**Neu-QAP**

(an EXTERNAL QUALITY ASSURANCE PROGRAMME)

PC-1047

## PARTICIPANT FINAL ASSESSMENT REPORT (SUMMARY)

### PT SCHEME:HEMATOLOGY

| | |
|---|---|
| Cycle No | *C3* |
| Ref.No. | NEUQAP109 |
| Sample ID | *NEUQAP HEM BLOOD/2021/7/C3/S7* |

Report Date : 10/08/2021

Sample : JUL 2021

**All Methods**

| | Parameters | Labs (n) | Lab Value | Unit | Assigned value | SDPA | Um | Z-Score | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | TOTAL COUNT | 42 | **2.43** | 10^3/cumm | 5.57 | 1.00 | 0.194 | 3.12 | Unsatisfactory |
| 2 | Eosinophils | 38 | **4.70** | % | 2.93 | 0.63 | 0.129 | 2.78 | Questionable |
| 3 | HEMOGLOBIN | 44 | **10.90** | g/dL | 10.69 | 0.20 | 0.038 | 1.03 | Satisfactory |
| 4 | RBC | 45 | **3.79** | 10^6/cumm | 3.70 | 0.06 | 0.012 | 1.35 | Satisfactory |
| 5 | AEC | 30 | **0.11** | 10^3/cumm | 0.17 | 0.04 | | 1.32 | Satisfactory |
| 6 | Lymphocyte | 38 | **56.60** | % | 47.05 | 8.30 | 1.683 | 1.15 | Satisfactory |
| 7 | PLATELET COUNT | 42 | **301.00** | 10^3/cumm | 281.90 | 21.16 | 4.082 | 0.90 | Good |
| 8 | MCV | 45 | **87.90** | fl | 89.81 | 2.50 | 0.466 | 0.77 | Good |
| 9 | MCH | 44 | **28.80** | pg | 28.73 | 0.62 | 0.117 | 0.11 | Good |
| 10 | MCHC | 45 | **32.80** | g/dL | 31.94 | 1.08 | 0.200 | 0.80 | Good |
| 11 | Neutrophils | 38 | **32.90** | % | 41.65 | 12.24 | 2.482 | 0.72 | Good |
| 12 | Monocyte | 38 | **5.00** | % | 5.44 | 2.30 | 0.466 | 0.19 | Good |
| 13 | Basophils | 38 | **0.80** | % | 1.32 | 1.09 | 0.221 | 0.47 | Good |
| 14 | Hematocrit | 36 | **33.30** | % | 33.37 | 0.87 | 0.181 | 0.08 | Good |
| 15 | ANC | 30 | **Not Recvd.** | 10^3/cumm | 2.49 | 0.90 | 0.206 | | N/A |
| 16 | ALC | 30 | **Not Recvd.** | 10^3/cumm | 2.63 | 0.38 | 0.086 | | N/A |
| 17 | CD4 | 0 | **Not Recvd.** | cells/dl | | | | | N/A |

Authorised Signatory

* denotes adjusted SDPA as per ISO 13528:2015(E)

SDPA - Standard Deviation for Proficiency Assessment



Dr. Sujay Prasad
Technical Manager and Program coordinator



An external quality assurance program from
NEUBERG ANAND ACADEMY OF LABORATORY MEDICINE PVT.LTD.

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## RCA FORM OF ILC / PT / EQAS OUTLIERS

**Department:** HEMATOLOGY **Date:** 31/08/2021.

1. Proficiency test exception for: TOTAL WBC COUNT & EOSINOPHIL COUNT
2. Proficiency test provider: NEV-QAP
3. Proficiency test analyte group:
4. Cause for PT exception:

   Machine Related

5. How did the section investigate the cause:

   QC of the day along with 24 hr retention on random sample were analysed & found to be satisfactory

6. What was the status of the internal QC on the day PT initially analysed:

   QC passed and within acceptable limits.

