

Date:16.06.2023

CALIBRATION CERTIFICATE

This is to state that the hematology cell counter model HORIBA Medical: **YUMIZEN H550** bearing serial no: **302YADH05317** installed AT **Legit Medical Diagnostics&Polyclinic,Nizamabad** was calibrated with Calibrator on **16th June 2023**,Next calibration Due Date:- **15/06/2024**.

Subsequently controls were processed and found them in respective range.

Calibrator Used: ABX MINOCAL
Lot No.: CX 484
Expiry Date: 05/08/2023

Thanking you,

Yours truly,
For HORIBA MEDICAL



Raju
16/6/2023

RAJU DASARI
ENGINEER CUSTOMER SUPPORT.

Log

Date/Time	Operator	Section	Level	Message/Details Comments
06/16/2023 07:15:17 AM	LEGIT1	Blank	INFO	Startup passed Pass WBC: 0.00 10 ³ /mm ³ RBC: 0.00 10 ⁶ /mm ³ HGB: 0.0 g/dL PLT: 0 10 ³ /mm ³
06/16/2023 01:22:57 PM	Service	Blank	INFO	Startup passed Pass WBC: 0.01 10 ³ /mm ³ RBC: 0.00 10 ⁶ /mm ³ HGB: 0.0 g/dL PLT: 0 10 ³ /mm ³
06/16/2023 01:25:38 PM	Service	Blank	INFO	Startup passed Pass WBC: 0.02 10 ³ /mm ³ RBC: 0.00 10 ⁶ /mm ³ HGB: 0.0 g/dL PLT: 0 10 ³ /mm ³



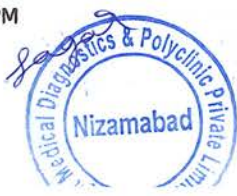
Repeatability Report (part 1)

Number of repeatability run report selected for statistic calculation 10/13

Coefficient	WBC (10 ³ /mm ³)	RBC (10 ⁶ /mm ³)	HGB (g/dL)	PLT (10 ³ /mm ³)	HCT (%)	MCV (fL)	RDW-CV (%)	RDW-SD (fL)	P-LCR (%)	MIC (%)
Minimum	5.62	5.02	14.5	290	41.5	82.7	12.6	38.8	25.1	0.6
Maximum	6.08	5.10	14.8	311	42.2	82.9	13.0	39.9	26.5	0.9
Mean	5.83	5.06	14.7	303	41.9	82.8	12.8	39.4	25.9	0.7
Difference	0.45	0.07	0.3	21	0.6	0.2	0.3	1.1	1.5	0.2
2 SD	0.26	0.05	0.2	14	0.4	0.2	0.2	1.1	1.1	0.1
CV(%)	2.19	0.51	0.57	2.38	0.51	0.11	0.90	1.45	2.06	9.17

Coefficient	MAC (%)	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	IMG% (%)	IMM% (%)
Minimum	4.4	55.3	31.3	7.7	2.3	0.0	0.0	0.0
Maximum	5.0	57.5	33.5	8.9	3.0	0.4	0.2	0.0
Mean	4.7	56.3	32.5	8.3	2.8	0.2	0.1	0.0
Difference	0.6	2.2	2.2	1.2	0.7	0.4	0.2	0.0
2 SD	0.4	1.5	1.4	0.9	0.4	0.2	0.1	0.0
CV(%)	3.77	1.29	2.14	5.27	8.09	68.29 H	52.70	0.00

