



**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. : 4678

Distribution No.: 159-L

Month/Year: April/2023

Instrument ID: 11621

Name & Contact No. of PT Co-ordinator: Dr. Seema Tyagi (Prof.), Hematology, AIIMS, Delhi,  
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Date of issue &amp; status of the report: 13-06-2023[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	3.79	3.6	7.39	7.96	0.031	-0.70	0.19	0.1	0.005	1.01
RBC x10 <sup>6</sup> /µl	1	4.23	4.2	8.43	8.96	0.010	-1.93	0.03	0.05	0.003	-0.45
Hb g/dl	1	11.8	11.6	23.4	26.3	0.028	-3.56	0.2	0.1	0.007	1.00
HCT%	1	40.2	39.1	79.3	85.7	0.229	-0.98	1.1	0.5	0.025	1.35
MCV-fl	1	94.5	92.5	187	190.8	0.466	-0.26	2	0.2	0.020	4.86
MCH-Pg	1	28.2	27.5	55.7	58.7	0.071	-1.40	0.7	0.2	0.011	2.25
MCHC-g/dl	1	30.7	29.5	60.2	60.8	0.162	-0.13	1.2	0.3	0.016	3.04
Plt. x10 <sup>3</sup> /µl	1	146	140	286	252	1.160	1.04	6	5	0.327	0.17
Retic %	2	9.04	9.02	18.06	14.7	0.201	0.57	0.02	0.6	0.045	-0.67

### P.S . Assesment

YOUR REPORT			CONSENSUS REPORT	
DLC%	3	Nrbc=4 , Poly=49 L=40, E=007, Mono/Promono=04 , B1=00 P.M.=0, Mye=0, Meta=0, Other=LEUCOCYTOSIS WITH LYMPHOCYTOSIS	Lymp: 80-89, Poly: 9-15, Mono: 1-2, nRBC/blast/Eosino/Myelo/Meta: 0-1	
RBC Morphology	3	NORMOCYTIC NORMOCHRONIC	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis	
Diagnosis	3	CHRONIC LYMPHOPROLIFERATIVE DISORDER	Chronic Lymphocytic Leukemia (CLL)	

**COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

Test parameters	S.No.	Total participants covered in the current dist. 159--L	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	347	347	84.44	90.2	4.32	3.46	11.24	6.34
RBC x10 <sup>6</sup> /μl	1	347	347	87.61	91.35	8.07	3.75	4.32	4.9
Hb g/dl	1	347	347	90.2	89.34	5.76	6.63	4.04	4.03
HCT%	1	347	347	91.93	91.07	4.9	6.34	3.17	2.59
MCV-fl	1	347	347	93.37	91.35	3.46	4.32	3.17	4.33
MCH-Pg	1	347	347	93.08	92.22	4.61	2.88	2.31	4.9
MCHC-g/dl	1	347	347	92.51	90.2	5.76	3.46	1.73	6.34
Plt. x10 <sup>3</sup> /μl	1	347	347	91.64	89.05	5.76	4.61	2.6	6.34
ReticCount%	2	347	224	92.41	91.52	7.14	2.68	0.45	5.80
PS Assessment	3	347	213	Satisfactory :95.96%, Borderline Sat. :3.18%, Unsatisfactory :0.86%					

**Comments:**

- 1). Among Lab (EQA) : CBC result for *HB* unacceptable, may be due to random/human error
- 2). Within Lab (IQA) : Difference in the CBC measurement values for *MCV* & *MCHC* unacceptable, please check precision/human error. Remaining precision acceptable.

**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

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