



**National Accreditation Board for
Testing and Calibration Laboratories**

(A Constituent Board of Quality Council of India)



CERTIFICATE OF ACCREDITATION

ELECTRONICS REGIONAL TEST LABORATORY (EAST)

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Block: DN, Sector-V, Salt Lake City, Kolkata, West Bengal

in the field of

CALIBRATION

Certificate Number CC-2008

Issue Date 21/01/2019

Valid Until 20/01/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



89076970200020000312

Anil Relia
Chief Executive Officer



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Laboratory Electronics Regional Test Laboratory (East), Block: DN, Sector-V, Salt Lake City, Kolkata, West Bengal

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
<u>ELECTRO-TECHNICAL CALIBRATION</u>				
I.	MEASURE			
1.	DC Voltage [#]	10 μ V to 1 mV 1 mV to 10 V 10 V to 1000 V	2 % to 0.014 % 0.014 % to 0.0004 % 0.0004 % to 0.0005 %	Using DC Reference Standard 7004 , Null Detector , Kelvin Verley Divider, FLK Multimeter 8508A by Direct/ Comparison method
		>1 kV to 40 kV	2.5 %	Using 80K40 HV probe by Direct/Comparison method
2.	DC Current [#]	10 μ A to 1 mA 1 mA to 20 A 20 A to 850 A	0.006 % to 0.002 % 0.002 % to 0.005 % 0.005 % to 0.05 %	Using Current Shunt & Standard Resistance, Agilent Current Source 875A& FLK DMM 8508A by Direct/Comparison Method
3.	DC Resistance [#]	0.0001 Ω to 0.001 Ω	0.03 % to 0.004 %	Using DMM FLK8508A, Standard Resistance Set, High Resistance Meter Agilent 4339 by Direct/Comparison Method
		0.001 Ω to 1 M Ω	0.004 % to 0.001 %	
		1 M Ω to 20 G Ω	0.001 % to 0.20 %	
		20 G Ω to 1 T Ω	0.2 % to 2.5 %	
4.	Inductance [#]	1 kHz 100 μ H to 10 H	0.2 % to 0.06 %	Using Digibridge 1689, Quadtech, USA STD "L", GR1482 Series by Direct/Comparison Method

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5.	Capacitance [#]	1 kHz 1 pF to 1.0 mF 1.0 mF to 10 mF	0.04 % to 1.2 % 1.2 % to 0.3 %	Using Capacitance Measuring Assembly GR 1620 AP, Digibridge 1689, Quadtech USA Direct/Comparison
6.	Frequency [#]	10 Hz to 100 kHz 100 kHz to 6 GHz	5×10^{-4} - 5×10^{-6} 5×10^{-8}	Using frequency Counter Pendulum CNT90 by Direct / Comparison Method
7.	AC Voltage [#]	10 Hz to 40 Hz 1 mV to 1000 V	0.5 % to 0.025 %	Using IVD, FLK 8508A, TVC HOLT, AC Meas Std FLK5790A By Direct/ Comparison Method
		40 Hz to 10 kHz 1mV to 1000 V	0.5 % to 0.012 %	
		10 kHz to 100 kHz 1 mV to 1V 1V to 100 V	0.43 % to 0.014 % 0.014 % to 0.016 %	
		100 kHz to 1 MHz 1 mV to 1 V	1.34 % to 0.1 %	
8.	AC Current [#]	50 Hz >1 kV to 28 kV	6 %	Using DMM & 80K40 HV Probe By Direct/ Comparison Method
		10 Hz to 5 kHz 10 μ A to 1 A 1 A to 20 A	0.05 % to 0.016 % 0.016 % to 0.035 %	Using DMM 8508A, AC/DC Standard Resistance, Fluke 5790A Zera COM 3003 by Direct/Comparison Method
		50 Hz 0.01A to 120 A	0.013 %	Using ZERA COM-3003by Direct Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
9.	Time Interval/ Time Period [#]	20 nsec to 2000 sec	0.0002 %	Using Freq. Counter Pendulam CNT-90 by Direct/Comparison Method
10.	High Frequency AC Voltage [#]	1 MHz to 100 MHz 10 mV to 10 V	3.3 %	Using URV-5 R&S by Direct/Comparison Method
		100 MHz to 1 GHz 10 mV to 7 V	3.5 %	
11.	AC Power & Energy 1 ϕ & 3 ϕ (50Hz) (Active and Reactive) [#]	10 mA to 120 A 60 V to 240 V UPF – 0.5 PF (lead & Lag) (0.03 W to 86.4 kW)\ (0.03 VAR to 86.4 kVAR)	0.023 % to 0.012 %	Using Three Phase Comparator, Make: Zera, Model: COM 3003 By Direct / Comparison Method
12.	Power Factor/ Phase Angle [#] (50 Hz) At 240 V, 5 A	+/- 0.1 – 1.0 (lag & lead) 0° to 180° (Lead & Lag)	0.01 %	Using Three Phase Comparator, Make: Zera, Model: COM 3003 by Direct/comparison Method
13.	AC Resistance [#]	1 kHz 1 Ω to 100 k Ω	0.3 % to 0.1%	Using Digibridge 1689, Quadtech, USA By Direct/ Comparison Method
14.	RF Power [#]	50 MHz to 2 GHz 1 nW to 1 mW 1 mW to 40 mW	6 % 4 %	Using RF mV Meter – URV-5, R&S Power Sensors, RF Attenuator , RF Amplifier By Direct/ Comparison Method
		50 MHz to 1 GHz 40 mW to 90 W	4 %	

