# 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. :** 5341 **Distribution No.:** 158-N **Month/Year:** February/2023

**Instrument ID:** Yumizen H 550 - 201YAXH03629

**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:** 28-02-2023[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 | 1.2 | 1.02 | 2.22 | 14.94 | 0.0360 | **-14.21** | 0.18 | 0.1 | 0.0080 | **0.77** |
| **RBC x10$^6$/µl** | 1 | 4.01 | 3.99 | 8 | 7.31 | 0.0090 | **2.91** | 0.02 | 0.04 | 0.0020 | **-0.54** |
| **Hb g/dl** | 1 | 12.8 | 12.6 | 25.4 | 24.9 | 0.0270 | **0.82** | 0.2 | 0.1 | 0.0080 | **0.79** |
| **HCT%** | 1 | 38.2 | 38.2 | 76.4 | 78.15 | 0.1710 | **-0.33** | 0 | 0.4 | 0.0250 | **-0.90** |
| **MCV-fl** | 1 | 95.7 | 95.2 | 190.9 | 214.85 | 0.4180 | **-1.80** | 0.5 | 0.3 | 0.0230 | **0.54** |
| **MCH-Pg** | 1 | 32 | 31.4 | 63.4 | 68.1 | 0.0800 | **-2.24** | 0.6 | 0.3 | 0.0220 | **0.81** |
| **MCHC-g/dl** | 1 | 33.4 | 33 | 66.4 | 63.4 | 0.1470 | **0.67** | 0.4 | 0.3 | 0.0200 | **0.27** |
| **Plt. x10$^3$/µl** | 1 | 179 | 169 | 348 | 319 | 1.68 | **0.56** | 10 | 5 | 0.32 | **0.96** |
| **Retic %** | 2 | 5 | 4 | 9 | 10 | 0.18 | **-0.20** | 1 | 0.5 | 0.03 | **0.84** |

**P.S . Assesment**

| | | YOUR REPORT | CONSENSUS REPORT |
|---|---|---|---|
| **DLC%** | 3 | Nrbcs=4 , Poly=6 L=89, E=0, Mono/Promono=3 , B1=2 P.M.=0, Mye=0, Meta=0, Other=Atypical Lymphoid cells seen | Lympho: 49-73, Blast: 5-35, Poly:4-10, nRBC/Eos/Baso/Mono /Myelo/Meta/ Promyelo: 0-5 |
| **RBC Morphology** | 3 | Normocytic Normochromic, Spherocytes | Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic |
| **Diagnosis** | 3 | Aleukemic Leukemia | Acute Leukemia (AL) |

## COMBINED DATA VALUES OF TOTAL PARTICIPANTS

| Test parameters | S.No. | Total participants covered in the current dist. 158--N | 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 | 342 | 340 | 80 | 85.59 | 4.71 | 3.53 | 15.29 | 10.88 |
| RBC $x10^6$/µl | 1 | 342 | 342 | 88.3 | 90.35 | 6.73 | 3.51 | 4.97 | 6.14 |
| Hb g/dl | 1 | 342 | 342 | 86.55 | 85.96 | 6.73 | 6.73 | 6.72 | 7.31 |
| HCT% | 1 | 342 | 340 | 95.88 | 87.94 | 3.53 | 5.29 | 0.59 | 6.77 |
| MCV-fl | 1 | 342 | 340 | 97.35 | 92.35 | 1.76 | 2.35 | 0.89 | 5.3 |
| MCH-Pg | 1 | 342 | 340 | 86.47 | 88.24 | 8.82 | 6.47 | 4.71 | 5.29 |
| MCHC-g/dl | 1 | 342 | 340 | 95.59 | 90.88 | 3.24 | 4.71 | 1.17 | 4.41 |
| Plt. $x10^3$/µl | 1 | 342 | 340 | 95 | 90 | 3.24 | 3.82 | 1.76 | 6.18 |
| ReticCount% | 2 | 342 | 265 | 94.34 | 89.81 | 4.53 | 5.66 | 1.13 | 4.53 |
| PS Assessment | 3 | 342 | 244 | Satisfactory :81.59%, Borderline Sat. :11.40%, Unsatisfactory :7.01% | | | | | |

*Comments:

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

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