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.
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)

<table>
<thead>
<tr>
<th>Angle</th>
<th>Length</th>
<th>Height</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>150</td>
<td>140</td>
<td>65 mm</td>
</tr>
<tr>
<td>45</td>
<td>235</td>
<td>140</td>
<td>53 mm</td>
</tr>
<tr>
<td>70</td>
<td>243</td>
<td>140</td>
<td>35 mm</td>
</tr>
</tbody>
</table>

Maximum vertical ray divergence: ±2.2° (Maximum horizontal beam divergence: ±2.5°)
Angle of incidence: 20-70°

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