

**REPORT ON**  
**TEMPERATURE MAPPING OF**  
**REFRIGERATOR**

Report ID:	UCL/20649/TM 3721/22
Client's Code:	SP/INS/02
UCL Identification Code:	20649/01
Mapping Start Date:	19/04/2022
Mapping End Date:	20/04/2022
Recommended (if required ) Next Mapping Date:	19/04/2023



Note : This report is issued subject to conditions stated overleaf.

UCL Identification Code: 20649/01  
Service Request No.: 20649  
Report No : UCL/20649/TM 3721/22  
Client's Code: SP/INS/02  
Mapping Start Date: 19/04/2022  
Mapping Completion Date: 20/04/2022  
Recommended Due Date: 19/04/2023

**Client:** SUNRISE PATHOLOGY LABORATORY  
**Address:** Shop No. 104, 1st Floor, Sun Height, Snoh Plaza Road  
Chandkheda - 382424, Ahmedabad, Gujarat

**Specification of Device under Mapping:**

Nomenclature:	REFRIGERATOR	Model:	0457 RA21F	Sr. No.	NA
Make:	SAMSUNG				

Note: Dates are in DD/MM/YYYY format, unless mentioned specifically

**Temperature Mapping Specification:**

Nos. of Temperature Measurement Locations:	10	Numbers	
Time Interval between successive data log:	5	Minutes	
Effective duration of mapping:	24	Hour	
Mapping Start Date (in mm/dd/yyyy format *):	'4/19/2022'	Time:	'11:04:46 AM' * Refer Table 1
Mapping End Date (in mm/dd/yyyy format *):	'4/20/2022'	Time:	'11:04:46 AM'
Set Temperature of Device:	NA		
Load Quantity in Device during Mapping:	Load distributed in total volume		

**Client's Acceptance Criteria:**

**Freezer:** Average registered temperature, at any location should be within 0 to -25 °C  
**Storage:** Average registered temperature, at any location should be within 5 °C ± 3

**Scope and Objective of Temperature Mapping:**

- 1 To measure, record and report temperature data acquired at different pre-determined locations inside the Unit under Temperature Mapping / Validation. The temperature data are acquired through appropriate data logger or data scanner via appropriate temperature sensors placed at above referred measurement locations. The data were acquired at fixed time interval and for effective duration mentioned in mapping specifications.
- 2 To identify the location(s) that manifested highest and Lowest average as well as peak temperature value during the reported evaluation period.

**Data Logging / Scanning System Used during Mapping:**

Nomenclature: Temperature Data Loggers  
Make: TEMPRECORD UCL IDs UCL/DLT/85 to UCL/DLT/95 (Selective Loggers Used)  
Operational Range: -29 °C to 60 °C Resolution: 0.01 °C  
Nos. Used: 10  
Internally Calibrated vide certificate no. UCL/INT/T/1557-1616, Cal. Date: 09-10/11/2021

**Traceability:**

Digital Thermometer with Sensor, Make: DOSTMANN ELECTRONICS, Model : P755, Indicator Sr.No: 75519120357,  
Sensor Sr. No. 27100015P100171428, (Instrument ID : UCL/MF/05, Sensor ID : UCL/TS/69) Calibrated By NCQC, Ahmedabad  
vide Certi No.: NCQC-T/121021/001 Cal Date: 12/10/2021. Measurements are traceable to National Standards

**UCL SOP ID:** UCLVA/01 (Brief description given hereunder)

**Mapping / Validation Procedure Adopted:**

The Unit under temperature mapping or validation (UUM) was inspected and appropriate locations to place temperature sensor of data logger were identify. The loading condition of UUM was recorded in terms of Fully-Loaded, Partially-Loaded or Empty-No-Load condition. The data loggers, that were programmed to capture temperature data at required time interval; were appropriately placed and adhered at the identified locations, ensuring that no direct heat or radiation fall on them. Required UUM information was recorded.



Authorized Signatory:  
Name: V. S. Jadeja  
In-Charge Laboratory

Issued By: Ashish Shah  
Name: Ashish Shah  
Technical Manager  
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Report ID: UCL/20649/TM 3721/22  
Issue Date: 20/04/2022  
UCL Identification Code: 20649/01  
Client's Code: SP/INS/02

ok  
21/04/22

Note: This report is issued subject to conditions stated overleaf.



The UUM was securely locked and was allowed to open and operate in normal usual procedure of the client, if required, to simulate actual working procedure of the client's users. UUM and its cooling system was kept in idle running condition throughout the mapping period.