7. Category into which the cause will fit into:

   A. Method
   B. Technical
   C. Clerical
   D. Problem with PT material Other
   (E.) No explanation after investigation

   (1) Yumizen H500 provider was contacted for the same who has provided an explanation for the recurring outlier. The certificate is enclosed herewith.

8. Evidence that the problem was corrected successfully:

9. Specific corrections taken to prevent the recurrence if possible:

   (2) Interlab comparison done & reports enclosed.

10. Signatures :

    (3) We are also participated with AIIMS PT report attached

    Quality manager:

    Pathologist:

**Troubleshooting Guidelines**

| Method | Technical | Clerical | Problem with PT material | No explanation after investigation |
|---|---|---|---|---|
| Equipment function checks | Misinterpretation / Wrong identification / Wrong labeling | Transcription error | Leaked / broken vial / not fit for analysis | Use this choice only when the investigation has yielded no satisfactory explanation |
| Scheduled maintenance not carried out or out of acceptable range | Dilution error / incorrect pipetting | Registration of wrong method or method change is not updated | Bacterial contamination | |
| Problem with data processing functions | Time delay between reconstitution and analysis | | Perceived survey bias / inappropriate target value | |
| Faulty standard or other reagent | Calculation error | | | |
| Incorrect calibration | Analysis accepted in nonlinear range | | Unstable material | |
| Carry over from previous specimen | Analysis done even though controls were out of range or controls not assayed | | Matrix effect incompatible with method | |
| Result close to the detection limit of method | QC data within acceptable limits but showed trend suggestive of problem with the assay | | No comparable peer group | |
| | | | Acceptable range too low | |
| | Sample mix up | | Late shipment | |
| Other method related problem | Other technical problem | | Improper package and temperature control | |

Note: When all identifiable sources of error have been excluded, a single unacceptable result may be attributed to random error, particularly when the result of repeat analysis is acceptable. In such cases, no corrective action should be taken; as such an action may actually increase the probability of a future unacceptable result.

HORIBA

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https://www.horiba.com
CIN : U73100DL2006PTC153232

14th, April 2021

# To Whom so ever it may concern

## Subject: Proficiency Testing

Dear Sir / Madam,

We would like to inform that performance of HORIBA Yumizen 500/550 has been successfully validated on different Proficiency testing programs, including Bio-Rad (EQAS) & Randox (RIQAS) programs. There are large number of users across the globe including India using Bio-Rad (EQAS) & Randox (RIQAS) successfully.

However, we had received few concerns specially with non-correlation of WBC counts from customers enrolled with AIIMS proficiency testing. In Initial investigation we had observed that there are limited Peer group data for HORIBA Yumizen 500/550 which might be reasons for difference in correlation. However, our technical team is working on the same and any development would be shared shortly.

Thank you for your continued trust in HORIBA Medical products & let us know should you need any additional information.

HORIBA India Private Limited New Delhi

Thanking with Regards

# 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. :** 2888 **Distribution No.:** 152-G **Month/Year:** March/2021

**Instrument ID:** PD-YH/LME/HEM/01-803YOXH01348

**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:** 12-05-2021[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 x$10^3$/µl | 1 | 9.34 | 9.24 | 18.58 | 29.12 | 0.0870 | -5.79 | 0.1 | 0.2 | 0.0150 | -0.59 |
| RBC x$10^6$/µl | 1 | 4.52 | 4.45 | 8.97 | 9.12 | 0.0090 | -0.72 | 0.07 | 0.04 | 0.0020 | 0.81 |
| Hb g/dl | 1 | 11.9 | 11.8 | 23.7 | 23.4 | 0.0260 | 0.58 | 0.1 | 0.1 | 0.0080 | 0.00 |
| HCT% | 1 | 39.7 | 38.3 | 78 | 77.8 | 0.1760 | 0.05 | 1.4 | 0.4 | 0.0280 | 2.70 |
| MCV-fl | 1 | 87.7 | 86 | 173.7 | 171.3 | 0.3280 | 0.30 | 1.7 | 0.3 | 0.0250 | 3.78 |
| MCH-Pg | 1 | 26.6 | 26.3 | 52.9 | 51.5 | 0.0620 | 0.98 | 0.3 | 0.2 | 0.0140 | 0.45 |
| MCHC-g/dl | 1 | 30.9 | 30 | 60.9 | 59.85 | 0.1410 | 0.30 | 0.9 | 0.3 | 0.0200 | 2.02 |
| Plt. x$10^3$/µl | 1 | 814 | 805 | 1619 | 1723.5 | 5.77 | -0.80 | 9 | 12 | 0.95 | -0.23 |
| Retic % | 2 | 17.7 | 17 | 34.7 | 23.5 | 0.46 | 0.99 | 0.7 | 0.5 | 0.05 | 0.24 |

