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. : 1079 **Distribution No.:** 151-C **Month/Year:** August/2020

Instrument ID: 306ESOH05900

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: 27-11-2020[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	3.11	3.1	6.21	6.3	0.0220	**-0.15**	0.01	0.1	0.0570	**-1.10**
RBC x10^6/µl	1	2.53	2.5	5.03	5.14	0.0050	**-0.74**	0.03	0.02	0.0130	**0.34**
Hb g/dl	1	6.9	6.9	13.8	15.2	0.0160	**-3.15**	0	0.1	0.0070	**-1.35**
HCT%	1	22.1	21.7	43.8	46.3	0.1090	**-0.88**	0.4	0.2	0.0110	**0.90**
MCV-fl	1	89	87	176	179.4	0.3260	**-0.40**	2	0.4	0.0270	**3.08**
MCH-Pg	1	27.8	27.3	55.1	59.4	0.1530	**-2.23**	0.5	0.3	0.0240	**0.67**
MCHC-g/dl	1	31.9	30.7	62.6	66.1	0.0720	**-0.84**	1.2	0.4	0.0190	**2.16**
Plt. x10^3/µl	1	306	284	590	473	1.56	**2.43**	22	6	0.35	**3.08**
Retic %	2	1.84	1.81	3.65	5	0.13	**-0.33**	0.03	0.2	0.02	**-0.57**

P.S . Assesment

		YOUR REPORT	CONSENSUS REPORT
DLC%	3	Nrbcs=02 , Poly=28 L=11, E=02, Mono/Promono=18 , B1=13 P.M.=03, Mye=08, Meta=15, Other=02	Poly: 25-50, Lymph; 2-7, nRBC/Mono/Eo/Blast/Pro: 0-5, Myelo: 20-35, Meta: 15-25, Baso: 0-3
RBC Morphology	3	Moderate anisocytosis,few microcytic cells	Predominantly: Normocytic Normochromic. Moderate: Anisocytosis. Mild: Microcytic.
Diagnosis	3	myeloid neoplasm	Chronic Myeloid Leukemia (Chronic Phase) : CML-CP

EQAP Code No.: 1079 *Distribution No.: 151-C Month/Year: August/2020 Instrument ID: 306ESOH05900*

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 $x10^3/\mu l$	1	450	333	87.09	90.09	4.2	3.6	8.71	6.01
RBC $x10^6/\mu l$	1	450	333	87.39	90.09	8.41	4.5	4.2	4.8
Hb g/dl	1	450	333	87.69	92.49	5.71	4.2	6.61	3.3
HCT%	1	450	333	90.69	92.49	6.01	3	3	3.9
MCV-fl	1	450	333	89.79	91.89	8.41	5.41	1.8	2.7
MCH-Pg	1	450	333	86.79	91.59	7.21	4.2	6.01	3.3
MCHC-g/dl	1	450	333	90.69	92.49	6.61	4.5	2.7	2.7
Plt. $x10^3/\mu l$	1	450	333	94.59	89.79	3.9	6.91	1.5	3.3
ReticCount%	2	450	291	93.47	87.97	4.81	2.41	1.72	12.03
PS Assessment	3	450	328	Acceptable:75.1%,Warning Signal:24.9%,Unacceptable :0%					

Comments:

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

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

Report authorized by,

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

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

BS SARDANA LABS.
BS DIAGNOSTIC CLINICS
NEW JAWAHAR NAGAR MARKET ROAD, OPP. APEE JAY SCHOOL, JALANDHAR
Ph. : 9915888228, Fax : (91) 0181-2458260 e-mail : sardanalabs@gmail.com

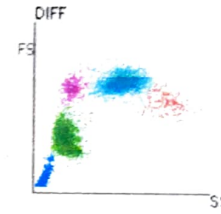
Name of the patient..... HARVINDER KAUR DS .....Regd. No..... 06-03-2021...

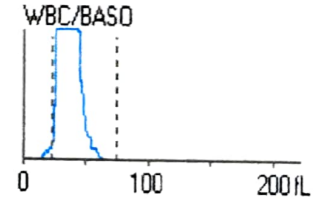
Age..... 53Year .....Sex..... Female .....Hospital..... K14 .....

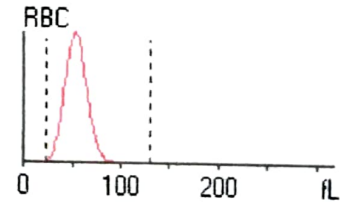
Doctor Incharge.....

