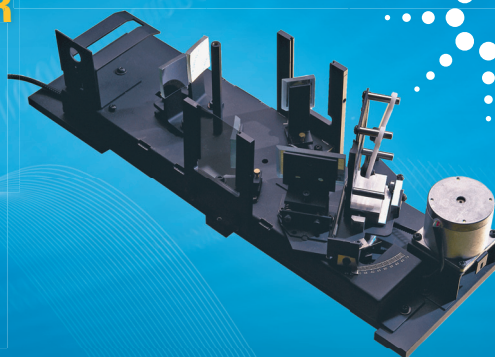


AGILENT VARIABLE ANGLE SPECULAR REFLECTANCE ACCESSORY (VASRA) FOR THE CARY 4000/5000/6000i UV-VIS-NIR SPECTROPHOTOMETERS

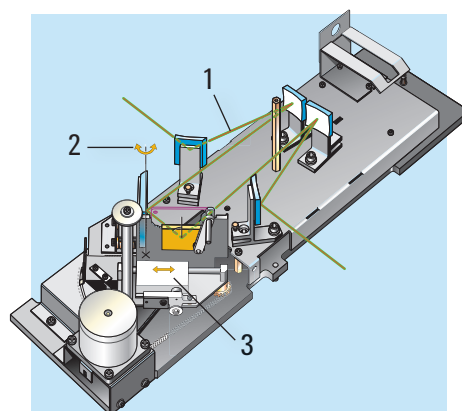
The Measure of Confidence



For automated variable angle specular reflectance measurements

The Cary VASRA provides the ability to automatically measure the specular reflectance of a sample surface at angles of incidence ranging from 20 to 70 degrees. It is easily installed in the sample compartment of the Cary 4000/5000/6000i, and has several unique features:

- A translation stage moves the sample as the angle changes, ensuring that the center of the light beam remains in the same position, regardless of the angle of incidence.
- The sample is mounted at the slit image position, so the width of the image can be changed to suit different samples by simply selecting the appropriate spectral bandwidth (SBW).
- The accessory is supplied with several aperture masks (2, 10 and 20 mm, including a circular sample holder) enabling the size of the image or the masking size to be changed to suit the sample.
- The accessory is driven via the Cary WinUV software, providing complete automation with no user intervention required to change angles.
- The Cary VASRA accurately measures the refractive index (RI) of lens coatings, anti-reflective coatings on glass, coated filters, and mirrors.



Optical diagram of the Cary VASRA accessory

1. Incoming light
2. Rotational sample stage
3. Translation stage

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



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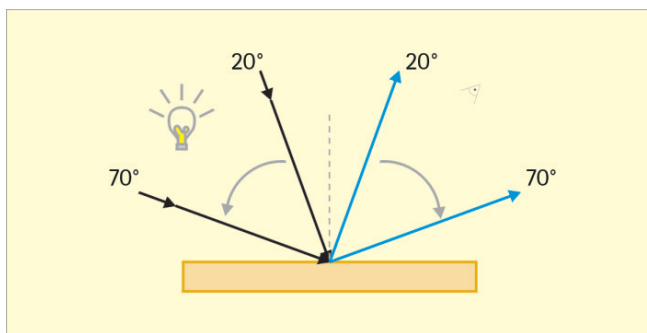
Applications

The VASRA is ideal for measuring the reflectance of materials at various angles and wavelengths, characterizing mirrors and determining the refractive index and thickness of thin films. The characterization of thin films for optical components is important in semiconductor, micro-machining, defense, materials and other high technology applications.

Sample	Example measurement
Anti-reflection coatings	Refractive index and other optical constant determination
Glass	Defect analysis
Architectural glass	Reflectance of light at varying angles
Paints/Coatings	Color at different viewing angles

Specifications

Instrument	Cary 4000/5000/6000i
Wavelength range	Equal to host instrument
Sample sizes (max)	
Angle	Length Height Thickness
20	150 140 65 mm
45	235 140 53 mm
70	243 140 35 mm
Maximum vertical ray divergence	$\pm 2.2^\circ$ (Maximum horizontal beam divergence: $\pm 2.5^\circ$)
Angle of incidence	20-70°



Schematic of VASRA showing incident light (black) and reflected light (blue)

Additional Accessories

Required	Extended sample compartment
Optional	Rear beam attenuator, crystal polarizer/depolarizer (comes standard with film polarizers)

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

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