

**HORIBA**

Explore the future

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HIN/MED/2022-2023/100711

04<sup>th</sup> Nov 2022

### CALIBRATION CERTIFICATE

This is to certify that the Hematology Analyzer ABX YUMIZEN H550 bearing serial number: **208YAXH03891** installed at **REDCLFFE LIFETECH PVT. LTD., RANCHI** calibrated on 04<sup>th</sup> Nov 2022

Calibrator : ABX MINOCAL

Lot No. : CX475

Expiry Date : 05<sup>th</sup> Nov 2022

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

Next calibration cycle is due on 03<sup>rd</sup> Nov 2023.



**Shrish Dixit**

(Head- Products & Marketing)

For Horiba India Pvt. Ltd.

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

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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
11/15/2022 05:44:48 PM	REDCLIFFE	0.18	0.00	0.0	4	Passed	

12/11/2022 11:05:58 AM

Printed by : technician

S/N 208YAXH03891

1

## Calibration Report

Sample ID CX475  
Lot number CX475

Name MINOCAL

Exp. date 11/06/2022  
Modified on 11/05/2022

Coefficient	WBC	RBC	HGB	HCT	PLT	MPV
New	1.074	0.868	0.949	0.970	0.941	1.104
Current	1.079	0.843	0.949	1.051	0.922	0.987
Target	9.15	4.57	13.1	38.2	245	10.4
Mean	9.19	4.44	13.1	40.2	240	9.3
CV(%)	0.97	1.45	0.68	1.51	3.97	1.80

Number of calibration run selected for coefficient calculation (minimum 5) 8/8

Sel.	Run Time	WBC (10 <sup>3</sup> /μL)	RBC (10 <sup>9</sup> /μL)	HGB (g/dL)	HCT (%)	PLT (10 <sup>3</sup> /μL)	MPV (μm <sup>3</sup> )
✓	11/05/2022 07:12:44 PM	9.08	4.47	13.2	40.5 h	220	9.1
✓	11/05/2022 07:14:37 PM	9.22	4.49	13.2	40.8 h	246	9.3
✓	11/05/2022 07:16:14 PM	9.26	4.38	13.2	39.7 h	232	9.4
✓	11/05/2022 07:17:45 PM	9.09	4.52	13.2	40.9 h	250	9.5
✓	11/05/2022 07:19:29 PM	9.17	4.40	13.0	39.7 h	238	9.4
✓	11/05/2022 07:21:01 PM	9.28	4.32	13.1	39.1	241	9.4
✓	11/05/2022 07:22:37 PM	9.13	4.46	13.1	40.4 h	242	9.7
✓	11/05/2022 07:24:20 PM	9.32	4.45	13.1	40.3 h	247	9.2

11/18/2022 03:42:28 PM

Printed by : technlclan

S/N208YAXH03891

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## Repeatability Report (part 1)

Number of repeatability run report selected for statistic calculation 8/12

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	4.95	5.08	14.9	44.5	78	86.9	11.6	40.3	47.6
Maximum	5.18	5.31	15.5	46.9	88	88.3	12.7	43.7	55.2
Mean	5.07	5.23	15.3	45.8	82	87.7	12.3	42.4	50.9
Difference	0.22	0.23	0.6	2.4	10	1.4	1.1	3.4	7.6
2 SD	0.13	0.17	0.4	1.5	7	0.9	0.8	2.4	4.9
CV(%)	1.32	1.63	1.47	1.64	4.00	0.50	3.17	2.80	4.87

