Mobile FTIR spectrometer	ATP8900TP

Features

- Spectral range 7800-350cm^{-1}
- Spectral resolution 1 cm^{-1}
- 10-inch touch screen
- IP67 （Ingress Protection Rating）
- One-touch measurement, evaluation and storage
- Standard IR spectra database with over 10,000 spectra
- Real-time display of battery level, charge and discharge status, and temperature
- 41cm×32cm×17cm；10Kg

Application

- Criminal Investigation: Quick Analysis of Explosives at Scene (black powder, ammonium nitrate explosive, TNT, hexogen, etc.), Rapid Forensics of Dangerous Chemicals;

- Drug Search: Drug Analysis (morphine, Heroin, Methylamphetamine, cocaine, etc.), New psychoactive substances.

Description

ATP8900TP is an integrated rugged portable FT-IR spectrometer for detecting and analyzing unknown substances. Unlike other portable devices, ATP8900TP has the same high performance as the benchtop devices, such as wider spectral range and higher spectral resolution. ATP8900TP can be used not only for routine measurement, but also for professional analysis. A 10 inch touchscreen tablet PC makes the operation simplicity. The built-in library databases provide the identification result rapidly. In addition, users can add their own database easily.

When using the FTIR spectrometer, usually a small amount of sample is required. Unknown substance could be identified by comparing spectrum with the reference from the library database. With the use of ATR technology, sample preparation can be simplified, and analysis for both solids and liquids become easier and more efficient.

Parameters	
Interferometer	Cube Mirror Michelson Interferometer
Infrared Source	Air-Cooled Ceramic source
Beamsplitter	ZnSe
Detector	High-sensitivity DLATGS Detector
Laser & Source	Solid-state laser & light source with 10 year warranty
Spectral Range	$7800{\sim}350$ cm^{-1}
Resolution	< 1 cm^{-1}
SNR	RMS > 150,000 : 1
Wavenumber Accuracy	< 0.01 cm^{-1}
Modules	Optional measure modules for replacement
Battery life	Built-in 4-hour Battery, can be powered with external 18~24V battery Charger: 20W Power Adaptor, 100~240VAC, 50~60Hz; 18~24V Optional
IP level	IP67
Power	AC220V / 50Hz
Dimension	41*32*17 cm
Touch Screen	10 inch touch screen
Weight	10 kg
Modules	plug-and-play
Analysis time	5-10 seconds
System	Windows 10
Software	Infrared control, spectrum processing, Quantitative analysis of multi-component samples, Auto inspect software, Advanced macro programming software, online continuous monitor of optical components, say laser light source, sensor , beam splitter so as to ensure best working status. Auto remove air water and $CO2$.
IR spectrum library	Reference Library Database: Multiple Infrared Library Databases, including White Powder, Explosives, Routine Chemicals, Pesticides,

	Drugs and Gases.

Universal ATR Accessory

✍ ATR accessory, pure diamond body, high strength, super corrosion resistance, large crystal size, high luminous flux, excellent sensitivity. Compatible with the use of infrared spectrometer brands at home and abroad. It can meet the testing needs of different industries such as organic matter, superhard polymer, inorganic matter, mineral, stone, asphalt and various composite materials.

Application

✍ **Public security:** the identification of unknown things, such as drugs, explosives, etc. Users can build their own database.

✍ **Fire and emergency:** it used for the detection of flammable and explosive substances, dangerous chemicals.

✍ **Customs:** rapid identification of dangerous goods, extiles, other materials and origin, etc.

✍ **Gas detection:** environmental protection gas and industrial online gas real-time detection.

Portable, convenient and flexible

✍ The small and compact structure makes it easy to carry and operate. In addition to its excellent seismic performance, it can be placed anywhere: it is mainly used in on-board laboratories and outdoor quick inspection projects, saving the time and cost of analyzing samples. It is also convenient to place it directly in the fume hood or instrument box.

✍ The fully functional and flexible measurement modules and detection accessories can be replaced in a few seconds and the card loading and positioning by relying on the uniquely designed interface device. instrument is automatically identified and can be used without calibration. Basically realize zero consumables, and complete the rapid detection with one click, with an average consumption of 3-5s.

Plug-and-play design

✍ Its unique modular design, excellent instrument components and advanced technical level ensure the excellent sensitivity of the instrument. The accuracy, stability and repeatability of wave number, and the accuracy and precision of measurement results. It can be applied to the measurement of solid, gas and liquid.

Application of criminal investigation and anti drug

☞ **Criminal Investigation:** rapid analysis of explosives on site, rapid detection of explosives (black powder, nitrate explosive, TNT, RDX...) and rapid evidence collection of dangerous goods on site.

☞ **Anti-drug:** drug analysis (fentanyl, morphine, heroin, methamphetamine, cocaine...), screening of new imitation poison crystals;

☞ The system supports users to build their own spectrum database, which is more suitable for local conditions and has powerful functions such as drug traceability, providing strong support for the detection of cases.

☞ The vibration frequencies of different components of drugs are different in the infrared spectrum. The components of drugs can be detected by analyzing drugs with infrared spectrum technology. Different drugs have different peak positions in the infrared spectrum, so the types of drugs can be easily identified from the spectrum. The application of infrared spectroscopy in drug detection has the advantages of simple operation, no use of harmful reagents, no pollution of test materials, small sample volume, accurate results and so oncharacteristic.

Advantages in the Field of Drug Detection

☞ Short-time for on-site detection and analysis (no need to wait for laboratory test results)

☞ Easy to use, user-friendly and simple operation interface, without professional training.

☞ Without professional background, the operator can also intuitively and accurately analyze the sample composition

☞ Without sample preparation, direct analysis on site-New data networking.

☞ New data networking, update upgrades in real time. Extremely fast, convenient and simple.

☞ Quickly identify explosives, drugs, contraband, general drugs, etc.

☞ On site investigation greatly saves cost (cost and time), which is efficient and fast

Other Related Fields

☞ Environmental emergency monitoring

☞ Scientific research on catalytic conversion.

☞ On site monitoring of labor hygiene

☞ The composition of the measured gas is complex

☞   Industrial process analysis and control

☞   Monitoring of waste incineration and combustion emissions

Especially suitable for

☞   Simultaneous analysis of multiple components

☞   Harsh test conditions

☞   Flue gas emission test

☞   High temperature and humidity of the measured gas

liquid or viscous sample	solid or powder sample	Quick-change desiccant