



Accreditation Certificate No.: CC-2689
(Electro-Technical, Mechanical
& Thermal Calibration)



Hi-Tech Laboratory & Services

(A House of Measurement & Calibration)

Shivani Complex, C-4, Vidya Vihar, Opp. Barkatullah University,
Bhopal- 462 026 M.P., India
Tel.: 0755 - 2410094, 4235738 Telefax : 0755 - 2410094
Mobile: 094250 09513 web: www.htls.co.in
e-mail: htlsbpl@hotmail.com / info@htls.co.in

CALIBRATION CERTIFICATE

(Form No. HTLS/QF/7 B.1/01 (Amendment No. 00 Dated 1st January 2020))

ULR : CC268920100001058F	Thermal Calibration	Certificate Issue Date:	10.02.2020
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Certificate No	Recived On	Received Condition	Callibration On	Calibration Due	Page No.
HTLS/20/BH/129.02	08.02.2020	Working	08.02.2020	07.02.2021 (As per customer requirements)	1 of 1

1) a. Calibrated for:

M/s Bansal Hospital,
Shahpura Lake,
Bhopal - 462016. (M.P.)

b. Name of Equipment /Instrument :

Auto Clave (Digital Temp. Controller)

c. Calibration Location: At Site

2) Description & Identification of Equipments / Instruments Under Calibrations (EUC*):

Manufactured by	Model	Serial No.	Identification No.	
S.M Scientific	---	---	BH/CL/EQ/30/EPT	
Range	Least count	Calibrated range	Dec. Accuracy	Location
0 to 300 °C	1 °C	121°C	± 1.0°C	Microbiology

3) Standards/ Calibrator & Measuring Equipments Used :

Standards Used	Make	Sr.No./I.D.No.	Traceability certificate No.	Validity
Temperature Data Logger With Sensor (12 CH)	Unnati Electronics	HTLS/TEMP/DLOA /2006/004/05-06/001	HTC/2020/01/1073 CC247820000001073F	16.01.2021
Precision Thermometer with pt-100 Sensor	Lutron	HTLS/DTI/01 I.183289	HTC/2020/01/797 CC247820000000797F	10.01.2021

The Standards used for calibration were calibrated by using reference standard traceable to National Standard.

4) Principle /Methodology of Calibration & Procedure :

Methodology adopted for Calibration is as per HTLS Procedure NO.HTLS/CP/TH-02 .

5) Calibration Results: (Digital Temp.Controller) , Make: i-Therm , Model:AI-7482 , SrNo.:15012545

Sl. No.	Unit	EUC* Value	Standard value (Average)	Deviation	Expended uncertainty (±)
a.	°C	100.0	100.88	-0.88	±0.70
b.	°C	120.0	120.78	-0.78	
c.	°C	121.0	121.69	-0.69	
d.	°C	150.0	150.52	-0.52	

Calibration Results of Total System : Digital Temp.Controller Set at 121.0 °C , Holding Time 30 min

Reading Time	Standard Digital Temperature Scanner Reading in °C			Expended uncertainty (±)
	Channel No.1	Channel No.2	Channel No.3	
11.40.00	121.8	121.5	121.5	1.0°C
11.50.00	121.7	121.7	121.5	
12.00.00	121.8	122.1	121.9	
12.10.00	122.1	122.1	122.1	

The values have been rounded off as per IS:2-1960(whenever applicable).

Expended uncertainty reported is at approx 95% confidence level with K=2.

Temperature scale :International Temperature Scale -1990.

6) Environmental Condition's :

a) Temperature: 25±3°C

b) Humidity: 60±15%

7) Calibration Status & Remark :

- A Calibration Sticker has been affixed on EUC*.
- The Auto Clave has been calibrated and found to be within accuracy limit.
- Refer to report before use.

Calibrated by: SANJAY BARPETE Calibration Engineer	
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Approved by : SANJAY BAIS Quality Manager	
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Data File generated on UNISCAN-3200