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
15.	Attenuation [#] 10 MHz to 1 GHz	50 MHz to 1 GHz 1 dB to 10 dB 10 dB to 60 dB	0.15 dB 0.17 dB	Using RF Level Meter, URV-5, R & S (for Variable Attenuator Calibration, 1dB – 60dB) by Direct/Comparison Method
16.	VSWR [#]	1.05 to 3 (50 MHz to 2 GHz)	0.15 to 0.3 in VSWR	Using SWR Bridge R & S, ZRB2, RF Level Meter, URV-5, By Return Loss Method
II.	SOURCE			
1.	DC Voltage [#]	10 μ V to 10 V 10 V to 1000 V	2 % to 0.0003 % 0.0003 % to 0.0004 %	Using Wavetek 4808, DMM-FLK 8508A, DC Voltage Ref STD 7004N, FLK DC Cal System-Null Detector FLK 845AR, Kelvin Verley Divider FLK 720A By Direct / Comparison Method
2.	DC Current [#]	10 μ A to 1 A 1 A to 20 A 20 A to 850 A 20 A to 1000 A	0.01 % to 0.005 % 0.005 % to 0.009 % 0.009 % to 0.06 % 0.53 %	Using FLK 5520A, 5080A, Wavetek 4808, STD"R", DMM-FLK8508A, Agilent 6680A, STD Shunt, By Direct / Comparison Method Using Calibrator With Current Coil By Direct Method

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3.	DC Resistance [#]	0.0001 Ω to 100 k Ω 100 k Ω to 10 M Ω 10 M Ω to 1 T Ω	0.04 % to 0.001 % 0.001 % to 0.003 % 0.003 % to 2 %	Using STD "R", L&N, Tinsley DMM FLK 8508A, Agilent High Resistance Meter By Direct / Comparison Method
4.	Inductance [#]	1 kHz 100 μ H to 100 mH 100 mH to 10 H	0.1 % to 0.03 % 0.03 % to 0.09 %	Using STD "L", GR 1482 Series By Direct / Comparison Method
5.	Capacitance [#]	1 kHz 10 pF to 1000 pF 1000 pF to 1 mF 1.0 mF to 10 mF 1 kHz to 1 MHz 1 pF to 1000 pF	0.003 % to 0.015 % 0.015 % to 0.05 % 0.05 % to 0.38 % 0.12 % to 0.3 %	Using STD "C", GR 1404 Series & 1409 Series By Direct / Comparison Method Using HP 16380A Series By Direct / Comparison Method
6.	Frequency [#]	10 Hz to 100 kHz 100 kHz to 6 GHz	5×10^{-4} - 5×10^{-6} 5×10^{-8}	Using Pendulum CNT-90, Func Gen Agilent 33250A, Signal Generator, Keysight, E8257D by Direct / Comparison Method
7.	AC Voltage [#]	10 Hz to 45 Hz 1 mV to 1000 V 45 Hz to 10 kHz 1 mV to 100 V 100 V to 1000 V	0.7 % to 0.025 % 0.4 % to 0.008 % 0.008 % to 0.02 %	Using Calibrator Wavetek4808 & IVD FLK 5790A HOLT TVC by Direct/Comparison Method

