# 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. :** 5987 **Distribution No.:** 164-O **Month/Year:** July/2024

**Instrument ID:** Sysmex **Model Name.:** XQ 320 **Serial No.:** 13073

**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 & status of the report:** 31-08-2024 [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$^3$/µl | 1 | 6.35 | 6.33 | 12.68 | 12.4 | 0.051 | **0.20** | 0.02 | 0.1 | 0.008 | **-0.67** |
| RBC x10$^6$/µl | 1 | 4.6 | 4.56 | 9.16 | 8.91 | 0.012 | **0.91** | 0.04 | 0.04 | 0.003 | **0.00** |
| Hb g/dl | 1 | 12.9 | 12.9 | 25.8 | 25.8 | 0.029 | **0.00** | 0 | 0.1 | 0.008 | **-0.67** |
| HCT% | 1 | 39.3 | 38.8 | 78.1 | 82.5 | 0.211 | **-0.85** | 0.5 | 0.4 | 0.025 | **0.27** |
| MCV-fl | 1 | 85.4 | 85.1 | 170.5 | 185.7 | 0.377 | **-1.45** | 0.3 | 0.3 | 0.023 | **0.00** |
| MCH-Pg | 1 | 28.3 | 28 | 56.3 | 57.9 | 0.090 | **-0.73** | 0.3 | 0.2 | 0.012 | **0.45** |
| MCHC-g/dl | 1 | 33.2 | 32.8 | 66 | 62.2 | 0.163 | **0.89** | 0.4 | 0.2 | 0.015 | **0.67** |
| Plt. x10$^3$/µl | 1 | 186 | 181 | 367 | 417 | 1.965 | **-0.96** | 5 | 6 | 0.353 | **-0.17** |
| Retic % | 2 | 8.5 | 7.8 | 16.3 | 7 | 0.184 | **1.70** | 0.7 | 0.5 | 0.034 | **0.34** |

**P.S . Assesment**

| | | YOUR REPORT | CONSENSUS REPORT |
|---|---|---|---|
| DLC% | 3 | Nrbcs=5 , Poly=86 L=13, E=1, Mono/Promono=0 , B1=0 P.M.=0, Mye=0, Meta=0, Other=Thrombocytopenia | Poly: 73-82, Lympho: 12-20, Mono: 2-5, Eos: 1-2, Blast/Promyelo/Myelo/Meta/Baso :0-5 |
| RBC Morphology | 3 | Normal distribution,normocytic normochromic,anisocytosis,poikilocytosis,spherocytes,bite cells. | RBC morphology shows marked anisopoikilocytosis with microcytic, normocytic, and macrocytic cells, polychromasia, schistocytes, spherocytosis, rouleaux formation, and nucleated RBCs. |
| Diagnosis | 3 | Hemolytic Anaemia | Microangiopathic Hemolytic Anemia (MAHA) |

## COMBINED DATA VALUES OF TOTAL PARTICIPANTS

| Test parameters | S.No. | Total participants covered in the current dist. 164--O | 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 | 310 | 308 | 84.74 | 90.26 | 6.82 | 3.57 | 8.44 | 6.17 |
| RBC $x10^6/\mu l$ | 1 | 310 | 310 | 87.1 | 90.97 | 5.81 | 2.9 | 7.09 | 6.13 |
| Hb g/dl | 1 | 310 | 310 | 89.35 | 88.39 | 4.84 | 4.52 | 5.81 | 7.09 |
| HCT% | 1 | 310 | 308 | 88.31 | 88.96 | 7.14 | 5.84 | 4.55 | 5.2 |
| MCV-fl | 1 | 310 | 307 | 94.14 | 91.53 | 3.58 | 1.95 | 2.28 | 6.52 |
| MCH-Pg | 1 | 310 | 308 | 87.01 | 92.53 | 6.17 | 1.62 | 6.82 | 5.85 |
| MCHC-g/dl | 1 | 310 | 308 | 87.99 | 89.29 | 7.79 | 3.57 | 4.22 | 7.14 |
| Plt. $x10^3/\mu l$ | 1 | 310 | 309 | 88.67 | 90.94 | 6.47 | 3.56 | 4.86 | 5.5 |
| ReticCount% | 2 | 310 | 225 | 92.89 | 90.22 | 4.44 | 7.56 | 2.67 | 2.22 |
| PS Assessment | 3 | 310 | 233 | Satisfactory :80.66%, Borderline Sat. :13.22%, Unsatisfactory :6.12% | | | | | |

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