



UNMATCHED SERVICE  
SINCE 1979...

Date: 15/07/2021  
Effective Date: 15/07/2021

## Certificate of Calibration

**Customer Name: ASHOK NURSING HOME**

**Model : Automated Hematology Analyzer Sysmex XP-100**

**Serial No. : B5203**

**Calibration Done Date: 15/07/2021**

**Next Calibration Due Date On or Before: 14/07/2022**

**Lab In-charge: . DR R K SAXENA**

*This is to certify that the above-mentioned product has been verified of calibration for CBC 5 parameters (WBC, RBC, HGB, HCT and PLT) according to the standard procedures provided by Sysmex Corporation, Japan.*

*The reference instruments used for value-assignment are managed by the traceability system in Sysmex Corporation and these are traceable to the International Standards, such as ICSH.*

Calibration at site performed by  
AMIT SHARMA  
SERVICE ENGINEER  
Transasia Bio-Medicals Ltd  
DELHI



Date: 15/07/2021  
Effective Date: 15/07/2021

## Certificate of Inspection

1. Model: Automated Hematology Analyzer Sysmex XP – 100
2. Serial No.: B5203
3. Calibration Date: 15/07/2021
4. Material used: SCS-1000 (Lot No. 11660525, Expiry date: 18-July-2021)

By comparing your data to the results of the standard counters in Sysmex Corporation, the calibration for CBC 5 parameters using the measurement standard material (SCS-1000) was completed. The calibration result of 5 runs is summarized in the following table. Please refer to the attached sheets for the details.

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## 7. CALIBRATION DATA

SMP NO/TIME	WBC	RBC	HGB	HCT	PLT
SCS-2	6.90	4.31	11.9	32.70	253
SCS-3	6.80	4.35	12.0	33.00	265
SCS-4	6.90	4.33	11.9	32.90	260
SCS-5	7.10	4.33	11.9	32.80	265
SCS-6	6.80	4.27	11.8	32.30	252
<b>MEAN</b>	<b>6.90</b>	<b>4.318</b>	<b>11.90</b>	<b>32.74</b>	<b>259.0</b>
Acceptable Limits	6.74 - 7.34	4.302 - 4.477	11.89 - 12.13	32.40 - 33.86	249.9 - 276.2
<b>Result</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>

## 8. (Traceability System) :

The traceability system of Sysmex Hematology analyzers are shown in attached sheet.

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## 5. BACKGROUND CHECK

PARAMETER	RESULT	Range
WBC	0.0	$0.3 \times 10^3$ /UI or Less
RBC	0.00	$0.02 \times 10^6$ /uL or Less
HGB	0.0	0.1 g/dL or Less
PLT	0	$10 \times 10^3$ /uL or Less

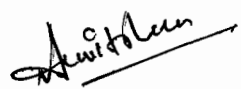
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## 6. PRECISION STUDY PERFORMED ON THE ANALYZER USING A BLOOD SAMPLE (ORIGINALS ATTACHED)

SMP NO	WBC	RBC	HGB	HCT	PLT
PRECISION 1	8.9	5.02	14.6	44.2	174
PRECISION 2	9.2	4.97	14.7	43.7	167
PRECISION 3	9.1	4.97	14.6	43.6	173
PRECISION 4	8.8	5.03	14.7	44.2	176
PRECISION 5	9.20	4.98	14.6	43.7	175
PRECISION 6	9.20	4.99	14.7	43.8	178
PRECISION 7	9.5	4.99	14.6	43.9	180
PRECISION 8	9.2	5.07	14.6	44.3	181
PRECISION 9	9.3	5.00	14.8	44.1	172
PRECISION 10	9.20	5.04	14.7	44.4	179
Mean	9.16	5.01	14.66	43.99	175.50
SD	0.196	0.033	0.070	0.285	4.249
CV%	2.134	0.661	0.477	0.647	2.421
Acceptable CV%	Within 3.5%	Within 2.0%	Within 1.5%	Within 2.0%	Within 6.0%
Result	PASS	PASS	PASS	PASS	PASS

  
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# BACKGROUND COUNT

ID. \_\_\_\_\_  
\_\_\_BLANK CHECK\_\_\_  
Date 2021/07/09  
Time 17:05  
M... ..

