



**PROFICIENCY TESTING REPORT**  
**ISHTM-AIIMS EXTERNAL QUALITY ASSURANCE PROGRAMME**  
 NABL accredited program as per ISO/IEC 17043:2010 standard  
 Organized By Department of Hematology, AIIMS, New Delhi-110029



*Duration of stability testing - minimum upto 8 days at ambient temp. after dispatch of specimens*

EQAP CODE No. : 5663

Distribution No.: 159-N

Month/Year: April/2023

Instrument ID: BC 5150

Name & Contact No. of PT Co-ordinator: Dr. Seema Tyagi (Prof.), Hematology, AIIMS, Delhi,  
 Tel: 9013085730 , E-Mail : accuracy2000@gmail.com

Date of issue &amp; status of the report: 14-06-2023[Final].

### CBC and Retic Assessment

Test Parameters	S.No.	Among Lab (Accuracy Testing)						Within Lab (Precision Testing)			
		Your Result 1	Your Result 2	Your Results Sum of 2 Value	Consensus result sum of 2 values (Assigned Value)	Uncertainty of Assigned Values	Z Score	Yours Results Diff. of 2 Values	Consensus Result Diff. of 2 values (Assigned Value)	Uncertainty of Assigned Values	Z Score
WBC x10 <sup>3</sup> /μl	1	3.87	3.83	7.7	8.1	0.039	-0.34	0.04	0.1	0.007	-0.48
RBC x10 <sup>6</sup> /μl	1	5.48	5.45	10.93	10.7	0.013	0.62	0.03	0.05	0.003	-0.34
Hb g/dl	1	12.7	12.5	25.2	25.2	0.026	0.00	0.2	0.1	0.007	0.67
HCT%	1	42.5	42.5	85	79.8	0.155	1.11	0	0.4	0.025	-0.90
MCV-fl	1	78.1	77.4	155.5	149.4	0.206	0.96	0.7	0.2	0.017	1.69
MCH-Pg	1	23.2	22.7	45.9	46.8	0.059	-0.56	0.5	0.2	0.012	2.02
MCHC-g/dl	1	29.8	29.4	59.2	62.5	0.120	-0.88	0.4	0.3	0.018	0.34
Plt. x10 <sup>3</sup> /μl	1	206	173	379	371	1.599	0.17	33	7	0.392	3.90
Retic %	2	20	18	38	15.65	0.249	2.93	2	0.5	0.034	2.53

### P.S . Assesment

YOUR REPORT		CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=42 L=6, E=3, Mono/Promono=1 , B1= P.M.=2, Mye=19, Meta=20, Other=8 Band form
RBC Morphology	3	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, hypochromia, Microcytosis; Mild: Macrocytosis, Poikilocytosis
Diagnosis	3	Chronic Myeloid Leukemia (Chronic Phase)



**COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

Test parameters	S.No.	Total participants covered in the current dist. 159--N	Total No. responded	% of Labs with Z Score 0-2		% of Labs with Z Score 2-3		% of Labs with Z Score >3	
				Among labs	Within lab	Among labs	Within lab	Among labs	Within lab
WBC x10 <sup>3</sup> /μl	1	363	358	88.55	86.31	3.07	6.42	8.38	7.27
RBC x10 <sup>6</sup> /μl	1	363	363	87.6	87.05	6.89	4.96	5.51	7.99
Hb g/dl	1	363	363	90.63	85.12	4.96	5.23	4.41	9.65
HCT%	1	363	359	94.71	87.47	4.46	4.74	0.83	7.79
MCV-fl	1	363	359	93.04	88.3	5.29	6.69	1.67	5.01
MCH-Pg	1	363	359	86.91	93.31	8.08	1.39	5.01	5.3
MCHC-g/dl	1	363	358	93.85	87.43	5.31	5.59	0.84	6.98
Plt. x10 <sup>3</sup> /μl	1	363	359	92.76	92.48	4.74	3.9	2.5	3.62
ReticCount%	2	363	272	93.38	84.93	4.78	8.82	1.84	6.25
PS Assessment	3	363	266	Satisfactory :93.95%, Borderline Sat. :2.20%, Unsatisfactory :3.85%					

**Comments:**

1). **Among Lab (EQA) : Results acceptable.**

2). **Within Lab (IQA) : Difference in the CBC measurement values for *PLT* unacceptable, may be due to random/human error.**

**Note-1: EQA** (External Quality Assurance) : Your Performance among various of participating labs in PT, to determine the accuracy of your results.

**IQA** ( Internal Quality Assurance) : Your Performance of comparison of two consecutive measurement values within your lab to test the precision of your autoanalyzer.

**Note-2:** Z score among & within lab were calculated, as per to ISO/IEC 13528:2015 standard. Z score among lab (EQA)= (Your Result Sum of two values - Consensus Result sum of two values)/(Normalised IQR)

Z score within lab (IQA)= (Your Result Difference of two values - Consensus Result difference of two values)/(Normalised IQR)

IQR = Quartile 3 - Quartile 1 of participant data, Normalised IQR = 0.7413 x IQR

**Note-3:** Z score 0 to ±2: Acceptable, Z score ±2 to ±3 :Warning Signal, Z score > ±3 : Unacceptable [As per ISO/IEC 13528:2015 standard]

**Note-4:** Z score value between "0 to ±2" are texted in green colour. Z score value between "±2 to ±3" are texted in orange colour. Z score value > ±3 are texted in red colour.

