

Date: 05/12/2019

CALIBRATION CERTIFICATE

This is to state that the hematology cell counter model **ABX YUMIZEN 500** bearing **Serial no: 711YOXH01164** at **FOSTR HEALTH CARE & DIAGNOSTICSS, Bangalore, Karnataka state**, was calibrated with Calibrator on **05/12/2019**.

The Calibration Coefficient is automatically generated after calibration. Subsequently controls were processed and found them in respective range.

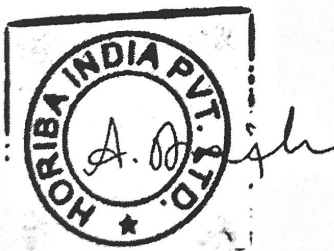
Calibrator Used: **ABX MINOCAL**

Lot No.: **CX 440**

Expiry Date: **05/12/2019**

Sr. No	Tested Parameter	Remarks
1	Repeatability/ Precision	Passed
2	Start up/Blank Cycle	Passed
3	Calibration	Passed
4	Quality Control	Passed

Next calibration cycle is due on **04/12/2020**.



A. RAJESH,
SENIOR ENGINEER CUSTOMER SUPPORT
Horiba Medical.

Notification No.	
Work Order No.	

SERVICE REPORT

CUSTOMER COPY

HIN-M02-

CUSTOMER DETAILS	INSTRUMENT DETAILS		SERVICE STATUS
NAME: FOSTER HEALTH CARE	MODEL: YUMIZEN H500		VISITING PURPOSE: <input type="checkbox"/> REPAIR <input type="checkbox"/> DATA ERROR <input type="checkbox"/> INSTALLATION <input type="checkbox"/> MAINTENANCE <input type="checkbox"/> UPGRADE <input type="checkbox"/> CUSTOMER TRAINING <input type="checkbox"/> COURTESY VISIT <input type="checkbox"/> DEMO <input checked="" type="checkbox"/> OTHERS
ADDRESS: #12, 2ND FLOOR PANATHUR MAIN ROAD, BANGALORE	EQUIP. SL. No.: 71140XH01164 VERSION: 2.1.1.1		
PIN CODE 560103	NOTIFICATION No.		CUSTOMER STATUS <input type="checkbox"/> R.R <input type="checkbox"/> WARRANTY <input type="checkbox"/> AMC <input type="checkbox"/> CMC <input type="checkbox"/> DEMO <input type="checkbox"/> FREE SERVICE <input type="checkbox"/> CHARGEABLE <input type="checkbox"/> OTHERS CALL
CITY BANGALORE	CALL DETAILS	DATE TIME	
STATE KARNATAKA	COMPLAINT RECD.		WORKS CARRIED OUT AT <input checked="" type="checkbox"/> SITE <input type="checkbox"/> SERVICE CENTRE
TEL. NO.: 9880256086	START	05/12/2019 10:30 AM	
CONTACT PERSON: DR - PRAVEEN	COMPLETED	05/12/2019 03:00 PM	
	TRAVEL TIME (Eng. 1)	1 HOURS	
	TRAVEL TIME (Eng. 2)	HOURS	
	DAILY WORKLOAD		

PROBLEM REPORTED: PREVENTIVE MAINTENANCE - CALIBRATION

OBSERVATIONS:

ACTION TAKEN: INSTRUMENT FULLY CLEANED. ALL MAINTENANCE DONE.
 STARTUP & PRECISION CHECKED. DE-CALIBRATION DONE
 USING ABX MINOCAL CX440. CALIBRATION AND QC FOUND PASSED.

FOLLOWING PARTS HAVE BEEN REPLACED FOLLOWING PARTS NEED TO BE REPLACED PLEASE APPROVE

PART CODE.	DESCRIPTION (Replaced)	QTY.	COST	TAX	TOTAL

PART CODE.	DESCRIPTION (Trouble Shooting)	QTY.	TOTAL RS.

*Replaced for Trouble Shooting
Need to be returned after Trouble Shooting.

FOLLOW-UP ACTION (Spare need to replaced, if any)

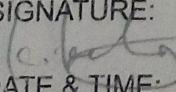
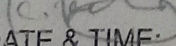
TO BE FILLED IN BY CUSTOMER

FAULT RECTIFIED & INSTRUMENT IS WORKING SATISFACTORILY

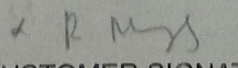
FAULT IS NOT COMPLETED, ENGINEER NEED TO COME AGAIN

WE HEREBY APPROVE Rs.

