



05/05/2023

BHC/PO 01/2023

To,

Biodiagnostics  
Alchemy archade  
Previdence College road,  
Malapparamb  
Calicut

Dear Sir,

As per the proposal and discussions there after we are pleased to place order for Fully Automated Clinical Chemistry Analyzer of below specifications.

Sl no	ITEM	Quantity
01	<b>Fully Automated Clinical Chemistry Analyzer</b> Model & Make Mispa CXL Pro Plus , Agappe Diagnostics Ltd.	01 unit
	<b>Total price</b>	<b>Rs. 4,10,000 + GST@18%</b>

**Terms and conditions:**

1. Reagent purchase will be exclusively from BioDiagnostics as approved by equipment manufacturer.
2. The price of analyser and the reagent kits prices mentioned in the annexure are special rates fixed for next 5 years .
3. All basic facilities like electrical power outlets ,UPS etc will be provided by the customer.
4. Warranty period- 5 years
5. Water plant will be placed by the vendor with 1 year warranty. After warranty maintenance of which will be under vendor responsibility and to be checked periodically.
6. All spares will be provided free of cost except, lamp ,which will be charged INR 4000 per set .
7. Transportation, installation and training onequipment will be done free of cost by the Vendor and equipment manufacturer
8. All documents of equipment to be handed over to customer once instatllation is successful , including calibration,IQ/OQ /PQ.
9. Expiry- Reagents and supplies should be supplied with atleast 1 year expiry and below that supply to be done only after prior information
10. Payment terms:50% Advance ie; INR 241900 & Balance as 5 PDCS of INR 48380 each .
11. Delivery terms : within 7 working days from receiving confirmed purchase order and payment advance.



bloom health care

Aswini Medical Centre Building, Pantheeramkavu  
Contact Number : 0495-2431123, 6238430591  
email : bloomhealthcare@vsnl.com

52019006	Amylase 2x55mL	600	7313	12.19
52019008	Bilirubin Direct 3x63/3x8mL	678	882	1.30
52019009	Bilirubin Total TAB 3x63/3x8mL	678	896	1.32
52019011	Enzymatic creatinine 3x52/3x20mL	654	7141	10.92
52019016	HDL-C Direct 3x53/3x20mL	918	14461	15.75
52019018	LDL-C Direct 3x30/3x11mL	358	9019	25.19
52019023	Triglycerides 5x65mL	1450	4499	3.10
52019026	Urea U.V 3x65/3x20mL	1074	2767	2.58
54007004	Alkaline Washing Solution 1*1000mL		1625	
51601003	QC 1*5 ml		1275	
51610001	Multi calibrator 5*3 ml		4460	

Special reagent packs

Item No.	Name	Packsize	No of Tests	Special Price	CPT
52019059	Calcium (Arsenazo )	2x30mL	246	762	3.10
52019071	LDH - P	1x30/1x11mL	152	1452	9.55
52019072	LDL-C Direct	1x30/1x12mL	162	4589	28.33
52019070	Inorganic Phosphorus	2x30mL	200	922	4.61

Thanks and regards

For,  
Bloom Health care

Dr Preeja C MBBS,DNB(OB&G)

Equipment delivery and installation address

Bloom Health care.  
Aswini Medical centre Building,  
Kodal Nadakkavu,  
Pantheeramkavu, Kerala 673019

**CERTIFICATE OF CALIBRATION**

ADL/BO/MS/C/0155/24-25

**Instrument:** MISPA CXL PRO PLUS Fully Automated Biochemistry Analyzer**Customer Name:** Bloom Health care**Date of Installation:** 22-06-2023**S/N:** 21T240PCS0082K**Alignment Check**

Motion Check	Checked	Remark
Sample Probe	<input type="checkbox"/>	OK
Reagent Probe	<input type="checkbox"/>	OK
Mixing Bar	<input type="checkbox"/>	OK
Reaction Disk	<input type="checkbox"/>	OK
Reagent Disk	<input type="checkbox"/>	OK
Sample Disk	<input type="checkbox"/>	OK
Cuvette Check	<input type="checkbox"/>	OK
Lamp	<input type="checkbox"/>	OK

