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. : 2031 **Distribution No.:** 160-C **Month/Year:** May/2023

Instrument ID: XN553 (27967)

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: 11-07-2023[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	7.27	7.24	14.51	17.4	0.112	**-0.92**	0.03	0.17	0.010	**-0.86**
RBC x10^6/µl	1	4.11	4.1	8.21	8.58	0.008	**-1.56**	0.01	0.04	0.002	**-0.81**
Hb g/dl	1	12.8	12.7	25.5	25.1	0.026	**0.54**	0.1	0.1	0.007	**0.00**
HCT%	1	42.3	42.3	84.6	75.35	0.191	**1.58**	0	0.35	0.022	**-0.94**
MCV-fl	1	103.2	102.9	206.1	175.3	0.389	**2.63**	0.3	0.3	0.018	**0.00**
MCH-Pg	1	31.1	31	62.1	58.6	0.077	**1.87**	0.1	0.2	0.014	**-0.45**
MCHC-g/dl	1	30.3	30	60.3	66.5	0.168	**-1.23**	0.3	0.3	0.016	**0.00**
Plt. x10^3/µl	1	64	48	112	200.5	2.329	**-1.24**	16	6	0.342	**1.69**
Retic %	2	10	8	18	18.5	0.269	**-0.06**	2	0.5	0.031	**2.53**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=1 L=20, E=0, Mono/Promono=0 , B1=79 P.M.=0, Mye=0, Meta=0, Other=smudge cells, Neutropenia, Thrombocytopenia.	Blast: 60-87, Lympho: 9-23, Poly: 1-4, nRBC/ Mono/Eos/Baso/Myelo/Meta/ Promyelo: 0-5
RBC Morphology	3	Anisocytosis, Poikilocytosis, microcytic hypochromic RBCs, macrocytes, macroovalocytes, fragmented RBCs, target cells and tear drop cells.	Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic
Diagnosis	3	Lymphoproliferative disorder (Leukemia).	Acute Leukemia (AL)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 160--C	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	367	363	80.17	87.05	9.09	4.96	10.74	7.99
RBC $x10^6/\mu l$	1	367	367	88.56	92.1	5.45	4.36	5.99	3.54
Hb g/dl	1	367	367	84.47	89.37	7.63	5.72	7.9	4.91
HCT%	1	367	364	94.23	95.05	4.12	1.65	1.65	3.3
MCV-fl	1	367	364	92.86	88.46	4.67	6.87	2.47	4.67
MCH-Pg	1	367	364	81.59	90.93	7.42	4.4	10.99	4.67
MCHC-g/dl	1	367	364	93.96	86.26	3.57	4.12	2.47	9.62
Plt. $x10^3/\mu l$	1	367	364	94.23	87.91	4.12	6.87	1.65	5.22
ReticCount%	2	367	343	93.29	86.88	4.08	10.2	2.63	2.92
PS Assessment	3	367	340	Satisfactory :83.62%, Borderline Sat. :9.83%, Unsatisfactory :6.55%					

*Comments:

1). Among Lab (EQA) : PS Diagnosis partially correct, 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----------

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. : 2031 **Distribution No.:** 159-C **Month/Year:** February/2023

Instrument ID: XN 550 (SN-27967)

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: 05-04-2023[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	2.17	2.16	4.33	4.23	0.017	**0.24**	0.01	0.08	0.004	**-1.05**
RBC x10^6/µl	1	2.97	2.97	5.94	6.06	0.006	**-0.74**	0	0.03	0.002	**-1.01**
Hb g/dl	1	10.2	10.2	20.4	20.8	0.018	**-0.90**	0	0.1	0.007	**-1.35**
HCT%	1	32.7	32.6	65.3	64.75	0.116	**0.14**	0.1	0.3	0.020	**-0.67**
MCV-fl	1	110.1	109.8	219.9	213.4	0.339	**0.55**	0.3	0.3	0.024	**0.00**
MCH-Pg	1	34.3	34.3	68.6	68.7	0.071	**-0.05**	0	0.3	0.018	**-1.01**
MCHC-g/dl	1	31.3	31.2	62.5	63.9	0.115	**-0.34**	0.1	0.3	0.018	**-0.67**
Plt. x10^3/µl	1	91	89	180	174	0.707	**0.29**	2	3	0.194	**-0.34**
Retic %	2	2	1.5	3.5	8.95	0.145	**-1.25**	0.5	0.4	0.021	**0.45**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=10 , Poly=42 L=46, E=03, Mono/Promono=08 , B1=00 P.M.=00, Mye=00, Meta=01, Other=	Poly: 43-54 , Lympho: 40-50 , Mono: 2-6, Eosino: 1-3 , nRBC:0-2, blast/Promyelo/Myelo/Meta: 0
RBC Morphology	3	Anisopoikilocytosis with predominantly Normocytic Hypochromic blood picture, also seen are Microcytes Target cells, Fragmented Rbc's and Sickled Rbc's.	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Poikilocytosis , Target cells , Sickle shaped cells ,tear drop cells
Diagnosis	3	Sickle cell Anemia.	Hemoglobinopathy Likely sickle cell-Beta Thalassemia

