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. : 4899 **Distribution No.:** 158-M **Month/Year:** January/2023

Instrument ID: BC -3600(TB-8200197)

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	7.7	7.4	15.1	13.31	0.0350	2.05	0.3	0.1	0.0070	2.08
RBC x10^6/µl	1	5.19	5.11	10.3	10.25	0.0120	0.15	0.08	0.05	0.0030	0.58
Hb g/dl	1	13.4	13.3	26.7	26.5	0.0270	0.27	0.1	0.1	0.0080	0.00
HCT%	1	43.3	42.3	85.6	85.7	0.2190	-0.01	1	0.4	0.0250	1.54
MCV-fl	1	83.4	82.8	166.2	169.35	0.3530	-0.27	0.6	0.3	0.0190	0.95
MCH-Pg	1	26	25.8	51.8	51.5	0.0590	0.18	0.2	0.2	0.0140	0.00
MCHC-g/dl	1	31.4	31	62.4	61	0.1400	0.26	0.4	0.3	0.0210	0.34
Plt. x10^3/µl	1	447	423	870	781	2.99	0.99	24	9	0.52	1.84
Retic %	2	8.7	8.5	17.2	15.35	0.22	0.31	0.2	0.5	0.03	-0.51

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=7 L=10, E=0, Mono/Promono=0 , B1=77 P.M.=6, Mye=0, Meta=0, Other=	Blast: 65-88, Lympho: 5-14, Poly: 2-5, nRBC/Eos/Baso/Mono /Myelo/Meta/ Promyelo: 0-5
RBC Morphology	3	NORMOCYTOSIS, NORMOCHROMIA,POLYCHROMASIA IS NIL,NORMOBLAST IS NIL, MINIMAL ANISOCYTOSIS &POIKILOCYTOSIS, NO HEMOPARASITES SEEN.LEUCOCYTOSIS WITH PRESENCE OF BLASTS.	Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic
Diagnosis	3	ACUTE MYELOID LEUKEMIA WITH THROMBOCYTOPENIA.	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 $x10^3/\mu l$	1	338	335	83.88	84.18	6.27	6.27	9.85	9.55
RBC $x10^6/\mu l$	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. $x10^3/\mu l$	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) : 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. : 4899 **Distribution No.:** 159-M **Month/Year:** April/2023

Instrument ID: BC-3600(TB-82001975

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	5.5	5.3	10.8	10.5	0.028	0.47	0.2	0.1	0.007	0.96
RBC x10^6/µl	1	4.19	4.08	8.27	8.04	0.011	0.86	0.11	0.03	0.002	1.80
Hb g/dl	1	11.6	11.4	23	23.7	0.028	-1.05	0.2	0.1	0.008	0.67
HCT%	1	38.2	36.7	74.9	72.4	0.149	0.60	1.5	0.4	0.025	2.47
MCV-fl	1	91.1	90	181.1	181	0.273	0.01	1.1	0.3	0.024	2.16
MCH-Pg	1	27.9	27.7	55.6	58.9	0.087	-1.48	0.2	0.3	0.016	-0.45
MCHC-g/dl	1	31	30.4	61.4	65.2	0.141	-0.97	0.6	0.3	0.019	1.01
Plt. x10^3/µl	1	230	215	445	422	1.588	0.53	15	6	0.362	1.73
Retic %	2	9.7	9.4	19.1	10.8	0.190	1.58	0.3	0.4	0.025	-0.17