System	Checked	Remark
Main unit	<input type="checkbox"/>	OK
Temp. unit	<input type="checkbox"/>	OK
Mixing unit	<input type="checkbox"/>	OK
Reaction unit	<input type="checkbox"/>	OK
Reagent unit	<input type="checkbox"/>	OK
Sample unit	<input type="checkbox"/>	OK

**AGAPPE DIAGNOSTICS LTD.** ISO 9001:2015 | EN ISO 13485:2016 CERTIFIED COMPANY | CIN : U24239MH1998PLC115413

**CORPORATE OFFICE / REAGENT PLANT**  
 Agappe Hills, Pattimattom (PO), Dist. Ernakulam, Kerala - 683 562, India.  
 Tel: +91 484 286 7000 | Email: agappe@agappe.in

**EQUIPMENT PLANT**  
 X/588-CB, Block No. 32, KINFRA Small Industrial Park,  
 Nellad, Cochin, Kerala, India - 686 721. Tel: +91 484 276 7477.

**KOLKATA OFFICE**  
 406, Merlin Matrix, Plot No-10, Block-DN, Sector V,  
 Salt Lake City, Kolkata - 700 091.  
 Tel: +91 33 4003 0451 | Email: kolkattoffice@agappe.in

**MUMBAI [REGISTERED OFFICE]**  
 401 & 402, 4<sup>th</sup> Floor, Jaisingh Business Centre, 119,  
 Sahar Road, Parsiwada, Andheri (East), Mumbai - 400 099, India.  
 Tel: +91 22 4300 8000 | Email: mumbaioffice@agappe.in

**DELHI OFFICE**  
 DSM 540, 5<sup>th</sup> Floor, DLF Tower, Shivaji Marg,  
 New Delhi - 110 015, India.  
 Tel: +91 11 4558 8416 | Email: delhioffice@agappe.in

**BANGALORE OFFICE**  
 S-6, II<sup>nd</sup> Floor, Red Cross Bhavan, No:26 Race Course Road,  
 Bangalore - 560 001. Tel: +91 80 2228 8288  
 Email: bangaloreoffice@agappe.in

**OPTICAL SECTION**

Filter	Light Intensity	
340		
380		
405		
450		
480		
505		
546		
570		
600		
660		
700		
800		

Power Supply :            12V                             24V

The equipment is calibrated for the different parameters by using Multi Calibrator  
 Lot.No: \_\_\_\_\_ Exp: \_\_\_\_\_

This is to certify that the above mentioned product has been calibrated according to the  
 standard operating procedure given by the Agappe Diagnostics Ltd.

**Date of Calibration : 21/06/2024**

**Next Due : 20/12/2024**

For Agappe Diagnostics Ltd.,



**Authorized Signatory**

**Name: Nishal P P**

**Designation :Customer Service Engineer**

**AGAPPE DIAGNOSTICS LTD.**    ISO 9001:2015 | EN ISO 13485:2016 CERTIFIED COMPANY | CIN : U24239MH1998PLC115413

**CORPORATE OFFICE / REAGENT PLANT**  
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 Bangalore - 560 001. Tel: +91 80 2228 8288  
 Email: bangaloreoffice@agappe.in





Cert No. CC-2543



# Medical Engineering & Services

*Things Beyond Thoughts*

Abhcon Crown, X1/411/21, Ambadi Lane  
Kokkalai, Thrissur-21. Ph: 0487 2420367  
Email: mescalibration.tsr@gmail.com  
Visit us @www.mescalibration.com

## CALIBRATION CERTIFICATE

Certificate Number : MES24/07/138-01      ULR Number : CC254324000000682F  
Customer Details : **BLOOM HEALTHCARE, PANTHEERAMKAVU, KOZHIKODE.**  
Date of Calibration : **11/07/2024**      SRF Number : **138**  
Next Calibration Due : **10/07/2025**      Date of Issue : **11/07/2024**

