

Laboratory Ben Lab, No. 1, Kalathumettu Street, Thirubhuvanai, Pondicherry
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number CC-2566 (In lieu of C-0992, C-0993) **Page** 1 of 6
Validity 01.03.2018 to 29.02.2020 **Last Amended on** --

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MECHANICAL CALIBRATION</u>				
1.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)			
1.	Caliper ^s (Vernier/Dial/Digital) L.C.: 0.01 mm	Upto 300 mm	7.52 μ m	Using Caliper Checker
2.	Height Gauge ^s (Vernier/Dial/Digital) L.C.: 0.01 mm	Upto 300 mm	7.76 μ m	Using Caliper Checker
3.	External Micrometer ^s (Mechanical/Digital) L.C.:0.001 mm	Upto 25 mm	0.86 μ m	Using Gauge Blocks Grade"0"
4.	Plunger Type Dial Gauge ^s (Dial/Digital) L.C.: 0.01 mm	Upto 25 mm	7.46 μ m	Using Dial Calibration tester
5.	Lever Type Dial Gauge ^s L.C.: 0.01 mm	Upto 1 mm	7.46 μ m	Using Dial Calibration tester
6.	Thickness Gauge ^s (Dial/Digital) L.C.:0.001 mm L.C.:0.01 mm	Upto 1 mm Upto 10 mm	1.5 μ m 6.37 μ m	Using Gauge Blocks

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Convenor

Avijit Das
Program Director

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II.	WEIGHTS			
1.	Mass ^s	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	0.030 mg 0.060 mg 0.04 mg 0.06 mg 0.06 mg 0.06 mg 0.08 mg 0.09 mg 0.11 mg 0.11 mg 0.11 mg 0.11 mg 0.11 mg 0.11 mg 0.30 mg 0.30 mg 1.0 mg	Using F1Class Standard Weights and Electronic weighing balance (Readability:0.01/0.1mg) as per OIML R-111 by ABBA Method
		500 g 1 kg 2 kg 5 kg	9.0 mg 15 mg 15 mg 18 mg	Using F1Class Standard Weights and Electronic weighing balance (Readability:10 mg) as per OIML R-111 by ABBA Method
		10 kg 20 kg 50 kg	100 mg 130 mg 1.1 g	Using F1Class Standard Weights and Electronic weighing balance (Readability:100 mg/1g) as per OIML R-111 by ABBA Method

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III.	WEIGHING SCALE AND BALANCE			
1.	Electronic Weighing Balances* (Class II and Coarser) Readability :1 mg	0 to 200g	0.7 mg	Using F1 Class weights as per OIML-R-76-1
	Class III and Coarser Readability :1 g Readability :2 g	Up to 5 kg Up to 10 kg	0.6 g 1.2 g	Using F1 Class weights as per OIML-R-76-1
	Class IV Accuracy Readability :5 g Readability :20 g Readability :100 g	Up to 30 kg Up to 300 kg Up to 1000 kg	2.9 g 20.1 g 101 g	Using M1 Class weights as per OIML-R-76-1
IV.	PRESSURE INDICATING DEVICES			
1.	Hydraulic Pressure-Dial Pressure Gauges, Digital Pressure Gauges #	6 bar to 700 bar	0.05% rdg	Using Digital Pressure Calibrator as DKD R6-1
2.	Pneumatic Pressure Dial Gauges, Digital Pressure Gauge, Pressure Transmitter And Pressure Switch#	0 to 200mbar 0.2 bar to 20bar	1.40% rdg 0.10% rdg	Using Digital Low Pressure Calibrator as DKD R6-1
3.	Vacuum-Negative Pressure Dial Pressure Gauges, Digital Pressure Gauge#	(-)0.95 bar to 0bar	0.84% rdg	Using Digital Pressure Calibrator as DKD R6-1 & DKD R6-2

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<u>THERMAL CALIBRATION</u>				
I. TEMPERATURE				
1.	Glass Thermometer [§]	(-)10 °C to 50 °C	0.3 °C	Using Standard RTD & Multifunction Calibrator and Liquid Temperature Bath
2.	RTD & Thermocouples, Temperature Indicator With Sensors/ Temperature Gauges/ Temperature Transmitter [§]	(-)80 °C to 50 °C	0.25 °C	Using Standard RTD, Multifunction Calibrator and Liquid Temperature Bath
3.	RTD & Thermocouples, Temperature Indicator With Sensors/ Temperature Gauges/ Temperature Transmitter/ Glass Thermometer [#]	50 °C to 400 °C	0.62 °C	Using Standard RTD, Multifunction Calibrator and Dry Block Calibrator
4.	RTD & Thermocouples, Temperature Indicator With Sensors/ Temperature Gauges/ Temperature Transmitter/ Digital Thermometer [#]	400 °C to 1200 °C	3.2 °C	Using Standard RTD, Thermocouple Multifunction calibrator and Temperature bath

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5.	Temperature Calibrator / Temperature Bath [#]	(-)80 °C to 50 °C 50 °C to 400 °C 400 °C to 1200 °C	0.25 °C 0.62 °C 3.2 °C	Using Standard RTD, Thermocouple Multifunction calibrator & Dry Block Calibrator
6.	Temperature In Thermo Hygrometer ^{\$}	0 °C to 50 °C	0.48 °C	Using Standard Temperature & Humidity Indicator With Sensor and Humidity Chamber
7.	Humidity In Thermo Hygrometer ^{\$}	30°C to 80@25°C %RH	2.7%RH	Using Standard Temperature & Humidity Indicator With Sensor and Humidity Chamber
8.	RTD & Thermocouples, Temperature Indicator With Sensors / Temperature Gauges / Temperature Transmitter / Digital Thermometer [*]	(-)20°C to 50°C	0.33°C	Using Standard RTD, Thermocouple Calibrator and Temperature Bath
II.	SPECIFIC HEAT AND HUMIDITY			
1.	Deep Freezers / Refrigerators/ Incubators/ Bath/Environmental Chambers/ Oven / Temperature Enclosures / Humidity Chambers [*]	(-)80 °C to 0 °C 0 °C to 200 °C	2.6 °C 1.6 °C	Using RTD & Datalogger

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2.	Humidity in Humidity Chambers & Environmental Chambers* (Multipoint)	30% to 80% R.H @25 °C	3.4% R.H	Using Wireless Humidity & Temperature Datalogger

* 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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