Centrifuge Calibration Verification Record Sheet

Name and Address : PPTCT, GOSHA GOVT HOSPITAL, VIZIANAGARAM , Andhra Pradesh -

Equipment ID: ICTC/CF/11 **Range :** up to 3500RPM

Procedure using centrifuge: In house verification of centrifuge using certified standard calibrated by Tachometer

Date of Calibration: 23.10.2023

Due date of Calibration: 22.10.2024

Certified Tachometer Id: SRL/HIVTL/Tachometer/01

Certified Tachometer calibration date : 16.10.23

Verification done by: K.Sateesh Kumar , Technical Officer, Dept. of Microbiology, Andhra Medical College, Visakhapatnam -530002

Sno	Standard reading (RPM)	UUC Reading (RPM)	Error (RPM)
1	499	500	1.0
2	993.9	1000	7.1
3	1997.8	2000	2.2
4	2998.2	3000	2.8
5	3497.1	3500	2.9

Accept/ Reject: Accepted since average difference is within +- 100RPM

Final Interpretation: Centrifuge verification is satisfactory

Action taken: NA

Remarks: NA

Signature T.OSALAme
23/10/2023

Tachometer Calibration

S.M. ENTERPRISES 27th Years of Service
(Calibration and Testing of Electrical, Electronic & Precision Instruments)

CALIBRATION CERTIFICATE

CALIBRATION ON 16/10/2023	CALIBRATION DUE 15/10/2024
1 Calibration Report Ref No. & Date	SML/NP/HOD/TDM/CAL-01/2023 Dt: 16/10/2023
2 Requested by (Name and address of the organization)	M/s. Prof and HOD , State reference Lab Department of Microbiology, Govt medical college, Vishakapatnam
3 Instrument Name	Digital Tachometer
4 Make/Model	Mextech/TDT-234C
5 Instrument Sl. No.	SRL/HIVTL/Tachometer/01
6 Range	5 to 99,999 RPM
7 Accuracy	+/- 1 RPM from 5 to 5000 & +/- 0.05% over 5000 RPM
8 Test parameter & condition	Speed Vs Speed
9 Standard Instruments used for Calibration	Digital Tachometer & Time interval meter
10 Traceability Certificate Ref No.	C-221311-4.1 Dt: 14/11/2022 DueDt:14/11/2023 TCR/INVL-O/151/23/2682 Dt:04/10/2023 DueDt: 03/10/2025 C-230613-5-1 Dt:22/06/2023 DueDt:22/06/2024

Test Results :-

Sl.No	Reading Of RPM in Dig Master Tachometer	Observed Reading Of RPM in Digital Tachometer	Error(+/-) in RPM
1	25.0	24.7	0.3
2	50.0	49.9	0.1
3	100.0	100.0	0.0
4	1000.0	999.9	0.1
5	8000	8000	0.0
6	10000	10001	1.0
7	15000	15001	1.0
8	20000	20000	0.0
9	30000	30000	0.0
10	40000	40001	1.0
11	50000	50001	1.0
12	90000	90000	0.0

PLEASE NOTE: THE INSTRUMENTS ERROR FOUND TO BE WITHIN THE SPECIFIED ACCURACY LIMIT

THIS CERTIFICATE VALID FOR PERIOD OF ONE YEAR FROM THE DATE OF ISSUE.

CALIBRATED BY
M.Ravi Kumar
DESIGNATION: MANAGER

GSTIN : 36AFVPS4924F1ZW Service Tax No. : AFVPS4924FST001 PAN No. : AFVPS4924F
NABL APPROVED LAB (CC-2471) / Approved Laboratory of ISO 9001:2015
TEST EQUIPT. / STANDARDS USED ARE TRACEABLE TO NATIONAL STANDARDS

