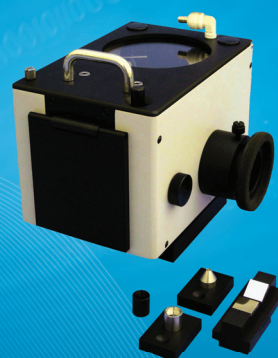


AGILENT PRAYING MANTIS ACCESSORY FOR THE CARY 4000/5000/6000i UV-VIS-NIR SPECTROPHOTOMETERS

The Measure of Confidence

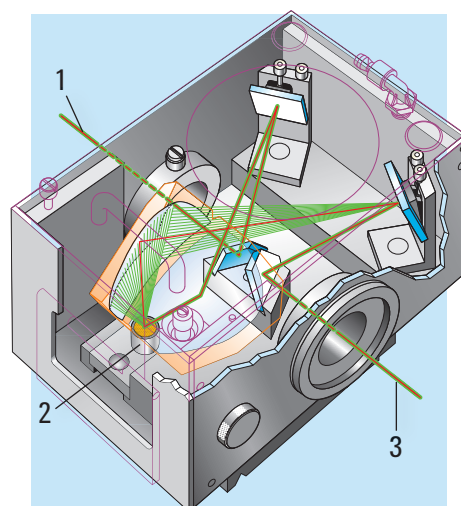


Easily measure diffuse reflectance over an extended wavelength range

The Praying Mantis is designed to measure diffuse reflectance of powder samples. Light is projected onto the horizontally positioned sample, and the two large elliptical mirrors positioned above the sample collect diffusely reflected light. The reflected light is then directed toward the instrument detector.

The Praying Mantis has several advantages over traditional integrating spheres:

- It is ideal for very small samples, as the image at the sample position is only 3 mm in diameter
- It can be used for samples that must be kept horizontal, such as powders, liquids or pastes
- The all-reflective optics of the Praying Mantis permit measurement over an extended wavelength range (dependent upon the type of instrument being used)
- The Praying Mantis can be used to perform experiments requiring controlled atmosphere, pressure and temperature environments



**Optical diagram of the Cary
Praying Mantis accessory**

1. Incoming light
2. Sample cup
3. Outgoing light

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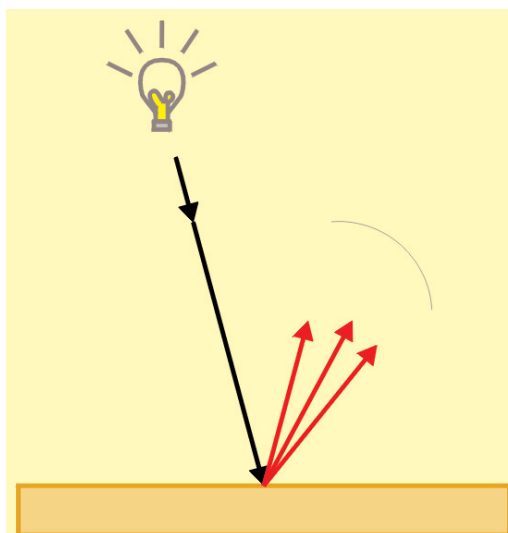
Applications

The design of the Praying Mantis means that samples are presented horizontally, and there is a small image at the sample position. It is therefore ideal for use with small samples, as well as those that must be mounted horizontally.

Sample	Example measurement
Powders	Ore (mineral) composition, drug identification
Pastes, viscous liquids	Adhesives, foods, pharmaceuticals, tars
Solid surfaces	Polymer/composite coatings, paints, dyes and inks
Fabrics	Color, UV absorbance/reflectance properties
Forensic samples	Paint chips, drug residues, fabric sample

Specifications

Instrument	Cary 4000/5000/6000i
Wavelength range	Equal to host instrument
Sample sizes (max)	
Diffuse microsampling cup	0.03 mL
Diffuse sampling cup	0.25 mL



Accessory schematic. Incident light (black) and diffuse reflection (red)

Additional Accessories

Required	Extended sample compartment
Optional	Low Temperature, Reaction Chamber for pressure and temperature operation down to -150 °C (under vacuum) High Temperature, Reaction Chamber for pressure and temperature operation up to 910 °C Vacuum chamber for both accessories: 133 mPa (10 ⁻⁶ torr) to 133 kPa (1 ktorr)

For more information:
www.agilent.com/chem/uv

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