Sel	Run Date &Time	WBC (10 ³ /mm ³)	RBC (10 ⁶ /mm ³)	HGB (g/dL)	PLT (10 ³ /mm ³)	HCT (%)	MCV (fL)	RDW-CV (%)	RDW-SD (fL)	P-LCR (%)	MIC (%)
	06/16/2023 01:29:48 PM	5.74	5.14	14.8	290	42.4	82.5	12.7	38.8	25.8	0.7
✓	06/16/2023 01:31:03 PM	5.92	5.04	14.7	306	41.8	82.9	12.9	39.9	26.5	0.7
✓	06/16/2023 01:32:13 PM	5.80	5.08	14.8	301	42.0	82.7	12.8	39.9	25.8	0.7
✓	06/16/2023 01:33:25 PM	5.87	5.08	14.5	309	42.1	82.8	12.7	38.8	25.2	0.6
✓	06/16/2023 01:34:34 PM	5.76	5.09	14.7	311	42.2	82.9	12.9	39.9	26.1	0.9
✓	06/16/2023 01:35:45 PM	5.67	5.10	14.7	307	42.1	82.7	13.0	39.9	26.3	0.8
✓	06/16/2023 01:36:56 PM	5.85	5.07	14.7	296	42.0	82.9	12.7	38.8	25.1	0.8
✓	06/16/2023 01:38:11 PM	6.08	5.03	14.7	301	41.7	82.9	12.8	39.9	26.4	0.7
	06/16/2023 01:39:20 PM	5.82	5.00	14.8	301	41.4	82.8	12.8	39.9	26.4	0.7
✓	06/16/2023 01:40:29 PM	5.85	5.02	14.7	290	41.5	82.7	12.7	38.8	26.2	0.7
✓	06/16/2023 01:41:41 PM	5.89	5.06	14.8	311	42.0	82.9	12.6	38.8	25.9	0.7
✓	06/16/2023 01:42:56 PM	5.62	5.04	14.7	296	41.7	82.8	12.8	39.9	25.3	0.7



Repeatability Report (part 1)

Sel	Run Date & Time	WBC (10 ³ /mm ³)	RBC (10 ⁶ /mm ³)	HGB (g/dL)	PLT (10 ³ /mm ³)	HCT (%)	MCV (fL)	RDW-CV (%)	RDW-SD (fL)	P-LCR (%)	MIC (%)
	06/16/2023 01:44:05 PM	5.75	5.05	14.8	299	41.8	82.8	12.7	38.8	25.0	0.7

Sel	Run Date & Time	MAC (%)	NEU% (%)	LYM% (%)	MON% (%)	EOS% (%)	BAS% (%)	IMG% (%)	IMM% (%)	Operator
	06/16/2023 01:29:48 PM	4.9	56.1	33.5	7.7	2.6	0.1	0.1	0.0	Service Technician
✓	06/16/2023 01:31:03 PM	5.0	56.9	31.9	8.0	3.0	0.2	0.1	0.0	Service Technician
✓	06/16/2023 01:32:13 PM	4.8	56.1	32.6	8.3	3.0	0.0	0.2	0.0	Service Technician
✓	06/16/2023 01:33:25 PM	4.8	57.2	31.3	8.7	2.6	0.2	0.1	0.0	Service Technician
✓	06/16/2023 01:34:34 PM	4.7	56.6	32.5	7.9	2.8	0.2	0.0	0.0	Service Technician
✓	06/16/2023 01:35:45 PM	4.9	55.6	33.5	7.7	3.0	0.2	0.2	0.0	Service Technician
✓	06/16/2023 01:36:56 PM	4.7	55.7	32.6	8.6	2.7	0.4	0.1	0.0	Service Technician
✓	06/16/2023 01:38:11 PM	4.7	56.0	32.1	8.9	2.8	0.2	0.1	0.0	Service Technician
	06/16/2023 01:39:20 PM	4.7	57.0	31.5	8.6	2.6	0.3	0.1	0.1	Service Technician
✓	06/16/2023 01:40:29 PM	4.5	57.5	31.8	8.0	2.7	0.0	0.1	0.0	Service Technician
✓	06/16/2023 01:41:41 PM	4.8	56.6	33.0	7.8	2.3	0.3	0.2	0.0	Service Technician
✓	06/16/2023 01:42:56 PM	4.4	55.3	33.3	8.7	2.6	0.1	0.1	0.0	Service Technician
	06/16/2023 01:44:05 PM	4.4	56.0	32.6	8.1	3.2	0.1	0.1	0.0	Service Technician

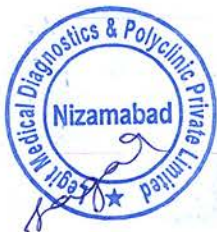


Repeatability Report (part 2)

Number of repeatability run report selected for statistic calculation 10/13

Coefficient	IML% (%)	LIC% (%)	ALY% (%)
Minimum	0.0	0.2	1.3
Maximum	0.0	0.3	1.9
Mean	0.0	0.3	1.5
Difference	0.0	0.1	0.6
2 SD	0.0	0.1	0.4
CV(%)	0.00	21.08	14.31