WBC 0.0  $\times 10^3/\mu\text{L}$   
RBC 0.00  $\times 10^6/\mu\text{L}$   
HGB 0.0 g/dL  
HCT 0.0 %  
MCV ----- fL  
MCH ----- pg  
MCHC ----- g/dL  
PLT 0  $\times 10^3/\mu\text{L}$

LYM% ----- %  
MXD% ----- %  
NEUT% ----- %  
LYM# -----  $\times 10^3/\mu\text{L}$   
MXD# -----  $\times 10^3/\mu\text{L}$   
NEUT# -----  $\times 10^3/\mu\text{L}$

RDW-SD ----- fL  
RDW-CV ----- %  
PDW ----- fL  
MPV ----- fL  
P-LCR ----- %  
PCT ----- %

ResearchW 0.021  $\times 10^3/\mu\text{L}$   
ResearchS -----  $\times 10^3/\mu\text{L}$   
ResearchM -----  $\times 10^3/\mu\text{L}$   
ResearchL -----  $\times 10^3/\mu\text{L}$

# SAMPLE PRECISION DATA

Operator  
 ID. PRECISION-1  
 Date 2021/07/09  
 Time 17:22  
 Mode WB

WBC 8.9  $\times 10^3/\mu\text{L}$   
 RBC 5.02  $\times 10^6/\mu\text{L}$   
 HGB 14.6 g/dL  
 HCT 44.2 %  
 MCV 88.0 fL  
 MCH 29.1 pg  
 MCHC 33.0 g/dL  
 PLT AG\* 174  $\times 10^3/\mu\text{L}$

LYM% 30.0 %  
 MXD% 8.9 %  
 NEUT% 61.1 %  
 LYM# 2.7  $\times 10^3/\mu\text{L}$   
 MXD# 0.8  $\times 10^3/\mu\text{L}$   
 NEUT# 5.4  $\times 10^3/\mu\text{L}$

RDW-SD 50.6 fL  
 RDW-CV 15.6 %  
 PDW + 20.9 fL  
 MPV + 13.1 fL  
 P-LCR + 50.3 %  
 PCT \* 0.23 %

ResearchW 8.940  $\times 10^3/\mu\text{L}$   
 ResearchG 2.670  $\times 10^3/\mu\text{L}$   
 ResearchM 0.792  $\times 10^3/\mu\text{L}$   
 ResearchL 5.478  $\times 10^3/\mu\text{L}$

Operator  
 ID. PRECISION-2  
 Date 2021/07/09  
 Time 17:23  
 Mode WB

WBC 9.2  $\times 10^3/\mu\text{L}$   
 RBC 4.97  $\times 10^6/\mu\text{L}$   
 HGB 14.7 g/dL  
 HCT 43.7 %  
 MCV 87.9 fL  
 MCH 29.6 pg  
 MCHC 33.6 g/dL  
 PLT AG\* 167  $\times 10^3/\mu\text{L}$

LYM% 29.8 %  
 MXD% 11.0 %  
 NEUT% 59.2 %  
 LYM# 2.7  $\times 10^3/\mu\text{L}$   
 MXD# 1.0  $\times 10^3/\mu\text{L}$   
 NEUT# 5.5  $\times 10^3/\mu\text{L}$

RDW-SD 50.6 fL  
 RDW-CV 15.2 %  
 PDW + 17.2 fL  
 MPV 12.6 fL  
 P-LCR + 46.4 %  
 PCT \* 0.21 %

ResearchW 9.186  $\times 10^3/\mu\text{L}$   
 ResearchS 2.742  $\times 10^3/\mu\text{L}$   
 ResearchM 1.012  $\times 10^3/\mu\text{L}$   
 ResearchL 5.432  $\times 10^3/\mu\text{L}$