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
✓ 11/15/2022 06:35:22 PM	5.11	5.27	15.5	45.8	80 *	86.9	11.6	40.3	50.9 *	technician
✓ 11/15/2022 06:37:09 PM	5.18	5.28	15.4	46.1	88 *	87.2	12.0	41.2	47.6 *	technician
✓ 11/15/2022 06:38:39 PM	5.10	5.30	15.5	46.5	85 *	87.7	12.1	42.0	51.7 *	technician
✓ 11/15/2022 06:40:16 PM	5.06	5.31	15.4	46.9	81 *	88.3	12.7	43.7	48.7 *	technician
✓ 11/15/2022 06:41:54 PM	5.09	5.23	15.2	46.0	80 *	87.8	12.4	42.8	50.5 *	technician
✓ 11/15/2022 06:43:32 PM	5.02	5.21	15.1	45.7	82 *	87.7	12.4	42.8	53.0 *	technician
11/15/2022 06:45:07 PM	4.96	5.12	15.0	45.3	73 *	88.4	12.1	42.0	45.8 *	technician
✓ 11/15/2022 06:46:55 PM	4.95	5.12	14.9	45.0	78 *	88.0	12.7	43.7	49.2 *	technician
11/15/2022 06:48:31 PM	4.99	5.17	15.0	45.4	71 *	87.9	12.4	42.8	49.0 *	technician
11/15/2022 06:50:14 PM	4.96	5.10	14.9	44.5	73 *	87.3	11.9	41.2	49.5 *	technician
11/15/2022 06:51:53 PM	4.99	5.09	14.8	44.8	80 *	88.1	12.7	43.7	51.1 *	technician
✓ 11/15/2022 06:53:26 PM	5.07	5.08	15.1	44.5	82 *	87.6	12.5	42.8	55.2 *	technician

## Repeatability Report (part 2)

Number of repeatability run report selected for statistic calculation 8/12

Coefficient	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)
Minimum	53.2	35.7	2.4	4.1	0.8	0.1
Maximum	56.5	38.4	2.9	5.0	1.3	0.3
Mean	54.6	37.2	2.7	4.5	1.1	0.2
Difference	3.3	2.7	0.5	0.9	0.5	0.2
2 SD	2.1	2.0	0.3	0.8	0.3	0.2
CV(%)	1.91	2.65	6.38	8.65	15.88	46.29

Run Date & Time	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)	Operator
✓ 11/15/2022 06:35:22 PM	53.9	38.0	2.8	4.1	1.2	0.2	technician
✓ 11/15/2022 06:37:09 PM	54.1	37.1	2.6	4.9	1.3	0.1	technician
✓ 11/15/2022 06:38:39 PM	53.2	38.4	2.4	4.8	1.2	0.1	technician
✓ 11/15/2022 06:40:16 PM	55.7	36.1	2.6	4.7	0.9	0.3	technician
✓ 11/15/2022 06:41:54 PM	56.5	35.7	2.9	4.1	0.8	0.3	technician
✓ 11/15/2022 06:43:32 PM	54.1	38.2	2.6	4.1	1.0	0.1	technician
11/15/2022 06:45:07 PM	55.2	36.6	2.9	4.6	0.7	0.3	technician
✓ 11/15/2022 06:46:55 PM	54.6	36.8	2.5	5.0	1.1	0.2	technician
11/15/2022 06:48:31 PM	54.4	37.5	2.8	4.4	0.9	0.2	technician
11/15/2022 06:50:14 PM	54.9	37.3	2.3	4.2	1.3	0.3	technician
11/15/2022 06:51:53 PM	56.1	35.9	2.4	4.3	1.3	0.2	technician
✓ 11/15/2022 06:53:26 PM	54.8	36.9	2.8	4.3	1.2	0.3	technician

**QC - Control Run Report**

**Run Date** 09/19/2023 10:21:25 AM

**Operator** technician

**Name** ABXdiffrol L

**Sample ID** PX443L

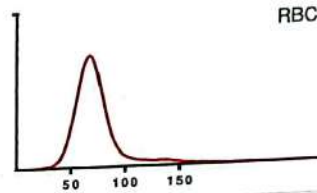
**Level** Low

**Exp. date** 11/05/2023

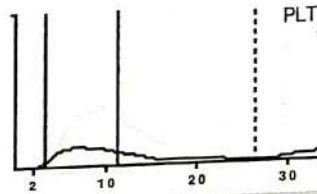
**Lot number** PX443L

**Alarms**

			Range
RBC	2.32	10 <sup>6</sup> /μL	2.08 - 2.40
HGB	5.8	g/dL	5.3 - 6.1
HCT	18.2	%	16.0 - 19.0
MCV	78.4	μm <sup>3</sup>	73.0 - 83.0
MCH	25.1	pg	23.4 - 27.4
MCHC	32.0	g/dL	29.6 - 35.6
RDW-CV	15.9	%	13.5 - 21.5



