



CERTIFICATE OF ACCREDITATION

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET):SARP-LARPM CALIBRATION LABORATORY

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

B-25,C.N.ICOMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA, INDIA

in the field of

CALIBRATION

Certificate Number: CC-3151

Issue Date: 12/08/2021 Valid Until: 10/09/2022

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)

Name of Legal Identity: CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer





SCOPE OF ACCREDITATION

Laboratory Name:

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET):SARP-LARPM CALIBRATION LABORATORY, B-25,C.N.I COMPLEX , PATIA,

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Validity

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S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
		2.0	Permanent Facility		
1	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer. L.C 0.01mm	Slip gauge set grade "0"	Up to 100 mm	6.74microns
2	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial thickness Gauge, L.C 0.001 mm	slip gauge set grade "0"	Up to 12.5 mm	2.67microns
3	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer L.C 0.001 mm	Slip Gauge Set Grade "0"	Up to 100 mm	2.57microns
4	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	inside micrometer L.C 0.01 mm	Slip gauge set grade '0' slip gauge accessories circular steel length bar electronic comparator with probe	5 mm to 30 mm	14.74 microns





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5	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge/Radius Template	Profile Projector	0.5 mm to 25 mm	26 microns
6	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Calliper checker	Slip Gauge Set Grade 0 & 2D Digital Height Gauge	Up to 600 mm	21.86 microns
7	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial indicator (lever) L.C 0.001 mm	Tester & Electronic comparator with probe	Up to 2 mm	2.61microns
8	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial indicator (Plunger) L.C 0.001 mm	Dial calibration tester	Up to 25 mm	6.32microns
9	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial/Digimatic/vernie r caliper L.C 0.01 mm	caliper checker slip gauge set circular steel length bar grade " 0"	Up to 300 mm	17.68microns
10	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial/Digimatic/vernie r caliper L.C 0.01 mm	calliper checker slip gauge set circular steel length bar grade "0"	Up to 600 mm	21.14microns
11	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial/Digimatic/vernie r height gauge L.C 0.01 mm	caliper checker slip gauge set circular steel length length bar	Up to 300 mm	20.34microns





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12	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Dial/Digimatic/vernie r height gauge L.C 0.01 mm	caliper checker slip gauge set circular steel length bar grade "0"	Up to 600 mm	21.51microns
13	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Feeler Gauge	Digimatic Micrometer	0.05 mm to 1 mm	3.39microns
14	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Measuring Scale L.C 1 mm	Scale & Tape Calibrator	Up to 2000 mm	57.89* Sqrt (L) μm : Where, L in mm
15	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Measuring Tape / Pie Tape, L.C 1 mm	Scale & Tape Calibrator	Up to 15 meter	57.89* Sqrt(L) μm Where, L in mm
16	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Metal Foils Thickness Measurements	electronic Comparator with probe	0.010 mm to 2 mm	11.23microns
17	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Pin gauge/thread measuring wire	Slip gauge set grade 0,electronic comparator with probe	0.29 mm to 15 mm	2.57microns
18	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Protractor, L.C 1 °	Profile Projector,	Up to 180 °	21 ' and 6 "





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19	MECHANICAL- DIMENSION (PRECISION INSTRUMENTS)	Snap gauge/gap gauge	Slip gauge set grade "0 "	5 mm to 100 mm	2.6microns
20	MECHANICAL- PRESSURE INDICATING DEVICES	Hydraulic Pressure indicating devices, Pressure Transmitter	dead weight tester (DKD-R-6-1)	60 bar to 1200 bar	1.2 bar
21	MECHANICAL- PRESSURE INDICATING DEVICES	Pressure gauge, pressure transmitter	Multifunctional calibrator with ext Sensor Using low pressure calibrator & comparison method (DKD-R-6R1)	0.2 bar(g) to 2 bar(g)	2.2mbar
22	MECHANICAL- PRESSURE INDICATING DEVICES	pressure gauge, pressure transmitter	dead weight tester(DKD R-6-1)	7 bar(g) to 60 bar(g)	0.066 bar
23	MECHANICAL- PRESSURE INDICATING DEVICES	Vacuum Indicating Device , Vacuum transmitter	Low pressure controller DWT- P3025-I by comparison method (DKD-R-6R1)	-0.01 mbar to -0.95 mbar	0.32 mbar
24	MECHANICAL- VOLUME	Burette	Using Electronic Weighing Balance (Readability: 0. 01mg) Distilled Water by Gravimetric method & ISO 4787:2010	0.1 ml to 25 ml	8μΙ