**P.S . Assesment**

| | YOUR REPORT | | CONSENSUS REPORT |
|---|---|---|---|
| DLC% | 3 | Nrbcs=03 , Poly=05 L=03, E=00, Mono/Promono= , B1=55 P.M.=03, Mye=06, Meta=08, Other=Monocytoid cells-20 | Blast: 20-80, Mono: 1-30, Poly: 10-25, Lympho: 5-15, Myelo/Promyelo/Meta: 1-5, nRBC/Eos: 0-1 |
| RBC Morphology | 3 | Normocytic hypochromic with few microcytes, elliptocytes and tear drop cells | Predominantly: Normocytic/Normochromic; Moderate: Microcytosis, Hypochromia; Mild: Anisocytosis, Macrocytosis |
| Diagnosis | 3 | Acute Myeloid Leukemia( M4). Suggested flow cytometry for confirmation. | Acute Myeloid Leukemia (AML) |

*EQAP Code No.: 2888* *Distribution No.: 152-G* *Month/Year: March/2021* *Instrument ID: PD-YH/LME/HEM/01-803YOXH01348*

## 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 | 214 | 232 | 87.5 | 90.95 | 3.02 | 3.02 | 9.48 | 5.6 |
| RBC $x10^6/\mu l$ | 1 | 214 | 232 | 88.79 | 92.24 | 6.9 | 2.59 | 4.31 | 4.74 |
| Hb g/dl | 1 | 214 | 231 | 85.71 | 149.35 | 6.93 | 4.76 | 7.36 | 0.87 |
| HCT% | 1 | 214 | 232 | 93.53 | 89.22 | 5.6 | 5.6 | 0.86 | 5.17 |
| MCV-fl | 1 | 214 | 232 | 96.55 | 84.48 | 3.45 | 9.48 | 0 | 6.03 |
| MCH-Pg | 1 | 214 | 232 | 86.64 | 77.16 | 8.19 | 18.53 | 5.17 | 3.88 |
| MCHC-g/dl | 1 | 214 | 232 | 93.53 | 88.36 | 4.74 | 6.03 | 1.72 | 4.74 |
| Plt. $x10^3/\mu l$ | 1 | 214 | 232 | 85.78 | 89.22 | 9.91 | 3.45 | 4.31 | 7.33 |
| ReticCount% | 2 | 214 | 214 | 96.73 | 92.99 | 2.34 | 5.14 | 0.93 | 2.34 |
| PS Assessment | 3 | 214 | 214 | Acceptable:80.8,Warning Signal:10.3,Unacceptable :8.9 | | | | | |

**Comments:**

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

**2). Within Lab (IQA) : Difference in the CBC measurement values for *MCV* unacceptable, may be due to random/human error.**

**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----------

PRIMA DIAGNOSTICS
JAYANAGAR
ISO 9001 : 2015 Certified

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -2 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:46 PM |
| Age / Sex | : 23 Year(s) / Male | Client | : Yelahanka | Collected On | : 26/08/2021 03:20 PM |
| Patient ID | : PDY052063 | | | Received On | : 26/08/2021 03:21 PM |
| Visit No. | : 21YP99164 | | | Reported On | : 26/08/2021 06:46 PM |