On expiry of schedule mapping or validation test period that includes the data report period plus additional temperature stabilization period for data loggers; the loggers were removed from UUM and data were uploaded to a Computer system through which they were programmed. Data files of each logger were converted for MS-excel programmed, locationwise grouped together and relevant data for reporting period were marked and analyzed.

Locationwise summary in terms of average, standard deviation, maximum, minimum, range was prepared along overall summary. The recorded data along with the analysis and graphical presentation were included in the mapping / validation report.

**LOCATIONWISE PLACEMENT OF DATALOGGER SENSORS**

Data Logger ID	Location ID	Location Details		
		HEIGHT	FACE	SIDE
UCL/DLT/85	1	Top	Back	Right
UCL/DLT/86	2	Top	Front	Left
UCL/DLT/87	3	Top	Back	Left
UCL/DLT/88	4	Top	Front	Right
UCL/DLT/89	5	Top-Middle	Back	Right
UCL/DLT/90	6	Top-Middle	Front	Left
UCL/DLT/91	7	Bottom-Middle	Back	Right
UCL/DLT/92	8	Bottom-Middle	Front	Left
UCL/DLT/93	9	Bottom	Front	Right
UCL/DLT/95	10	Bottom	Back	Left

**Summary and Result of Acquired Data:**

Logger IDs:	UCL/DLT/85	UCL/DLT/86	UCL/DLT/87	UCL/DLT/88	UCL/DLT/89	UCL/DLT/90	UCL/DLT/91	UCL/DLT/92	UCL/DLT/93	UCL/DLT/95
UUC Location IDs:	1	2	3	4	5	6	7	8	9	10
Average	-10.72	-7.93	3.77	2.98	6.50	4.21	6.58	6.67	5.82	4.97
Maximum (Hottest)	-8.08	-5.83	5.51	4.25	7.85	5.38	7.83	7.95	7.19	6.42
Minimum (Coldest)	-13.19	-9.63	2.13	2.08	5.84	3.53	5.92	5.77	5.15	4.01
Range (Max. - Min.)	5.12	3.79	3.38	2.17	2.01	1.85	1.91	2.18	2.04	2.41
Standard Deviation	1.46	1.13	0.76	0.52	0.36	0.36	0.39	0.43	0.40	0.44

**Hot Spot Identification:**

	Freezer Unit		Storage Unit	
	Temperature (°C)	Location	Temperature (°C)	Location
Highest (Warmest) Average Temperature:	-7.93	2	6.67	8 <b>HOT SPOT</b>
Lowest (Warmest) Average Temperature:	-10.72	1	2.98	4 <b>COLD SPOT</b>
Hottest Temperature Recorded:	-5.83	2	7.95	8
Coldest Temperature Recorded:	-13.19	1	2.08	4



Authorized Signatory:  
Name: V. S. Jadeja  
In-Charge Laboratory

Issued By:  
Name: Ashish Shah  
Technical Manager

Report ID: UCL/20649/TM 3721/22  
Issue Date: 20/04/2022  
UCL Identification Code: 20649/01  
Client's Code: SPI/INS/02

Note : This report is issued subject to conditions stated overleaf.

**Acceptance:**

Client's Acceptance Criteria FREEZER 0 to -25 °C	<b>COMMENT</b> ACCEPTED: Average register values are with in 0 to -25 °C
Client's Acceptance Criteria STORAGE 5 ± 3 °C	<b>COMMENT</b> ACCEPTED: Average register values are with in 5 ± 3 °C

