



RML- Quality Assurance Program (RML-QAP)



HEMATOLOGY

ALL METHOD REPORT

Cycle-12/2023

Round -5

Lab Code: 3136

Date: 31/10/2023

Complete Blood Count (CBC)

Parameters	No.of Participants	Robust Mean	Robust Standard deviation (SD)	Uncertainty of Assign Values	Range (± 2 SD)	Your Value	Z Score
Hb gm/dl	338	11.7	0.4	0.02	11.0-12.5	10.9	-2.4
WBC $\times 10^3/\mu\text{l}$.	333	11.0	0.8	0.06	9.3-12.6	10.0	-1.2
RBC $\times 10^6/\mu\text{l}$.	336	4.1	0.1	0.01	3.9-4.3	4.00	-0.7
Hct%	337	35.5	2.3	0.16	30.8-40.1	34.3	-0.5
MCV fl.	336	86.8	4.6	0.31	77.7-95.9	85.8	-0.2
MCH pg.	336	28.8	0.9	0.06	27.0-30.7	27.2	-1.7
MCHC gm/dl	336	33.1	2.0	0.13	29.2-37.0	31.7	-0.7
Platelet $\times 10^3/\mu\text{l}$.	337	260.1	19.6	1.34	220.8-299.4	244	-0.8

Interpretation of Z Score:

Z Score Value(+/-)	$[Z] \leq 2.0$	$2.0 < [Z] < 3.0$	$[Z] \geq 3.0$
Interpretation	Satisfactory Performance No signal	Questionable Warning Signal	Unsatisfactory Performance action Signal

Peripheral Blood Smear(PBS):

	Your Result	Consensus Result
DLC	P- 44, L-13, E-41, Mono- 02	P- 17.3-59.7, L- 8.7-24.3, E- 14.6-61.6, Mono- 1.2-4.8
Morphology	RBC- Normocytic Normochromic Blood Cells. WBC- Increased in count with predominance of Eosinophils. Platelets- Reduced in count. No Hemoparasite seen.	Δ Normocytic/Normochromic (283/302) Δ Eosinophilia (264/302) Δ Leukocytosis (212/302) Δ Thrombocytopenia (153/302)
Diagnosis	Normocytic Normochromic Blood Picture with Eosinophilic Leucocytosis and thrombocytopenia	Eosinophilia

Legends	(*) Excluded From Group Mean	{.} Not Reported	(#)Late Result Submission	(\$)Reported in other Unit
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Chief Coordinator

Dr. Sanjay Mehrotra

Checked By:

Doc. No.: ASS / FR / 06 / R 01 / Dt.: 05.01.2022

****End of Report****

Programme Director

Dr. Bandana Mehrotra

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PC 1001

RML- Quality Assurance Program (RML-QAP)



HEMATOLOGY

METHOD WISE REPORT

Cycle-12/2023

Round -5

Date: 31/10/2023

Lab Code: 3136

Note: Your lab is not the part of this Method Group

Complete Blood Count (CBC)

Parameters	Method Group	No.of Participants	Method Wise Robust Mean	Method Wise Robust Standard deviation (SD)	Method Wise Uncertainty of Assign Values	Method Wise Range (± 2 SD)	Your Value	Method Wise Z Score
Hb gm/dl	Photometric	195	11.8	0.4	0.03	11.0-12.5	-	-
WBC $\times 10^3/\mu\text{l}$.	Electrical impedance	175	11.0	0.7	0.07	9.5-12.5	-	-
RBC $\times 10^6/\mu\text{i}$.	Electrical impedance	195	4.1	0.1	0.01	3.8-4.4	-	-
Hct%	Calculated	191	35.8	2.4	0.22	30.9-40.6	-	-
MCV fl.	Calculated	136	86.4	4.4	0.48	77.5-95.3	-	-
MCH pg.	Calculated	202	28.8	0.9	0.08	27.0-30.6	-	-
MCHC gm/dl	Calculated	205	33.0	1.6	0.14	29.7-36.2	-	-
Platelet $\times 10^3/\mu\text{l}$.	Electrical impedance	192	259.3	18.7	1.69	221.9-296.8	-	-

Interpretation of Z Score:

Z Score Value(+/-)	$[Z] \leq 2.0$	$2.0 < [Z] < 3.0$	$[Z] \geq 3.0$
Interpretation	Satisfactory Performance No signal	Questionable Warning Signal	Unsatisfactory Performance action Signal

Legends	(*) Excluded From Group Mean	{.} Not Reported	(#) Late Result Submission	(\$) Reported in other Unit
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Chief Coordinator

Dr. Sanjay Mehrotra

Checked By:

