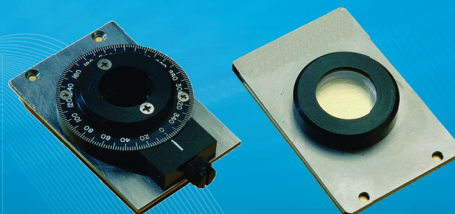


## AGILENT POLARIZER AND DEPOLARIZER

### FOR THE CARY 60/100/300/4000/5000/6000i UV-VIS-NIR SPECTROPHOTOMETERS

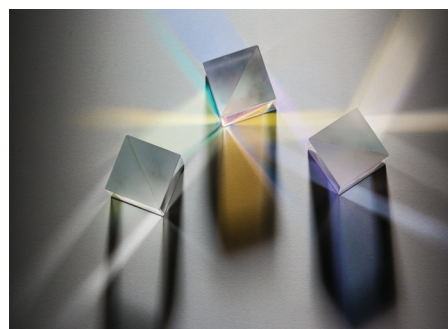
The Measure of Confidence



Easily control light beam polarization

Polarizers are used to control the plane polarization of the incident beam of light. Conversely, a depolarizer can be used to convert any plane polarization of the transmitted beam to a mixture of polarizations. The light passing through the depolarizer changes from parallel, through circular, to perpendicular polarization many times over. The light hitting the detector is thus a non-uniform mixture of polarizations. The depolarizer can also be used before the sample to ensure that the incident beam has no polarization bias.

The Cary polarizer is a Glan-Taylor polarizing prism, mounted in a stainless steel slide with vernier and dial. The Cary depolarizer comprises two crystalline quartz wedges, one twice the thickness of the other, placed together so that the crystal axes are at  $45^\circ$ . The depolarizer is not wavelength sensitive nor does it demonstrate a fast axis nor deflect light.



For more information:  
[www.agilent.com/chem/uv](http://www.agilent.com/chem/uv)



**Agilent Technologies**

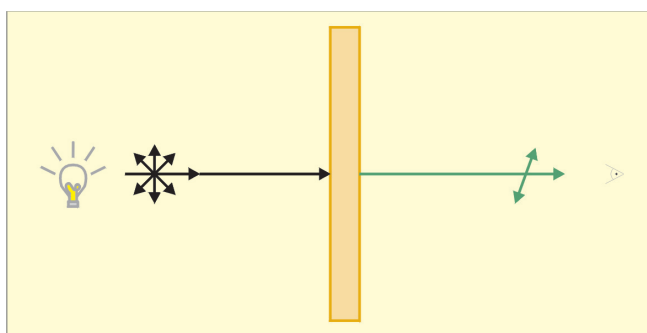
## Applications

In many instances, it is important to control the plane polarization of the light beam in a spectrophotometer. Polarizers and depolarizers are useful in a number of situations.

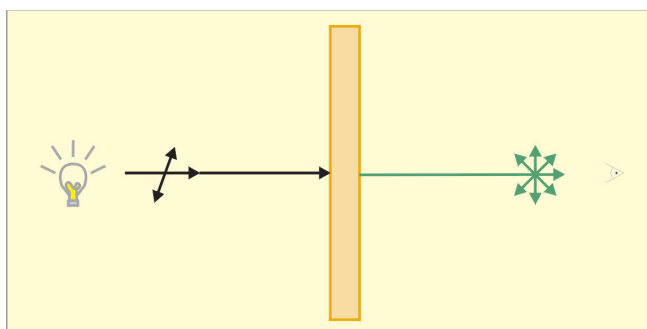
| Sample                     | Example measurement                                 |
|----------------------------|---|
| Liquid crystal             | Sample sensitivity to plane polarized light         |
| Polarizing of sample       | Depolarizer used to reduce polarizing effects       |
| Optically active compounds | Polarimetry measurements to determine concentration |
| Mirrors                    | Reflectance measurements at angles greater than 10° |
| Thin film                  | Transmission at various angles                      |

## Specifications

|                       |  |
|-----------------------|--|
| Instrument            | Cary<br>60/100/300/4000/5000/6000i                       |
| Glan-Taylor Polarizer |  |
| Wavelength range      | 350–2300 nm made from UV selected calcite                |
| Extinction ratio      | $<5 \times 10^{-5}$                                      |
| Material/substrate    | Calcite  |
| Clear aperture        | 12 mm  |
| Slide plate mounted   | 5 x 7.5 cm   |
| Depolarizer           | High transmittance<br>Fabricated from crystalline quartz |
| Clear aperture        | 22 mm  |
| Slide plate mounted   | 5 x 7.5 cm   |



Polarizer



Depolarizer

## Additional Accessories

|          |   |
|----------|---|
| Required | Solid sample holder   |
| Optional | Solid sample holder (with side mounted slides), VASRA, all DRAs |

For more information:  
[www.agilent.com/chem](http://www.agilent.com/chem)

Agilent Products are for Research Use Only.  
 Not for use in diagnostic procedures.  
 Information, descriptions and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2013  
 Published in USA, April 1, 2013  
 5991-1719EN

