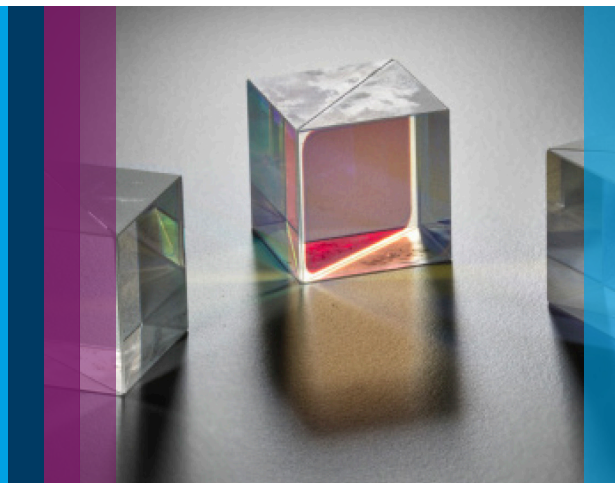


Variable Angle Specular Reflectance Accessory (VASRA)

for the Cary 4000, 5000, 6000i, or 7000 UV-Vis-NIR spectrophotometers



Automated variable angle specular reflectance measurements

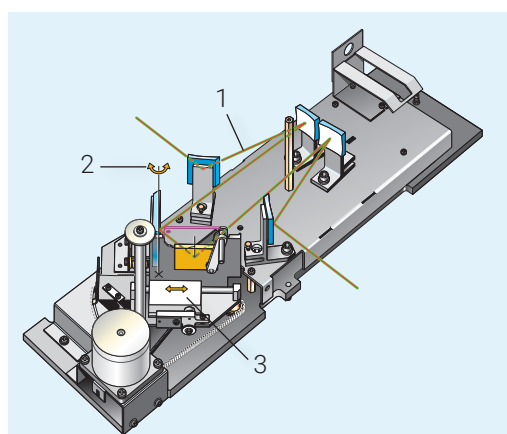
The Cary VASRA accessory can automatically measure the relative specular reflectance of a sample surface at angles of incidence between 20 to 70 degrees. It is easily installed in the sample compartment of a Cary 4000, 5000, 6000i, or 7000 instrument.

The accessory features:

- A translation stage that 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
- Sample mounting at the slit image position, so the width of the image can be changed to suit different samples, simply by selecting the appropriate spectral bandwidth (SBW) in the instrument software
- Several aperture masks (2, 10, and 20 mm, including a circular sample holder). This allows the size of the light spot or the masking size to be changed to suit the sample
- Automation, using the instrument software. You can program the measurements to be done at each angle

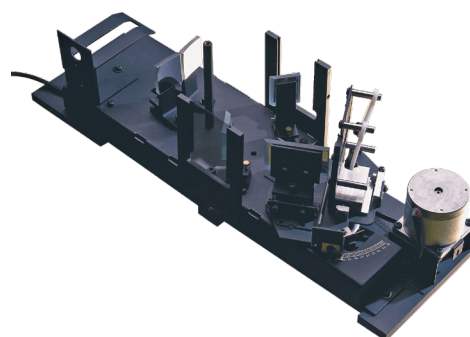
The Cary VASRA accurately measures the refractive index (RI) of lens coatings, anti-reflective coatings on glass, coated filters, and mirrors.

The accessory is supplied with a polymer film polarizer. The extended sample compartment accessory is required (sold separately). Optional accessories include a rear beam attenuator and a crystal Glan Taylor polarizer/depolarizer.



Optical diagram of the Cary VASRA accessory

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



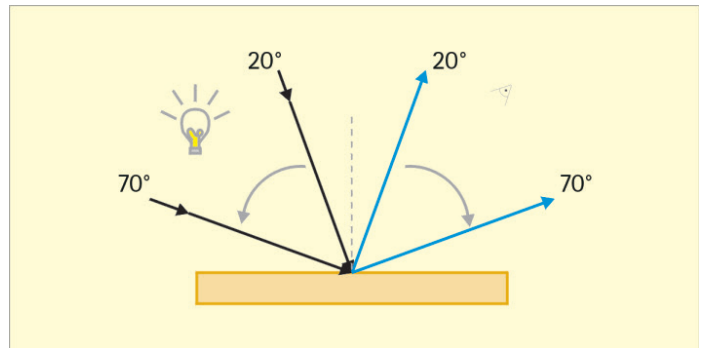
Applications

The VASRA is ideal for measuring the reflectance of materials at various angles and wavelengths. Characterization of mirrors and determining the refractive index and thickness of thin films are common applications. 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

Polymer Film Polarizer	400 nm to 700 nm range		
Glan Taylor Polarizer	350 nm to 2300 nm range		
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	±2.2° (Maximum horizontal beam divergence: ±2.5°)		
Angle of incidence	20-70°		



The VASRA can measure the light reflected (blue) at angles of incidence between 20 to 70°. Incident light is shown in black.

For more information:

www.agilent.com/chem/uv

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This information is subject to change without notice.

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