21YP99164

Report Type : Final

| Test | Results | Units | Biological Reference Range |
|---|---|---|---|
| **HEMATOLOGY** | | | |
| ***CBC - Complete Blood Count*** | | | |
| ***CBC*** | | | |
| Haemoglobin - Whole Blood<br>Photometric (SLS Hemoglobin) | 15.3 | g/dL | 13.5-18.0 |
| Red blood cell count - Whole Blood<br>Electrical impedance | 4.97 | million/cu.mm | 4.2-6.5 |
| Hematocrit(PCV) - Whole Blood<br>Electrical impedance | 46.1 | % | 39-54 |
| Mean Corpuscular Volume(MCV) - Whole Blood<br>Calculated from HCT and RBC | 92.8 | fL | 75-95 |
| Mean Corpuscular Hemoglobin(MCH) - Whole Blood<br>Calculated from RBC and Hb | 30.8 | pg | 26-32 |
| Mean Corpuscular Hemoglobin Concentration (MCHC) - Whole Blood<br>Calculated from HCT and Hb | 33 | g/dL | 30-35 |
| Red cell distribution width (RDW)-CV - Whole Blood<br>Calculated | 14.3 | % | 11.6-14.6 |
| Platelet count - Whole Blood<br>Electrical impedance | 1.88 | lakh/cu.mm | 1.50-4.40 |
| Total WBC count - Whole Blood | 9400 | cells/cu.mm | 4000-11000 |
| Absolute Basophil Count - Whole Blood<br>Flow Cytometry | 0.10 | 10^3 / µl | 0.01-0.05 |
| Absolute Eosinophil Count - Whole Blood<br>Flow Cytometry | 1.20 | 10^3 / µl | 0.02-0.50 |
| Absolute Lymphocyte Count - Whole Blood | 2.40 | 10^3 / µl | 1-3 |

Dr. Shreya Prabhu,
Pathologist
KMC-No:114274



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JAYANAGAR
ISO 9001 : 2015 Certified

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -2 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:46 PM |
| Age / Sex | : 23 Year(s) / Male | Client | : Yelahanka | Collected On | : 26/08/2021 03:20 PM |
| Patient ID | : PDY052063 | | | Received On | : 26/08/2021 03:21 PM |
| Visit No. | : 21YP99164 | | | Reported On | : 26/08/2021 06:46 PM |

21YP99164

**Report Type : Final**

| | | | |
|---|---|---|---|
| Flow Cytometry | | | |
| Absolute Neutrophil Count - Whole Blood<br>Flow Cytometry | 4.90 | 10^3 / µl | 2-7 |
| Absolute Monocyte Count - Whole Blood<br>Flow Cytometry | 0.70 | 10^3 / µl | 0.2-1.0 |
| ***DIFFERENTIAL COUNT - DC*** - Whole Blood<br>Flow Cytometry/Microscopy | | | |
| Neutrophils | 52.5 | % | 40-75 |
| Lymphocytes | 26.1 | % | 20-45 |
| Monocytes | 7.7 | % | 1-10 |
| Eosinophils | **13.0** | % | 1-6 |
| Basophils | 0.7 | % | 0-1 |

## IMMUNOLOGY

| | | | |
|---|---|---|---|
| T3 ( TOTAL) - Serum<br>CLIA | 1.59 | ng/mL | Newborn : 0.7-2.0<br>< 1 Year: 1.0-2.4<br>1 - 5 Years : 1.0-2.4<br>6 - 10 Years: 0.9-2.4<br>11 - 50 Years: 0.7-2.0<br>> 50 Years: 0.4-1.8<br>First Trimester: 0.8-1.9<br>Second Trimester: 1.0-2.6 |

## SEROLOGY

***RAPID PLASMA REAGIN (RPR) / VDRL*** - Serum
Slide Flocculation

RAPID PLASMA REAGIN RPR / VDRL — Non Reactive

Dr. Shreya Prabhu,
Pathologist
KMC-No:114274



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ISO 9001 : 2015 Certified

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -2 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:46 PM |
| Age / Sex | : 23 Year(s) / Male | Client | : Yelahanka | Collected On | : 26/08/2021 03:20 PM |
| Patient ID | : PDY052063 | | | Received On | : 26/08/2021 03:21 PM |
| Visit No. | : 21YP99164 | | | Reported On | : 26/08/2021 06:46 PM |

