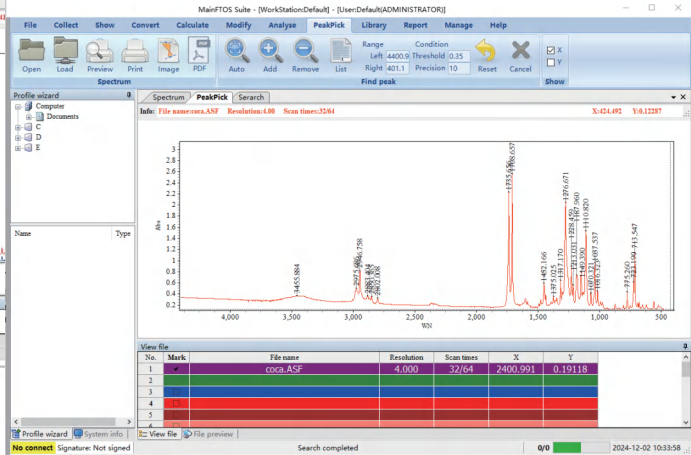
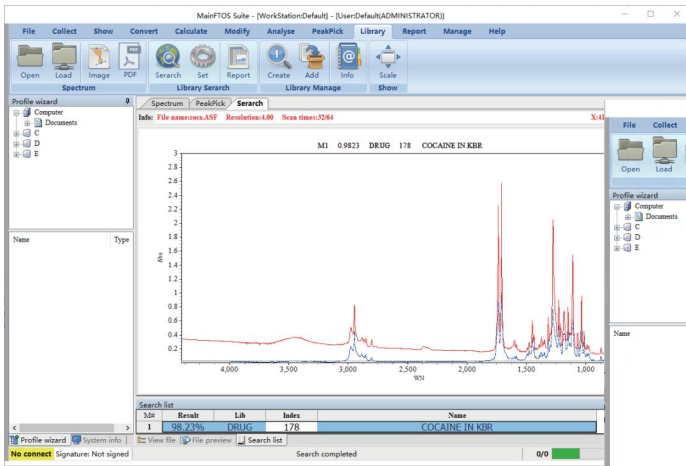
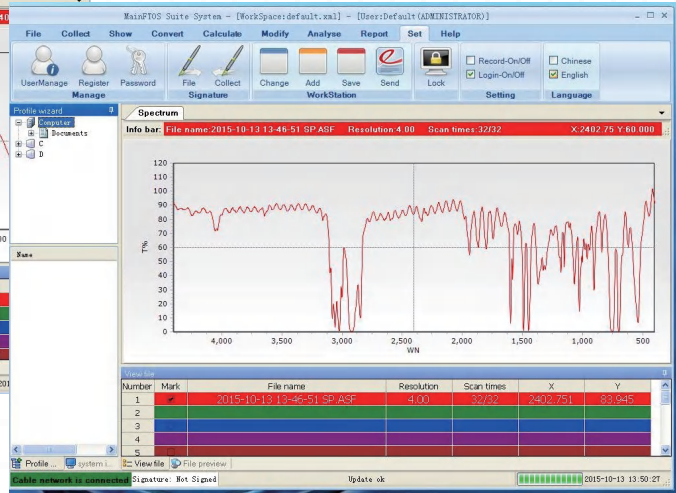
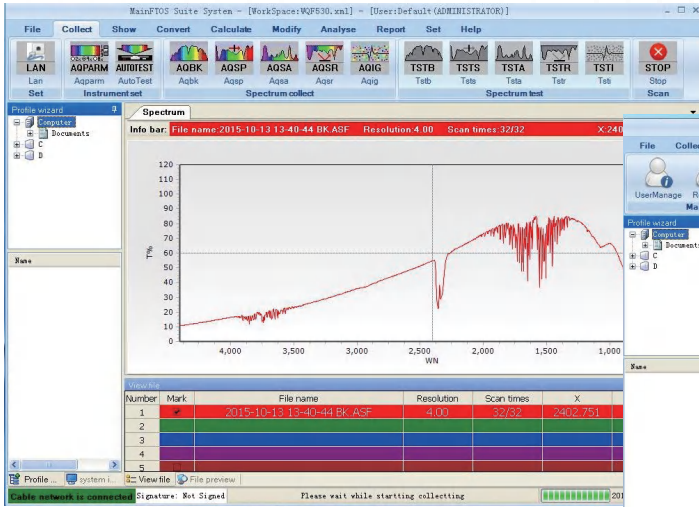
Secondary development library

Providing C++ and C# development sample code for different application development



The 'Electronic signature' dialog box includes a checked option 'Use electronic signature' and a warning message: 'Your are about to sign a record electronically. Please make sure the electronic data and the signature information are correct. This is the legal equivalent of a traditional handwritten signature.' Below this, there are 'Verify' fields for 'User' (Default) and 'Password' (****). The 'Signature Information' section contains fields for 'Signature' (Default), 'Time' (Monday, October 31, 2022), and 'Reason' (Authorship:signifies ownership). 'Save' and 'Cancel' buttons are at the bottom.