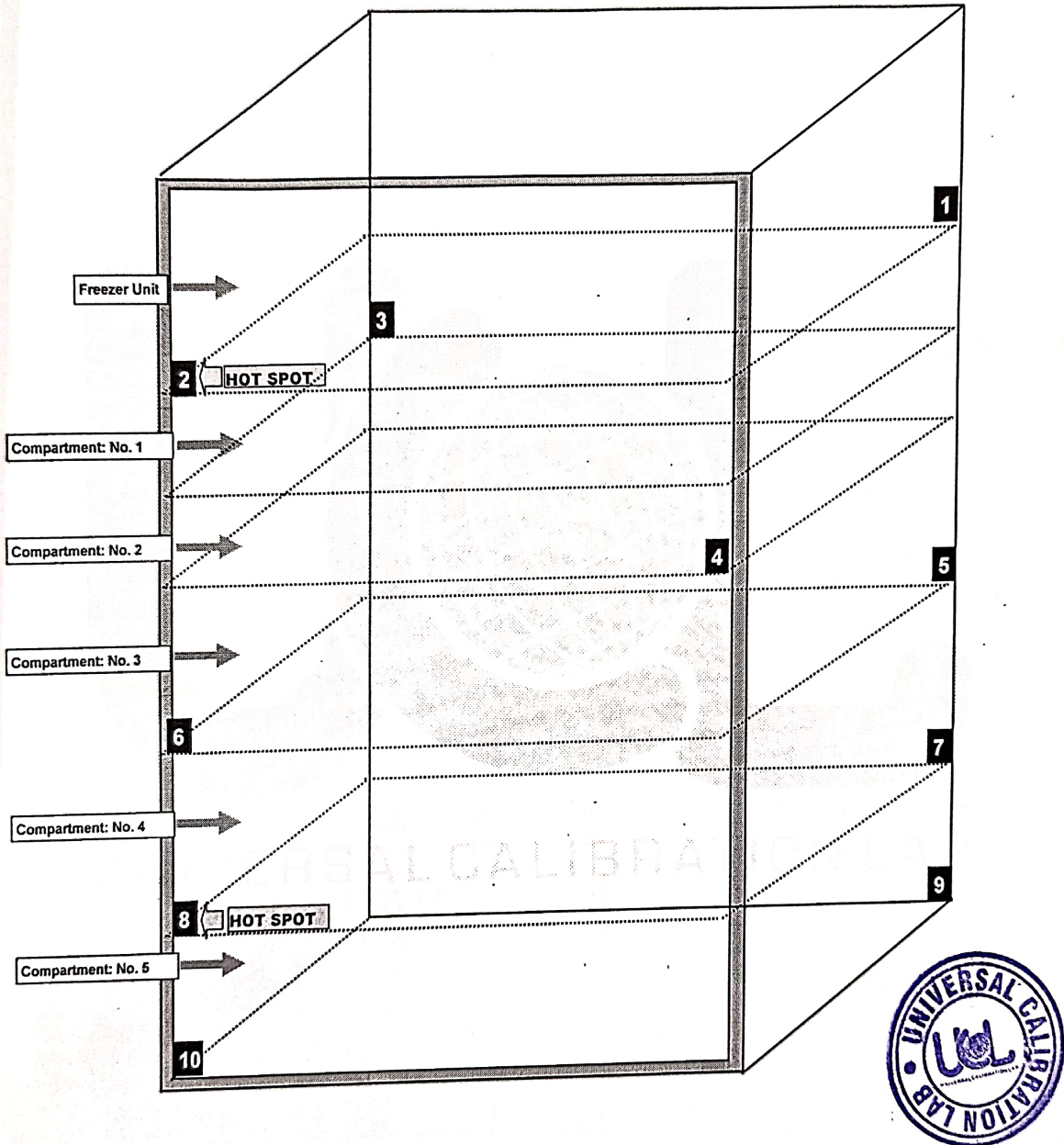


Figure 1: Diagram showing Placement of Data-Logger Sensors in the Unit under Mapping / Validation. 1, 2 ... are the locations inside the UUM where data logger sensors were placed. Sketch not to the scale

Authorized Signatory: *V. S. Jadeja*  
 Name: V. S. Jadeja  
 In-Charge Laboratory

Issued By: *Ashish Shah*  
 Name: Ashish Shah  
 Technical Manager

Report ID: UCL/20649/TM 3721/22  
 Issue Date: 20/04/2022  
 UCL Identification Code: 20649/01  
 Client's Code: SP/INS/02

Note: This report is issued subject to conditions stated overleaf.

UCL Identification Code: 20647/01  
Service Request No.: 20647

Report No.: UCL/20647/HY 32097/22  
Client UUC Code: SP/INS/03  
Item Receipt Date: 19/04/2022  
Calibration Date 19/04/2022

1.0 Client: **SUNRISE PATHOLOGY LABORATORY**  
2.0 Address: **Shop No. 104, 1st Floor, Sun Height, Sneh Plaza Road,  
Chandkheda - 382 424 , Ahmedabad , Gujarat**

3.0 Description of Item:

Nomenclature: **DIGITAL IN/OUT THERMOHYGROMETER (OUT SENSOR)**  
Make: EUROLAB  
Model: 288ATH  
Sr. No. NA

