# AccessATR™

The AccessATR™ makes ATR FTIR spectroscopy accessible to everyone. It is perfect for quick and accurate ATR measurements of most samples and it is affordable. Simply place the sample – a solid, liquid, or paste - on the ATR crystal, record the spectrum and wipe the crystal clean. The AccessATR™ is equipped with a built-in trough to contain liquids and a press for solid sampling.

## APPLICATIONS

- Convenient for routine analysis of liquids, pastes, and flexible solids.
- Single reflection ATR (internal reflectance) accessory.
- Excellent for university laboratories, teaching facilities and the cost-conscious.
- Designed for highly repeatable qualitative and quantitative FTIR measurements.


## FEATURES

- Convenient, horizontal sampling surface.
- Top loading.
- Fixed 45° incident angle.
- Spectral range: 20,000 $cm^{-1}$ to 550 $cm^{-1}$.
- Easy to use – no alignment required.
- Excellent throughput.
- Little or no sample preparation required.
- Gasket-sealed ATR crystal preserves sample integrity.
- Readily replaceable affordable ZnSe ATR crystal.
- Convenient slide plate mounting fits all FTIR spectrometers.

## INCLUDES

- Mounted ZnSe prism.
- Integral trough for analyzing liquids, powders and pastes.
- Built-in pressure applicator for solid sampling.
- Pressure pad.
- Slide plate mounting.

## ORDERING INFORMATION

| | CATALOG NO. |
|---|---|
| AccessATR™ | ACC-ATR |

## OPTIONS

| | |
|---|---|
| Sample Slide Plate Holder | HSS-XXX* |
| Rail Plate | HRM-XXX* |

## REPLACEMENT PARTS

| | |
|---|---|
| ZnSe ATR Crystal | ACC-PRM-M |
| Ge ATR Crystal | ACC-PRM-J |
| Gasket | ACC-GSK |
| Pressure Pads (set of 5) | GATR-PAD |

**XXX indicates spectrometer make and model*

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Ph: 800-248-3847 or 914-747-7202, FAX: 914-747-7209, web site: www.harricksci.com, e-mail: info@harricksci.com

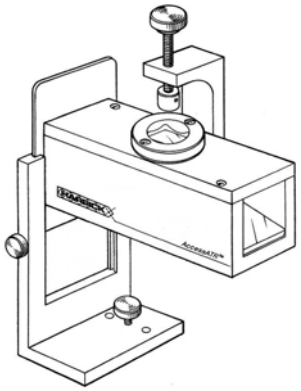

Figure 1. Access ATR™ inserted in a Slide Plate Holder.

AccessATR™ is an affordable single reflection, horizontal internal reflection (ATR) accessory. Its simple optical design and straightforward use make it a perfect introductory ATR accessory. The AccessATR™ is excellent for repeatable qualitative and quantitative studies of a wide range of samples. These include aqueous and organic liquids, pastes, and organic and inorganic powders.

ATR spectroscopy is the method of choice for many samples. ATR requires little or no sample preparation and is a much quicker method for analyzing all types of samples. For affordable analysis of solids and powders, the sample is simply placed in the trough and pressed against the ATR crystal with the built-in press. No KBr pellets or nujol mulls are required. For liquids or pastes, just smear or drip a small amount of sample on the top of the ATR crystal and record the spectrum. Avoid the typical problems with transmission liquid cells - interference fringes, peak saturation, and squeezing viscous samples into short pathlengths. The AccessATR™ produces excellent spectral quality every time.

AccessATR™ uses two planar mirrors to direct the beam to and from the ATR crystal at a 45° incident angle. The ATR crystal is made from ZnSe which has a wide useful spectral range (20,000 $cm^{-1}$ to 550 $cm^{-1}$) and durable mechanical properties. The crystal is held in place with a gasket, making it straightforward to replace the crystal when needed. This design is reasonably insensitive to precise alignment. The accessory just slides into the sample slide plate holder supplied with the FTIR spectrometer and no further alignment is necessary.

