



# TMSCC

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



An NABL Accredited Calibration Laboratory  
A Constituent Board of Quality Council of India  
An ISO 9001 : 2015 Certified company

CC - 3125

Calibration of Various Instruments & Testing Machines...

Form No.: TMSCC/R/23

## CALIBRATION CERTIFICATE

CALIBRATION CERTIFICATE NO.:		2023/06/96	Page 1 of 1
ISSUE DATE :		5-Jun-2023	
ULR No.:		CC312523000007013F	
1.0	ISSUED TO:	M/s.: Suraha Speciality Laboratory 167, Beharapara, H.C. Sarani, Sonarpur, 24.Parganas(S), Kolkata - 700150	
1.1	Service Request Form No. :	SRF/2023/06/02/02	
1.2	Service Request Date :	02-06-2023	
1.3	Location:	At Lab	

Description identification of item to be calibrated:						
1.4	i	Name:	Micro Pipette	ii	Make:	Thermo Scientific
	iii	Model / Type No.:	F3	iv	S/L No.:	SW28504
	v	I.D.No.:	-	vi	Job Code No:	2023/06/96
	vii	Range:	(20 - 200) µl	viii	Resolution:	0.2 µl
	ix	Accuracy	As Per ISO 8655-6	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:	2-Jun-2023	1.8	Date of calibration:	2-Jun-2023
-----	--------------------------	------------	-----	----------------------	------------

1.9	Calibration due on:	1-Jun-2024	2.0	Frequency of calibration once in:	12	Months
-----	---------------------	------------	-----	-----------------------------------	----	--------

2.1	Environmental condition during calibration	Temperature:	20.3 °C
		Humidity:	54 % RH

2.2	Basis of calibration:	SOP/04/02
-----	-----------------------	-----------

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

Name of the Instrument	Sl. No./ Id No.	Certificate No.	Lab Certificate No.	Calibrated On	Due On
Digital Weighing Balance	(TMSCC/EB/01) (Sl. No.- 14255716)	TSC/22-23/12101-25	CC - 2231	15-11-2022	15-11-2023
Digital Temperature Indicator with Sensor(RTD)	Sl. No.- 18K588073 (Sensor Sl. No.- 19102403)	TSC/22-23/12095-36	CC - 2231	17-11-2022	17-11-2023

## CALIBRATION RESULTS

Sl. No.	Denomination Volume in µl	Observed Reading at Ref. Std. Balance in g (Avg. of five readings)	Density of De Ionized Water in g/ml	Actual volume in µl	Error in µl	MPE in ± µl	Measurement Uncertainty in ± µl	Acceptance Criteria
1	20	0.01998	0.998141	20.01730	0.01730	0.20	1.95	Pass
2	50	0.04995	0.998141	50.04325	0.04325	0.50	1.95	Pass
3	70	0.06993	0.998141	70.06055	0.06055	0.80	1.95	Pass
4	100	0.09990	0.998141	100.08650	0.08650	0.80	1.95	Pass
5	200	0.19980	0.998141	200.17300	0.17300	1.60	1.95	Pass

Measurement Uncertainty at 95% confidence level where coverage factor, k=2

Remarks: The above DUC has been calibrated over its above range & the readings observed are tabulated above. The reference standard used is traceable to National Standard.

DUC: Device Under Calibration

Physical status of the Instrument : Ok

Calibrated By :

J. Bhattacherjee  
(Sr. Calibration Engineer)

Checked By :

S. Chowdhury  
(Quality Manager)



Approved By :

C. Ghosh  
(Technical Director)

END OF CERTIFICATE