

TEST STATUS REPORT

0201/0205/LC1205/LC1210/BR 201CE/UV1000/UV2000/UV150 DETECTOR

START DATE	<u>6-29-98</u>	MODEL NUMBER	<u>A 4696-010</u>
DUE DATE	<u>6-27-90</u>	FIRMWARE VER.	<u>3.11</u>
SERIAL NUMBER	<u>0623</u>	INPROCESS TRACKING NO.	<u> </u>
TECHNICIAN	<u>M. Jaramila</u>	INPROCESS TRACKING NO.	<u> </u>

CHECK

0201-01	TSP (UV1000)	UPRIGHT	D2	
A5415-070	GBC 201	CUSTOM	D2 & W	
0201-04	TSP (UV150)	UPRIGHT	D2	
A4550-010	VANILLA 201	FLAT	D2	
A4550-020	VANILLA 201	FLAT	D2 & W	
A4550-030	VAN 201 W/MOD F/W	FLAT	D2 & W	
A4696-010 ✓	BIO-RAD 201CE	CUSTOM	D2	<u>MS</u>
0205-01	TSP (UV2000)	UPRIGHT	D2 & W	
0205-04	FINNIGAN UV 2000	UPRIGHT	D2 & W	
A4555-010	VANILLA 205	FLAT	D2 & W	
A4555-020	VAN.205 W/MOD F/W	FLAT	D2 & W	
A5405-070	GBC 205	CUSTOM	D2 & W	
TROUBLESHOOT				

4.1.9 HI-POT LABEL..... MS

4.2 GROUND IMPEDANCE..... MS

4.3.2 CURRENT (NOT TO EXCEED 1.5 AMPS)..... 794MA

RTV APPLIED TO SAMPLE AND REFERENCE PHOTODIODE CONNECTORS.....

4.3.3.1 TRANSFORMER WIRES ROUTED CORRECTLY...GBC ONLY.....

4.3.3.2 TUNGSTEN LAMP INSTALLED.....GBC ONLY.....

4.3.3.3 OVERLY SECURELY BONDED TO UNIT.....GBC ONLY.....

4.3.3.4 GROUND WIRE FROM TRANSFORMER TO MONO..GBC ONLY.....

4.3.4 MOTOR DRIVE TEST 190/450 VERIFY HOME.....

4.3 PRETEST COMPLETE..... MS

4.5.2 WAVELENGTH CALIBRATION OTHER THAN BIO-RAD 201CE (253.7nm FILTER) D2 LAMP: ON

251	_____ V	_____ V	
252	_____ V	_____ V	
*253	_____ V	_____ V	PEAK _____
*254	_____ V	_____ V	253.7 ± 1NM
255	_____ V	_____ V	
256	_____ V	_____ V	

4.5.3 HOME VERIFIED AFTER WAVELENGTH ADJUSTMENT.....

4.6.1 D2 LAMP ALIGNMENT (D2 LAMP ON)(OTHER THAN BIO-RAD 201CE)

653	_____	_____	
654	_____	_____	
655	_____	_____	D2 LAMP PEAK (REF) = _____ NM
656	_____	_____	D2 LAMP PEAK (SAMP) = _____ NM
657	_____	_____	
658	_____	_____	

NOTE: ACCEPTABLE RANGE IS 655NM TO 658NM

4.7 (4.7.4,4.7.6 - 4.7.9) WAVELENGTH CALIBRATION (MERCURY LAMP FIXTURE) BIO-RAD 201CE ONLY

LAMPS: OFF

544	<u>5117</u> V	<u>6227</u> V	251	<u>2754</u> V	<u>95017</u> V
545	<u>5320</u> V	<u>6775</u> V	252	<u>35024</u> V	<u>109345</u> V
* 546	<u>5507</u> V	<u>7120</u> V	* 253	<u>39445</u> V	<u>113901</u> V
547	<u>5589</u> V	<u>7152</u> V	* 254	<u>39805</u> V	<u>108916</u> V
548	<u>5522</u> V	<u>6887</u> V	255	<u>36295</u> V	<u>94408</u> V
			256	<u>30096</u> V	<u>73114</u> V

MAX. WAVELENGTH = 547.
546 ± 1NM

PEAK 254.6
253.6 ± 1NM

4.8 D2 LAMP ALIGNMENT (D2 LAMP ON)(BIO-RAD 201CE ONLY)

MAX. WAVELENGTH + 110NM = 657. NM (OPTIMUM PEAK)
OPT. PEAK + 1.5NM = 658.5 NM, OPT. PEAK - 1.5NM = 655.5 NM

653	<u>5236</u>	<u>7020</u>	
654	<u>5522</u>	<u>8064</u>	
655	<u>6004</u>	<u>9626</u>	D2 LAMP PEAK (REF) = <u>658.3</u> NM
656	<u>6684</u>	<u>11438</u>	D2 LAMP PEAK (SAMP) = <u>658.0</u> NM
657	<u>7107</u>	<u>12421</u>	
658	<u>7243</u>	<u>12683</u>	

4.9.4 BIO-RAD 201CE ONLY:

SAMPLE LIGHT LEVEL @ 200NM = 55103
REFERENCE LIGHT LEVEL @ 200NM = 89330
SAMPLE/REFERENCE RATIO = .61

4.9.6 TUNGSTEN LAMP ALIGNED.....

4.10.29 PASSED LINEARITY TEST.....
READING AT 7.5PPM.....
15.0PPM.....
30.0PPM.....

4.12 NOISE AND DRIFT TEST EXCEL PRINTOUTS COMPLETED
(BIO-RAD 201-CE) 200NM.....
254NM.....
546NM.....
DUAL W/L 254/280NM.....