	Temperature (°C)	Relative Humidity (%)
UUC Range:	-50 to 70	10 to 99
Calibration Range:	-25 to 50	30 to 85
Resolution:	0.1	1
Accuracy:	Not Specified	Not Specified

Location of Calibration: **At UCL Lab.**

4.0 Environment Condition: **Temperature: 33.7°C Humidity : 32%**

5.0 Calibration Details:

5.1 Standards Used:

Nomenclature **DIGITAL THERMOHYGROMETER WITH RH SENSOR**  
UCL ID No. **UCL/MF/01 & UCL/THS/03**  
Calibration Date **10/02/2022**  
Due Date **09/02/2023**  
Calibration Agency **NCQC, Ahmedabad**  
Uncertainty **± RH % 3.20**

Nomenclature **DIGITAL THERMOMETER WITH SENSOR**  
UCL ID No. **UCL/MF/05 & UCL/TS/69**  
Calibration Date **12/10/2021**  
Due Date **11/10/2022**  
Calibration Agency **NCQC, Ahmedabad**  
Uncertainty **± °C 2.20**

5.2 Equipment Used:

Nomenclature **Hot-Cold Liquid Bath**  
UCL ID No. **UCL/LB/02**

**Humidity Generator**  
UCL/HG/01

5.3 Calibration Procedure:

UCL SOP No : **UCL/HY/02**

For Relative Humidity (% RH) calibration, the Unit Under Calibration (UUC) along with Temperature-Humidity sensor of Reference Humidity Indicator (STD) were placed inside the Humidity Generator on which required humidity and temperature values were set. On stabilization, indicated temperature & humidity values of both UUC and STD were recorded. For External temperature calibration , both (UUC) and (STD) were placed inside a translucent sealed chamber of heating-cooling Liquid Bath on which required temperature values were set. On stabilization, indicated temperature values of both UUC and STD were recorded. The calibration was performed by comparison of UUC values with STD values.

6.0 Traceability:

Digital Thermohygrometer with Rh Sensor, Make: DOSTMANN Electronic, Model : P655LOG/6020-1001, Sr.No: 65508120086, (ID: UCL/MF/01), Sensor Sr. No.: 2710FBB32C81F69C171665 (ID: UCL/THS/03), Calibrated by NCQC, Ahmedabad vide Certi No.: NCQC-T/100222/001 dated: 10/02/2022. Measurements are traceable to National Standards.

Digital Thermometer with Temperature Sensor, Make: DOSTMANN ELECTRONICS, Model : P755, Base Unit Sr.No: 75519120357, Sensor Sr. No. 27100015P100171428, (Instrument ID : UCL/MF/05, Sensor ID : UCL/TS/69) Calibrated By NCQC, Ahmedabad vide Certi No.: NCQC-T/121021/001 Dated: 12/10/2021. Measurements are traceable to National Standards

7.0 Recommended Calibration Due Date (Refer Note 4 given overleaf):

19/04/2023

Prepared By: **D. N. Darji**

Format: UCL/CR/01, Issue No. 01, Revision: 00, Issue Date: 01/12/2008



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*Handwritten signature and date: 22/04/22*

Note : This report is issued subject to conditions stated overleaf.



UCL Identification Code: 20647/01  
 Service Request No. 20647

Report No.: UCL/20647/HY 32097/22  
 Client UUC Code: SP/INS/03  
 Item Receipt Date: 19/04/2022  
 Calibration Date: 19/04/2022

**A: Relative Humidity and Associated Temperature :**

Standard* Humidity % RH	UUC * Humidity % RH	Error # % RH	Uncertainty (±) % RH	Standard* Temperature °C	UUC * Temperature °C	Error # °C	Uncertainty (±) °C
30.3	32	1.7	3.25	25.18	24.9	-0.28	2.20
55.2	54	-1.2	3.25	25.24	25.6	0.36	2.20
85.4	84	-1.4	3.25	25.22	25.0	-0.22	2.20

\* Mean of Five Observations  
 # Error = UUC Value - STD Value

UUC - Unit Under Calibration

**B: External Temperature :**

Standard* Temperature °C	UUC * Temperature °C	Error # °C	Uncertainty (±) °C
-24.96	-24.7	0.28	2.20
2.23	2.5	0.27	2.20
6.19	7.8	-0.39	2.20
25.19	25.5	0.31	2.20
50.20	50.6	0.40	2.20

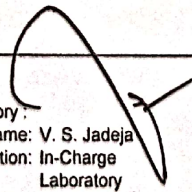
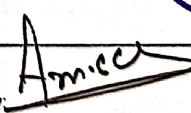
\* Mean of Five Observations  
 # Error = UUC Value - STD Value

UUC - Unit Under Calibration

The combined standard uncertainties were multiplied by a coverage factor of 2 to give expanded uncertainties, which defines the interval having approximately 95 % of confidence level. The expanded uncertainties is not to be confused with accuracy or error of UUC.



