

# CALIBRATION CERTIFICATE

Certificate no. 0106

Customer: LIKHITHA DIAGNOSTICS  
Ecil,hyderabad

Date of Calibration: 30-10-2021  
Working Temperature:  $25^{\circ} \pm 1^{\circ}$   
Due Date: 29-10-2022

Instrument: Automated 3 Part Haematology Analyzer Serial no. DM10011813072.

Model: "DH 36"

Manufacturer: SHENZHEN DYMIND BIOTECHNOLOGY CO. LTD.

Acu Medica Lab Systems Pvt. Limited is an organization dealing with Dymind Auto Haematology Analyzer. It has a technically qualified Technical team to ensure trouble free operation. The Described instrument has been checked and calibrated under the ambient conditions stated above.

Power Supply			
UPS Supply	Expected Reading	Measured Reading	Remarks
Phase to Neutral	$230 \pm 10$ VAC	232 VAC	Within Limits
Phase to Earth	$230 \pm 10$ VAC	234 VAC	
Neutral to Earth	0 - 5 VAC	2 VAC	

Test Point Voltages	Measured Reading	Remarks
$5 \pm 0.15$ VDC	5.0 VDC	Values are within Limits
$12 \pm 0.25$ VDC	11.52 VDC	
$-12 \pm 0.25$ VDC	-11.71 VDC	
$56 \pm 6.0$ VDC	55.60 VDC	
$3.3 \pm 0.13$ VDC	3.26 VDC	

	Measured Value	Range	Remarks
HGB Zero (V)	0.0	0.0 – 0.20	Within Range
HGB Blank (V)	4.56	3.4 – 4.8	
Vacuum	184	175 – 205	

Test Point Voltages	Status	Remarks
Pressure	Normal	All Parts are working well & Adjustment not required.
Vacuum	Normal	
Filter	Normal	
Syringe Motor Check	Normal	
Rotation Motor Check	Normal	
Elevator Motor Check	Normal	
Printer/Recorder Check	Normal	

	Status	Remarks
System Initialization	Okay	Working Well.
Key Board Check	Okay	
Display Check	Okay	

Acu Medica Lab Systems (P) Ltd.

B-518/519, NandDham, 59, Sector-11, CBD Belapur, Navi Mumbai, 400614, Maharashtra, India

T: +91 22 6187 8888 W: [www.acumedia.in](http://www.acumedia.in)

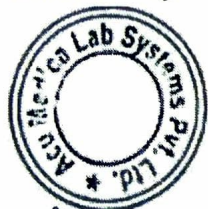
Parameters Tested	Target Values	Acceptable Range	Units
White Blood Cells (WBC)	9.10	$\pm 0.20$	$10^3/\mu\text{L}$
Red Blood Cells (RBC)	4.73	$\pm 0.08$	$10^6/\mu\text{L}$
Haemoglobin (HGB)	13.5	$\pm 0.20$	g / dL
Mean Cell Volume (MCV)	91.8	$\pm 2.0$	fL
Platelet (PLT)	254	$\pm 12$	$10^3/\mu\text{L}$

This Instrument and the above measuring parameters are calibrated with R & D Systems Inc. **CBC-CAL PLUS** Haematology Calibrator. Lot no. PLUS1121 Exp. Date : 5/12/2021 The estimated uncertainty to be associated with the results is at a confidence level of approximately 99%.

REMARKS/DEVIATIONS IF ANY:

1. The calibration interval should be determined based on the user's requirements.
2. The user should be determining the stability of the instrument for its intended use.
3. The results stated in this certificate related only to the instrument calibrated.

Calibrated By:




**UPPUTHOLLA ANKARAO**

Area Service Manager - IVD (South)

M +91 8801737785.

