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

Duration of stability testing - minimum upto 8 days at ambient temp. after dispatch of specimens

EQAP CODE No. : 5215 **Distribution No.:** 163-M **Month/Year:** April/2024

Instrument ID: AGAPPE **Model Name.:** BC-3000 PLUS **Serial No.:** RJ-8C127453

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

Date of issue & status of the report: 02-07-2024[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	5.4	11	10.64	0.039	**0.44**	0.2	0.1	0.007	**0.84**
RBC x10^6/µl	1	3.6	3.47	7.07	7.15	0.009	**-0.39**	0.13	0.03	0.002	**3.37**
Hb g/dl	1	10.9	10.3	21.2	23.2	0.022	**-3.37**	0.6	0.1	0.008	**6.74**
HCT%	1	32.6	31.4	64	73.5	0.163	**-2.10**	1.2	0.4	0.026	**2.16**
MCV-fl	1	90.7	90.6	181.3	204.6	0.376	**-2.49**	0.1	0.3	0.025	**-0.45**
MCH-Pg	1	30.2	29.6	59.8	64.8	0.089	**-2.25**	0.6	0.3	0.020	**1.01**
MCHC-g/dl	1	33.4	32.8	66.2	62.6	0.138	**0.99**	0.6	0.3	0.020	**1.01**
Plt. x10^3/µl	1	94	83	177	208	1.844	**-0.65**	11	4	0.292	**1.57**
Retic %	2	10.4	9.6	20	15.3	0.227	**0.84**	0.8	0.5	0.033	**0.51**

P.S . Assesment

YOUR REPORT			CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=68 L=25, E=4, Mono/Promono=3 , B1=0 P.M.=0, Mye=0, Meta=0, Other=WBC's: mild increase in total count .PLATELETS: adequate on smear numerous large platelets seen.no hemoparasites / immature cells seen.few neutrophils shows hyper segmentation few reactive lymphocytes seen.	Poly: 70-79 , Lympho: 15-22, Eosino: 1-3 , Mono: 2-5.25, blast/Promyelo/Myelo/Meta: 0

Test Parameters	S.No.			Among Lab (Accuracy Testing)				Within Lab (Precision Testing)			
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RBC Morphology	3	Predominantly microcyte hypochromic RBC's with few normocytic normochromic RBC's . Mild degree of anisopoikilocytosis noted with few sickle cells few target cells fragmented RBC's.occasionaly NRBC's seen.				Predominantly: Normocytic/Normochromic; Moderate: Sickle cells, Poikilocytosis, Target cells, Mild: Anisocytosis, Polychromasia, tear drop cells					
Diagnosis	3	microcytic hypochromic anemia suggestive of hemolytic type differential diagnosis 1.sickle cell anemia 2. Thalassemia .mild reactive leucocytosis.				Sickle Cell Disease					

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 163--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/µl	1	283	283	78.8	89.75	6.71	6.01	14.49	4.24
RBC x10^6/µl	1	283	283	89.05	92.93	5.65	2.83	5.3	4.24
Hb g/dl	1	283	283	86.22	89.4	5.65	5.3	8.13	5.3
HCT%	1	283	283	92.58	92.93	4.95	4.24	2.47	2.83
MCV-fl	1	283	283	92.23	89.05	5.3	4.24	2.47	6.71
MCH-Pg	1	283	283	91.17	89.05	4.95	3.89	3.88	7.06
MCHC-g/dl	1	283	283	90.81	89.4	6.71	5.3	2.48	5.3
Plt. x10^3/µl	1	283	283	95.05	91.87	3.53	3.53	1.42	4.6
ReticCount%	2	283	254	93.31	86.22	4.72	11.02	1.97	2.76
PS Assessment	3	283	238	Satisfactory :80.22%, Borderline Sat. :14.48%, Unsatisfactory :5.30%					

*Comments:

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

2). Within Lab (IQA) : Difference in the CBC measurement values for *RBC & HB* unacceptable, please check precision/human error. Remaining 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. Manoranjan Mahapatra (Prof. & Head)
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. : 5215 **Distribution No.:** 162-M **Month/Year:** January/2024

Instrument ID: AGAPPE **Model Name.:** BC-3000 PLUS MINDRAY **Serial No.:** 18004257151