Prepared By: D. N. Darji

Authorised Signatory:  Name: V. S. Jadeja Designation: In-Charge Laboratory	Issued By:  Name: Ashish Shah Designation: Technical Manager Date of Issue: 19/04/2022
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Note: This report is issued subject to conditions stated overleaf.

UCL Identification Code: 20649/02  
Service Request No.: 20649

Report No : UCL/20849/CF 0586/22  
Client UUC Code: SP/INS/06  
Item Receipt Date: 20/04/2022  
Calibration Date : 20/04/2022

- 1.0 Client: SUNRISE PATHOLOGY LABORATORY
- 2.0 Address: Shop No. 104, 1st Floor, Sun Height, Sneh Plaza Road,  
Chandkheda - 382 424 , Ahmedabad , Gujarat

3.0 Description of Item:

Nomenclature: NON COOLING CENTRIFUGE

Make: REMI  
Model: R-8C  
Sr. No. ZCBN-04685

	Speed (RPM)	Time(Minute)
Calibration Range:	1500 to 4000	5 to 15
Resolution:	1	1
Accuracy:	Not Specified	Not Specified

Location of Calibration: At Site

4.0 Environment Condition: Temperature: NA Humidity : NA

5.0 Calibration Details:

5.1 Standards and Equipments Used:

Nomenclature: DIGITAL TACHOMETER	DIGITAL STOP WATCH
UCL ID No. UCL/TM/02	UCL/SW/05
Cal. Date: 18/05/2021	27-09 to 02-10-2021
Due Date: 17/05/2022	01-10-2022
Cal Agency: NCQC, Ahmedabad	NCQC, Ahmedabad
Uncertainty: RPM $\pm$ 6.10	Sec. $\pm$ 25.07

5.2 Calibration Procedure:

UCL SOP No : UCL/CF/01

Rotational speed of Unit Under Calibration (UUC) was measured using reference standard Tachometer (STD) of working rotor. Time period of UUC was set for adequate period and at an interval of every 5-minutes of UUC timer, the time period was measured on reference standard Timer (STD) that was used in split memory mode. Based on the corrected STD values, UUC errors in these parameters were calculated.

6.0 Traceability:

6.1 Digital Tachometer, Make: LUTRON, Model: DT 2234B, Sr.No: Q609041 (UCL/TM/02)  
Calibrated by NCQC, Ahmedabad (NABL Accredited Lab) vide Certi No.: NCQC-M/180521/02, Cal. Date: 18/05/2021  
Traceable to International Standards through National Standards

6.2 Digital Stop Watch, Make : Fisher Scientific, Model NII, Sr.No : 122571131 (UCL/SW/05)  
Calibrated By Calibrated by NCQC, Ahmedabad (NABL Accredited Lab) vide Certi No.: NCQC-E/270921/02 Dated 27-9 to 02-10-2021.  
Traceable to National Standards

7.0 Recommended Calibration Due Date (Refer Note 4 given overleaf):

20/04/2023

Prepared By: D.P. Dargi.



*Handwritten signature and date: 23/04/22*

UCL Identification Code: 20649/02  
 Service Request No.: 20649

Report No : UCL/20649/CF 0586/22  
 Client UUC Code: SP/INS/05  
 Item Receipt Date: 20/04/2022  
 Calibration Date : 20/04/2022

**A: Rotational Speed of Rotors (RPM) Measurement**

Load Condition	UUC Set Speed (RPM)	Standard * Speed (RPM)	Error # (RPM)	% Error	Uncertainty (± RPM)
NO LOAD	1500	1505	-5	-0.33	6.17
	2000	2004	-4	-0.22	6.34
	2500	2496	4	0.18	6.18
	3000	2997	3	0.10	6.18
	3500	3497	3	0.09	6.21
	4000	4001	-1	-0.02	6.33

\* Mean of five Observations

UUC - Unit Under Calibration

# Error = UUC Value - STD Value

**B: Time Period Measurement**

UUC Period* (Sec)	Standard Observed * Period (Sec)	Error # (Sec)	Uncertainty (± Sec/Min)
300	300.35	-0.35	25.078
600	599.99	0.01	25.092
900	899.82	0.18	25.080
Overall Error (Sec/Minute)			-0.010
Overall Uncertainty (± Sec/Minute)			0.418