**Acu Medica Lab Systems (P) Ltd.**

B-518/519, NandDham, 59, Sector-11, CBD Belapur, Navi Mumbai, 400614, Maharashtra, India

T: +91 22 6187 8888 W: [www.acumedica.in](http://www.acumedica.in)





## Traceability CBC-CAL PLUS Hematology Calibrator

DYMIND CBC-CAL PLUS Hematology Calibrator, manufactured by R&D Systems Inc., is traceable to standard reference methods.

Hematology analyzers in R&D Systems' Quality Assurance Laboratory are whole blood calibrated to values obtained using these standard reference methods. Whole blood samples drawn from normal, healthy donors are collected in EDTA anticoagulant and analyzed within six hours of collection.

**WBC:** A 1:500 dilution is prepared using a 100 mL Class A volumetric flask filled with isotonic diluent. 1.2 mL of diluent is removed. Sample is added to the flask using a 200  $\mu$ L calibrated positive displacement pipette, followed by 1.0 mL lysing agent. Counting is performed on a Coulter Counter Z series instrument. All counts are corrected for coincidence.

**RBC:** A 1:50,000 dilution is prepared using a 1000 mL Class A volumetric flask filled with isotonic diluent. Sample is added to the flask using a 20  $\mu$ L T.C. micropipet. Counting is performed on a Coulter Counter Z series instrument. All counts are corrected for coincidence.

**HGB:** A 1:251 dilution is prepared using a 50 mL Class A volumetric flask filled with the CLSI recommended reagent for the hemoglobincyanide (cyanmethemoglobin) method (1). Sample is added to the flask using a 200  $\mu$ L calibrated positive displacement pipette. The sample is filtered with a 0.2  $\mu$ m filter immediately before reading. Readings are made at 540 nm in a colorimeter/spectrophotometer calibrated according to CLSI H15-A3 and ICSH recommendations (1).

**HCT:** Plain glass microhematocrit tubes (not coated with anticoagulant) are filled with sample, sealed with sealing putty and centrifuged for 5 minutes in a microhematocrit centrifuge according to the CLSI H07-A3 document (2). After centrifugation, the length of the whole column including the plasma, and the length of the red blood cell column, are viewed and measured using a microscope with graduated stage and an ocular micrometer. The hematocrit (packed cell volume) is calculated as the ratio of the two measurements. No correction is made for trapped plasma.

**MCV:** On some instruments MCV is the calibrated parameter instead of the HCT. The MCV is calculated from the HCT and RBC using the formula:  $MCV = HCT \times 10/RBC$

**PLT:** A 1:126 dilution is prepared using a 50 mL Class A volumetric flask filled with filtered 1% ammonium oxalate. Sample is added to the flask using a 400  $\mu$ L calibrated positive displacement pipette. The dilution is plated onto a clean, dry Neubauer ruled phase type hemocytometer. The hemocytometer is left for 10 minutes in a humidified chamber. Using phase contrast optics, the platelets in the entire central square millimeter on both sides of the hemocytometer are counted. The two counts are averaged and multiplied by 1260 (dilution factor 126  $\times$  volume factor 10 = 1260).

### BIBLIOGRAPHY

1. Clinical Laboratory Standards Institute. Reference and Selected Procedures for the Quantitative Determination of Hemoglobin in Blood: Approved Standard-Third Edition. CLSI document H15-A3.
2. Clinical Laboratory Standards Institute. Procedure for Determining Packed Cell Volume by the Microhematocrit Method: Approved Standard-Third Edition. CLSI document H07-A3.

All brands and products are trademarks or registered trademarks of their respective companies.

