

REMI SALES & ENGINEERING LIMITED

CALIBRATION CERTIFICATE

CUSTOMER NAME & ADDRESS:

CERTIFICATE No: RSEL /005/23-24

DATE: 25.04.2023

M/s. Head of the Department, Department of Biochemistry,

Siddha Central Research Institute (CCRS), Ministry of AYUSH, Govt. of India

Chennai- 600 016 Mobile: 9940142329.

DESCRIPTION OF THE EQUIPMENT: REMI TABLE TOP CENTRIFUGE

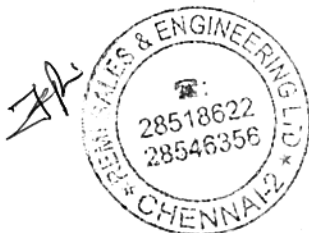
MODEL: NEYA 16R SL.NO: ZEGU-23676 MFG: 07/18

INSTRUMENT USED FOR CALIBRATION: DIGITL TACHOMETER MAKE/MODEL: ELECTRONIC AUTOMATION / DT2001-B SL.NO: NA TAG/ID.NO: TAC - 08 CERTIFICATE NO: C22102140/P/01 CERTIFIED BY: AUTOCAL, MUMBAI-401210. INSTRUMENT VALIDITY: 11.10.2023

INSTRUMENT USED FOR CALIBRATION: DIGITAL TEMPERATURE INDICATOR WITH SENSOR INSTRUMENT MAKE: SHRIJI ELECTRONICS MODEL: DTM-100 SL. NO: 39709 CERTIFICATE NO: C22102140/T/01 CERTIFIED BY: AUTOCAL, MUMBAI-401210. INSTRUMENT VALIDITY: 11.10.2023

SL.NO.	DISPLAY RPM	TACHOMETER READING	ALLOWABLE ERROR in percentage %	ERROR OBSERVED	Remark
1.	1000 (A 32-15 HEAD)	1006	±10	06	OK
2.	2000 (A 32-15 HEAD)	2001	±10	01	OK
3.	3000 (A 32-15 HEAD)	3003	±10	03	OK
4.	9000 (A 6-50 HEAD)	9008	±10	08	OK

It is traceable to NIST standard.



R. Govindarajan

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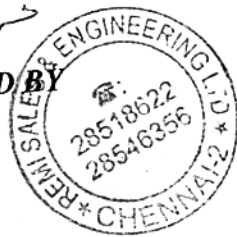
Sl. No.	Instrument Temperature Displayed	Thermometer Temperature Displayed	Difference $\pm 1^\circ\text{C}$	Remark
1.	22°C	22.2°C	0.2	O.K.
2.	4°C	4.2°C	0.2	O.K.
Sl. No.	Instrument Time Displayed Minutes	Measured Time Displayed minutes	Difference In seconds	Remark
1.	10	10:00:18	0.18	O.K.
2.	5	05:00:15	0.15	O.K.

NEXT CALIBRATION DUE ON: 24.04.2024

NOTE:

1. RESULTS ARE RELATED ONLY TO THE EQUIPMENT CALIBRATED BASED UPON THE WORKING CONDITION OF THE EQUIPMENT AT THE TIME OF CALIBRATION.
2. OVERALL DEVIATION IS DECIDED BASED UPON SPECIFIED ACCURACY DECLARED BY THE MANUFACTURER'S.

APPROVED BY



R. Srinivasan
CALIBRATED BY

PAGE: 2 OF 2

SI. No. : RSEL / CC / 005
 Model No. Ne 7a 16 R Serial No. ZE 610-23676 cal Solutions Private Limited
 Installation On Calibration on 25/11/23
 Next Calibration Due on : 24/11/24
 Calibrated By : R. Gopinathan

Laboratory : Unit No. 4, Ruby Industrial Estate, PCS Ltd.,
 d (E), Dist. Palghar - 401210, Maharashtra, India.
 J No. U72200MH2008PTC178116
 @autocal.net Web Address: www.autocal.net
 Phone No.:(0250) 2393460



Service Help Line : 09092048877
 Instservicechennai@remigroup.com

LIBRATION CERTIFICATE
THERMAL DISCIPLINE

FF/31-B
 Page 1 of 1

ULR No.	CC238222000019078F		
Certificate No	C22102140/T/1	Issue Date	14/10/2022
Date of calibration	12/10/2022	Next Calibration Date	11/10/2023

Service Request Form No.	C22102140		
Calibrated For	Remi Elektrotechnik Ltd		
	Bldg.B, Survey No.65/1, Village Valiv, Vasai (East), Vasai Dist. Palghar Maharashtra India 401208		
Date of Receipt of Instrument	11/10/2022		
Condition of Instrument on Receipt	Working	Calibration at	Lab
Environmental Conditions	Temperature 24.4 °C	Relative Humidity	59.4 %RH

Details of Unit Under Calibration (UUC)			
Instrument	Digital Temperature Indicator With Sensor	Equipment	NA
Make:	Shriji Electronics	Equipment Id	NA
Model No.:	DTM-100	Department	NA
Sr. No:	39709	Section	NA
Tag/Id. No.	39709	Location:	NA
Procedure No	WI/ASPL/CAL/TH/01	Ref. Used:	ITS-90