4.12.65 UV150 EPROM A4411-040 RE-INSTALLED.....

4.13 BUTTON UP

- 4.13.1 DIODE OFFSET VALUES DO NOT EQUAL ZERO/RECALCULATE..... ✓
- 4.13.2 D2 AND W LAMP HOURS ON DISPLAY SET TO ZERO..... ✓
- 4.13.3 LAMP COVER INTERLOCK SWITCH FUNCTIONAL..... ✓
- 4.13.4 NUMBER OF LAMP HOURS ON LAMP TIMER < 100HRS..... 9 HRS
- 4.13.5 START/STOP/ZERO REMOTE FUNCTION.....
- 4.13.6 CLEAR NOVDRAM KEYDOWN (STOP BUTTON) POWER UP..... ✓
- 4.13.7 REMOVE ALL TEST EQUIPMENT & FUSE'S..... ✓
- 4.13.8 VISUAL INSPECTION OF ALL WIRING..... ✓
- 4.13.9 CHECK LAMP SHIELD AND HARDWARE..... ✓

THE FOLLOWING FOR BIO-RAD 201CE ONLY

- 4.13.10 FEMALE CONNECTOR INSTALLED INTO MOTHER BOARD..... ✓
- 4.13.11 SCREW FROM MOTHER BOARD TO CHASSIS INSTALLED..... ✓
- 4.13.12 ALL CHASSIS MOUNTING AND COVER SCREWS INSTALLED..... ✓

4.14 ATTACH THE FOLLOWING INFORMATION

- 4.14.1 PRODUCTION/FINAL TEST QA CHECKLIST..... ✓
- 4.14.2 TEST STATUS REPORT..... ✓
- 4.14.3 NOISE AND DRIFT CHARTS..... ✓
- 4.14.4 MONO ASSY TRAVELER..... ✓

A4695-010 MONOCHROMATOR ASSY., B/R 201 CE

REV. F

CHECKLIST

DUE DATE 3-16-98

ASSEMBLY

1. GRATING INSTALLED
2. APPLY LOCTITE 609 ON GRATING SHAFT
3. RETAINING RING IS SEATED PROPERLY
4. TORQUE SEAL ON GRATING DRIVE SCREWS
5. CHECK ORIENTATION OF ARM ADJUSTMENT SCREW
6. LEADSCREW OILED WITH "TRI-FLOW"

ALIGNMENT

1. ZERO ORDER REFLECTION
2. SPECTRUM
3. WAVELENGTH
4. PROPER HARDWARE HAS 290 LOCTITE

BUTTON UP

1. BLOW OUT INSIDE OF MONOCHROMATOR
2. CLEAN AND INSTALL BEAMSPLITTER SCREWS #2851-1072
3. ALL HARDWARE TIGHTENED TO PROPER TORQUE
4. PLUGS INSTALLED
5. COVER AND RAILS ASSEMBLED AND INSTALLED
6. 3 SCREWS #2851-1086 INSTALLED ON BOTTOM OF MONO
7. DIODES ARE CLEAN, CORRECT REF. DIODE ORIENTATION (YELLOW)
8. LENS IS CLEAN, LENS ALIGNED
9. FLEXURE NOT BENT
10. DUST COVER OVER BEAMSPLITTER INSTALLED

DETECTOR PROCESS TRAVELER

A4696-010 BASE ASSY., B/R 201 CE

REV. _____

DUE DATE _____

<u>OPERATION</u>	<u>COMP. DATE</u>	<u>INT.</u>
1. MONO ASSEMBLY (A4695-010)	3-16-98	<i>[Signature]</i>
2. MONO. ALIGNMENT	3-16-98	<i>[Signature]</i>
3. MONO. BUTTON UP	3-16-98	<i>[Signature]</i>