# CBC-CAL

## HEMATOLOGY CALIBRATOR

Assay values and ranges provided by DYMIND

**CALIBRATOR**

LOT PLUS1121

2021-10-07

2021-12-05

Instrument	Parameter	Unit	Reference Value	Deviation
DH31, DH33, DH36 (Technical File Version A5.0 or higher) DH31Vet, DH36Vet (Technical File Version A1.0 to A4.0)	WBC	$\times 10^9/L$	9.10	$\pm 0.20$
	RBC	$\times 10^{12}/L$	4.73	$\pm 0.08$
	HGB	g/L	135	$\pm 2$
	MCV	fL	91.8	$\pm 2.0$
	PLT	$\times 10^9/L$	254	$\pm 12$
DH20, DH21, DH22 DH23, DH25, DH26 (Technical File Version A1.0 or higher)	WBC	$\times 10^9/L$	9.10	$\pm 0.20$
	RBC	$\times 10^{12}/L$	4.68	$\pm 0.08$
	HGB	g/L	135	$\pm 2$
	MCV	fL	84.8	$\pm 2.0$
	PLT	$\times 10^9/L$	259	$\pm 12$
DH31Vet, DH36Vet (Technical File Version A5.0 or higher)	WBC	$\times 10^9/L$	9.26	$\pm 0.20$
	RBC	$\times 10^{12}/L$	4.62	$\pm 0.08$
	HGB	g/L	134	$\pm 2$
	MCV	fL	93.7	$\pm 2.0$
	PLT	$\times 10^9/L$	256	$\pm 12$
DH36X (Technical File Version A1.0 or higher)	WBC	$\times 10^9/L$	9.37	$\pm 0.20$
	RBC	$\times 10^{12}/L$	4.65	$\pm 0.08$
	HGB	g/L	133	$\pm 2$
	MCV	fL	88.3	$\pm 2.0$
	PLT	$\times 10^9/L$	250	$\pm 12$

**【NOTE】**

1. The calibrator should be stored in refrigerator (2°C~8°C). After opening, it will keep stable for 7 days when it is stored airtight at 2°C~8°C.
2. Before mixing and running the calibrator after take it out from the refrigerator, please keep it at least 15 minutes until reaching room temperature(15°C~30°C).
3. Calibrator must be well mixed before using. Please mix gently, to avoid cells rupture and/or generating bubbles.
4. After using, put the calibrator back into the refrigerator to prevent contamination and evaporation.



# CBC-3D

## HEMATOLOGY CONTROL

Assay values and ranges provided by DYMIND

**CONTROL**

LOT B0821

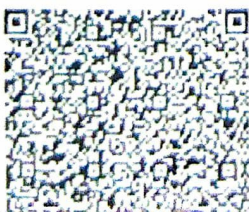
2021-07-09

2021-11-05

Instrument	Parameter	Unit	Low		Normal		High	
DYMIND	<b>WBC</b>	×10 <sup>9</sup> /L	<b>2.12</b>	±0.60	<b>7.97</b>	±1.00	<b>21.20</b>	±2.50
DH31	Lym%	%	59.4	±9.0	31.9	±8.0	14.8	±8.0
DH33	Gran%	%	29.0	±9.0	61.9	±8.0	82.1	±8.0
DH36	Mid%	%	11.6	±10.0	6.2	±6.0	3.1	±3.1
(Technical File Version A5.0 or higher)	Lym#	×10 <sup>9</sup> /L	1.26	±0.30	2.54	±0.70	3.14	±2.00
	Gran#	×10 <sup>9</sup> /L	0.62	±0.30	4.93	±0.70	17.40	±2.00
DH36Vet	Mid#	×10 <sup>9</sup> /L	0.25	±0.20	0.49	±0.49	0.66	±0.50
(Technical File Version A1.0 to A4.0)	<b>RBC</b>	×10 <sup>12</sup> /L	<b>2.42</b>	±0.24	<b>4.89</b>	±0.24	<b>6.13</b>	±0.30
	<b>HGB</b>	g/L	<b>58</b>	±6	<b>137</b>	±6	<b>192</b>	±8
	HCT	%	18.6	±2.0	43.5	±3.0	59.7	±4.0
	MCV	fL	76.7	±5.0	88.8	±5.0	97.4	±5.0
	MCH	pg	23.8	±2.5	28.0	±2.5	31.3	±2.5
	MCHC	g/L	310	±30	315	±30	322	±30
	RDW-CV	%	15.2	±3.0	14.7	±3.0	13.9	±3.0
	RDW-SD	fL	47.0	±8.0	52.6	±8.0	54.6	±8.0
	<b>PLT</b>	×10 <sup>9</sup> /L	<b>71</b>	±20	<b>268</b>	±40	<b>524</b>	±60
	MPV	fL	9.1	±3.0	9.4	±3.0	9.4	±3.0
	PDW	/	16.0	±3.0	16.2	±3.0	16.4	±3.0
	PDW	fL	11.5	±3.0	12.0	±3.0	12.3	±3.0
	PCT	%	0.066	±0.066	0.255	±0.200	0.505	±0.200
	P-LCR	%	21.9	±10.0	23.1	±10.0	24.1	±10.0
	P-LCC	×10 <sup>9</sup> /L	16	±15	63	±25	129	±30

