

# HORIBA

**HORIBA India Private Limited**

246, Okhla Industrial Estate Phase-III,  
New Delhi 110020, India  
Tel : +91 (11) 4646 5000 / 4669 5001  
https://www.horiba.com  
CIN : U73100DL2006PTC153232

Dated: 07/07/2022

## CALIBRATION CERTIFICATE

This is to certify that the Hematology analyzer Model:YUMIZEN 550 bearing Sr.No:205YAXH03767 and installed at REDCLIFFE LIFETECH PVT.LTD TAMILNADU CHENNAI – 600037 was calibrated on 07/07/2022.

The CV of repeatability check, Background, Calibrator and Control values were all found in range. Done the Calibration by using the ABX MINOCAL. The next calibration due is on 06/07/2023.

Calibration done and the instrument is working satisfactorily.

ABX MINOCAL Lot No.: CX 472  
Expiry Date: 06/08/2022

Thanking You

ENGINEER CUSTOMER SUPPORT  
ASHWIN KUMAR S  
For HORIBA MEDICAL,  
HORIBA INDIA PVT LIMITED.



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### Blank Cycle Logs

Running Date Comments	Operator	WBC 10 <sup>9</sup> /μL	RBC 10 <sup>9</sup> /μL	HGB g/dL	PLT 10 <sup>9</sup> /μL	Status	Technical alarms
07/07/2022 01:28:15 PM	technician	0.20	0.00	0.0	1	Passed	
07/07/2022 03:41:11 PM	REDCLIFFE	0.05	0.00	0.0	4	Passed	



12/21/2022 03:53:27 PM

Printed by : technician

S/N 205YAXH03767

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## Calibration Report

Sample ID CX472  
Lot number CX472

Name CX472

Exp. date 08/06/2022  
Modified on

Coefficient	WBC	RBC	HGB	HCT	PLT	MPV
New	1.134	0.952	1.016	1.039	0.987	1.047
Current	1.134	0.952	1.016	1.039	0.987	1.047
Target	8.90	4.52	13.0	38.0	251	10.7
Mean	8.57	4.18	12.6	35.9	234	10.1
CV(%)	1.65	1.57	1.16	1.77	2.44	1.68

Number of calibration run selected for coefficient calculation (minimum 5) 11/11

Sel.	Run Time	WBC (10 <sup>3</sup> /μL)	RBC (10 <sup>6</sup> /μL)	HGB (g/dL)	HCT (%)	PLT (10 <sup>3</sup> /μL)	MPV (μm <sup>3</sup> )
✓	07/07/2022 01:37:58 PM	8.54	4.24	12.9	36.7	232	9.8
✓	07/07/2022 01:39:41 PM	8.71	4.29	12.7	36.8	239	10.2
✓	07/07/2022 01:41:25 PM	8.60	4.25	12.8	36.4	244	10.2
✓	07/07/2022 01:43:12 PM	8.66	4.20	12.8	36.0	241	10.2
✓	07/07/2022 01:44:58 PM	8.79	4.21	12.7	36.0	231	10.3
✓	07/07/2022 01:46:44 PM	8.66	4.20	12.7	35.8	229	10.0
✓	07/07/2022 01:50:22 PM	8.45	4.14	12.6	35.6	232	9.9
✓	07/07/2022 01:52:08 PM	8.43	4.17	12.5	35.7	226	10.0
✓	07/07/2022 01:54:25 PM	8.41	4.07	12.5	34.8	231	10.2
✓	07/07/2022 01:56:16 PM	8.64	4.11	12.5	35.0	229	10.3
✓	07/07/2022 01:58:02 PM	8.35	4.14	12.5	35.6	234	10.0

*R. D. H.*

12/21/2022 03:42:38 PM

Printed by : technician

S/N205YAXH03767

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QC - Control Run Report

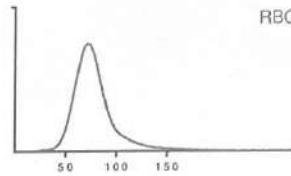
Run Date 07/07/2022 02:12:04 PM

Operator technician

Name ABXdiffrol L  
Level Low  
Lot number PX436L

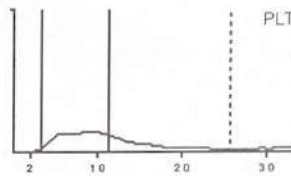
Sample ID PX436L  
Exp. date 09/05/2022

			Range
RBC	2.43	10 <sup>6</sup> /μL	2.29 - 2.61
HGB	6.2	g/dL	5.9 - 6.7
HCT	19.7	%	18.1 - 21.1
MCV	81.2	μm <sup>3</sup>	75.0 - 85.0
MCH	25.7	pg	23.7 - 27.7
MCHC	31.6	g/dL	29.1 - 35.1
RDW-CV	15.7	%	13.0 - 21.0