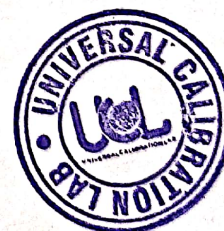
\* Mean of minimum three Observations

UUC - Unit Under Calibration

# Error = UUC Value - STD Value

The combined standard uncertainties were multiplied by a coverage factor of 2 to give expanded uncertainties, which defines the interval having approximately 95 % of confidence level. The expanded uncertainties is not to be confused with accuracy or error of UUC.

Prepared By: D. N. Darji.



Authorised Signatory :  
 Name: V. S. Jadeja  
 Designation: In-Charge  
 Laboratory

Issued By: Ashish Shah  
 Name: Ashish Shah  
 Designation: Technical Manager

Date of Issue: 20/04/2022





# EIE INSTRUMENTS PVT. LTD.

(NABL Accredited Laboratory as per ISO/IEC 17025)



CC-2222

## CALIBRATION CERTIFICATE

Certificate No.:-	EIE/M/22521	ULR No.:-	CC222222300000513F	Page No 1 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222161	22/04/2022	21/04/2023	22/04/2022

**Customer Name & Address** : SUNRISE PATHOLOGY LABORATORY  
SHOP NO. 104, 1st FLOOR, SUN HEIGHT, SNEH PLAZA ROAD, CHANDKHEDA -  
382424, AHMEDABAD, GUJARAT

**Instrument received on** : 21/04/2022

### Details of Unit Under Calibration

Name of Instruments	: Micropipette	Model No	: ---
Make	: Durapet	ID No.	: SP/INS/06
Range	: 100 to 1000 µl	Accuracy	: ---
Resolution	: 10 µl	Location	: ---

**Condition on Receipt** : Good  
**Calibration Location** : Mass - Balance Calibration Laboratory  
**Reference Work Instruction Number** : EIE/W/M/004  
**Environmental condition** : Temperature - ( 23 ± 1.5 ) °C  
: Humidity - ( 40 to 60 ) % RH

### Standard Used :

Nomenclature	Range	Make / ID No:	Uncertainty	Certificate No:	Calibration Due Date	Traceable By
Standard Weights E1 Class	1 mg to 500g	WEIGHTRONICS/ EIE/CAL/WS/10	± 0.000081 g @ 500g	NC-106	06/03/2025	NSTAR, Ahmedabad
Digital Weighing balance	0.001 to 5g	WEIGHTRONICS/ EIE/CAL/DWB/05	± 0.000005 g @ 5g	EIE/M/22002	02/01/2023	EIE Instruments Pvt. Ltd.

The Standards used are traceable to National / International standards

Calibrated By

Arvind Abhishek

Calibration Engineer

Corporate Office:



EIE/F/LAB/056.03 Issue Date 01/01/2022

Calibration Laboratory:

Approved By

Bhadresh Patel  
Calibration Head

A-1301, BVR Ek, Opp. Hotel Inder Residency,  
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Phone : (079) 6621 1234  
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Singarva-Kathwada Road,  
Kathwada, Ahmedabad-382 430.  
Phone : (079) 6604 0660 • Fax : (079) 6604 0600  
E-mail : info@eieinstruments.com

GST TIN No. : 24AABCE4018L1ZU  
I.T. PAN No. : AABCE 4018L  
IEC No. : 0813026598 Dt. 04/03/2014  
CIN No. : U29199GJ2004PTC045078





## CALIBRATION CERTIFICATE

Certificate No.:-	EIE/M/22521	ULR No.:-	CC222222300000513F	Page No 2 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222161	22/04/2022	21/04/2023	22/04/2022

### Calibration Observation Table (Mechanical Calibration):-

Sr. No.	Parameter	100	500	1000
	Nominal Value( $\mu$ l)			
1	*Mean Value( $\mu$ l)	101.779	503.957	1004.073
2	Water Temperature( $^{\circ}$ C)	23.2	23.2	23.1
3	Error( $\mu$ l)	1.779	3.957	4.073
4	Expanded Uncertainty( $\pm\mu$ l)		0.9	

### Remarks :

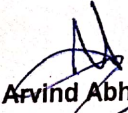
- (\*) Indicates average of five readings.
- The calibration results reported in this certificate are valid at the time of calibration.
- Suggested due date is given based on customer requirements.
- Volume measurement by implementing gravimetric method of the volumetric instruments as per ISO 8655-6 2002.
- The Volume has been rounded - off as per IS 2:1960, wherever it is required.
- The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $K = 2.78$ , which for normal distribution corresponds to a coverage probability of approximately 95%.