Sel	Run Date &Time	IML% (%)	LIC% (%)	ALY% (%)	Operator
	06/16/2023 01:29:48 PM	0.0	0.4	1.5	Service Technician
✓	06/16/2023 01:31:03 PM	0.0	0.2	1.4	Service Technician
✓	06/16/2023 01:32:13 PM	0.0	0.3	1.9	Service Technician
✓	06/16/2023 01:33:25 PM	0.0	0.2	1.4	Service Technician
✓	06/16/2023 01:34:34 PM	0.0	0.2	1.5	Service Technician
✓	06/16/2023 01:35:45 PM	0.0	0.3	1.3	Service Technician
✓	06/16/2023 01:36:56 PM	0.0	0.3	1.3	Service Technician
✓	06/16/2023 01:38:11 PM	0.0	0.3	1.6	Service Technician
	06/16/2023 01:39:20 PM	0.0	0.4	1.5	Service Technician
✓	06/16/2023 01:40:29 PM	0.0	0.2	1.4	Service Technician
✓	06/16/2023 01:41:41 PM	0.0	0.3	1.8	Service Technician
✓	06/16/2023 01:42:56 PM	0.0	0.2	1.3	Service Technician
	06/16/2023 01:44:05 PM	0.0	0.3	1.1	Service Technician



Calibration Report

Sample ID CX484
Lot number CX484

Name Minocal

Exp. date 08/05/2023
Modified on

Coefficient	WBC	RBC	HGB	HCT	PLT
New	1.070	0.873	0.930	0.883	1.051
Current	1.087	0.869	0.923	0.880	1.040
Target	8.80	4.54	13.3	36.4	277
Mean	8.94	4.52	13.2	36.1	274
CV(%)	1.35	0.84	0.29	0.81	1.85

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

Sel.	Run Time	WBC (10 ³ /mm ³)	RBC (10 ⁶ /mm ³)	HGB (g/dL)	HCT (%)	PLT (10 ³ /mm ³)
✓	06/16/2023 02:14:16 PM	8.75	4.58	13.2	36.6	280
✓	06/16/2023 02:15:31 PM	8.98	4.51	13.2	35.9	271
✓	06/16/2023 02:16:44 PM	8.97	4.55	13.3	36.4	268
✓	06/16/2023 02:17:56 PM	8.85	4.52	13.3	36.1	283
✓	06/16/2023 02:19:09 PM	8.92	4.54	13.2	36.1	273
✓	06/16/2023 02:20:22 PM	9.05 h	4.56	13.2	36.3	275
✓	06/16/2023 02:22:23 PM	8.83	4.52	13.2	36.2	274
✓	06/16/2023 02:24:15 PM	8.91	4.48 l	13.3	35.7	268
✓	06/16/2023 02:25:39 PM	9.17 h	4.48 l	13.3	35.8	275
✓	06/16/2023 02:26:59 PM	9.00 h	4.46 l	13.3	35.6	269



Calibration Report

Sample ID CX484
Lot number CX484

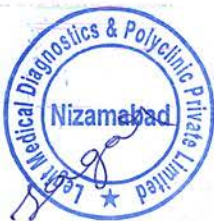
Name Minocal

Exp. date 08/05/2023
Modified on

Coefficient	WBC	RBC	HGB	HCT	PLT
New	1.070	0.873	0.930	0.883	1.051
Current	1.070	0.873	0.930	0.883	1.051
Target	8.80	4.54	13.3	36.4	277
Mean	8.94	4.52	13.2	36.1	274
CV(%)	1.35	0.84	0.29	0.81	1.85

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

Sel.	Run Time	WBC (10 ³ /mm ³)	RBC (10 ⁶ /mm ³)	HGB (g/dL)	HCT (%)	PLT (10 ³ /mm ³)
✓	06/16/2023 02:14:16 PM	8.75	4.58	13.2	36.6	280
✓	06/16/2023 02:15:31 PM	8.98	4.51	13.2	35.9	271
✓	06/16/2023 02:16:44 PM	8.97	4.55	13.3	36.4	268
✓	06/16/2023 02:17:56 PM	8.85	4.52	13.3	36.1	283
✓	06/16/2023 02:19:09 PM	8.92	4.54	13.2	36.1	273
✓	06/16/2023 02:20:22 PM	9.05 h	4.56	13.2	36.3	275
✓	06/16/2023 02:22:23 PM	8.83	4.52	13.2	36.2	274
✓	06/16/2023 02:24:15 PM	8.91	4.48 l	13.3	35.7	268
✓	06/16/2023 02:25:39 PM	9.17 h	4.48 l	13.3	35.8	275
✓	06/16/2023 02:26:59 PM	9.00 h	4.46 l	13.3	35.6	269





