



**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. : 5988

Distribution No.: 159-F

Month/Year: June/2023

Instrument ID: CELLENIUM 21 (3020ET-03772)

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: 01-08-2023[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	8.2	7.9	16.1	15.33	0.039	0.75	0.3	0.1	0.008	1.80
RBC x10 <sup>6</sup> /μl	1	3.64	3.58	7.22	6.84	0.008	1.90	0.06	0.03	0.002	1.01
Hb g/dl	1	10.6	10.5	21.1	21.1	0.021	0.00	0.1	0.1	0.007	0.00
HCT%	1	37.5	37.3	74.8	67.1	0.167	1.61	0.2	0.4	0.023	-0.67
MCV-fl	1	90.4	89.4	179.8	195.3	0.416	-1.28	1	0.3	0.022	1.89
MCH-Pg	1	29.6	28.8	58.4	61.7	0.077	-1.82	0.8	0.3	0.018	1.69
MCHC-g/dl	1	32.8	32.3	65.1	63.1	0.160	0.43	0.5	0.3	0.021	0.67
Plt. x10 <sup>3</sup> /μl	1	170	168	338	458	1.916	1.61	0.2	0.4	0.023	-0.67
Retic %	2	45.1	45	90.1	43	0.840	1.83	0.1	1	0.092	-0.81

### P.S. Assesment

YOUR REPORT		CONSENSUS REPORT
DLC%	3	Nrbcs=10 , Poly=74 L=24, E=01, Mono/Promono=01 , B1=0 P.M.=0, Mye=0, Meta=0, Other=0
RBC Morphology	3	Poly: 54-67, Lympho: 22-33, Mono: 2-5, Eosino: 1-3, blast/Promyelo/Myelo/Meta: 0-5
Diagnosis	3	macrocytosis present anisopoikilocytosis marked, nucleated rbc -: 10/100wbc, platelet-: 82x1000/ul, mp absent, abnormal cell absent
		Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Poikilocytosis , Target cells , Sickle shaped cells ,tear drop cells
		Macrocytic anemia
		Thalassemia/Haemoglobinopathy

**COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

Test parameters	S.No.	Total participants covered in the current dist. 159--F	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	317	315	84.76	82.22	2.54	10.79	12.7	6.99
RBC x10 <sup>6</sup> /μl	1	317	317	83.91	88.01	8.52	5.68	7.57	6.31
Hb g/dl	1	317	317	86.44	92.11	5.68	3.79	7.88	4.1
HCT%	1	317	315	93.65	93.02	3.81	2.54	2.54	4.44
MCV-fl	1	317	315	94.29	91.75	5.08	3.49	0.63	4.76
MCH-Pg	1	317	315	85.71	88.89	6.67	4.76	7.62	6.35
MCHC-g/dl	1	317	315	95.24	91.43	3.49	4.76	1.27	3.81
Plt. x10 <sup>3</sup> /μl	1	317	315	89.52	88.89	7.3	5.08	3.18	6.03
ReticCount%	2	317	282	98.23	87.94	1.42	3.55	0.35	8.51
PS Assessment	3	317	282	Satisfactory :89.28%, Borderline Sat. :6.94%, Unsatisfactory :3.78%					

**\*Comments:**

1). **Among Lab (EQA) : PS Diagnosis partially correct, remaining results acceptable**

2). **Within Lab (IQA) : 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

Department of Hematology, AIIMS, New Delhi

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