**【NOTE】**

1. The controls should be stored in refrigerator (2~8°C). After opening, it will keep stable for 14 days when it is stored airtight at 2~8°C.
2. Before mixing and running the control after take it out from the refrigerator, please keep it at least 15 minutes until reaching room temperature(15~30°C).
3. Controls must be well mixed before using. Please mix gently, to avoid cells rupture and/or generating bubbles.
4. After using, put the controls back into the refrigerator to prevent contamination and evaporation.



# LIKHITHA DIAGNOSTIC

Blank

First Name:  
Last Name:  
Gender:  
Diagnosis:

Sample Type:  
Department:  
Med Rec. No.:

Sample ID: Blank 1  
Run Time: 2021/10/30 18:17  
Age:

Parameter	Result	Ref. Range	Unit
1 WBC	0.00		10 <sup>3</sup> /uL
2 Lym%	***		%
3 Gran%	***		%
4 Mid%	***		%
5 Lym#	****		10 <sup>3</sup> /uL
6 Gran#	****		10 <sup>3</sup> /uL
7 Mid#	****		10 <sup>3</sup> /uL
8 RBC	0.00		10 <sup>6</sup> /uL
9 HGB	0.0		g/dL
10 HCT	0.0		%
11 MCV	***		fL
12 MCH	***		pg
13 MCHC	***		g/dL
14 RDW-CV	**		%
15 RDW-SD	***		fL
16 PLT	0		10 <sup>3</sup> /uL
17 MPV	**		fL
18 PDW	**		fL
19 PCT	***		%
20 P-LCR	**		%
21 P-LCC	****		10 <sup>9</sup> /L

---

Submitter:                      Operator:      service                      Approver:      service  
 Sampling Time: 2021/10/30 18:17      Delivery Time: 2021/10/30 18:17      Validated Time: 2021/10/30 18:18  
 Report Time: 2021/10/30 18:18      Remarks:

\*The Report is responsible for this sample only. If you have any questions, please contact us in 24 hours.

# LIKHITHA DIAGNOSTIC

*Calibrator of a sample before calibration*

First Name:  
Last Name:  
Gender:  
Diagnosis:

Sample Type:  
Department:  
Med Rec. No.:

Sample ID: Before Cal 1  
Run Time: 2021/10/30 18:14  
Age:

Parameter	Result	Ref. Range	Unit
1 WBC	7.76		10 <sup>3</sup> /uL
2 Lym%	1.8		%
3 Gran%	97.7		%
4 Mid%	0.5		%
5 Lym#	0.14		10 <sup>3</sup> /uL
6 Gran#	7.58		10 <sup>3</sup> /uL
7 Mid#	0.04		10 <sup>3</sup> /uL
8 RBC	4.79		10 <sup>6</sup> /uL
9 HGB	12.2		g/dL
10 HCT	44.5		%
11 MCV	93.0		fL
12 MCH	25.5		pg
13 MCHC	27.5		g/dL
14 RDW-CV	14.0		%
15 RDW-SD	53.1		fL
16 PLT	245		10 <sup>3</sup> /uL
17 MPV	10.6		fL
18 PDW	14.1		fL
19 PCT	0.260		%
20 P-LCR	29.9		%
21 P-LCC	73		10 <sup>9</sup> /L

Submitter: Operator: service Approver: service  
 Sampling Time: 2021/10/30 18:14 Delivery Time: 2021/10/30 18:14 Validated Time: 2021/10/30 18:15  
 Report Time: 2021/10/30 18:15 Remarks:

\*The Report is responsible for this sample only. If you have any questions, please contact us in 24 hours.