ABX Minocal

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

LOT CX 484
 Rev 1
CAL
 (Exp.) 2023-08-05
 (YYYY-MM-DD)

PARAMETRES PARAMETERS	UNITES UNITS	YUMIZEN since V3				TOLERANCES TOLERANCE
		YUMIZEN V1.0 to V2.x		YUMIZEN since V3		
		H500	H500 OT H500 CT	H500 OT H500 CT	H500 CT H500 CT	
GB WBC	$10^3/mm^3 \cdot 10^9/l$	8.80	8.80	8.80	8.80	± 0.20
GR RBC	$10^6/mm^3 \cdot 10^{12}/l$	4.57	4.57	4.54	4.54	± 0.06
	g/dl	13.2	13.2	13.3	13.3	± 0.2
HB HGB	g/l	132	132	133	133	± 2
	mmol/l	8.20	8.20	8.26	8.26	± 0.12
	%	38.6	38.6	36.9	36.4	± 1.0
HT HCT	l/l	0.386	0.386	0.369	0.364	± 0.010
PLA PLT	$10^3/mm^3 \cdot 10^9/l$	253	253	272	277	± 10
VMP MPV	$\mu m^3 \cdot fl$	10.4	10.4	N/A	N/A	± 0.5

Ref: TEMP-0387 Rev.49 BACK / VERSO 1300113555



Blood Control Vial should be dispose off as per State Government Bio-Medical Waste Management Rule.

Explore the future.

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

HORIBA

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 484

Rev 1

CAL



(Exp.) 2023-08-05

(YYYY - MM - DD)

PARAMETRES PARAMETERS	UNITES UNITS	ABX Lysebio						TOLERANCES TOLERANCE
		YUMIZEN	H1500	H2500				
GB WBC	$10^3/\text{mm}^3; 10^9/\text{l}$							± 0.20
GR RBC	$10^6/\text{mm}^3; 10^{12}/\text{l}$							± 0.06
	g/dl							± 0.2
HB HGB	g/l							± 2
	mmol/l							± 0.12
HT HCT	%							N/A
	l/l							N/A
PLA PLT	$10^3/\text{mm}^3; 10^9/\text{l}$							± 10
VMP MPV	$\mu\text{m}^3; \text{fl}$							N/A
VGM MCV	$\mu\text{m}^3; \text{fl}$							± 4.0

1300060884

Ref: TEMP-0387 Rev.49

*Blood Control Vial should be dispose off as per State Government Bio-Medical Waste Management Rule.

Explore the future

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

HORIBA

QC - Control Run Report

Run Date 06/16/2023 03:00:05 PM

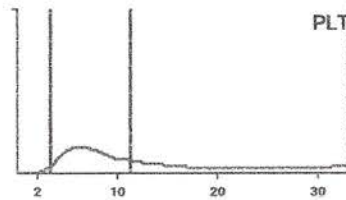
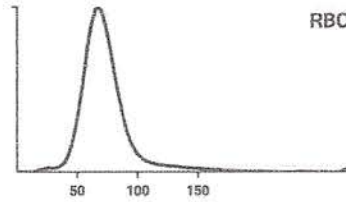
Operator Service Technician

Name DIFFTROL L
Level Low
Lot number PX442L

Sample ID PX442L
Exp. date 09/05/2023

CBC

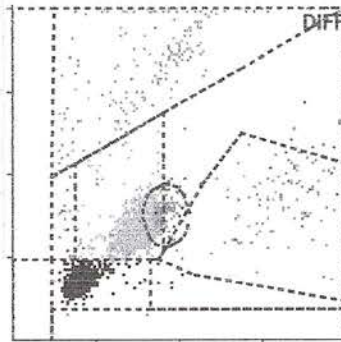
			Range
WBC	2.95	10 ³ /mm ³	2.55 - 3.35
RBC	2.36	10 ⁶ /mm ³	2.19 - 2.51
HGB	6.0	g/dL	5.6 - 6.4
HCT	17.4	%	15.7 - 18.7
MCV	73.6	fL	68.0 - 78.0
MCH	25.5	pg	23.5 - 27.5
MCHC	34.7	g/dL	32.0 - 38.0
RDW-CV	15.5	%	11.4 - 19.4
RDW-SD	39.9	fL	29.5 - 45.5
PLT	96	10 ³ /mm ³	62 - 102
MPV	11.6	fL	8.3 - 12.3



