



Agilent Technologies

Innovating the HP Way

1100 Series Multiple Wavelength Detector (MWD) Cell Test Procedure Using the Hand-Held Control Module

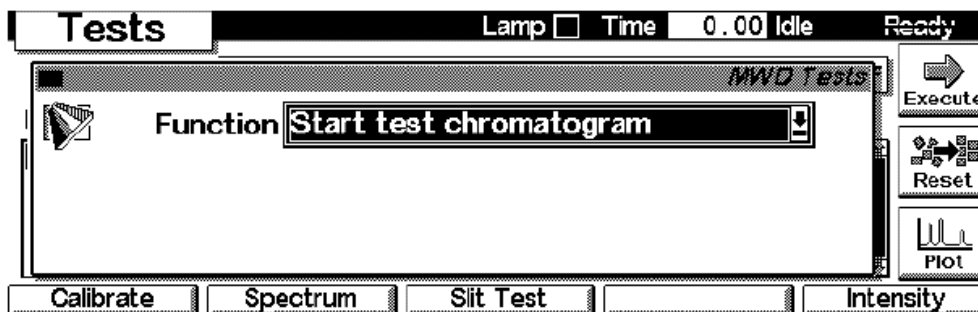
Troubleshooting the Detector

1. Select the Tests button [F3] in the System screen.
2. Select the Detector from the menu.
3. Press the Enter key.
4. Select the Cell Test.

Diagnostics and Tests

Tests screen

Use the **Esc** key to receive **Views** on the F5 key. Choose **System** from the pull-down menu. Use the F3 key (**Tests**) to select the MWD. Several tests are available to test the Agilent 1100 MWD. Additional test are listed in the function box. Refer to “Troubleshooting and Test Functions” on page 49 for more information on the tests.



The selection of tests depends on the revision of the hand-held control module. For information about each test, see the *Reference Manual* for the Agilent 1100 detectors.

NOTE The full test capability is only available from the LC ChemStation.

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Cell Test

Cell Test

The cell test measures the intensity of the deuterium and tungsten lamps over the full wavelength range (190 – 950 nm), once with the flow cell installed, and once with the flow cell removed. The resulting intensity ratio is a measure of the amount of light absorbed by the flow cell. The test can be used to check for dirty or contaminated flow cell windows. When the test is started, the 1-nm slit is moved into the light path automatically, and the gain is set to zero. To eliminate effects due to absorbing solvents, the test should be done with water in the flow cell.

Cell Test Evaluation

The Agilent ChemStation calculates the intensity ratio automatically. The intensity ratio (typically between 0.5 and 0.7) is dependent on the degree of contamination of the flow cell windows, and on the type of flow cell used.

Figure 25

Cell Test Results

The screenshot shows a software window titled "MWD Cell Test" with "Explain" and "Close" buttons. Below the buttons is a table with the following data:

		Result Status	
Detector Cell Test			
Expected total time: approx. 45 s.			
Test Procedure:			
1. If cell not in place, install it			done
2. Measuring intensity with cell	1554		done
3. Remove cell			done
4. Measuring intensity without cell	38019		done
5. Calculating intensity ratio	0.0		done

Test Failed (low ratio value)

Probable Causes

- Absorbing solvent or air bubble in flow cell.
- Dirty or contaminated flow cell (see example above).

Suggested Actions

- Ensure the flow cell is filled with water, and free from air bubbles.
- Exchange the flow cell windows.