



**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



## PARTICIPATION CERTIFICATE

[Certificate No. EAQP/5023/2022/30]

Date 30.12.2022

This is to certify that " **REGIONAL AYURVEDA RESEARCH INSTITUTE, NAGPUR, Nagpur, Maharashtra, 440009** "has participated in the "ISHTM-AIIMS External Quality Assurance Program" for the period "January 2022 to December 2022".

Report authorized by,

Dr. Seema Tyagi (Prof.)  
 PT Co-ordinator: ISHTM-AIIMS-EQAP  
 Department of Hematology, AIIMS, New Delhi



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Duration of stability testing - minimum upto 8 days at ambient temp. after dispatch of specimens

EQAP CODE No. : 5023

Distribution No.: 156-M

Month/Year: July/2022

Instrument ID: SYSMAX XP -100 (A1143)

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

Date of issue &amp; status of the report: 28-09-2022[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 <sup>3</sup> /µl  | 1     | 2.8                          | 2.8           | 5.6                         | 6.47  | 0.0430                         | -0.98   | 0                               | 0.1   | 0.0110                         | -0.84   |
| RBC x10 <sup>6</sup> /µl  | 1     | 3.93                         | 3.83          | 7.76                        | 7.95  | 0.0160                         | -0.64   | 0.1                             | 0.06  | 0.0050                         | 0.60    |
| Hb g/dl                   | 1     | 13.5                         | 13.1          | 26.6                        | 27  | 0.0470                         | -0.54   | 0.4                             | 0.17  | 0.0160                         | 1.06    |
| HCT%                      | 1     | 39.1                         | 38.1          | 77.2                        | 83.05   | 0.3440                         | -0.81   | 1                               | 0.6   | 0.0610                         | 0.49    |
| MCV-fl                    | 1     | 99.5                         | 99.5          | 199                         | 209.8   | 0.6860                         | -0.74   | 0                               | 0.5   | 0.0540                         | -0.84   |
| MCH-Pg                    | 1     | 35.2                         | 33.3          | 68.5                        | 67.9  | 0.1360                         | 0.23    | 1.9                             | 0.3   | 0.0360                         | 3.60    |
| MCHC-g/dl                 | 1     | 35.4                         | 33.5          | 68.9                        | 64.05   | 0.2860                         | 0.83    | 1.9                             | 0.4   | 0.0380                         | 2.89    |
| Plt. x10 <sup>3</sup> /µl | 1     | 151                          | 150           | 301                         | 282   | 1.67                           | 0.57    | 1                               | 6   | 0.45                           | -0.96   |
| Retic %                   | 2     | 3                            | 2             | 5                           | 3   | 0.11                           | 0.84    | 1                               | 0.2   | 0.02                           | 2.70    |

### P.S . Assesment

| YOUR REPORT    |   |   | CONSENSUS REPORT   |  |  |
|----------------|---|---|--|--|--|
| DLC%           | 3 | Nrbcs=3.0 , Poly=03 L=94, E=00, Mono/Promono=03 , B1=0 P.M.=0, Mye=0, Meta=00, Other=00 | Blast: 32-75, Lympho: 11-39, Poly: 4-9, nRBC/Eos/Baso/Mono/Myelo/Meta/ Promyelo: 0-5 |  |  |
| RBC Morphology | 3 | Normocytic Normochromic   | Predominantly: Normocytic/ Normochromic, Moderate: Anisocytosis, Microcytic          |  |  |
| Diagnosis      | 3 | Normocytic Normochromic Anaemia with Lymphocytosis with Thrombocytopenia                | Acute Leukemia (AL)  |  |  |

**COMBINED DATA VALUES OF TOTAL PARTICIPANTS**

| Test parameters           | S.No. | Total participants covered in the current dist. 156--M | 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 <sup>3</sup> /µl  | 1     | 171  | 170                 | 83.53  | 81.18      | 5.29                       | 6.47       | 11.18                     | 12.35      |
| RBC x10 <sup>6</sup> /µl  | 1     | 171  | 171                 | 83.63  | 85.38      | 8.19                       | 5.26       | 8.18                      | 9.36       |
| Hb g/dl                   | 1     | 171  | 171                 | 77.19  | 91.81      | 8.77                       | 1.75       | 14.04                     | 6.44       |
| HCT%                      | 1     | 171  | 170                 | 91.18  | 88.82      | 6.47                       | 4.12       | 2.35                      | 7.06       |
| MCV-fl                    | 1     | 171  | 170                 | 93.53  | 85.88      | 5.29                       | 2.35       | 1.18                      | 11.77      |
| MCH-Pg                    | 1     | 171  | 170                 | 85.88  | 85.29      | 6.47                       | 5.88       | 7.65                      | 8.83       |
| MCHC-g/dl                 | 1     | 171  | 170                 | 93.53  | 88.24      | 4.12                       | 2.94       | 2.35                      | 8.82       |
| Plt. x10 <sup>3</sup> /µl | 1     | 171  | 170                 | 91.76  | 86.47      | 6.47                       | 7.06       | 1.77                      | 6.47       |
| ReticCount%               | 2     | 171  | 153                 | 89.54  | 86.93      | 6.54                       | 9.15       | 3.92                      | 3.92       |
| PS Assessment             | 3     | 171  | 149                 | Satisfactory :78.95%, Borderline Sat. :11.11%, Unsatisfactory :9.94% |            |                            |            |                           |            |

**\*Comments:**

1). Among Lab (EQA) : PS Diagnosis partially correct, remaining results acceptable

2). Within Lab (IQA) : Difference in the CBC measurement values for MCH 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](http://www.ishtmaiimseqap.com).

**Note 10:** Reports are kept confidential.

Report authorized by,



Dr. Seema Tyagi (Prof.)

PT Co-ordinator: ISHTM-AIIMS-EQAP

Department of Hematology, AIIMS, New Delhi

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