

Date: 3.12.2020  
Effective Date: 3.12.2020

## Certificate of Calibration

**Customer Name: PGM DIAGNOSTICS CENTRE**

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

**Serial No. : B6342**

**Calibration Done Date: 3.12.2020**

**Next Calibration Due Date On or Before: 2.12.2021**

**Lab In-charge: .**

*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 Performed by  
Engineer Name:- Sunil Giri  
Designation:- Service Engineer  
Transasia Bio-Medicals Ltd  
Location:- Mumbai

Encl:

1. Certificate of Inspection
2. Assay Sheet of Calibrator SCS-1000
3. Printouts
4. Traceability & Uncertainty document

Date: 3.12.2020  
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## Certificate of Inspection

1. Model: Automated Hematology Analyzer Sysmex XP – 100
2. Serial No.: B6342
3. Calibration Date: 3.12.2020
4. Material used: SCS-1000 (Lot No. 0308 0525, Expiry date: 06-Dec-2020)

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

SMP NO	WBC	RBC	HGB	HCT	PLT
1.	8.6	4.49	14.3	40.3	232
2	8.7	4.47	14.5	40.3	217
3	8.9	4.52	14.5	40.7	226
4	8.8	4.51	14.5	40.7	237
5	8.90	4.54	14.5	40.8	225
6	8.8	4.55	14.5	41.3	223
7	8.9	4.54	14.5	40.9	231
8	8.7	4.52	14.5	40.7	220
9	8.9	4.58	14.6	41.1	215
10	8.90	4.56	14.6	41.1	227
Mean	8.81	4.53	14.50	40.79	225.30
SD	0.110	0.033	0.082	0.328	6.881
CV%	1.249	0.727	0.563	0.804	3.054
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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## 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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## 7. CALIBRATION DATA

SMP NO/TIME	WBC	RBC	HGB	HCT	PLT
1	6.90	4.30	12.0	33.80	264
2	6.60	4.20	12.1	33.10	271
3	6.80	4.20	12.1	33.00	259
4	6.60	4.29	12.1	33.60	271
5	6.70	4.29	12.2	33.60	268
<b>MEAN</b>	<b>6.72</b>	<b>4.256</b>	<b>12.10</b>	<b>33.42</b>	<b>266.6</b>
Acceptable Limits	6.52 - 7.10	4.195 - 4.366	11.90 - 12.14	32.49 - 33.95	250.3 - 276.7
<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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# Traceability and Uncertainty

## SCS-1000 Sysmex Calibrator System

### XP-Series, Automated Hematology Analyzer



LOT NO: 03080525  
 EXP. DATE: 6-Dec-2020

Parameter	Reference Method	Reference Material	Assigned Value	Uncertainty*	Unit
WBC	*1	-	6.808	0.16	10 <sup>9</sup> /L
RBC	*1	-	4.281	0.065	10 <sup>12</sup> /L
PLT	*2	-	263.5	11	10 <sup>9</sup> /L
HGB	*3, *4	-	12.02	0.12	g / dL
HCT	*5, *6	-	33.22	0.79	%

\* : This uncertainty (expanded uncertainty: k=2 was calculated in accordance with the "Guide to the expression of Uncertainty in Measurement" (GUM: 1995).

\*1: ICSH Expert Panel on Cytometry, Clinical Laboratory Haematology, 16, 131-138, 1994

"Reference method for the enumeration of erythrocytes and leucocytes"

\*2: ICSH Expert Panel on Cytometry and International Society of Laboratory Hematology Task Force on Platelet Counting, American Journal of Clinical Pathology, 115, 460-464, 2001

"Platelet Counting by the RBC/Platelet Ratio method – A reference Method"

\*3: CLSI, H15-A3

"Reference and selected procedures for the quantitative determination of hemoglobin in blood – 3rd edition; Approved

\*4: Journal of Clinical Pathology, 49, 271-274, 1996

"Recommendation for reference method for haemoglobinometry in human blood (ICSH standard 1995) and specification for international haemoglobin cyanide reference preparation (4th ed.)"

\*5: CLSI H7-A3

"Procedure for Determining Packed Cell Volume by the Microhematocrit Method – 3rd edition; Approved Standard"

\*6: Laboratory Hematology, 7, 148-170, 2001

"Recommendations for reference method for the packed cell volume (ICSH Standard 2001)"