### DETAILS OF DEVICE UNDER CALIBRATION(DUC)

Nomenclature : Micropipette      Serial No. : UW06710  
Make / Model : Thermo Scientific & Finnpiptette F3      ID No. : BHC/LAB/EQP-05  
Equipment Condition : Good      Resolution : 1 µl  
Range : 100 - 1000 µL      Location : Laboratory

### DETAILS OF MASTER EQUIPMENT USED

Nomenclature : Electronic Precision Balance      Range : 0 – 210 gm  
Make : Boeco Germany      Readability : 0.01/0.1 mg  
Model : BBC-22      Serial No. : 27104178  
Certificate No. : TVCSPL 23/10/1135-01      Calibration Due Date : 02.10.2024

### ENVIRONMENTAL CONDITIONS

Temperature(°C)	Relative Humidity (%)	Atmospheric Pressure (mbar)	Water Temperature(°C)
26.5	56	1004	26.3

### CALIBRATION RESULTS

Sl. No.	Discipline : Set Volume µl	Mechanical		Parameter		Volume	
		Standard Value µl	Systematic Error µl	Acceptable Systematic Error ± µl	Random Error µl	Acceptable Random Error ± µl	Expanded Uncertainty ± µl
1	100	99.95	0.05	1.40	0.32	0.60	1.092
2	500	501.67	-1.67	12.00	0.33	4.00	1.105
3	1000	1003.86	-3.86	12.00	0.34	4.00	1.119

#### Notes: -

- The results in this certificate are only related to DUC submitted calibration and valid at the time of calibration under stated condition of measurements
- The measurement uncertainty is estimated at a confidence level of 95.45% with coverage factor k=2.
- Results in this certificate shall not be reproduced in partial or full without the written approval of the laboratory.
- Next calibration due date is mentioned as per customer requirement.
- Calibration certificate issued for scientific or industrial purpose only.
- Acceptable error limit is given as per ISO 8655-2:2002(E) Guidelines
- Calibration is carried out as per ISO 8655-6 Guidelines;MES work procedure: MES/WP/VOLUME.

Calibrated by

*Prabin*

Prabin KP

(Calibration Engineer)



Authorized Signatory

*Binoj*

Binoj Thomas

(Technical Manager)



## CERTIFICATE OF CALIBRATION

TVCSPL/F/7.8/01		Page 1 of 1	
ULR No. :	CC393524000003752F	Date of Issue :	11-07-2024
Certificate No. :	TVCSPL 24/07/0829-01	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024		
Customer Details :	M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.	SRF No. :	0829
		Calibrated at :	On-Site
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Temperature Indicator(Refrigerator)	Model No. :	RD EDGENEO 207E
Range :	2 to 8°C	Serial No :	--
Least Count :	0.1°C	Identification No. :	BHC/LAB/EQP-11
Make :	Godrej	Accuracy :	As Per Manual
Working range :	--	Location :	Laboratory
Details of Standard Used :			
Name	Certificate No.	Valid upto	Calibrated at
RTD Sensor with Digital Thermometer	CC-2023-L-0227/002	08-09-2024	CC-3050
Work Instruction :	WI-T-02		
Environmental Details :	Temperature: 25±4 °C	Relative Humidity:	45-75 % RH

### THERMAL CALIBRATION

(Temperature)

#### Calibration Results

Test Reading	Standard Reading Mean	Deviation	Expanded Uncertainty (±)	Coverage Factor
°C	°C	°C	°C	K
2.0	2.2	-0.2	0.8	2
3.0	3.4	-0.4	0.8	2
4.0	4.5	-0.5	0.8	2
5.0	5.6	-0.6	0.8	2
6.0	6.7	-0.7	0.8	2
8.0	8.9	-0.9	0.8	2

#### Remarks:-

1. The above UUC was calibrated at On-Site
2. UUC is defined as Unit Under Calibration
3. Reading given was the average of 3 Measurements
4. The measurement confidence level is 95.45%
5. The Calibration Certificate shall not be reproduced except in full without written approval of TVCSPL
6. The above Expanded Uncertainty includes Repeatability, Resolution & Uncertainty of Measurement
7. The above results relate only to the item calibrated
8. Temperature Scale : ITS-90
9. Masters are Traceable to SI Units.