21YP99164

**Report Type :** Final

| Test | Results | Units | Biological Reference Range |
|---|---|---|---|
| **BIOCHEMISTRY** | | | |
| Alanine Transaminase(ALT/ SGPT) - Serum<br>IFCC without P-5-P | 14.0 | U/L | 0-55 |
| Alkaline Phosphatase - Serum<br>IFCC PNPP | 51.0 | U/L | Male: 13 - 15 Year(s) : < 750<br>Both: 0 - 12 Year(s) : < 500<br>Both: 16 - 120 Year(s) : 40 - 150 |
| Cholesterol Total - Serum<br>CHOD-POD | 158.00 | mg/dl | Desirable: < 200<br>Borderline High: 200-239<br>High: > 240 |
| Gamma-Glutamyl Transferase (GGT) - Serum<br>Gamma--Glutamyl-p-nitroanilide IFCC | 9.0 | U/L | 12-64 |
| HDL Cholesterol - Serum<br>Accelerator selective detergent | 42.00 | mg/dL | 40-60 |
| ***ELECTROLYTES (Na+, K+, Cl)*** - Serum<br>ISE indirect | | | |
| SODIUM (Na+) | 139 | mmol/L | 135-148 |
| POTASSIUM (K+) | 3.9 | mmol/L | 3.5-5.3 |
| CHLORIDE(Cl-) | 106 | mmol/L | 98-107 |

**-- End of Report --**

Kindly correlate clinically. If necessary discuss/repeat

Ramakrishna

**Mr. Ramakrishna.B,**
**Biochemist**

PRIMA DIAGNOSTICS
YELAHANKA

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -1 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:42 PM |
| Age / Sex | : 22 Year(s) / Male | Client | : Walk-in | Collected On | : 26/08/2021 02:43 PM |
| Patient ID | : PDY052062 | | | Received On | : 26/08/2021 02:43 PM |
| Visit No. | : 21YP99163 | | | Reported On | : 27/08/2021 12:08 PM |

21YP99163

**Report Type :** Final

| Test | Results | Units | Biological Reference Range |
|---|---|---|---|
| **HEMATOLOGY** | | | |
| ***CBC - Complete Blood Count*** | | | |
| ***CBC*** | | | |
| Haemoglobin - EDTA Whole Blood<br>Spectrophotometry | 15.8 | g/dL | 13.5-18 |
| Red blood cell count - EDTA Whole Blood<br>RBC Histogram(Volume) | 4.8 | million/cu.mm | Male: 4.2-6.5<br>Female: 3.7-5.6 |
| Hematocrit(PCV) - EDTA Whole Blood<br>RBC Pulse Height detection | 44.7 | % | Male: 39-54<br>Female: 34-48 |
| Mean Corpuscular Volume(MCV) - EDTA Whole Blood<br>Calculate From RBC Histogram | 94.2 | fL | 75-95 |
| Mean Corpuscular Hemoglobin(MCH) - EDTA Whole Blood<br>Calculated From RBC and HGB | 32.0 | pg | 26-32 |
| Mean Corpuscular Hemoglobin Concentration (MCHC) - EDTA Whole Blood<br>Calculated From HGB and HCT | **35.0** | g/dL | 30-35 |
| Red cell distribution width (RDW)-CV - EDTA Whole Blood<br>Calculated | 13.2 | % | 11.6-14.6 |
| Platelet count - EDTA Whole Blood<br>Platelet Histogram(Volume) | 2.05 | lakh/cu.mm | 1.50-4.40 |
| Total WBC count - EDTA Whole Blood<br>Double Hydrodynamic Sequential System(DHSS) | 8880 | cells/cu.mm | 4000-11000 |
| Absolute Basophil Count - EDTA Whole Blood<br>Flow Cytometry | 0.02 | 10^3 / µl | 0.01-0.05 |
| Absolute Eosinophil Count - EDTA Whole Blood | **1.06** | cells/cu.mm | 0.01-0.50 |