# Calibration Coefficient

Print Time: 2021/10/30 18:40:07

Whole Blood

Para.	Cal. Coefficient (%)	Cal. Date
WBC	100.00	2021/10/30
RBC	100.00	2021/10/30
HGB	100.00	2021/10/30
MCV	100.00	2021/10/30
PLT	100.00	2021/10/30

Predilute

Para.	Cal. Coefficient (%)	Cal. Date
WBC	100.00	
RBC	100.00	
HGB	100.00	
MCV	100.00	
PLT	100.00	

Whole Blood-Factory

Para.	Cal. Coefficient (%)	Cal. Date
WBC	93.21	2021/10/30
RBC	86.71	2021/10/30
HGB	112.97	2021/10/30
MCV	97.38	2021/10/30
PLT	85.09	2021/10/30
MPV	102.86	2018/08/03

Predilute-Factory

Para.	Cal. Coefficient (%)	Cal. Date
WBC	101.06	2018/03/31
RBC	97.31	2018/03/31
HGB	105.75	2018/03/31
MCV	92.43	2018/03/31
PLT	98.13	2018/03/31
MPV	100.00	



# Calibrator

Lot No.: PLUS1121  
Calibration Mode: Whole Blood

Exp. Date: 2021/12/05  
Print Time: 2021/10/30 18:39:39

Para.	WBC	RBC	HGB	MCV	PLT	MPV
Target	9.10	4.73	13.5	91.8	254	
1	9.87	5.49	12.1	94.3	299	
2	9.91	5.50	12.0	94.4	303	
3	9.64	5.51	12.0	94.4	294	
4	9.60	5.40	11.8	94.0	278	
5	9.73	5.50	11.9	94.3	306	
6	9.83	5.33	11.9	94.2	311	
Mean	9.763	5.455	11.95	94.27	298.5	
CV(%)	1.3	1.3	0.9	0.2	3.9	
Cal. Coefficient (%)	93.21	86.71	112.97	97.38	85.09	

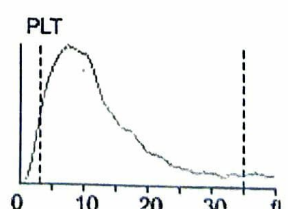
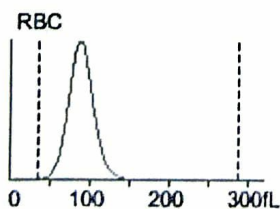
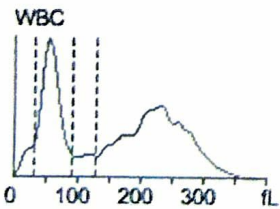


# L-J QC Analysis

Before Calibration QC

File No.: 14 Lot No.: B0821 Level: High  
 Operator: service Exp. Date: 2021/11/05 Run Time: 2021/10/30 18:22  
 Print Time: 2021/10/30 18:26 QC Mode: Whole Blood QC Sample ID: H3

