

CALIBRATION CERTIFICATE

EQN/FT/7.8/01

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CRF No. : EQN/CRF/2112062	Date of Calibration : 15-Dec-21
Certificate No : 2021-22/EQN/2112062-08	Recom. Due Date : 15-Dec-22
ULR No. : CC276021000011937F	

CUSTOMER DETAILS :

M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala.	Calibrated at : Lab Date of Receipt : 15-Dec-21 Cond. On Receipt : Satisfactory Date of Issue : 19-Dec-21
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DETAILS OF UUC :

Description : DIGITAL THERMOMETER	Identification No. : MCL/REF/01/01
Range : -50 to 50 °C	Serial No. : -
Least Count : 0.1 °C	Make : -
Cal./Working Range : --	Model / Type : -
Location : MCL/REF/01/01-Bio Chemistry Lab	Accuracy : --

DETAILS OF STANDARD USED :

Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No. : EQN/CP/TL-02	Environmental Details : Temperature: 25±2°C Relative Humidity: 40-70 % RH
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THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-25.1	-0.14	0.41
2	2.17	2.1	0.07	0.41
3	8.12	8.3	-0.18	0.41
4	25.07	24.9	0.17	0.41
5	50.10	49.6	0.50	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

Issued by :  Sr. Calibration Engineer S.B. RAJESH KUMAR	Authorized by :  K.YOGANATHAN
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CRF No.	: EQN/CRF/2112062	Date of Calibration	: 15-Dec-21
Certificate No	: 2021-22/EQN/2112062-04	Recom. Due Date	: 15-Dec-22
ULR No.	: CC276021000011933F		

CUSTOMER DETAILS :

M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala	Calibrated at : Lab Date of Receipt : 15-Dec-21 Cond. On Receipt : Satisfactory Date of Issue : 19-Dec-21
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DETAILS OF UUC :

Description : DIGITAL THERMOMETER	Identification No. : MCL/REF/03/01
Range : -50 to 50 °C	Serial No. : -
Least Count : 0.1 °C	Make : -
Cal./Working Range : --	Model / Type : -
Location : MCL/REF/03/01-Bio Chemistry Lab	Accuracy : --

DETAILS OF STANDARD USED :

Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No.	: EQN/CP/TL-02
Environmental Details	: Temperature: 25±2°C Relative Humidity: 40-70 % RH

THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-24.9	-0.34	0.41
2	-20.17	-19.9	-0.27	0.41
3	0.12	-0.1	0.22	0.41
4	25.07	24.9	0.17	0.41
5	50.10	49.7	0.40	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

Issued by :		Authorized by :	
Sr. Calibration Engineer	S.B. RAJESH KUMAR	TM	K. YOGANATHAN



CALIBRATION CERTIFICATE

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CRF No.	: EQN/CRF/2112062	Date of Calibration	: 15-Dec-21
Certificate No	: 2021-22/EQN/2112062-02	Recom. Due Date	: 15-Dec-22
ULR No.	: CC276021000011931F		

CUSTOMER DETAILS :

M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala.	Calibrated at : Lab Date of Receipt : 15-Dec-21 Cond. On Receipt : Satisfactory Date of Issue : 19-Dec-21
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DETAILS OF UUC :

Description : DIGITAL THERMOMETER	Identification No. : MCL/REF/02/01
Range : -50 to 50 °C	Serial No. : -
Least Count : 0.1 °C	Make : -
Cal./Working Range : --	Model / Type : -
Location : MCL/REF/02/01-Bio Chemistry Lab	Accuracy : --

DETAILS OF STANDARD USED :

Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No.	: EQN/CP/TL-02
Environmental Details	: Temperature: 25±2°C Relative Humidity: 40-70 % RH

THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-25.4	0.16	0.41
2	-20.17	-20.3	0.13	0.41
3	0.12	0.3	-0.18	0.41
4	25.07	25.4	-0.33	0.41
5	50.10	50.5	-0.40	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

Issued by :		Authorized by :	
Sr. Calibration Engineer	S.B. RAJESH KUMAR	TM	K.YOGANATHAN



CALIBRATION CERTIFICATE

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CRF No.	EQN/CRF/2112062	Date of Calibration	15-Dec-21
Certificate No	2021-22/EQN/2112062-01	Recom. Due Date	15-Dec-22
ULR No.	CC276021000011930F		

CUSTOMER DETAILS :

M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala.	Calibrated at : Lab Date of Receipt : 15-Dec-21 Cond. On Receipt : Satisfactory Date of Issue : 19-Dec-21
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DETAILS OF UUC :

Description	DIGITAL THERMO-HYGROMETER	Identification No.	MCL/RTM/01
Range	-10 - 50 °C , 10 - 90% RH	Serial No.	--
Least Count	0.1 °C & 1%RH	Make	HTC
Operating Range	--	Model No.	HTC-1
Location	Bio Chemistry Lab	Accuracy	--

DETAILS OF STANDARD USED :

Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Digital Temp Humidity Meter	INS/TM/133	27-Apr-22	TransCal,Bangalore

CP No	EQN/CP/TL-06
Environmental Details	Temperature: 25±2°C Relative Humidity: 40-70 % RH

CALIBRATION RESULT

(THERMAL DISCIPLINE(SPECIFIC HEAT & HUMIDITY))

@50 % RH				
Sl. No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	15.21	14.8	-0.41	0.58
2	30.27	30.0	-0.27	0.58
3	55.44	55.0	-0.44	0.58
@25 °C				
Sl. No.	(%RH)	(%RH)	(%RH)	± (%RH)
1	29.81	31	1.59	1.97
2	60.18	62	1.32	1.97
3	90.11	92	1.89	1.97

