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. : 3543 **Distribution No.:** 159-J **Month/Year:** March/2023

Instrument ID: MEDONIC M-SERIES M32 112438

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: 01-06-2023[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	5.6	5.2	10.8	10.36	0.038	0.37	0.4	0.1	0.008	2.28
RBC x10^6/µl	1	4.2	4.19	8.39	8.99	0.011	-2.13	0.01	0.04	0.003	-0.67
Hb g/dl	1	14.2	14	28.2	29.3	0.029	-1.48	0.2	0.1	0.008	0.67
HCT%	1	39.1	38.6	77.7	88.55	0.234	-1.74	0.5	0.4	0.027	0.22
MCV-fl	1	92.3	92	184.3	196.05	0.390	-1.00	0.3	0.3	0.023	0.00
MCH-Pg	1	33.7	33.4	67.1	65.5	0.076	0.80	0.3	0.3	0.018	0.00
MCHC-g/dl	1	36.4	36.3	72.7	65.9	0.163	1.54	0.1	0.3	0.020	-0.67
Plt. x10^3/µl	1	106	104	210	255	1.285	-1.24	2	4	0.284	-0.45
Retic %	2										

P.S . Assesment

YOUR REPORT			CONSENSUS REPORT
DLC%	3	Nrbcs= , Poly= L=, E=, Mono/Promono= , B1= P.M.=, Mye=, Meta=, Other=	Poly: 25 – 45, Myelo: 15 - 31, Meta: 10– 20, Lympho: 2– 7, Eosino: 1-4, Promyelo: 2-7, Blast: 1-4, Mono: 1 – 3, nRBC/Baso: 0-5
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--J	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 $x10^3/\mu l$	1	308	302	83.44	86.75	2.98	5.96	13.58	7.29
RBC $x10^6/\mu l$	1	308	308	87.66	90.26	5.52	2.92	6.82	6.82
Hb g/dl	1	308	308	81.49	83.44	5.52	6.49	12.99	10.07
HCT%	1	308	304	91.12	89.8	5.92	3.62	2.96	6.58
MCV-fl	1	308	304	95.72	92.43	1.97	2.96	2.31	4.61
MCH-Pg	1	308	304	88.82	89.14	6.58	2.63	4.6	8.23
MCHC-g/dl	1	308	304	93.42	89.14	3.29	6.58	3.29	4.28
Plt. $x10^3/\mu l$	1	308	304	94.41	91.12	3.29	6.25	2.3	2.63
ReticCount%	2	308	268	94.4	92.16	4.85	3.36	0.75	4.48
PS Assessment	3	308	268	Satisfactory :95.46%, Borderline Sat. :2.27%, Unsatisfactory :2.27%					

*Comments:

1). Among Lab (EQA) : PS Diagnosis not reported, 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.

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----------

RCA

PROBLEM : The value of some analytes are existing outside the normal limits.

Why 1 : Low stability of the reagent.

Why 2 : errors from reusable glasswares.

Why 3 : Manul errors occurs in pipetting of reagents and samples.

Why 4 : Errors from dilution of QC material.

Why 5 : Temperature variation of refrigerator due to the interruption of current supply.

Medical Officer
Family Health Centre
Panavally 688526

Panavally
19/07/2023

MEDICAL OFFICER
FHC PANAVALLY

CAPA

DEFINE THE PROBLEM

In performing external quality programme, the value of some analytes are existing outside the normal limits.

IDENTIFY THE ROOT CAUSE

- **Low stability of the reagent .**
- **Errors from reusable glasswares.**
- **Manual error occures in pipetting.**
- **Temperature variation of refrigerator due to interruption of current supply.**

RECOMMENED AND IMPLEMENT SOLUTIONS

- **New reagent kits are implemented.**
- **Correct cleaning procedure are given to the cleaning staff regarding cleaning of reusable glasswares.**
- **Intermittent wiping of pipettes with tissue paper are promoted.**
- **Solar panel is implemented in the FHC for the uniflow of current to the laboratory.**

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