Parameter	Result	Ref. Range	Unit
1 WBC	22.00	18.70-23.70	10 <sup>3</sup> /uL
2 Lym%	20.6	6.8-22.8	%
3 Gran%	84.8	74.1-90.1	%
4 Mid%	4.3	0.0-6.2	%
5 Lym#	2.36	1.14-5.14	10 <sup>3</sup> /uL
6 Gran#	17.80	15.40-19.40	10 <sup>3</sup> /uL
7 Mid#	0.38	0.16-1.16	10 <sup>3</sup> /uL
8 RBC	6.11	5.83-6.43	10 <sup>6</sup> /uL
9 HGB	18.7	18.4-20.0	g/dL
10 HCT	60.7	55.7-63.7	%
11 MCV	97.1	92.4-102.4	fL
12 MCH	30.8	28.8-33.8	pg
13 MCHC	32.4	29.2-35.2	g/dL
14 RDW-CV	14.7	10.9-16.9	%
15 RDW-SD	56.0	46.6-62.6	fL
16 PLT	537	464-584	10 <sup>3</sup> /uL
17 MPV	9.6	6.4-12.4	fL
18 PDW	11.2	9.3-15.3	fL
19 PCT	0.507	0.305-0.705	%
20 P-LCR	23.0	14.1-34.1	%
21 P-LCC	120	99-159	10 <sup>9</sup> /L

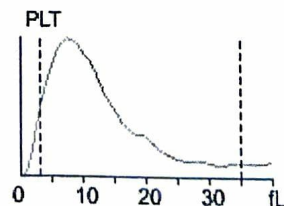
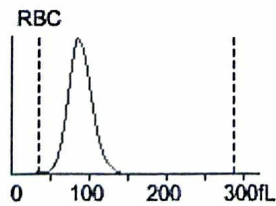
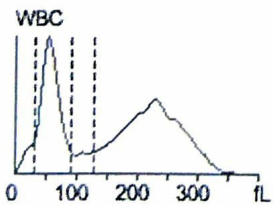




# L-J QC Analysis

File N:	13	Lot No.:	B0821	Level:	Normal
Generator:	service	Exp. Date:	2021/11/05	Run Time:	2021/10/30 18:20
Print Time:	2021/10/30 18:21	QC Mode:	Whole Blood	QC Sample ID:	N2

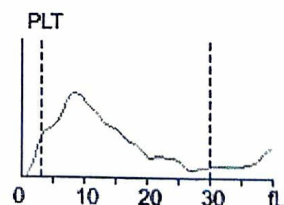
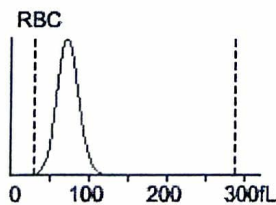
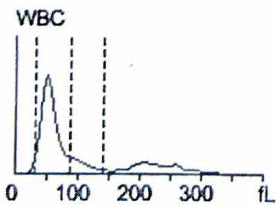
Parameter	Result	Ref. Range	Unit
1 WBC	7.90	6.97-8.97	10 <sup>3</sup> /uL
2 Lym%	32.4	23.9-39.9	%
3 Gran%	62.6	53.9-69.9	%
4 Mid%	5.0	0.2-12.2	%
5 Lym#	2.24	1.84-3.24	10 <sup>3</sup> /uL
6 Gran#	4.31	4.23-5.63	10 <sup>3</sup> /uL
7 Mid#	0.35	0.00-0.98	10 <sup>3</sup> /uL
8 RBC	4.71	4.65-5.13	10 <sup>6</sup> /uL
9 HGB	13.5	13.1-14.3	g/dL
10 HCT	43.2	40.5-46.5	%
11 MCV	91.7	83.8-93.8	fL
12 MCH	27.1	25.5-30.5	pg
13 MCHC	29.6	28.5-34.5	g/dL
14 RDW-CV	14.8	11.7-17.7	%
15 RDW-SD	55.3	44.6-60.6	fL
16 PLT	260	228-308	10 <sup>3</sup> /uL
17 MPV	9.6	6.4-12.4	fL
18 PDW	10.3	9.0-15.0	fL
19 PCT	0.248	0.055-0.455	%
20 P-LCR	23.1	13.1-33.1	%
21 P-LCC	60	38-88	10 <sup>9</sup> /L