### Notes :

- This calibration certificate refers only to the particular item(S) submitted for calibration.
- Any hand written correction in the report invalidates the certificate.
- This certificate shall not be reproduced, except in full prior permission from **EIE INSTRUMENTS PVT. LTD.**

Calibrated By



  
Arvind Abhishek  
Calibration Engineer  
Corporate Office:

EIE/F/LAB/056.03 Issue Date 01/01/2022

Approved By

  
Bhadresh Patel  
Calibration Head





## CALIBRATION CERTIFICATE

Certificate No.:-	EIE/M/22520	ULR No.:-	CC222222300000512F	Page No 1 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222160	22/04/2022	21/04/2023	22/04/2022

**Customer Name & Address** : SUNRISE PATHOLOGY LABORATORY  
SHOP NO. 104, 1st FLOOR, SUN HEIGHT, SNEH PLAZA ROAD, CHANDKHEDA -  
382424, AHMEDABAD, GUJARAT

**Instrument received on** : 21/04/2022

### Details of Unit Under Calibration

Name of Instruments	: Micropipette	Model No	: ---
Make	: Bio System	ID No.	: SP/INS/08
Range	: 20 to 200 µl	Accuracy	: ---
Resolution	: 0.5 µl	Location	: ---

**Condition on Receipt** : Good  
**Calibration Location** : Mass - Balance Calibration Laboratory  
**Reference Work Instruction Number** : EIE/W/M/004  
**Environmental condition** : Temperature - ( 23 ± 1.5 ) °C  
: Humidity - ( 40 to 60 ) % RH

### Standard Used :

Nomenclature	Range	Make / ID No:	Uncertainty	Certificate No:	Calibration Due Date	Traceable By
Standard Weights E1 Class	1 mg to 500g	WEIGHTRONICS/ EIE/CAL/WS/10	± 0.000081 g @ 500g	NC-106	06/03/2025	NSTAR, Ahmedabad
Digital Weighing balance	0.001 to 5g	WEIGHTRONICS/ EIE/CAL/DWB/05	± 0.000005 g @ 5g	EIE/M/22002	02/01/2023	EIE Instruments Pvt. Ltd.

The Standards used are traceable to National / Internation standards

Calibrated By

Arvind Abhishek

Calibration Engineer

Corporate Office:



EIE/F/LAB/056.03 Issue Date 01/01/2022

Calibration Laboratory:

Approved By

Bhadresh Patel  
Calibration Head

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Near Gujarat College, Ellisbridge,  
Ahmedabad-380 006.  
Phone : (079) 6621 1234  
Website : www.eieinstruments.com

B-14, Zaveri Industrial Estate, Opp. Shyam Villa,  
Singarva-Kathwada Road,  
Kathwada, Ahmedabad-382 430.  
Phone : (079) 6604 0660 • Fax : (079) 6604 0600  
E-mail : info@eieinstruments.com

GST TIN No. : 24AABCE4018L1ZU  
I.T. PAN No. : AABCE 4018L  
IEC No. : 0813026598 Dt. 04/03/2014  
CIN No. : U29199GJ2004PTC045078



CALIBRATION CERTIFICATE				
Certificate No.:-	EIE/M/22520	ULR No.:-	CC222222300000512F	Page No 2 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222160	22/04/2022	21/04/2023	22/04/2022

**Calibration Observation Table (Mechanical Calibration):-**

Sr. No.	Parameter	20.0	100.0	200.0
	Nominal Value( $\mu$ l)	20.0	100.0	200.0
1	*Mean Value( $\mu$ l)	20.344	100.469	200.403
2	Water Temperature( $^{\circ}$ C)	25.4	23.3	23.3
3	Error( $\mu$ l)	0.344	0.469	0.403
4	Expanded Uncertainty( $\pm\mu$ l)		0.9	


**Remarks :**

- (\*) Indicates average of five readings.
- The calibration results reported in this certificate are valid at the time of calibration.
- Suggested due date is given based on customer requirements.
- Volume measurement by implementing gravimetric method of the volumetric instruments as per ISO 8655-6 2002.
- The Volume has been rounded - off as per IS 2:1960, wherever it is required.
- The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $K = 2.78$ , which for nominal distribution corresponds to a coverage probability of approximately 95%.

