

Instrument : Horiba Yumizen H1500

Analyte	Standard Unit	Result Value	Mean	Z-Score	RMZ
@ Erythrocyte (RBC) Count	mill/cu.mm	2.54	--	-0.08	-0.09
X Total Leucocytes (WBC) count	/c.mm	5290.00	--	6.03	3.99
X Neutrophils Differential	%	18.70	--	-13.83	-9.22
* Lymphocytes Differential	%	14.80			0.00
@ Monocytes Differential	%	0.30	--	-1.67	-1.14
@ Eosinophils Differential	%	3.90	--	-0.95	-0.39
X Basophils Differential	%	62.30	--	101.67	134.84
@ Haemoglobin	g/dL	7.50	--	0.89	0.56
Ⓜ MCV (Mean Corpuscular Volume)	fL	106.90	--	-1.62	-1.52
@ MCH (Mean Corpuscular Hb)	pg	29.70	--	0.53	0.48
MCHC (Mean Corpuscular Hb Concentration)	g/dL	27.80	--	2.71	2.14
@ Platelet Count	1000/ μ L	152.00	--	1.05	0.57
@ Hematocrit	%	27.10	--	-1.52	-1.31
@ RDW CV%	%	20.40	--	0.22	0.13

Legend @ : Acceptable

! : 2.0 < z score < 3.0 - Warning

X : z score \geq 3 - Unacceptable

: Not Evaluated

Ⓜ : Delayed Result Entry

* : Not considered for evaluation.

Total Parameters	14
Not Evaluated Parameters	0
Evaluated Parameters	14
Outlier Parameters (X)	4
EQAS Score Haematology - CBC	71.43 %

Dr Puneet Kumar Nigam

Dr Puneet Kumar Nigam

PT coordinator & Technical Manager, MHL EQAS

Unit No. 409-416.

Commercial Building - 1A

Kohinoor Mall, Kiroi Road, Kurla (W),

Mumbai - 400070

Analyte	Instrument	Result Value	Standard Unit	Z-Score
X Total Leucocytes (WBC) count	Horiba Yumizen H1500	5290.00	1000/ μ L	6.03
X Neutrophils Differential	Horiba Yumizen H1500	18.70	%	-13.83
* Lymphocytes Differential	Horiba Yumizen H1500	14.80	%	*
X Basophils Differential	Horiba Yumizen H1500	62.30	%	101.67
MCHC (Mean Corpuscular Hb Concentration)	Horiba Yumizen H1500	27.80	g/dL	2.71

Legend @ : z score \leq 2.0 - Acceptable
 | : 2.0 < z score < 3.0 - Warning
 X : z score \geq 3 - Unacceptable
 # : Not Evaluated
 ⊙ : Delayed Result Entry
 * : Not considered for evaluation.

Problem Classification: Sample NOT RECEIVED IN TEMPERATURE.

Corrective Action: I.L.C Done

Reviewed by: *Mj*

Dated: 2-8-24

CORRECTIVE ACTION & PREVENTIVE ACTION (CAPA)

Name of the Department: <i>Haematology</i>						
Sr. No	Date	Non Conformity Observed	Root Cause Analysis	Corrective Action & Preventive Action	Date of Closure	Signature
	<i>2-8-24</i>	<i>Total leucocytes Count</i>	<i>Sample not received in temp</i>	<i>ILC DONE</i>	<i>2-8-24</i>	<i>[Signature]</i>
	<i>2-8-24</i>	<i>Neutrophilia</i>	<i>Sample not received in temp</i>	<i>ILC DONE</i>	<i>2-8-24</i>	<i>[Signature]</i>
	<i>2-8-24</i>	<i>Basophil</i>	<i>Sample not received in temp</i>	<i>ILC DONE</i>	<i>2-8-24</i>	<i>[Signature]</i>
	<i>2-8-24</i>	<i>RBC</i>	<i>Sample not received in temp</i>	<i>ILC DONE</i>	<i>2-8-24</i>	<i>[Signature]</i>