Dr. Seema Umarji
MBBS MD, Pathologist.
KMC NO:95296



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www.primadiagnostics.com

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -1 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:42 PM |
| Age / Sex | : 22 Year(s) / Male | Client | : Walk-in | Collected On | : 26/08/2021 02:43 PM |
| Patient ID | : PDY052062 | | | Received On | : 26/08/2021 02:43 PM |
| Visit No. | : 21YP99163 | | | Reported On | : 27/08/2021 12:08 PM |

21YP99163

**Report Type :** Final

| | | | |
|---|---|---|---|
| Double Hydrodynamic Sequential System(DHSS) | | | |
| Absolute Lymphocyte Count - EDTA Whole Blood<br>Double Hydrodynamic Sequential System(DHSS) | 2.29 | cells/cu.mm | 1-3 |
| - | | | |
| Absolute Neutrophil Count - EDTA Whole Blood<br>Flow Cytometry | 4.90 | 10^3 / µl | 2-7 |
| Absolute Monocyte Count - EDTA Whole Blood<br>Flow Cytometry | 0.61 | 10^3 / µl | 0.2-1.0 |

## *DIFFERENTIAL COUNT - DC*

| | | | |
|---|---|---|---|
| Neutrophils - EDTA Whole Blood<br>DHSS / Microscopy | 55 | % | 40-75 |
| Lymphocytes - EDTA Whole Blood<br>DHSS / Microscopy | 26 | % | 20-45 |
| Monocytes - EDTA Whole Blood<br>Flow Cytometry/Microscopy | 06 | % | 1-10 |
| Eosinophils - EDTA Whole Blood<br>DHSS / Microscopy | **12** | % | 1-6 |
| Basophils - EDTA Whole Blood<br>DHSS / Microscopy | 01 | % | 0-1 |

## BIOCHEMISTRY

| | | | |
|---|---|---|---|
| Alanine Transaminase(ALT/ SGPT) - Serum<br>UV with P-5-P Dry Chemistry | 15.0 | U/L | Adult: < 45 |
| Alkaline Phosphatase - Serum<br>Para Nitro Phenyl Phosphate,AMP Buffer Dry Chemistry | **52.0** | U/L | 53-128 |
| Cholesterol Total - Serum<br>Cholesterol Oxidase Dry Chemistry | 153.0 | mg/dl | Desirable: < 200<br>BorderLine High: 200-239<br>High: >= 240 |

Dr. Seema Umarji
MBBS MD, Pathologist.
KMC NO:95296



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| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -1 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:42 PM |
| Age / Sex | : 22 Year(s) / Male | Client | : Walk-in | Collected On | : 26/08/2021 02:43 PM |
| Patient ID | : PDY052062 | | | Received On | : 26/08/2021 02:43 PM |
| Visit No. | : 21YP99163 | | | Reported On | : 27/08/2021 12:08 PM |