Calibrated by :



N.Nagan

(Sr. Calibration Engineer)

\* End of Certificate\*



Authorised by:



Mr. Anand Manoharan

(QM & TM)

...redefining the true value







## CERTIFICATE OF CALIBRATION

TVCSPL/F/7.8/01		Page 1 of 1	
ULR No. :	CC39352400003753F	Date of Issue :	11-07-2024
Certificate No. :	TVCSPL 24/07/0829-02	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024	Customer Details :	SRF No. : 0829
M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.		Calibrated at :	On-Site
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Temperature Indicator(Incubator)	Model No. :	RI - 14
Range :	30 to 110°C	Serial No. :	99123
Least Count :	5°C	Identification No. :	BHC/LAB/EQP-07
Make :	Rotek	Accuracy :	As Per Manual
Working range :	--	Location :	Laboratory
Details of Standard Used :			
Name	Certificate No.	Valid upto	Calibrated at
TD Sensor with Digital Thermomet	CC-2023-L-0227/002	08-09-2024	CC-3050
S-Type Thermocouple	CC-2023-L-0227/001	08-09-2024	CC-3050
Work Instruction :	WI-T-02		
Environmental Details :	Temperature: 25±4 °C	Relative Humidity:	45-75 % RH

### THERMAL CALIBRATION

(Temperature)

#### Calibration Results

Test Reading	Standard Reading Mean	Deviation	Expanded Uncertainty (±)	Coverage Factor
°C	°C	°C	°C	K
40.0	40.2	-0.2	0.8	2
60.0	60.3	-0.3	0.8	2
70.0	70.4	-0.4	0.8	2
80.0	80.6	-0.6	0.8	2
90.0	90.7	-0.7	0.8	2
110.0	110.8	-0.8	0.8	2

#### Remarks:-

1. The above UUC was calibrated at On-Site
2. UUC is defined as Unit Under Calibration
3. Reading given was the average of 3 Measurements
4. The measurement confidence level is 95.45%
5. The Calibration Certificate shall not be reproduced except in full without written approval of TVCSPL
6. The above Expanded Uncertainty includes Repeatability, Resolution & Uncertainty of Measurement
7. The above results relate only to the item calibrated
8. Temperature Scale : ITS-90

Calibrated by :



N.Nagan

(Sr Calibration Engineer)



\* End of Certificate\*

Authorised by:



Mr. Anand Manoharan

(QM & TM)

...redefining the true value





**CERTIFICATE OF CALIBRATION**

TVCSP/L/F/7.8/01		Page 1 of 1	
ULR No.	: CC393524000003754F	Date of Issue	: 11-07-2024
Certificate No.	: TVCSPL 24/07/0829-03	Recom. Due Date	: 09-07-2025
Date of Calibration	: 10-07-2024	SRF No.	: 0829
Customer Details	: M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.	Calibrated at	: On-Site
		Date of Receipt	: 10-07-2024
		Cond. On Receipt	: Satisfactory
Details of Test Instrument:			
Description	: Centrifuge	Model No.	: PMC - 6A
Range	: Max - 4000 RPM	Serial No	: 21218
Least Count	: 100 RPM	Identification No.	: BHC/LAB/EQP-06
Make	: Rotek Plus	Accuracy	: As Per Manual
Working range	: --	Location	: Laboratory
Details of Standard Used			
Name	Certificate No.	Valid upto	Calibrated at
Digital Tachometer	HT/CC/230830-12/001	31-Aug-24	CC-2151
Work Instruction	: WI-R-05		
Environmental Details	: Temperature: 25±5 °C	Relative Humidity:	40-70 % RH

**MECHANICAL CALIBRATION**

(Acceleration & Speed)

**Calibration Results**

Sr.No.	Test Reading	Standard Reading	Error	Uncertainty
	RPM	RPM	RPM	±RPM
1	1000	1005	5	3.2
2	2000	2008	8	3.5
3	3000	3012	12	3.5
4	3500	3516	16	3.7
5	4000	4018	18	3.7

**Remarks:-**

1. Standard reading given was the average of 3 measurements
2. The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor  $k=2$
3. Masters are Traceable to SI Units.

