Protocol

NanoDrop Ultra Spectrophotometers and Fluorometers

Cuvette Check

Introduction

Recommended Schedule: Every 6 months.

The Cuvette Qualification Filter Kit, is required to verify the photometric performance of the cuvette pathway of the Thermo Scientific™ NanoDrop™ Ultra^{C} and Thermo Scientific™ NanoDrop™ Ultra^{C} FL Spectrophotometer and Fluorometer instruments.

Prior to running this test, please ensure the cuvette port is completely empty.

Materials Needed

- Cuvette Qualification Filter Kit for NanoDrop Instruments (PN 840-257300)
    - NIST-Traceable Certified 10% Transmittance (at 590 nm) Neutral Density Filter
    - NIST-Traceable Certified 50% Transmittance (at 590 nm) Neutral Density Filter

Cuvette Check Procedure:

1. From the home screen, select the **Diagnostics** icon , followed by **Cuvette Check**.
2. Enter the serial number of the qualification filter kit and the lot-specific target absorbance at 590 nm for each filter. If using the local instrument software, select **Done** to close the number pad window for each entry.

   This information can be found on the certificate of calibration provided with the cuvette qualification filter kit.

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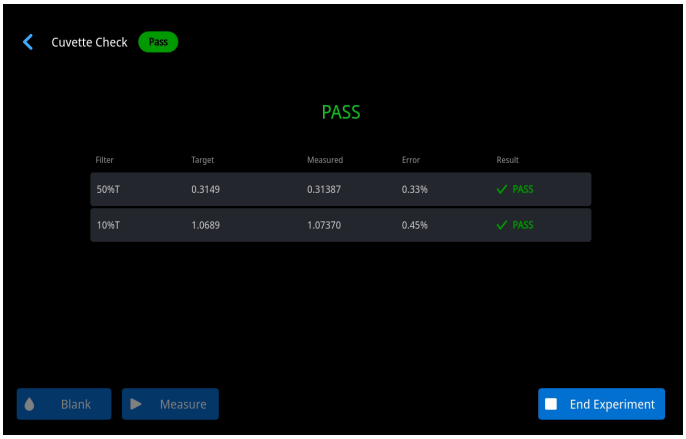
3. After all values have been input, select **Run**.
4. Ensure the cuvette holder is empty and clear of any obstruction.
5. With no cuvette inside the cuvette holder, select **Blank** to record the blank measurement. A blank filter is not needed.
6. Load the 50%T filter into the cuvette holder ensuring that the filter is oriented correctly, select **Measure**.
    a. The arrow etched into the assembly indicates the direction of the light path.
7. Load the 10%T filter into the cuvette holder ensuring that the filter is oriented correctly, select **Measure**.
8. After each measurement, the overall result of the Cuvette check will be displayed on screen.
9. When finished, select **End Experiment**, and remove any remaining filters from the cuvette holder.
10. The experiment name can be changed at this time and up to five unique identifiers/tags can be added, once complete, select **Next**.
11. Results can be exported and printed at this time by selecting **Continue** or at a later time from the History.
    a. After exporting or printing, select **OK** to go back to the Diagnostics screen.
12. If results do not need to be exported or printed, select **Finish** to return to the Diagnostics screen.
13. To review results from a previous Cuvette Check, select the **History** icon from the Main Menu and locate the Cuvette Check results from the list of experiments.

Interpreting Results



1. The overall result of the test will be displayed at the top of the screen as a **PASS** or **Fail**.
2. The software will display the results for each measured filter in the results table with either a PASS or a Fail indicator. If both filters provide passing results, the overall Pass result will be displayed at the top.
3. If one or both filters fail, the Cuvette Check will also fail. In the case of a failed Cuvette Check, immediately repeat the test ensuring that the cuvette is clean and in the proper orientation. If the test fails again, contact NanoDrop Technical Support (**nanodrop@thermofisher.com**) or your local distributor for assistance.

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