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. : 2126 **Distribution No.:** 149-F **Month/Year:** December/2019

Instrument ID: MINDARY BC 5000

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: 09-03-2020[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	6.92	4	10.92	11.63	0.0270	**-0.86**	2.92	0.1	0.0080	**22.38**
RBC x10^6/µl	1	3.77	3.5	7.27	8.06	0.0070	**-3.81**	0.27	0.04	0.0020	**5.17**
Hb g/dl	1	10.9	10	20.9	22.2	0.0200	**-1.95**	0.9	0.1	0.0070	**5.40**
HCT%	1	34.9	34	68.9	66.8	0.1410	**0.46**	0.9	0.3	0.0210	**1.62**
MCV-fl	1	92.6	80	172.6	166.25	0.3130	**0.57**	12.6	0.2	0.0200	**27.88**
MCH-Pg	1	28.9	27	55.9	55	0.0540	**0.61**	1.9	0.2	0.0100	**7.64**
MCHC-g/dl	1	31.2	31	62.2	66.7	0.1380	**-0.88**	0.2	0.3	0.0190	**-0.27**
Plt. x10^3/µl	1	166	100	266	340	0.92	**-2.73**	66	6	0.32	**10.12**
Retic %	2	5		5							

P.S . Assesment

YOUR REPORT			CONSENSUS REPORT
DLC%	3	Nrbcs=10-15/100 WBCs , Poly=05% L=10%, E=10%, Mono/Promono=05% , B1=09% P.M.=04%, Mye=08%, Meta=12%, Other=00%	Poly: 50-60, Lymph: 2-6, nRBC/Eo/Mono/Blast/Pro: 0-5, My: 10-20, Meta: 10-15
RBC Morphology	3	00%	Predominantly: Normocytic Normochromic. Moderate: Micro. Mild: Hypo, Aniso.
Diagnosis	3	CHRONIC MYELOID LEUKEMIA	Chronic Myeloid Leukemia (Chronic Phase) : CML-CP

EQAP Code No.: 2126 *Distribution No.: 149-F* *Month/Year: December/2019* *Instrument ID: MINDARY BC 5000*

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	450	366	90.98	84.97	3.28	6.83	5.19	7.1
RBC x10^6/µl	1	450	366	89.89	88.25	5.46	5.19	4.1	6.01
Hb g/dl	1	450	366	92.08	86.89	4.92	3.83	2.46	8.74
HCT%	1	450	366	95.08	90.16	3.01	5.74	1.37	3.55
MCV-fl	1	450	366	96.99	95.63	1.37	1.64	1.09	2.19
MCH-Pg	1	450	366	87.7	89.62	7.65	5.19	4.1	4.64
MCHC-g/dl	1	450	366	97.54	88.25	1.64	4.92	0.27	6.28
Plt. x10^3/µl	1	450	366	89.34	91.53	7.92	4.64	1.91	3.01
ReticCount%	2	450	301	94.02	74.75	2.99	20.6	2.99	7.64
PS Assessment	3	450	349	Acceptable:96.2%,Warning Signal:3.2%,Unacceptable :0.6%					

***Comments:**

1). Among Lab (EQA) : CBC result for RBC unacceptable, may be due to random/human error, PS partially correct, PS Morph not reported

2). Within Lab (IQA) : Difference for most of the CBC results unacceptable, check precision.

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. R. Saxena
Prof & Head, Hematology, AIIMS, Delhi.
PT Co-ordinator: ISHTM-AIIMS-EQAP

----------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

NABL Certificate No. PC - 1002

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

EQAP CODE No. : 2126 **Distribution No.:** 152-F **Month/Year:** February/2021

Instrument ID: H560 (K11042015033)

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: 25-03-2021[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	3.7	3.4	7.1	6.7	0.0230	**0.75**	0.3	0.1	0.0060	**3.17**
RBC x10^6/µl	1	4.16	4.15	8.31	8.3	0.0090	**0.04**	0.01	0.04	0.0030	**-1.01**
Hb g/dl	1	13.4	13.3	26.7	27.2	0.0300	**-0.69**	0.1	0.1	0.0080	**0.00**
HCT%	1	44	43.9	87.9	85.1	0.1870	**0.52**	0.1	0.4	0.0260	**-0.95**
MCV-fl	1	105.8	105.7	211.5	206	0.3690	**0.64**	0.1	0.3	0.0280	**-0.39**
MCH-Pg	1	32.1	32.1	64.2	65.5	0.0880	**-0.70**	0	0.25	0.0190	**-0.84**
MCHC-g/dl	1	30.4	30.3	60.7	64.1	0.1500	**-0.92**	0.1	0.3	0.0190	**-0.67**
Plt. x10^3/µl	1	112	111	223	204	1.39	**0.61**	1	4	0.34	**-0.67**
Retic %	2	6.5	6.5	13	8.5	0.17	**1.11**	0	0.3	0.03	**-0.54**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=5-7/100 WBCs , Poly=40% L=08%, E=05%, Mono/Promono=09% , B1=05% P.M.=02%, Mye=10%, Meta=11%, Other=Stab Cells and Band cells 06% +03%	Poly: 35 – 65, Myelo: 10 – 30, Meta: 5 – 15, Promyelo: 1 – 10, nRBC/Baso/Blast/Lympho/Eos/Mono: 0 – 5
RBC Morphology	3	Normocytic Normochromic cells	Predominantly: Normocytic/Normochromic; Moderate: Microcytosis, Anisocytosis; Mild: Hypochromia, Macrocytosis, Poikilocytosis
Diagnosis	3	Chronic myeloid leukemia (CML) Chronic phase	Chronic Myeloid Leukemia (CML)

EQAP Code No.: 2126 *Distribution No.: 152-F* *Month/Year: February/2021* *Instrument ID: H560 (K11042015033)*

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	236	255	89.41	87.84	3.14	0.78	7.45	10.2
RBC x10^6/µl	1	236	255	89.8	91.76	5.49	3.92	4.71	3.92
Hb g/dl	1	236	255	93.33	92.16	3.53	3.53	3.14	4.31
HCT%	1	236	255	94.12	89.8	5.49	2.75	0	6.67
MCV-fl	1	236	255	91.76	93.33	5.88	2.75	1.57	3.53
MCH-Pg	1	236	255	85.1	88.63	9.41	5.1	5.1	5.49
MCHC-g/dl	1	236	255	96.08	89.02	2.75	3.14	0.39	7.06
Plt. x10^3/µl	1	236	255	89.8	88.63	5.88	3.53	3.92	7.45
ReticCount%	2	236	235	92.34	92.34	4.68	5.11	3.4	2.98
PS Assessment	3	236	244	Acceptable:95.3,Warning Signal:0.9,Unacceptable :3.8					

***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.

Report authorized by,

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

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

Cross check H560 WBC result with manual method

Date: 30.03.2021

Sample no:1

Patient Name: Mr. BIBHUTI DEY

Regd No: 1141560

Method: Neubauer Haemocytometry

Instrument Used: Neubauer Chamber

Parameter	H560 Value	Manual Value
WBC	22,200 Cells/cu/mm	21,400

Sample no:2

Patient Name: Mrs. RAMA SAHOO

Regd No: 1141740

Method: Neubauer Haemocytometry

Instrument Used: Neubauer Chamber

Parameter	H560 Value	Manual Value
WBC	4800 Cells/ cu/mm	5,000

Done by: Luna Tripathy

Check By: Pallavi

Approved By: 30/03/2021