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. : 285 **Distribution No.:** 156-A **Month/Year:** April/2022

Instrument ID: Pentra ES60,Horiba 5 part diff hematoanalyzer,Serial no: 910PES15342

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: 08-07-2022[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	11.6	11.4	23	30.81	0.2690	-0.76	0.2	0.21	0.0130	-0.04
RBC x10^6/µl	1	6.03	5.99	12.02	12.23	0.0110	-0.66	0.04	0.06	0.0030	-0.39
Hb g/dl	1	13.1	13	26.1	25.9	0.0200	0.31	0.1	0.1	0.0070	0.00
HCT%	1	41.9	41.5	83.4	86.1	0.1480	-0.62	0.4	0.4	0.0240	0.00
MCV-fl	1	70	69	139	141.2	0.2110	-0.35	1	0.2	0.0200	2.16
MCH-Pg	1	21.9	21.6	43.5	42.4	0.0460	0.87	0.3	0.2	0.0100	0.67
MCHC-g/dl	1	31.4	31.3	62.7	59.8	0.1190	0.82	0.1	0.3	0.0200	-0.67
Plt. x10^3/µl	1	178	174	352	368	2.34	-0.23	4	9	0.53	-0.52
Retic %	2	12.8	12.6	25.4	15.85	0.27	1.13	0.2	0.4	0.02	-0.34

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=1 , Poly=47 L=48, E=1, Mono/Promono=4 , B1=0 P.M.=0, Mye=0, Meta=0, Other=Occasional hypersegmented neutrophils present	Lympho: 44-54, Poly: 40-49, Mono: 2-5, Eosino: 1-4, blast/Promyelo/Myelo/Meta: 0
RBC Morphology	3	Many Macrocytes,few microcytes,moderate anisocytosis,few poikiocytes,some target cells,Occasional stomatocytes,moderate hypochromasia and few polychromasia.	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Poikilocytosis , Target cells , Sickle shaped cells ,tear drop cells
Diagnosis	3	Megaloblastic anaemia.	Diagnosis- Thalassemia/haemoglobinopathy

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 156--A	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	375	366	95.63	90.16	0.82	2.46	3.55	7.38
RBC $x10^6/\mu l$	1	375	375	84.27	87.2	7.73	4.53	8	8.27
Hb g/dl	1	375	375	89.87	86.67	4.27	5.07	5.86	8.26
HCT%	1	375	365	90.96	87.95	4.93	6.03	4.11	6.02
MCV-fl	1	375	365	90.96	92.6	5.75	1.92	3.29	5.48
MCH-Pg	1	375	366	89.07	89.07	7.1	4.64	3.83	6.29
MCHC-g/dl	1	375	366	91.8	89.34	4.37	3.01	3.83	7.65
Plt. $x10^3/\mu l$	1	375	366	93.44	90.98	4.1	3.55	2.46	5.47
ReticCount%	2	375	354	95.2	95.2	3.11	4.24	1.69	0.56
PS Assessment	3	375	345	Satisfactory :84.24%, Borderline Sat. :13.63%, Unsatisfactory :2.13%					

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,

Z score of MCV + 2.16 i.e ±2 to ±3
CAPA taken - Proper maintenance done by Service Engineer, Horiba

10/7/22

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

NABL Certificate No: MC - 1002

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

EQAP CODE No. : 285 **Distribution No.:** 155-A **Month/Year:** January/2022

Instrument ID: Horiba Pentra ES 60 (Serial No-910PES15342)

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: 05-04-2022[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	5.8	5.7	11.5	11.3	0.0260	0.27	0.1	0.1	0.0070	0.00
RBC x10^6/µl	1	4.35	4.32	8.67	8.94	0.0110	-0.79	0.03	0.04	0.0020	-0.22
Hb g/dl	1	13.7	13.6	27.3	27.3	0.0190	0.00	0.1	0.1	0.0060	0.00
HCT%	1	38.7	38.6	77.3	82.2	0.1300	-1.25	0.1	0.3	0.0210	-0.67
MCV-fl	1	89	89	178	185	0.2670	-0.82	0	0.3	0.0210	-0.67
MCH-Pg	1	31.5	31.4	62.9	60.7	0.0820	0.82	0.1	0.3	0.0180	-0.67
MCHC-g/dl	1	35.3	35.2	70.5	66.4	0.1090	1.11	0.1	0.3	0.0190	-0.67
Plt. x10^3/µl	1	230	228	458	434	0.95	0.88	2	5	0.32	-0.58
Retic %	2	2.6	2.5	5.1	4.2	0.09	0.30	0.1	0.2	0.01	-0.67

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=2 , Poly=79 L=19, E=1, Mono/Promono=1 , B1=0 P.M.=0, Mye=0, Meta=0, Other=	Poly: 75-82 ,Lympho: 14-20, Mono: 2-4 , Eosino: 1-2, , Promyelo/Myelo/Meta/blast: 0
RBC Morphology	3	Reduce RBC count,Moderate anisocytosis,some macrocytes, few microcytes,few poikilocytes & tear drop cells,moderate hypochromia, and few polychromasia.	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Poikilocytosis
Diagnosis	3		Megaloblastic anemia

11/4/22

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 155--A	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	390	389	86.63	82.78	5.4	9.51	7.97	7.71
RBC $x10^6/\mu l$	1	390	390	92.05	92.05	6.41	4.87	1.54	3.08
Hb g/dl	1	390	390	91.28	93.33	6.15	3.59	2.57	3.08
HCT%	1	390	390	93.85	91.28	4.36	4.1	1.79	4.62
MCV-fl	1	390	390	95.13	92.56	4.87	3.59	0	3.85
MCH-Pg	1	390	389	93.06	91.77	5.91	4.11	1.03	4.12
MCHC-g/dl	1	390	390	97.44	88.46	2.56	4.87	0	6.67
Plt. $x10^3/\mu l$	1	390	390	90.77	88.72	5.64	7.69	3.59	3.59
ReticCount%	2	390	390	87.18	75.9	4.36	11.03	8.46	13.07
PS Assessment	3	390	360	Satisfactory :96.42%, Borderline Sat. :3.07%, Unsatisfactory :0.51%					

Comments:

1). Among Lab (EQA) : **PS Diagnosis not reported, 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.
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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,

11/04/2022

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

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