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

NABL Certificate No. PC - 1002

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

EQAP CODE No. : 803 **Distribution No.:** 152-A **Month/Year:** January/2021

Instrument ID: ERBA Sysmex Xp- 100,3 part,B2607

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: 17-02-2021[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	4.7	4.2	8.9	9.41	0.0260	**-0.68**	0.5	0.1	0.0070	**3.17**
RBC x10^6/µl	1	3.07	3.04	6.11	6.12	0.0050	**-0.04**	0.03	0.03	0.0010	**0.00**
Hb g/dl	1	10.5	10.5	21	20.6	0.0180	**0.86**	0	0.1	0.0060	**-1.35**
HCT%	1	29.4	29.1	58.5	62.3	0.1250	**-0.81**	0.3	0.3	0.0110	**0.00**
MCV-fl	1	95.8	95.7	191.5	203	0.3650	**-0.83**	0.1	0.3	0.0200	**-0.54**
MCH-Pg	1	34.5	34.2	68.7	67.3	0.0580	**0.82**	0.3	0.3	0.0180	**0.00**
MCHC-g/dl	1	36.1	35.7	71.8	66.1	0.1400	**1.16**	0.4	0.3	0.0200	**0.30**
Plt. x10^3/µl	1	131	129	260	250.5	0.62	**0.53**	2	4	0.21	**-0.54**
Retic %	2	4	3.5	7.5	13.15	0.25	**-0.67**	0.5	0.4	0.02	**0.34**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=01 , Poly=02 L=98, E=0, Mono/Promono=0 , B1=0 P.M.=0, Mye=0, Meta=0, Other=	Lymp: 1-25, Blast: 60-95, Poly: 1-6, nRBC/Mono/Eo/Myelo/Meta: 0-1
RBC Morphology	3	NCNC, few MCHC	Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic
Diagnosis	3	Chronic Lymphocytic Leukemia	Acute Lymphoblastic Leukemia (ALL)

EQAP Code No.: 803 *Distribution No.: 152-A* *Month/Year: January/2021* *Instrument ID: ERBA Sysmex Xp- 100,3 part,B2607*

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist.	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	374	375	90.13	82.4	4.53	6.93	5.6	10.4
RBC x10^6/µl	1	374	376	87.5	85.9	7.45	3.46	5.05	10.11
Hb g/dl	1	374	376	89.89	91.76	6.38	2.93	3.72	0.53
HCT%	1	374	376	98.67	88.3	0.8	5.32	0.53	5.85
MCV-fl	1	374	376	98.94	92.02	0.8	2.66	0.27	5.32
MCH-Pg	1	374	375	92.53	88.27	4.27	8.27	3.2	3.47
MCHC-g/dl	1	374	376	97.61	88.3	1.86	5.32	0.53	6.12
Plt. x10^3/µl	1	374	376	89.63	92.02	6.91	2.93	3.46	5.05
ReticCount%	2	374	325	96.31	92.62	3.08	1.23	0.31	7.38
PS Assessment	3	374	357	Acceptable:85%,Warning Signal:4.8%,Unacceptable :10.2%					

***Comments:**

1). Among Lab (EQA) : Wrongly Reported PS ,remaining 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.

Report authorized by,

Dr. Seema Tyagi (Prof.)
PT Co-ordinator: ISHTM-AIIMS-EQAP
Department of Hematology, AIIMS, New Delhi

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

Corrective action of WBC at January 2021 in EQAP Report

Inadequacy	WBC unacceptable for the month of January 2021 in eqap result
Root cause analysis	Human/Random Error
Corrective action	We are running internal quality check- Erba QC and all pathological values- high and low were checked manually by peripheral smear method by pathologist before giving report to patient.
Preventive action	Internal QC will be done frequently and abnormal/Critical values will be verified by pathologist to ensure correct report.