Prepared By: SSK

Programme Director

Dr. Bandana Mehrotra

End of Report

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Continuous Efforts And Execution Leads To Quality Excellence



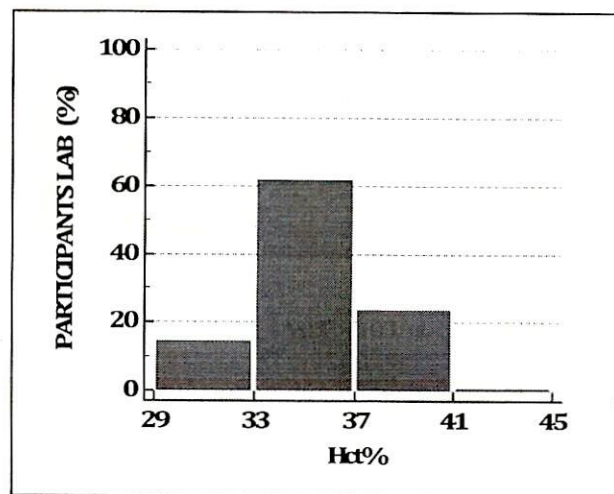
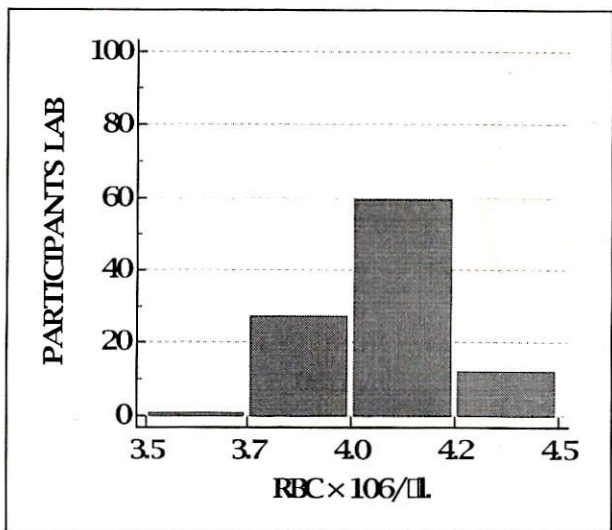
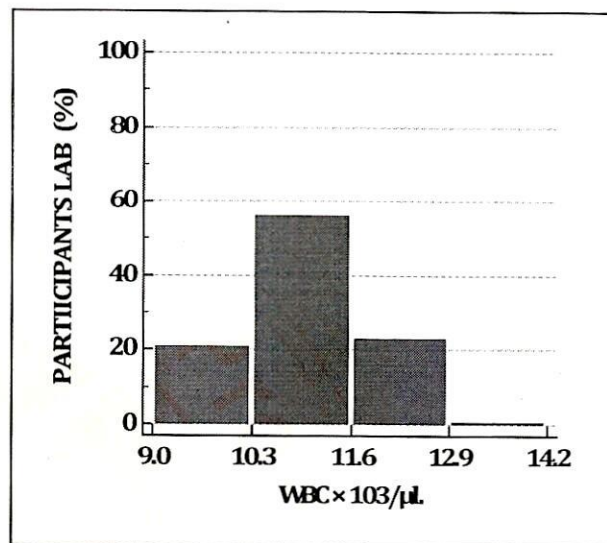
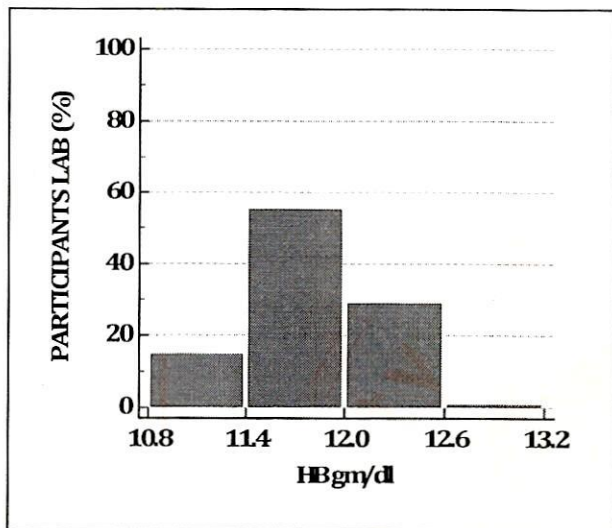
HEMATOLOGY