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		10 kHz to 50 kHz 1mV to 1 V 1V to 100 V 50 kHz to 1 MHz 1 mV to 100 mV 100 mV to 10 V	0.2 % to 0.014 % 0.014 % to 0.02 % 0.05 % to 1.2 % 0.25 % to 0.12 %	
8.	Time Interval/ Time Period [#]	20 nsec to 2000 sec	0.0002 %	Using Agilent Func. Gen. Freq. Counter Pendulam CNT-90 by Direct / Comparison Method
9.	High Frequency AC Voltage [#]	1 MHz to 1 GHz 10 mV to 7 V	3.5 %	Using Calibrator Wavetek 4808, RF Voltmeter with Insertion Unit, Signal Generator & RF Amplr., AR100W 1000MHz, RF Attenuator by Direct / Comparison Method
10.	AC Current [#]	10 Hz to 5 KHz 10 μ A to 1 A 1 A to 20 A 50 Hz 10 mA to 100 A 50 Hz 20 A to 1000 A	0.08 % to 0.05 % 0.05 % to 0.035 % 0.013 % 0.55 %	Using Calibrator FLK-5520A, 5080A, Wavetek 4808, 8508A, FLK 5790 & Shunt by Direct/ Comparison Method Using Zera COM3003 by Direct Method Using Calibrator and Current Coil By Direct Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
11.	AC Resistance [#]	1 kHz 1 Ω to 10 k Ω	0.007 %	Using Tinsley 5685A & 5685B by Direct / Comparison Method
12.	RF Power [#]	30 MHz to 2 GHz 1 nW to 1 mW 1 mW to 40 mW 50 MHz to 1 GHz 40 mW to 90 W	6 % 4 % 4 %	Using RF mV Meter R & S, RF Attenuator, Amplifier Research RF Amplifier 100W1000B & Signal Gen by Direct / Comparison Method
13.	Attenuation [#]	50 MHz to 1 GHz 1 dB to 10 dB 10 dB to 60 dB	0.2 dB 0.2 dB	Using R & S RF Milli Voltmeter URV-5, Level Meter with Sensor, HP Power Meter, RF Step Attenuator, RSP By Power Ratio Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
MECHANICAL CALIBRATION				
I.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)			
1.	Gauge Block ^{\$}	Up to 10 mm 10 mm to 25 mm 25 mm to 50 mm 50 mm to 100 mm	0.25 μ m 0.30 μ m 0.45 μ m 0.60 μ m	Using Gauge Block Calibration Tester & Gauge Block Set K Grade By comparison Method (IS 2984)
2.	Vernier Caliper ^{\$} (Dial/Digital/Analog) L.C.: 0.01 mm L.C.: 0.01 mm	0 to 300 mm 300 mm to 1000 mm	13.5 μ m 25.0 μ m	Using Gauge Block Set/Accessory Set By Comparison Method (IS 3651)
3.	External Micrometer ^{\$} L.C.: 0.001 mm L.C.: 0.001 mm L.C.: 0.001 mm L.C.: 0.001 mm L.C.: 0.001 mm L.C.: 0.001 mm L.C.: 0.001 mm	0 to 25 mm 25 mm to 50 mm 50 mm to 75 mm 75 mm to 100 mm 100 mm to 150 mm 150 mm to 300 mm 300 mm to 400 mm	1.8 μ m 2.0 μ m 2.5 μ m 2.8 μ m 3.0 μ m 5.0 μ m 6.0 μ m	Using Slip Gauge Block Set/Long Gauge Block Set By Comparison Method (IS 2967)
4.	Internal Micrometer ^{\$} L.C.: 0.001 mm	50 mm to 500 mm	6.1 μ m	Using Gauge Block Set/ Gauge Block Accessories, Long Gauge Block Set By Comparison Method (IS 2967)
5.	Micrometer Setting Standard /Length Bar ^{\$}	25 mm to 600 mm	8.0 μ m	Using Long Gauge Block Set/Electronic Probe with DRO By Comparison Method (IS 2967)

