

**HORIBA**

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**HORIBA India Private Ltd.**

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HIN/MED/2023-2024/00321

18<sup>th</sup> May 2023.

**CALIBRATION CERTIFICATE**

This is to certify that the Hematology Analyzer ABX Yumizen H550 bearing serial number:  
908YAXH02532 installed at REDCLIFFE LIFETECH PVT LTD, JODHPUR Calibrated on 18<sup>th</sup> May 2023.

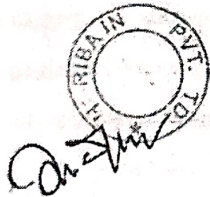
Calibrator : ABX MINOCAL

Lot No. : CX483

Expiry Date : 05<sup>th</sup> August 2023.

The reports of Blank Cycle, Repeatability and Calibration Values were all found in acceptable range.

Next calibration cycle is due on 17<sup>th</sup> May 2024.

A circular stamp with the text "HORIBA INDIA PVT. LTD." around the perimeter. Overlaid on the stamp is a handwritten signature in black ink.

**Shrish Dixit**

(Head- Products & Marketing)

For Horiba India Pvt. Ltd.

Explore the Future

Automotive Test Systems | Process & Environment | Medical | Semiconductor | Scientific

**HORIBA**  
Explore the future



Scanned with OKEN Scanner

## Calibration Report

Sample ID CX483  
Lot number CX483

Name ABX MINOCAL

Exp. date 05/07/2023  
Modified on

Coefficient	WBC	RBC	HGB	HCT	PLT	MPV
New	1.203 H	0.965	1.033	1.027	0.992	1.028
Current	1.203 H	0.965	1.033	1.027	0.992	1.028
Target	8.90	4.52	12.8	37.1	258	10.3
Mean	8.51	4.52	12.7	37.2	268	10.3
CV(%)	1.46	1.42	0.95	1.74	2.97	0.98

Number of calibration run selected for coefficient calculation (minimum 5) 10/11

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> )
	18/05/2023 03:50:04 PM	8.56 I	4.45 I	12.6 I	36.9	266	10.2
✓	18/05/2023 03:51:39 PM	8.80	4.62 h	12.7	38.5 h	264	10.2
✓	18/05/2023 03:53:13 PM	8.45 I	4.48	12.6	36.6	267	10.4
✓	18/05/2023 03:54:47 PM	8.50 I	4.48	12.7	36.8	266	10.3
✓	18/05/2023 03:56:24 PM	8.60 I	4.52	12.6 I	37.4	265	10.2
✓	18/05/2023 03:58:00 PM	8.40 I	4.57	12.9	37.7	269 h	10.1
✓	18/05/2023 03:59:40 PM	8.46 I	4.45 I	12.7	36.7	265	10.2
✓	18/05/2023 04:01:16 PM	8.55 I	4.50	12.6 I	36.9	268 h	10.3
✓	18/05/2023 04:02:53 PM	8.39 I	4.42 I	12.5 I	36.3	252	10.3
✓	18/05/2023 04:04:31 PM	8.43 I	4.59 h	12.8	37.7	281 h	10.4
✓	18/05/2023 04:06:10 PM	8.48 I	4.52	12.7	37.1	279 h	10.2