Operator  
 ID. PRECISION-3  
 Date 2021/07/09  
 Time 17:25  
 Mode WB

WBC 9.1  $\times 10^3/\mu\text{L}$   
 RBC 4.97  $\times 10^6/\mu\text{L}$   
 HGB 14.6 g/dL  
 HCT 43.8 %  
 MCV 88.1 fL  
 MCH 29.4 pg  
 MCHC 33.3 g/dL  
 PLT AG\* 173  $\times 10^3/\mu\text{L}$

LYM% 30.7 %  
 MXD% 11.2 %  
 NEUT% 58.1 %  
 LYM# 2.8  $\times 10^3/\mu\text{L}$   
 MXD# 1.0  $\times 10^3/\mu\text{L}$   
 NEUT# 5.3  $\times 10^3/\mu\text{L}$

RDW-SD 49.5 fL  
 RDW-CV 15.3 %  
 PDW + 17.9 fL  
 MPV 13.0 fL  
 P-LCR + 48.9 %  
 PCT \* 0.22 %

ResearchW 9.077  $\times 10^3/\mu\text{L}$   
 ResearchS 2.794  $\times 10^3/\mu\text{L}$   
 ResearchM 1.019  $\times 10^3/\mu\text{L}$   
 ResearchL 5.264  $\times 10^3/\mu\text{L}$

# SAMPLE PRECISION DATA

ID. PRECISION-4

Date 2021/07/09  
Time 17:26  
Mode WB

WBC 8.8 ×10<sup>3</sup>/μL  
RBC 5.03 ×10<sup>6</sup>/μL  
HGB 14.7 g/dL  
HCT 44.2 %  
MCV 87.9 fL  
MCH 29.2 pg  
MCHC 33.3 g/dL  
PLT AG\* 176 ×10<sup>3</sup>/μL

LYM% 30.2 %  
MXD% 9.4 %  
NEUT% 60.4 %  
LYM# 2.7 ×10<sup>3</sup>/μL  
MXD# 0.8 ×10<sup>3</sup>/μL  
NEUT# 5.3 ×10<sup>3</sup>/μL

RDW-SD 50.7 fL  
RDW-CV 15.5 %  
PDW + 19.1 fL  
MPV + 13.1 fL  
P-LCR + 49.9 %  
PCT \* 0.23 %

ResearchW 8.818 ×10<sup>3</sup>/μL  
ResearchS 2.658 ×10<sup>3</sup>/μL  
ResearchM 0.827 ×10<sup>3</sup>/μL  
ResearchL 5.333 ×10<sup>3</sup>/μL

ID. PRECISION-5

Date 2021/07/09  
Time 17:27  
Mode WB

WBC 9.2 ×10<sup>3</sup>/μL  
RBC 4.98 ×10<sup>6</sup>/μL  
HGB 14.6 g/dL  
HCT 43.7 %  
MCV 87.8 fL  
MCH 29.3 pg  
MCHC 33.4 g/dL  
PLT AG\* 175 ×10<sup>3</sup>/μL

LYM% 30.0 %  
MXD% 8.1 %  
NEUT% 61.9 %  
LYM# 2.8 ×10<sup>3</sup>/μL  
MXD# 0.7 ×10<sup>3</sup>/μL  
NEUT# 5.7 ×10<sup>3</sup>/μL

RDW-SD 49.5 fL  
RDW-CV 15.1 %  
PDW + 18.7 fL  
MPV + 13.2 fL  
P-LCR + 50.1 %  
PCT \* 0.23 %

ResearchW 9.206 ×10<sup>3</sup>/μL  
ResearchS 2.760 ×10<sup>3</sup>/μL  
ResearchM 0.745 ×10<sup>3</sup>/μL  
ResearchL 5.701 ×10<sup>3</sup>/μL

