

Laboratory **The South India Textile Research Association (SITRA), Calibration Laboratory, 13/37, Avinashi Road, Aerodrome Post, Coimbatore, Tamil Nadu**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **CC-2678**

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Validity **18.05.2018 to 17.05.2020**

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MECHANICAL CALIBRATION</u>				
I.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)			
1.	Caliper [§] (Vernier / Dial / Digital) L.C.10 μ m	0 to 600 mm	13.0 μ m	Using Caliper Checker External Micrometer
2.	Depth Caliper [§] (Vernier/ Dial / Digital) L.C.10 μ m	0 to 300 mm	9.0 μ m	Using Gauge Block; Long Gauge Block & Surface Plate
3.	Height Gauge [§] (Vernier / Dial / Digital) L.C.10 μ m	0 to 600 mm	12.0 μ m	Using Gauge Block; Long Gauge Block & Surface Plate
4.	External Micrometer [§] (Analog / Dial / Digital) L.C.1 μ m L.C.10 μ m	0 to 100 mm 0 to 100 mm >100 mm to 300 mm	2.0 μ m 6.3 μ m 7.0 μ m	Using Gauge Block Set; Long Gauge Block
5.	Micrometer Setting Rod [§]	0 to 275 mm	4.4 μ m	Using Gauge Block Set; Long Gauge Block; Electronic Probe & Comparator Stand

Shally Sharma
Convenor

Avijit Das
Program Director

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6.	Inside Micrometer / Stick Micrometer [§] (2 points) Basic Travel of Micrometer L.C.10 μ m Overall Length Accuracy with Extension Rod (Stick)	50 mm to 63 mm 50mm to 300 mm	3.6 μ m 5.5 μ m	Using Gauge Block Set; Long Gauge Block; Electronic Probe & Comparator Stand
7.	Plunger Dial Gauge [§] L.C. 1 μ m L.C. 10 μ m	0 to 1 mm 0 to 10 mm	3.9 μ m 4.9 μ m	Using Electronic Dial Calibration Tester
8.	Dial Thickness Gauge [§] L.C. 10 μ m	0 to10 mm	4.3 μ m	Using Gauge Block Set
9.	Plain Plug Gauge [§]	Up to 100 mm	2.7 μ m	Using Gauge Block Set; Electronic Probe & Comparator Stand
10.	Feeler Gauge [§]	0.03 mm to 1.0 mm	2.0 μ m	Using Electronic Probe & Comparator Stand
11.	Measuring Scale [§]	0 to1000 mm	232 μ m	Using Scale & Tape Calibration Unit
12.	Measuring Tape [§] (Steel)	0 to100000 mm	386 X \sqrt{L} 'L' in mtr.	Using Scale & Tape Calibration Unit

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II. WEIGHTS				
1.	Standard Weights § Calibration of F1 class & Coarser	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g	0.01mg 0.01mg 0.01mg 0.01mg 0.01mg 0.01mg 0.01mg 0.01mg 0.01mg 0.02mg 0.02mg 0.02mg 0.03mg 0.03mg 0.10mg 0.10mg 0.15mg	Using E2 class weights and balance of readability 0.01mg up to 40g and 0.1mg up to 200g as per OIML R-111
	Calibration of F2 Class & Coarser	500 g 1 kg	1 mg 1 mg	Using E2 class weights and Balance of readability 1mg as per OIML R-111
	Calibration of M1 Class & Coarser	2 kg 5 kg 10 kg	86 mg 86 mg 86 mg	Using E2 class weights and balance of readability 100mg as per OIML R-111

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III.	WEIGHING SCALE AND BALANCE			
1.	Calibration of Electronic Weighing Balances of Class 1 & Coarser * Readability 0.01mg Readability 0.1mg Readability 1mg Readability 100mg	0 to 40 g 0 to 200 g 0 to 1 kg 0 to 12 kg	0.06 mg 0.13 mg 1 mg 66 mg	Using E2 Class Weights as per OIML R-76-1
IV.	PRESSURE INDICATING DEVICES			
1.	Vacuum Gauge [#]	(- 1) to 0 bar	0.008 bar	Using Digital Vacuum Calibrator with Pneumatic Pump
2.	Pressure Gauge [#] (Pneumatic)	1 bar to 10 bar	0.033 bar	Using Digital Pneumatic Calibrator with Pneumatic Pump
3.	Pressure Gauge [#] (Hydraulic)	40 bar to 150 bar 200 bar to 600 bar	0.5 bar 1.8 bar	Using Digital Pressure Calibrator with Hydraulic Pump
V.	ACCELERATION AND SPEED			
1.	Tachometer [§] Contact Method Non-Contact	50 rpm to 4000 rpm 100 rpm to 100000 rpm	1.1% 1.0 %	Using Digital Tachometer

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VI.	UTM, TENSION CREEP AND TORSION TESTING MACHINE			
1.	Force measuring system of UTM of accuracy class II & Coarser * Tension	50N to 0.5kN 100N to 1kN 250N to 2.5kN 1kN to 5kN	0.84% 0.83% 0.78% 0.64%	Using Proving Rings with Dial Gauge as per IS 1828
2.	Tensile Tester *	10N to 100N	0.27%	Using Dead Weight F2 Class as per IS 1828

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

\$Only in Permanent Laboratory

*Only for Site Calibration

The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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