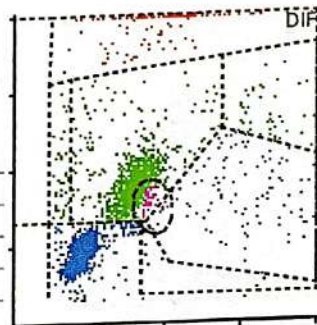
			Range
PLT	65	10 <sup>3</sup> /μL	45 - 85
MPV	9.9	μm <sup>3</sup>	7.7 - 11.7



			Range
WBC	3.11	10 <sup>3</sup> /μL	2.60 - 3.40

	#	Range	%	Range
NEU	1.40	0.93 - 1.63	45.0	32.8 - 52.8
LYM	1.23	0.86 - 1.52	39.5	27.8 - 51.8
MON	0.18	0.01 - 0.49	5.9	0.5 - 16.3
EOS	0.23	0.04 - 0.30	7.4	1.2 - 9.8
BAS	0.07	0.00 - 0.22	2.2	0.0 - 7.0



**Raw Data**

**PLT counts (by sections)**

S1	S2	S3	S4	S5	S6
104	80	123	109	128	119
S7	S8	S9	S10	S11	S12
81	78	105	115	111	117

**RBC counts (by sections)**

S1	S2	S3	S4	S5	S6
2461	2493	2467	2494	2462	2520
S7	S8	S9	S10	S11	S12
2484	2471	2332	2436	2442	2483

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

S1	S2	S3	S4	S5	S6
203	220	210	216	199	235
S7	S8	S9	S10	S11	
233	203	201	223	207	

**HGB measures (Optical intensity)**

LI1	LI2	LI3	LI4	LI5	LI6
3611	3611	3614	1817	1818	1818
LI7	LI8	LI9	LI10	LI11	LI12
1818	1816	1817	1818	1819	1817
LI13					
1819					

RMeasured : 2235  
Correlated : 2214  
Optical intensity 187

QC - Control Run Report

Run Date 09/19/2023 10:31:41 AM

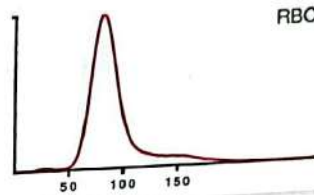
Operator technician

Name ABXdiffrol H  
Level High  
Lot number PX443H

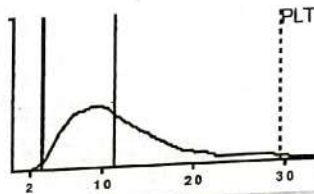
Sample ID PX443H  
Exp. date 11/05/2023

Alarms

			Range
RBC	5.31	10 <sup>6</sup> /μL	5.03 - 5.53
HGB	16.6	g/dL	15.7 - 16.9
HCT	51.1	%	47.1 - 52.1
MCV	96.2	μm <sup>3</sup>	89.0 - 99.0
MCH	31.3	pg	28.4 - 33.4
MCHC	32.5	g/dL	29.8 - 35.8
RDW-CV	11.4	%	9.5 - 17.5



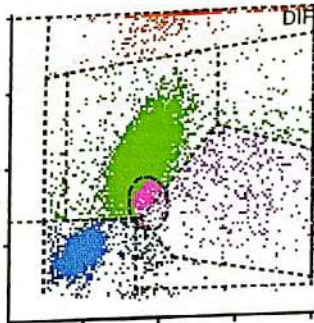
			Range
PLT	489	10 <sup>3</sup> /μL	447 - 547
MPV	10.7	μm <sup>3</sup>	8.8 - 12.8



			Range
WBC	19.23	10 <sup>3</sup> /μL	16.10 - 20.50

	#	Range	%	Range
NEU	13.22	10.54 -	68.8	58.0 - 78.0
LYM	3.90	2.18 - 5.18	20.3	12.1 - 28.1
MON	0.76	0.00 - 1.42	3.9	0.0 - 7.8
EOS	0.83	0.00 - 1.46	4.3	0.0 - 8.0
BAS	0.52	0.00 - 1.46	2.7	0.0 - 8.0