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25	MECHANICAL- VOLUME	Burette	Using Electronic Weighing Balance (Readability: 0. 01 mg) Distilled Water by Gravimetric method & ISO 4787:2010	25 ml to 50 ml	9μΙ
26	MECHANICAL- VOLUME	Burette	Using Electronic Weighing Balance (Readability: 0.01 mg) Distilled Water by Gravimetric method & ISO 4787:2010	50 ml to 100 ml	10μΙ
27	MECHANICAL- VOLUME	Dispenser	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	10 ml to 100 ml	9μΙ
28	MECHANICAL- VOLUME	Measuring Cylinder/Jar	Using electronic weighing balance (readability: 0.01/0.1mg) distilled water by gravimetric method & IS/ISO4787:2010	1 ml to 10 ml	4μΙ





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29	MECHANICAL- VOLUME	Measuring Cylinder/Jar	electronic weighing balance (readability:0.01/0.1 mg) distilled water by gravimetric method & IS/ISO4787:2010	100 ml to 500 ml	253μΙ
30	MECHANICAL- VOLUME	Measuring Cylinder/Jar	electronic weighing balance (readability: 0.01/0.1mg) distilled water by gravimetric method & IS/ISO4787:2010	20 ml to 25 ml	8µІ
31	MECHANICAL- VOLUME	Measuring Cylinder/Jar	electronic weighing balance (readability:0.01/0.1 mg) distilled water by gravimetric method & IS/ISO4787:2010	25 ml to 100 ml	20 μΙ
32	MECHANICAL- VOLUME	Measuring Cylinder/Jar	electronic weighing balance (readability:0.01/0.1 mg) distilled water by gravimetric method & IS/ISO4787:2010	500 ml to 1000 ml	267μΙ





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33	MECHANICAL- VOLUME	Pipette	Using Electronic Weighing Balance (Readability: 0.01/0. 1mg) Distilled Water by Gravimetric method & ISO 4787:2010	0.1 ml to 5 ml	2μΙ
34	MECHANICAL- VOLUME	Pipette	Electronic Weighing Balance (Readability: 0.01/0.1mg) Distilled Water by gravimetric method & IS/ISO4787:2010	10 ml to 25 ml	4μΙ
35	MECHANICAL- VOLUME	Pipette	Using Electronic Weighing Balance (Readability: 0.01/0. 1mg) Distilled Water by Gravimetric method & ISO 4787:2010	5 ml to 10 ml	1.0μΙ
36	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO8655-6:2002	10 μl to 100 μl	0.05μΙ





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37	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	1 ml to 2 ml	0.3μΙ
38	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	100 μl to 500 μl	0.06μΙ
39	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	2 ml to 5 ml	1.2µl
40	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	5 ml to 10 ml	0.46µl





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41	MECHANICAL- VOLUME	Piston-operated Apparatus (Micropipette)	Electronic Weighing Balance Range:0 to 100 g Readability: 0.001 mg) & distilled water By Gravimetric Method ISO 8655-6:2002	500 μl to 1000 μl	0.13 μΙ
42	MECHANICAL- VOLUME	Volumetric flask	electronic weighing balance (readability: 0.01/0.1mg) distilled water by gravimetric method & IS/ISO4787:2010	1 ml to 25 ml	8.6µl
43	MECHANICAL- VOLUME	Volumetric flask	electronic weighing balance (readability:0.01/0.1 mg) distilled water by gravimetric method & IS/ISO4787:2010	100 ml to 1000 ml	65μl
44	MECHANICAL- VOLUME	Volumetric flask	electronic weighing balance (readability:0.01/0.1 mg) distilled water by gravimetric method & IS/ISO4787:2010	25 ml to 100 ml	14.2μΙ





