# 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. :** 3659 **Distribution No.:** 159-J **Month/Year:** March/2023

**Instrument ID:** TH16009935

**Name & Contact No. of PT Co-ordinator:** Dr. Manoranjan Mahapatra ( Prof. & Head), Hematology, AIIMS, Delhi, Tel: 9013085730 , E-Mail : accuracy2000@gmail.com

**Date of issue & status of the report:** 01-06-2023[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 x$10^3$/µl | 1 | 5.7 | 5.5 | 11.2 | 10.36 | 0.038 | **0.71** | 0.2 | 0.1 | 0.008 | **0.75** |
| RBC x$10^6$/µl | 1 | 4.41 | 4.34 | 8.75 | 8.99 | 0.011 | **-0.83** | 0.07 | 0.04 | 0.003 | **0.67** |
| Hb g/dl | 1 | 14.7 | 14.4 | 29.1 | 29.3 | 0.029 | **-0.27** | 0.3 | 0.1 | 0.008 | **1.35** |
| HCT% | 1 | 44.6 | 43.9 | 88.5 | 88.55 | 0.234 | **-0.01** | 0.7 | 0.4 | 0.027 | **0.67** |
| MCV-fl | 1 | 101.1 | 101.1 | 202.2 | 196.05 | 0.390 | **0.53** | 0 | 0.3 | 0.023 | **-0.67** |
| MCH-Pg | 1 | 33.2 | 33.1 | 66.3 | 65.5 | 0.076 | **0.40** | 0.1 | 0.3 | 0.018 | **-0.67** |
| MCHC-g/dl | 1 | 32.9 | 32.8 | 65.7 | 65.9 | 0.163 | **-0.05** | 0.1 | 0.3 | 0.020 | **-0.67** |
| Plt. x$10^3$/µl | 1 | 111 | 107 | 218 | 255 | 1.285 | **-1.02** | 4 | 4 | 0.284 | **0.00** |
| Retic % | 2 | 10.7 | 10 | 20.7 | 24.65 | 0.520 | **-0.28** | 0.7 | 1 | 0.062 | **-0.27** |

### P.S . Assesment

| | | YOUR REPORT | CONSENSUS REPORT |
|---|---|---|---|
| DLC% | 3 | Nrbcs=01 , Poly=24 L=01, E=03, Mono/Promono=02 , B1=02 P.M.=04, Mye=34, Meta=29, Other= | Poly: 25 – 45, Myelo: 15 - 31, Meta: 10– 20, Lympho: 2– 7, Eosino: 1-4, Promyelo: 2-7, Blast: 1-4, Mono: 1 – 3, nRBC/Baso: 0-5 |
| RBC Morphology | 3 | NORMOCYTES++ | Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, hypochromia, Microcytosis; Mild: Macrocytosis, Poikilocytosis |
| Diagnosis | 3 | CHRONIC MYELOPROLIFERATIVE DISORDER ? CML , ADVICE: BCR ABL FUSION GENE ANALYSIS | Chronic Myeloid Leukemia (Chronic Phase) |

## COMBINED DATA VALUES OF TOTAL PARTICIPANTS

| Test parameters | S.No. | Total participants covered in the current dist. 159--J | 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 | 308 | 302 | 83.44 | 86.75 | 2.98 | 5.96 | 13.58 | 7.29 |
| RBC $x10^6/\mu l$ | 1 | 308 | 308 | 87.66 | 90.26 | 5.52 | 2.92 | 6.82 | 6.82 |
| Hb g/dl | 1 | 308 | 308 | 81.49 | 83.44 | 5.52 | 6.49 | 12.99 | 10.07 |
| HCT% | 1 | 308 | 304 | 91.12 | 89.8 | 5.92 | 3.62 | 2.96 | 6.58 |
| MCV-fl | 1 | 308 | 304 | 95.72 | 92.43 | 1.97 | 2.96 | 2.31 | 4.61 |
| MCH-Pg | 1 | 308 | 304 | 88.82 | 89.14 | 6.58 | 2.63 | 4.6 | 8.23 |
| MCHC-g/dl | 1 | 308 | 304 | 93.42 | 89.14 | 3.29 | 6.58 | 3.29 | 4.28 |
| Plt. $x10^3/\mu l$ | 1 | 308 | 304 | 94.41 | 91.12 | 3.29 | 6.25 | 2.3 | 2.63 |
| ReticCount% | 2 | 308 | 268 | 94.4 | 92.16 | 4.85 | 3.36 | 0.75 | 4.48 |
| PS Assessment | 3 | 308 | 268 | Satisfactory :95.46%, Borderline Sat. :2.27%, Unsatisfactory :2.27% | | | | | |

**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,

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