The 'System login' dialog box is titled 'MainFTOS Suite System'. It features a 'User' dropdown menu set to 'Default', with 'BRAIC' and 'ADMINISTRATOR' listed below. A 'Password' field is followed by the text 'Default'. The 'WorkStation' dropdown menu is set to 'C:\Program Files (x86)\BFRL\MainFTOS Suite\WorkStation'. 'Login' and 'Exit' buttons are located at the bottom.



Features

- **High sensitivity optical system**

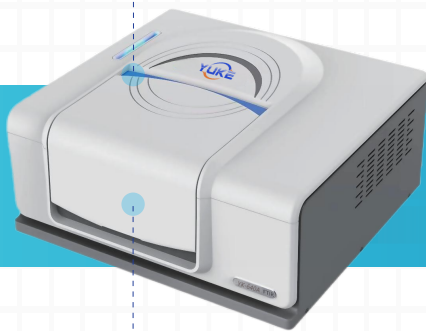
Cube-corner Michelson interferometer combined with patented fixing mirror alignment technology (Utility model ZL 2013 2 0099730.2: Fixing mirror alignment assembly), to ensure long term stability, without the need of dynamic alignment which needs extra complicated electronic circuits. Reflecting mirrors are coated with gold to provide the maximum light throughput and ensure the detection sensitivity.

- **High stability modular partition design**

compact structure modular design with layout on cast aluminum base and overall balance of mechanical robustness and partition heat dissipation, offering higher ability of deformation resistance and less sensitive to vibrations and thermal variations, greatly improves the mechanical stability and long-term working stability of the instrument.

- **Intelligent multi-sealed moisture-proof design**

multiple sealed interferometers, large-capacity desiccant cartridge with visible window and easy replacement structure, real-time monitoring of temperature and humidity inside the interferometer, getting rid of influences of high temperature, high humidity and chemical corrosions to the optical system in many ways.



FT-IR SPECTROMETER YK-640A/Pro

- **Innovated integration electronic system**

high sensitivity pyroelectric detector pre-amplifier technology, dynamic gain amplification technology, high precision 24-bit A/D conversion technology, real-time control and data processing technology, digital filter, and network communication technology, ensuring high quality real-time data collection and high-speed transmission.

- **Good anti-electromagnetic interference capability**

The electronic system is designed to meet CE and electromagnetic compatibility requirements, minimizing electromagnetic radiation in design and technology, in line with green instrument designing concept.

- **High intensity IR source**

High intensity, long lifetime IR source module, with the highest energy distributed in fingerprint region, adopts a reflex sphere design to obtain even and stable IR radiation. External isolated IR source module and large space heat dissipation chamber design provide higher thermal stability and stable optical interference.

Specifications

Interferometer	Cube-corner Michelson interferometer	
Beam Splitter	Multilayer Ge coated KBr	
Detector	yK-640A: LiTaO ₃ yK-640A Pro: DLATGS	MCT detector (optional)
IR Source	High intensity, long lifetime, air-cooled IR source	
Wavenumber Range	7800cm ⁻¹ ~350cm ⁻¹	
Resolution	0.85 cm ⁻¹	
Signal to noise ratio	yK-640A: Better than 20,000:1 (RMS value, at 2100cm ⁻¹ ~ 2200cm ⁻¹ , resolution: 4cm ⁻¹ , 1 minute data collection)	yK-640A Pro: Better than 40,000:1 (RMS value, at 2100cm ⁻¹ ~ 2200cm ⁻¹ , resolution: 4cm ⁻¹ , 1 minute data collection)
Wavenumber Accuracy	±0.01 cm ⁻¹	
Scanning Speed	Microprocessor control, different scanning speed selectable.	
Software	MainFTOS Suite software workstation, compatible to all version Windows OS	FDA 21 CFR Part11 compliance software (optional)
Interface	Ethernet & WIFI wireless	
Data Output	Standard data format, report generation and output	
Status Diagnosis	Power on self-check, real-time temperature and humidity monitoring and reminders	
Certification	CE	IQ/OQ/PQ (optional)
Environment Conditions	Temperature: 10°C ~ 30°C, Humidity: less than 60%	
Power Supply	AC220V±22V, 50Hz±1Hz	AC110V (optional)
Dimensions & Weight	490×420×240 mm, 23.2kg	
Accessories	Transmission sample holder (Standard)	Optional accessories such as gas cell, liquid cell, Defused/Specular Reflection, single/multiple reflection ATR, IR Microscope etc.