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. : 598 **Distribution No.:** 164-B **Month/Year:** May/2024

Instrument ID: Horiba **Model Name.:** Yumizenh550 **Serial No.:** 302YADr105317

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: 15-07-2024[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	4.8	3.8	8.6	11.24	0.052	**-1.80**	1	0.1	0.006	**7.59**
RBC x10^6/µl	1	3.17	3.16	6.33	6.39	0.011	**-0.20**	0.01	0.03	0.002	**-0.67**
Hb g/dl	1	10.4	10.4	20.8	20.7	0.035	**0.10**	0	0.1	0.006	**-1.35**
HCT%	1	30.7	30	60.7	63.6	0.177	**-0.56**	0.7	0.3	0.016	**1.35**
MCV-fl	1	97	97	194	197.9	0.340	**-0.38**	0	0.3	0.019	**-1.01**
MCH-Pg	1	33	30.2	63.2	64.8	0.066	**-0.86**	2.8	0.2	0.014	**8.77**
MCHC-g/dl	1	34	34	68	65.1	0.138	**0.71**	0	0.3	0.017	**-1.01**
Plt. x10^3/µl	1	87	82	169	216	1.010	**-1.67**	5	4	0.199	**0.27**
Retic %	2	12	10	22	30	0.416	**-0.60**	2	0.6	0.042	**1.84**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=05 , Poly=07 L=04, E=08, Mono/Promono=01 , B1=04 P.M.=02, Mye=25, Meta=12, Other=Nill	Poly: 19 – 36, Myelo: 20 - 37, Lympho: 5 – 12, Meta: 7–17, Promyelo: 2-10, Eosino: 2-7, Mono: 1-3, Blast: 2 - 5, Baso: 0-5
RBC Morphology	3	Normocytic normochromic rbc with 5n rbc/100 wbc seen	Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Mild: Polychromatophils (+), Poikilocytosis, Macrocytes
Diagnosis	3	Myeloproliferative neoplasm : chronic myelogenous leukemia - chronic phase	MPN likely CML-CP

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 164--B	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	389	388	86.6	87.37	6.19	5.41	7.21	7.22
RBC x10^6/µl	1	389	389	83.03	88.17	3.34	4.37	13.63	7.46
Hb g/dl	1	389	389	81.49	93.83	3.6	3.08	14.91	3.09
HCT%	1	389	389	87.4	88.43	9.25	7.46	3.35	4.11
MCV-fl	1	389	389	91.52	86.12	3.34	8.74	5.14	5.14
MCH-Pg	1	389	389	86.89	92.8	7.2	3.86	5.91	3.34
MCHC-g/dl	1	389	389	89.72	93.83	6.94	3.6	3.34	2.57
Plt. x10^3/µl	1	389	389	87.15	93.57	9.51	3.34	3.34	3.09
ReticCount%	2	389	362	95.58	93.92	3.59	2.76	0.83	3.32
PS Assessment	3	389	363	Satisfactory :92.02%, Borderline Sat. :3.09%, Unsatisfactory :4.89%					

***Comments:**

1). Among Lab (EQA) : Results acceptable.

2). Within Lab (IQA) : Difference in the CBC measurement values for *WBC & MCH* 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

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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. : 598 **Distribution No.:** 163-B **Month/Year:** February/2024

Instrument ID: HORIBA **Model Name.:** YUMIZEN H550 **Serial No.:** 302YADH05317

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: 29-04-2024[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	5.73	4.73	10.46	13.75	0.022	**-5.54**	1	0.1	0.007	**7.14**
RBC x10^6/µl	1	5.24	5.23	10.47	10.26	0.008	**0.81**	0.01	0.04	0.002	**-0.81**
Hb g/dl	1	13	12.8	25.8	25.4	0.017	**1.08**	0.2	0.1	0.007	**1.35**
HCT%	1	35.9	35.8	71.7	78.8	0.111	**-2.19**	0.1	0.3	0.021	**-0.67**
MCV-fl	1	68.7	68.3	137	153.7	0.180	**-3.04**	0.4	0.2	0.018	**0.67**
MCH-Pg	1	24.9	24.4	49.3	49.6	0.040	**-0.25**	0.5	0.2	0.011	**2.02**
MCHC-g/dl	1	36.2	35.7	71.9	64.4	0.096	**2.53**	0.5	0.3	0.011	**0.67**
Plt. x10^3/µl	1	116	113	229	220	1.479	**0.19**	3	5	0.320	**-0.34**
Retic %	2	8	5	13	24	0.321	**-1.13**	3	0.5	0.032	**4.22**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=04 , Poly=17 L=06, E=03, Mono/Promono=02 , B1=67 P.M.=01, Mye=03, Meta=01, Other=	Blast: 38-66, Poly: 11.75-20, Myelo: 4-15, Meta: 3-10, Promyelo: 1-10, Lympho: 3-7, Mono: 1-4, nRBC/Eos/Baso : 0-5
RBC Morphology	3	Normocytic Normochromic with few macrocytes, polychromatophils and 4 RBS/100 WBC seen	Predominantly: Normocytic/Normochromic, Moderate: Anisocytosis, Mild: Macrocytes, poikilocytosis
Diagnosis	3	Acute Leukemia Morphologically Myeloid(AML)	Acute Leukemia likely Acute Myeloid Leukemia

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 163--B	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	379	378	85.19	88.1	5.03	7.41	9.78	4.49
RBC x10^6/µl	1	379	379	91.29	91.29	5.8	3.43	2.91	5.28
Hb g/dl	1	379	379	83.91	92.35	7.65	3.17	8.44	4.48
HCT%	1	379	378	92.33	89.15	5.29	4.76	2.38	6.09
MCV-fl	1	379	377	93.1	86.21	5.04	8.75	1.86	5.04
MCH-Pg	1	379	377	88.59	95.76	6.63	1.59	4.78	2.65
MCHC-g/dl	1	379	377	94.16	91.51	3.98	3.98	1.86	4.51
Plt. x10^3/µl	1	379	378	91.8	87.83	7.67	7.14	0.53	5.03
ReticCount%	2	379	352	95.17	85.51	3.69	10.23	1.14	4.26
PS Assessment	3	379	358	Satisfactory :93.42%, Borderline Sat. :1.84%, Unsatisfactory :4.74%					

***Comments:**

1). Among Lab (EQA) : CBC result for *WBC & MCV* unacceptable, please check calibration/human error.Remaining results acceptable.

2). Within Lab (IQA) : *WBC & 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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----------End Of Report----------