

XY Autosampler

AT A GLANCE

- ▶ Automated analysis with standard 24-, 48-, or 96-well plates. Special configurations available.
- ▶ Diffuse reflection of powdered samples or specular reflection sampling for reaction residues
- ▶ Gold-coated optics version for highest performance mid-IR and NIR sampling
- ▶ Optional transmission sampling with integrated DTGS or InGaAs detector and transmission sampling plate
- ▶ Fully enclosed, purgeable design with front-loading tray
- ▶ In-compartment mounting, compatible with most FTIR spectrometers



FULLY AUTOMATED
WITH AUTOPRO SOFTWARE

The XY Autosampler is designed around standard 24-, 48- or 96-well microplate architectures – ideal for high-efficiency sample loading and FTIR reflection analysis. Through automation, you will save time and improve consistency across measurements.

Applications include high throughput analysis of liquid residues and chemical reactions, powdered samples, and automated diffuse reflection analysis. Also, when configured with a custom sample tray, the XY may be easily converted into a precision mapping stage for IR measurements.

DESIGN

The loading tray moves to a position outside of the accessory for easy loading and unloading of samples while conserving the purge. This also permits interface to a robot/autoloader.

XY AUTOSAMPLER FEATURES

The XY Autosampler features an X, Y stage with both axes driven by high-precision motors for speed and reproducibility. USB and DC power are the only external connections required for this accessory. The transmission option requires a spectrometer external IR detector port. Programming and control of the XY Autosampler is done through PIKE Technologies' AutoPRO software, which can be integrated easily with most FTIR software packages. With AutoPRO, custom mapping profiles to suit needs are easily generated, and data collection protocols can be saved and imported for later use.

OPTICAL DESIGN

The optical layout of the XY Autosampler is based upon a precision ellipsoidal reflector, which condenses the beam onto the sample with a power of approximately 3 times with an Angle of Incidence (AOI) striking the sample at 30°. The size of the spot illuminated at the sample is approximately 2 mm which is ideal for up to 96-well configurations.

The accessory is compatible with most FTIR spectrometers. The XY Autosampler is available with standard aluminum optics or with gold-coated optical components for highest performance in mid-IR and optimized NIR sampling.



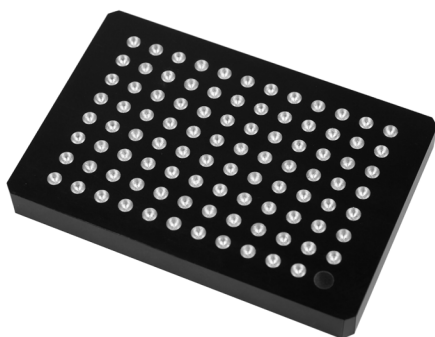
SPECIFICATIONS

Optics	Elliptical – 3X beam demagnification
Angle Of Incidence	30°
Mechanical Specifications	
Repeatability	+/- 5 µm
Accuracy	+/- 25 µm
Resolution	1 µm
Minimum Run Time	Time is spectrometer and application dependent
Computer Interface	USB
Purge	Standard purge tubes and purge connections
Power Requirements	100–240 Volts AC; 50/60 Hz
Dimensions (W X D X H)	159 x 336 x 141 mm (including micrometer)
Weight	4.5 kg

SAMPLING PLATES

The 96-well diffuse reflection plate features 96 polished cavities for placement of powder samples and small solids. For sampling convenience, an option 24-well plate for disposable cups is available for reflection measurements.

Please contact PIKE Technologies if you require specialized sampling plate configurations or a custom plate for mapping the sample



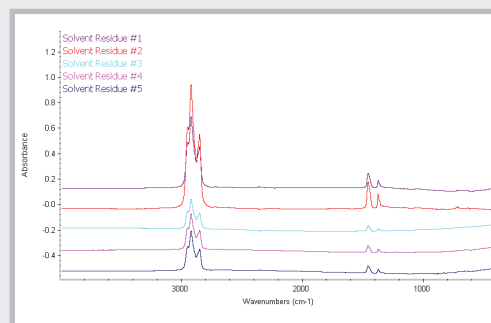
96-well diffuse reflection sampling plate.



96-well silicon transmission sampling plate.

APPLICATION

The XY Autosampler offers a flexible platform to automated diffuse/specular IR measurements. It may be configured to increase lab productivity by running several samples within a run, and also may be used as a precision mapping stage.



High-quality FTIR spectra of solvent residues collected with the XY Autosampler.

PART NUMBER	DESCRIPTION
047-21XX	XY Autosampler – Diffuse reflection
047-61XX	XY Autosampler – Diffuse reflection with Gold-Coated Optics
047-22XX	XY Autosampler – Diffuse reflection/Transmission with integrated DTGS detector
047-62XX	XY Autosampler – Diffuse reflection/Transmission with Gold-Coated Optics with integrated DTGS detector
047-23XX	XY Autosampler – Diffuse reflection/Transmission with integrated InGaAs detector
047-63XX	XY Autosampler – Diffuse reflection/Transmission with Gold-Coated Optics with integrated InGaAs detector

Notes: Replace **XX** with your spectrometer's Instrument Code listed in the back of the catalog. All XY Autosamplers include PIKE AutoPRO software and a 96-well diffuse reflection sampling plate. Diffuse reflection/Transmission versions include a 96-well plate for diffuse reflection and a 96-well plate for transmission. For other options please contact PIKE Technologies. For transmission option, your spectrometer must be capable of interfacing with an external detector. A glass-bottom well plate is recommended for NIR transmission measurements.

Options	
073-9110	96-Well Diffuse reflection Sampling Plate
073-9130	96-Well Si Transmission Sampling Plate
073-9160	24-Well Diffuse reflection Sampling Plate for Disposable Cups
162-1920	Disposable Cups (50 ea.)