SpectraMax® QuickDrop™

UV-Vis Spectrophotometer

Trouble Shooting

MOLECULAR DEVICES

N/A
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Troubleshooting

CAUTION! Maintenance procedures other than those specified in this guide must be performed by Molecular Devices. When service is required, contact Molecular Devices technical support.

If the following problems happen, do the following troubleshooting corrections.

Display Has Vertical Lines

The instrument should start up when you touch the power button or the touchscreen. If the instrument does not start up and the screen displays vertical lines:

- The power cord is not seated correctly in the machine. Unplug the power cord from the instrument and then fully plug the cord back in to the instrument.

Instrument Start Up Failure

The instrument should start up when you touch the power button or the touchscreen. The instrument might not start up for the following reasons:

- The sample paths are blocked or dirty. Dried DNA or Protein sample on the micro-volume head can cause start up calibration errors.
- The power supply is disconnected.

Report persistent failures to technical support.

Negative Absorbance Readings

Sample measurements read negative absorbance for the following reasons:

- The absorbance value of the reference is higher than the sample.
- The reference and the sample are interchanged.
- The sample is very dilute and close to the absorbance of the reference. The minimum concentration for the micro-volume sample port is 1 ng/µL (dsDNA) The minimum concentration for the 10 mm pathlength standard cuvette port is 0.5 ng/µL (dsDNA).

Unexpected Results

You can see unexpected results for the following reasons:

- There are bubbles or contamination in the sample or reference.
- The cuvette orientation is wrong.
- The cuvette material is not compatible with the experiment wavelength requirement.
- The pathlength you select is wrong.
- Both the cuvette and the micro-volume sample platform contain sample at the same time.

Absorbance Readings are Higher Than Expected

Absorbance readings can be higher than expected for the following reasons:

- The sample reference is wrong.
- The cuvette orientation is wrong.
- The cuvette material for the measurement wavelengths is wrong.
- The pathlength you select is wrong.
- Both the cuvette and the micro-volume sample platform contain sample at the same time.
- The sample or the cuvette is contaminated.
- In DNA applications, check 320 nm background, if the value is higher than 0, select a background correction in method set up.
- The optical alignment might be wrong. Contact technical support.

Absorbance Readings are Lower Than Expected

Absorbance readings can be lower than expected for the following reasons:

- The sample reference is wrong.
- The sample or the reference is contaminated.
- The sample and the reference samples are the same.
- The cuvette material is not compatible with the experiment wavelength requirement.
- The pathlength you select is wrong.
- The light beam might be missing the sample in the cuvette. Fill the cuvette with 20 mm of sample.
- On the micro-volume sample platform, the size or position of the droplet might be wrong.
- For DNA applications, check that the measurements at 230 nm and 320 nm are near 0.
- There might be a stray light issue. Contact technical support.

Absorbance Readings are Stable but are Different Than Expected

Absorbance readings might be stable, but different than expected for the following reasons:

- Check that the Absorbance displayed is being normalized to a pathlength of 10 mm if a standard micro-volume cuvette is used.
- With a 0.5 mm pathlength, the ideal measurement range becomes equivalent when normalized to 2 A to 50 A and for a pathlength of 0.125 mm it becomes 8 A to 200 A.

For unresolved Absorbance issues, contact technical support. See Obtaining Support on page 4.

Poor Reproducibility

You can get poor reproducibility for the following reasons:

- More sample is needed in the cuvette or the micro-volume sample port.
- The cuvette orientation is wrong.
- The cuvette material for the measurement wavelengths is wrong.
- The concentration of the sample is either too low or too high. Using a 10 mm pathlength cuvette, the measured sample absorbance should be between 0.1 A and 2.0 A. If absorbance is > 2 A, the measurement is no longer in the linear range.
- There are particulates in the sample. Absorbance measurements are not accurate in turbid samples.
- There might be noise or a measurement stability issue. Contact technical support.

Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest level of technical service.

Our Support website, www.moleculardevices.com/service-support, has a link to the Knowledge Base, which contains technical notes, software upgrades, safety data sheets, and other resources. If you still need assistance after consulting the Knowledge Base, you can submit a request to Molecular Devices Technical Support.

You can contact your local representative or Molecular Devices Technical Support at 800-635-5577 (North America only) or +1 408-747-1700. In Europe, call +44 (0) 118 944 8000.

To find regional support contact information, visit www.moleculardevices.com/contact.

Please have your instrument serial number or Work Order number, and your software version number available when you call.

WARNING! BIOHAZARD. It is your responsibility to decontaminate components of the instrument before you return parts to Molecular Devices for repair. Molecular Devices does not accept items that have not been decontaminated where it is applicable to do so. If parts are returned, they must be enclosed in a sealed plastic bag stating that the contents are safe to handle and are not contaminated.

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