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
6.	Height Gauge (Dial/Digital/Analog) L.C.: 0.01 mm	0 to 1000 mm	15.0 μ m	Using Long Gauge Block Set/Surface Plate By comparison method (IS 2921)
7.	Depth Micrometer ^s L.C.: 0.01 mm	0 to 300 mm	10 μ m	Using Gauge Block Set/ Surface Plate By Comparison Method
8.	Wire Gauge ^s	Up to 10 mm	6.0 μ m	Using Profile Projector By comparison method
9.	Plain Plug Gauge ^s	Up to 100 mm	3.0 μ m	Using Gauge Block Set/ Electronic Comparator By comparison method (IS 3455)
10.	Plunger Dial ^s L.C.: 0.01 mm	0 to 25 mm	8.3 μ m	Using Dial Calibration Tester By comparison method (IS 2092)
11.	Lever Dial ^s L.C.: 0.01 mm	0 to 2 mm	3 μ m	Using Dial Calibration Tester By comparison method (IS 11498)
12.	Feeler Gauge ^s	0 to 1 mm	2.8 μ m	Using Electronic comparator with stand By comparison method (IS 3179)
13.	Test Sieves ^s	0.032 mm to 0.075 mm 0.075 mm to 25 mm	2 μ m 6 μ m	Using Profile Projector By comparison method (IS 460)

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
14.	Radius Gauge Set ^s	R.4 – R25 mm	6 μ m	Using Profile Projector By comparison method (IS 5273)
15.	Measuring Scale ^s L.C.: 1 mm	0 to 2000 mm	220 $\sqrt{L}$ μ m L in m	Using Scale & Tape Calibrator By comparison method (IS 1481)
16.	Measuring Tape ^s L.C.: 1 mm	0 to 10 m	220 $\sqrt{L}$ μ m L in m	Using Scale & Tape Calibrator By comparison method (IS 1269)
17.	PI Tape ^s	0 to 1200 mm	220 $\sqrt{L}$ μ m L in m	Using Scale & Tape Calibrator By comparison method (IS 1269)
18.	Sine Bar ^s	Up to 500 mm	3.0 arc sec	Using Gauge Block Set/Angle Gauge, Dial Gauge By Comparison Method
19.	Profile Projector ^s L.C.: 0.001 mm L.C.: 1'	Linear 0 to 100 mm 0 to 360°	6.6 μ m 54 sec	Using Gauge Block Set/Angle Gauge By Comparison Method (JIS B 7184)
20.	Bore Gauge ^s L.C.: 0.01 mm	0 to 2 mm	6.3 μ m	Using Dial Calibration Tester By Comparison Method
21.	Dial Thickness Gauge ^s L.C.: 0.01 mm	0 to 10 mm	6 μ m	Using Gauge Block Set By comparison method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
22.	Bevel Protractor ^{\$} L.C.: 5 min	0 to 360 °	1 min	Using Angle Gauge Set By comparison method (IS 4239)
23.	Spirit Level ^{\$} Sensitivity 0.01 mm/m	0 $\pm$ 0.100 mm	5.0 μ m/m	Using Sine Bar & Gauge Block Set With fixture By comparison method
24.	Surface Plate*	1000 mm X 1000 mm	1.0* $\sqrt{(L + W)/150}$ L & W in mm	Using Electronic Level By comparison method (IS 7327)
II. PRESSURE INDICATING DEVICES				
1.	Pressure (Hydraulic) Calibration of Precision Pressure Gauges, Pressure Transmitters [#]	0 to 700 bar	0.16 bar	Using Digital Pressure Calibrator as per DKD R-6-1
2.	Pressure (Pneumatic) Calibration of Precision Calibrator ^{\$}	0.2 bar to 10 bar	0.003 bar	Using Low Pressure Dead Weight Tester & Digital Pressure Calibrator as per DKD R-6-1
3.	Precision Gauges, Precision Transmitter [#]	0 to 20 bar	0.013 bar	Using Digital Pressure Calibrator as per DKD R-6-1
4.	Pressure (Absolute) (Calibration of Absolute Gauges, Barometer, Absolute Pressure Transmitters ^{\$}	30 to 1000 mbar (a) 1000 to 2600 mbar (a)	0.07 % of reading 0.05 % of reading	Using Digital Pressure Calibrator as per DKD R-6-1