**Notes :**

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Calibrated By

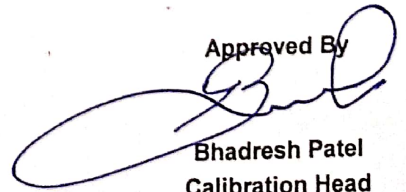
  
**Arvind Abhishek**  
Calibration Engineer  
Corporate Office:



EIE/F/LAB/056.03 Issue Date 01/01/2022

Calibration Laboratory:

Approved By

  
**Bhadresh Patel**  
Calibration Head

A-1301, BVR Ek, Opp. Hotel Inder Residency,  
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Kathwada, Ahmedabad-382 430.  
Phone : (079) 6604 0660 • Fax : (079) 6604 0600  
E-mail : info@eieinstruments.com

GST TIN No. : 24AABCE4018L1ZU  
I.T. PAN No. : AABCE 4018L  
IEC No. : 0813026598 Dt. 04/03/2014  
CIN No. : U29199GJ2004PTC045078



## CALIBRATION CERTIFICATE

Certificate No.:-	EIE/M/22519	ULR No.:-	CC222222300000511F	Page No 1 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222159	22/04/2022	21/04/2023	22/04/2022

**Customer Name & Address** : SUNRISE PATHOLOGY LABORATORY  
SHOP NO. 104, 1st FLOOR, SUN HEIGHT, SNEH PLAZA ROAD, CHANDKHEDA -  
382424, AHMEDABAD, GUJARAT

**Instrument received on** : 21/04/2022

Details of Unit Under Calibration			
Name of Instruments	: Micropipette	Model No	: ---
Make	: Durapet	ID No.	: SP/INS/07
Range	: 5 to 50 µl	Accuracy	: ---
Resolution	: 0.5 µl	Location	: ---


**Condition on Receipt** : Good  
**Calibration Location** : Mass - Balance Calibration Laboratory  
**Reference Work Instruction Number** : EIE/W/M/004  
**Environmental condition** : Temperature - ( 23 ± 1.5 ) °C  
: Humidity - ( 40 to 60 ) % RH

Standard Used :						
Nomenclature	Range	Make / ID No:	Uncertainty	Certificate No:	Calibration Due Date	Traceable By
Standard Weights E1 Class	1 mg to 500g	WEIGHTRONICS/ EIE/CAL/WS/10	± 0.000081 g @ 500g	NC-106	06/03/2025	NSTAR, Ahmedabad
Digital Weighing balance	0.001 to 5g	WEIGHTRONICS/ EIE/CAL/DWB/05	± 0.000005 g @ 5g	EIE/M/22002	02/01/2023	EIE Instruments Pvt. Ltd.

The Standards used are traceable to National / Internation standards

25/04/22

Calibrated By

  
**Arvind Abhishek**  
Calibration Engineer  
Corporate Office:



EIE/F/LAB/056.03 Issue Date 01/01/2022

Calibration Laboratory:

Approved By

  
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## CALIBRATION CERTIFICATE

Certificate No.:-	EIE/M/22519	ULR No.:-	CC222222300000511F	Page No 2 of 2
SRF No:	Job Card No:	Calibration Date	Recommended Due Date	Certificate Issue Date
EIE/22544	222159	22/04/2022	21/04/2023	22/04/2022

### Calibration Observation Table (Mechanical Calibration):-

Sr. No.	Parameter			
	Nominal Value( $\mu$ l)	5.0	25.0	50.0
1	*Mean Value( $\mu$ l)	4.957	24.922	50.088
2	Water Temperature( $^{\circ}$ C)	23.3	23.4	23.4
3	Error( $\mu$ l)	-0.043	-0.078	0.088
4	Expanded Uncertainty( $\pm\mu$ l)		0.3	

### Remarks :

- (\*) Indicates average of five readings.
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- Volume measurement by implementing gravimetric method of the volumetric instruments as per ISO 8655-6 2002.
- The Volume has been rounded - off as per IS 2:1960, wherever it is required.
- The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $K = 2.78$ , which for nominal distribution corresponds to a coverage probability of approximately 95%.

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Calibrated By

Arvind Abhishek

Calibration Engineer

Corporate Office:



EIE/F/LAB/056.03 Issue Date 01/01/2022

Calibration Laboratory:

Approved By

Bhadresh Patel

Calibration Head

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