Remarks :

1. Reading given was the average of 3 Measurements
2. The reported Expanded Uncertainty is calculated at 95% C.L Approx with coverage factor k=2
3. Temperature scale ITS 90

Issued by :	 S.B.RAJESH KUMAR		Authorized by :	 K.YOGANATHAN
Sr. Calibration Engineer			Technical Manager	

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CRF No.	: EQN/CRF/2112062	Date of Calibration	: 15-Dec-21
Certificate No	: 2021-22/EQN/2112062-09	Recom. Due Date	: 15-Dec-22
ULR No.	: CC276021000011938F		

CUSTOMER DETAILS :			
M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala.	Calibrated at	:	Lab
	Date of Receipt	:	15-Dec-21
	Cond. On Receipt	:	Satisfactory
	Date of Issue	:	19-Dec-21

DETAILS OF UUC :			
Description	: DIGITAL THERMOMETER	Identification No.	: MCL/REF/01/02
Range	: -50 to 50 °C	Serial No.	: -
Least Count	: 0.1 °C	Make	: -
Cal./Working Range	: --	Model / Type	: -
Location	: MCL/REF/01/02-Bio Chemistry Lab	Accuracy	: --

DETAILS OF STANDARD USED :			
Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No.	: EQN/CP/TL-02
Environmental Details	: Temperature: 25±2°C Relative Humidity: 40-70 % RH

THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-24.9	-0.34	0.41
2	-20.17	-19.9	-0.27	0.41
3	0.12	-0.2	0.32	0.41
4	25.07	24.9	0.17	0.41
5	50.10	49.7	0.40	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

END

Issued by : <u>S.B. RAJESH KUMAR</u> Sr. Calibration Engineer	Authorized by : <u>K. YOGANATHAN</u> TM
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CALIBRATION CERTIFICATE

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CRF No.	: EQN/CRF/2112062	Date of Calibration	: 15-Dec-21
Certificate No	: 2021-22/EQN/2112062-03	Recom. Due Date	: 15-Dec-22
ULR No.	: CC276021000011932F		

CUSTOMER DETAILS :

M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS, Court Road, Manjery - 676121, Kerala.	Calibrated at : Lab Date of Receipt : 15-Dec-21 Cond. On Receipt : Satisfactory Date of Issue : 19-Dec-21
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DETAILS OF UUC :

Description : DIGITAL THERMOMETER Range : -50 to 50 °C Least Count : 0.1 °C Cal./Working Range : -- Location : MCL/REF/02/02-Bio Chemistry Lab	Identification No. : MCL/REF/02/02 Serial No. : - Make : ACETEQ Model / Type : - Accuracy : --
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DETAILS OF STANDARD USED :

Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No.	: EQN/CP/TL-02
Environmental Details	: Temperature: 25±2°C Relative Humidity: 40-70 % RH

THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-25.1	-0.14	0.41
2	2.17	2.0	0.17	0.41
3	8.12	8.2	-0.08	0.41
4	25.07	25.3	-0.23	0.41
5	50.10	50.4	-0.30	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

Issued by :  Sr.Calibration Engineer S.B.RAJESH KUMAR	 CHENNAI 600 032	Authorized by :  TM K.YOGANATHAN
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CALIBRATION CERTIFICATE

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CRF No.	: EQN/CRF/2112062	Date of Calibration	: 15-Dec-21
Certificate No	: 2021-22/EQN/2112062-05	Recom. Due Date	: 15-Dec-22
ULR No.	: CC276021000011934F		

CUSTOMER DETAILS :			
M/s.MANJERI CLINICAL LABORATORY & IDEAL X-RAYS,	Calibrated at	: Lab	
Court Road,	Date of Receipt	: 15-Dec-21	
Manjery - 676121,	Cond. On Receipt	: Satisfactory	
Kerala.	Date of Issue	: 19-Dec-21	

DETAILS OF UUC :			
Description	: DIGITAL THERMOMETER	Identification No.	: MCL/REF/03/02
Range	: -50 to 50 °C	Serial No.	: -
Least Count	: 0.1 °C	Make	: -
Cal./Working Range	: --	Model/ Type	: -
Location	: MCL/REF/03/03-Bio Chemistry Lab	Accuracy	: --

DETAILS OF STANDARD USED :			
Master Name	Lab ID No. / Sr No.	Valid upto	Traceability
Portable Calibrator	INS/ET/02	04-Dec-22	EQN,Chennai
RTD	INS/TM/30	14-Aug-22	EQN,Chennai

CP No.	: EQN/CP/TL-02
Environmental Details	: Temperature: 25±2°C Relative Humidity: 40-70 % RH

THERMAL CALIBRATION - (Temperature)

CALIBRATION RESULT				
Sl.No.	STD READING (°C)	TEST READING (°C)	ERROR (°C)	UNCERTAINTY ± (°C)
1	-25.24	-24.8	-0.44	0.41
2	2.17	1.9	0.27	0.41
3	8.12	7.8	0.32	0.41
4	25.07	24.8	0.27	0.41
5	50.10	49.6	0.50	0.41

Remarks:

1. Reading given was the average of 3 Measurements.
2. The reported Expanded Uncertainty is calculated at 95.45 % C.I. Approx with coverage factor k=2

Issued by :	 S.B. RAJESH KUMAR	Authorized by :  K.YOGANATHAN	Sr. Calibration Engineer S.B. RAJESH KUMAR
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