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5.	Pressure (Vacuum) Calibration of Pressure Gauges, Pressure Transmitter #	0 mbar g to (-)980 mbar(g)	0.0007 bar	Using Low pressure Dead Weight Tester & Digital Pressure Calibrator as per DKD R-6-1
6.	Torque Wrench/ Screw Drivers (Type 1, Class A, B,C,D,E) (Type II, Class A,B,D,E) #	0 to 10 Nm 11 Nm to 100 Nm	1.75 % of reading 1.70 % of reading	Using Torque Transducer & Digital Indicator As per IS/ISO 6789
7.	Torque Wrench/ Screw Drivers (Type 1, Class A, B,C,D,E) (Type II, Class A,B,D,E) §	101 Nm to 1000 Nm	0.85 % of reading	Using Torque Transducer & Digital Indicator As per IS/ISO 6789
III.	WEIGHTS			
1.	Calibration of Weights §	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	0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.03 mg 0.04 mg 0.04 mg 0.05 mg 0.06 mg	Using Weights of Accuracy Class E2 and Electronic Balance with readability $d=0.01$ mg $d=1$ mg $d=10$ mg $d=100$ mg As per OIML R-14-1 (2004) Calibration of Weights of Class F1 and coarser

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		50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg	0.06 mg 0.06 mg 0.12 mg 1.0 mg 1.0 mg 5.8 mg 58.0 mg 58.0 mg	
2.	Calibration of Balances *	0 to 210 g, Readability 0.01 mg & 0.1 mg 0 to 1000g, Readability 1 mg 0 to 4.0 kg Readability 10 mg 0 to 12 kg Readability 100 mg	0.1 mg 1.5 mg 7.0 mg 66.52 mg	Using Standards Weights of Class E2 as per OIML & R -76 (2006) Calibration of Balances Class II and Coarser
IV.	VOLUME			
1.	Volume ^s i) Micro-pipette ii) Pipette/Burette iii) Measuring Cylinder & Flask	10 μ l to 1000 μ l 1 ml to 50 ml 0.1 ml to 25 ml 0.1 ml to 100 ml 0.1 ml to 1000 ml	1.66 μ l 10.0 μ l 0.01 ml 0.02 ml 0.03 ml	Using Standard Weights of Class E2, Precision Balance ($d=0.01/1.0$ mg) & Distilled water of known density as per ISO 8655-6 & ISO 4787
2.	Density of Liquids Calibration of Hydrometers ^s	0.6000 g/ml to 1.2000 g/ml	0.0008 g/ml	Using Liquid with Different Densities & Standard Hydrometer As per IS 3104
3.	Viscosity Viscometer Constant ^s	0.0008 cSt/s to 0.5 cSt/s >0.5 cSt/s to 20 cSt/s	0.23 % 0.50 %	Using Certified Viscosity Ref. Standard & Temp. Bath As per ASTM 445, 446 & ISO 3105

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V.	ACCELERATION AND SPEED			
1.	Rotational Speed Calibration of Tachometer (Contact Type) ^{\$}	100 rpm to 6000 rpm	0.26% of reading	Using Precision Tachometer & Using RPM Generator By Comparison method
2.	Rotational Speed Calibration of Centrifuge, Rotameter*	100 rpm to 6000 rpm	0.33% of reading	Using Precision Tachometer by Comparison method
VI.	ACOUSTICS			
1.	Sound Pressure Level (Sound Level Calibrator and Sound Level Meter) ^{\$}	1 kHz 94 & 114 dB(A) 1 kHz 94 & 114 dB(A)	0.34 dB 0.34 dB	Using Precision Integrating Sound Level Meter, 2230 of B & K Using Sound Level Calibrator 4231 of B & K
2.	Sound Pressure Level (Sound Level Calibrator and Sound Level Meter)*	1 kHz 94 & 114 dB(A) 1 kHz 94 & 114 dB(A)	0.34 dB 0.34 dB	Using Precision Integrating Sound Level Meter, 2230 of B & K Using Sound Level Calibrator 4231 of B & K

