

# CALIBRATION CERTIFICATE

Certificate No. 0076

Customer: Sunrise Pathology Laboratory  
Ahmedabad.  
Gujarat

Date of Calibration: 12-08-2022  
Working Temperature:  $25^{\circ} \pm 1^{\circ} \text{C}$   
Due Date: 11-08-2023  
Serial no. DM10011938016

Instrument: Fully Auto 3 Part Haematology Analyzer

Model: "DH 36"

Manufacturer: SHENZHEN DYMIND BIOTECHNOLOGY CO. LTD.

Acu Medica Lab Systems Pvt. Limited is an organization dealing with Dymind Auto Haematology Analyzer. It has a technically qualified Technical team to ensure trouble free operation. The Described instrument has been checked and calibrated under the ambient conditions stated below.

Power Supply			
UPS Supply	Expected Reading	Measured Reading	Remarks
Phase to Neutral	$230 \pm 10 \text{ VAC}$	232 VAC	Within Limits
Phase to Earth	$230 \pm 10 \text{ VAC}$	233 VAC	
Neutral to Earth	0 - 5 VAC	1 VAC	

Test Point Voltages	Measured Reading	Remarks
$5 \pm 0.15 \text{ VDC}$	5.0 VDC	Values are within Limits
$12 \pm 0.25 \text{ VDC}$	11.52 VDC	
$-12 \pm 0.25 \text{ VDC}$	-11.71 VDC	
$56 \pm 6.0 \text{ VDC}$	55.60 VDC	
$3.3 \pm 0.13 \text{ VDC}$	3.26 VDC	

	Measured Value	Range	Remarks
HGB Zero (V)	0.0	0.0 - 0.20	Within Range
HGB Blank (V)	4.56	3.4 - 4.8	
Vacuum	184	175 - 205	

Test Point Voltages	Status	Remarks
Pressure	Normal	All Parts are working well & Adjustment not required.
Vacuum	Normal	
Filter	Normal	
Syringe Motor Check	Normal	
Rotation Motor Check	Normal	
Elevator Motor Check	Normal	
Printer/Recorder Check	Normal	

	Status	Remarks
System Initialization	Okay	Working Well.
Key Board Check	Okay	
Display Check	Okay	

Acu Medica Lab Systems (P) Ltd.

D-109, Kanakia Zillion, LBS Road, Kurla - West, Mumbai, 400070, Maharashtra, India

T: +91 22 62501000 W: [www.acumedica.in](http://www.acumedica.in)

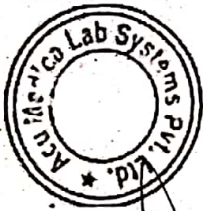
Parameters Tested	Target Values	Acceptable Range	Units
White Blood Cells (WBC)	9.26	$\pm 0.20$	$10^3/\mu\text{L}$
Red Blood Cells (RBC)	4.69	$\pm 0.08$	$10^6/\mu\text{L}$
Haemoglobin (HGB)	13.4	$\pm 0.20$	g/ dL
Mean Cell Volume (MCV)	88.6	$\pm 2.00$	fL
Platelet (PLT)	254	$\pm 12$	$10^3/\mu\text{L}$

This Instrument and the above measuring parameters are calibrated with R & D Systems Inc. DM-CAL PLUS Haematology Calibrator. Lot no. N0822 Exp. Date: 10/09/2022 the estimated uncertainty to be associated with the results is at a confidence level of approximately 99%.

REMARKS/DEVIATIONS IF ANY:

1. The calibration interval should be determined based on the user's requirements.
2. The user should be determining the stability of the instrument for its intended use.
3. The results stated in this certificate related only to the instrument calibrated.

Calibrated By:



Vasudev Tank  
Sr. Area Service Manager - Gujarat  
+91 9998999573

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**SERVICE REPORT**

SR. No. :