## Repeatability Report (part 1)

Number of repeatability run report selected for statistic calculation 10/10

Coefficient	WBC (10 <sup>3</sup> /μL)	RBC (10 <sup>6</sup> /μL)	HGB (g/dL)	HCT (%)	PLT (10 <sup>3</sup> /μL)	MCV (μm <sup>3</sup> )	RDW-CV (%)	RDW-SD (μm <sup>3</sup> )	P-LCR (%)	
Minimum	7.67	3.78	11.1	32.9	188	86.5	12.9	49.6	56.9	
Maximum	8.27	3.92	11.4	34.3	210	87.5	13.9	52.9	60.8	
Mean	7.97	3.86	11.2	33.6	198	87.1	13.3	51.2	59.6	
Difference	0.60	0.14	0.4	1.4	22	1.0	0.9	3.4	4.0	
2 SD	0.39	0.09	0.3	0.9	15	0.6	0.6	2.1	2.4	
CV(%)	2.44	1.15	1.17	1.41	3.66	0.37	2.07	2.04	2.00	
Run Date & Time	WBC (10 <sup>3</sup> /μL)	RBC (10 <sup>6</sup> /μL)	HGB (g/dL)	HCT (%)	PLT (10 <sup>3</sup> /μL)	MCV (μm <sup>3</sup> )	RDW-CV (%)	RDW-SD (μm <sup>3</sup> )	P-LCR (%)	Operator
✓ 22/05/2023 07:25:40 PM	8.13	3.90	11.4	34.1	197 *	87.5	13.9	52.9	59.3	technician
✓ 22/05/2023 07:27:15 PM	7.78	3.85	11.1	33.5	192 *	86.9	13.2	50.4	60.2	technician
✓ 22/05/2023 07:28:49 PM	7.97	3.88	11.3	33.9	199 *	87.3	13.3	50.4	56.9	technician
✓ 22/05/2023 07:30:29 PM	7.72	3.83	11.1	33.1	206 *	86.5	12.9	49.6	58.4	technician
✓ 22/05/2023 07:32:09 PM	7.97	3.92	11.2	34.3	201 *	87.4	13.5	52.1	59.4	technician
✓ 22/05/2023 07:35:32 PM	8.00	3.89	11.3	33.9	210 *	87.0	13.0	50.4	59.6	technician
✓ 22/05/2023 07:37:06 PM	8.27	3.90	11.4	34.0	203 *	87.3	13.5	52.1	60.5	technician
✓ 22/05/2023 07:38:40 PM	8.10	3.82	11.1	33.4	202 *	87.3	13.5	52.1	60.6	technician
✓ 22/05/2023 07:48:20 PM	7.67	3.78	11.2	32.9	189 *	86.9	13.3	51.2	59.9	technician
✓ 22/05/2023 07:49:58 PM	8.11	3.84	11.1	33.3	188 *	86.7	13.2	51.2	60.8	technician

*Amid  
Chouhan*



## Repeatability Report (part 2)

Number of repeatability run report selected for statistic calculation 10/10

Coefficient	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)	
Minimum	59.5	30.9	2.5	2.7	0.2	0.3	
Maximum	62.9	32.9	3.1	4.2	0.7	0.4	
Mean	61.0	32.1	2.8	3.3	0.4	0.3	
Difference	3.4	2.0	0.6	1.5	0.5	0.1	
2 SD	1.7	1.2	0.4	0.9	0.3	0.1	
CV(%)	1.43	1.79	7.06	13.63	37.17	13.18	

Run Date &Time	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)	Operator
✓ 22/05/2023 07:25:40 PM	62.9	30.9	2.7	2.9	0.3	0.3	technician
✓ 22/05/2023 07:27:15 PM	60.8	31.8	2.9	3.7	0.4	0.4	technician
✓ 22/05/2023 07:28:49 PM	61.4	31.8	2.9	3.4	0.2	0.3	technician
✓ 22/05/2023 07:30:29 PM	60.3	32.5	2.9	3.7	0.3	0.3	technician
✓ 22/05/2023 07:32:09 PM	60.7	31.8	3.1	3.5	0.6	0.3	technician
✓ 22/05/2023 07:35:32 PM	61.4	32.4	2.5	2.7	0.7	0.3	technician
✓ 22/05/2023 07:37:06 PM	59.5	32.9	2.6	4.2	0.5	0.3	technician
✓ 22/05/2023 07:38:40 PM	61.0	32.4	2.7	3.2	0.4	0.3	technician
✓ 22/05/2023 07:48:20 PM	61.3	31.9	3.0	3.2	0.3	0.3	technician
✓ 22/05/2023 07:49:58 PM	61.1	32.6	2.6	2.9	0.4	0.4	technician



# ABX Minocal



**LOT** CX 472  
Rev 1

**CAL**

(Exp.) 2022-08-05  
(YYYY-MM-DD)

PARAMETRES PARAMETERS	UNITES UNITS	WHITEDIFF								TOLERANCES TOLERANCE	
		TUBES N°1 & N°2 a				TUBES N°3					
		H550	H500 OT H500 CT			H500 OT	H500 CT H550				
GB WBC	10 <sup>3</sup> /mm <sup>3</sup> ; 10 <sup>9</sup> /l	8.90	8.90			9.00	9.00				± 0.20
GR RBC	10 <sup>12</sup> /mm <sup>3</sup> ; 10 <sup>12</sup> /l	4.57	4.57			4.48	4.48				± 0.06
HB HGB	g/dl	13.2	13.2			13.3	13.3				± 0.2
	g/l	132	132			133	133				± 2
	mmol/l	8.20	8.20			8.26	8.26				± 0.12
HT HCT	%	38.6	38.6			35.0	35.0				± 1.0
	l/l	0.386	0.386			0.350	0.350				± 0.010
PLA PLT	10 <sup>9</sup> /mm <sup>3</sup> ; 10 <sup>9</sup> /l	256	256			255	255				± 10
WMP MPV	µm <sup>3</sup> ; fl	10.9	10.9			10.6	10.6				± 0.5