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

Date of issue & status of the report: 09-04-2024[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	4.9	4.7	9.6	9.1	0.029	**0.76**	0.2	0.1	0.007	**0.90**
RBC x10^6/µl	1	4.43	4.25	8.68	9.07	0.012	**-1.35**	0.18	0.04	0.003	**3.15**
Hb g/dl	1	8.3	8	16.3	17.9	0.023	**-3.08**	0.3	0.1	0.008	**2.70**
HCT%	1	27.2	26.1	53.3	61.8	0.153	**-2.24**	1.1	0.3	0.024	**2.16**
MCV-fl	1	61.6	61.5	123.1	136.6	0.250	**-2.16**	0.1	0.3	0.022	**-0.67**
MCH-Pg	1	18.8	18.7	37.5	39.6	0.051	**-1.64**	0.1	0.2	0.012	**-0.67**
MCHC-g/dl	1	30.6	30.5	61.1	58.15	0.135	**0.83**	0.1	0.3	0.018	**-0.90**
Plt. x10^3/µl	1	226	191	417	477	2.088	**-1.11**	35	7	0.511	**3.43**
Retic %	2	7.5	6.5	14	20	0.353	**-0.66**	1	0.5	0.044	**0.84**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=4 , Poly=13 L=33, E=0, Mono/Promono=1 , B1=51 P.M.=1, Mye=0, Meta=1, Other=WBC- Increase in total count with shift to left upto blast noted	Blast: 47-78, Lympho: 10-38, Poly: 7-12, , Mono: 1-5, nRBC/Myelo/Meta/Eos/Mono/Promyelo/Baso : 0-5
RBC Morphology	3	NORMOCYTIC NORMOCHROMIC RBC's WITH FEW MICROCYTIC HYPOCHROMIC RBC's NOTED	Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic, poikilocytosis
Diagnosis	3	ACUTE LYMPHOBLASTIC LEUKEMIA	Acute Leukemia (AL)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 162--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/µl	1	260	260	86.54	89.62	4.62	3.46	8.84	6.92
RBC x10^6/µl	1	260	260	88.08	88.46	7.69	5	4.23	6.54
Hb g/dl	1	260	260	88.08	93.46	7.31	2.31	4.61	4.23
HCT%	1	260	260	93.08	87.31	5	5.38	1.92	7.31
MCV-fl	1	260	260	91.92	87.69	6.54	6.92	1.54	5.39
MCH-Pg	1	260	260	90.77	90.38	6.54	4.23	2.69	5.39
MCHC-g/dl	1	260	260	95.38	89.23	2.69	3.85	1.93	6.92
Plt. x10^3/µl	1	260	260	95	92.31	3.85	4.23	1.15	3.46
ReticCount%	2	260	239	95.4	82.85	2.93	12.13	1.67	5.02
PS Assessment	3	260	234	Satisfactory :92.71%, Borderline Sat. :6.53%, Unsatisfactory :0.76%					

***Comments:**

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

2). Within Lab (IQA) : Difference in the CBC measurement values for *RBC & PLT* unacceptable, please check precision/human error. Remaining 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.

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Report authorized by,

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ISHTM-AIIMS EXTERNAL QUALITY ASSURANCE PROGRAMME

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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. : 5215 **Distribution No.:** 161-M **Month/Year:** October/2023

Instrument ID: AGAPPE **Model Name.:** BC-3000PLUS **Serial No.:** RJ-8C127453

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

Date of issue & status of the report: 01-02-2024[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	4.8	4.6	9.4	8.92	0.036	**0.59**	0.2	0.1	0.007	**0.79**
RBC x10^6/µl	1	4.04	3.82	7.86	8.26	0.011	**-1.54**	0.22	0.04	0.003	**4.05**
Hb g/dl	1	11.2	10.9	22.1	24.4	0.029	**-3.88**	0.3	0.1	0.008	**2.08**
HCT%	1	33.8	31.4	65.2	75.2	0.179	**-2.33**	2.4	0.4	0.027	**4.50**
MCV-fl	1	83.8	82.2	166	181.8	0.329	**-1.88**	1.6	0.3	0.025	**3.51**
MCH-Pg	1	28.5	28.3	56.8	59.1	0.079	**-1.18**	0.2	0.2	0.018	**0.00**
MCHC-g/dl	1	34.7	33.9	68.6	64.8	0.147	**1.03**	0.8	0.3	0.025	**1.35**
Plt. x10^3/µl	1	173	170	343	413	1.605	**-1.81**	3	5	0.372	**-0.30**
Retic %	2	7.8	7.6	15.4	17	0.300	**-0.19**	0.2	0.5	0.037	**-0.51**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs= , Poly=60 L=2, E=3, Mono/Promono= , B1=7 P.M.=4, Mye=12, Meta=11, Other=Increase in total count with shift to left upto blasts.PLATELETS: Adequate on smear no hemoparasites.	Poly: 50 – 65, Myelo: 10 - 18, Meta: 8– 15, Lympho: 2– 5, Promyelo: 1-5, Blast: 1-3, Eosino: 1-3, Mono, Baso: 0-5
RBC Morphology	3	PREDOMINANTLY:Normocytic normochromic.RBC's mild anisocytosis with few microcytes noted.	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Hypochromic, Mild: Poikilocytosis
Diagnosis	3	CHRONIC MYLOID LEUKEMIA	Chronic Myeloid Leukemia (Chronic Phase)

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 161--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/µl	1	272	272	83.09	93.75	6.62	2.21	10.29	4.04
RBC x10^6/µl	1	272	272	86.4	93.38	6.25	2.57	7.35	4.05
Hb g/dl	1	272	272	84.56	88.24	5.88	6.25	9.56	5.51
HCT%	1	272	272	89.71	88.6	7.35	5.15	2.94	6.25
MCV-fl	1	272	272	90.44	90.81	6.25	3.31	3.31	5.88
MCH-Pg	1	272	272	90.07	90.07	4.04	2.57	5.89	7.36
MCHC-g/dl	1	272	272	91.91	87.13	5.15	5.15	2.94	7.72
Plt. x10^3/µl	1	272	272	91.54	93.01	5.88	3.31	2.58	3.68
ReticCount%	2	272	244	97.54	84.02	2.05	12.7	0.41	3.28
PS Assessment	3	272	238	Satisfactory :97.43%, Borderline Sat. :1.10%, Unsatisfactory :1.47%					

***Comments:**

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

2). Within Lab (IQA) : Difference in the CBC measurement values for *RBC, HCT & MCV* unacceptable, please check precision/human error. Remaining precision acceptable.

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----------End Of Report----------