

**CALIBRATION CERTIFICATE**

Calibration of the **MINDRAY BS-240** (Fully Automated Biochemistry Analyzer) has been carried out as per the recommendations of the company **SHENZHEN MINDRAY BIO-MEDICAL ELECTRONICS CO.,LTD,China.**

Customer Name & Address:	Installation Date : 14/09/2022 Calibration Date : 28/12/2022 Calibration Due Date: 27/06/2023
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Serial No: YX 28005074	Software Version: 24.00
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**Instrument Calibration Data's Attached here.**

  
Sign and Seal

# PRAKASH DIAGNOSTIC CENTRE

Date: 28/12/2022

Instrument SerialNumber		Yx-28005874	Software version	24.00.	
NO.	Unit	Parameter	Default Value	Parameter Range	Actual Value
1	Reaction Carousel	Lamp Lightness Value	238	[0,255]	235
2	Reaction Carousel	Automatic Wash best Adjust Cuvette Position offset	30	[1,93]	93
3	Reaction Carousel	Automatic Washmax forward deviation Cuvette Position offset	60	[1,93]	65
4	Reaction Carousel	Automatic wash Max Negative deviation Cuvette Position Offset	90	[1,93]	18
5	Reaction Carousel	Reagent Dispensing Optimal Alignment Position	30	[1,93]	17
6	Reaction Carousel	Reagent Dispensing Forward maximum Deviating Position	60	[1,93]	88
7	Reaction Carousel	Reagent Dispensing Reversed maximum Deviating Position	90	[1,93]	49
8	Reaction Carousel	Signal Collecting Optimal Alignment Position	30	[1,93]	11
9	Reaction Carousel	Signal Collecting Forward Maximum Deviating Position	60	[1,93]	88
10	Reaction Carousel	Signal Collecting Reversed Maximum Deviating Position	90	[1,93]	42
11	Reagent Carousel	Dynamic scanning deviation	20	NA	20
12	Reagent Carousel	Deviation of reagent probe on outer ring injection port	67	[12,92]	58
13	Reagent Carousel	Deviation of reagent probe on Inner ring injection port	38	[12,92]	36
14	Reagent Carousel	Barcode scanning deviation on outer ring	38	[32,42]	38
15	Reagent Carousel	Barcode scanning deviation on inner ring	86	[80,90]	86
16	Reagent Carousel	Compensation for reversed stop position on inner ring	2	[-20,+20]	3

17	Reagent Carousel	Compensation for reversed stop position on outer ring	2	[-20,+20]	3
18	Sample Carousel	Dynamic scanning deviation	25	NA	25
19	Sample Carousel	Deviation on sample carousel outer ring—Stop position	64	[17,111]	64
20	Sample Carousel	Deviation on sample carousel middle ring—Stop position	88	[41,129]	88
21	Sample Carousel	Deviation on sample carousel inner ring—Stop position	26	[12,73]	26
22	Sample Carousel	Barcode scanning deviation on middle ring—Stop position	116	110,122]	116
23	Sample Carousel	Barcode scanning deviation on outer ring—Stop position	49	[43,55]	47
24	Sample Probe	Reaction Carousel Horizontal Dispensing Position	-1094	[-1112,-1044]	-1092
25	Sample Probe	Reaction Carousel Horizontal Diluting Position	-1094	[-1112,-1044]	-1092
26	Sample Probe	Horizontal washing Position(Forward)	-160	[-210,-110]	-163
27	Sample Probe	Horizontal washing Position(Reversed)	-160	[-210,-110]	-163
28	Sample Probe	Horizontal position on sample carousel outer ring	266	[216,316]	257
29	Sample Probe	Horizontal position on sample carousel middle ring	395	[345,445]	385
30	Sample Probe	Horizontal position on sample carousel inner ring	551	[501,601]	542
31	Sample Probe	Reaction Carousel vertical Extreme Position	610	[538,682]	623
32	Sample Probe	Above ISE sample injection port	240	[3,510]	240
33	Sample Probe	ISE vertical Position	480	[895,565]	480
34	Sample Probe	ISE vertical Extreme Position	490	[405,575]	490
35	Sample Probe	ISE Horizontal Dispensing Position	1924	[1874,1939]	1924
36	Sample Probe	Vertical washing Position	43	[3,83]	51
37	Reagent Probe	Reaction Carousel Horizontal Reagent Dispensing Position	683	[633,733]	683
38	Reagent Probe	Reaction Carousel Vertical Extreme Position	610	[538,682]	616
39	Reagent Probe	Horizontal washing Position	200	[150,250]	197
40	Reagent Probe	Vertical washing Position **:	43	[3,83]	50
41	Reagent Probe	Horizontal position on reagent carousel outer ring	-274	[-324,-224]	-279
42	Reagent Probe	Horizontal position on reagent carousel inner ring	-470	[-520,-420]	-486
43	Reagent probe	Reagent carousel vertical extreme position	1490	[1350,1530]	1467
44	Mixer	Reagent mixing Horizontal Position	624	[574,674]	616