\* End of Certificate \*

Calibrated by :

*N. Nagan*

N.Nagan

(Sr Calibration Engineer)



Authorised by:

*Anand Manoharan*

Mr. Anand Manoharan

(QM & TM)

*...redefining the true value*



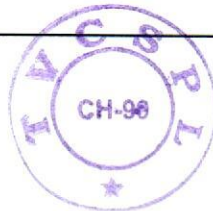




CERTIFICATE OF CALIBRATION

TVCSPL/F/7.8/01		Page 1 of 2	
ULR No. :	CC393524000003755F	Date of Issue :	11-07-2024
Certificate No. :	TVCSPL 24/07/0829-04	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024	SRF No. :	0829
Customer Details :	M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.	Calibrated at :	Lab
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Micropipette	Model No. :	Finnpipette F3
Range :	5-50µl	Serial No. :	TW16425
Least Count :	0.5µl	Id. No. :	BHC/LAB/EQP-04
Make :	Thermo scientific	Accuracy :	As per Manual
Location :	Laboratory		
Details of Standard Used :			
Name	Certificate No.	Valid upto	Calibrated at
Weighing Machine	TVCSPL 24/03/0260-01	04-03-2025	CC-2144
Weighing Machine	TVCSPL 24/02/0219-03	23-02-2025	CC-2144
Work Instruction :	WI-M-03		
Environmental Details :	Temperature : 25±2°C	Relative Humidity :	50±10 % RH
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
1. Lower Volume :	5 µl	No. of Measurements :	10
<input type="text" value="4.931"/>	<input type="text" value="4.942"/>	<input type="text" value="4.942"/>	<input type="text" value="4.900"/>
<input type="text" value="4.794"/>	<input type="text" value="4.970"/>	<input type="text" value="4.988"/>	<input type="text" value="5.002"/>
<input type="text" value="4.895"/>	<input type="text" value="4.901"/>		
Mean Value :	4.926 µl		
<b>Error Limits(±)</b>			
Systematic Error :	-0.074 µl	0.125 µl	
Systematic Error :	-1.47 %	2.50 %	
Random Error :	0.06 µl	0.08 µl	
Random Error :	1.19 %	1.50 %	
Measurement Uncertainty :	± 0.094 µl		

Calibrated by :  
*M. Jeevitha*  
 M. Jeevitha  
 (Calibration Engineer)



Authorised by:  
*Anand Manoharan*  
 Mr. Anand Manoharan  
 (QM & TM)

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ULR No. : CC39352400003755F		Page 2 of 2	
Certificate No. : TVCSPL 24/07/0829-04			
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
2. Middle Volume :	25 $\mu$ l	No. of Measurements : 10	
25.09	25.11	24.98	25.03
25.01	24.89	24.91	25.09
25.10	24.94		
Mean Value :	25.01 $\mu$ l		
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	0.01 $\mu$ l	0.50	$\mu$ l
Systematic Error :	0.05 %	1.00	%
Random Error :	0.08 $\mu$ l	0.20	$\mu$ l
Random Error :	0.33 %	0.40	%
Measurement Uncertainty :	$\pm$ 0.26 $\mu$ l		
3. Nominal Volume :	50 $\mu$ l	No. of Measurements : 10	
49.84	49.77	49.82	49.83
49.81	49.80	49.73	49.78
49.91	49.84		
Mean Value :	49.81 $\mu$ l		
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	-0.19 $\mu$ l	0.50	$\mu$ l
Systematic Error :	-0.37 %	1.00	%
Random Error :	0.05 $\mu$ l	0.20	$\mu$ l
Random Error :	0.10 %	0.40	%
Measurement Uncertainty :	$\pm$ 0.26 $\mu$ l		

Remarks

1. The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor  $k=2$
2. The above Micropipette was within the error limits
3. Masters are Traceable to SI Units.