Range	Resolution / Least Count	Accuracy/ Acceptance Criteria
(-100) to 199.9 °C	0.1 °C	± 1 °C

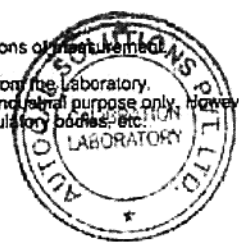
Details of Standard(s) used for Calibration (Traceable to National & International Standards)				
Description	Make & Model	Serial No. & Identification No	Traceability (Certificate No.)	Valid Up To
PRT Sensor With Indicator	Fluke / I:1524 , S:5616-12	I:2335036 , S: 80089 / STD/P/TH/113	ASPL, Vasai C2262025/T/01	26/06/2023

Measurement Results
 Parameter : Temperature | Discipline:Group :- Thermal : Temperature

Range	Test Point	Reading On UUC	Reading on STD	Error	Expanded Uncertainty	Coverage Factor (k)
	°C	°C	°C	°C	°C	
(-100 to 199.9 °C	-86	-85.8	-86.066	0.266	±0.1089	2
	-40	-39.7	-40.159	0.459	±0.0614	2
	-20	-19.6	-20.066	0.466	±0.0614	2
	25	25.2	24.990	0.210	±0.0729	2
	100	100.3	99.982	0.318	±0.0731	2

- Remark**
- The reported expanded uncertainty of measurement is stated as a standard uncertainty of measurement multiplied by coverage factor "k= 2" such that the coverage probability corresponds to approximately 95% confidence level.
 - The measured values mentioned are the average of 5 readings.
 - Measured readings have been mentioned.

- Notes**
- This certificate refers only to the particular item calibrated at site / laboratory.
 - The calibration results reported are valid at the time of and under the stated conditions of measurement.
 - Any correction in this certificate invalidates this certificate.
 - This certificate shall not be reproduced except, in full without the written approval from the Laboratory.
 - Calibration of UUC done by any accredited laboratories is meant for scientific and industrial purpose only. However, if used for commercial trading, additional recognition/ approval shall be complied as required by Dept. of Legal metrology, Regulatory bodies, etc.



Jadhav
 14/10/22
 Authorised Signatory

Authorised Signatory	Prashant Jadhav
	Lab Incharge
Calibrated By	Abinash Paikaray
	Calibration Engineer



CALIBRATION CERTIFICATE

FF/31-E

MECHANICAL DISCIPLINE

Page 1 of 2

ULR No.	CC238222000019081F		
Certificate No	C22102140/P/1	Issue Date	14/10/2022
Date of calibration	12/10/2022	Next Calibration Date	11/10/2023

Service Request Form No.	C22102140		
Calibrated For	Remi Elektrotechnik Ltd Bldg.B, Survey No.65/1,Village Valiv, Vasal (East), Vasal Dist, Palghar Maharashtra India 401208		
Date of Receipt of Instrument	11/10/2022		
Condition of Instrument on Receipt	Working	Calibration at	Lab
Environmental Conditions	Temperature	Relative Humidity	55.4 %RH
	23.3 °C		

Details of Unit Under Calibration (UUC)			
Instrument	Digital Tachometer	Equipment	NA
Make:	Electronic Automation	Equipment Id	NA
Model No.:	DT 2001-B	Department	NA
Sr. No.:	-	Section	NA
Tag/Id. No.	TAC-08	Location:	NA
Procedure No	WI/ASPL/CAL/PR/07	Ref. Used:	Sanas TR 45-01

Range	Resolution / Least Count	Accuracy/ Acceptance Criteria
20 to 20000 RPM	0.1 RPM upto 5999.9 RPM & 1 RPM above 6000 RPM	Not Specified

Details of Standard(s) used for Calibration (Traceable to National & International Standards)				
Description	Make & Model	Serial No. & Identification No	Traceability (Certificate No.)	Valid Up To
DIGITAL TACHOMETER	Monarch / PLT 200	1856742 / STD/PIPR/07	Hi Tech,Chennai HT/CC/220617-06/003	29/08/2023

Measurement Results

Observation Table | Discipline:Group :- Mechanical : Acceleration & Speed

Sr. No.	Calibration Point	Reading On Standard	Reading On UUC	Error	(±) Expanded Uncertainty
	RPM	RPM	RPM	RPM	RPM
1	20	20.001	20.0	-0.001	±0.6000
2	500	500.02	500.0	-0.02	±1.500
3	7000	7000.1	7001	0.9	±5.600
4	15000	15001	15002	1	±4.000
5	20000	20000	20002	2	±4.000

Remark
1.The reported expanded uncertainty of measurement is stated as a standard uncertainty of measurement multiplied by coverage factor "k= 2" such that the coverage probability corresponds to approximately 95% confidence level.
2.The Average Values-Mentioned are the average of 5 readings.



