

March, 28, 2021

***Calibration Certificate for 5PDA Heamatology Analyzer
Model: H560(Sr. No.: K11042015033)***

This is to certify that the Fully Automated Biochemistry Analyzer, Model: EM200(Sr. No.: K11042015033) installed at Pathology Department, Sun Diagnostic Centre. IMA Building, Ranihat, Near SCB Medical College, Cuttack, Odisha-753008 has been calibrated and the calibration value of all gains and all the required values are well within limit.

This calibration is valid till March ,27, 2022.

For, Transasia Bio-Medicals Ltd.



***Shibbananda Biswas
Dy. Regional Service Manager***

Instrument name: 5Part Heamatology Analyser

Instrument Model: H560

Instrument Sr. No: K11042015033

Parameters Gain

Item	Current Value	Adjustment Rate
WBC	120	100
RBC	115	100
DIFF-LS	155	100
DIFF-MS	130	100
DIFF-HS	65	100
BASO-LS	142	100
BASO-MS	113	100
MASO-HS	59	100

HGB Current Value: 156(130-170)

HGB Blank Voltage: 4.58(4.2-4.8)

P12V: 12.02(10.0-15.0)

P24V: 24.07(20.0-28.0)

A+12V: 12.1(10.0-15.0)

A-12V: -12.13(15.0- -10.0)

Constant current source voltage: 57.02(50.0-75.0)

Laser Diode Current: 40.68(38.0-42.0)


Calibrator Used: H560Calibrator

Lot no.: H002436

Expiry: 5th April'2021

Ramarks: All Voltages & Gain values are well within limit. Instrument is working satisfactorily.



MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B. Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. OC - 2545
	CALIBRATION CERTIFICATE OF CENTRIFUGE	
CALIBRATION CERTIFICATE NO.: MTL / SDC / R01 / 05 - 21		ULR - CC254521000009548F

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Centrifuge	b) Code No.:	SDC / LAB / CENTRIFUGE / 01
c) Sl. No.:	ZFAN - 01838	d) Make:	Remi
e) Model / Type:	C - 852	f) Range:	3500 rpm
g) Sensor:	N.A.	h) Resolution:	N.A.
i) End User:	Pathology	j) Accuracy:	N.S.
k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item : 11-05-21 1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21 1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration: Temperature: 25 °C ± 3 °C
 Humidity: 50 % RH ± 10 % RH

1.9 Method of Calibration: SOP / RPM / CF / 01

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

i) Digital Tachometer Cal. Certificate No. JRPM - CCTR - A&S - 2020 - 0027 (JRPM, Chennai) (Cal. Date: 11/07/20, Due Date: 10/07/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Knob set at Position	Std. Value Average of Five Readings rpm	Measurement Expanded Uncertainty ± rpm
1.	Rotation 3500 rpm	1	999.74	1.28
2.		2	1498.7	
3.		3	2503.5	
4.		4	2997.9	
5.		5	3482.4	


Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.

ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable rpm - Rotation Per Minute
 Std. - Standard

Opinions and Interpretations	
Calibrated	√ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by:
Testing Engineer
 Measure Techno Lab
 Kolkata
 12/05/21

Checked / Approved by:

 Quality & Technical Manager
 S. Pandey

MEASURE TECHNO LAB
2, B.T. ROAD (JAYANTI CINEMA COMPLEX)
BARRACKPORE, KOLKATA - 700120, W.B.

Form No. - MTL/22/2006



Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519,
 Mobile: 9831190974, LAB:- 8100143376,
 E-mail: measuretechno@yahoo.co.in

**CALIBRATION CERTIFICATE OF
 MICRO PIPETTE**

CALIBRATION CERTIFICATE NO.: MTL / SDC / R03 / 05 - 21

ULR - CC25452100009550F

Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	SDC / LAB / PIPETTE / 01
	c) Sl. No.:	YE168AA0027340	d) Make:	Dragon Lab
	e) Model / Type:	Micropette	f) Range:	5 µl to 50 µl
	g) Sensor:	N.A.	h) Resolution:	0.5 µl
	i) End User:	Pathology	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item :	10-05-21	1.4 Physical Condition of DUC :	OK
1.5 Date of calibration :	11-05-21	1.6 Recommended date of next calibration :	11-05-22
1.7 Date of Issue :	12-05-21		

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1012.5 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 – 6 : 2002)

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
- b) The following standards / Equipment have been used.