GRAPHICAL REPORT

Cycle - 12/2023

Round - 5

Date: 31/10/2023



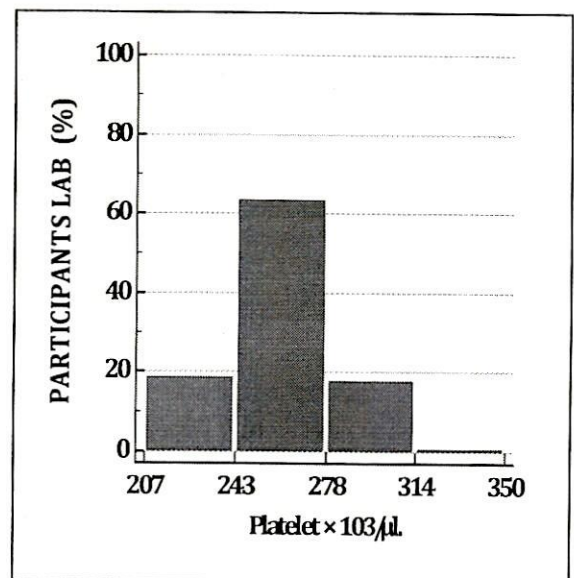
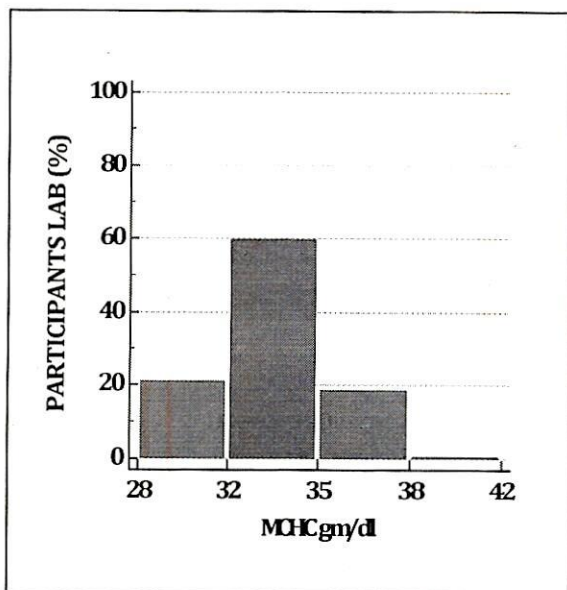
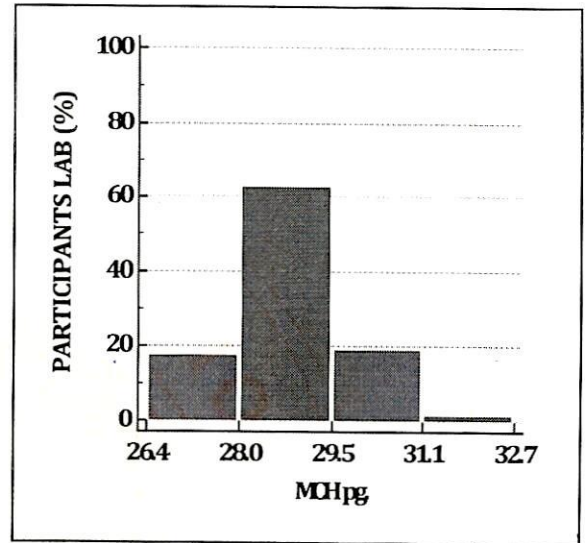
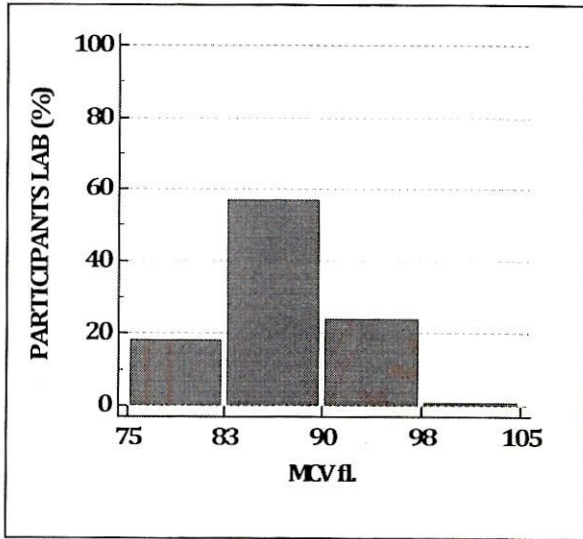


HEMATOLOGY

GRAPHICAL REPORT

Cycle - 12/2023
Round -5

Date: 31/10/2023



Hematology

ALL PARTICIPANTS COMPLETE DATA REPORT

Cycle - 12/2023

Round No - 5

Date: 31/10/2023

Note:- This report is only for information about the participant's performance in the particular round