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45	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	10 mg	0.01mg
46	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	1 mg	0.01mg
47	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	10 g	0.03 mg
48	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.01 mg: As per OIML R 111	100 g	0.10mg
49	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of F1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	2 g	0.04mg





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50	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	20 g	0.04mg
51	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	20 mg	0.01 mg
52	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.01 mg: As per OIML R 111	200 g	0.33mg
53	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	200 mg	0.02mg
54	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of F1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	5 g	0.04mg





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55	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.01 mg : As per OIML R 111	50 g	0.04mg
56	MECHANICAL- WEIGHTS	Standard weights F1 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	500 mg	0.02mg
57	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	1 g	0.04mg
58	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.1 mg : As per OIML R 111	1 kg	2.69 mg
59	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	100 mg	0.02 mg





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60	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.1 mg: As per OIML R 111	2 kg	10mg
61	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 & Weighing balance with readability 0.001 mg: As per OIML R 111	2 mg	0.01mg
62	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	5 mg	0.01 mg
63	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.001 mg : As per OIML R 111	50 mg	0.02 mg
64	MECHANICAL- WEIGHTS	Standard weights F2 Accuracy class and coarser	Using Standard Weight set of E1 class & Weighing balance with readability 0.1 mg: As per OIML R 111	500 g	1mg





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65	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity & Temperature indicator, Thermo hygrometer	Humidity Chamber with Digital Temp & Humidity indicator with sensors by Comparison calibration. By single piston calibration method/DKD -R5-7	16 °C to 24 °C	0.6°C
66	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity & Temperature indicator, Thermo hygrometer	Humidity Chamber with Digital Temp & Humidity indicator with sensors by Comparison calibration. By single piston calibration method/DKD -R5-7	20 %RH to 70 %RH @24 °C	1.05%RH
67	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber	Humidity and Temp Data Logger single position calibration method/DKD -R5-7	20 % RH to 70 % RH @ 24 °C	2 % RH
68	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber	Humidity and Temp Data Logger Multipoint Calibration method/DKD -R5-7	20 %RH to 70 %RH @ 24 °C	2%RH
69	THERMAL- TEMPERATURE	Controller /indicator with Sensor of liquid Baths, Dry Well Block	SPRT & Fluke Make Readout By single position calibration & ITS-90/EURAMET cg -13	250 °C to 650 °C	3.5°C





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70	THERMAL- TEMPERATURE	Controller /indicator with Sensor of liquid Baths, Dry Well Block	SPRT & Fluke make readout by single position calibration & ITS-90/EURAMET cg -13	-40 °C to 50 °C	0.71°C
71	THERMAL- TEMPERATURE	Controller /indicator with Sensor of liquid Baths, Dry Well Block .	SPRT & Fluke make readout by single position calibration & ITS-90/EURAMET cg -13	-60 °C to -40 °C	0.67°C
72	THERMAL- TEMPERATURE	Controller /indicator with Sensor of liquid Baths, Dry Well Block, Oven	SPRT & Fluke make readout by single postion calibration & ITS-90/EURAMET cg -13	50 °C to 200 °C	0.66°C
73	THERMAL- TEMPERATURE	Controller/Indicator of furnace, dry well block	Standard PRT with Milk indicator By single position Calibration (at measuring location in DUC) & ITS-90/DKD-R5-7	250 °C to 650 °C	3.7°C