21YP99163

**Report Type :** Final

| | | | |
|---|---|---|---|
| Gamma-Glutamyl Transferase (GGT) - Serum<br>?-glutamyl-p-nitroanilide Dry Chemistry | 14.0 | U/L | < 55 |
| HDL Cholesterol - Serum<br>Colorimetric: non HDL Precipitation Method | **43.0** | mg/dL | Low: < 40.0<br>High: >= 60.0 |
| ***ELECTROLYTES (Na+, K+, Cl)*** - Serum<br>DIRECT ISE | | | |
| SODIUM (Na+) | 141.5 | mmol/L | 137-145 |
| POTASSIUM (K+) | 3.81 | mmol/L | 3.5-5.1 |
| CHLORIDE(Cl-) | 105.5 | mmol/L | 98-107 |
| **IMMUNOLOGY** | | | |
| T3 ( TOTAL) - Serum<br>Enhanced Chemiluminescence | 1.27 | ng/mL | Newborn: 0.7-2.0<br>< 1 Year: 1.0-2.4<br>1 - 5 Years: 1.0-2.4<br>6 - 10 Years: 0.9-2.4<br>11 - 50 Years: 0.7-2.0<br>> 50 Years: 0.4-1.8<br>First Trimester: 0.8-1.9<br>Second Trimester: 1.0-2.6 |
| **SEROLOGY** | | | |
| ***RAPID PLASMA REAGIN (RPR) / VDRL*** | | | |
| RAPID PLASMA REAGIN RPR / VDRL - Serum,<br>Slide Flocculation | Non Reactive | | |
| INTERPRETATION - Serum | Non Reactive | | |

**-- End of Report --**

Dr. Seema Umarji
MBBS MD, Pathologist.
KMC NO:95296



**PRIMA DIAGNOSTICS YELAHANKA**
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YELAHANKA

| | | | | | |
|---|---|---|---|---|---|
| Name | : Mr. INTERLAB COMPARTION -1 | Ref. Doctor | : DR. SELF | Registered Date | : 26/08/2021 02:42 PM |
| Age / Sex | : 22 Year(s) / Male | Client | : Walk-in | Collected On | : 26/08/2021 02:43 PM |
| Patient ID | : PDY052062 | | | Received On | : 26/08/2021 02:43 PM |
| Visit No. | : 21YP99163 | | | Reported On | : 27/08/2021 12:08 PM |

21YP99163

**Report Type :** Final

Kindly correlate clinically. If necessary discuss/repeat



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Neu-QAP

(an EXTERNAL QUALITY ASSURANCE PROGRAMME)

PC-1047

## PARTICIPANT FINAL ASSESSMENT REPORT (SUMMARY)

## PT SCHEME:HEMATOLOGY

| | |
|---|---|
| Cycle No | *C3* |
| Ref.No. | NEUQAP109 |
| Sample ID | *NEUQAP HEM BLOOD/2021/8/C3/S8* |

**Report Date :** 09/09/2021

**Sample :** AUG 2021

**All Methods**

| | Parameters | Labs (n) | Lab Value | Unit | Assigned value | SDPA | Um | Z-Score | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | HEMOGLOBIN | 45 | **13.80** | g/dL | 13.14 | 0.27 | 0.051 | 2.42 | **Questionable** |
| 2 | MCH | 45 | **32.80** | pg | 30.88 | 0.78 | 0.146 | 2.45 | **Questionable** |
| 3 | PLATELET COUNT | 42 | **197.00** | 10^3/cumm | 218.93 | 15.93 | 3.073 | 1.38 | Satisfactory |
| 4 | TOTAL COUNT | 43 | **4.60** | 10^3/cumm | 6.93 | 1.38 | 0.262 | 1.70 | Satisfactory |
| 5 | MCHC | 45 | **35.40** | g/dL | 33.59 | 1.24 | 0.231 | 1.46 | Satisfactory |
| 6 | AEC | 29 | **0.20** | 10^3/cumm | 0.37 | 0.13 | | 1.38 | Satisfactory |
| 7 | Basophils | 38 | **0.50** | % | 1.36 | 0.79 | 0.160 | 1.09 | Satisfactory |
| 8 | RBC | 45 | **4.21** | 10^6/cumm | 4.24 | 0.07 | 0.013 | 0.47 | Good |
| 9 | MCV | 45 | **92.40** | fl | 91.81 | 2.31 | 0.431 | 0.25 | Good |
| 10 | Neutrophils | 38 | **36.40** | % | 37.46 | 11.77 | 2.387 | 0.09 | Good |
| 11 | Lymphocyte | 38 | **55.50** | % | 51.02 | 10.05 | 2.037 | 0.45 | Good |
| 12 | Monocyte | 38 | **2.20** | % | 3.51 | 1.91 | 0.386 | 0.69 | Good |
| 13 | Eosinophils | 38 | **4.40** | % | 4.96 | 1.13 | 0.229 | 0.50 | Good |
| 14 | Hematocrit | 36 | **38.90** | % | 39.16 | 1.26 | 0.262 | 0.21 | Good |
| 15 | ANC | 28 | **Not Recvd.** | 10^3/cumm | 3.05 | 1.01 | 0.237 | | N/A |
| 16 | ALC | 28 | **Not Recvd.** | 10^3/cumm | 3.51 | 0.38 | 0.089 | | N/A |
| 17 | CD4 | 0 | **Not Recvd.** | cells/dl | | | | | N/A |

