# 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. :** 3818 **Distribution No.:** 152-J **Month/Year:** March/2021

**Instrument ID:** BC 6200 MINDRAY (TW - 97000584)

**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:** 24-05-2021[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 | 7.09 | 7.09 | 14.18 | 13.8 | 0.0410 | **0.41** | 0 | 0.1 | 0.0110 | **-0.84** |
| RBC x$10^6$/µl | 1 | 4.13 | 4.01 | 8.14 | 7.96 | 0.0110 | **0.63** | 0.12 | 0.04 | 0.0030 | **1.80** |
| Hb g/dl | 1 | 11.4 | 11.2 | 22.6 | 21.7 | 0.0290 | **1.35** | 0.2 | 0.1 | 0.0080 | **1.35** |
| HCT% | 1 | 36.3 | 35.4 | 71.7 | 67.5 | 0.1620 | **1.09** | 0.9 | 0.4 | 0.0270 | **1.35** |
| MCV-fl | 1 | 88.2 | 87.8 | 176 | 170.1 | 0.3220 | **0.80** | 0.4 | 0.3 | 0.0300 | **0.17** |
| MCH-Pg | 1 | 27.9 | 27.6 | 55.5 | 54.7 | 0.0880 | **0.42** | 0.3 | 0.3 | 0.0200 | **0.00** |
| MCHC-g/dl | 1 | 31.7 | 31.4 | 63.1 | 64.2 | 0.1490 | **-0.33** | 0.3 | 0.3 | 0.0220 | **0.00** |
| Plt. x$10^3$/µl | 1 | 263 | 223 | 486 | 406.5 | 2.29 | **1.52** | 40 | 7 | 0.47 | **4.45** |
| Retic % | 2 | | | | | | | | | | |

### P.S . Assesment

| | | YOUR REPORT | CONSENSUS REPORT |
|---|---|---|---|
| DLC% | 3 | Nrbcs=01 , Poly=43 L=19, E=03, Mono/Promono=02 , B1=03 P.M.=05, Mye=12, Meta=12, Other=BASOPHILS - 01 | Poly: 35 - 65, Myelo: 10 - 30, Meta: 5 - 15, Blast/Lympho/Promyelo: 1 - 10, nRBC/Baso/Eos/Mono: 0 - 5 |
| RBC Morphology | 3 | MICROCYTIC HYPOCHROMIC | Predominantly: Normocytic/Normochromic; Moderate: Microcytosis, Anisocytosis, Hypochromia; Mild: Macrocytosis, Poikilocytosis |
| Diagnosis | 3 | CHRONIC MYELOID LEUKEMIA | Chronic Myeloid Leukemia (CML) |

## 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 | 249 | 276 | 80.43 | 91.3 | 5.8 | 1.45 | 13.04 | 6.16 |
| RBC $x10^6/\mu l$ | 1 | 249 | 276 | 88.04 | 90.58 | 6.16 | 2.54 | 5.07 | 6.16 |
| Hb g/dl | 1 | 249 | 276 | 88.77 | 90.58 | 5.07 | 4.35 | 5.8 | 4.71 |
| HCT% | 1 | 249 | 276 | 90.22 | 89.13 | 3.99 | 3.62 | 5.07 | 6.52 |
| MCV-fl | 1 | 249 | 276 | 86.59 | 93.12 | 9.06 | 0.72 | 3.62 | 5.43 |
| MCH-Pg | 1 | 249 | 276 | 86.23 | 94.57 | 7.61 | 1.45 | 5.43 | 3.26 |
| MCHC-g/dl | 1 | 249 | 276 | 87.68 | 89.49 | 6.52 | 5.43 | 5.07 | 4.35 |
| Plt. $x10^3/\mu l$ | 1 | 249 | 276 | 86.59 | 88.04 | 6.16 | 5.8 | 6.52 | 5.43 |
| ReticCount% | 2 | 249 | 253 | 95.65 | 81.82 | 2.77 | 0.79 | 1.58 | 17.79 |
| PS Assessment | 3 | 249 | 257 | Acceptable:94.4,Warning Signal:4.0,Unacceptable :1.6 | | | | | |

*Comments:

**1). Among Lab (EQA) : Results acceptable.**

**2). Within Lab (IQA) : Difference in the CBC measurement values for *PLT* 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.)
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