Parameters	Total No. of Participants	No. of Responses	No of Participant Excluded from Robust Group Mean	No. of Participants Z Score b/w 0.0 - 2	No. of Participants Z Score b/w 2.1 - 2.9	No. of Participants Z Score >3
Hb gm/dl	448	338	48	277	13	48
WBC × 10 ³ /μl.	448	333	106	212	15	106
RBC × 10 ³ /μl.	448	336	52	252	32	52
HCT%	448	337	18	303	16	18
MCV fl.	448	336	6	321	9	6
MCH pg.	448	336	17	294	25	17
MCHC gm/dl	448	336	10	302	24	10
Platelet × 10 ³ /μl.	448	337	18	300	19	18

****End of Report****

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Doc. No.: ASS / FR / 01 / R 00 / Dt.: 01.07.2012



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. : 6020

Distribution No.: 161-O

Month/Year: October/2023

Instrument ID: AGAPPE

Name & Contact No. of PT Co-ordinator: Dr. Manoranjan Mahapatra (Prof. & Head), Hematology, AIIMS, Delhi,
 Tel: 9013085730 , E-Mail : accuracy2000@gmail.com

Date of issue & status of the report: 15-01-2024[provisional].

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	3.9	7.8	7.3	0.032	0.56	0	0.1	0.007	-0.79
RBC x10 ⁶ /µl	1	3.4	3.39	6.79	7.02	0.009	-1.00	0.01	0.04	0.002	-0.81
Hb g/dl	1	10.5	10.4	20.9	21.8	0.027	-1.35	0.1	0.1	0.008	0.00
HCT%	1	33.1	32.8	65.9	68.2	0.165	-0.53	0.3	0.4	0.024	-0.22
MCV-fl	1	97.4	96.9	194.3	194.8	0.360	-0.05	0.5	0.3	0.020	0.54
MCH-Pg	1	30.8	30.6	61.4	61.8	0.091	-0.17	0.2	0.3	0.018	-0.45
MCHC-g/dl	1	31.7	31.7	63.4	63.9	0.164	-0.11	0	0.3	0.022	-1.01
Plt. x10 ³ /µl	1	171	168	339	349	1.479	-0.23	3	5	0.314	-0.39
Retic %	2	4.5	4.5	9	13	0.313	-0.35	0	0.5	0.036	-0.84

P.S . Assesment

YOUR REPORT		CONSENSUS REPORT
DLC%	3	Nrbcs=0 , Poly=12 L=82, E=1, Mono/Promono=4 , B1=1 P.M.=0, Mye=0, Meta=0, Other=NIL
RBC Morphology	3	Lymp: 77-88, Poly: 7-12, Eosino: 1-2, mono: 1-3, nRBC/blast/Myelo/Meta: 0-5
Diagnosis	3	CHRONIC LYMPHOCYTIC LEUKEMIA WITH MILD NORMOCYTIC NORMOCHROMIC ANEMIA AND THROMBOCYTOPENIA
		Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Mild: Poikilocytosis.
		Chronic Lymphoproliferative Disorder

COMBINED DATA VALUES OF TOTAL PARTICIPANTS

Test parameters	S.No.	Total participants covered in the current dist. 161--0	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	332	332	87.65	92.77	4.22	2.11	8.13	5.12
RBC x10 ⁶ /µl	1	332	332	87.65	93.67	5.42	1.51	6.93	4.82
Hb g/dl	1	332	332	87.95	87.35	4.22	4.82	7.83	7.83
HCT%	1	332	332	88.55	88.25	6.63	4.82	4.82	6.93
MCV-fl	1	332	332	91.87	85.24	6.33	4.52	1.8	10.24
MCH-Pg	1	332	332	87.95	89.16	6.93	4.82	5.12	6.02
MCHC-g/dl	1	332	332	90.66	89.46	5.42	5.72	3.92	4.82
Plt. x10 ³ /µl	1	332	332	93.07	90.06	3.31	3.92	3.62	6.02
ReticCount%	2	332	255	96.47	83.92	1.96	9.41	1.57	6.67
PS Assessment	3	332	260	Satisfactory :91.57%, Borderline Sat. :3.31%, Unsatisfactory :5.12%					

***Comments:**

1). **Among Lab (EQA) : 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,



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



PARTICIPATION CERTIFICATE

[Certificate No. EQAP/6020/2023/30]

Date 30.12.2023

This is to certify that " **Precise Health Care, Bangalore, Karnataka, 560085** "has participated in the "ISHTM-AIIMS External Quality Assurance Program" for the period "January 2023 to December 2023".

Report authorized by,

Dr. Manoranjan Mahapatra (Prof. & Head)
PT Co-ordinator: ISHTM-AIIMS-EQAP
Department of Hematology, AIIMS, New Delhi