Issued by : <i>Vinod Lonkar</i> <i>Vinod</i>	Issued on : 01.03.2024		
Approved by : <i>Dr Amol Patil</i> <i>ACP</i>			
Doc No. GEN-69	Version No : 2	Amend No :	Amend Date :

INTER LABORATORY COMPARISON RESULTS

Sr. No	Date	Analyte Name	Barcode ID	Lab Result	Unit	ILC lab Result	Unit	Acceptability Criteria	Observed CV %	Acceptability range	Result Acceptable Yes / No	Done by	Reviewed by
	2-8-24	WBC	580943	6.54	$\times 10^3/\mu l$	6.30	$\times 10^3/\mu l$	10%	3.6%	10%	Yes	<i>P. K. Deka</i>	<i>Mj</i>
										10%			
	2-8-24	Neutro	11	44.0	%	4.5	%	10%	-2%	10%	Yes	<i>P. K. Deka</i>	<i>Mj</i>
	2-8-24	Baso	11	0.70	%	0.70	%	10%	0%	10%	Yes	<i>P. K. Deka</i>	<i>Mj</i>
	2-8-24	RBC	11	4.80	$\times 10^6/\mu l$	4.38	$\times 10^6/\mu l$	10%	8.75%	10%	Yes	<i>P. K. Deka</i>	<i>Mj</i>

Qualitative: Clinically comparable results shall be Concordance.
Clinically not comparable results shall be Disconcordance.

Quantitative: Acceptability: 10 % (As per NABL 112)

Signature Doctor

Issued by : Vinod Lonkar <i>Vinod</i>	Issue Date : 01.09.2023
Approved by : Dr. Manish Karekar <i>Manish</i>	
Doc No. GEN-01	Version No. 1
Amend No. --	Amend Date .



UNA

मुख्यमंत्री निःशुल्क निदान योजना

स्वास्थ्य सुविधाएँ घर-द्वार, कृत्त सकल्पित है हिमाचल सरकार



RH UNA

Medical Laboratory Report

Patient Name : Mr ILC LEKH RAM

Age and Gender : 59 Years / Male

Category : OPD - HP UNA LAB

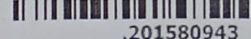
Referring Doctor : Self

Sample Processed at : HP HAMIRPUR LAB

Patient UID No : UNAP240800092607

PRN No : UNAP240800092607

Registered On : 02 Aug 2024 17:02

Sample UID No.  201580943

HEMATOLOGY

Test Done	Observed Value	Units	Biological Reference Interva
COMPLETE BLOOD COUNT			
COMPLETE BLOOD COUNT (Sample type : EDTA)			
Haemoglobin	14.10	g/dl	13.0 - 18.0
Photometric			
Total Leucocyte Count	6.30	$\times 10^3 / \mu\text{L}$	4.0 - 11.0
Electrical impedance			
Total Erythrocyte Count	4.38	$\times 10^6 / \mu\text{L}$	3.5 - 5.5
Electrical impedance			
Platelet count	171.00	$\times 10^3 / \mu\text{L}$	150 - 450
Electrical impedance			
MPV	12.00	fL	7.8 - 11.0 fL
Calculated			
PCT	0.21	%	0.15 - 0.62 %
Electrical Impedence			
PDW	26.20	fL	8.3 - 25.0
Calculated			
R.B.C. Indices			
HCT (P.C.V.)	39.20	%	40 - 52
Calculated			
M.C.V.	83.50	fL	82 - 95.0
Measured			
M.C.H.	30.20	pg	25 - 33
Measured			
M.C.H.C	35.80	gm/dl	33 - 37
Calculated			
R.D.W. CV	13.80	%	11.0 - 16.0
Calculated			
Differential W.B.C. Count			
Neutrophils	45.00	%	40 - 70
Cytochemistry & impedance/PS			
Lymphocytes	44.00	%	20 - 45
Cytochemistry & impedance/PS			
Eosinophils	2.10	%	0 - 6
Cytochemistry & impedance/PS			
Monocytes	9.70	%	0 - 8
Cytochemistry & impedance/PS			
Basophils	0.70	%	0 - 1
Cytochemistry & impedance/PS			
Absolute Count			
Absolute Neutrophil Count	2.84	$\times 10^3 / \mu\text{L}$	1.5 - 8.0