Authorised Signatory

* denotes adjusted SDPA as per ISO 13528:2015(E)
SDPA - Standard Deviation for Proficiency Assessment



Dr. Sujay Prasad
Technical Manager and Program coordinator



An external quality assurance program from
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**Neu-QAP**

(an EXTERNAL QUALITY ASSURANCE PROGRAMME)

PC-1047

**PARTICIPANT FINAL ASSESSMENT REPORT (SUMMARY)**

**PT SCHEME:HEMATOLOGY**

| | |
|---|---|
| **Cycle No** | *C3* |
| **Ref.No.** | **NEUQAP109** |
| **Sample ID** | ***NEUQAP HEM BLOOD/2021/8/C3/S8*** |

**Report Date : 09/09/2021**

**Sample : AUG 2021**

**Peer group**

| | Parameters | Labs (n) | Lab Value | Unit | Assigned value | SDPA | Um | Z-Score | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 18 | MCH (Automated cell counter) | 34 | **32.80** | pg | 30.99 | 0.87 | 0.187 | 2.07 | **Questionable** |
| 19 | HEMOGLOBIN (Photometric method) | 4 | **13.80** | g/dL | 13.40 | 0.31 | | 1.28 | Satisfactory |
| 20 | PLATELET COUNT (Automated cell counter) | 6 | **197.00** | 10^3/cumm | 221.00 | 19.63 | | 1.22 | Satisfactory |
| 21 | TOTAL COUNT (Automated cell counter) | 8 | **4.60** | 10^3/cumm | 6.75 | 1.56 | | 1.38 | Satisfactory |
| 22 | MCHC (Automated cell counter) | 45 | **35.40** | g/dL | 33.59 | 1.24 | 0.231 | 1.46 | Satisfactory |
| 23 | AEC (Automated Cell counter) | 19 | **0.20** | 10^3/cumm | 0.39 | 0.15 | | 1.27 | Satisfactory |
| 24 | Basophils (Automated Cell counter) | 33 | **0.50** | % | 1.30 | 0.80 | 0.174 | 1.01 | Satisfactory |
| 25 | RBC (Automated cell counter) | 30 | **4.21** | 10^6/cumm | 4.23 | 0.07 | 0.015 | 0.23 | Good |
| 26 | MCV (Automated cell counter) | 42 | **92.40** | fl | 91.77 | 2.23 | 0.431 | 0.28 | Good |
| 27 | Neutrophils (Automated Cell counter) | 33 | **36.40** | % | 36.53 | 12.66 | 2.755 | 0.01 | Good |
| 28 | Lymphocyte (Automated Cell counter) | 33 | **55.50** | % | 52.01 | 11.06 | 2.406 | 0.32 | Good |
| 29 | Monocyte (Automated Cell counter) | 33 | **2.20** | % | 3.40 | 1.91 | 0.416 | 0.63 | Good |
| 30 | Eosinophils (Automated Cell counter) | 33 | **4.40** | % | 5.06 | 1.18 | 0.257 | 0.56 | Good |
| 31 | Hematocrit (Automated Cell counter) | 35 | **38.90** | % | 39.12 | 1.26 | 0.265 | 0.18 | Good |

Authorised Signatory

* denotes adjusted SDPA as per ISO 13528:2015(E)
SDPA - Standard Deviation for Proficiency Assessment



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