**Note-5:** Homogeneity and stability testing of PT sample were done as per ISO 13528:2015 standard. To pass homogeneity test, between sample SD (Ss) should be smaller than the check value (0.3\*SDPA). To pass the stability test, average difference in measurement values of first and last day sample ( $\bar{x}-\bar{y}$ ) should be smaller than the check value (0.3\*SDPA).

**Note-6:** ISHTM-AIIMS-EQAP does not subcontract any task of its scheme

**Note-7:** Participants are free to use methods/analyzer of their own choice.

**Note-8:** Proficiency testing (PT ) samples are sent quarterly to each participant.

**Note-9:** All the necessary details regarding design and implementation of PT, are provided in the instruction sheet as well as on programme's website [www.ishtmaiimseqap.com](http://www.ishtmaiimseqap.com).

**Note 10:** Reports are kept confidential.

Report authorized by,



Dr. Seema Tyagi (Prof.)

PT Co-ordinator: ISHTM-AIIMS-EQAP

Department of Hematology, AIIMS, New Delhi

-----End Of Report-----





### CORRECTIVE ACTION PREVENTIVE ACTION SHEET

Date	Non-compliance raised	Root cause analysis	Corrective action taken	Preventive action	Signature
15/6/23	Proficiency outlier Platelet count	Random Error	Call to the Service Engineer Run-reproducibility test & result was found ok.	Working Staff informed to be sensitive while running sample or a.c.	

**Our Vision:** People affected by leprosy living with dignity in a transformed, inclusive society that has overcome leprosy.

Reproducibility		Date/Time	Operator	WBC	RBC	HGB	MCV	PLT	Neu%	Lym%	Mon%	Eos%	Bas%	MPV
Mode:	WB-CBC+DIFF			1.6	0.6	0.5	0.1	2.8	2.6	2.3	11.0	7.4	8.5	1.7
Material:	BC-5D			2.5	1.5	1.5	1.0	4.0	4.0	3.0	2.0	1.5	0.8	4.0
Lot No.:	BC2305BN			Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Analyzer SN:	5 SR-73001780	10 16-06-2023 15:36	service	9.81	4.22	90.8	289	60.2	27.3	7.4	1.0	9.5		
		9 16-06-2023 15:35	service	9.55	4.21	90.9	310	58.2	28.4	7.4	1.1	9.7		
		8 16-06-2023 15:32	service	9.85	4.22	90.7	294	59.9	27.6	6.7	1.0	9.4		
		7 16-06-2023 15:31	service	9.56	4.16	90.8	301	58.5	28.1	7.9	0.9	9.3		
		6 16-06-2023 15:29	service	9.55	4.17	90.9	292	62.1	26.8	5.9	0.9	9.6		

*[Handwritten Signature]*

\* SERVICE REPORT \*



# Redcell Technocare Pvt.Ltd.

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☎ 7081810123 📧 service.redcell@gmail.com

Authorised Service Partner for Mindray IVD Instruments

Book No.: 49

Serial No.: 1207

CUSTOMER DETAILS	INSTRUMENT DETAILS	SERVICE STATUS								
<b>NAME &amp; ADDRESS:</b> The Leprosy mission Hospital. Barabanki.	<b>MODEL:</b> BC-5150 <b>SR. NO.:</b> SR-73001780	<input type="checkbox"/> WARRANTY <input checked="" type="checkbox"/> AMC/CMC <input type="checkbox"/> CHARGED CALL/OUT OF WARRANTY								
<b>TEL No.:</b> 7905368280	<b>CALL DETAILS</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">DATE/TIME</th> </tr> <tr> <td style="width:50%;"><b>CALL RECD.</b></td> <td style="width:50%; text-align: center;">15/6/23</td> </tr> <tr> <td><b>CALL ATTENDED</b></td> <td style="text-align: center;">16/6/23</td> </tr> <tr> <td><b>CALL COMPLETED</b></td> <td style="text-align: center;">//</td> </tr> </table>	DATE/TIME		<b>CALL RECD.</b>	15/6/23	<b>CALL ATTENDED</b>	16/6/23	<b>CALL COMPLETED</b>	//	<b>TYPE OF CALL</b> <input type="checkbox"/> INSTALLATION / REINSTALLATION <input type="checkbox"/> P.M. VISIT    I   II   III   IV <input checked="" type="checkbox"/> APPLICATION SUPPORT <input type="checkbox"/> BREAKDOWN <input type="checkbox"/> AMC/CMC FOLLOW UP <input type="checkbox"/> OTHERS - _____
DATE/TIME										
<b>CALL RECD.</b>	15/6/23									
<b>CALL ATTENDED</b>	16/6/23									
<b>CALL COMPLETED</b>	//									
<b>NAME OF THE OPERATOR:</b> Mr. Ashish										
<b>PROBLEM REPORTED:</b> Result values occur variation during reproducibility test.										
<b>OBSERVATIONS:</b> Need to perform some maintenance.										
<b>ACTION TAKEN:</b> Performed time based maintenance as well as upgraded the software after that runned reproducibility test and found their values well within limits.										
VOLTAGE	L-N	L-E      N-E								
<input type="checkbox"/> FOLLOWING PARTS HAVE BEEN REPLACED/NEED TO BE REPLACED										
NO.	DESCRIPTION	QTY	Price (Rs.)							
				<input type="checkbox"/> PREVENTIVE MAINTENANCE CARRIED OUT SATISFACTORY. <input type="checkbox"/> FAULT RECITIFIED & INSTRUMENT IS WORKING SATISFACTORY. <input type="checkbox"/> COMMENTS (IF ANY)						
TOTAL Rs.				CUSTOMER'S SIGNATURE : 						
<b>ENGINEER SUGGESTION / REMARK :</b> ENGINEER'S NAME/Signature										