Alarms

DIF

	%	Range	10 ³ /mm ³	Range
NEU	45.6	34.5 - 54.5	1.35	0.96 - 1.66
LYM	33.7	26.0 - 50.0	0.99	0.79 - 1.45
MON	6.1	0.3 - 13.1	0.18	0.01 - 0.39
EOS	8.5	0.3 - 12.7	0.25	0.01 - 0.37
BAS	6.1	0.0 - 8.6	0.18	0.00 - 0.26
IMG	2.5	0.0 - 5.2	0.07	0.00 - 0.16



Raw Data

PLT counts

S1	S2	S3	S4	S5	S6
111	109	121	111	142	117
S7	S8	S9	S10	S11	S12
101	108	106	130	128	124

RBC counts

S1	S2	S3	S4	S5	S6
2575	2494	2565	2433	2445	2470
S7	S8	S9	S10	S11	S12
2462	2481	2539	2501	2525	2573

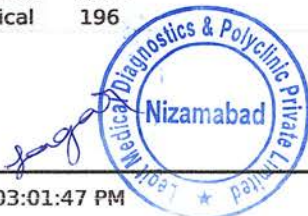
WBC counts

S1	S2	S3	S4	S5	S6
233	219	204	211	222	210
S7	S8	S9	S10	S11	
216	213	221	205	202	

HBG measures

LI1	LI2	LI3	LI4	LI5	LI6
3808	3808	3808	1801	1801	1801
LI7	LI8	LI9	LI10	LI11	LI12
1802	1802	1801	1802	1801	1802
LI13					
1802					

RMeasured: 2272
Correlated: 2264
Optical: 196



QC - Control Run Report

Run Date 06/16/2023 03:02:39 PM

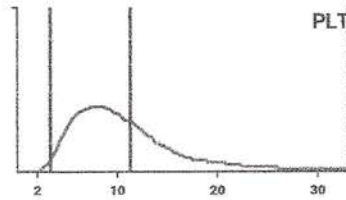
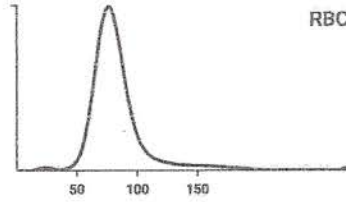
Operator Service Technician

Name DIFFTROL N
Level Normal
Lot number PX442N

Sample ID PX442N
Exp. date 09/05/2023

CBC

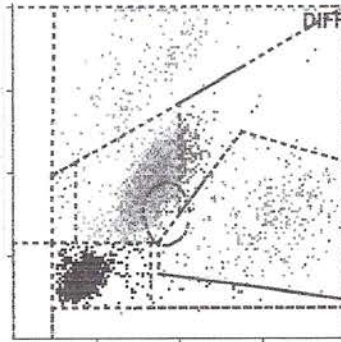
			Range
WBC	8.26	10 ³ /mm ³	7.30 - 9.30
RBC	4.77	10 ⁶ /mm ³	4.48 - 4.88
HGB	13.6	g/dL	13.0 - 14.0
HCT	39.0	%	36.9 - 40.9
MCV	81.8	fL	78.1 - 88.1
MCH	28.6	pg	26.8 - 30.8
MCHC	34.9	g/dL	31.7 - 37.7
RDW-CV	13.1	%	9.1 - 17.1
RDW-SD	37.6	fL	29.4 - 45.4
PLT	290	10 ³ /mm ³	243 - 303
MPV	9.8	fL	7.2 - 11.2



Alarms

DIF

	%	Range	10 ³ /mm ³	Range
NEU	48.7	37.4 - 57.4	4.02	3.03 - 4.83
LYM	40.1	32.5 - 48.5	3.31	2.66 - 4.06
MON	5.5	0.4 - 11.2	0.46	0.03 - 0.93
EOS	3.4	0.3 - 5.9	0.28	0.03 - 0.49
BAS	2.3	0.0 - 6.4	0.19	0.00 - 0.54
IMG	3.5	0.0 - 8.6	0.29	0.00 - 0.72