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74	THERMAL- TEMPERATURE	Controller/Indicator of dry Well Blocks ,Muffle Furnace	Standard 'S' type TC with Milk Indicator & Dry well bath by Single position calibration (At measuring location in DUC) & ITS-90/ASTM E220-13/EURAMET cg-8, cg -13	650 °C to 900 °C	3.2°C
75	THERMAL- TEMPERATURE	Controller/indicator of dry well blocks Muffle furnace	'S 'Type TC with indicator By Single position calibration & ITS-90/ASTM E220- 13/EURAMET cg-8	900 °C to 1200 °C	3.2°C
76	THERMAL- TEMPERATURE	Controller/Indicator of incubators (for non-medical application) ovens, furnace, dry well block, liquid bath	Standard PRT with Milk indicator By single position Calibration (at measuring location in DUC) & ITS-90/DKD-R5-7	50 °C to 200 °C	0.83°C
77	THERMAL- TEMPERATURE	Controller/Indicator of refrigerators, incubators (for non- medical application) , furnace, dry well block, liquid bath	Standard PRT with Milk indicator By single position Calibration (at measuring location in DUC) & ITS-90/DKD-R5-7	-35 °C to 50 °C	0.67°C





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78	THERMAL- TEMPERATURE	Liquid in Glass thermometers	Standard PRT with Millk indicator, low temperature bath, oil bath & ITS-90/IS 6274, IS 2480, OIML R 133	50 °C to 200 °C	0.69°C
79	THERMAL- TEMPERATURE	Liquid in Glass thermometers	Standard PRT with Millk indicator, low temperature bath, oil bath & ITS-90/IS 6274, IS 2480, OIML R 133	-25 °C to 50 °C	0.68°C
80	THERMAL- TEMPERATURE	Liquid in Glass thermometers	SPRT & Read out, Low Temperature Bath & oil bath & comparison method ITS-90/IS 6274, IS 2480, OIML R 133	-40 °C to 50 °C	0.66°C
81	THERMAL- TEMPERATURE	Liquid in Glass thermometers	SPRT & Read out, Low Temperature Bath & oil bath & comparison method ITS-90/IS 6274, IS 2480, OIML R 133	50 °C to 200 °C	0.69°C
82	THERMAL- TEMPERATURE	Liquid in Glass thermometers	SPRT & Read out, Low Temperature Bath & oil bath & comparison method ITS-90/IS 6274, IS 2480, OIML R 133	-60 °C to -40 °C	0.69°C





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83	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without Indicator, Temperature Gauges	Standard PRT with Milk indicator, low temperature oil bath, calibrator by comparison method & ITS-90	-25 °C to 50 °C	0.69°C
84	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without Indicator, Temperature Gauges	Standard PRT with Milk indicator, low temperature oil bath, calibrator by comparison method	50 °C to 200 °C	1.58°C
85	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath & oil bath & comparison method. ITS-90	-40 °C to 50 °C	0.69°C
86	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath, oil bath & dry well bath by comparison method. & ITS-90	50 °C to 200 °C	0.71°C
87	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath, oil bath & Dry well bath by comparison method. & ITS-90	250 °C to 650 °C	3.2°C





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88	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath & oil bath by comparison method. & ITS-90	-60 °C to -40 °C	0.71°C
89	THERMAL- TEMPERATURE	Thermocouple temperature Sensor with and with out indicators Temperature Gauges	Standard s type TC with indicator with dry well bath & comparison method ITS-90	650 °C to 900 °C	3.2°C
90	THERMAL- TEMPERATURE	Thermocouple temperature Sensor with and with out indicators Temperature Gauges	Standard s type TC with indicator with dry well bath & comparison method ITS-90	900 °C to 1200 °C	3.2°C
91	THERMAL- TEMPERATURE	Thermocouple temperature sensor with and without Indicator, Indicator temperature gauges	'S' Type TC with MILIK indicator & Dry well Bath By comparison calibration & ITS-90	650 °C to 900 °C	3.2°C
92	THERMAL- TEMPERATURE	Thermocouple temperature sensor with and without Indicator, Indicator temperature gauges	'S' Type TC with MILIK indicator & Dry well bath by comparison calibration & ITS-90	900 °C to 1200 °C	3.2°C





