



CC-2689



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/7.8.1/01 (Amendment No. 00 Dated 1st January 2020))

ULR : CC268923100003648F		Mechanical Calibration		Certificate Issue Date:	29.03.2023
Certificate No	Received On	Received Condition	Calibration On	Calibration Due	Page No.
HTLS/23/TBH/319.01	29.03.2023	Working	29.03.2023	28.03.2024 (As per customer requirements)	1 of 1

1) a. Calibrated for:

M/s ICTC TB HOSPITAL.,
RIRD, EIDGAH HILLS,
BHOPAL (M.P.),

b. Name of Equipment /Instrument :

Centrifuge Machine

c. Calibration Location: At Site**2) Description & Identification of Equipments / Instruments Under Calibrations (EUC*):**

Manufactured by	Type	Range	Serial No.	Identification No.
Labotech	Knob Type	Max: 3500 rpm	---	MPSACS/ICTC/REF/2008/92

3) Standards/ Calibrator & Measuring Equipments Used :

Standards Used	Make / I.D.No.	Traceability Certificate No.	Calibrated By	Validity
Digital Tachometer (Non Contact) with optical sensor	Lutom / DT-1236L / 1235100 / HTL/TM/02	L22101103-01	NABL : CC3172	10.10.2023
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/RPM/01-01, Which is compared with standard Tachometer.

5) Calibration Results:

Sl. No.	Dial Setting Knob Set at	Standard Value (Average)	Expended Uncertainty (±)
a.	1	2081	±6 rpm
b.	2	2190	±6 rpm
c.	3	Not ok	±6 rpm
d.	4	2673	±6 rpm
e.	5	2919	±6 rpm

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.

6) Environmental Condition's):

a) Temperature: 25±2°C b) Humidity: 50±10%

7) Calibration Status & Remark :

- A Calibration Sticker has been affixed on EUC*.
- The Centrifuge Machine has been calibrated and status report has been given.
- Refer to report before use.

*****END OF THE CERTIFICATE*****

Calibrated by:	
ATUL SINGH Calibration Engineer	

Approved by :	
SANJAY BAIS Quality Manager	





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CALIBRATION CERTIFICATE

(Form No. HTLS/QF/7.8.1/01 (Amendment No. 00 Dated 1st January 2020))

ULR : CC268923100003649F		Thermal Calibration		Certificate Issue Date:	29.03.2023
Certificate No	Received On	Received Condition	Calibration On	Calibration Due	Page No.
HTLS/23/TBH/319.02	29.03.2023	Working	29.03.2023	28.03.2024 (As per customer requirements)	1 of 1

1) a. Calibrated for:

M/s ICTC TB HOSPITAL.,
RIRD, EIDGAH HILLS,
BHOPAL (M.P.),

b. Name of Equipment /Instrument :

Refrigerator
with Digital Temp. Indicator

c. Calibration Location: At Site**2) Description & Identification of Equipments / Instruments Under Calibrations (EUC*):**

Manufactured By	Capacity	Set Temp. Cabinet	Identification No.
Samsung	---	2 to 8°C	MPSACS/ICTC/REF/2008/91
Digital Temp. Indicator Make	Least count	Model	Calibrated Range
HTC	0.1°C	HTC 2	2 to 8°C

3) Standards/ Calibrator & Measuring Equipments Used :

Standards Used	Make / I.D.No.	Traceability Certificate No.	Calibrated By	Validity
Temperature Data Logger With Sensor (12 CH)	Countron / HTLS/TDL/02/C091471SEP9	NEC/22-23/SP/001-1	NABL : CC2248	03.07.2023
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, IS :2848 - 1986.

5) Calibration Results:**Calibration Results of Total System :**

Reading Time	Standard Digital Temperature Scanner Reading in °C			
	Channel No.1 Freezer	Channel No.2 Upper Cabinet	Channel No.3 Middle Cabinet	Channel No.4 Lower Cabinet
11.25.00	-20.1	2.1	4.9	6.3
12.25.00	-19.6	2.2	5.4	6.5
13.25.00	-19.8	2.4	5.6	6.7

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

Expanded uncertainty reported is at approx 95% confidence level with K=2. $\pm 2.1^\circ\text{C}$

Temperature scale :International Temperature Scale -1990.

Note: Calibration result can be referred through Data File Generated on Countron Calibration Chart attached with this report.

6) Environmental Condition's :

a) Temperature: $25\pm 3^\circ\text{C}$

b) Humidity: $60\pm 15\%$

7) Calibration Status & Remark :

- A Calibration Sticker has been affixed on EUC*.
- The Refrigerator has been calibrated and status report has been given.
- Refer to report before use.

*****END OF THE CERTIFICATE*****

Calibrated by:	
ATUL SINGH Calibration Engineer	

Approved by :	
SANJAY BAIS Quality Manager	



Data File generated on Countron

M/s ICTC TB HOSPITAL

Refrigerator. Certificate No. :HTLS/23/TBH/319.02

Logging Interval (Minutes) = 005

No. of Readings / Channel =100/04

Logging Start Date = 29.03.2023

Logging Start Time = 11:25:00

DATE	TIME	CH-01 DEG.C	CH-02 DEG.C	CH-03 DEG.C	CH-04 DEG.C
29.03.2023	11:25:00	-20.1	2.1	4.9	6.3
29.03.2023	11:30:00	-20.2	2.2	4.9	6.4
29.03.2023	11:35:00	-19.6	2.2	5.0	6.5
29.03.2023	11:40:00	-19.5	2.2	5.1	6.5
29.03.2023	11:45:00	-19.6	2.3	5.1	6.5
29.03.2023	11:50:00	-19.6	2.3	5.2	6.4
29.03.2023	11:55:00	-19.7	2.2	5.3	6.4
29.03.2023	12:00:00	-19.7	2.2	5.2	6.4
29.03.2023	12:05:00	-19.8	2.3	5.3	6.6
29.03.2023	12:10:00	-19.8	2.4	5.2	6.7
29.03.2023	12:15:00	-19.7	2.4	5.2	6.6
29.03.2023	12:20:00	-19.7	2.3	5.3	6.7
29.03.2023	12:25:00	-19.6	2.2	5.4	6.5
29.03.2023	12:30:00	-19.9	2.2	5.4	6.5
29.03.2023	12:35:00	-20.0	2.2	5.3	6.5
29.03.2023	12:40:00	-20.0	2.1	5.3	6.4
29.03.2023	12:45:00	-19.6	2.1	5.4	6.4
29.03.2023	12:50:00	-19.7	2.1	5.5	6.5
29.03.2023	12:55:00	-19.7	2.2	5.6	6.5
29.03.2023	13:00:00	-19.8	2.2	5.4	6.5
29.03.2023	13:05:00	-19.8	2.1	5.4	6.6
29.03.2023	13:10:00	-19.7	2.2	5.4	6.6
29.03.2023	13:15:00	-19.7	2.3	5.5	6.6
29.03.2023	13:20:00	-19.8	2.3	5.5	6.7
29.03.2023	13:25:00	-19.8	2.4	5.6	6.7
Max . Temp. °C		-19.5	2.4	5.6	6.7
Min . Temp.°C		-20.2	2.1	4.9	6.3
Average Temp.°C		-19.0	2.2	5.3	6.5