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OPTICAL CALIBRATION				
1.	Optical Wavelength [#]	400 nm to 1750 nm	0.9 nm	Using Optical Spectrum Analyzer by Direct Method
2.	Optical Length [#]	0 to 50 Km	0.003% of Rdg.	Using Fibre Spool by Direct Method
3.	Optical Power [#]	10 dBm to (-) 60 dBm	0.32 dB	Using Optical Source, Optical Attenuator and Lightwave Multimeter with Sensor by Comparison Method
4.	Optical Attenuation [#]	0 dB to 60 dB	0.30 dB	Using Optical Source, Lightwave Multimeter with Sensor by Direct Method
5.	Illuminance [#]	10 lux to 10000 Lux	At 10 lux:1 lux At 10000 lux:300 lux	Using TH Lamp with Photometer by Comparison Method
6.	X, Y Colour Coordinate [#]	x : 0 to 1 y : 0 to 1	0.005 0.005	Using Chroma Meter, Standard CFL & LED by Direct Method
7.	Colour Temperature [#]	Up to 10,000 K	At 1000K:23 K At 10000K:150 K	Using Colorimeter & Standard Lamp by Direct Method and Using x, y Colour Coordinate by Indirect Method

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Convenor

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Program Manager



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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
8.	Luminous Flux (Lumen) ^{\$}	Up to 1500 lm	3.5% of Rdg.	Using Lumen Meter with Integrating Sphere, Standard CFL & LED by Direct Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
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THERMAL CALIBRATION

I.	TEMPERATURE			
1.	Temperature (Glass Thermometer, Indicator, Temp. Gauge, T/C & RTD, Digital Temp. Meter, Dry & Wet Bulb Thermometer, Dry Well, Sensors & Controller) ^{\$}	(-) 80 °C to 250 °C 250 °C to 550 °C 550 °C to 1200 °C 1200 °C to 1300 °C	0.08 °C 0.12 °C 2.0 °C 3.0 °C	Using Liquid Baths, Dry Block Calibrator, SPRT, Std. PRT, Digital Indicator (Black Stack), Tube Furnace, Std. 'R' Type T/C by Comparison Method
2.	Non -Contact Temperature (IR Thermometer, Optical Pyrometer, Radiation Thermometer) ^{\$}	600 °C to 1300 °C	3.7 °C	Using Black Body Radiation Source, IR Thermometer, Std. R Type T/C with Meter By Comparison Method
3.	Temperature (PRT, T/C, Indicator Temp. Gauge, Sensor & Calibrator) (Bath, Oven, Chamber Incubator (for Non-Medical Applications), Autoclave (for Non-Medical Applications) (Refrigerator & Cold Chamber) (Dry Well Calibrator Hot Chamber, Furnace) [*]	50 °C to 1200 °C (-) 50 °C to 300 °C (-) 80 °C to 50 °C 300 °C to 1300 °C	2.0 °C 1.0 °C 1.0 °C 3.0 °C	Using PRT, Dry Block Calibrator, T/C Type 'K' & 'R' By Comparison Method Using RTD & Data Logger Using RTD & Data Logger Using 'R' Type T/C & Four Channel Thermometer

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
II.	SPECIFIC HEAT & HUMIDITY			
1.	Relative Humidity (%RH) (Environmental & Humidity Chamber) *	35 % to 95 % RH 25 °C to 50 °C	2.5 % RH 1.0 °C	Using RTD, Data Logger & Humidity Indicator By Comparison Method
2.	Relative Humidity (% RH) (RH Sensor, RH Meter, RH Indicator, Digital Hygrometer) \$	35 % to 95 % RH 25 °C to 50 °C	2.5 % RH 1 °C	Using Standard RH Meter Humidity Source (Chamber) RTD & Data Logger By Comparison Method

* 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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