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NABL Certificate No. PC - 1002

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

EQAP CODE No. : 803 **Distribution No.:** 153-A **Month/Year:** July/2021

Instrument ID: Sysmex B 2607

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: 25-07-2021[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	3.9	3.6	7.5	6.9	0.0290	**0.71**	0.3	0.1	0.0050	**2.45**
RBC x10^6/µl	1	4.19	4.18	8.37	8.28	0.0060	**0.53**	0.01	0.03	0.0020	**-0.67**
Hb g/dl	1	10.7	10.6	21.3	20.6	0.0130	**1.57**	0.1	0.1	0.0060	**0.00**
HCT%	1	34.5	34.4	68.9	66.1	0.1080	**0.90**	0.1	0.2	0.0130	**-0.45**
MCV-fl	1	82.3	82.3	164.6	159.7	0.2100	**0.77**	0	0.2	0.0200	**-0.67**
MCH-Pg	1	25.6	25.3	50.9	50	0.0410	**0.81**	0.3	0.2	0.0110	**0.67**
MCHC-g/dl	1	31.1	3.07	34.17	62.4	0.1010	**-9.07**	28.03	0.2	0.0130	**93.86**
Plt. x10^3/µl	1	118	114	232	276	1.08	**-1.42**	4	5	0.33	**-0.17**
Retic %	2	3.5	3	6.5	2.5	0.05	**2.84**	0.5	0.13	0.01	**3.33**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=05 , Poly=10/16/0 L=0, E=01, Mono/Promono=0 , B1=21 P.M.=06, Mye=16, Meta=30, Other=	Poly: 30 – 60, Blast: 5 – 30, Myelo: 5 – 20, Meta/nRBC: 1 – 15, Promyelo/Eos/Baso/Lympho/Mono: 0 – 5
RBC Morphology	3	Ncnc, pencil shaped cells +, mild anisocytosis	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis
Diagnosis	3	CML-Blast crisis phase	Chronic Myeloid Leukemia (Blast crisis) / Acute Myeloid Leukemia

EQAP Code No.: 803 *Distribution No.: 153-A* *Month/Year: July/2021* *Instrument ID: Sysmex B 2607*

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist.	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	360	358	88.55	89.66	2.79	1.96	8.66	8.1
RBC x10^6/µl	1	360	358	87.71	88.55	6.42	6.98	5.87	4.47
Hb g/dl	1	360	358	91.34	96.37	4.19	3.07	4.47	0.56
HCT%	1	360	358	92.46	71.51	5.03	20.39	2.51	7.82
MCV-fl	1	360	358	93.02	92.46	3.91	2.79	3.07	4.75
MCH-Pg	1	360	358	87.71	94.41	6.42	2.51	5.87	2.79
MCHC-g/dl	1	360	358	95.25	89.39	1.68	7.82	3.07	2.79
Plt. x10^3/µl	1	360	358	92.18	92.46	5.87	4.75	1.96	2.79
ReticCount%	2	360	335	91.64	84.78	4.48	9.85	3.28	5.37
PS Assessment	3	360	343	Acceptable:98.2%,Warning Signal:1.5%,Unacceptable :0.3%					

***Comments:**

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

2). Within Lab (IQA) : *MCHC & RETIC* 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.
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Report authorized by,

Dr. Seema Tyagi (Prof.)
PT Co-ordinator: ISHTM-AIIMS-EQAP
Department of Hematology, AIIMS, New Delhi

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

Corrective action for MCHC at July 2021 in EQAP Report

Inadequacy	Outlier found in MCHC
Root cause analysis	Typographical Error, uploaded report for aiims eqap July 2021 is attached herewith.
Corrective action	Hereafter with utmost care the results will be uploaded with double check.
Preventive action	All the entries will be double checked before entering.

Corrective action for Retic Count in July 2021
EQAP Report

Inadequacy	Outlier found in Retic
Root Cause analysis	Artifact/Human error. Retic slide staining is very dull and many needle shaped crystal like artifact was spread over the slide.
Preventive action	We will follow the procedure mentioned in the leaflet strictly, accompanied along with the eqap sample.
Corrective action	Training was taken and multiple slides were reviewed by Pathologist and proper report was given. We will ensure that this won't be repeated hereafter.