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

PC-1002

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

EQAP CODE No. : 5215 **Distribution No.:** 158-M **Month/Year:** January/2023

Instrument ID: BC-3000plus (RJ8C127453)

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

Date of issue & status of the report: 28-02-2023[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 x10^3/µl	1	7	6.5	13.5	13.31	0.035	0.22	0.5	0.1	0.007	4.15
RBC x10^6/µl	1	5.17	4.97	10.14	10.25	0.012	-0.30	0.2	0.05	0.003	2.89
Hb g/dl	1	12.6	12.2	24.8	26.5	0.027	-2.29	0.4	0.1	0.008	2.02
HCT%	1	37.8	36.5	74.3	85.7	0.219	-1.53	1.3	0.4	0.025	2.31
MCV-fl	1	73.5	73.2	146.7	169.35	0.353	-1.97	0.3	0.3	0.019	0.00
MCH-Pg	1	24.5	24.3	48.8	51.5	0.059	-1.66	0.2	0.2	0.014	0.00
MCHC-g/dl	1	33.4	33.3	66.7	61	0.140	1.05	0.1	0.3	0.021	-0.67
Plt. x10^3/µl	1	355	326	681	781	2.986	-1.11	29	9	0.518	2.45
Retic %	2	2.5	2	4.5	15.35	0.222	-1.82	0.5	0.5	0.034	0.00

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=1 L=1, E=1, Mono/Promono=0 , B1=90 P.M.=2, Mye=2, Meta=4, Other=WBC: Total count is increased with shift to left upto myeloblasts.BLASTS MORPHOLOGY: Large cells with moderate cytoplasm,having round to indended nucleus ,coarse chromatin with prominend nucleoli,Auer rods noted in the cytoplasm.PLATELETS: Decreased on	Blast: 65-88, Lympho: 5-14, Poly: 2-5, nRBC/Eos/Baso/Mono /Myelo/Meta/ Promyelo: 0-5

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
RBC Morphology	3	Normocytic Normochromic RBC's predominantly with occational microcytic hypochromic RBC's .Nucleated RBC's noted				Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic					
Diagnosis	3	Normocytic normochromic anemia.Acute leukemia (accure myeloid leukemia) thrombocytophenia				Acute Leukemia (AL)					

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 158--M	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 x10^3/µl	1	338	335	83.88	84.18	6.27	6.27	9.85	9.55
RBC x10^6/µl	1	338	338	89.64	89.35	5.92	5.03	4.44	5.62
Hb g/dl	1	338	338	88.76	85.21	5.03	4.44	6.21	10.35
HCT%	1	338	336	97.92	89.88	0.89	5.36	1.19	4.76
MCV-fl	1	338	336	97.62	87.2	1.79	6.55	0.59	6.25
MCH-Pg	1	338	336	88.39	89.58	7.44	4.76	4.17	5.66
MCHC-g/dl	1	338	336	98.21	86.9	0.89	7.74	0.9	5.36
Plt. x10^3/µl	1	338	336	94.64	92.26	3.27	2.98	2.09	4.76
ReticCount%	2	338	296	91.22	85.14	6.08	9.8	2.7	5.06
PS Assessment	3	338	283	Satisfactory :97.93%, Borderline Sat. :1.18%, Unsatisfactory :0.890%					

***Comments:**

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

2). Within Lab (IQA) : Difference in the CBC measurement values for WBC 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.

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----------

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PC-1002

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

EQAP CODE No. : 5215 **Distribution No.:** 157-M **Month/Year:** October/2022

Instrument ID: BC-3000plus (RJ8C127453)

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

Date of issue & status of the report: 24-11-2022[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 x10^3/µl	1	5.4	5.2	10.6	11.2	0.029	**-0.74**	0.2	0.1	0.006	**0.96**
RBC x10^6/µl	1	3.73	3.73	7.46	7.55	0.008	**-0.42**	0	0.04	0.003	**-0.90**
Hb g/dl	1	10.9	10.8	21.7	23.7	0.027	**-3.03**	0.1	0.1	0.008	**0.00**
HCT%	1	31	30.9	61.9	73.3	0.166	**-2.37**	0.1	0.4	0.025	**-0.58**
MCV-fl	1	83.3	82.9	166.2	194.6	0.396	**-2.46**	0.4	0.3	0.021	**0.34**
MCH-Pg	1	29.2	28.9	58.1	62.6	0.084	**-1.90**	0.3	0.3	0.020	**0.00**
MCHC-g/dl	1	35.1	34.9	70	64.5	0.150	**1.30**	0.2	0.3	0.022	**-0.27**
Plt. x10^3/µl	1	143	129	272	281	1.191	**-0.28**	14	4	0.275	**2.25**
Retic %	2	1.7	1	2.7	10.5	0.232	**-1.18**	0.7	0.5	0.033	**0.34**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=2 , Poly=60 L=1, E=8, Mono/Promono=1 , B1=8 P.M.=2, Mye=10, Meta=8, Other=PLATELETS ADEQUATE ON SMEAR	Poly: 60 – 77, Myelo: 5 - 12, Meta: 5 – 10, Lympho: 3 – 7, Eos: 1- 3, nRBC/ Baso/ Promyelo, Blast Mono: 0 – 5
RBC Morphology	3	NORMOCYTIC IN NORMOCHROMIC ,RBCs WITH OCCASIONAL TEAR DROP CELLS AND FEW PENCIL CELLS .NRBCs SEEN	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, hypochromia
Diagnosis	3	CHRONIC MYELOID LEUKEMIA	Chronic Myeloid Leukemia

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 157--M	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 $x10^3$/µl	1	334	333	83.18	88.59	6.61	5.11	10.21	6.3
RBC $x10^6$/µl	1	334	334	88.62	88.92	5.09	5.69	6.29	5.39
Hb g/dl	1	334	334	86.53	85.93	5.99	6.89	7.48	7.18
HCT%	1	334	332	93.98	91.57	4.22	3.31	1.8	5.12
MCV-fl	1	334	333	95.5	90.99	3	2.4	1.5	6.61
MCH-Pg	1	334	333	90.09	85.59	5.71	7.81	4.2	6.6
MCHC-g/dl	1	334	333	93.69	91.89	3.9	2.1	2.41	6.01
Plt. $x10^3$/µl	1	334	333	91.29	91.89	5.71	4.2	3	3.91
ReticCount%	2	334	297	87.88	88.22	7.41	7.07	4.71	4.71
PS Assessment	3	334	270	Satisfactory :87.66%, Borderline Sat. :11.14%, Unsatisfactory :1.20%					

*Comments:

1). Among Lab (EQA) : CBC result for *HB* unacceptable, may be due to random/human error

2). Within Lab (IQA) : Precision acceptable.

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