



NABL/ILAC/0115

CC-2743

Document No.: WMCL/Doc-F-17

D-46, Sector - 4, DSII DC, Bawana, Delhi - 110 039, INDIA
 Phone : +91 - 11 - 2776 1662, 2776 2663
 E-mail : info@weightronics.net, Web : www.weightronics.net

Calibration Certificate

TRUE COPY

Issue Dated: 25-12-2019

Recommended Date for the Next Calibration Mentioned As Per Request of the Customer	Page	No. of Pages
Date: 23-12-2021	-1-	-2-

Certificate No.: WMCL/E/2019-12/3197
 ULR - CC274319000000698F

Date of Calibration: 24-12-2019

- Calibrated for : NATIONAL CENTRE FOR QUALITY CALIBRATION
 4, Abhishree Corporate Park,
 Near Swagat Bungalows BRTS,
 Iskon-Bopal Road, Ambli,
 Ahmedabad - 380 058, Gujarat; INDIA
- Customer Reference : Gate Pass No.: 19122019, Dated: 19/12/2019
- Description of Instrument : Make - "WEIGHTRONICS"
 10 kg, 5 kg : Stainless Steel Knob Type Cylindrical Weights
- Assumed Density (d) : (7 950 ± 140) kg/m³; (k=2) for Stainless Steel
- Environmental Conditions : Temperature : (23.0 ± 2.0)^oC
 : Relative Humidity : (50.0 ± 10.0) %
 [Change in Temperature and Relative Humidity during the calibration were less than ± 0.7^oC per hour and ± 10.0 % per 4 hours respectively]
- Standard (s) used : WMCL working standard of mass with uncertainty Better than one-third of the reported uncertainty of measurement
- Traceability Standard (s) : The Standard used for Calibration are Traceable from "NPL" New Delhi, INDIA vide Calibration Certificate No.: 19100740/D1.01/C-114, Dated: 03/12/2019 valid up to Dated: 03/12/2022
- Balance used for Calibration : Precision Balances of Appropriate Accuracy Traceable to Mass Standards
- Methodology of Calibration Adopted : The Method of comparison with standard (s) using Substitution Weighing Method and (ABBA or ABA) Weighing Cycle, The Reported Mass Values(s) is (are) the conventional mass value(s) (M_C) related to the true mass value(s) (M_T) by formula: M_C=M_T[1-1.2(1/d-1/8000)]. (Where, 'd' is in kg/m³) (Cal. Procedure No.: WMCL/ Doc-13/Cal- PR-01)



Calibrated by:

[Signature]
 Arun Pathak
 Technical Manager

NCQC
 Valid up to 23-12-2021
 Reviewed *[Signature]*

Issued by:

[Signature]
 Lalit Shukla (Q.M.)
 Authorized Signatory

NCQC System Certificate No. 145



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Results:

ID. No.	Denomination	Mass Value (g)	Uncertainty (\pm g)
NCQC/M-53	10 kg	10 000.001	0.005
NCQC/M-52	5 kg	5 000.000	0.002 5

Remarks: Mass Values of all the weights are conventional mass values and within the maximum errors permissible in "E₂" Accuracy Class of Weights as per OIML R 111-1:2004.

The Reported uncertainty is at coverage factor $k=2$ which corresponds to a coverage probability of approximately 95% for a normal distribution. The contribution of uncertainty originating from the standard used, the weighing process, drift in standard and the air buoyancy correction are taken in to account.

Notes: This Calibration Certificate may not be reproduced except in full, unless written Permission for Publication of an approved extract has been obtained from the Laboratory (WMCL).


The Calibration results reported in this Certificate are valid at the time of and under the stated conditions of measurement.

The Calibration Certificate issued for Weights used for Scientific or Industrial purposes only.

Calibrated by:


 Arun Pathak
 Technical Manager

Issued by:


 Lalit Shukla (Q.M.)
 Authorized Signatory