CUSTOMER DETAILS		INSTRUMENT DETAILS			SERVICE STATUS	
NAME: <i>Sunrise</i> ADDRESS: <i>Pathology Lab</i> <i>Chandkheda</i> <i>A'wad</i> TEL. NO. : CONTACT PERSON : <i>M. Akhobhai</i>		MODEL: <i>DH36</i> EQUIP. SL. NO.: <i>DM1001938016</i> VERSION : CALL DETAILS:      DATE    TIME COMPLAINT RECD <i>10/8/22</i> START <i>12/8/22</i> COMPLETED <i>12/8/22</i> TRAVEL TIME DAILY WORKLOAD			WARRANTY CMC AMC <input checked="" type="checkbox"/> PREVENTIVE MAINTENANCE <i>Calibration</i> WORK CARRIED OUT AT <input checked="" type="checkbox"/> SITE <input type="checkbox"/> WHERE HOUSE	
PROBLEM REPORTED: <i>Need Calibration of m/c..</i>						
OBSERVATION :						
ACTION TAKEN : <i>Done the PM of m/c..</i> <i>Done the Calibration of m/c. by calibrator</i> <i>Lot No. N0822. All the results are within</i> <i>range.</i> <i>Calibration done successfully.</i> <i>m/c is working ok.</i>						
<input type="checkbox"/> FOLLOWING PARTS HAVE BEEN REPLACED <input type="checkbox"/> FOLLOWING PARTS NEED TO BE REPLACED PLEASE APPROVE						
PART NO.	DESCRIPTION	COST	QTY.	TOTAL	TO BE FILLED BY CUSTOMER	
					<input type="checkbox"/> COMMENTS (IF ANY).	
	TOTAL RS				SEAL	
FOLLOW-UP ACTION:					CUSTOMER SIGNATURE	
ENGINEER NAME: <i>Vasudeo Tame</i>					<i>Akh</i> <i>12/08/22</i>	
SIGNATURE: <i>Vasudeo Tame</i>					DATE & TIME <i>12/8/22</i>	
					CUSTOMER NAME: <i>Aksh Patel</i>	

Acu Medica Lab Systems (P) Ltd.

B-518/519, Nand Dham, 59, Sector-11, CBD Belapur, Navi Mumbai, 400614, Maharashtra, India Tel : +91 22 6187 8888 Website : www.acumedica.in



# DM-CAL

## HEMATOLOGY CALIBRATOR

Reference Values provided by DYMIND

**CALIBRATOR**

LOT N0822

2022-07-13

2022-09-10

Applicable Instrument	Parameter	Unit	Reference Value
DH31, DH33, DH36 (Technical File Version A5.0 or higher) DH31 Vet, DH36 Vet (Technical File Version A1.0 to A4.0)	WBC	$\times 10^9/L$	9.26
	RBC	$\times 10^{12}/L$	4.69
	HGB	g/L	134
	MCV	fL	88.6
	PLT	$\times 10^9/L$	254
DH20, DH21, DH22 DH23, DH25, DH26 (Technical File Version A1.0 or higher)	WBC	$\times 10^9/L$	9.17
	RBC	$\times 10^{12}/L$	4.57
	HGB	g/L	131
	MCV	fL	81.6
	PLT	$\times 10^9/L$	258
DH31Vet, DH36Vet (Technical File Version A5.0 or higher)	WBC	$\times 10^9/L$	9.24
	RBC	$\times 10^{12}/L$	4.44
	HGB	g/L	130
	MCV	fL	90.3
	PLT	$\times 10^9/L$	246
DH36X (Technical File Version A1.0 or higher)	WBC	$\times 10^9/L$	9.44
	RBC	$\times 10^{12}/L$	4.56
	HGB	g/L	130
	MCV	fL	85.5
	PLT	$\times 10^9/L$	252

**【NOTE】**

1. The calibrator should be stored in refrigerator (2°C~8°C). After opening, it will keep stable for 7 days when it is stored airtight at 2°C~8°C.
2. Before mixing and running the calibrator after take it out from the refrigerator, please keep it at least 15 minutes until reaching room temperature(15°C~30°C).
3. Calibrator must be well mixed before using. Please mix gently, to avoid cells rupture and/or generating bubbles.
4. After using, put the calibrator back into the refrigerator to prevent contamination and evaporation.

Para.	WBC	RBC	HGB	MCV	PLT	MPV
Target	9.26	4.69	13.4	88.6	254	
1	10.60	5.27	14.0	94.1	280	
2	10.75	5.20	14.0	93.9	285	
3	10.55	5.22	13.8	93.9	273	
4	10.46	5.27	14.0	93.8	278	
5	10.47	5.22	13.8	93.9	278	
6	10.32	5.17	14.0	93.9	274	
Mean	10.525	5.225	13.93	93.92	278.0	
CV(%)	1.4	0.8	0.7	0.1	1.6	
Coefficient (%)	87.98	89.76	96.17	94.34	91.37	

Lot No.

N0822

Exp. Date

10/09/2022

Mode

Whole Blood

Predilute

Clear

Print

Save