मुख्यमंत्री निःशुल्क निदान योजना

स्वास्थ्य सुविधाएँ घर-द्वार, कृत सकल्पित है हिमाचल सरकार



Medical Laboratory Report

Patient Name : Mr ILC LEKH RAM

Age and Gender : 59 Years / Male

Category : OPD - HP UNA LAB

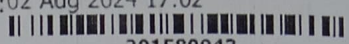
Referring Doctor : Self

Sample Processed at : HP HAMIRPUR LAB

Patient UID No : UNAP240800092607

PRN No : UNAP240800092607

Registered On : 02 Aug 2024 17:02

Sample UID No.  .201580943

HEMATOLOGY

Test Done	Observed Value	Units	Biological Reference Interva
COMPLETE BLOOD COUNT			
Absolute Count			
Calculated			
Absolute Lymphocyte Count	2.77	X10 ⁹ /l	1.02 - 3.55
Calculated			
Absolute Eosinophil Count	0.13	x 10 ³ /μL	0.04 - 0.44
Calculated			
Absolute Monocyte Count	0.61	X 10 ⁹ /l	0.26 - 1.07
Calculated			
Absolute Basophil Count	0.04	x 10 ³ /μL	0.02 - 0.10
Calculated			

Test performed on fully automated 5 part differential cell counter.



Dr. Rajiv Dogra
(MDPhysician), DCP Pathologist

~~~ END OF REPORT ~~~



HAMIR PUR



मुख्यमंत्री निःशुल्क निदान योजना

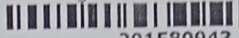
स्वास्थ्य सुविधाएँ घर-द्वार, कुल संकल्पित हे डिमांचल सरकार



HAMIR PUR

### Medical Laboratory Report

Patient Name : Mr LEKH RAM  
 Age and Gender : 59 Years / Male  
 Category : OPD - HP UNA LAB  
 Referring Doctor : Self  
 Sample Processed : HP UNA LAB  
 at

Patient UID No : UNAP240800092238  
 PRN No : UNAP240800092238  
 Registered On : 01 Aug 2024 11:34  
 Sample UID No.   
 201580943

#### HEMATOLOGY

| Test Done                                              | Observed Value | Units                       | Biological Reference Interv: |
|--------------------------------------------------------|----------------|-----------------------------|------------------------------|
| <b>COMPLETE BLOOD COUNT</b>                            |                |                             |                              |
| <b>COMPLETE BLOOD COUNT ( Sample type : EDTA )</b>     |                |                             |                              |
| Haemoglobin<br>Photometric                             | 14.50          | g/dl                        | 13.0 - 18.0                  |
| <b>Total Leucocyte Count</b><br>Electrical impedance   | 6.54           | $\times 10^3 / \mu\text{L}$ | 4.0 - 11.0                   |
| <b>Total Erythrocyte Count</b><br>Electrical impedance | 4.80           | $\times 10^6 / \mu\text{L}$ | 3.5 - 5.5                    |
| Platelet count<br>Electrical impedance                 | 176.00         | $\times 10^3 / \mu\text{L}$ | 150 - 450                    |
| MPV<br>Calculated                                      | 13.00          | fL                          | 7.8 - 11.0                   |
| PCT<br>Electrical Impedence                            | 0.23           | %                           | 0.15 - 0.62                  |
| PDW<br>Calculated                                      | 27.10          | %                           | 8.3 - 25.0                   |
| <b>R.B.C. Indices</b>                                  |                |                             |                              |
| HCT ( P.C.V. )<br>Calculated                           | 40.60          | %                           | 40 - 52                      |
| M.C.V.<br>Measured                                     | 84.50          | fL                          | 82 - 95.0                    |
| M.C.H.<br>Measured                                     | 30.20          | pg                          | 25 - 33                      |