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 159--C	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	348	346	84.68	92.77	6.07	1.16	9.25	6.07
RBC $x10^6/\mu l$	1	348	348	91.38	87.36	5.75	5.75	2.87	6.89
Hb g/dl	1	348	348	90.52	92.82	5.46	3.45	4.02	3.73
HCT%	1	348	346	98.55	88.15	0.87	6.36	0.58	5.49
MCV-fl	1	348	346	99.42	92.2	0.58	3.76	0	4.04
MCH-Pg	1	348	346	93.93	86.99	4.05	5.49	2.02	7.52
MCHC-g/dl	1	348	346	97.69	86.99	2.02	6.94	0.29	6.07
Plt. $x10^3/\mu l$	1	348	346	90.17	91.33	6.65	4.05	3.18	4.62
ReticCount%	2	348	330	94.55	82.42	4.24	13.33	1.21	4.25
PS Assessment	3	348	313	Satisfactory :88.83%, Borderline Sat. :8.02%, Unsatisfactory :3.15%					

*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. : 2031 **Distribution No.:** 158-C **Month/Year:** November/2022

Instrument ID: SYSMEX-XN 550[SN-27967]

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: 02-01-2023[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	7.36	7.28	14.64	14.5	0.030	**0.19**	0.08	0.1	0.008	**-0.18**
RBC x10^6/µl	1	4.11	4.1	8.21	8.15	0.007	**0.31**	0.01	0.03	0.002	**-0.54**
Hb g/dl	1	11.9	11.9	23.8	23.4	0.020	**0.77**	0	0.1	0.007	**-1.35**
HCT%	1	39.2	39.2	78.4	73.3	0.144	**1.15**	0	0.3	0.023	**-1.01**
MCV-fl	1	95.6	95.4	191	180.9	0.301	**1.03**	0.2	0.3	0.020	**-0.27**
MCH-Pg	1	29	29	58	57.3	0.053	**0.50**	0	0.2	0.015	**-0.90**
MCHC-g/dl	1	30.4	30.4	60.8	63.4	0.126	**-0.66**	0	0.3	0.018	**-1.01**
Plt. x10^3/µl	1	279	276	555	570	2.175	**-0.25**	3	6	0.352	**-0.51**
Retic %	2	6	5.8	11.8	10	0.171	**0.40**	0.2	0.4	0.023	**-0.34**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=8 L=82, E=2, Mono/Promono=3 , B1=4 P.M.=0, Mye=0, Meta=0, Other=0	Lymp: 77-89, Poly: 6-12, blast: 1-8, nRBC/mono/Eosino/Myelo/Meta: 0-5
RBC Morphology	3	Anisocytosis-Mild,Normocytic,Hypochromic	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis ,Few smudge cells seen.
Diagnosis	3	Chronic Lymphocytic Leukemia	Chronic lymphoproliferative disorder

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 158--C	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	320	320	81.25	82.81	6.88	8.13	11.87	9.06
RBC $x10^6/\mu l$	1	320	320	90.31	91.88	6.56	3.75	3.13	4.37
Hb g/dl	1	320	320	92.81	90.94	4.06	4.06	3.13	5
HCT%	1	320	320	97.19	92.19	2.19	5	0.62	2.81
MCV-fl	1	320	320	98.44	93.75	0.94	2.81	0.62	3.44
MCH-Pg	1	320	320	89.69	92.81	6.56	4.69	3.75	2.5
MCHC-g/dl	1	320	320	97.5	92.19	1.88	4.69	0.62	3.12
Plt. $x10^3/\mu l$	1	320	320	93.44	92.5	3.44	4.38	3.12	3.12
ReticCount%	2	320	301	92.03	93.69	4.65	5.98	3.32	0.33
PS Assessment	3	320	296	Satisfactory :94.08%, Borderline Sat. :2.49%, Unsatisfactory :3.42%					

*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.
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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).

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