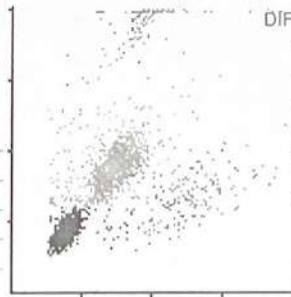


Alarms

			Range
PLT	84	10 <sup>3</sup> /μL	59 - 99
MPV	10.5	μm <sup>3</sup>	8.6 - 12.6



WBC			Range	
3.30	10 <sup>3</sup> /μL	2.60 - 3.40		
	#	Range	%	Range
NEU	1.61	0.94 - 1.64	48.9	33.0 - 53.0
LYM	1.21	0.84 - 1.50	36.5	27.0 - 51.0
MON	0.24	0.00 - 0.52	7.2	0.0 - 17.4
EOS	0.20	0.00 - 0.34	6.1	0.0 - 11.0
BAS	0.04	0.00 - 0.22	1.3	0.0 - 7.6



Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :

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QC - Control Run Report

Run Date 07/07/2022 02:02:21 PM

Operator technician

Name ABXdifftrol N

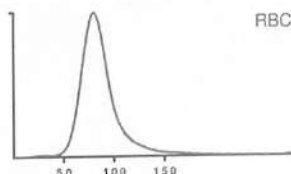
Sample ID PX436N

Level Normal

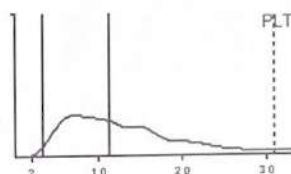
Exp. date 09/05/2022

Lot number PX436N

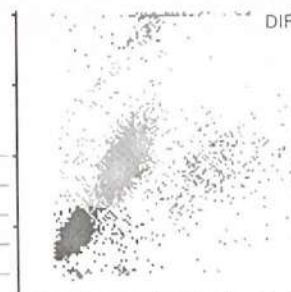
			Range
RBC	4.70	10 <sup>6</sup> /μL	4.40 - 4.80
HGB	12.9	g/dL	12.7 - 13.7
HCT	41.8	%	38.5 - 42.5
MCV	88.8	μm <sup>3</sup>	83.0 - 93.0
MCH	27.5	pg	26.7 - 30.7
MCHC	31.0	g/dL	29.6 - 35.6
RDW-CV	12.5	%	10.5 - 18.5



			Range
PLT	246	10 <sup>3</sup> /μL	221 - 281
MPV	12.0	μm <sup>3</sup>	9.8 - 13.8



WBC	8.67	10 <sup>3</sup> /μL	Range 7.40 - 9.40	
	#	Range	%	Range
NEU	4.27	3.08 - 4.88	49.3	37.2 - 57.2
LYM	3.58	2.85 - 4.25	41.3	34.3 - 50.3
MON	0.46	0.03 - 0.85	5.3	0.0 - 10.4
EOS	0.30	0.00 - 0.56	3.4	0.0 - 6.6
BAS	0.06	0.00 - 0.30	0.7	0.0 - 3.6



Alarms

Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :

*R. J. M.*

12/21/2022 03:41:47 PM

Printed by : REDCLIFFE

S/N 205YAXH03767

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QC - Control Run Report

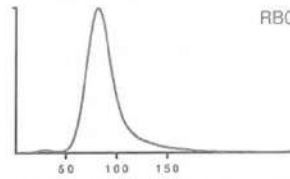
Run Date | 07/07/2022 02:06:05 PM

Operator | technician

Name | ABXdifftrol H  
Level | High  
Lot number | PX436H

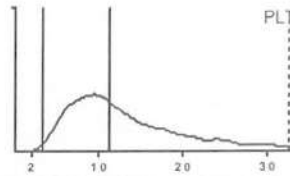
Sample ID | PX436H  
Exp. date | 09/05/2022

			Range
RBC	5.30	10 <sup>6</sup> /μL	4.84 - 5.34
HGB	15.8	g/dL	14.9 - 16.1
HCT	48.5	%	44.8 - 49.8
MCV	91.4	μm <sup>3</sup>	88.0 - 98.0
MCH	29.7	pg	28.0 - 33.0
MCHC	32.5	g/dL	29.7 - 35.7
RDW-CV	12.0	%	8.0 - 16.0