~~~ END OF REPORT ~~~



DR.SHELLY VASHISHT (E16918)
 CONSULTANT PATHOLOGIST



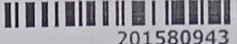
मुख्यमंत्री निःशुल्क निदान योजना

स्वास्थ्य सुविधाएँ घर-द्वार, कृत संकल्पित है हिमाचल सरकार



Medical Laboratory Report

Patient Name : Mr LEKH RAM
Age and Gender : 59 Years / Male
Category : OPD - HP UNA LAB
Referring Doctor : Self

Patient UID No : UNAP240800092238
PRN No : UNAP240800092238
Registered On : 01 Aug 2024 11:34
Sample UID No. 
201580943

Sample Processed : HP UNA LAB
at

COMPLETE BLOOD COUNT

| | | | |
|--|-------|-----------------------------|-------------|
| M.C.H.C
Calculated | 35.80 | gm/dl | 33 - 37 |
| R.D.W. CV
Calculated | 13.80 | % | 11.0 - 16.0 |
| Differential W.B.C. Count | | | |
| Neutrophils
Cytochemistry & impedance/PS | 44.00 | % | 40 - 70 |
| Lymphocytes
Cytochemistry & impedance/PS | 43.50 | % | 20 - 45 |
| Eosinophils
Cytochemistry & impedance/PS | 2.10 | % | 0 - 6 |
| Monocytes
Cytochemistry & impedance/PS | 9.70 | % | 0 - 8 |
| Basophils
Cytochemistry & impedance/PS | 0.70 | % | 0 - 1 |
| Absolute Count | | | |
| Absolute Neutrophil Count
Calculated | 2.87 | $\times 10^3 / \mu\text{L}$ | 1.5 - 8.0 |
| Absolute Lymphocyte Count
Calculated | 2.83 | $\times 10^3 / \mu\text{L}$ | 1.02 - 3.55 |
| Absolute Eosinophil Count
Calculated | 0.13 | $\times 10^3 / \mu\text{L}$ | 0.04 - 0.44 |
| Absolute Monocyte Count
Calculated | 0.63 | $\times 10^3 / \mu\text{L}$ | 0.26 - 1.07 |
| Absolute Basophil Count
Calculated | 0.05 | $\times 10^3 / \mu\text{L}$ | 0.02 - 0.1 |

~~~ END OF REPORT ~~~



DR.SHELLY VASHISHT ( E16918 )  
CONSULTANT PATHOLOGIST





**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. : 6079

Distribution No.: 162-0

Month/Year: January/2024

Instrument ID: HORIBA

Model Name.: YUMIZEN H1500

Serial No.: 302M1XH01076

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 &amp; status of the report: 12-04-2024[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 <sup>3</sup> /µl  | 1     | 6.02                         | 5.93          | 11.95                       | 12.91                                             | 0.033                          | -0.99   | 0.09                            | 0.1                                                 | 0.007                          | -0.09   |
| RBC x10 <sup>6</sup> /µl  | 1     | 4.4                          | 4.38          | 8.78                        | 8.96                                              | 0.012                          | -0.58   | 0.02                            | 0.04                                                | 0.003                          | -0.39   |
| Hb g/dl                   | 1     | 12.1                         | 12            | 24.1                        | 24                                                | 0.027                          | 0.15    | 0.1                             | 0.1                                                 | 0.008                          | 0.00    |
| HCT%                      | 1     | 36.4                         | 36            | 72.4                        | 76.9                                              | 0.171                          | -0.91   | 0.4                             | 0.4                                                 | 0.025                          | 0.00    |
| MCV-fl                    | 1     | 82.7                         | 82.1          | 164.8                       | 173.3                                             | 0.304                          | -0.97   | 0.6                             | 0.2                                                 | 0.012                          | 1.35    |
| MCH-Pg                    | 1     | 27.6                         | 27.3          | 54.9                        | 53.8                                              | 0.080                          | 0.54    | 0.3                             | 0.2                                                 | 0.011                          | 0.45    |
| MCHC-g/dl                 | 1     | 33.6                         | 33.1          | 66.7                        | 62.3                                              | 0.149                          | 1.04    | 0.5                             | 0.3                                                 | 0.020                          | 0.67    |
| Plt. x10 <sup>3</sup> /µl | 1     | 262                          | 255           | 517                         | 514                                               | 1.539                          | 0.07    | 7                               | 7                                                   | 0.408                          | 0.00    |
| Retic %                   | 2     | 6.8                          | 6.5           | 13.3                        | 13.8                                              | 0.222                          | -0.09   | 0.3                             | 0.5                                                 | 0.036                          | -0.34   |