MECHANICAL ASSEMBLY

STATION 1

1. BASE PAN ASSEMBLY	_____	_____
2. HI-POT TEST	_____	_____
3. IMPEDANCE TEST	_____	_____

STATION 2

1. MONO. INSTALLATION	_____	_____
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STATION 3

1. MECHANICAL ASSEMBLY FINAL	_____	_____
2. AFFIX IN-PROCESS TRACKING NUMBER	_____	_____

TEST

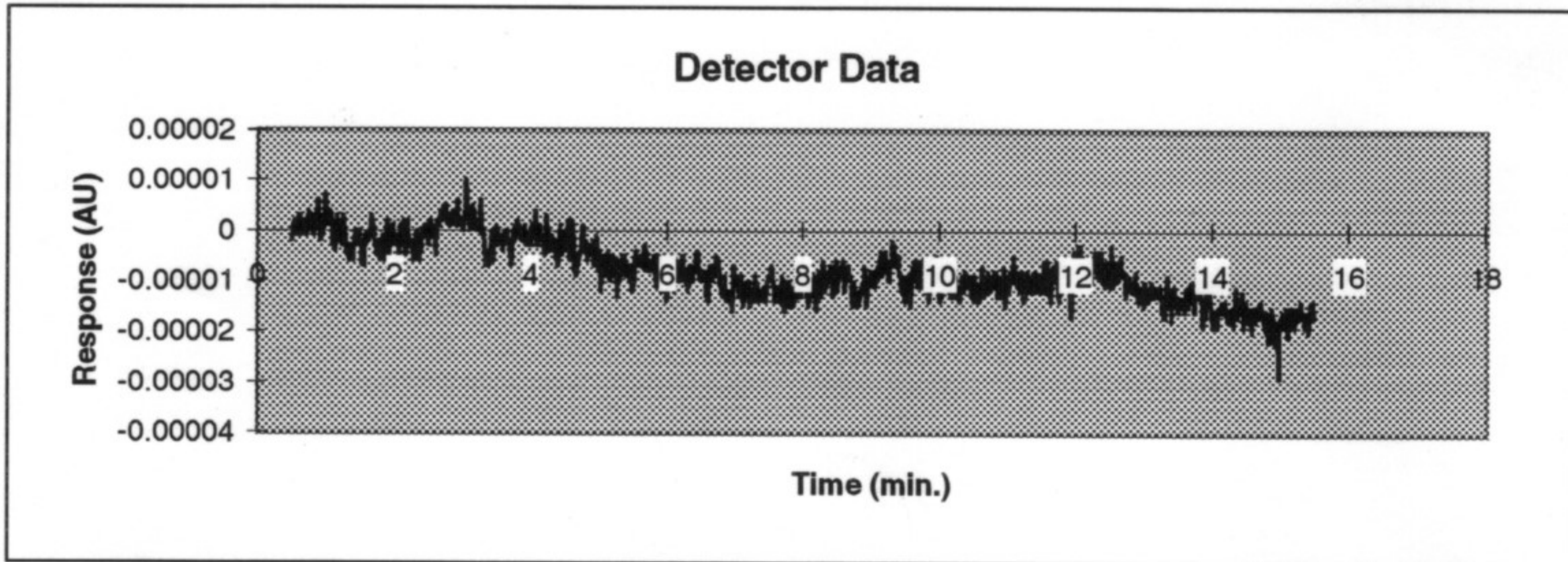
1. PRETEST	_____	_____
2. FINAL TEST	_____	_____
3. VERIFY FIRMWARE VERSION IS 3.11	_____	_____

TBA PERFORMANCE QUALIFICATION LOG
UV Detector Noise and Drift Tests @ 200nm

Model: BR-201CE **Serial #:** 623

Interval	Slope	Intercept	Max	Min	Noise
1	-4.94E-06	5.09E-06	6.77E-06	-4.62E-06	1.14E-05
2	-4.23E-06	-4.23E-06	1.57E-05	3.66E-06	1.20E-05
3	-3.76E-06	1.22E-05	9.31E-06	-7.36E-06	1.67E-05
4	-1.14E-06	2.93E-06	5.70E-06	-5.70E-06	1.14E-05
5	-6.89E-06	2.89E-05	4.92E-06	-6.27E-06	1.12E-05
6	-1.66E-06	2.02E-06	4.70E-06	-6.05E-06	1.08E-05
7	-3.58E-06	1.40E-05	5.10E-06	-5.03E-06	1.01E-05
8	1.67E-06	-2.48E-05	5.18E-06	-4.95E-06	1.01E-05
9	3.84E-06	-4.36E-05	5.89E-06	-5.77E-06	1.17E-05
10	-6.94E-07	-3.00E-06	4.91E-06	-5.35E-06	1.03E-05
11	1.23E-06	-2.39E-05	5.27E-06	-4.59E-06	9.86E-06
12	3.78E-06	-5.37E-05	5.14E-06	-8.48E-06	1.36E-05
13	-6.75E-06	7.64E-05	5.06E-06	-4.00E-06	9.06E-06
14	-2.83E-06	2.49E-05	4.65E-06	-4.72E-06	9.37E-06
15	3.17E-08	-1.78E-05	3.34E-06	-1.17E-05	1.50E-05
Average Noise					1.2 E-05
Drift					1.6 E-05

	Actual	Specification	Pass/Fail
Noise (AU)	1.2 E-05	2 E-05	Pass
Drift (AU/hr)	1.6 E-05	2 E-04	Pass
Sample Rate (Hz)	5		



The above detector was certified
 by the following TBA Technician:

Name: Mel Jaramillo

Date: 6/30/98

Signature: Mel Jaramillo