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		2.0	Site Facility		
1	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic weighing balance readability: 0.001mg, with accuracy Class 1	standard Weight of E1 class (1mg to 200g) E2 class Weight (500g to 2kg) compassion method as per OIML R 76-1:2006	1 mg to 20 g	0.015mg
2	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic weighing balance readability: 0.01mg, with accuracy Class 1	standard Weight of E1 class (1mg to 200g) E2 class Weight (500g to 2kg) & Compassion method as per OIML R 76-1:2006	20 g to 200 g	0.77mg
3	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic weighing balance readability:1.0 mg, with accuracy Class 1	Standard Weight of E1 class (1mg to 200g) E2 class Weight (500g to 2kg) compassion method as per OIML R 76-1:2006	200 g to 2000 g	1.03mg
4	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity & Temperature indicator, Thermo hygrometer	Humidity Chamber with Digital Temp &Humidity indicator with sensors by Comparison calibration. By single piston calibration method/DKD -R5-7	16 °C to 24 °C	0.6°C





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5	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity & Temperature indicator, Thermo hygrometer	Humidity Chamber with Digital Temp &Humidity indicator with sensors by Comparison calibration. By single piston calibration method/DKD -R5-7	20 %RH to 70 %RH @24 °C	1.05%RH
6	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber	Humidity and Temp Data Logger single position calibration method/DKD -R5-7	20 % RH to 70 % RH @ 24 °C	2 % RH
7	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chamber	Humidity and Temp Data Logger Multipoint Calibration method/DKD -R5-7	20 %RH to 70 %RH @ 24 °C	2%RH
8	THERMAL- TEMPERATURE	Controller/Indicator of dry Well Blocks ,Muffle Furnace	Standard 'S' type TC with Milk Indicator & Dry well bath by Single position calibration (At measuring location in DUC) & ITS-90/ASTM E220-13/EURAMET cg-8, cg -13	650 °C to 900 °C	3.2°C





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9	THERMAL- TEMPERATURE	Controller/indicator of dry well blocks Muffle furnace	'S 'Type TC with indicator By Single position calibration & ITS-90/ASTM E220- 13/EURAMET cg-8	900 °C to 1200 °C	3.2°C
10	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath, oil bath & dry well bath by comparison method. & ITS-90	50 °C to 200 °C	0.71°C
11	THERMAL- TEMPERATURE	RTD/Thermocouple temperature sensor with or without indicators temperature gauges	SPRT/PRT &Read out ,Multimeter, low Temperature bath, oil bath & Dry well bath by comparison method. & ITS-90	250 °C to 650 °C	3.2°C
12	THERMAL- TEMPERATURE	Thermocouple temperature Sensor with and with out indicators Temperature Gauges	Standard s type TC with indicator with dry well bath & comparison method ITS-90	650 °C to 900 °C	3.2°C
13	THERMAL- TEMPERATURE	Thermocouple temperature Sensor with and with out indicators Temperature Gauges	Standard s type TC with indicator with dry well bath & comparison method ITS-90	900 °C to 1200 °C	3.2°C





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14	THERMAL- TEMPERATURE	Thermocouple temperature sensor with and without Indicator, Indicator temperature gauges	'S' Type TC with MILIK indicator & Dry well Bath By comparison calibration & ITS-90	650 °C to 900 °C	3.2°C
15	THERMAL- TEMPERATURE	Thermocouple temperature sensor with and without Indicator, Indicator temperature gauges	'S' Type TC with MILIK indicator & Dry well bath by comparison calibration & ITS-90	900 °C to 1200 °C	3.2°C

^{*} CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.