# L-J QC Analysis

File No.: 12	Lot No.: B0821	Level: Low	
Operator: service	Exp. Date: 2021/11/05	Run Time: 2021/10/30 18:18	
Print Time: 2021/10/30 18:19	QC Mode: Whole Blood	QC Sample ID: L1	

Parameter	Result	Ref. Range	Unit
1 WBC	1.65	1.52-2.72	10 <sup>3</sup> /uL
2 Lym%	58.5	50.4-68.4	%
3 Gran%	28.8	20.0-38.0	%
4 Mid%	12.7	1.6-21.6	%
5 Lym#	0.97	0.96-1.56	10 <sup>3</sup> /uL
6 Gran#	0.47	0.32-0.92	10 <sup>3</sup> /uL
7 Mid#	0.21	0.05-0.45	10 <sup>3</sup> /uL
8 RBC	2.49	2.18-2.66	10 <sup>6</sup> /uL
9 HGB	5.6	5.2-6.4	g/dL
10 HCT	18.9	16.6-20.6	%
11 MCV	75.7	71.7-81.7	fL
12 MCH	22.3	21.3-26.3	pg
13 MCHC	29.4	28.0-34.0	g/dL
14 RDW-CV	16.1	12.2-18.2	%
15 RDW-SD	49.6	39.0-55.0	fL
16 PLT	80	51-91	10 <sup>3</sup> /uL
17 MPV	9.4	6.1-12.1	fL
18 PDW	11.7	8.5-14.5	fL
19 PCT	0.075	0.000-0.132	%
20 P-LCR	22.8	11.9-31.9	%
21 P-LCC	18	1-31	10 <sup>9</sup> /L

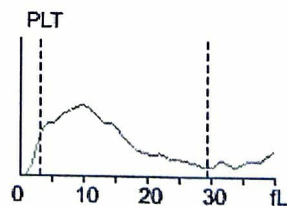
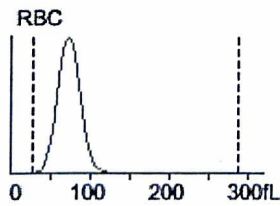
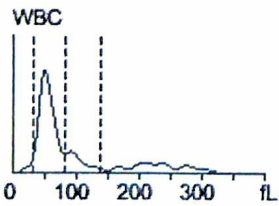


# L-J QC Analysis

After Calibration OK

File No.: 12      Lot No.: B0821      Level: Low  
 Operator: service      Exp. Date: 2021/11/05      Run Time: 2021/10/30 18:43  
 Print Time: 2021/10/30 18:45      QC Mode: Whole Blood      QC Sample ID: L1

Parameter	Result	Ref. Range	Unit
1 WBC	2.00	1.52-2.72	10 <sup>3</sup> /uL
2 Lym%	56.9	50.4-68.4	%
3 Gran%	28.1	20.0-38.0	%
4 Mid%	15.0	1.6-21.6	%
5 Lym#	1.14	0.96-1.56	10 <sup>3</sup> /uL
6 Gran#	0.56	0.32-0.92	10 <sup>3</sup> /uL
7 Mid#	0.30	0.05-0.45	10 <sup>3</sup> /uL
8 RBC	2.57	2.18-2.66	10 <sup>6</sup> /uL
9 HGB	6.1	5.2-6.4	g/dL
10 HCT	19.3	16.6-20.6	%
11 MCV	75.3	71.7-81.7	fL
12 MCH	23.7	21.3-26.3	pg
13 MCHC	31.5	28.0-34.0	g/dL
14 RDW-CV	16.1	12.2-18.2	%
15 RDW-SD	49.2	39.0-55.0	fL
16 PLT	80	51-91	10 <sup>3</sup> /uL
17 MPV	9.6	6.1-12.1	fL
18 PDW	12.0	8.5-14.5	fL
19 PCT	0.077	0.000-0.132	%
20 P-LCR	23.9	11.9-31.9	%
21 P-LCC	19	1-31	10 <sup>9</sup> /L

