If you have additional questions regarding this piece of equipment, its operation, safety requirements, or constraints, DO NOT OPERATE and contact the Lab Coordinator (3675) for assistance.

Location: Life Sciences Laboratory, Room 1118

Company: Agilent Technologies

Model: Cary 60 UV-Vis
General Operations

The parts of this instrument that users are allowed access to are the: main cover; sample compartment module; and lamp module. The lamp module should ONLY be removed if it is to be changed or aligned. Any other panels or covers that are retained by screws on this instrument and its accessories may be opened ONLY by Agilent service engineers. The alignment procedures can be found on page 29 of Agilent Cary 60 Spectrophotometer User’s Guide.

To use the equipment please follow the instructions below:

1. Reserve the instrument in the User Services Online Portal.
2. Fill in the logbook. It is located on the shelf by this equipment.
3. Plug the power cable of the instrument to the **power source (outlet) on the wall**. Please note that the use of extension cords or outlet adaptors is not recommended. Ensure that the computer connected to the instrument is connected to a power source and turned on as you will need the **Cary WinUV software** installed on the computer for your sample(s) analyses.
4. To turn the instrument on, press the ‘power button’ located on the front panel of the instrument (see figure 1 below). Note that the indicator lamp on the power button has several conditions (see table 1 below)

![Figure 1. Cary 60 spectrophotometer](image)

**Table 1.** The conditions of the indicator lamp on the power button

<table>
<thead>
<tr>
<th>Color</th>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Static on</td>
<td>Powered on; instrument is calibrated/initialized and not scanning</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Scanning (no fault condition exists)</td>
</tr>
<tr>
<td>Orange (yellow)</td>
<td>Static on</td>
<td>Instrument initializing (not scanning)</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Scan in progress while initializing/calibrating</td>
</tr>
<tr>
<td>Red</td>
<td>Static on</td>
<td>Initialization or calibration failed. Instrument is still allowed to operate</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Instrument is scanning after initialization or calibration has failed</td>
</tr>
</tbody>
</table>

5. To analyze your sample after placing them in the cuvette, please use the **Cary WinUV software** installed in the computer connected to this equipment. A number of tutorials been provided to get you started using the Cary WinUV software, see the list below. To run the Cary 60 tutorials double-
click the tutorial icon on the computer’s desktop or click **Start>Programs>Agilent>Cary WinUV>Cary Tutorial**. The **Cary WinUV Help** also installed on the computer can be useful.

- Cary WinUV overview – describes the software layout, how to specify report settings and how to save and open methods.
- Measuring a sample at one or more wavelengths – describes how to perform absorbance readings of samples using the Simple Read application.
- Measuring multiple samples using the Multicell Holder accessory – describes how to measure multiple samples using the Advanced Reads application.
- Running a wavelength scan – describes how to scan multiple samples using the Scan application.
- Running a Concentration experiment using a Fiber Optic Dip Probe accessory – describes how to use the probe for rapid sample measurements.
- Running a temperature controlled single cell Kinetics experiment – describes how to use the Kinetics application to calculate reaction rates from absorbance versus time data.

6. Once you are done using the instrument, please rinse the cuvette with copious amounts of ultrapure water. Then shutdown the computer, turn the instrument off using the power button, and unplug the power cable from the power outlet.
Safety Recommendations

1. The lamp module contains components operating at high voltages, to avoid electric shock, NEVER disassemble the module.

2. When operating, the lamp module emits high intensity light that can cause serious damage to the eyes. To avoid eye damage, never operate the lamp outside the instrument.

3. Do not attempt to open any panel or cover that is retained by screws.

4. Do not block any ventilation grills present on the computer.

5. If your samples (materials, solvents or solutions) are flammable, corrosive, toxic or hazardous, ALWAYS ensure that laboratory safety practices governing the use, handling and disposal of such samples are strictly observed.

6. The Measurement category is IEC610:I. Do not use this instrument for measurements within measurement categories II, III and IV.

7. To avoid damage through spillage of solutions and samples being analyzed, the worktops should be covered with a material that is corrosion resistant and impervious to liquids.

8. Allow at least two inches of space on both sides, and six inches at the rare of the system to permit free air circulation.

9. The Instrument weighs 18 kg. To avoid injury to personnel or damage to it, always use two or more people when lifting or carrying the instrument. NEVER attempt to lift the instrument alone.

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