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. : 4442 **Distribution No.:** 159-L **Month/Year:** April/2023

Instrument ID: S.N.19624

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: 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 x10^3/µl	1	4.37	4.26	8.63	7.96	0.031	**0.82**	0.11	0.1	0.005	**0.11**
RBC x10^6/µl	1	4.55	4.51	9.06	8.96	0.010	**0.36**	0.04	0.05	0.003	**-0.22**
Hb g/dl	1	13.3	13.3	26.6	26.3	0.028	**0.37**	0	0.1	0.007	**-1.15**
HCT%	1	45.5	45.1	90.6	85.75	0.229	**0.74**	0.4	0.5	0.025	**-0.22**
MCV-fl	1	100	100	200	190.85	0.466	**0.62**	0	0.2	0.020	**-0.54**
MCH-Pg	1	29.5	29.2	58.7	58.7	0.071	**0.00**	0.3	0.2	0.011	**0.45**
MCHC-g/dl	1	29.5	29.2	58.7	60.8	0.162	**-0.45**	0.3	0.3	0.016	**0.00**
Plt. x10^3/µl	1	125	124	249	251.5	1.160	**-0.08**	1	5	0.327	**-0.67**
Retic %	2	12	5	17	14.7	0.201	**0.39**	7	0.6	0.045	**7.19**

P.S . Assesment

	YOUR REPORT		CONSENSUS REPORT
DLC%	3	Nrbcs=00 , Poly=00 L=00, E=02, Mono/Promono=03 , B1=00 P.M.=00, Mye=00, Meta=00, Other=00	Lymp: 80-89, Poly: 9-15, Mono: 1-2, nRBC/blast/Eosino/Myelo/Meta: 0-1
RBC Morphology	3	normochromic, normocytic	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis
Diagnosis	3	leucoytosis with limphocytosis	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 $x10^3$/µl	1	346	346	84.68	90.17	4.05	3.47	11.27	6.36
RBC $x10^6$/µl	1	346	346	87.57	91.33	8.09	3.76	4.34	4.91
Hb g/dl	1	346	346	90.17	89.31	5.78	6.65	4.05	4.04
HCT%	1	346	346	91.91	91.04	4.91	6.65	3.18	2.31
MCV-fl	1	346	346	93.64	91.33	3.18	4.34	3.18	4.33
MCH-Pg	1	346	346	93.06	92.2	4.62	2.89	2.32	4.91
MCHC-g/dl	1	346	346	92.77	90.17	5.49	3.47	1.74	6.36
Plt. $x10^3$/µl	1	346	346	92.49	90.17	4.91	4.05	2.6	5.78
ReticCount%	2	346	223	92.38	91.48	7.17	2.69	0.45	5.83
PS Assessment	3	346	212	Satisfactory :95.96%, Borderline Sat. :3.18%, Unsatisfactory :0.86%					

*Comments:

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

2). Within Lab (IQA) : RETIC result is 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----------

District Govt. Hospital Betul Central Processing Lab Dr. Bhimrao Ambedkar Square Betul MP 460001

Check list of Investigation/Corrective Action taken for EQAS failure

Parameter: Retic% (Slide)		Month: 13-06-2023	
SN	**Pre-analytical phase of analysis**	**Status**	
1	Was the EQAS sample stored at the proper temperature following receipt	Yes	
2	Was the test reagent stored correctly in appropriate temperature	Yes	
3	Was both slides unbroken while received	Yes	
	Analytical phase of analysis		
1	Was the sample at room temperature	Yes	
2	Was the person running the EQAS sample was trained	Yes	
3	Was daily maintenance performed on the day that the EQAS sample was run	Yes	
4	Was IQC within an acceptable range on the day that the EQAS sample was run	Yes	
	Post-analytical phase of analysis		
1	Was the result uploaded before the last date of submission	Yes	
2	Have the results been reported correctly (Match instrument raw data)	Yes	
3	Was the configuration correct (instrument, method and reagent)	Yes	
4	Was microscopy done again (in case of unacceptable results in Microscopic examination)	Yes	

Note: Outlier result of Retic% (Slide) Z Score in parameter, result has been assesst by two slides by the pathologist, after root cause analysis has been done as per above checklist. The first result is 7.5 and the second result 7.7, and sum of two results 15.2, now the Retic% is acceptable.

Reviewed by: डॉ. [illegible] ए. बामले. पैथोलॉजिस्ट जिला चिकित्सालय, बैतूल

Date: 04-07-2023