

## **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.: 5153

**Distribution No.:** 157-M Month/Year: October/2022

Instrument ID: Merilyzer CelQuant 5 (Sr no. 201203)

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: 24-11-2022[Final].

## **CBC and Retic Assessment**

|                          |       |                     |                    | Among Lab (Accuracy Testing)            |  |                                      |            | Within Lab (Precision Testing) |      |                                      |            |  |
|--------------------------|-------|---------------------|--------------------|---|--|--------------------------------------|------------|--------------------------------|------|--------------------------------------|------------|--|
| Test<br>Parameters       | S.No. | Your<br>Result<br>1 |                    | Your<br>Results<br>Sum of<br>2<br>Value | Consensus<br>result<br>sum of 2<br>values<br>(Assigned<br>Value) | Uncertainty<br>of Assigned<br>Values | Z<br>Score |                                |      | Uncertainty<br>of Assigned<br>Values | Z<br>Score |  |
| WBC x10³/µl              | 1     | 5.68                | 5.58               | 11.26                                   | 11.2   | 0.0290                               | 0.07       | 0.1                            | 0.1  | 0.0060                               | 0.00       |  |
| RBC x10 <sup>6</sup> /µl | 1     | 3.89                | 3.85               | 7.74                                    | 7.56   | 0.0080                               | 0.86       | 0.04                           | 0.04 | 0.0030                               | 0.00       |  |
| Hb g/dl                  | 1     | 12                  | 11.9               | 23.9                                    | 23.7   | 0.0270                               | 0.30       | 0.1                            | 0.1  | 0.0080                               | 0.00       |  |
| HCT%                     | 1     | 37.1                | 36. <mark>7</mark> | 73.8                                    | 73.3   | 0.1660                               | 0.10       | 0.4                            | 0.4  | 0.0250                               | 0.00       |  |
| MCV-fl                   | 1     | 95.4                | 95.3               | 190.7                                   | 194.55   | 0.3960                               | -0.33      | 0.1                            | 0.3  | 0.0210                               | -0.63      |  |
| MCH-Pg                   | 1     | 30.9                | 30.8               | 61.7                                    | 62.6   | 0.0840                               | -0.39      | 0.1                            | 0.3  | 0.0200                               | -0.54      |  |
| MCHC-g/dl                | 1     | 32.4                | 32.4               | 64.8                                    | 64.5   | 0.1500                               | 0.07       | 0                              | 0.3  | 0.0220                               | -0.81      |  |
| Plt. x10³/µl             | 1     | 137                 | 136                | 273                                     | 281.5  | 1.19                                 | -0.26      | 1                              | 4    | 0.28                                 | -0.67      |  |
| Retic %                  | 2     | 11                  | 10                 | 21                                      | 10.5   | 0.23                                 | 1.57       | 1                              | 0.5  | 0.03                                 | 0.84       |  |

### **P.S** . Assesment

|                   |   | YOUR REPORT                         | CONSENSUS REPORT   |  |  |  |  |
|-------------------|---|-------------------------------------|--|--|--|--|--|
| DLC%              | 3 |                                     | Poly: 60 - 77, Myelo: 5 - 12, Meta: 5 - 10, Lympho: 3 - 7, Eos: 1- 3,<br>nRBC/ Baso/ Promyelo, Blast Mono: 0 - 5 |  |  |  |  |
| RBC<br>Morphology | 3 | UNATTOCVIIC DATTOCATOMIC            | Predominantly: Normocytic/Normochromic; Moderate: Anisocytosis<br>hypochromia                                    |  |  |  |  |
| Diagnosis         | 3 | Chronic Myeloproliferative disorder | Chronic Myeloid Leukemia   |  |  |  |  |

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### **COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

| Test name atom            | S No  | Total<br>participants<br>covered in the | Total No.<br>responded | % of Labs with Z<br>Score 0-2  |                     | % of Labs with Z<br>Score 2-3 |               | % of Labs with Z<br>Score >3 |               |  |
|---------------------------|-------|---|------------------------|--|---------------------|-------------------------------|---------------|------------------------------|---------------|--|
| Test parameters           | 5.NU. | current dist.<br>157M                   |                        | Among<br>labs  | Within<br>lab       | Among<br>labs                 | Within<br>lab | Among<br>labs                | Within<br>lab |  |
| WBC x10 <sup>3</sup> /µl  | 1     | 333                                     | 332                    | <mark>83</mark> .13  | 88.55               | 6.63                          | 5.12          | 10.24                        | 6.33          |  |
| RBC x10 <sup>6</sup> /µl  | 1     | 333                                     | 333                    | 88.89  | 88.89               | 5.11                          | 5.71          | 6                            | 5.4           |  |
| Hb g/dl                   | 1     | 333                                     | 333                    | 86.49  | 85.89               | 6.01                          | 6.91          | 7.5                          | 7.2           |  |
| HCT%                      | 1     | 333                                     | 3 <mark>31</mark>      | 93.96  | 91.54               | 4.23                          | 3.32          | 1.81                         | 5.14          |  |
| MCV-fl                    | 1     | 333                                     | 332                    | 95.48  | 91.27               | 3.01                          | 2.41          | 1.51                         | 6.32          |  |
| MCH-Pg                    | 1     | 333                                     | 332                    | 90.36  | <mark>85</mark> .54 | 5.72                          | 7.83          | 3.92                         | 6.63          |  |
| MCHC-g/dl                 | 1     | 333                                     | 332                    | 93.67  | <mark>91.8</mark> 7 | 3.92                          | 2.11          | 2.41                         | 6.02          |  |
| Plt. x10 <sup>3</sup> /µl | 1     | 333                                     | 332                    | 91.57  | 92.17               | 5.72                          | 4.22          | 2.71                         | 3.61          |  |
| ReticCount%               | 2     | 333                                     | 296                    | 88.18  | 88.18               | 7.43                          | 7.09          | 4.39                         | 4.73          |  |
| <b>PS</b> Assessment      | 3     | 333                                     | 269                    | Satisfactory :87.66%, Borderline Sat. :11.14%, Unsatisfactory :1.20% |                     |                               |               |                              |               |  |

#### \*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  $\pm 2$ : Acceptable, Z score  $\pm 2$  to  $\pm 3$ : Warning Signal, Z score >  $\pm 3$ : Unacceptable [As per ISO/IEC 13528:2015 standard]

**Note-4:** Z score value between "0 to  $\pm 2$ " are texted in green colour. Z score value between " $\pm 2$  to  $\pm 3$ " are texted in orange colour. Z score value >  $\pm 3$  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 guarterly 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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