Raw Data

PLT counts (by sections)

S1	S2	S3	S4	S5	S6
455	434	467	450	462	498
S7	S8	S9	S10	S11	S12
377	433	413	449	511	444

RBC counts (by sections)

S1	S2	S3	S4	S5	S6
5063	5181	5055	5133	5108	5124
S7	S8	S9	S10	S11	S12
5044	5124	4972	5017	5021	5047

WBC counts (by sections) and others

S1	S2	S3	S4	S5	S6
1261	1343	1264	1324	1308	1373
S7	S8	S9	S10	S11	
1271	1310	1289	1330	1299	

HGB measures (Optical intensity)

LI1	LI2	LI3	LI4	LI5	LI6
3551	3570	3556	558	555	557
LI7	LI8	LI9	LI10	LI11	LI12
554	555	557	555	557	555
LI13					
557					

RMeasured : 11664  
Correlated : 11601  
Optical intensity 187

**QC - Control Run Report**

**Run Date** 09/19/2023 10:24:56 AM

**Operator** technician

**Name** ABXdiffrol N

**Sample ID** PX443N

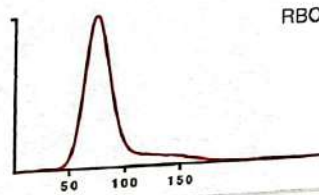
**Level** Normal

**Exp. date** 11/05/2023

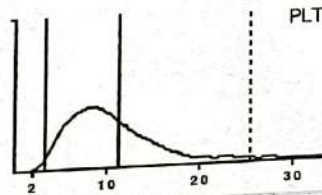
**Lot number** PX443N

**Alarms**

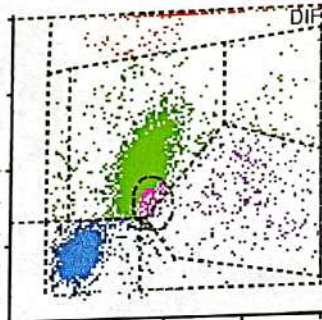
			Range
<b>RBC</b>	4.78	10 <sup>6</sup> /μL	4.46 - 4.86
<b>HGB</b>	13.6	g/dL	12.7 - 13.7
<b>HCT</b>	42.2	%	38.5 - 42.5
<b>MCV</b>	88.3	μm <sup>3</sup>	82.0 - 92.0
<b>MCH</b>	28.4	pg	26.3 - 30.3
<b>MCHC</b>	32.2	g/dL	29.6 - 35.6
<b>RDW-CV</b>	12.4	%	10.0 - 18.0



			Range
<b>PLT</b>	246	10 <sup>3</sup> /μL	220 - 280
<b>MPV</b>	9.5	μm <sup>3</sup>	7.5 - 11.5



			Range
<b>WBC</b>	8.68	10 <sup>3</sup> /μL	7.40 - 9.40
<b>NEU</b>	4.24	#	36.8 - 56.8
		Range	%
			Range
<b>LYM</b>	3.46		33.0 - 49.0
<b>MON</b>	0.51		0.2 - 12.2
<b>EOS</b>	0.30		0.0 - 6.0
<b>BAS</b>	0.17		0.0 - 6.0



**Raw Data**

**PLT counts (by sections)**

S1	S2	S3	S4	S5	S6
237	239	281	256	242	278
S7	S8	S9	S10	S11	S12
242	261	249	234	286	259

**RBC counts (by sections)**

S1	S2	S3	S4	S5	S6
4692	4715	4611	4649	4717	4740
S7	S8	S9	S10	S11	S12
4582	4620	4558	4581	4651	4604

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

S1	S2	S3	S4	S5	S6
603	550	569	601	620	577
S7	S8	S9	S10	S11	S12
621	594	597	593	609	

**HBG measures (Optical Intensity)**

LI1	LI2	LI3	LI4	LI5	LI6
3614	3613	3614	771	770	770
LI7	LI8	LI9	LI10	LI11	LI12
771	772	771	770	769	769
LI13					
769					

RMeasured : 5886  
 Correlated : 5859  
 Optical intensity : 187