

Diagnostics App Self Test Technical Note 131

Introduction

Although the DS-11 propriety SmartPath® technology enables accurate pathlength control and eliminates the need for routine recalibration, labs may choose to run the Diagnostics app to verify that the instrument is working within specifications. The Self Test option within the app is specifically designed to assess parameters other than pathlength calibration.

Diagnostics Self Test

The DS-11 Diagnostic Self Test is a simple one button procedure that returns results in under 20 seconds. Two spectral plots of the xenon flash lamp intensity and a table that compares measured versus specified values for a panel of specifications will be displayed as seen in the image below:

| | Self Test Mode | Microvolume Mode nd bottom sample surfaces. | Date | 2014-03-09 | Serial Number | 123 | Measurement Cycles | 4 |
|---|--|---|------------------|---------------|------------------|---------|-----------------------|--------|
| 1 | . Clean both top and bottom sample surfaces. | | | Self Test | Specif | ication | Measured | Result |
| 0. Discuss 1. J. of dupped as a standard offers | | | Peak | at 484.43nm | +/-1. | .0 nm | 484.56 | PASS |
| 2. Pipette 1 uL of dH20, then tap the Self Fest button. | | | Peak at 362.41nm | | +/-1. | .0 nm | 362.51 | PASS |
| | | | Peak at 823.16nm | | +/- 1.0 nm | | 823.74 | PASS |
| 00000 | @ © | 0 | Peak | at 260.55nm | +/-1. | .0 nm | 260.57 | PASS |
| | | ~ | Detec | ctor Dark | > 150 | I0 cts | 2519 | PASS |
| 80000 | | | Detec | tor Dark | < 500 | IO cts | 2519 | PASS |
| | | | Inten | sity at 260nm | > 100 | IOO cts | 29066 | PASS |
| 60000 | 1.1 | | Inten | sity at 484nm | > 100 | IOO cts | 51431 | PASS |
| - | | | Inten | sity at 800nm | >= 50 | I0 cts | 1227 | PASS |
| 20000 . 20000 . 0 . 2 | 10 300 400 500 600 700 1 | sóo | | | | | | |

Tips

- Ensure that both the upper and lower microvolume measurement surfaces are clean prior to starting the microvolume mode Self Test assessment. Note: The sampling surface is located near the front of the instrument. The optical surface at the back near the arm hinge base should be cleaned if someone inadvertently pipettes samples onto this surface.
- For DS-11+ models, remove cuvettes from the holder block and ensure the light path is clear of all obstructions prior to starting the cuvette mode Self Test assessment.

Troubleshooting

The primary cause for failed **microvolume mode** Self Test results is dirty measurement surfaces.

• Clean the surfaces, then repeat the Self Test. Refer to the User guide or DeNovix Technical Note 110 for surface cleaning information.

The cuvette left in the cuvette block is primary cause for failed **cuvette mode** Self Test results.

• Remove cuvette from the cuvette block, then repeat the Self Test.

Lamp Reset

• If a second attempt at the Self Test fails, then use the Lamp Reset option accessed from the Overflow menu to initiate a system reoptimization. The Overflow menu is represented by the 3 vertical dots at the top right of the screen.

Software Update

 Confirm lamp is activated during the microvolume mode Self Test by looking at a water sample pipetted onto the measurement surface. If no light is observed after the Measure button is pushed, the instrument operating software and firmware might be out of date. The DS-11 software should be fully updated (using the Home screen second page Updater App).

Customer Support

Contact DeNovix Customer Support if further help is required. Please include the serial number of your instrument when contacting Customer Support by email.

Outside of the US, please contact your local distributor for assistance.

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