National Accreditation Board for
Testing and Calibration Laboratories

NABL

CERTIFICATE OF ACCREDITATION

NATIONAL METROLOGY 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

Rijug Lam, BSB Campus, Thimphu, Bhutan

in the field of

CALIBRATION

Certificate Number CC-1057

Issue Date 02/09/2025 **Valid Until** 01/09/2029

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 Entity : National Metrology Laboratory, Bhutan

Signed for and on behalf of NABL

Anita Rani
Director

Chakravarthy T. Kannan
Chief Executive Officer

8907697020002000758

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name	**National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan**		
Accreditation Standard	**ISO/IEC 17025: 2017**		
Certificate No.	**CC-1057**	**Page No.**	**Page 1 of 7**
Validity	**02.09.2025 to 01.09.2029**	**Last Amended on**	**10.11.2025**

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)(±)
			Permanent Facility		
1.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	1 mg	0.020 mg
2.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	2 mg	0.020 mg
3.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	5 mg	0.020 mg
4.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	10 mg	0.025 mg

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 2 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
5.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	20 mg	0.030 mg
6.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1:2004	50 mg	0.040 mg
7.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	100 mg	0.050 mg
8.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1:2004	200 mg	0.060 mg

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 3 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
9.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	500 mg	0.080 mg
10.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	1 g	0.10 mg
11.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	2 g	0.12 mg
12.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	5 g	0.16 mg
13.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	10 g	0.20 mg

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 4 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
14.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	20 g	0.25 mg
15.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	50 g	0.30 mg
16.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	100 g	0.50 mg
17.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using E2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	200 g	1.0 mg
18.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	500 g	2.5 mg

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 5 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
19.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	1 kg	5.0 mg
20.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	2 kg	10 mg
21.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	5 kg	25 mg
22.	MECHANICAL/ WEIGHTS	Weights (Accuracy class F2 & coarser)	Using F1 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	10 kg	50 mg
23.	MECHANICAL/ WEIGHTS	Weights (Accuracy class M1 & coarser)	Using F2 Class Weight & Weighing Balance (Readability: 0.01 mg) by Substitution Method (ABBA Cycle) as per OIML R111-1: 2004	20 kg	300 mg

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 6 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
24.	MECHANICAL / VOLUME	Pipette, Burette, Measuring Cylinder, Volumetric Flask, Jar	Using Weighing Balance (Readability: 0.01 mg) and distilled water of known density as per gravimetric method as per ISO 4787: 2021	5 ml to 100 ml	0.2 ml
25.	MECHANICAL / VOLUME	Pipette, Burette, Measuring Cylinder, Volumetric Flask, Jar	Using Weighing Balance (Readability: 1 mg) and Distilled Water of known Density as per Gravimetric Method as per ISO 4787: 2021	100 ml to 500 ml	0.3 ml
26.	MECHANICAL / VOLUME	Pipette, Burette, Measuring Cylinder, Volumetric Flask, Jar	Using Weighing Balance (Readability: 10 mg) and Distilled Water of known Density as per Gravimetric Method as per ISO 4787: 2021	500 ml to 2 l	0.5 ml
27.	MECHANICAL / VOLUME	Pipette, Burette, Measuring Cylinder, Volumetric Flask, Jar	Using Weighing Balance (Readability: 0.1 g) and Distilled Water of known Density as per Gravimetric Method as per ISO 4787: 2021	2 l to 5 l	1.7 ml

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name National Metrology Laboratory, Rijug Lam, BSB Campus, Thimphu, Bhutan

Accreditation Standard ISO/IEC 17025: 2017

Certificate No. CC-1057 **Page No.** Page 7 of 7

Validity 02.09.2025 to 01.09.2029 **Last Amended on** 10.11.2025

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)(±)
		Site Facility			
1.	MECHANICAL / WEIGHING SCALE AND BALANCE	Weighing Scale & Balance – Class I and Coarser (Readability: 0.01 mg)	Using E2 Class weights by Comparison Method as per OIML R76-1:2006	Upto 81 g	0.47 mg
2.	MECHANICAL / WEIGHING SCALE AND BALANCE	Weighing Scale & Balance: - Class-I and Coarser (Readability: 0.1 mg)	Using E2 Class weights by Comparison Method as per OIML R76-1:2006	Upto 220 g	0.53 mg
3.	MECHANICAL / WEIGHING SCALE AND BALANCE	Weighing Scale & Balance: - Class-II and Coarser (Readability: 1 mg)	Using F1 Class weights by Comparison Method as per OIML R76-1:2006	Upto 1 kg	2.2 mg
4.	MECHANICAL / WEIGHING SCALE AND BALANCE	Weighing Scale & Balance: - Class-II and Coarser (Readability: 10 mg)	Using F1 Class weights by Comparison Method as per OIML R76-1:2006	Upto 5 kg	11 mg
5.	MECHANICAL / WEIGHING SCALE AND BALANCE	Weighing Scale & Balance: - Class-I and Coarser (Readability: 100 mg)	Using F1 & F2 Class weights by Comparison Method as per OIML R76-1: 2006	Upto 20 kg	144 mg

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