COMMENTS (IF ANY)

ENGINEER'S NAME-1: K. KANISHKUMAR
 SIGNATURE: 
 DATE & TIME: 

ENGINEER'S NAME-2:
 SIGNATURE:
 DATE & TIME:

CUSTOMER SIGNATURE:
 NAME: Mungarandan. R. 
 SEAL:

Repeatability Report (part 1)

Number of repeatability run report selected for statistic calculation 10/11

Coefficient	WBC (10 ³ /μL)	RBC (10 ⁶ /μL)	HGB (g/dL)	HCT (%)	PLT (10 ³ /μL)	MCV (μm ³)	RDW-CV (%)	RDW-SD (μm ³)	P-LCR (%)
Minimum	12.18	4.79	13.5	38.6	317	79.5	11.7	40.3	34.2
Maximum	12.55	4.92	13.6	40.1	342	81.6	12.8	44.5	36.9
Mean	12.35	4.87	13.5	39.3	330	80.7	12.2	42.5	35.4
Difference	0.37	0.13	0.1	1.4	24	2.0	1.1	4.2	2.6
2 SD	0.22	0.09	0.1	0.9	16	1.6	0.8	2.7	1.8
CV(%)	0.91	0.92	0.31	1.14	2.45	0.97	3.24	3.12	2.59

Sel	Run Date &Time	WBC (10 ³ /μL)	RBC (10 ⁶ /μL)	HGB (g/dL)	HCT (%)	PLT (10 ³ /μL)	MCV (μm ³)	RDW-CV (%)	RDW-SD (μm ³)	P-LCR (%)	Operator
	12/05/2019 11:54:07 AM	12.46 *	4.88	13.5	38.8	349	79.4	10.7	36.1	35.7	technician
✓	12/05/2019 11:55:45 AM	12.33 *	4.90	13.5	39.5	325	80.6	11.7	41.2	34.2	technician
✓	12/05/2019 11:57:13 AM	12.32 *	4.92	13.5	39.2	342	79.7	11.7	42.0	36.9	technician
✓	12/05/2019 11:58:43 AM	12.30 *	4.84	13.5	38.6	320	79.8	12.3	42.0	35.0	technician
✓	12/05/2019 12:00:05 PM	12.32	4.79	13.5	39.0	317	81.4	12.5	43.7	34.6	technician
✓	12/05/2019 12:01:29 PM	12.18 *	4.90	13.5	39.4	340	80.4	11.8	40.3	35.5	technician
✓	12/05/2019 12:03:01 PM	12.47 *	4.88	13.6	39.8	325	81.5	12.1	42.0	35.7	technician
✓	12/05/2019 12:04:23 PM	12.37	4.88	13.5	38.8	334	79.5	12.3	42.0	34.7	technician
✓	12/05/2019 12:05:43 PM	12.23	4.80	13.5	39.0	334	81.2	12.8	43.7	36.4	technician
✓	12/05/2019 12:07:08 PM	12.44	4.91	13.6	40.1	331	81.6	12.7	44.5	36.6	technician
✓	12/05/2019 12:08:38 PM	12.55	4.89	13.6	39.6	332	81.0	12.4	43.7	34.9	technician

Repeatability Report (part 2)

Number of repeatability run report selected for statistic calculation 10/11

Coefficient	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)
Minimum	53.4	37.3	4.1	2.2	0.7	0.3
Maximum	54.9	39.0	5.0	2.6	1.1	0.5
Mean	54.0	37.8	4.5	2.3	0.9	0.4
Difference	1.5	1.7	0.9	0.4	0.4	0.2
2 SD	1.0	1.1	0.5	0.3	0.3	0.1
CV(%)	0.91	1.44	5.48	5.77	15.09	19.42