- i) 1 mg to 200 g Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)
- ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
- iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	5	4.9740	4.9939	-0.0061	0.039
2.	5 µl to 50 µl	25	24.8873	24.9868	-0.0132	0.39
3.		50	49.7846	49.9837	-0.0163	0.39

Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10⁻⁵ µl / °k.

- ii) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
- iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration

N.S. - Not Specified

N.A. - Not Applicable


Opinions and Interpretations	
Calibrated	√ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by:
Testing Engineer
Measure Techno Lab
 Testing Engineer
SM 12/05/21

Checked / Approved by:

 Quality & Technical Manager

S. Pandey

MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B. Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974, LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. CC - 2545
	CALIBRATION CERTIFICATE OF MICRO PIPETTE	
CALIBRATION CERTIFICATE NO.: MTL / SDC / R04 / 05 - 21	ULR - CC254521000009551F	Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	SDC / LAB / PIPETTE / 02
	c) Sl. No.:	YE6F725706	d) Make:	Dragon Lab
	e) Model / Type:	Micropette	f) Range:	100 µl to 1000 µl
	g) Sensor:	N.A.	h) Resolution:	5 µl
	i) End User:	Pathology	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item : 10-05-21

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21

1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1012.5 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2002)

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

- i) 1 mg to 200 g Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)
- ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
- iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	100	99.5830	99.9813	-0.0187	
2.	100 µl to 1000 µl	500	497.9670	499.9589	-0.0411	0.39
3.		1000	995.9380	999.9218	-0.0782	

- Remarks: i) Cubical Expansion co-efficient of pipette material taken as $10^{-5} \mu\text{l} / ^\circ\text{k}$.
 ii) This result has an expanded uncertainty with a coverage factor $k=2$ at approximately 95% confidence level.
 iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration


N.S. - Not Specified

N.A. - Not Applicable

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibrated by:
Testing Engineer
 S. Mahapatra
 Testing Engineer
 Kolkata

Checked / Approved by:

 Quality & Technical Manager
 S. Pandey

MEASURE TECHNO LAB
2, B.T. ROAD (JAYANTI CINEMA COMPLEX)
BARRACKPORE, KOLKATA - 700120, W.B.

Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519,
 Mobile: 9831190974, LAB:- 8100143376,
 E-mail: measuretechno@yahoo.co.in

Form No. - MTL/22/2006

**CALIBRATION CERTIFICATE OF
 MICRO PIPETTE**



CALIBRATION CERTIFICATE NO.: MTL / SDC / R05 / 05 - 21

ULR - CC254521000009552F

Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	SDC / LAB / PIPETTE / 03
	c) Sl. No.:	YE176AF0016085	d) Make:	Dragon Lab
	e) Model / Type:	Micropette	f) Range:	1000 µl (Fixed)
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Pathology	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item : 10-05-21

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21

1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1012.5 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2002)

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
 b) The following standards / Equipment have been used.
- i) 1 mg to 200 g Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)
 - ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
 - iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume 1000 µl (Fixed)	1000	995.9371	999.9208	-0.0792	0.39

- Remarks: i) Cubical Expansion co - efficient of pipette material taken as $10^{-5} \mu\text{l} / ^\circ\text{k}$.
 ii) This result has an expanded uncertainty with a coverage factor $k=2$ at approximately 95% confidence level.
 iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.


DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable

Opinions and Interpretations	
Calibrated	√ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by:
Testing Engineer
 S. Mahapatra
 Testing Engineer
 Kolkata

Checked / Approved by:

 Quality & Technical Manager
 S. Pandey

MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B.	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. CC - 2545
	CALIBRATION CERTIFICATE OF MICRO PIPETTE	
Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	CALIBRATION CERTIFICATE NO.: MTL / SDC / R06 / 05 - 21	
ULR - CC254521000009553F		Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Micro Pipette	b) Code No.:	SDC / LAB / PIPETTE / 04
c) Sl. No.:	V58804	d) Make:	Accupipet
e) Model / Type:	Micropette	f) Range:	1 µl to 100 µl
g) Sensor:	N.A.	h) Resolution:	1 µl
i) End User:	Pathology	j) Accuracy:	N.S.
k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item : 10-05-21

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21

1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1012.5 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 – 6 : 2002)

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

- i) 1 mg to 200 g Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)
- ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
- iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	1	0.9921	0.9961	-0.0039	0.039
2.	1 µl to 100 µl	50	49.7847	49.9838	-0.0162	0.39
3.		100	99.5826	99.9809	-0.0191	0.39

Remarks: i) Cubical Expansion co - efficient of pipette material taken as $10^{-5} \mu\text{l} / ^\circ\text{k}$.

ii) This result has an expanded uncertainty with a coverage factor $k=2$ at approximately 95% confidence level.

iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration

N.S. - Not Specified

N.A. - Not Applicable


Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibrated by: **Testing Engineer**
Measure Techno Lab
 S. Manapatra
 Testing Engineer
 Kolkata
 12/05/21

Checked & Approved By:

Quality & Technical Manager
S. Pandey

MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B.	Form No. - MTL/22/2006	 CALIBRATION CERTIFICATE OF REFRIGERATOR <small>NABL ACCREDITED LABORATORY Certificate No. CC - 2545</small>
Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	CALIBRATION CERTIFICATE OF REFRIGERATOR	
CALIBRATION CERTIFICATE NO.: MTL / SDC / R07 / 05 - 21	ULR - CC254521000009554F	Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
IMA Building, Ranihat, Near SCB Medical College,
Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:	a) Name: Refrigerator	b) Code No.: SDC / LAB / RF / 1	
	c) Sl. No.: 10710201030122	d) Make: Videocon	
	e) Model / Type: S166NE	f) Range: 2 °C to 8 °C	
	g) Sensor: N.A.	h) Resolution: 0.1 °C	
	i) End User: Pathology	j) Accuracy: N.S.	
	k) Calibration done at: <input checked="" type="checkbox"/> On Site / <input type="checkbox"/> In House		

1.3 Date of receipt of item : 11-05-21 1.4 Physical Condition of DUC : OK
 1.5 Date of calibration : 11-05-21 1.6 Recommended date of next calibration : 11-05-22
 1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration: Temperature: 25.2 °C
 Humidity: 63.2 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :
 a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
 b) The following standards / Equipment have been used.
 i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
 ii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :
Thermal Calibration


Sl. No.	Parameter/ Range	Temperature Set at °C	Measured Value on DUC °C			Corrected Std. Value °C			Error °C	Rack	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average	Min.	Max.	Average			
1.	Temperature 2 °C to 8 °C	2.0	2.0	2.0	2.00	2.28	2.34	2.315	-0.315	1	1.06
						2.39	2.46	2.438	-0.438	2	1.06
						2.45	2.60	2.538	-0.538	3	1.06
						2.53	2.68	2.622	-0.622	4	1.06
2.	4.0	4.0	4.0	4.00	4.36	4.48	4.437	-0.437	1	1.06	
					4.40	4.51	4.468	-0.468	2	1.06	
					4.58	4.65	4.628	-0.628	3	1.06	
					4.63	4.69	4.675	-0.675	4	1.06	


Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Average Reading obtained by 10 Readings.
 iv) Error = Average DUC Reading - Average Standard Reading.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
 Max. - Maximum

Opinions and Interpretations	
Calibrated	✓
Limited Use	✗

Calibrated by: *Testing Engineer*
Measure Techno Lab
Kolkata
12/05/21

Checked / Approved by:

 Quality & Technical Manager
S. Pandey

MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B. Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974, LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. CC - 2545
	CALIBRATION CERTIFICATE OF REFRIGERATOR	
CALIBRATION CERTIFICATE NO.: MTL / SDC / R08 / 05 - 21	ULR - CC25452100009555F	Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Refrigerator	b) Code No.:	SDC / LAB / RF / 2
c) Sl. No.:	INA182815120	d) Make:	Whilpool
e) Model / Type:	FZ2D2583S	f) Range:	2 °C to 8 °C
g) Sensor:	N.A.	h) Resolution:	0.1 °C
i) End User:	Pathology	j) Accuracy:	N.S.

k) Calibration done at: On Site / In House

1.3 Date of receipt of item : 11-05-21
 1.4 Physical Condition of DUC : OK
 1.5 Date of calibration : 11-05-21
 1.6 Recommended date of next calibration : 11-05-22
 1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

Temperature:	25.2 °C
Humidity:	63.1 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
 b) The following standards / Equipment have been used.