ID. PRECISION-6

Date 2021/07/09  
Time 17:29  
Mode WB

WBC 9.2 ×10<sup>3</sup>/μL  
RBC 4.99 ×10<sup>6</sup>/μL  
HGB 14.7 g/dL  
HCT 43.8 %  
MCV 87.8 fL  
MCH 29.5 pg  
MCHC 33.6 g/dL  
PLT AG\* 178 ×10<sup>3</sup>/μL

LYM% 30.0 %  
MXD% 9.4 %  
NEUT% 60.6 %  
LYM# 2.8 ×10<sup>3</sup>/μL  
MXD# 0.9 ×10<sup>3</sup>/μL  
NEUT# 5.5 ×10<sup>3</sup>/μL

RDW-SD 50.7 fL  
RDW-CV 15.4 %  
PDW + 20.8 fL  
MPV + 13.1 fL  
P-LCR + 49.0 %  
PCT \* 0.23 %

ResearchW 9.153 ×10<sup>3</sup>/μL  
ResearchS 2.760 ×10<sup>3</sup>/μL  
ResearchM 0.865 ×10<sup>3</sup>/μL  
ResearchL 5.528 ×10<sup>3</sup>/μL

Operator

ID. PRECISION-7

Date 2021/07/09  
Time 17:31  
Mode WB

WBC 9.5 ×10<sup>3</sup>/μL  
RBC 4.99 ×10<sup>6</sup>/μL  
HGB 14.6 g/dL  
HCT 43.9 %  
MCV 88.0 fL  
MCH 29.3 pg  
MCHC 33.3 g/dL  
PLT AG\* 180 ×10<sup>3</sup>/μL

LYM% 29.5 %  
MXD% 10.9 %  
NEUT% 59.6 %  
LYM# 2.8 ×10<sup>3</sup>/μL  
MXD# 1.0 ×10<sup>3</sup>/μL  
NEUT# 5.7 ×10<sup>3</sup>/μL

RDW-SD 50.0 fL  
RDW-CV 15.1 %  
PDW + 21.0 fL  
MPV + 13.3 fL  
P-LCR + 50.8 %  
PCT \* 0.24 %

ID. PRECISION-8

Date 2021/07/09  
Time 17:32  
Mode WB

WBC 9.2 ×10<sup>3</sup>/μL  
RBC 5.07 ×10<sup>6</sup>/μL  
HGB 14.6 g/dL  
HCT 44.3 %  
MCV 87.4 fL  
MCH 28.8 pg  
MCHC 33.0 g/dL  
PLT AG\* 181 ×10<sup>3</sup>/μL

LYM% 30.4 %  
MXD% 9.0 %  
NEUT% 60.6 %  
LYM# 2.8 ×10<sup>3</sup>/μL  
MXD# 0.8 ×10<sup>3</sup>/μL  
NEUT# 5.6 ×10<sup>3</sup>/μL

RDW-SD 49.9 fL  
RDW-CV 15.1 %  
PDW + 21.4 fL  
MPV + 13.6 fL  
P-LCR + 52.5 %  
PCT \* 0.25 %

ID. PRECISION-9

Date 2021/07/09  
Time 17:33  
Mode WB

WBC 9.3 ×10<sup>3</sup>/μL  
RBC 5.00 ×10<sup>6</sup>/μL  
HGB 14.8 g/dL  
HCT 44.1 %  
MCV 88.2 fL  
MCH 29.6 pg  
MCHC 33.6 g/dL  
PLT AG\* 172 ×10<sup>3</sup>/μL

LYM% 29.1 %  
MXD% 11.0 %  
NEUT% 59.9 %  
LYM# 2.7 ×10<sup>3</sup>/μL  
MXD# 1.0 ×10<sup>3</sup>/μL  
NEUT# 5.6 ×10<sup>3</sup>/μL