Sel	Run Date &Time	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	LIC% (%)	Operator
	12/05/2019 11:54:07 AM	53.6 *	37.9 *	4.5 *	2.2 *	1.2 *	0.6 *	technician
✓	12/05/2019 11:55:45 AM	54.9 *	37.3 *	4.5 *	2.2 *	0.8 *	0.3 *	technician
✓	12/05/2019 11:57:13 AM	53.7 *	38.2 *	4.3 *	2.3 *	1.1 *	0.4 *	technician
✓	12/05/2019 11:58:43 AM	53.4 *	38.3 *	4.4 *	2.4 *	1.0 *	0.5 *	technician
✓	12/05/2019 12:00:05 PM	54.7	37.3	4.5	2.3	0.9	0.3	technician
✓	12/05/2019 12:01:29 PM	54.1 *	37.4 *	5.0 *	2.4 *	0.7 *	0.4 *	technician
✓	12/05/2019 12:03:01 PM	54.2 *	37.6 *	4.5 *	2.3 *	1.0 *	0.4 *	technician
✓	12/05/2019 12:04:23 PM	54.0	37.6	4.7	2.6	0.8	0.3	technician
✓	12/05/2019 12:05:43 PM	53.9	38.0	4.4	2.2	1.1	0.4	technician
✓	12/05/2019 12:07:08 PM	54.2	37.6	4.3	2.5	1.1	0.3	technician
✓	12/05/2019 12:08:38 PM	53.4	39.0	4.1	2.2	1.0	0.3	technician

LOT CX 440
Rev 1

CAL

 (Exp.) 2019-12-05
(YYYY-MM-DD)

PARAMETRES PARAMETERS	UNITES UNITS	WHITEDIFF								TOLERANCES TOLERANCE
		YUMIZEN		YUMIZEN						
		H550	H500 OT H500 CT							
GB WBC	10 ⁹ /mm ³ , 10 ⁹ /l	8.90	8.90							± 0.20
GR RBC	10 ⁶ /mm ³ , 10 ¹² /l	4.55	4.55							± 0.06
HB HGB	g/dl	13.3	13.3							± 0.2
	g/l	133	133							± 2
	mmol/l	8.26	8.26							± 0.12
HT HCT	%	38.7	38.4							± 1.0
	l/l	0.387	0.384							± 0.010
PLAQ. PLTS	10 ³ /mm ³ , 10 ⁹ /l	267	267							± 10
VPM MPV	µm ³ , fl	11.0	11.0							± 0.5

Ref. TEMP-0387 Rev.46 BACK / VERSO 1300060881

LOT		CX 440		CAL							(Exp.) 2019-12-05	
PARAMETRES PARAMETERS		UNITES UNITS	Minilysebio								TOLERANCES TOLERANCE	
			MICROS	MICROS	MICROS	MICROS	MICROS	PENTRA	PENTRA	PENTRA	PENTRA	
			ES60	CRP 200			60 BP 60 1BP					
GB	WBC	10 ⁹ /mm ³ ; 10 ⁹ /l	9.2	8.5			9.1				± 0.2	
GR	RBC	10 ¹² /mm ³ ; 10 ¹² /l	4.49	4.45			4.49				± 0.06	
HB	HGB	g/dl	13.8	13.5			13.8				± 0.2	
		g/l	138	135			138				± 2	
		mmol/l	8.57	8.40			8.57				± 0.12	
HT	HCT	%	39.1	38.7			39.0				± 1.0	
		l/l	0.391	0.387			0.390				± 0.010	
PLAQ	PLTS	10 ¹² /mm ³ ; 10 ¹² /l	243	240			240				± 10	
VPM	MPV	µm ³ ; fl	9.0	8.6			9.3				± 0.5	

LOT		CX 440		CAL							(Exp.) 2019-12-05	
PARAMETRES PARAMETERS		UNITES UNITS	LyseVet								TOLERANCES TOLERANCE	
			MICROS	MICROS								
			Sci Vet ABC	Sci Vet ABC Plus ESV 60								
GB	WBC	10 ⁹ /mm ³ ; 10 ⁹ /l	8.7	8.9							± 0.2	
GR	RBC	10 ¹² /mm ³ ; 10 ¹² /l	4.47	4.50							± 0.06	
HB	HGB	g/dl	13.6	13.5							± 0.2	
		g/l	136	135							± 2	
		mmol/l	8.45	8.38							± 0.12	
HT	HCT	%	38.9	38.8							± 1.0	
		l/l	0.389	0.388							± 0.010	
PLAQ	PLTS	10 ¹² /mm ³ ; 10 ¹² /l	230	250							± 10	
VPM	MPV	µm ³ ; fl	N/A	9.4							± 0.5	

Ref TEMP-0387 Rev 46 FRONT / RECTO 1300060861

Calibration Report

Sample ID CX440
Lot number CX440

Name MINOCAL

Exp. date 12/06/2019
Modified on

Coefficient	WBC	RBC	HGB	HCT	PLT	MPV
New	1.117	1.030	0.965	0.990	1.269 H	1.058
Current	1.117	1.040	0.981	0.990	1.230 H	1.058
Target	8.90	4.55	13.3	38.4	267	11.0
Mean	8.66	4.58	13.5	39.8	261	10.2
CV(%)	1.91	0.73	0.36	1.29	2.81	0.45

