

**CERTIFICATE OF CALIBRATION****Customer Name:** Department of Pathology AHM Hospital Kanpur**Instrument Name:** Medonic **Model:** M20 **Serial Number :** 30973**Calibration done on:** 01/08/2024**Next Calibration due:** 31/07/2025**Lot number of calibrator used:** 22306-34**Expiry date of Calibrator:** 21.09.2024

This is to certify that abovementioned instrument has been calibrated for six CBC parameters i.e. RBC, MCV, PLT, MPV, HGB and WBC in open tube mode after verifying the background run for the machine. Calibration was verified by running controls (3 level) for which data has been attached as annexure herewith along with the obtained factors.

Calibration done by: Mr.Manish Singh**Certificate Issued by:****Ajit Mohan Dubey****(Asst. Sr. Manager Application)****Annexures:-**

Annexure-I:-Background and %CV results obtained

Annexure-II:-Factors obtained before and after calibration and IQC results



ANNEXURE-I

1. Results obtained after running background.

Parameter	Value	Range	Status
RBC	0	$\leq 0.01 (10^{12}/L)$	Passed
WBC	0	$\leq 0.1 (10^9/L)$	Passed
HGB	0.1	$\leq 0.2 (g/dL)$	Passed
PLT	2	$\leq 10 (10^9/L)$	Passed

Note:- Printout of the snapshot of the background results are attached herewith.

2. %CV obtained after running calibrator multiple times:-

Test	TargetCV[%]	Meanresult	CV[%]	Status
RBC	<2.2%	4.18	0.3	Passed
WBC	<4.2%	8.5	1.2	Passed
HGB	<1.8%	12.8	0.4	Passed
PLT	<5.8%	226	2.2	Passed
MCV	<1.8%	84.2	0.1	Passed
MPV	<2.0%	10.9	0.7	Passed

Note: - Printout of the snapshot of the calibration results are attached herewith.



ANNEXURE-II

1. Factors obtained before and after calibration:-

Test	Targetvalue&Range	OldFactor	NewFactor	Status
RBC	4.08±0.10	-6.1	-4.5	Cal Done
WBC	8.4±0.3	-12.1	-10.3	Cal Done
HGB	11.3±0.2	-15.4	-14.6	Cal Done
PLT	239±15	-2.1	0.0	Cal Done
MCV	75.4±2.0	-0.4	-0.6	Cal Done
MPV	10.1±1.5	-13.7	-15.1	Cal Done

Note:- Printout of the snapshot of the calibration results are attached herewith.

2. Results of the Internal Quality Control after calibration:-

Test	RangeLow QC	Result	RangeNormalQ C	Result	RangeHigh QC	Result
RBC	2.29±0.12	2.26	4.15±0.18	4.29	5.07±0.22	5.1
WBC	3.4±0.3	3.4	8.7±0.6	8.1	20.5±1.8	20.0
HGB	5.7±0.3	5.5	12.2±0.6	12.8	16.7± 0.5	16.6
PLT	78±15	78	229±30	221	507±60	472
MCV	65.4±5.0	65.8	82.5±5.0	85.3	96.4±5.0	93.2
MPV	10.0±1.5	10.6	10.4±1.5	10.7	10.7±1.5	11.1

Note: - Printout of the snapshot of the IQC results are attached herewith.

ID:

OT

ID2:

BACKGROUND

WBC

0.0

LYM



MID



GRAN



HGB

0.1

MCH

MCHC

RBC

0.00

MCV

RDW_a

HCT

RDW%

PLT

2

MPV

PDW

LPCR

PCT



▲ Prev

SEQ 7538

▼ Next

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Sample

List

Menu

Print

New Sample

ID: 2230634+

OT

ID2:

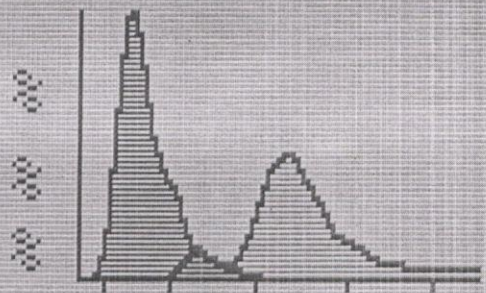
CALIBRATOR

WBC 8.6

LYM

MID

GRAN



HGB 12.8

MCH

MCHC

RBC 4.18

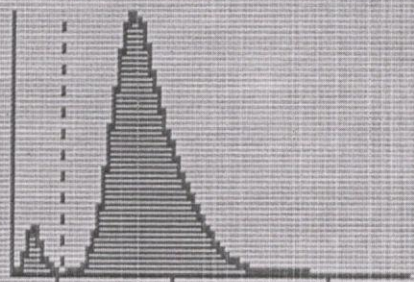
MCV

84.5

RDW_a

HCT

RDW%



PLT 223

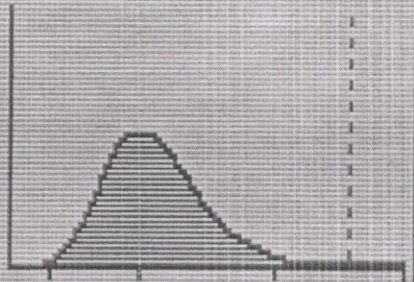
MPV

10.9

PDW

LPCR

PCT



▲ Prev

SEQ 7539

▼ Next

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Sample

List

Menu

Print

New Sample

ID: 2230634+

OT

ID2:

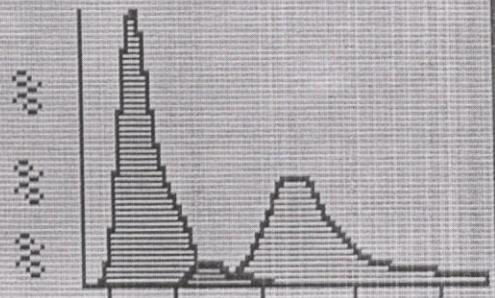
CALIBRATOR

WBC 8.5

LYM

MID

GRAN



HGB 12.8

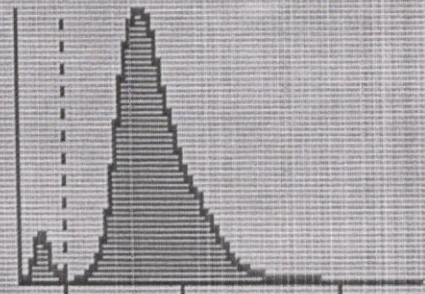
MCH

MCHC

RBC 4.17

MCV 84.3 RDW_a

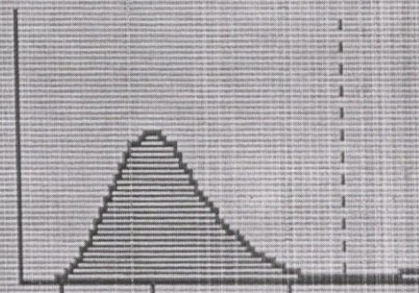
HCT RDW%



PLT 233

MPV 10.8 PDW

LPCP PCT



▲ Prev

SEQ 7540

▼ Next

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Sample

List

Menu

Print

New Sample

ID: 2230634+

OT

ID2:

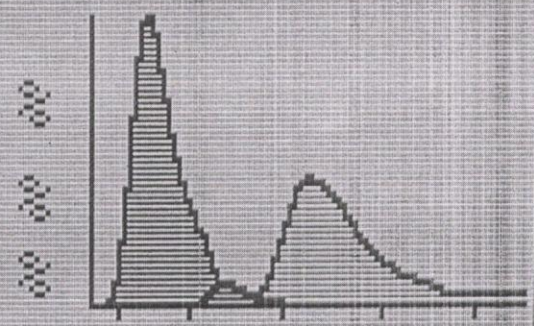
CALIBRATOR

WBC 8.4

LYM

MID

GRAN



HGB 12.8

MCH

MCHC

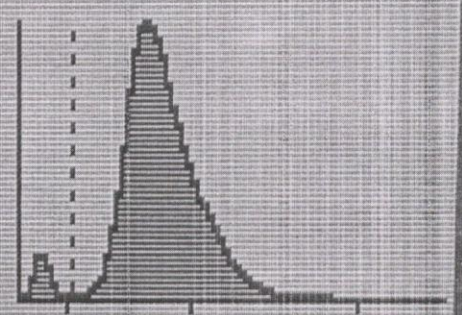
RBC 4.20

MCV 84.3

RDW

HCT

RDW%



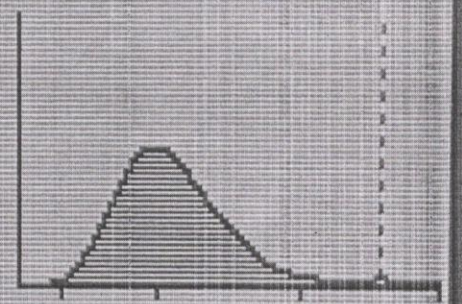
PLT 222

MPV 10.9

PDW

LPC

PCT



▲ Prev

SEQ 7541

▼ Next

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Sample

List

Menu

Print

New Sample

ID: 2230634+

DT

ID2:

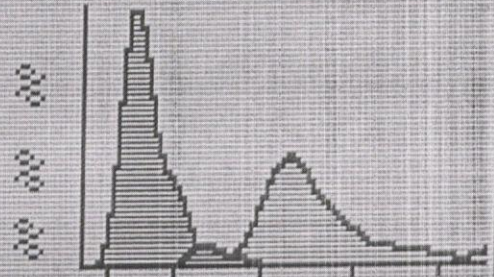
CALIBRATOR

WBC 8.6

LYM

MID

GRAN



HGB 12.9

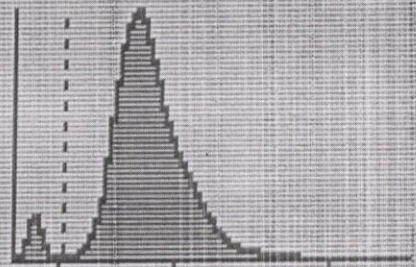
MCH

MCHC

RBC 4.17

MCV 84.4 RDW_a

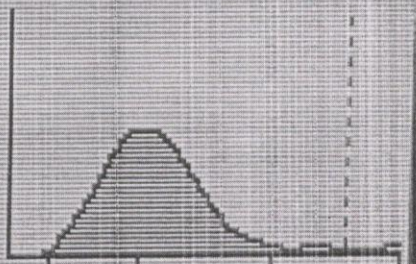
HCT RDW%



PLT 226

MPV 11.0 PDW

LPCR PCT



▲ Prev

SEQ 7542

▼ NEXT

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Sample

List

Menu

Print

New Sample

Whole Blood Calibration

Profile: CALIBRATOR

Use	RBC	SEQ	ID
<input checked="" type="checkbox"/>	4.18	7539	2230634+
<input checked="" type="checkbox"/>	4.17	7540	2230634+
<input checked="" type="checkbox"/>	4.20	7541	2230634+
<input checked="" type="checkbox"/>	4.17	7542	2230634+

Mean: 4.18

CV%: 0.3

Orig CAL Factor	New CAL Factor	Target Value	CAL Value
-6.1	-4.5	4.25	4.25

-6.1

-4.5

Set TV

Use CAL

Next

Exit

Whole Blood Calibration

Profile: CALIBRATOR

Use	MCV	SEQ	ID
<input checked="" type="checkbox"/>	84.5	7539	2230634+
<input checked="" type="checkbox"/>	84.3	7540	2230634+
<input checked="" type="checkbox"/>	84.3	7541	2230634+
<input checked="" type="checkbox"/>	84.4	7542	2230634+
<input type="checkbox"/>			

Mean: 84.4

CV%: 0.1

Orig CAL Factor	New CAL Factor	Target Value	CAL Value
-0.4	-0.6	84.2	84.2

-0.4

-0.6

Set TV

Use CAL

Next

Exit

Whole Blood Calibration

Profile: CALIBRATOR

Use	PLT	SEQ	ID
<input checked="" type="checkbox"/>	223	7539	2230634+
<input checked="" type="checkbox"/>	233	7540	2230634+
<input checked="" type="checkbox"/>	222	7541	2230634+
<input checked="" type="checkbox"/>	226	7542	2230634+
<input type="checkbox"/>			

Mean: 226

CV%: 2.2

Orig CAL Factor	New CAL Factor	Target Value	CAL Value
-2.1	+0.0	231	231
	<input type="text" value="+0.0"/>	<input type="text" value="Set TV"/>	<input type="text" value="Use CAL"/>

Whole Blood Calibration

Profile: CALIBRATOR

Use MPV SEQ ID

 10.9 7539 2230634+

 10.8 7540 2230634+

 10.9 7541 2230634+

 11.0 7542 2230634+

Mean: 10.9

CV%: 0.7

Orig CAL Factor	New CAL Factor	Target Value	CAL Value
-15.1	-14.1	11.0	11.0

-15.1

-14.1

Set TV

Use CAL

Next

Exit

ID: 2230641+

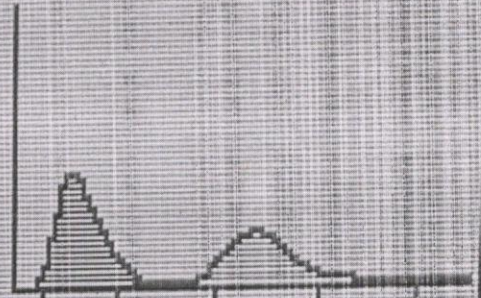
OT

ID2:

LOW CONTROL

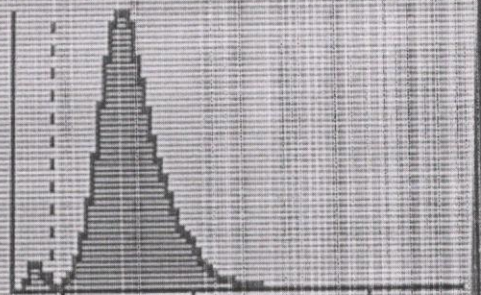
WBC 3.4

LYM	1.5	43.3%
MID	0.2	5.2%
GRAN	1.7	51.5%



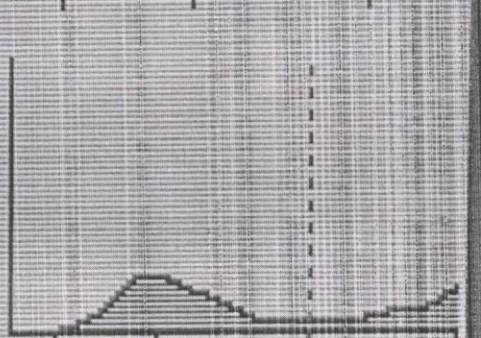
HGB 5.5

MCH	24.6	MCHC	37.4
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RBC 2.26

MCV	65.8	RDW _a	
HCT	14.8	RDW%	14.8



PLT 78

MPV	10.6	PDW	
LPCR		PCT	



▲ Prev

SEQ 7543

▼ Next

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Sample

List

Menu

Print

New Sample

2230642+

OT

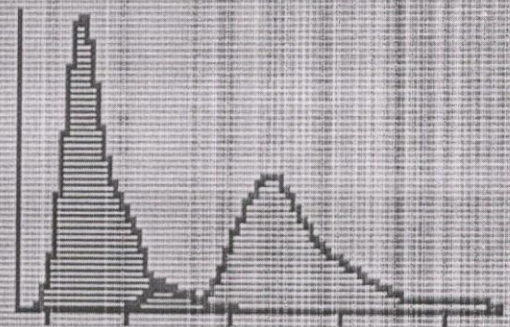
NORMAL CONTROL

WBC 8.1

LYM 3.5 43.0%

MID 0.5 6.4%

GRAN 4.1 50.6%



HGB 12.8

MCH 30.0 MCHC 35.1

RBC 4.29

MCV 85.3 RDW_a

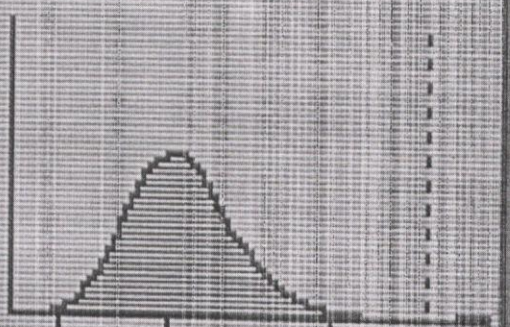
HCT 36.6 RDW% 13.1



PLT 221

MPV 10.7 PDW

LPCR PCT



▲ Prev

SEQ 7544

Next

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Sample

List

Menu

Print

New Sample

ID: 2230643+

OT

D2:

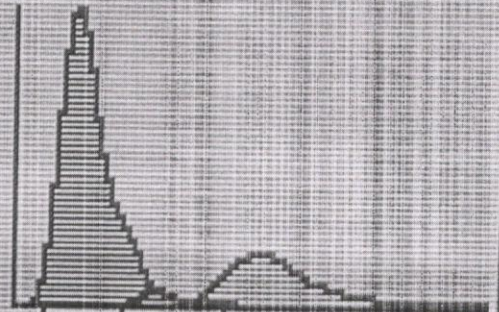
HIGH CONTROL

WBC 20.0

LYM 12.6 63.1%

MID 1.2 5.6%

GRAN 6.2 31.3%



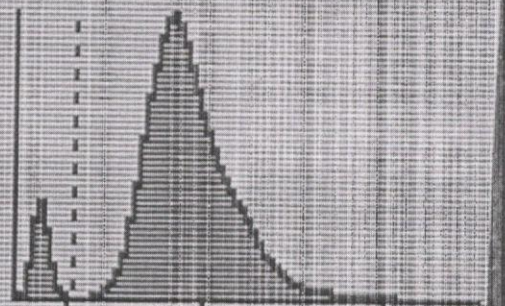
HGB 16.6

MCH 32.5 MCHC 34.9

RBC 5.10

MCV 93.2 RDW_a

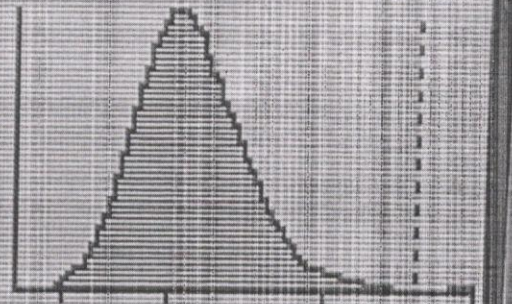
HCT 47.6 RDW% 13.2



PLT 472

MPV 11.1 PDW

LPCR PCT



▲ Prev

SEQ 7545

Next ▼

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Sample

List

Print

New Sample