Raw Data

PLT counts

S1	S2	S3	S4	S5	S6
203	242	251	267	277	261
S7	S8	S9	S10	S11	S12
226	264	271	247	282	282

RBC counts

S1	S2	S3	S4	S5	S6
4623	4675	4601	4576	4574	4746
S7	S8	S9	S10	S11	S12
4535	4547	4635	4646	4600	4582

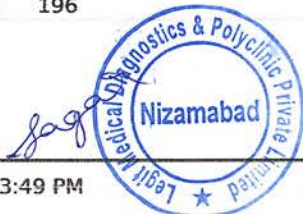
WBC counts

S1	S2	S3	S4	S5	S6
597	593	637	563	583	585
S7	S8	S9	S10	S11	S12
599	594	567	699	554	

HBG measures

LI1	LI2	LI3	LI4	LI5	LI6
3804	3804	3801	754	753	754
LI7	LI8	LI9	LI10	LI11	LI12
754	754	754	754	754	754
LI13					
754					

RMeasured: 5947
Correlated: 5933
Optical: 196



QC - Control Run Report

Run Date 06/16/2023 03:04:22 PM

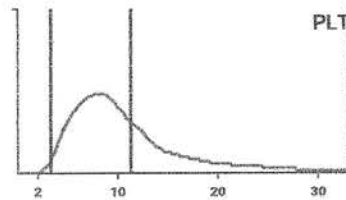
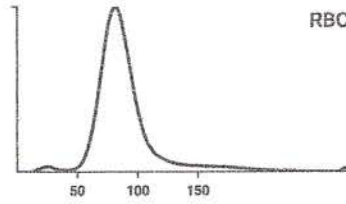
Operator Service Technician

Name DIFFTROL H
Level High
Lot number PX442H

Sample ID PX442H
Exp. date 09/05/2023

CBC

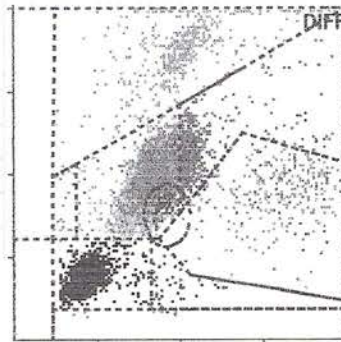
			Range
WBC	17.49	10 ³ /mm ³	15.40 - 19.80
RBC	5.21	10 ⁶ /mm ³	5.08 - 5.58
HGB	16.4	g/dL	15.9 - 17.1
HCT	45.6	%	45.1 - 50.1
MCV	87.6	fL	84.3 - 94.3
MCH	31.6	pg	28.5 - 33.5
MCHC	36.0	g/dL	31.7 - 37.7
RDW-CV	12.9	%	8.6 - 16.6
RDW-SD	41.0	fL	30.2 - 46.2
PLT	543	10 ³ /mm ³	458 - 558
MPV	9.9	fL	7.2 - 11.2



Alarms

DIF

	%	Range	10 ³ /mm ³	Range
NEU	70.8	59.9 - 79.9	12.38	10.4 - 14.2
LYM	17.6	10.3 - 26.3	3.08	1.72 - 4.72
MON	3.3	0.6 - 6.6	0.57	0.10 - 1.16
EOS	4.6	0.1 - 9.1	0.80	0.02 - 1.60
BAS	3.7	0.0 - 7.2	0.66	0.00 - 1.26
IMG	6.8	0.0 - 12.8	1.19	0.00 - 2.22



Raw Data

PLT counts

S1	S2	S3	S4	S5	S6
403	411	428	445	444	461
S7	S8	S9	S10	S11	S12
432	420	386	465	420	446

RBC counts

S1	S2	S3	S4	S5	S6
4894	5054	4968	5067	5007	5026
S7	S8	S9	S10	S11	S12
5154	4996	4991	4899	5060	4991

WBC counts

S1	S2	S3	S4	S5	S6
1256	1268	1221	1295	1282	1230
S7	S8	S9	S10	S11	S12
1290	1254	1197	1337	1183	

HBG measures

LI1	LI2	LI3	LI4	LI5	LI6
3802	3802	3801	558	559	559
LI7	LI8	LI9	LI10	LI11	LI12
559	559	559	560	559	560
LI13					
559					

RMeasured: 11473
Correlated: 11458
Optical 196

