

# FT-IR SPECTROMETER ACCESSORIES

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# Accessories

## Single Reflection ATR

Single reflection ATR can be used to measure various forms samples (liquid, viscous material, soft and ductile film and solid), and it has good results when testing substances with relatively strong absorption.



Single reflection ATR (Specac)  
Crystal materials: Diamond, ZnSe and Ge



Single reflection ATR (BFRL)  
Crystal materials: ZnSe

## Horizontal ATR

A multi-reflection horizontal ATR can be used for the infrared analysis of solids, liquids, pastes and gels.

- 6-reflection and interchangeable sampling top plates(Specac)
- 12-reflection and integrated groove shape plate(BFRL)
- Crystal materials: ZnSe



Horizontal ATR (Specac)



Horizontal ATR (BFRL)

## Diffuse/Specular Reflectance Accessory

Diffuse/Specular reflectance accessory is a versatile diffuse reflectance and specular reflectance accessory. Diffuse reflection mode is used for transparent and powder sample analysis. Specular reflection mode is for measuring smooth reflective surface and coating surface.

- High light throughput
- Easy operation, no internal adjustment needed
- Optical aberration compensation
- Small light spot, able to measure micro samples
- Variable angle of incidence
- Fast change of powder cup



## Specular Reflection Accessory

Specular reflection accessory is fixed 10-degree angle of incidence. At a near-normal angle, the polarization effects on reflectivity are minimized. Specular reflection accessory is recommended to measure the reflectivity of glass. However, it may also be used to measure near-normal reflectivity of a wide variety of surfaces including military devices, reflecting optics, anti-reflective (AR) coated surfaces, and other reflecting and non-reflecting materials.

- Fixed 10-degree angle of incidence



## Transmission Sample Clamp

Transmission sample clamp can be used to keep in place films, salt plates, KBr pellets and other materials.

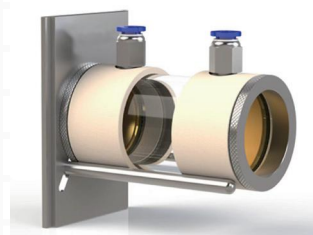
- Clear aperture of the holder: 13 mm



## Gas Cell

Gas cell is suitable for the detection of gas samples.

- Optional window plate: ZnSe and KBr
- Optional pathlength: 50 mm and 100 mm



## Sealed Liquid Cell

Sealed liquid cell is usually used for qualitative or quantitative analysis of volatile liquids.

- Size of window: 41x23x4 mm
- Optional window plates: KBr, CaF<sub>2</sub> and ZnSe
- Optional pathlength: 0.05 mm, 0.1 mm, 0.2 mm, 0.5 mm and 1 mm.  
The standard pathlength is 0.5 mm



## Demountable Liquid Cell

Demountable liquid cell is usually used for qualitative or quantitative analysis of non-volatile liquid sample.

- Size of window:  $\Phi 25 \times 4$  mm
- Optional window plates: KBr, CaF<sub>2</sub> and ZnSe
- Standard spacers include 0.05, 0.1, 0.2, 0.3, 0.5 and 1 mm



## Hydraulic Press 15T

The hydraulic press is for making high-quality KBr pellets for transmission FTIR analysis. The pellet preparation involves loading of the powdered KBr and sample matrix into the die chamber and placing the assembled die onto the platform of the hydraulic press.

- Clamp force, max 15 tons
- Diameter of die set: 13 mm



### The TGA/FTIR Accessory

The TGA/FTIR accessory is designed to be an interface for evolved gas analysis from a thermogravimetric analyzer (TGA) to the FTIR spectrometer. Qualitative measurements is doable from sample masses, typically in the low milligram range.

- Gas cell pathlength: 100mm
- Gas cell volume: 38.5mL
- Temperature range of gas Cell: Room temp.~300 °C
- Temperature range of transfer line: Room temp.~220 °C
- Accuracy of temperature control:  $\pm 1$  °C



### IR Microscope

IR microscope can be used in combination with FTIR spectrometer for high sensitivity detection of trace materials, infrared trace analysis and microanalysis, and apply to foreign bodies in drug component identification, drug analysis, drug packaging material of each component and the analysis of the foreign body.



### Intelligent Electronic Moisture-proof Box

The intelligent electronic moisture-proof box adopts high-performance electronic dehumidification core and microcomputer humidity control, which has the characteristics of energy saving, no noise, and intuitive display of humidity. The service life of the core components of the Fourier transform infrared spectrometer is longer.

- Humidity setting and control
- Temperature display
- Humidity over limit alarm



### IR Oven

The IR oven as FTIR spectrophotometer accessory, mainly used for drying potassium bromide powder or window, silica gel and other easy delixidation materials, which can effectively improve the surface quality of the sample.

