# 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. :** 607 **Distribution No.:** 156-A **Month/Year:** April/2022

**Instrument ID:** NIHON KOHDEN (MEK-6420P) (SERIAL NO.: 52464)

**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:** 08-07-2022[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 | 20.8 | 20.1 | 40.9 | 30.81 | 0.2690 | **0.98** | 0.7 | 0.21 | 0.0130 | **1.79** |
| **RBC x10$^6$/µl** | 1 | 6.49 | 6.39 | 12.88 | 12.23 | 0.0110 | **2.10** | 0.1 | 0.06 | 0.0030 | **0.77** |
| **Hb g/dl** | 1 | 13.5 | 13.3 | 26.8 | 25.9 | 0.0200 | **1.39** | 0.2 | 0.1 | 0.0070 | **0.67** |
| **HCT%** | 1 | 42.9 | 42.1 | 85 | 86.1 | 0.1480 | **-0.25** | 0.8 | 0.4 | 0.0240 | **0.90** |
| **MCV-fl** | 1 | 66.1 | 65.9 | 132 | 141.2 | 0.2110 | **-1.48** | 0.2 | 0.2 | 0.0200 | **0.00** |
| **MCH-Pg** | 1 | 20.8 | 20.8 | 41.6 | 42.4 | 0.0460 | **-0.63** | 0 | 0.2 | 0.0100 | **-1.35** |
| **MCHC-g/dl** | 1 | 31.6 | 31.5 | 63.1 | 59.8 | 0.1190 | **0.93** | 0.1 | 0.3 | 0.0200 | **-0.67** |
| **Plt. x10$^3$/µl** | 1 | 225 | 211 | 436 | 368 | 2.34 | **1.00** | 14 | 9 | 0.53 | **0.52** |
| **Retic %** | 2 | | | | | | | | | | |

**P.S . Assesment**

| | | YOUR REPORT | CONSENSUS REPORT |
|---|---|---|---|
| **DLC%** | 3 | Nrbcs=01 , Poly=33 L=62, E=02, Mono/Promono=03 , B1= P.M.=, Mye=, Meta=, Other= | Lympho: 44-54, Poly: 40-49, Mono: 2-5, Eosino: 1-4, blast/Promyelo/Myelo/Meta: 0 |
| **RBC Morphology** | 3 | Dimorphism ++, Microcytosis +, Macrocytosis +, Anisopoikilocytosis +, Elliptocytosis +, Target cells +, Schistocytes (occasional) | Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis, Microcytosis, Hypochromia; Mild: Poikilocytosis , Target cells , Sickle shaped cells ,tear drop cells |
| **Diagnosis** | 3 | Dimorphic Anemia / Hemolytic Anemia | Diagnosis- Thalassemia/haemoglobinopathy |

## COMBINED DATA VALUES OF TOTAL PARTICIPANTS

| Test parameters | S.No. | Total participants covered in the current dist. 156--A | 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 | 375 | 366 | 95.63 | 90.16 | 0.82 | 2.46 | 3.55 | 7.38 |
| RBC $x10^6$/µl | 1 | 375 | 375 | 84.27 | 87.2 | 7.73 | 4.53 | 8 | 8.27 |
| Hb g/dl | 1 | 375 | 375 | 89.87 | 86.67 | 4.27 | 5.07 | 5.86 | 8.26 |
| HCT% | 1 | 375 | 365 | 90.96 | 87.95 | 4.93 | 6.03 | 4.11 | 6.02 |
| MCV-fl | 1 | 375 | 365 | 90.96 | 92.6 | 5.75 | 1.92 | 3.29 | 5.48 |
| MCH-Pg | 1 | 375 | 366 | 89.07 | 89.07 | 7.1 | 4.64 | 3.83 | 6.29 |
| MCHC-g/dl | 1 | 375 | 366 | 91.8 | 89.34 | 4.37 | 3.01 | 3.83 | 7.65 |
| Plt. $x10^3$/µl | 1 | 375 | 366 | 93.44 | 90.98 | 4.1 | 3.55 | 2.46 | 5.47 |
| ReticCount% | 2 | 375 | 354 | 95.2 | 95.2 | 3.11 | 4.24 | 1.69 | 0.56 |
| PS Assessment | 3 | 375 | 345 | Satisfactory :84.24%, Borderline Sat. :13.63%, Unsatisfactory :2.13% | | | | | |

*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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