RDW-SD 49.8 fL  
RDW-CV 15.4 %  
PDW + 18.6 fL  
MPV + 13.2 fL  
P-LCR + 49.8 %  
PCT \* 0.23 %

ResearchW 9.274 ×10<sup>3</sup>/μL  
ResearchS 2.760 ×10<sup>3</sup>/μL



## SAMPLE PRECISION DATA

ID. PRECISION-10  
Date 2021/07/09  
Time 17:35  
Mode WB

WBC 9.2  $\times 10^3/\mu\text{L}$   
RBC 5.04  $\times 10^6/\mu\text{L}$   
HGB 14.7 g/dL  
HCT 44.4 %  
MCV 88.1 fL  
MCH 29.2 pg  
MCHC 33.1 g/dL  
PLT AG\* 179  $\times 10^3/\mu\text{L}$

LYM% 30.4 %  
MXD% 11.6 %  
NEUT% 58.0 %  
LYM# 2.8  $\times 10^3/\mu\text{L}$   
MXD# 1.1  $\times 10^3/\mu\text{L}$   
NEUT# 5.3  $\times 10^3/\mu\text{L}$

RDW-SD 49.8 fL  
RDW-CV 15.3 %  
PDW + 20.3 fL  
MPV + 13.4 fL  
P-LCR + 51.7 %  
PCT \* 0.24 %

ResearchW 9.226  $\times 10^3/\mu\text{L}$   
ResearchS 2.797  $\times 10^3/\mu\text{L}$   
ResearchM 1.067  $\times 10^3/\mu\text{L}$   
ResearchL 5.362  $\times 10^3/\mu\text{L}$

# CALIBRATOR RUN DATA

ID. SCS-5  
 Date 2021/07/09  
 Time 18:10  
 Mode CL

ID. SCS-6  
 Date 2021/07/09  
 Time 18:11  
 Mode CL

WBC 7.1  $\times 10^3/\mu\text{L}$   
 RBC 4.33  $\times 10^6/\mu\text{L}$   
 HGB 11.9 g/dL  
 HCT 32.8 %  
 MCV ----.- fL  
 MCH ----.- pg  
 MCHC ----.- g/dL  
 PLT 265  $\times 10^3/\mu\text{L}$

LYM% ----.- %  
 MXD% ----.- %  
 NEUT% ----.- %  
 LYM# ----.-  $\times 10^3/\mu\text{L}$   
 MXD# ----.-  $\times 10^3/\mu\text{L}$   
 NEUT# ----.-  $\times 10^3/\mu\text{L}$

RDW-SD ----.- fL  
 RDW-CV ----.- %  
 PDW ----.- fL  
 MPV ----.- fL  
 P-LCR ----.- %  
 PCT ----.- %

ResearchW 7.084  $\times 10^3/\mu\text{L}$   
 ResearchS ----.-  $\times 10^3/\mu\text{L}$   
 ResearchM ----.-  $\times 10^3/\mu\text{L}$   
 ResearchL ----.-  $\times 10^3/\mu\text{L}$

WBC 6.8  $\times 10^3/\mu\text{L}$   
 RBC 4.27  $\times 10^6/\mu\text{L}$   
 HGB 11.8 g/dL  
 HCT 32.3 %  
 MCV ----.- fL  
 MCH ----.- pg  
 MCHC ----.- g/dL  
 PLT 252  $\times 10^3/\mu\text{L}$

LYM% ----.- %  
 MXD% ----.- %  
 NEUT% ----.- %  
 LYM# ----.-  $\times 10^3/\mu\text{L}$   
 MXD# ----.-  $\times 10^3/\mu\text{L}$   
 NEUT# ----.-  $\times 10^3/\mu\text{L}$