### P.S . Assesment

| YOUR REPORT    |   |                                                                                                                                                                                                        | CONSENSUS REPORT                                                                                                        |
|----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| DLC%           | 3 | Nrbcs=5 , Poly=50 L=40, E=05, Mono/Promono=05 , B1=00 P.M.=00, Mye=00, Meta=00, Other=                                                                                                                 | Poly: 47-61.5, Lympho: 30-43, Eosino: 2-4, Mono: 2-6, Blast/Promyelo/Myelo/ Meta: 0-5                                   |
| RBC Morphology | 3 | NORMOCYTIC NORMOCHROMIC TO MICROCYTIC HYPOCHROMIC, TARGET CELLS++, SHHISTOCYTES++, DACROCYTES+,BASOPHILING STIPPILING+, POLYCHROMATOPHILS+, MICROSPHEROCYTES+, ELLIPTOCYTES+SEVERE ANSIOPOIKILOCYTOSIS | Predominantly: Microcytic, Hypochromic, Moderate: Anisopoikilocytosis Mild:Target cells , Tear drop cells, Elliptocytes |

| 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) |
| Diagnosis       | 3     | HEAMOGLOBINOPATHY - D/D-THALESSEMIA DISEASE.(MODERATE HEMOLYTIC ANEMIA) WITH THROMBOCYTOPENIA |               |                             |                                                   | Haemoglobinopathy              |         |                                 |                                                     |

### COMBINED DATA VALUES OF TOTAL PARTICIPANTS

| Test parameters           | S.No. | Total participants covered in the current dist. 162--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 <sup>3</sup> /µl  | 1     | 332                                                    | 331                 | 87.01                                                               | 87.01      | 9.37                       | 6.04       | 3.62                      | 6.95       |
| RBC x10 <sup>6</sup> /µl  | 1     | 332                                                    | 332                 | 86.14                                                               | 91.57      | 7.83                       | 2.71       | 6.03                      | 5.72       |
| Hb g/dl                   | 1     | 332                                                    | 332                 | 85.24                                                               | 85.84      | 8.13                       | 6.02       | 6.63                      | 8.14       |
| HCT%                      | 1     | 332                                                    | 331                 | 92.15                                                               | 90.94      | 4.53                       | 3.02       | 3.32                      | 6.04       |
| MCV-fl                    | 1     | 332                                                    | 331                 | 93.96                                                               | 88.22      | 5.14                       | 3.32       | 0.9                       | 8.46       |
| MCH-Pg                    | 1     | 332                                                    | 331                 | 87.31                                                               | 72.21      | 7.25                       | 19.64      | 5.44                      | 8.15       |
| MCHC-g/dl                 | 1     | 332                                                    | 331                 | 93.96                                                               | 89.73      | 3.93                       | 6.04       | 2.11                      | 4.23       |
| Plt. x10 <sup>3</sup> /µl | 1     | 332                                                    | 330                 | 92.12                                                               | 90.3       | 4.24                       | 4.24       | 3.64                      | 5.46       |
| ReticCount%               | 2     | 332                                                    | 264                 | 91.67                                                               | 81.82      | 4.55                       | 12.12      | 3.78                      | 6.06       |
| PS Assessment             | 3     | 332                                                    | 255                 | Satisfactory :87.06%, Borderline Sat. :9.33%, Unsatisfactory :3.61% |            |                            |            |                           |            |

**\*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](http://www.ishtmaiimseqap.com).

**Note 10:** Reports are kept confidential.



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

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

