



MEASURE TECHNO LAB

2, B.T. ROAD (JAYANTI CINEMA COMPLEX), BARRACKPORE,
KOLKATA - 700120, W.B.



CC - 2545

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CALIBRATION CERTIFICATE OF CENTRIFUGE

CALIBRATION CERTIFICATE NO.: MTL / HE / R01 / 09 - 24

ULR - CC254524000044906F

1.0 Service Request No.: MTL / 13A / 09 / 24 - 25

1.1 Issued to: M/s. Halder Enterprise,
458 / 1A, Motilal Colony,
P.O. - Rajbari, P.S. - Airport, Pin - 700081.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Centrifuge	b) Code No.:	HE / CF - 01
	c) Sl. No.:	202301253 - 12	d) Make:	Electra - BL
	e) Model / Type:	12T	f) Range:	4000 rpm
	g) Sensor:	N.A.	h) Resolution:	10 rpm
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	√ On Site / In House		

1.3 Date of receipt of item :	13-09-24	1.4 Physical Condition of DUC :	OK
1.5 Date of calibration :	13-09-24	1.6 Recommended date of next calibration :	13-09-25

1.7 Date of Issue :	16-09-24
1.8 Environmental Conditions During Calibration:	Temperature: 25 °C ± 2 °C Humidity: 55 % RH ± 10 % RH

1.9 Method of Calibration: SOP / RPM / CF / 01

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
- b) The following standards / Equipment have been used.
- i) Digital Tachometer Cal. Certificate No. HT / CC / 240625 - 03 / 001 (HI TECH, Chennai) (Cal. Date: 26/06/24, Due Date: 25/06/25)

2.1 Result :

Mechanical Calibration: (Acceleration and Speed)

Sl. No.	Parameter/ Range	Nominal Value on DUC rpm	Std. Value Average of Five Readings rpm	Error rpm	Measurement Expanded Uncertainty ± rpm
1.		1000	1004.2	-4.2	5.99
2.	Rotation	2000	2002.3	-2.3	
3.	4000 rpm	3000	3015.2	-15.2	
4.		4000	4024.6	-24.6	

- Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Error = DUC Reading - Standard Reading.
 iv) Calibrations are carried out without any adjustment or repair.

DUC - Device Under Calibration	N.S. - Not Specified	N.A. - Not Applicable
Std. - Standard	rpm - Rotation Per Minute	

Opinions and Interpretations

Calibrated	√	Accepted / Valid for use
Limited Use		Rejected / Out of use

Calibration Engineer
 Measure Techno Lab
 Kolkata
 D.K.Singh
 Calibration Engineer

Checked / Approved by:

 Quality / Technical Manager
 S. Pandey