RDW-SD ----.- fL  
 RDW-CV ----.- %  
 PDW ----.- fL  
 MPV ----.- fL  
 P-LCR ----.- %  
 PCT ----.- %

ResearchW 6.763  $\times 10^3/\mu\text{L}$   
 ResearchS ----.-  $\times 10^3/\mu\text{L}$   
 ResearchM ----.-  $\times 10^3/\mu\text{L}$   
 ResearchL ----.-  $\times 10^3/\mu\text{L}$

# CALIBRATOR RUN DATA

ID. SCS-2  
 Date 2021/07/09  
 Time 18:00  
 Mode CL

WBC 6.9  $\times 10^3/\mu\text{L}$   
 RBC 4.31  $\times 10^6/\mu\text{L}$   
 HGB 11.9 g/dL  
 HCT 32.7 %  
 MCV ----- fL  
 MCH ----- pg  
 MCHC ----- g/dL  
 PLT 253  $\times 10^3/\mu\text{L}$

LYM% ----- %  
 MXD% ----- %  
 NEUT ----- %  
 LYM# -----  $\times 10^3/\mu\text{L}$   
 MXD# -----  $\times 10^3/\mu\text{L}$   
 NEUT# -----  $\times 10^3/\mu\text{L}$

RDW-SD ----- fL  
 RDW-CV ----- %  
 PDW ----- fL  
 MPV ----- fL  
 P-LCR ----- %  
 PCT ----- %

ResearchW 6.39  $\times 10^3/\mu\text{L}$   
 ResearchS -----  $\times 10^3/\mu\text{L}$   
 ResearchM -----  $\times 10^3/\mu\text{L}$   
 ResearchL -----  $\times 10^3/\mu\text{L}$

ID. SCS-3  
 Date 2021/07/09  
 Time 18:07  
 Mode CL

WBC 6.8  $\times 10^3/\mu\text{L}$   
 RBC 4.35  $\times 10^6/\mu\text{L}$   
 HGB 12.0 g/dL  
 HCT 33.0 %  
 MCV ----- fL  
 MCH ----- pg  
 MCHC ----- g/dL  
 PLT 265  $\times 10^3/\mu\text{L}$

LYM% ----- %  
 MXD% ----- %  
 NEUT% ----- %  
 LYM# -----  $\times 10^3/\mu\text{L}$   
 MXD# -----  $\times 10^3/\mu\text{L}$   
 NEUT# -----  $\times 10^3/\mu\text{L}$

RDW-SD ----- fL  
 RDW-CV ----- %  
 PDW ----- fL  
 MPV ----- fL  
 P-LCR ----- %  
 PCT ----- %

ResearchW 6.793  $\times 10^3/\mu\text{L}$   
 ResearchS -----  $\times 10^3/\mu\text{L}$   
 ResearchM -----  $\times 10^3/\mu\text{L}$   
 ResearchL -----  $\times 10^3/\mu\text{L}$

ID. SCS-4  
 Date 2021/07/09  
 Time 18:09  
 Mode CL

WBC 6.9  $\times 10^3/\mu\text{L}$   
 RBC 4.33  $\times 10^6/\mu\text{L}$   
 HGB 11.9 g/dL  
 HCT 32.9 %  
 MCV ----- fL  
 MCH ----- pg  
 MCHC ----- g/dL  
 PLT 260  $\times 10^3/\mu\text{L}$

LYM% ----- %  
 MXD% ----- %  
 NEUT% ----- %  
 LYM# -----  $\times 10^3/\mu\text{L}$   
 MXD# -----  $\times 10^3/\mu\text{L}$   
 NEUT# -----  $\times 10^3/\mu\text{L}$

RDW-SD ----- fL  
 RDW-CV ----- %  
 PDW ----- fL  
 MPV ----- fL  
 P-LCR ----- %  
 PCT ----- %

ResearchW 6.946  $\times 10^3/\mu\text{L}$   
 ResearchS -----  $\times 10^3/\mu\text{L}$   
 ResearchM -----  $\times 10^3/\mu\text{L}$   
 ResearchL -----  $\times 10^3/\mu\text{L}$