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=3 , Poly=61 L=7, E=2, Mono/Promono=1 , B1=2 P.M.=4, Mye=16, Meta=5, Other=	Poly: 26 - 44, Myelo: 17 - 33, Meta: 11- 21, Lympho: 3- 7, Promyelo: 1-7, Eosino: 1-5, Blast: 1-4, Mono: 1 - 3, nRBC/Baso: 0-5
RBC Morphology	3	NORMOCYTOSIS,NORMOCHROMIA.Minimal anisocytosis&poikilocytosis.	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, hypochromia, Microcytosis; Mild: Macrocytosis, Poikilocytosis
Diagnosis	3	Myeloproliferative disorder	Chronic Myeloid Leukemia (Chronic Phase)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 159--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 $x10^3/\mu l$	1	309	309	83.17	86.08	3.88	7.44	12.95	6.48
RBC $x10^6/\mu l$	1	309	309	87.06	93.53	7.44	4.21	5.5	2.26
Hb g/dl	1	309	309	87.7	89	5.83	5.18	6.47	5.82
HCT%	1	309	309	92.23	93.53	4.85	1.62	2.92	4.85
MCV-fl	1	309	309	92.56	89.32	5.83	2.91	1.61	7.77
MCH-Pg	1	309	309	91.26	93.2	5.18	4.21	3.56	2.59
MCHC-g/dl	1	309	309	94.17	87.7	2.91	6.8	2.92	5.5
Plt. $x10^3/\mu l$	1	309	308	92.86	92.53	4.22	4.55	2.92	2.92
ReticCount%	2	309	275	96	92	2.91	4.73	1.09	3.27
PS Assessment	3	309	269	Satisfactory :95.14%, Borderline Sat. :1.94%, Unsatisfactory :2.92%					

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. : 4899 **Distribution No.:** 160-M **Month/Year:** July/2023

Instrument ID: BC-3600(TB-8200197)

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

Date of issue & status of the report: 05-10-2023[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	3.3	3.3	6.6	6.84	0.042	-0.23	0	0.1	0.006	-1.04
RBC x10^6/µl	1	3.93	3.84	7.77	7.66	0.009	0.48	0.09	0.04	0.003	1.12
Hb g/dl	1	12.6	12.3	24.9	25.7	0.030	-0.98	0.3	0.1	0.009	1.35
HCT%	1	41	39.7	80.7	82	0.187	-0.23	1.3	0.5	0.027	1.80
MCV-fl	1	104.2	103.5	207.7	214.6	0.390	-0.62	0.7	0.4	0.025	0.67
MCH-Pg	1	32.1	32	64.1	67.3	0.109	-1.03	0.1	0.3	0.020	-0.67
MCHC-g/dl	1	30.9	30.8	61.7	62.2	0.142	-0.13	0.1	0.3	0.019	-0.60
Plt. x10^3/µl	1	133	121	254	226	1.219	0.88	12	5	0.316	1.22
Retic %	2	20.9	19.8	40.7	12.9	0.310	3.10	1.1	0.5	0.038	1.01

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=23 L=75, E=2, Mono/Promono=0 , B1=0 P.M.=0, Mye=0, Meta=0, Other=Lymphocytic leucocytosis wityh pressure of SMUDGE CELLS & IMMATURE LYMPHOCYTES. platelet redced	Lymp: 67-80, Poly: 15-26, mono: 1-3, nRBC/blast/Myelo/Meta/Eosino: 0-5
RBC Morphology	3	Mildly anisocytosis&Poikilocytosis,Normocytosis to microcytosis,mild hypochromia	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytic, Hypochromia; Mild: Macrocytosis, Poikilocytosis.
Diagnosis	3	possibility of chronic lymphocytic leukaemia	Chronic Lymphoproliferative Disorder/CLL

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 160--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 $x10^3/\mu l$	1	309	307	85.99	88.27	4.89	4.56	9.12	7.17
RBC $x10^6/\mu l$	1	309	309	87.38	88.35	5.83	5.5	6.79	6.15
Hb g/dl	1	309	309	87.38	84.79	4.21	4.53	8.41	10.68
HCT%	1	309	307	95.11	89.25	3.26	4.23	1.63	6.52
MCV-fl	1	309	307	94.46	93.16	5.21	3.26	0.33	3.58
MCH-Pg	1	309	307	93.16	87.62	3.26	6.19	3.58	6.19
MCHC-g/dl	1	309	307	93.49	87.62	4.23	7.17	2.28	5.21
Plt. $x10^3/\mu l$	1	309	306	88.89	90.52	7.52	6.54	3.59	2.94
ReticCount%	2	309	249	91.97	85.94	5.22	12.45	2.81	1.61
PS Assessment	3	309	258	Satisfactory :98.72%, Borderline Sat. :0.64%, Unsatisfactory :0.64%					

Comments:

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

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.
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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)
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