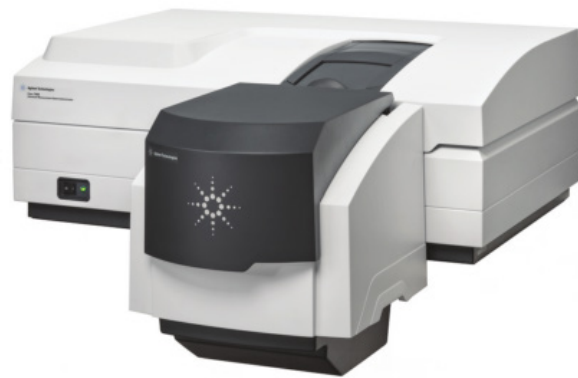


Unattended, Automated Measurements of Optical Components in a Production Environment

Spend less time configuring, more time measuring



The Cary Universal Measurement Spectrophotometer

The Cary 7000 Universal Measurement Spectrophotometer (UMS) is an instrument designed for measuring and characterizing thin films, coatings, and optical components, as well as a variety of other solid samples at various angles of incidence.

The Cary Universal Measurement Accessory (UMA) is an optional accessory that provides the same measurements when fitted to any Cary 4000, 5000 and 6000i spectrophotometer.

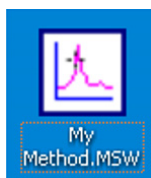
Together with the Cary Win UV software, they were designed for routine operators, or optical technicians, executing rigorous quality assurance programs. They allow optics companies to increase their competitiveness through faster response time and reduced testing cost per part. By increasing automation, reducing attended operation and eliminating reconfiguration time between sample sets, these instruments provide multi-angle measurements quickly and easily.

The Simple Workflow

3-step process to measuring your sample:

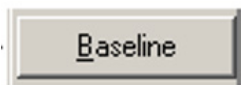
Retrieving a previously created method to perform routine analyses has never been easier. The user simply double-clicks directly on a method file (.MSW). The appropriate Cary WinUV software application will start, automatically loading that method. The operator then clicks on "Baseline", followed by "Start" to perform their routine multi-angle analysis. The 3 step workflow to measure a sample using a Cary UMS or UMA system is outlined below.

1.



Double click the chosen method file on the desktop or preferred folder.

2.



Click the Baseline button.

3.



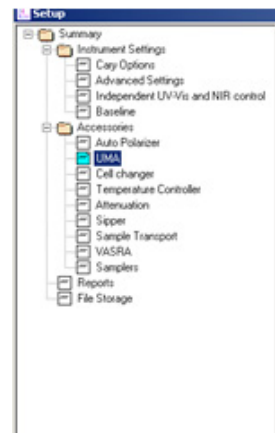
Click the Start button.

Employing an already created method to perform routine analyses as an operator has never been easier!

Creating a Method

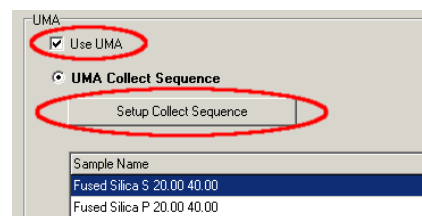
The laboratory supervisor or method developer will also find it very straight-forward to configure multi-angle measurement methods in the Cary WinUV software for the UMA. The workflow below demonstrates the steps required to set up a method that can then be used by any operator for routine sample measurements.

1.



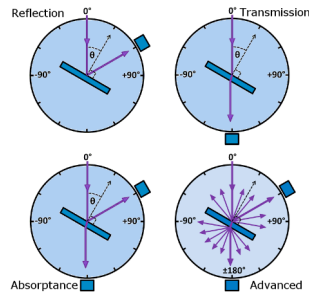
In the Cary WinUV Setup window, select "UMA". The spectrophotometer will be automatically configured with the optimum beam path, component change points, slit height, spectral bandwidth, averaging time, etc.

2.

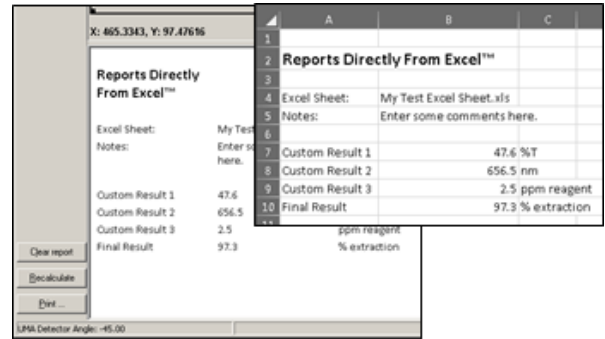


Enter your preferred wavelength range and open the UMA Collect Sequence – a multi-angle configuration wizard.

3.



Guided by the schematics in the user interface, choose the desired collection mode; %T, %R, Absorbance or Advanced.



Data can be imported from Excel into the Cary WinUV software to generate custom reports.

Conclusion

The Cary Universal Measurement Spectrophotometer or Universal Measurement Accessory is designed for rapid, automated measurements of solid samples at multiple angles.

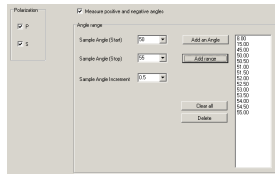
It is an ideal tool for automated measurement of optical components in a production environment. The productivity improvements it offers will reduce the cost of production testing and free up operators to complete other tasks.

Related Product



The Cary UMS can be fitted with an autosampler that can accommodate single large samples or multiple smaller samples.

4.



Enter the required angles of incidence.

5.

Sample Name	Polarization Angle	Sample Angle	Detector Angle
Sample 1	0.00	0.00	180.00
Sample 2	90.00	0.00	180.00
Sample 3	0.00	30.00	180.00
Sample 4	90.00	30.00	60.00
Sample 5	0.00	45.00	180.00
Test Sample 1	45.00	45.00	90.00
Test Sample 2	45.00	5.00	12.00
Test Sample 3	47.00	5.00	14.00
QC Check 1	48.00	5.00	20.00
QC Check 2	48.00	5.00	20.00

Review the final configuration in the summary table and click OK to commence automated measurements.

Cary WinUV methods can be configured to automatically save data in the native WinUV .BSW file format, or automatically export data in the popular .CSV file format for easy import into Excel at the end of any analysis.

A Cary WinUV method can also be linked to a pre-made Excel spreadsheet for customized data processing. Any text or numbers present in the spreadsheet's "Report" tab will be captured by the Cary WinUV software and ported directly back into the Cary WinUV reporting window. This feature ultimately provides users with a convenient and flexible solution for generating custom data reports directly in the Cary WinUV software, without having to manually import data into other software for further processing (see figure, below).

www.agilent.com/chem

© Agilent Technologies, Inc. 2018
Printed in the USA, April 30, 2018
5991-9339EN