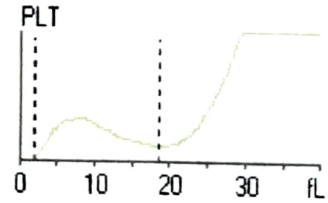
HEMOGRAM

Parameter	Result	Unit	Ref.Range
WBC	8.46	x10^3/uL	4.00 - 10.00
Neu%	60.0	%	50.0 - 70.0
Lym%	33.0	%	20.0 - 40.0
Mon%	3.8	%	3.0 - 12.0
Eos%	2.9	%	0.5 - 5.0
Bas%	0.3	%	0.0 - 1.0
Neu#	5.07	x10^3/uL	2.00 - 7.00
Lym#	2.79	x10^3/uL	0.80 - 4.00
Mon#	0.33	x10^3/uL	0.12 - 1.20
Eos#	0.25	x10^3/uL	0.02 - 0.50
Bas#	0.02	x10^3/uL	0.00 - 0.10
RBC	5.51	x10^6/uL	3.50 - 5.00
HGB	8.7	g/dL	11.0 - 15.0
HCT	29.4	%	37.0 - 47.0
MCV	53.4	fL	80.0 - 100.0
MCH	15.8	pg	27.0 - 34.0
MCHC	29.6	g/dL	32.0 - 36.0
RDW-CV	18.7	%	11.0 - 16.0
RDW-SD	43.2	fL	35.0 - 56.0
PLT	219	x10^3/uL	150 - 400
MPV	8.6	fL	6.5 - 12.0
PDW	15.0		9.0 - 17.0
PCT	0.189	%	0.108 - 0.282
ALY%	0.1	%	0.0 - 2.0
LIC%	1.8	%	0.0 - 2.5
ALY#	0.01	x10^3/uL	0.00 - 0.20
LIC#	0.16	x10^3/uL	0.00 - 0.20









EOA:

Dated :

Dr. N.K. SARDANA

HARVINDER KAUR DS

PID NO: P552000071238
Age: 53.0 Year(s) Sex: Female

Reference: Dr.N.K. SARDANA
Sample Collected At:
DR. N K SARDANA
SARDANA LABS, 50 MAHAVIR MARG, JALANDHAR
Sample Processed At: Metropolis Healthcare Ltd E-21, B1 Mohan Co-op Ind Estate New Delhi-110044

VID: 552001006868610
Registered On: 06/03/2021 06:07 PM
Collected On: 06/03/2021 6:07PM
Reported On: 08/03/2021 01:43 PM

Haemoglobin Studies

Investigation	Observed Value	Unit	Biological Reference Interval
Erythrocyte (RBC) Count	5.51	mill/cu.mm	4.2-5.4
Haemoglobin (Hb)	8.7	gm/dL	12.5-16
MCH (Mean Corpuscular Hb)	15.7	pg	27-31
MCHC (Mean Corpuscular Hb Concn.)	29.5	g/dL	32-36
MCV (Mean Corpuscular Volume)	53.3	fL	78-100
HCT(Hematocrit)	29.4	%	37-47
RDW (Red Cell Distribution Width)	21.7	CV%	11.5-14.0
Foetal Haemoglobin (HbF)	0.6	%	0.0-2.0
Haemoglobin A0 (Hb A0)	94.3	%	94.3-98.5
Haemoglobin A2 (HbA2)	5.1	%	1.5-3.7
Haemoglobin D (HbD)	0	%	0-0
Haemoglobin S (HbS)	0	%	0-0
Haemoglobin C (HbC)	0	%	0-0
Haemoglobins E (HbE)	0	%	0-0
Impression	BETA THALASSAEMIA TRAIT. (MINOR).		
Suggestion	See Remark 1 & 2. Advise: Family Study and Iron Studies.		

Method: HPLC (High performance liquid chromatography), on whole blood.

Interpretations & Remarks:-

1. All results have to be correlated with age and history of blood transfusion If there is history of blood transfusion in last 3 months, repeat testing after 3 months from last date of transfusion is recommended.
2. In case of haemoglobinopathy, parents or family studies,DNA Analysis and Genetic counseling is advised..
3. This test detects Beta thalassaemia and haemoglobinopathies. DNA analysis is recommended to rule out alpha thalassaemia and silent carriers.
4. Mild to moderate increase in fetal heamoglobin can be seen in some acquired conditions like Pregnancy, Megaloblastic anaemia, Thyrotoxicosis, Hypoxia, Chronic kidney disease, Recovering marrow, MDS, Aplastic anaemia, PNH, Medications (Hydroxyurea, Erythropoietin) etc.
5. P3 window- Above 10% is often indicative of either denatured forms of hemoglobins or may suggest a possibility of abnormal haemoglobin variant. Hence,repeat analysis with fresh sample or DNA studies is advised.
6. P2 window- Above 10% is indicative of either glycated haemoglobin requiring correlation with diabetic status or may suggest a possibility of abnormal haemoglobin variant requiring further DNA studies for confirmation.
7. Iron deficiency Anaemia may be associated with low HbA2 result.
8. Megaloblastic Anaemia may be associated with elevated HbA2 levels (False high result).

Results relate only to the sample as received. Refer to conditions of reporting overleaf.

* The Parameters marked with an * are not accredited by NABL.
† This test was outsourced to Metropolis Healthcare Ltd. Mumbai

Refer to conditions of reporting overleaf **Referred Test* *Results relate only to the sample as received*

Dr. Asim Israr Khan
M.D (Pathology)