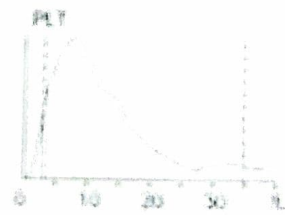
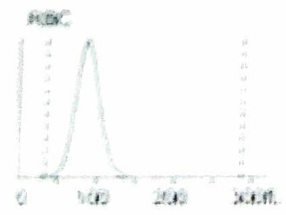
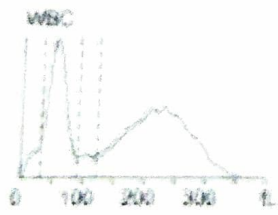




# L-J QC Analysis

No.: 13	Lot No.: B0821	Level: Normal
Operator: service	Exp. Date: 2021/11/05	Run Time: 2021/10/30 18:46
Print Time: 2021/10/30 18:50	QC Mode: Whole Blood	QC Sample ID: N2

Parameter	Result	Ref. Range	Unit
1 WBC	8.27	6.97-8.97	10 <sup>3</sup> /uL
2 Lym%	32.0	23.9-39.9	%
3 Gran%	63.3	53.9-69.9	%
4 Mid%	4.7	0.2-12.2	%
5 Lym#	2.65	1.84-3.24	10 <sup>3</sup> /uL
6 Gran#	5.23	4.23-5.63	10 <sup>3</sup> /uL
7 Mid#	0.39	0.00-0.98	10 <sup>3</sup> /uL
8 RBC	4.88	4.65-5.13	10 <sup>6</sup> /uL
9 HGB	13.8	13.1-14.3	g/dL
10 HCT	44.3	40.5-46.5	%
11 MCV	90.8	83.8-93.8	fL
12 MCH	28.4	25.5-30.5	pg
13 MCHC	31.2	28.5-34.5	g/dL
14 RDW-CV	14.7	11.7-17.7	%
15 RDW-SD	54.6	44.6-60.6	fL
16 PLT	280	228-308	10 <sup>3</sup> /uL
17 MPV	9.4	6.4-12.4	fL
18 PDW	10.9	9.0-15.0	fL
19 PCT	0.263	0.055-0.455	%
20 P-LCR	21.4	13.1-33.1	%
21 P-LCC	60	38-88	10 <sup>9</sup> /L



# L-J QC Analysis

Specimen No.:	14	Lot No.:	B0821	Level:	High
Operator:	service	Exp. Date:	2021/11/05	Run Time:	2021/10/30 18:48
Print Time:	2021/10/30 18:53	QC Mode:	Whole Blood	QC Sample ID:	H3

Parameter	Result	Ref. Range	Unit
1 WBC	21.70	18.70-23.70	10 <sup>3</sup> /uL
2 Lym%	18.7	6.8-22.8	%
3 Gran%	81.8	74.1-90.1	%
4 Mid%	4.6	0.0-6.2	%
5 Lym#	2.70	1.14-5.14	10 <sup>3</sup> /uL
6 Gran#	17.10	15.40-19.40	10 <sup>3</sup> /uL
7 Mid#	0.46	0.16-1.16	10 <sup>3</sup> /uL
8 RBC	6.01	5.83-6.43	10 <sup>6</sup> /uL
9 HGB	19.7	18.4-20.0	g/dL
10 HCT	60.4	55.7-63.7	%
11 MCV	96.8	92.4-102.4	fL
12 MCH	28.9	28.8-33.8	pg
13 MCHC	32.8	29.2-35.2	g/dL
14 RDW-CV	14.8	10.9-16.9	%
15 RDW-SD	55.0	46.6-62.6	fL
16 PLT	531	464-584	10 <sup>3</sup> /uL
17 MPV	9.3	6.4-12.4	fL
18 PDW	10.9	9.3-15.3	fL
19 PCT	0.511	0.305-0.705	%
20 P-LCR	22.3	14.1-34.1	%
21 P-LCC	104	99-159	10 <sup>9</sup> /L