- i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
 ii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Thermal Calibration


Sl. No.	Parameter/ Range	Temperature Set at °C	Measured Value on DUC °C			Corrected Std. Value °C			Error °C	Rack	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average	Min.	Max.	Average			
1.	Temperature 2 °C to 8 °C	2.0	2.0	2.0	2.00	2.46	2.58	2.525	-0.525	1	1.06
						2.57	2.69	2.643	-0.643	2	1.06
						2.61	2.70	2.668	-0.668	3	1.06
						2.69	2.83	2.777	-0.777	4	1.06
2.	4.0	4.0	4.0	4.00	4.49	4.56	4.542	-0.542	1	1.06	
					4.48	4.59	4.548	-0.548	2	1.06	
					4.57	4.70	4.648	-0.648	3	1.06	
					4.61	4.78	4.710	-0.710	4	1.06	


- Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Average Reading obtained by 10 Readings.
 iv) Error = Average DUC Reading - Average Standard Reading.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
 Max. - Maximum

Opinions and Interpretations	
Calibrated	<input checked="" type="checkbox"/> Accepted / Valid for use
Limited Use	<input type="checkbox"/> Rejected / Out of use

Calibrated by:
Testing Engineer
 Measure Techno Lab
 Kolkata
 12/05/21

Checked / Approved by:

 Quality & Technical Manager
 S. Pandey

MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B. Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. CC - 2545
	CALIBRATION CERTIFICATE OF REFRIGERATOR	
CALIBRATION CERTIFICATE NO.: MTL / SDC / R09 / 05 - 21	ULR - CC25452100009556F	Page: 1 of 1

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
 IMA Building, Ranihat, Near SCB Medical College,
 Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Refrigerator	b) Code No.:	SDC / LAB / RF / 3
c) Sl. No.:	N.S.	d) Make:	Euronova
e) Model / Type:	N.S.	f) Range:	2 °C to 8 °C
g) Sensor:	N.A.	h) Resolution:	0.1 °C
i) End User:	Pathology	j) Accuracy:	N.S.
k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item : 11-05-21

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21

1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

Temperature: 25.1 °C
 Humidity: 63.3 % RH

1.9 Method of Calibration: SOP / TH / 05

2.0 Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b) The following standards / Equipment have been used.

i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)

ii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Temperature Set at °C	Measured Value on DUC °C			Corrected Std. Value °C			Error °C	Rack	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average	Min.	Max.	Average			
1.	Temperature 2 °C to 8 °C	2.0	2.0	2.0	2.00	2.35	2.44	2.405	-0.405	1	1.06
						2.40	2.56	2.491	-0.491	2	1.06
						2.48	2.70	2.605	-0.605	3	1.06
						2.55	2.73	2.657	-0.657	4	1.06
						4.46	4.58	4.530	-0.530	1	1.06
2.	4.0	4.0	4.00	4.54	4.60	4.583	-0.583	2	1.06		
				4.61	4.73	4.683	-0.683	3	1.06		
				4.65	4.78	4.730	-0.730	4	1.06		

Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.

ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

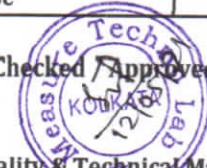
iii) Average Reading obtained by 10 Readings.

iv) Error = Average DUC Reading - Average Standard Reading.

DUC - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable Std. - Standard Min. - Minimum
 Max.- Maximum

Opinions and Interpretations	
Calibrated	√ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by:
Testing Engineer
 Measure Techno Lab
 Testing Engineer
 Kolkata

Checked / Approved by:

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