Ref: TEMB-0387 Rev 48 BACK / VERSO 1300105208

**QC - Control Run Report**

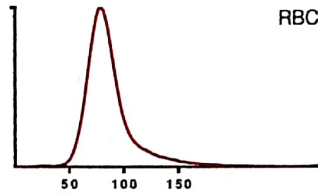
Run Date 18/05/2023 09:26:01 AM

Operator technician

Name ABXdifftrol N  
Level Normal  
Lot number PX441N

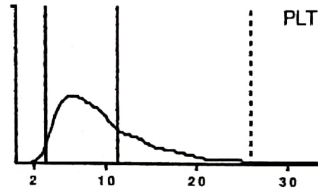
Sample ID PX441N  
Exp. date 05/07/2023

			Range
RBC	4.62	10 <sup>6</sup> /μL	4.39 - 4.79
HGB	12.9	g/dL	12.7 - 13.7
HCT	40.6	%	37.9 - 41.9
MCV	87.9	μm <sup>3</sup>	82.0 - 92.0
MCH	28.1	pg	26.8 - 30.8
MCHC	31.9	g/dL	30.1 - 36.1
RDW-CV	12.2	%	11.0 - 19.0

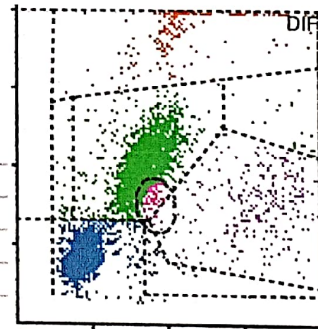


**Alarms**

			Range
PLT	253	10 <sup>3</sup> /μL	210 - 270
MPV	9.2	μm <sup>3</sup>	7.3 - 11.3



WBC	8.31	10 <sup>3</sup> /μL	Range	
NEU	#	Range	%	Range
NEU	4.03	2.97 - 4.77	48.6	37.2 - 57.2
LYM	3.35	2.74 - 4.14	40.3	34.0 - 50.0
MON	0.46	0.00 - 0.80	5.5	0.0 - 9.8
EOS	0.34	0.00 - 0.48	4.1	0.0 - 5.8
BAS	0.13	0.00 - 0.20	1.5	0.0 - 3.0



**Raw Data**

PLT counts (by sections)						RBC counts (by sections)					
S1	S2	S3	S4	S5	S6	S1	S2	S3	S4	S5	S6
248	234	247	255	280	244	4181	4093	3962	4166	4104	4003
S7	S8	S9	S10	S11	S12	S7	S8	S9	S10	S11	S12
225	237	235	232	250	270	4113	3987	4060	4076	4106	4072
WBC counts (by sections) and others						HBG measures (Optical intensity)					
S1	S2	S3	S4	S5	S6	LI1	LI2	LI3	LI4	LI5	LI6
545	554	543	528	523	527	3651	3657	3657	900	900	900
S7	S8	S9	S10	S11		LI7	LI8	LI9	LI10	LI11	LI12
524	463	557	543	563		899	900	900	899	900	899
RMeasured :	5388					LI13					
Correlated :	5363					899					
Optical intensity	193										

**QC - Control Run Report**

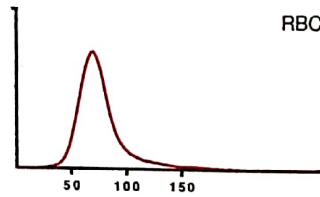
**Run Date** 18/05/2023 09:28:08 AM

**Operator** technician

**Name** ABXdifftrol L  
**Level** Low  
**Lot number** PX441L

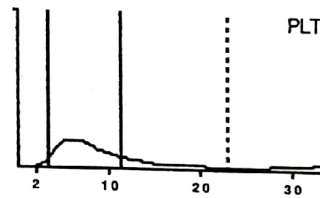
**Sample ID** PX441L  
**Exp. date** 05/07/2023

			Range
<b>RBC</b>	2.30	10 <sup>6</sup> /μL	2.16 - 2.48
<b>HGB</b>	5.7	g/dL	5.4 - 6.2
<b>HCT</b>	18.1	%	16.2 - 19.2
<b>MCV</b>	78.6	μm <sup>3</sup>	71.5 - 81.5
<b>MCH</b>	24.7	pg	23.0 - 27.0
<b>MCHC</b>	31.4	g/dL	29.7 - 35.7
<b>RDW-CV</b>	14.5	%	12.0 - 20.0