\* End of Certificate \*

Calibrated by :  
*M. Jeevitha*  
 M. Jeevitha  
 (Calibration Engineer)



Authorised by:  
*Chand Manoharan*  
 Mr. Anand Manoharan  
 (QM & TM)

*...redefining the true value*







## CERTIFICATE OF CALIBRATION

TVCSPL/F/7.8/01		Page 1 of 1	
ULR No. :	CC393524000003756F	Date of Issue :	11-07-2024
Certificate No. :	TVCSPL 24/07/0829-05	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024	SRF No. :	0829
Customer Details :	M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.	Calibrated at :	Lab
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Thermohygrometer	Model No. :	HTC-1
Range :	-50 to 70°C / 20 to 99%RH	Serial No. :	-
Least Count :	0.1°C / 1%RH	Identification No. :	BHC/LAB/EQP-09
Make :	-	Accuracy :	As Per Manual
Working range :	-	Location :	Laboratory
Details of Standard Used :			
Name	Certificate No.	Valid upto	Calibrated at
Digital Humidity Temperature Indicator with Sensor	RI/CERT/0224/055-02	21-02-2025	CC-2823
Work Instruction :	WI-T-04		
Environmental Details :	Temperature: 25±3 °C	Relative Humidity:	45-75 % RH

### THERMAL CALIBRATION (Temperature & Humidity) Calibration Results

Temperature @50%RH						
Sr.No.	Set Reading	Test Reading (UUC)	Standard Reading	Deviation	Expanded Uncertainty (+)	Coverage Factor
	°C	°C	°C	°C	°C	K
1	10.0	9.9	10.02	-0.12	0.7	2
2	20.0	19.9	20.13	-0.23		
3	30.0	29.9	30.24	-0.34		
4	40.0	39.9	40.35	-0.45		
5	50.0	49.9	50.36	-0.46		

Humidity @25°C						
Sr.No.	Set Reading	Test Reading (UUC)	Standard Reading	Deviation	Expanded Uncertainty (+)	Coverage Factor
	%RH	%RH	%RH	%RH	%RH	K
1	20	18	18.14	-0.14	1.79	2
2	40	38	38.24	-0.24		
3	60	58	58.36	-0.36		
4	80	78	78.43	-0.43		
5	90	88	88.54	-0.54		

#### Remarks:-

- The above UUC was calibrated at Lab
- UUC is defined as Unit Under Calibration.
- Reading given was the average of 3 Measurements.
- The measurement confidence level is 95.45%
- The Calibration Certificate shall not be reproduced except in full without written approval of TVCSPL.
- The above Expanded Uncertainty includes Repeatability, Resolution & Uncertainty of Measurement.
- The above results relate only to the item calibrated.
- Temperature Scale : ITS-90
- Masters are Traceable to SI Units.

Calibrated by :  
**M. Jeevitha**  
M.Jeevitha  
(Calibration Engineer)



Authorised by:  
**Mr. Anand Manoharan**  
(QM & TM)

*...redefining the true value*







## CERTIFICATE OF CALIBRATION

TVCSP/L/F/7.8/01		Page 1 of 1	
ULR No. :	CC39352400003757F	Date of Issue :	11-07-2024
Certificate No. :	TVCSP/L 24/07/0829-06	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024	Customer Details :	SRF No. : 0829
M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.		Calibrated at :	On-Site
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Temperature Indicator(Digital Thermometer)	Model No. :	--
Range :	-50 to 70°C	Serial No. :	--
Least Count :	0.1°C	Identification No. :	BHC/LAB/EQP-10
Make :	--	Accuracy :	As Per Manual
Working range :	--	Location :	Laboratory
Details of Standard Used :			
Name	Certificate No.	Valid upto	Calibrated at
RTD Sensor with Digital	CC-2023-L-0227/002	08.09.2024	CC-3050
Work Instruction :	WI-T-02		
Environmental Details :	Temperature: 25±4 °C	Relative Humidity:	45-75 % RH