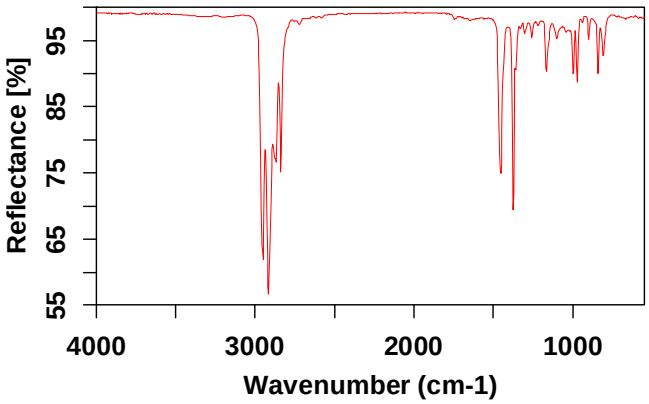


Figure 2. ATR Spectrum of a Twix Wrapper.

Figures 2 through 4 show spectra from different portions of a Twix™ (Mars, Inc.) candy bar, illustrating its use with solids and pastes. Figure 5 shows the spectrum of two liquids, rubbing alcohol and water, clearly showing that water is one of the components of rubbing alcohol. Subtraction, using commercial spectrometer software, results in a spectrum that is clearly identifiable as isopropanol. Note that, despite the strong absorbance of these samples, the ATR spectra are free from saturation effects.

AccessATR™ offers simplicity, economy, and versatility for all FTIR laboratories, enabling quick and accurate measurements for a wide range of samples.

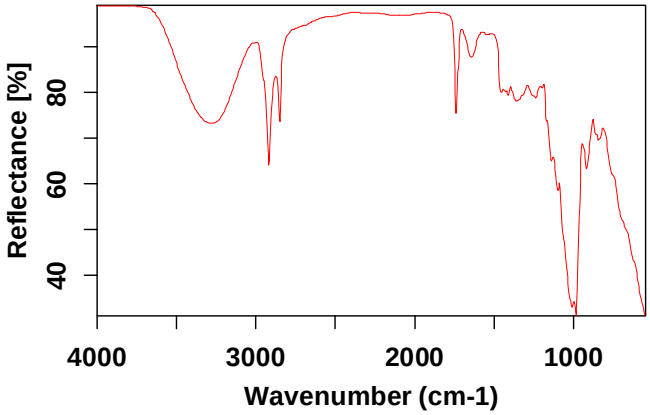


Figure 3. ATR Spectrum of the Twix Caramel.

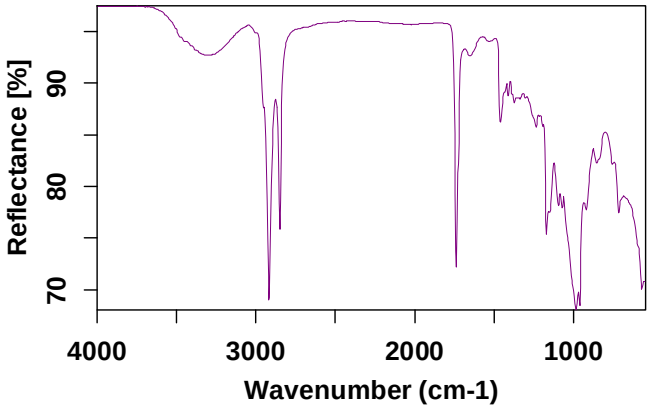


Figure 4. ATR Spectrum from a Twix Wafer.

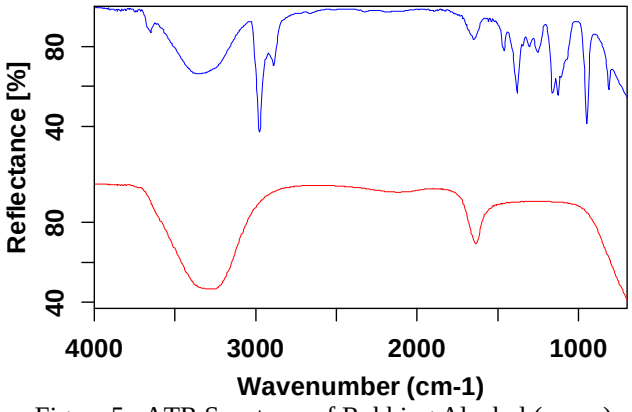


Figure 5. ATR Spectrum of Rubbing Alcohol (upper) and Water (lower).