Traceability

CALIBRATION CERTIFICATE

Godrej & Boyce Mfg Co Ltd. — Calibration Services

Customer No. C-221311-4.1
Date Of Calibration 14.11.2022
Customer Details: S.M.ENTERPRISES, PLOT NO 12, SANJEEVAIAH NAGAR, CO-OPERATIVE SOCIETY, BESIDE TADBUND TEMPLE, MOOSAPET, HYDERABAD, TELANGANA, HYDERABAD Telangana India 500059
Details of Unit Under Calibration: Name: Digital Tachometer; Make: EAPL; Sr. No.: 1811194342608; Model No.: DT-2941 D; Range: 5 to 99999 RPM; Least Count: 1 RPM upto 1000 RPM & 0.05% above 1000 RPM; Accuracy(+/-): 5 RPM; Id. No.: ; Operating Range: 10 to 99999 RPM

Name	Make	Sr. No.	Model	Valid Upto	Traceability
DIGITAL TACHOMETER	MONARCH	19548291/81679	QSCM/TT	21/10/2023	Hioki, Chennai

Work Instruction No.: WI-ME-01 & WI-ME-06 — Reference Standard No: SANAS TR 45-02
Environmental Details: Temperature: 20 +/- 1°C — Relative Humidity: 60 +/- 20 %RH

Calibration Results Group: MECHANICAL DISCIPLINE : Acceleration, & Speed

Sr. No	Mode	Standard Reading	Test Reading	Error	Expanded Uncertainty
		RPM	RPM	RPM	±RPM
1	Non Contact	10.078	10.2	0.122	±0.4
2		29.996	30.1	0.104	±0.4
3		49.978	50.1	0.122	±0.4
4		999.9	1000.1	0.2	+2.1
5		4999.9	5000.3	0.4	+2.1
6		10000	9999	-1	+11
7		50000	49995	-5	+11

Remark
1 Readings given were the average of 3 Measurements

Notes
•Equipment used for calibration were calibrated & traceable to National & International Standards
•This certificate is not to be used for any purpose other than for which it is issued.
•Godrej Calibration Services is not liable for any damage or inconvenience arising from the interpretation of this certificate.
•Godrej Calibration Services is not liable for any damage caused to the equipment due to damage caused to it after issuance of this certificate.
•Standards/instruments/equipments received by us are used and under the stated conditions of the measurements.
•This calibration results reported are valid only in case of and under the stated conditions of the measurements.
•This calibration results reported are valid only in case of and under the stated conditions of the measurements.
•The Certificate should not be reproduced except in full without the prior permission from Godrej Calibration Services.
•The Certificate should not be reproduced except in full without the prior permission from Godrej Calibration Services.
•Satisfactory calibration reported in this certificate only implies that the equipment calibrated is approved by Godrej Calibration Services shall not be liable for any loss or liability that may be arise in any party in this regards.
•All precautions have been taken for any error or omission while calibrating the instruments and issuing this certificate. However Godrej Calibration Services shall not be liable for any loss or liability that may be arise in any party in this regards.
•The reported expanded uncertainty of measurement is calculated at approximately 95 % (on Gaussian level with coverage factor k = 2.

Authorised Signatory: P Muthukumar
Designation: Senior Manager
Calibrated By: M Ramesh — Calibration Engg.
Checked By: M Ramesh — Calibration Engg.
End of Calibration Report
Godrej & Boyce Mfg Co Ltd.
Regd. Office: Pirojshanagar, L.B.S. Marg, Vikhroli, Mumbai 400 079. T: 91-22-6796 1 F:91-22-6796 1 5600 W: www.godrej.com
Signature is not required as it is generated through software

FLUID CONTROL RESEARCH INSTITUTE, PALAKKAD
CERTIFICATE OF CALIBRATION

Tachometer Traceability

COMMERCIAL IN CONFIDENCE
FLUID CONTROL RESEARCH INSTITUTE, PALAKKAD
CERTIFICATE OF CALIBRATION
OF DIGITAL TACHOMETER FOR
M/s. S.M. ENTERPRISES
PLOT NO 12, SANJEEVAIAH NAGAR, CO-OPERATIVE SOCIETY,
BESIDE TADBUND MANDIRAM TEMPLE, MOOSAPET
TELANGANA

Noise And Vibration Laboratory

FLUID CONTROL RESEARCH INSTITUTE, PALAKKAD
CERTIFICATE OF CALIBRATION

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