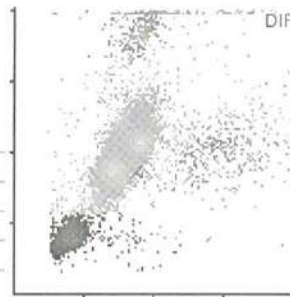


Alarms

			Range
PLT	523	10 <sup>3</sup> /μL	455 - 555
MPV	12.4	μm <sup>3</sup>	9.7 - 13.7



WBC	18.78	10 <sup>3</sup> /μL	Range	
	#	Range	%	Range
NEU	13.45	10.16 -	71.7	59.3 - 79.3
LYM	3.73	2.33 - 5.33	19.9	14.0 - 30.0
MON	0.57	0.00 - 0.84	3.0	0.0 - 4.8
EOS	0.89	0.00 - 1.54	4.7	0.0 - 8.8
BAS	0.14	0.00 - 0.66	0.7	0.0 - 3.8



Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :

*R. J. H.*  
12/21/2022 08:41:32 PM

Printed by : REDCLIFFE

S/N 205YXH03767

Manufactured By:  
**HORIBA India Private Limited**  
 (A subsidiary of HORIBA Limited Japan)  
 Plot No.26, Sector-7, I.I.E, SIDCUL,  
 Haridwar-249403, Uttarakhand, India  
 Toll Free No.: 1800 103 4470

ABX Minocal



LOT		CX 471		CAL		(Exp.) 2022-07-05				
		Rev. 1				(YYYY-MM-DD)				
PARAMETRES PARAMETERS	UNITES UNITS	WHITEDIFF								TOLERANCES TOLERANCE
		YUMIZEN H550	YUMIZEN H500 CT H500 CT							
GB WBC	10 <sup>3</sup> /mm <sup>3</sup> , 10 <sup>3</sup> /μl	8.90	8.90							± 0.20
GR RBC	10 <sup>12</sup> /mm <sup>3</sup> , 10 <sup>12</sup> /μl	4.52	4.52							± 0.06
HB HGB	g/dl	13.0	13.0							± 0.2
	g/l	130	130							± 2
	mmol/l	8.07	8.07							± 0.12
HT HCT	%	38.0	38.0							± 1.0
	l/l	0.380	0.380							± 0.010
PLAQ. PLTS	10 <sup>7</sup> /mm <sup>3</sup> , 10 <sup>7</sup> /μl	251	251							± 10
VPM MPV	μm <sup>3</sup> , fl	10.7	10.7							± 0.5

Ref. TEMP-0387 Rev.47 BACK / VERSO 1300060881

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QC - Control Run Report

Run Date | 12/21/2022 08:21:46 AM

Operator | REDCLIFFE

Name | ABXdifftrol L

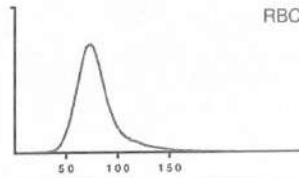
Sample ID | PX438L

Level | Low

Exp. date | 01/05/2023

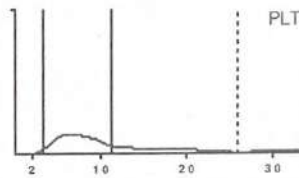
Lot number | PX438L

			Range
RBC	2.35	10 <sup>6</sup> /μL	2.18 - 2.50
HGB	6.2	g/dL	5.8 - 6.6
HCT	19.4	%	17.2 - 20.2
MCV	82.5	μm <sup>3</sup>	75.0 - 85.0
MCH	26.3	pg	24.5 - 28.5
MCHC	31.8	g/dL	30.1 - 36.1
RDW-CV	15.6	%	13.0 - 21.0

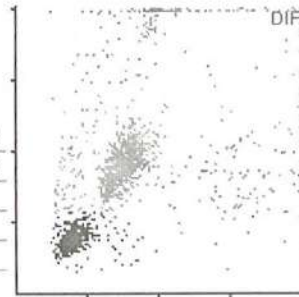


Alarms

			Range
PLT	59	10 <sup>3</sup> /μL	45 - 85
MPV	9.8	μm <sup>3</sup>	7.5 - 11.5



			Range		Range
WBC	3.18	10 <sup>3</sup> /μL	2.55 - 3.35		
	#			%	Range
NEU	1.50		1.02 - 1.72	47.4	36.3 - 56.3
LYM	1.17		0.77 - 1.43	36.7	25.2 - 49.2
MON	0.17		0.01 - 0.43	5.3	0.0 - 15.0
EOS	0.30		0.02 - 0.36	9.3	0.3 - 12.7
BAS	0.04		0.00 - 0.14	1.3	0.1 - 4.9



Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :