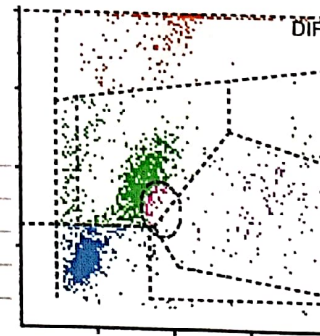


**Alarms**

			Range
<b>PLT</b>	79	10 <sup>3</sup> /μL	48 - 88
<b>MPV</b>	8.8	μm <sup>3</sup>	7.1 - 11.1



			Range
<b>WBC</b>	3.19	10 <sup>3</sup> /μL	2.50 - 3.30
	<b>#</b>	<b>Range</b>	<b>%</b>
<b>NEU</b>	1.33	0.84 - 1.54	41.8
<b>LYM</b>	1.20	0.88 - 1.54	37.4
<b>MON</b>	0.19	0.00 - 0.42	6.0
<b>EOS</b>	0.40	0.00 - 0.50	12.6
<b>BAS</b>	0.07	0.00 - 0.10	2.2



**Raw Data**

**PLT counts (by sections)**

S1	S2	S3	S4	S5	S6
113	102	108	120	124	126
S7	S8	S9	S10	S11	S12
111	137	109	112	108	132

**RBC counts (by sections)**

S1	S2	S3	S4	S5	S6
2202	2245	2183	2150	2204	2181
S7	S8	S9	S10	S11	S12
2199	2213	2184	2189	2162	2217

**WBC counts (by sections) and others**

S1	S2	S3	S4	S5	S6
189	192	236	196	194	206
S7	S8	S9	S10	S11	
199	228	210	219	193	

**HGB measures (Optical Intensity)**

LI1	LI2	LI3	LI4	LI5	LI6
3656	3656	3656	1942	1942	1941
LI7	LI8	LI9	LI10	LI11	LI12
1942	1943	1942	1942	1943	1943
LI13					
1944					

RMeasured : 2162  
 Correlated : 2125  
 Optical intensity : 193

**QC - Control Run Report**

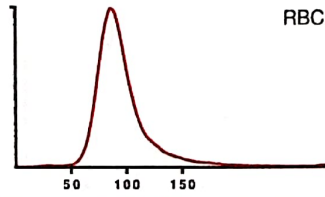
**Run Date** | 11/07/2023 09:55:04 AM

**Operator** | RCLJOD

**Name** | ABXdifftrol H  
**Level** | High  
**Lot number** | PX441H

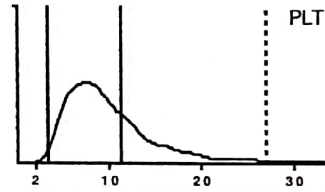
**Sample ID** | PX441H  
**Exp. date** | 02/10/2023

			Range
<b>RBC</b>	5.02	10 <sup>6</sup> /μL	4.86 - 5.36
<b>HGB</b>	15.5	g/dL	15.1 - 16.3
<b>HCT</b>	48.2	%	44.5 - 49.5
<b>MCV</b>	96.1	μm <sup>3</sup>	87.0 - 97.0
<b>MCH</b>	30.9	pg	28.2 - 33.2
<b>MCHC</b>	32.2	g/dL	30.4 - 36.4
<b>RDW-CV</b>	12.4	%	10.0 - 18.0

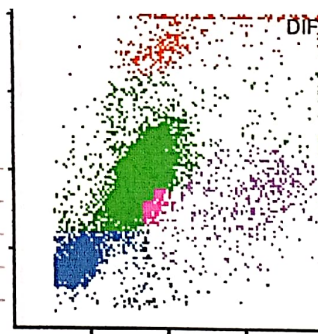


**Alarms**

			Range
<b>PLT</b>	493	10 <sup>3</sup> /μL	439 - 539
<b>MPV</b>	9.3	μm <sup>3</sup>	7.3 - 11.3



			Range
<b>WBC</b>	18.20	10 <sup>3</sup> /μL	16.20 - 20.60
	<b>#</b>	<b>Range</b>	<b>%</b>
<b>NEU</b>	12.83	10.67 -	70.4
<b>LYM</b>	3.29	2.12 - 5.12	18.1
<b>MON</b>	0.86	0.00 - 1.48	4.7
<b>EOS</b>	0.72	0.00 - 1.44	4.0
<b>BAS</b>	0.50	0.00 - 1.50	2.8



