

AutoDiff II – Automated Diffuse Reflectance Sampling

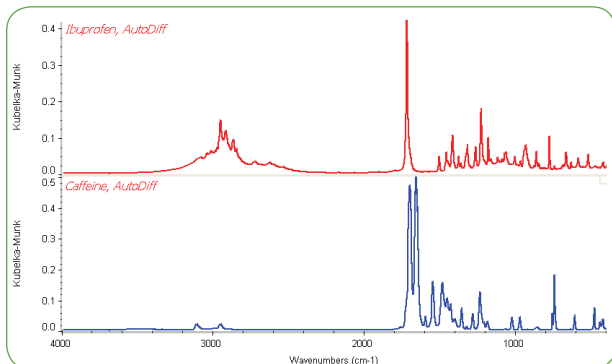
AUTOMATED ACCESSORY



FEATURES

- Complete automated diffuse reflectance accessory and software package for unattended analysis of up to 60 samples
- High-performance optical design collects maximum amount of diffusely reflected energy and provides high-quality spectra in a short time period
- Flexible sample sequencing and background collection to provide maximum sampling efficiency and greatly minimize atmospheric contributions to sample spectra
- Easily programmable AutoPRO software delivers automated sample collection
- Easily removable sample tray to speed sample loading and unloading

The AutoDiff II is a high-performance, automated diffuse reflectance accessory developed to analyze multiple samples with minimal user intervention. Typical applications include powdered pharmaceutical samples, high-throughput forensic sampling, kidney stone analysis, soils analysis and analysis of many other powdered samples where speed and efficiency are important. The design employs an automated R-theta sampling stage providing diffuse reflectance analysis with greatly reduced operator intervention and increased sample throughput.



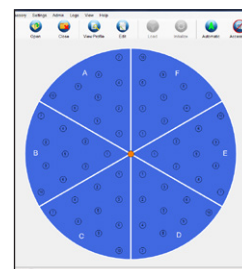
Spectra of pharmaceuticals using the AutoDiff II accessory.

The optical design of the AutoDiff II utilizes a high-efficiency fixed ellipsoidal reflector to collect the maximum amount of diffusely reflected energy from the sample. Other optical components important to achieving this high performance are aligned and permanently located. The accessory is baseplate-mounted in the FTIR spectrometer sample compartment and can be purged independently or it can use the spectrometer's purge.

Spectral quality and reproducibility are excellent with the AutoDiff II. By programming the collection of spectra at precise time periods and alternating sample and background collection, any effects of atmosphere are greatly reduced.

The PIKE AutoDiff II fully automates diffuse reflectance FTIR spectroscopy. The sample holder contains positions for 60 samples, plus a center position for a background sample, which usually consists of pure KBr powder.

The sample plate is marked into six areas, labeled from A to F. Each area has ten sample positions marked from 1 through 10. This sample position numbering scheme is also used within the software for describing and positioning the samples.



The AutoDiff II is controlled by PIKE AutoPRO software which incorporates multi-operator sample submission. The system is extremely flexible and the graphical user interface is intuitive and simple. Multiple operators may independently log samples onto the system. The AutoPRO software integrates easily with most commercially-available FTIR software packages.

The AutoDiff II is also available with gold-coated optics for highest performance mid-IR analysis and for automated NIR diffuse reflectance sampling.

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
043-29XX	AutoDiff II – Automated Diffuse Reflectance System Includes motion control unit (100-240 VAC), AutoPRO software 60-position sample mounting tray, 60 macro sample cups and Sample Preparation Kit
043-79XX	AutoDiff II – Automated Diffuse Reflectance System with Gold-Coated Optics Includes motion control unit (100-240 VAC), AutoPRO soft- ware, 60-position sample mounting tray, 60 macro sample cups and Sample Preparation Kit

Note: Replace **XX** with your spectrometer's Instrument Code. [Click for List >](#)

REPLACEMENT PARTS AND OPTIONS

PART NUMBER	DESCRIPTION
043-3090	AutoDiff II Sampling Cups, macro (60 ea.)
043-3085	AutoDiff II Sampling Cups, micro (60 ea.)
043-0902	AutoDiff II 60-Position Sampling Tray
042-2010	Sample Cup, micro, 6.0 mm diameter, 1.6 mm deep (2 ea.)
042-2020	Sample Cup, macro, 10 mm diameter, 2.3 mm deep (2 ea.)
042-3010	Abrasion Sampling Kit
042-3020	Abrasion Disks, silicon carbide (100 ea.)
042-3025	Abrasion Disks, diamond (50 ea.)
042-3080	Alignment Mirror, aluminum
042-3082	Alignment Mirror, gold