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QC - Control Run Report

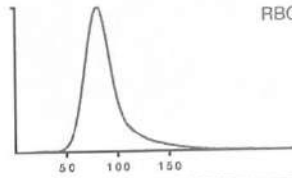
Run Date | 12/21/2022 08:27:27 AM

Operator | REDCLIFFE

Name | ABXdiffrol N  
Level | Normal  
Lot number | PX438N

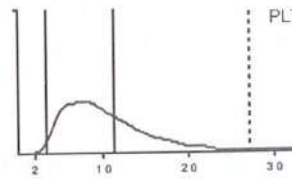
Sample ID | PX438N  
Exp. date | 01/05/2023

			Range
RBC	4.60	10 <sup>6</sup> /μL	4.49 - 4.89
HGB	13.7	g/dL	13.4 - 14.4
HCT	41.7	%	39.7 - 43.7
MCV	90.5	μm <sup>3</sup>	84.0 - 94.0
MCH	29.7	pg	27.6 - 31.6
MCHC	32.8	g/dL	30.3 - 36.3
RDW-CV	13.2	%	10.5 - 18.5

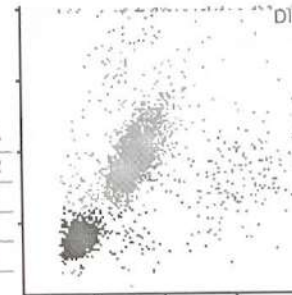


Alarms

			Range
PLT	229	10 <sup>3</sup> /μL	209 - 269
MPV	9.8	μm <sup>3</sup>	7.7 - 11.7



			Range	
WBC	8.03	10 <sup>3</sup> /μL	7.30 - 9.30	
	#		Range	%
NEU	4.20		3.20 - 5.00	52.2
LYM	3.22		2.64 - 4.04	40.1
MON	0.30		0.05 - 0.81	3.8
EOS	0.23		0.04 - 0.46	2.9
BAS	0.08		0.00 - 0.36	1.0
			Range	
			39.4 - 59.4	
			32.2 - 48.2	
			0.4 - 10.0	
			0.4 - 5.6	
			0.0 - 4.4	



*J. J. J.*

Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :

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QC - Control Run Report

Run Date | 12/21/2022 08:30:37 AM

Operator | REDCLIFFE

Name | ABXdifftrol H

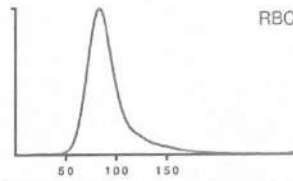
Sample ID | PX438H

Level | High

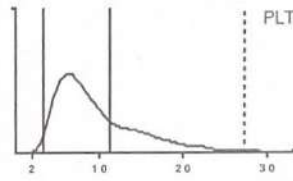
Exp. date | 01/05/2023

Lot number | PX438H

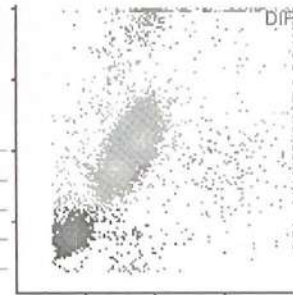
			Range
RBC	5.20	10 <sup>6</sup> /μL	5.04 - 5.54
HGB	15.7	g/dL	15.5 - 16.7
HCT	49.1	%	46.2 - 51.2
MCV	94.4	μm <sup>3</sup>	87.0 - 97.0
MCH	30.2	pg	27.9 - 32.9
MCHC	31.9	g/dL	30.1 - 36.1
RDW-CV	13.4	%	10.5 - 18.5



			Range
PLT	463	10 <sup>3</sup> /μL	440 - 540
MPV	9.2	μm <sup>3</sup>	7.0 - 11.0



			Range	
WBC	17.74	10 <sup>3</sup> /μL	15.70 - 20.10	
	#		Range	%
NEU	12.75		10.50 - 15.29	71.7
LYM	3.68		2.29 - 5.29	20.8
MON	0.40		0.01 - 1.07	2.3
EOS	0.74		0.03 - 1.33	4.2
BAS	0.17		0.00 - 0.96	1.0
			Range	
			59.3 - 79.3	
			13.2 - 29.2	
			0.0 - 6.0	
			0.1 - 7.5	
			0.0 - 5.4	



Alarms

*Handwritten signature*

Slide Review

Neutrophil	Myeloblast	Anisocytosis
Lymphocyte	Promyelocyte	Hypochromia
Monocyte	Myelocyte	Polychromasia
Eosinophil	Metamyelocyte	Poikilocytosis
Basophil	Blast	Microcytosis
Atypical Lymphocyte	Target Cell	Macrocytosis
Other	Sickle Cell	Platelet Clumps

Reviewed on \_\_\_\_\_ by \_\_\_\_\_ Signature :