M/s Bansal Hospital

Auto Clave Machine

Logging Interval (Minutes) = 001

No. of Readings / Channel = 03

Logging Start Date = 08.02.2020

Logging Start Time 11:40:00

Date	Time	CH-01	CH-02	CH-03
08.02.2020	11:40:00	121.8	121.5	121.5
08.02.2020	11:41:00	121.7	121.2	121.5
08.02.2020	11:42:00	121.7	121.5	121.5
08.02.2020	11:43:00	121.7	121.6	121.5
08.02.2020	11:44:00	121.7	121.0	121.5
08.02.2020	11:45:00	121.8	121.5	121.5
08.02.2020	11:46:00	121.7	121.2	121.5
08.02.2020	11:47:00	121.7	121.5	121.5
08.02.2020	11:48:00	121.7	121.6	121.5
08.02.2020	11:49:00	121.8	121.5	121.6
08.02.2020	11:50:00	121.7	121.7	121.5
08.02.2020	11:51:00	121.7	121.5	121.2
08.02.2020	11:52:00	121.7	121.7	121.5
08.02.2020	11:53:00	121.8	121.7	121.7
08.02.2020	11:54:00	121.7	121.8	121.7
08.02.2020	11:55:00	121.7	121.7	121.8
08.02.2020	11:56:00	121.7	121.8	121.8
08.02.2020	11:57:00	121.7	121.8	121.7
08.02.2020	11:58:00	121.8	121.9	121.8
08.02.2020	11:59:00	121.7	122.0	121.8
08.02.2020	12:00:00	121.8	122.1	121.9
08.02.2020	12:01:00	121.8	122.1	122.0
08.02.2020	12:02:00	121.9	121.9	122.1
08.02.2020	12:03:00	122.0	121.9	122.2
08.02.2020	12:04:00	122.1	122.1	122.1
08.02.2020	12:05:00	122.1	122.0	122.2
08.02.2020	12:06:00	121.9	122.1	122.1
08.02.2020	12:07:00	121.9	122.2	122.1
08.02.2020	12:08:00	122.1	122.1	122.1
08.02.2020	12:09:00	122.0	122.1	122.2
08.02.2020	12:10:00	122.1	122.2	122.2
08.02.2020	12:11:00	122.2	122.2	122.3
08.02.2020	12:12:00	122.2	122.3	122.3
08.02.2020	12:13:00	122.2	122.1	122.2
08.02.2020	12:14:00	122.3	122.00	122.4





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e-mail: hillsbpl@hotmail.com / info@hills.co.in

CALIBRATION CERTIFICATE

(Form No. HTLS-QF/7 A 101) (Amendment No. 00 Dated 1st January 2020)

ULR : CC268920100001059F	Thermal Calibration	Certificate Issue Date:	10.02.2020
Certificate No. HTLS/20/BH/129 03	Recived on 08.02.2020	Recived Condition working	Calibration On 08.02.2020
			Calibration Due 07.02.2021 <small>(As per customer requirements)</small>
			Page No. 1 of 1

- 1) a. **Calibrated For:**
M/s Bansal Hospital,
Shahpura Lake,
Bhopal - 462016. (M.P.)
- b. **Name of Equipment / Instrument**
Pressure Gauge
- c. **Calibration Location:** At Site

2) Description & Identification of Equipment / Instrument Under Calibrations (EUC):

Manufactured by Baumer	Model EN 837-1	Serial No. ---	Type Dial	Identification No. BH/CL/EQ/30/EPT
Range 0 to 2.1 kg/cm ²	Least Count 0.05 kg/cm ²	Calibrated Range up to 2 kg/cm ²	Declared Accuracy ± 0.05 kg/cm ²	Location Auto Clave Microbiology

3) Standard / Calibrator & Measuring Equipments Used :

Standard Used Digital Pressure Gauge (-1 to 25 bar)	Make Vijay Enterprises	Sr. No./Id No. VET11243-A HTLS/DPG/01	Traceability Certificate No. M-191227-12-1 CC263419000052959F	Validity 28.12.2020
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with multifunction Pressure Calibrator.

The Standards used for calibration were calibrated by using reference standard traceable to National Standard.

4) Principle / Methodology of Calibration & Procedure :

Methodology adopted for calibration is as per HTLS Procedure No.HTLS/CP/PG-01 . As Per DKD-R-6-1 Standard.

5) Calibration Results :

ASCENDING

Sr. No.	Unit	EUC Value	Standard Value Average	Deviation	Expended Uncertainty (±)
a.	kg/cm ²	0.00	0.000	0.000	
b.	kg/cm ²	0.20	0.205	-0.004	
c.	kg/cm ²	0.50	0.510	-0.010	
d.	kg/cm ²	1.00	1.020	-0.020	
e.	kg/cm ²	1.50	1.526	-0.026	
f.	kg/cm ²	2.00	2.033	-0.032	
DESCENDING					
a.	kg/cm ²	2.00	2.033	-0.032	1.10 % rdg
b.	kg/cm ²	1.50	1.526	-0.026	
c.	kg/cm ²	1.00	1.017	-0.017	
d.	kg/cm ²	0.50	0.510	-0.010	
e.	kg/cm ²	0.20	0.202	-0.002	
f.	kg/cm ²	0.00	0.000	0.000	

The values have been rounded off as per IS:2-1960(whenever applicable).

Pressure Conversion: 1 bar = 1.0197 kg/cm²

Expended uncertainty reported is at approx 95% confidence level with K=2.

Average of Three Reading (Ascending & Descending). Hysteresis: 0.006 kg/cm²

- 6) **Environmental Conditions :** a) Temperature : 23±2°C b) Humidity : 50±10 %

7) Calibration Status & Remark :

- a. A Calibration Sticker has been affixed on EUC*.
b. The Pressure Gauge has been calibrated and status report has been given.
c. Refer to report before use.

Calibrated by :
SANJAY BARPETE
Calibration Engineer

Approved by :
SANJAY BAIS
Quality Manager