

EQUIPMENT REQUIRED

Quantity	Part Number	Description
1	TE82903	TUV Final Test Station
1	700004155	Waters Two Cuvette Set
1	WAT042885	Waters Wavelength Accuracy Calibration Solution (*see notes 1 and 3 below)
1	700004156	Waters Six Cuvette Set (only 5 cuvettes used)
1	WAT042881	Waters Absorbance Detector 10mm Cell Linearity Test Package (* see notes 1 and 2 below)
AR	205001027	2489 Analytical Cell

NOTES:

1. There is a shelf life for both the wavelength accuracy and the linearity kits.
Check the expiration date on the kits before use.
2. Label Linearity cuvettes and fill with solutions from Test Package as follows:
Cuvette #1 fill with Ampule 1 100% Methanol
Cuvette #2 fill with Ampule 2 5.0 mg/L Propyl Paraben
Cuvette #3 fill with Ampule 4 15.0 mg/L Propyl Paraben
Cuvette #4 fill with Ampule 6 25.0 mg/L Propyl Paraben
Cuvette #5 fill with Ampule 7 30.0 mg/L Propyl Paraben
3. Label Wavelength Accuracy cuvettes & fill with calibration solutions as follows:
Cuvette #1 fill with Ampule 1 100% Methanol
Cuvette #2 fill with Ampule 2 10 g/L Erbium Perchlorate

REFERENCE DOCUMENTATION

Document #	Description
721007908	2489 UV/Vis Detector for Refresh/ACQUITY Arc/ AQUITY Arc Bio Functional Specifications

DEFINITIONS AND ABBREVIATIONS

Term	Definition
LSL	Lower Spec Limit
USL	Upper Spec Limit
Δ Production Support Checks (PSC)	Tests performed in support of product design specifications to assure product quality, and/or verify pre/post test conditions.
UA	Absorbance Unit
nm	Nano Meter

TEST SPECIFICATIONS AND TRACEABILITY MATRIX

Test #	Test Specification & Condition	Acceptance criteria	Reference
1	Drift Test	LSL = -0.0001 AU USL = 0.0001 AU	721007908 Sec.5.15.4
2	Drift Run Count	LSL = 0 EA USL = 99 EA	PSC
3	Noise Test	LSL = 0 USL = 0.000005 AU	721007908 Sec. 5.15.2
4	Noise Run Count	LSL = 0 EA USL = 99 EA	PSC
5	Dual Noise Test	LSL = 0 AU USL = 0.000035 AU	721007908 Sec.5.15.3
6	Dual Noise Run Count	LSL = 0 EA USL = 99 EA	PSC
7	Linearity Test	LSL = 0 %RSD USL = 5 % RSD	721007908 Sec.5.15.1
8	255 nm Accuracy Test	LSL = 254 nm USL = 256 nm	721007908 Sec.5.15.5
9	378.8 nm Accuracy Test	LSL = 377.8 nm USL = 379.8 nm	721007908 Sec.5.15.5
10	522.4 nm Accuracy Test	LSL = 521.4 nm USL = 523.4 nm	721007908 Sec.5.15.5

1. TESTER DESCRIPTION

This test station allows the testing of up to 4 detectors at a time. All operator and instrument information may be entered via keyboard or barcode scanner. Operator may choose to run in Auto, Manual, or Diagnostics mode. Auto will execute each test sequentially. Manual will allow tests to be performed in any order. Diagnostics mode does not require any operator or unit information. Test data for each test, as well as the instruments final test results are saved automatically under a folder named by the instrument serial number. The INSTRUMENT FINAL TEST RECORD will print out upon request. A station overview showing station status and test progress is available for viewing or printing.

2. TESTER SETUP

2.1. Plug Tester into a 100-240 Volts 50/60 HZ AC outlet.

- 2.2. Switch power on and allow PC to boot.
- 2.3. Make sure printer is connected, ready and available.

3. UNIT SETUP

When testing spare optics benches, place bench into instrument chassis to perform test.

- 3.1. Place detector at Test Station and connect the appropriate RS232 cable and power cord. Use caution to not "Hot Plug" (instrument power switch should be off).
- 3.2. Install test analytical cell.
- 3.3. Switch detector power on.
- 3.4. When the detector beeps and displays the power up diagnostics page, you must sequentially press the "**Shift**", ".", "**1**" keys. The unit will briefly display "RS232 Enabled".
- 3.5. Allow the unit to initialize and then warm up. The instrument home page is displayed when done.
- 3.6. Press "Shift Calibrate" to calibrate instrument.
- 3.7. Press "Enter" once instrument completed calibration.

NOTE: If the RS232 is not enabled, the detector will not communicate with the Test Station.

- 3.8. Select the appropriate test program for unit type to be tested. Either the desktop icon or from the Start\Program Files\TE82903 menu.
- 3.9. Select the desired test mode, and follow the on screen instructions.

CAUTIONS:

Noise & Drift Tests: Units are very sensitive, so don't disturb units or benches while noise tests are running. Make sure cover is secure and front panel is on.

Linearity Test: This test uses five sealed cuvettes, marked one to five. They must be handled carefully. The smooth surfaces of these cuvettes must remain completely clean. Otherwise test results will be affected. These cuvettes are glass and may shatter under excessive pressures.

Wavelength Accuracy Test: This test uses two sealed cuvettes, one filled with Erbium Perchlorate, and the other with filtered water. They must be handled carefully. The smooth surfaces of these cuvettes must remain completely clean, otherwise test results will be affected. These cuvettes are glass and may shatter under excessive pressures.

4. TESTS COMPLETE / REMOVING UNITS

- 4.1. Select "**UUT DONE**". Then select YES to create test files and print report.
- 4.2. Clear lamp hours
 - 4.2.1. Press DIAG 4
 - 4.2.2. Select lamp change, press "ENTER".
 - 4.2.3. Input 6 ones (1) for the serial number, press "ENTER".
 - 4.2.4. Enter date and year-press "ENTER" twice after the month and once after the day & year.
 - 4.2.5. Press HOME.

- 4.2.6. Answer all questions with "ENTER"
- 4.3. Switch power off.
- 4.4. Disconnect cables.
- 4.5. Remove test analytical cell.