45	Mixer	Sample mixing Horizontal Position	-627	[-677,-574]	-621
46	Mixer	Sample Mixing vertical Position	690	[672,715]	691
47	Mixer	Reagent mixing vertical Position	690	[672,715]	692
48	Cuvette Automatic Wash	Horizontal washing position	500	[280,610]	524
49	Cuvette Automatic Wash	Reaction carousel dispensing position	800	[580,910]	824
50	Cuvette Automatic Wash	Reaction carousel washing position	1557	[1337,1667]	1581
51	Cuvette Automatic Wash	Fluidic Prime Complete	0	0/1	0
52	Temperature Control	Reaction Carousel Sensor 1 R0	1000	NA	999.370000
53	Temperature Control	Reaction Carousel Sensor 1 A	0.00381	NA	0.003830000
54	Temperature Control	Reaction Carousel Sensor 1 B	-0.000000602	NA	-6.19E-07
55	Temperature Control	Reaction carousel Sensor 2 R0	1000	NA	1000.050000
56	Temperature Control	Reaction Carousel Sensor 2 A	0.00381	NA	0.003800000
57	Temperature Control	Reaction Carousel Sensor 2 B	-0.000000602	NA	-0.000000475
58	Temperature Control	Reaction carousel Sensor 3 R0	1000	NA	999.460000
59	Temperature Control	Reaction Carousel Sensor 3 A	0.00381	NA	0.00383
60	Temperature Control	Reaction Carousel Sensor 3 B	-0.000000602	NA	-0.000000602
61	Temperature Control	Reaction Carousel Sensor 1 ΔAD	0	NA	0
62	Temperature Control	Reaction Carousel Sensor 2 ΔAD	0	NA	0
63	Temperature Control	Reaction Carousel Sensor 3 ΔAD	0	NA	0
64	Temperature Control	Reaction Carousel Sensor 1 ΔAT	0	NA	0.25
65	Temperature Control	Reaction Carousel Sensor 2 ΔAT	0	NA	0.25
66	Temperature Control	Reaction Carousel Sensor 3 ΔAT	0	NA	0.25
67	Main Controller	Photo electricity Gain Channel 340	127	[50,255]	229
68	Main Controller	Photo electricity Gain Channel 380	127	[20,255]	94
69	Main Controller	Photo electricity Gain Channel 412	127	[20,255]	104
70	Main Controller	Photo electricity Gain Channel 450	127	[20,255]	105
71	Main Controller	Photo electricity Gain Channel 505	127	[20,255]	87
72	Main Controller	Photo electricity Gain Channel 546	127	[20,255]	90
73	Main Controller	Photo electricity Gain Channel 570	127	[20,255]	99
74.0	Main Controller	Photo electricity Gain Channel 605	127	[20,255]	68

75	Main Controller	Photo electricity Gain Channel 660	127	[20,255]	87
76	Main Controller	Photo electricity Gain Channel 700	127	[20,255]	88
77	Main Controller	Photo electricity Gain Channel 740	127	[20,255]	87
78	Main Controller	Photo electricity Gain Channel 800	127	[20,255]	73
					Date Verified
					28/12/2022

Service Engineer ; Nitayan