



TMSCC

TESTING MACHINE SERVICE AND CALIBRATION CENTRE
Precision is Our Destination.....

An ISO 9001 : 2015 Certified company
Calibration of Various Instruments & Testing Machines...



CC - 3125

Form No.: TMSCC/R/23

CALIBRATION CERTIFICATE

CALIBRATION CERTIFICATE NO.: 2023/08/1639 Page 1 of 2

ISSUE DATE : 13-Sep-2023

ULR No.: CC312523000013646F

1.0 ISSUED TO : M/s. Barasat Government Medical College & Hospital
ICTC,
Barasat, Banamalipur, North 24 Pgs, Pin-700124,
West Bengal.



1.1 Service Request From No. : SRF/2023/08/30/03

1.2 Service Request Date : 30-Aug-2023

1.3 Location : At Lab

1.4 Description identification of item to be calibrated :

| | | | | | |
|-----|-------------------|--------------------------------------|------|---------------|---------------|
| i | Name : | RPM & Timer of Centrifuge | ii | Make : | REMI |
| iii | Model / Type No.: | RS-12 Plus | iv | S/L No.: | ZEBS 05832 |
| v | ID.No.: | -- | vi | Job Code No.: | 2023/08/1639 |
| vii | Capacity | (50 - 450) RPM, 99 Min | viii | Resolution : | 1 RPM & 1 Min |
| ix | Accuracy : | As Per ASTM F-2046, NIST: 1960-12 | x | End User : | -- |

1.5 Full / Partial Calibration : Full Calibration

1.6 Applicable specification of item to be calibrated: Accuracy / permissible limit : Not Specified.

1.7 Date of receipt of item : 30-Aug-2023 1.7 Date of calibration : 30-Aug-2023

1.9 Calibration due on : 29-Aug-2024 1.9 Frequency of calibration once in : 12 Months

2.1 Environmental condition during calibration :
Temperature : 25.2 °C
Humidity : 52 % RH

2.2 Basis of calibration : SOP/05/01, SOP/9/16

2.3 Traceability : Standards used for calibration are traceable to National Standards through NABL accredited Laboratory.

| Name of Instrument | Sl. No./ Id No. | Certificate No. | Lab Certificate No. | Calibrated On | Due On |
|------------------------|--|--------------------|---------------------|---------------|------------|
| Digital Tachometer | (TMSCC/DT/01) (Sl. No. - 197-0062V) | NI2023/04/0019 | CC-2294 | 07-04-2023 | 06-04-2024 |
| Digital Time Totaliser | (TMSCC/TT/01) (Sl. No. - 19HT0559) | TSC/22-23/12095-38 | CC-2231 | 15-11-2022 | 15-11-2023 |

CALIBRATION RESULTS

1. RPM Range: (50-450) rpm, L/c : 1 rpm

| Sl. No. | Denomination set in rpm | Observed Reading at Ref. Std. in rpm (Average of five readings) | Error in rpm | Uncertainty in (±) % | Acceptance Criteria |
|---------|-------------------------|--|--------------|----------------------|---------------------|
| 1 | 50 | 49.8 | -0.2 | 1.52 | Pass |
| 2 | 150 | 149.5 | -0.5 | 1.52 | Pass |
| 3 | 250 | 249.2 | -0.8 | 1.52 | Pass |
| 4 | 350 | 348.8 | -1.2 | 1.52 | Pass |
| 5 | 450 | 448.5 | -1.5 | 1.52 | Pass |

Maximum Permissible Error : (±) 1% of rdg

Calibrated By :

P. Dasmalakar

(Sr. Calibration Engineer)

Checked By :

C. Ghosh

(Technical Director)

Approved By :

S. Chowdhury

(Quality Manager)



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|--|---------------------------------------|---|--------------|--------------------------|---------------------|
| | Date : | 30-Aug-2023 | | | |
| | Page No.: 2 of 2 | | | | |
| 2. Time Maximum Range : 99 min L/c: 1 min | | | | | |
| Sl. No. | Reading at Standard Totaliser in sec. | Reading at DUC in Min (Avg. of five readings) | Error in sec | Uncertainty in \pm sec | Acceptance Criteria |
| 1 | 300.24 | 5 | -0.24 | 2.33 | Pass |
| 2 | 1800.52 | 30 | -0.52 | 2.33 | Pass |
| 3 | 3601.35 | 60 | -1.35 | 2.33 | Pass |
| Maximum Permissible Error : ± 5 sec (upto 1 min)/ ± 6 sec (above 1 min) | | | | | |
| Measurement Uncertainty at 95% Confidence Level where Coverage Factor $k = 2$ | | | | | |
| REMARKS : The DUC has been calibrated over its range. The readings observed are tabulated above. The reference standard is traceable to National standard. | | | | | |
| DUC: Device Under Calibration. | | | | | |
| Physical Status of the DUC : OK | | | | | |

Calibrated By :

J. Bhattacharjee
(Sr. Calibration Engineer)

Checked By :

C. Ghosh
(Technical Director)

Approved By :

P. K. Modak
(Sr. Calibration Engineer)

END OF CERTIFICATE

