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. : 2180 **Distribution No.:** 157-F **Month/Year:** August/2022

Instrument ID: A6927

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: 28-10-2022[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 x10³/µl	1	3.7	3.6	7.3	10.5	0.0360	**0.63**	0.1	0.1	0.0070	**0.00**
RBC x10⁶/µl	1	4.23	4.2	8.43	8.43	0.0090	**0.00**	0.03	0.04	0.0030	**-0.27**
Hb g/dl	1	13.5	13.4	26.9	28.4	0.0300	**-1.96**	0.1	0.1	0.0080	**0.00**
HCT%	1	39.5	39.1	78.6	85.2	0.1910	**-1.33**	0.4	0.4	0.0260	**0.00**
MCV-fl	1	93.4	93.1	186.5	202.6	0.3720	**-1.67**	0.3	0.3	0.0240	**0.00**
MCH-Pg	1	31.9	31.9	63.8	67.4	0.0810	**-1.87**	0	0.3	0.0200	**-1.01**
MCHC-g/dl	1	34.3	34.2	68.5	66.2	0.1610	**0.54**	0.1	0.3	0.0190	**-0.67**
Plt. x10³/µl	1	108	87	195	273	1.81	**-1.70**	21	5	0.32	**1.60**
Retic %	2	8	7	15	11.4	0.22	**0.64**	1	0.49	0.03	**0.86**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=2 , Poly=30 L=19, E=4, Mono/Promono=7 , B1=23 P.M.=5, Mye=8, Meta=4, Other=	Blast: 30-85, Poly: 2-8, Lympho: 4-10, Myelo: 0-7, Mono: 1-10.5, nRBC/Promyelo/Meta/Eos: 0-5
RBC Morphology	3	normocytic normochromic	Predominantly: Normocytic/Normochromic; Moderate: Microcytosis, Hypochromia; Mild: Anisocytosis, Macrocytosis
Diagnosis	3	acute myeloid leukemia	Acute Myeloid Leukemia (AML)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 157--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 $x10^3/\mu l$	1	288	288	82.29	86.11	4.17	7.64	13.54	6.25
RBC $x10^6/\mu l$	1	288	288	86.46	93.06	6.25	3.47	7.29	3.47
Hb g/dl	1	288	288	87.5	87.5	5.9	6.6	6.6	5.9
HCT%	1	288	287	91.99	90.59	3.83	5.92	4.18	3.49
MCV-fl	1	288	287	91.64	94.08	5.57	1.05	2.79	4.87
MCH-Pg	1	288	287	83.97	89.55	7.32	6.62	8.71	3.83
MCHC-g/dl	1	288	287	93.03	86.76	4.18	5.23	2.79	8.01
Plt. $x10^3/\mu l$	1	288	287	89.2	88.85	6.27	5.57	4.53	5.58
ReticCount%	2	288	251	95.62	91.24	3.98	7.17	0.4	1.59
PS Assessment	3	288	255	Satisfactory :94.45%, Borderline Sat. :3.12%, Unsatisfactory :2.43%					

*Comments:

1). Among Lab (EQA) : 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----------

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. : 2180 **Distribution No.:** 158-F **Month/Year:** December/2022

Instrument ID: A6927

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: 23-01-2023[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	10.2	9.4	19.6	18.2	0.0730	**0.67**	0.8	0.12	0.0090	**8.34**
RBC x10^6/µl	1	4.53	4.5	9.03	9.11	0.0100	**-0.33**	0.03	0.04	0.0030	**-0.27**
Hb g/dl	1	12.7	12.5	25.2	25.8	0.0220	**-1.16**	0.2	0.1	0.0080	**1.35**
HCT%	1	41.3	41.1	82.4	84.35	0.2260	**-0.33**	0.2	0.4	0.0260	**-0.54**
MCV-fl	1	91.3	91.2	182.5	185.4	0.4410	**-0.23**	0.1	0.2	0.0210	**-0.34**
MCH-Pg	1	28	27.8	55.8	56.4	0.0550	**-0.45**	0.2	0.2	0.0140	**0.00**
MCHC-g/dl	1	30.8	30.4	61.2	60.7	0.1560	**0.11**	0.4	0.2	0.0160	**0.90**
Plt. x10^3/µl	1	198	196	394	373	1.71	**0.46**	2	5	0.32	**-0.58**
Retic %	2	12	11	23	27	0.63	**-0.23**	1	1	0.06	**0.00**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=05 , Poly=44 L=07, E=02, Mono/Promono=01 , B1=06 P.M.=02, Mye=27, Meta=10, Other=	Poly: 49 – 67, Myelo: 10 - 19, Meta: 6– 14, Lympho: 2– 6, Eosino: 0-2, Promyelo: 1-5, nRBC/Blast/Baso/Mono: 0 – 5
RBC Morphology	3	normocytic normochromic	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, hypochromia, Microcytosis; Mild: Macrocytosis, Poikilocytosis
Diagnosis	3	chronic myelogenous leukemia	Chronic Myeloid Leukemia (Chronic Phase)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 158--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 $x10^3$/µl	1	296	295	87.46	88.81	5.42	5.08	7.12	6.11
RBC $x10^6$/µl	1	296	296	83.78	92.23	9.46	3.38	6.76	4.39
Hb g/dl	1	296	296	82.77	89.53	8.45	6.08	8.78	4.39
HCT%	1	296	294	95.92	94.22	3.06	2.04	1.02	3.74
MCV-fl	1	296	294	97.62	93.2	1.7	2.04	0.68	4.76
MCH-Pg	1	296	294	85.03	91.16	7.14	3.4	7.83	5.44
MCHC-g/dl	1	296	294	97.28	92.86	1.36	3.74	1.36	3.4
Plt. $x10^3$/µl	1	296	294	94.22	91.84	4.76	4.42	1.02	3.74
ReticCount%	2	296	265	92.83	93.58	4.53	2.64	2.64	3.78
PS Assessment	3	296	265	Satisfactory :92.21%, Borderline Sat. :3.05%, Unsatisfactory :4.74%					

*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----------