Laboratory	**AVI Scientific Calibration & Services, A-221, Amar Gian Industrial Complex, Thane (W), Maharashtra**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**CC-2645** **Page 1 of 6**
Validity	**13.04.2018 to 12.04.2020** **Last Amended on 22.06.2018**

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
		MECHANICAL CALIBRATION		
I.	**PRESSURE INDICATING DEVICES**			
1.	Pressure Gauge (Dial & Digital) Hydraulic#	0 bar to 70 bar 0 bar to 300 bar 0 bar to 700 bar	0.14 bar 0.32 bar 0.74 bar	Using Digital Pressure Gauge & Hydraulic Pressure Comparator By Comparison Method DKD R-6-1
2.	Pressure Gauge (Dial & Digital) Pneumatic#	0 bar to 20 bar	0.06 bar	Using Digital Pressure Gauge & Hydraulic Pressure Comparator By Comparison Method DKD R-6-1
3.	Vacuum Gauge#	(-) 0.9 bar to 0 bar	0.06 bar	Using Digital Pressure Calibrator and Pressure Comparator By Comparison Method DKD R-6-2
II.	**ACCELERATION & SPEED**			
1.	Acceleration & Speed RPM (Non Contact Type) ♣	100 RPM to 5000 RPM 5000 RPM to 30000 RPM	19 RPM 28 RPM	Using Digital Tachometer along with stroboscope By Comparison Method

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III.	Weights[$]			
1.	Mass /Weights For calibration of F1 to F2 Class weights and 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	0.02 mg 0.01 mg 0.01 mg 0.01 mg 0.01 mg 0.02 mg 0.02 mg 0.02 mg 0.03 mg 0.03 mg 0.04 mg 0.1 mg 0.1 mg 0.1 mg 0.1 mg 0.2 mg 0.3 mg	Using E2 Class Standard Weights ABBA with Digital Weighing Balance upto 42 g of D-0.01 mg and upto 220 g of D-0.1 mg by substitution ABBA method as per OIML R-111
	For calibration of M2 class weights and coarser	500 g 1 kg 2 kg 5 kg 10 kg 20 kg	10.0 mg 11.0 mg 17.0 mg 28.0 mg 1.82 gm 1.76 gm	Using F2 (upto 5 kg) and above 5 kg.M1 class and Digital Weighing Balance upto 5 kg with d-10 mg and upto 0 kg with d= 2g by substitution ABBA method as per OIML R-111
2.	Weighing Balance[#]			
	For Calibration of Electronic Weighing Balance / class I weighing Balances and coarser	1mg to 42 g d ≥ 0.01 mg	0.04 mg	Method based on OIML R- 76
		> 42 g to 220 g d ≥ 0.1 mg	0.2 mg	

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	For Calibration of class II weighing Balances and coarser	> 220 g to 5 kg d ≥ 10 mg	20 mg	
	For Calibration of class III weighing Balances and coarser	> 5 kg to 50 kg d ≥ 2 g	1.2 g	
IV.	**VOLUME**			
1.	Calibration of Piston Pipette[$] Micropipettes	 20 µl to 1000 µl > 1ml to 10 ml	 0.31 µl 1.2 µl	As per IS 8655-6 & ISO/TR 20461
2.	Calibration of Glassware[$]			As per ISO 4787 & ISO/TR 20461
	Glass Pipette (Graduated/ Non Graduated)	1 ml to 10 ml > 10 ml to 100 ml	0.012 ml 0.061 ml	
	Glass Burette	1 ml to 10 ml > 10 ml to 100 ml	0.012 ml 0.061 ml	
	Measuring Cylinder/ Volumetric Flask / Conical Flask / Beaker	1 ml to 10 ml > 10 ml to 100 ml > 100 ml to 1000 ml	0.012 ml 0.061 ml 0.25 ml	

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
THERMAL CALIBRATION				
I.	**TEMPERATURE**			
1.	Temperature Indicator with Sensor (RTD/TC) & Glass Thermometer[#]	(-) 40 ºC to 50 ºC 50 ºC to 300 ºC	0.9 ºC 1.0	Using Standard RTD Sensor with Indicator & Liquid Bath By Comparison Method
2.	Relative humidity cum Temperature Indicators / Thermo hygrometers/ Data Logger[#]	35% to 75 % RH @25ºC 75% to 90 % RH @40ºC 20ºC to 40ºC @ 50%RH	3.1 % RH 3.1 % RH 1.02 ºC	Using Humidity & Temperature Indicator & Humidity Chamber By Comparison Method
3.	Temperature Indicator of Oven[♣]	50 ºC to 250 ºC	2.88 ºC	Using Standard RTDs Sensor with Indicator & Single Point By Comparison Method

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
4.	Temperature Indicator of Muffle Furnace♣	300 ºC to 1150 ºC	5.22 ºC	Using Standard S Type Thermocouple with Indicator & Single Position by Comparison Method
5.	Temperature Indicator of Temperature Bath♣	30 ºC to 110 ºC	1.02 ºC	Using Standard RTD Sensor with Indicator & Single Position by Mapping Method
6.	Temperature Indicator of Incubator♣	30 ºC to 110 ºC	1.35 ºC	Using Standard RTD Sensor with Indicator & Single Point By Comparison Method
7.	Temperature Indicator of Autoclave♣	121 ºC	1.03 ºC	Using Standard RTD Sensor with Indicator & Single Point By Comparison Method
8.	Indicator of Environmental Chamber♣	35% to 75 % RH @25ºC 75% to 90 % RH @40ºC 20ºC to 40ºC@ 50% RH	3.1 % RH 3.1 % RH 1.02 ºC	Using Humidity & Temperature Indicator & Humidity Chamber- Multi point By Comparison Method
9.	Temperature Indicator of Heat & Cold Chamber♣	(-) 40 ºC to 50 ºC 50 ºC to 250 ºC	0.85 ºC 1.02 ºC	Using Standard RTSs Sensor with Indicator - Multi Point By Comparison Method

*** Measurement Capability is expressed as an uncertainty (±) 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.
Φ Laboratory can also calibrate instruments/devices of coarser resolution / least count within the accredited range using same reference standard/ master equipment under the scope of accreditation.

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** Relative accuracy error has not been considered for CMC estimation.

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