ISO 9001:2015 Certified Company

NABL/ILAC/0357 NABL CERTIFICATE
No. CC - 2346

M.M.D. Kantawala
CALIBRATION LABORATORY

ISO/IEC 17025 (NABL) Accredited Laboratory

Calibration Certificate

TRUE COPY

Name of Customer → National Centre For Quality Calibration 4, Abhishree Corporate park, Nr.Swagat Bunglows BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad – 380058, Gujarat, India.	Certificate No. : MMD/150321/01 Date of Issue : 16–03–2021 Date of Calibration : 15–03–2021 # Due Date : 14–03–2024
Date Of Receipt / Ref. No.→ 12–03–2021	F/CAL/02/CR, Issue No.03 Page 1 of 2

Discipline	Mechanical – Mass		
Details of Observation of Unit Under Calibration	Identification No. : **NCQC/M-47** Serial No. : **NCQC/M/W/E1/04** Name of Instrument : **Weight Box**		
Weights	1mg to 500mg Total = 12 pcs	1g to 200g Total = 11 pcs	
Type	Wire Type	Cylindrical Knob Type	
Material	Stainless steel		
Assumed Density	7950 ± 140 kg/m^3		
Make Location	Weightronics ====	Visual Inspection Barometric Pressure	OK 1005 ± 15 hPa

Results of Calibration

Sr. No.		Denomination (Unit under calibration)	Mass value in g.	Deviation in g.	Uncertainty (±) in mg.	Class
1		0.001 g.	0.0010004	0.0000004	0.001	E1
2		0.002 g.	0.0019997	-0.0000003	0.001	E1
3	*	0.002 g.	0.0020000	0.0000000	0.001	E1
4		0.005 g.	0.0049985	-0.0000015	0.001	E1
5		0.01 g.	0.0099997	-0.0000003	0.001	E1
6		0.02 g.	0.0200019	0.0000019	0.001	E1
7	*	0.02 g.	0.0200019	0.0000019	0.001	E1
8		0.05 g.	0.0500003	0.0000003	0.001	E1
9		0.1 g.	0.1000029	0.0000029	0.001	E1
10		0.2 g.	0.1999992	-0.0000008	0.002	E1
11	*	0.2 g.	0.1999969	-0.0000031	0.002	E1
12		0.5 g.	0.5000023	0.0000023	0.002	E1
13		1 g.	1.0000029	0.0000029	0.003	E1
14		2 g.	1.9999926	-0.0000074	0.004	E1
15	*	2 g.	1.9999992	-0.0000008	0.004	E1
16		5 g.	5.0000030	0.0000030	0.005	E1
17		10 g.	9.999996	-0.000004	0.006	E1
18		20 g.	19.999991	-0.000009	0.009	E1
19	*	20 g.	19.999990	-0.000010	0.009	E1
20		50 g.	50.000019	0.000019	0.01	E1
21		100 g.	100.000026	0.000026	0.02	E1
22		200 g.	199.99995	-0.00005	0.03	E1
23	*	200 g.	200.00002	0.00002	0.03	E1

NCQC System Certificate No. 242

Traceable To National / International Standards.

Calibrated By	Vilas Prajapati	Reviewed and Approved By	Viral Mistry

17/A, Mohan Estate, Opp. Anupam Cinema, Khokhara, Ahmedabad-380 008 (Gujarat) INDIA.
web : www.mmdkantawala.com e-mail : calibrationlab@mmdkantawala.com - micronele@yahoo.com Mo. 093742 42142 / 098795 65805

Calibration Certificate

Name of Customer → National Centre For Quality Calibration 4, Abhishree Corporate park, Nr.Swagat Bunglows BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad – 380058, Gujarat, India.	Certificate No. Date of Issue Date of Calibration # Due Date	MMD/150321/01 16–03–2021 15–03–2021 14–03–2024
Date Of Receipt / Ref. No.→ 12–03–2021	F/CAL/02/CR, Issue No.03 Page 2 of 2	

Discipline	Mechanical – Mass	
Details of Observation of Unit Under Calibration	Identification No. Serial No. Name of Instrument	: **NCQC/M-47** : **NCQC/M/W/E1/04** : **Weight Box**

Remarks:

- Mass values of all the weights are conventional mass values and within the maximum errors permissible in "E_1" Accuracy Class of weights as per OIML R 111–1.
- Thermal stabilization time 48 hours.
- These results are obtained at the time of calibration.
- # Suggested date is not given in the calibration certificate, at the end of calibration. User will decide the next calibration date based on the usage, purpose and stability.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Environment condition during calibration: Temperature – 24 ± 0.5°C, Relative Humidity – 40 to 60 %Rh. (Change in temperature was controlled and maintained less than ± 0.3 °C per hour with a maximum of ± 0.5 °C per 12 hours, and relative humidity was controlled and maintained with a maximum of ± 5% Rh per 4 hours)
- Average temperature → 24.2°C, Average pressure 1009.2 hpa and average humidity 48.0% Rh was maintained during calibration.
- The uncertainty of measurement has been evaluated in compliance with documented quality procedure. The expanded uncertainty assigned corresponds to a coverage probability of 95.45% for normal distribution and the coverage factor k=2. The uncertainty does not include the possible effect of magnetism. The contribution of uncertainty originating from the standards and the balances used, the weighing process, and air buoyancy corrections are taken in to account.
- Condition of instrument found satisfactory during receipt.
- Calibration is performed on the electronic weighing balance against standards mass by comparison method under controlled conditions (ABBA Method).
- Reference standard no.: OIML R 111 – 1 for calibration and classification of weights.
- Reference Calibration method no.: MMD/CM/02.
- Master equipment / reference standards are traceable to NABL accredited calibration laboratory.
- Corrected mass value is calculated based on ABBA method.
- Shape of reference standard weights : Wire Type & Cylindrical knob
- **ULR – CC234621000000116F**

Details of Master Instrument Used for Calibration

Nomenclature	Make / Model	Serial No. / ID No.	Class	Calibration Due Date
Reference Weight Box	Weigh India / =====	MMD/CAL/06	E1	15–12–2023
Mass Comparator	Sartorius / MCM6.7	36301047	===	======
Mass Comparator	Sartorius / MCM106	36301045	===	======
Mass Comparator	Sartorius / MCM605	36301046	===	======

NCQC
Valid up to 14-03-2024
Reviewed

Traceable To National / International Standards.

Calibrated By	Vilas Prajapati	Reviewed and Approved By	Viral Mistry