(Signature)
18/10/22

Authorised Signatory	Jyotindra Mehta Calibration Engineer
Calibrated By	Krinjal Patil Calibration Engineer



Authorised Signatory



CC2382

CALIBRATION CERTIFICATE
MECHANICAL DISCIPLINE

FF/31-E

Page 2 of 2

ULR No.	CC238222000019081F		14/10/2022
Certificate No	C22102140/P/1	Issue Date	11/10/2023
Date of calibration	12/10/2022	Next Calibration Date	

Notes

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2. The calibration results reported are valid at the time of and under the stated conditions of measurement.
3. Any correction in this certificate invalidates this certificate.
4. This certificate shall not be reproduced except, in full without the written approval from the Laboratory.
5. Calibration of UUC done by any accredited laboratories is meant for scientific and industrial purpose only. However, if used for commercial trading, additional recognition/ approval shall be complied as required by Dept. of Legal metrology, Regulatory bodies, etc.



[Handwritten Signature]
18/10/22

Authorised Signatory

Authorised Signatory	Jyotindra Mehta Calibration Engineer
Calibrated By	Krinjal Patil Calibration Engineer



— End of Certificate —

AUTOCAL SOLUTIONS PVT. LTD.

Regd. Office & Laboratory: Unit No. 4, Ruby Industrial Estate PCS Ltd., Navghar,
Vasai Road (E), Dist. Palghar - 401 210, Maharashtra, India.
CIN No. U72200MH2008PTC178116
Email Id: sales@autocal.net Web Address: www.autocal.net
Phone No.: (0250) 2393460



CALIBRATION CERTIFICATE

FF/31-A

ELECTROTECHNICAL DISCIPLINE

Page 1 of 2

ULR No.	CC238222000019189F -		
Certificate No.	C22102140/E/1	Issue Date	15/10/2022
Date of Calibration	13/10/2022	Next Calibration Date	12/10/2023

Service Request Form No.	C22102140		
Calibrated for	Remi Elektrotechnik Ltd. Bldg. B. Survey No.65/1, Village Valiv, Vasai (East), Dist. Palghar Maharashtra India 401208		
Date of Receipt of Instrument	11/10/2022		
Condition of Instrument on Receipt	Working	Calibrated at	Lab
Environmental Conditions	Temperature 24.2°C	Relative Humidity	54.2%RH

Details of Unit Under Calibration (UUC)			
Instrument	Digital Stop Watch	Equipment	NA
Make	Racer	Equipment Id.	NA
Model	NA	Department	NA
Sr. No.	NA	Section	NA
Taq/Id. No.	SW-103	Location	NA
Procedure No.	WI/ASPL/CAL/ET/06	Ref. Used	--

Range	Resolution / Least Count	Accuracy / Acceptance Criteria
0 to 23 hrs 59 min 59 Sec	0.01 sec for below 30 min & 1 sec for above 30 min	± 2 sec upto 3 hrs & ± 0.02 % rdg for above 3 hrs

Details of Standard(s) Used for Calibration (Traceable to National / International Standards)				
Description	Make & Model	Serial No. & Identification No.	Traceability (Certificate No.)	Valid upto
Timer / Counter / Analyzer	Pendulum & CNT-90	964025 & STD/PI/ET/108	WAVECAL, Bangalore 22/79-01	07/07/2023



Authorised Signatory	Minal Vaidya Technical Manager
Calibrated By	Laxmi Gilbile Calibration Engineer



M Vaidya
17/10/22
Authorised Signatory

AUTOCAL SOLUTIONS PVT. LTD.

Regd. Office & Laboratory: Unit No. 4, Ruby Industrial Estate PCS Ltd., Navghar,
Vasai Road (E), Dist. Palghar - 401 210, Maharashtra, India.
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CALIBRATION CERTIFICATE
ELECTROTECHNICAL DISCIPLINE

FF/31-A

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ULR No.	CC238222000019189F -		
Certificate No.	C22102140/E/1	Issue Date	15/10/2022
Date of Calibration	13/10/2022	Next Calibration Date	12/10/2023

Measurement Result

Parameter : Time | Discipline:Group:Electro-Technical : Time & Frequency

Test Point	Reading on Standard	Reading on UUC				Calculated Value for UUC	Deviation	(±) Expanded Uncertainty (%Rdg)
		hrs	min	sec	1/100 sec			
10	10.3601	--	0	10	37	10.35	-0.0101	± 0.474
30	30.2802	--	00	30	27	30.27	-0.0102	± 0.021
60	60.3029	--	1	00	31	60.31	0.0071	± 0.010
1800	1800.4741	0	30	00	--	1800	-0.4741	± 0.032
7200	7200.3461	2	00	00	--	7200	-0.3461	± 0.013

Remarks

- 1 The reported expanded uncertainty of measurement is stated as a standard uncertainty of measurement multiplied by coverage factor "k=2" such that the coverage probability corresponds to approximately 95% confidence level.
- 2 The measured values mentioned are the average of 3 readings.
- 3 Measured readings have been mentioned

Notes

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Authorised Signatory	Minal Vaidya
	Technical Manager
Calibrated By	Laxmi Gilbile
	Calibration Engineer



Minal Vaidya
17/10/22
Authorised Signatory