Number of calibration run selected for coefficient calculation (minimum 5) 5/6

Sel.	Run Time	WBC (10 ³ /μL)	RBC (10 ⁶ /μL)	HGB (g/dL)	HCT (%)	PLT (10 ³ /μL)	MPV (μm ³)
✓	12/05/2019 12:27:44 PM	8.47	4.62 h	13.4	39.8 h	269	10.1
✓	12/05/2019 12:33:26 PM	8.54	4.54	13.5	39.3	257	10.2
	12/05/2019 12:34:49 PM	8.46	4.49	13.4	38.2	281 h	10.4
✓	12/05/2019 12:36:09 PM	8.75	4.59	13.4	40.4 h	268	10.2
✓	12/05/2019 12:41:59 PM	8.68	4.54	13.5	39.2	261	10.1
✓	12/05/2019 12:55:24 PM	8.88	4.60	13.6 h	40.2 h	251	10.2

QC - Control Run Report

Run Date 12/05/2019 01:13:03 PM

Operator technician

Name CONTROL

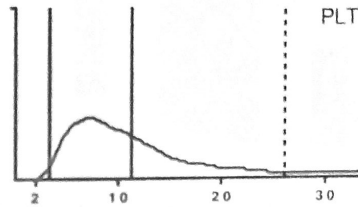
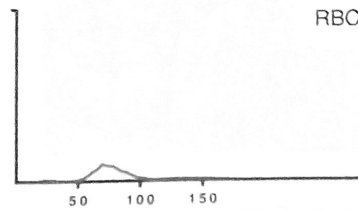
Sample ID PX420N

Level Normal

Exp. date 01/05/2020

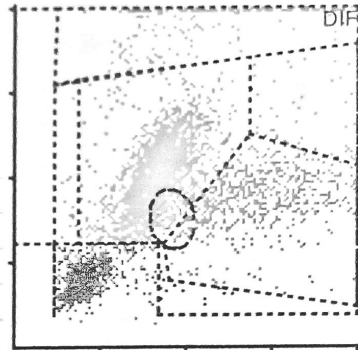
Lot number PX420N

			Range
RBC	4.54	10 ⁶ /μL	4.31 - 4.71
HGB	13.1	g/dL	12.7 - 13.7
HCT	38.6	%	36.1 - 40.1
MCV	85.0	μm ³	79.5 - 89.5
MCH	28.8	pg	27.3 - 31.3
MCHC	33.8	g/dL	31.6 - 37.6
RDW-CV	12.6	%	8.5 - 16.5
RDW-SD	43.7	μm ³	33.0 - 49.0
Range			
PLT	267	10 ³ /μL	227 - 287
MPV	10.4	μm ³	7.9 - 11.9



Alarms

WBC	7.64	10 ³ /μL	6.55 - 8.55	
	#	Range	%	Range
NEU	3.92	2.79 - 4.59	51.4	38.9 - 58.9
LYM	2.09	1.47 - 2.87	27.3	20.8 - 36.8
MON	1.02	0.00 - 2.12	13.4	0.0 - 28.2
EOS	0.46	0.00 - 0.88	6.0	0.0 - 11.6
BAS	0.15	0.00 - 0.36	1.9	0.0 - 4.8



Raw Data

PLT counts (by sections)						RBC counts (by sections)					
S1	S2	S3	S4	S5	S6	S1	S2	S3	S4	S5	S6
221	224	251	230	265	253	3720	3814	3865	3787	3683	3926
S7	S8	S9	S10	S11	S12	S7	S8	S9	S10	S11	S12
191	211	224	237	229	234	3749	3670	3807	3735	3723	3726
WBC counts (by sections) and others						HBG measures (Optical intensity)					
S1	S2	S3	S4	S5	S6	LI1	LI2	LI3	LI4	LI5	LI6
514	491	551	517	492	469	3834	3837	3838	879	879	879
S7	S8	S9	S10	S11	S12	LI7	LI8	LI9	LI10	LI11	LI12
455	513	559	482	514		879	880	880	880	880	880
RMeasured :	4886					LI13					
Correlated :	4877					880					
Optical intensity	191										