### THERMAL CALIBRATION

(Temperature)

#### Calibration Results

Test Reading	Standard Reading Mean	Deviation	Expanded Uncertainty (±)	Coverage Factor
°C	°C	°C	°C	K
10.0	10.3	-0.3	0.6	2
20.0	20.4	-0.4	0.6	2
40.0	40.5	-0.5	0.6	2
60.0	60.6	-0.6	0.6	2

#### Remarks:-

1. The above UUC was calibrated at On-Site
2. UUC is defined as Unit Under Calibration
3. Reading given was the average of 3 Measurements
4. The measurement confidence level is 95.45%
5. The Calibration Certificate shall not be reproduced except in full without written approval of TVCSPL
6. The above Expanded Uncertainty includes Repeatability, Resolution & Uncertainty of Measurement
7. The above results relate only to the item calibrated
8. Temperature Scale : ITS-90
9. Masters are Traceable to SI Units.

Calibrated by :



N.Nagan

(Sr. Calibration Engineer)



\* End of Certificate \*

Authorised by:



Mr. Anand Manoharan  
(QM & TM)

...redefining the true value





## CERTIFICATE OF CALIBRATION

TVCSPL/F/7.8/01		Page 1 of 1	
ULR No. :	CC39352400003758F	Date of Issue :	11-07-2024
Certificate No. :	TVCSPL 24/07/0829-07	Recom. Due Date :	09-07-2025
Date of Calibration :	10-07-2024	Customer Details :	SRF No. : 0829
M/s. Bloom Healthcare Pantheeramkavu, Kozhikode.		Calibrated at :	On-Site
		Date of Receipt :	10-07-2024
		Cond. On Receipt :	Satisfactory
Details of Test Instrument:			
Description :	Timer	Model No. :	
Range :	99 Min 59 Sec	Serial No. :	
Least Count :	--	Identification No. :	BHC/LAB/EQP-08
Make :		Accuracy :	--
Working range :	0 to 30 Min	Location :	Laboratory
Details of Standard Used :			
Name	Certificate No.	Valid upto	calibrated at
Digital Time Calibrator	HT/CC/240201-18/001	31-01-2025	CC-2151
Work Instruction :	WI-E-01		
Environmental Details :	Temperature: 25±4 °C	Relative Humidity:	45-75 % RH

## ELECTROTECHNICAL CALIBRATION

(Time & Frequency)  
Calibration Results

Results of Calibration				
Sl. No.	Standard Reading (hr:min:ms)	UUC Reading (hr:min:ms)	Error (sec)	Measurement Uncertainty ± (sec)
01	00:01:00.00	00:01:00.00	0.00	0.08
02	00:03:00.02	00:03:00.00	-0.02	0.28
03	00:05:00.03	00:05:00.00	-0.03	0.17
04	00:10:00.04	00:10:00.00	-0.03	0.13
05	00:15:00.04	00:15:00.00	-0.04	0.60
06	00:20:00.02	00:20:00.00	-0.02	0.61
06	00:30:00.03	00:30:00.00	-0.03	0.63

### Remarks:-

- The above DUC was Calibrated at On-site.
- UUC is defined as Unit Under Calibration
- Reading given was the average of 3 Measurements
- The measurement confidence level is 95.45%
- The Calibration Certificate shall not be reproduced except in full without written approval of TVCSPL
- The above Expanded Uncertainty includes Repeatability, Resolution & Uncertainty of Measurement
- Calibration of the UUC are traceable to SI units
- The above results relate only to the item calibrated

Calibrated by :

  
N. Nagan  
(Sr. Calibration Engineer)

\* End of Certificate \*



Authorised by :

  
Mr. Anand Manoharan  
(QM & TM)

...redefining the true value