**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 :



**QC - Control Run Report**

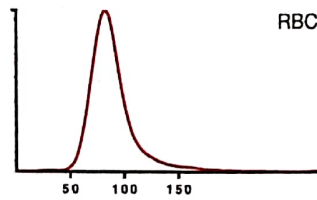
**Run Date** 11/07/2023 09:50:21 AM

**Operator** RCLJOD

**Name** ABXdifftrol N  
**Level** Normal  
**Lot number** PX441N

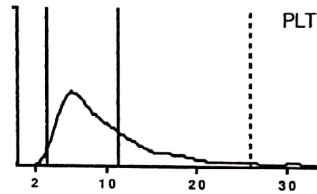
**Sample ID** PX441N  
**Exp. date** 02/10/2023

			Range
<b>RBC</b>	4.57	10 <sup>6</sup> /μL	4.39 - 4.79
<b>HGB</b>	13.4	g/dL	12.7 - 13.7
<b>HCT</b>	41.0	%	37.9 - 41.9
<b>MCV</b>	89.7	μm <sup>3</sup>	82.0 - 92.0
<b>MCH</b>	29.3	pg	26.8 - 30.8
<b>MCHC</b>	32.7	g/dL	30.1 - 36.1
<b>RDW-CV</b>	11.9	%	11.0 - 19.0

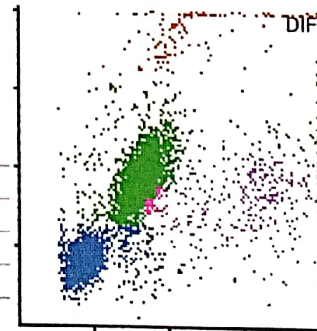


**Alarms**

			Range
<b>PLT</b>	238	10 <sup>3</sup> /μL	210 - 270
<b>MPV</b>	9.1	μm <sup>3</sup>	7.3 - 11.3



			Range
<b>WBC</b>	8.51	10 <sup>3</sup> /μL	7.20 - 9.20
	<b>#</b>	<b>Range</b>	<b>%</b>
<b>NEU</b>	4.04	2.97 - 4.77	47.5
<b>LYM</b>	3.59	2.74 - 4.14	42.1
<b>MON</b>	0.51	0.00 - 0.80	6.0
<b>EOS</b>	0.26	0.00 - 0.48	3.1
<b>BAS</b>	0.11	0.00 - 0.50	1.3



**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 :

**QC - Control Run Report**

**Run Date** 11/07/2023 11:19:02 AM

**Operator** RCLJOD

**Name** ABXdifftrol L

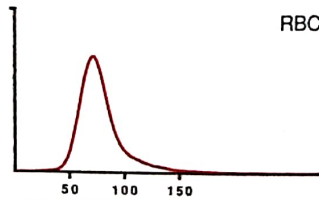
**Sample ID** PX441L

**Level** Low

**Exp. date** 02/10/2023

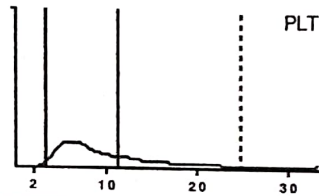
**Lot number** PX441L

			Range
<b>RBC</b>	2.21	10 <sup>6</sup> /μL	2.16 - 2.48
<b>HGB</b>	5.6	g/dL	5.4 - 6.2
<b>HCT</b>	17.9	%	16.2 - 19.2
<b>MCV</b>	80.7	μm <sup>3</sup>	71.5 - 81.5
<b>MCH</b>	25.5	pg	23.0 - 27.0
<b>MCHC</b>	31.6	g/dL	29.7 - 35.7
<b>RDW-CV</b>	14.4	%	12.0 - 20.0

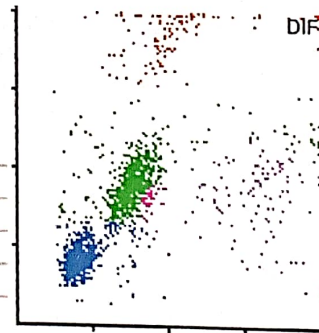


**Alarms**

			Range
<b>PLT</b>	71	10 <sup>3</sup> /μL	48 - 88
<b>MPV</b>	9.6	μm <sup>3</sup>	7.1 - 11.1



			Range
<b>WBC</b>	2.86	10 <sup>3</sup> /μL	2.50 - 3.30
	<b>#</b>	<b>Range</b>	<b>%</b>
<b>NEU</b>	1.21	0.84 - 1.54	42.5
<b>LYM</b>	1.21	0.88 - 1.54	42.2
<b>MON</b>	0.17	0.00 - 0.42	5.9
<b>EOS</b>	0.21	0.00 - 0.36	7.3
<b>BAS</b>	0.06	0.00 - 0.22	2.1



**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 :