

D.1. Evidence of Compliance on the requirements and operation of laboratories, if applicable

PHYSICS LABORATORY

- evidence of provision of four (4) Certificate of Calibration by the Department of Science and Technology (DOST) for Beam balance with different serial numbers

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY - DAVAO

CALIBRATION CERTIFICATE

Request Reference No. : R11-092023-MET-1363
Sample Code : MET-02005
Calibration Item : Beam Balance¹
Make/Model : Ohaus / 700800 Series
Serial Number : LCL 233-038²
Calibrated at (On-site) : Physics Central Laboratory

Date Submitted : September 26, 2022
Date Calibrated : September 27, 2022
Capacity : 2610 g
Repeatability : 0.1 g
Actual Scale Interval, d : 0.1 g

Submitted by : UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS³
Address : Use Makabay Pang Asan, Poblacion, Kabacan, North Cotabato⁴

CALIBRATION RESULTS

REPEATABILITY: Test Load 2000 g

Total	Indication (g)
1	1995.6
2	1995.6
3	1995.6
4	1995.6
5	1995.2
6	1995.6
7	1995.6
8	1995.6
9	1995.6
10	1995.6

ECCENTRICITY: Test Load 100 g

Position	Indication (g)	Error (g)
1	100.0	0.0
2	100.0	0.0
3	100.0	0.0
4	100.0	0.0
5	100.0	0.0
6	100.0	0.0

1-Center
2-Front Left
3-Back Left
4-Back Right
5-Front Right
6-Front Right

Standard Deviation : 0.05 g

ERRORS OF INDICATION

Test Load (g)	Standard Mass Used (g)	Indication (g)	Error (g)	Coverage Factor, k	Expanded Uncertainty (g)
0	0.00005	0.0	0.0	0.00	0.00
100	99.99910	99.9	-0.8	1.97	0.006
500	499.98932	100.0	-0.8	1.97	0.006
1000	1000.00488	1000.0	0.0	1.97	0.012
2000	1996.84319	1995.6	-0.8	1.97	0.012
2500	2499.73850	2500.0	0.3	1.97	0.023

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Address : Cor. Dumaguete and Poblacion Hills, Republic Division City
Tel. No. : (082) 227-0310 ext. 215 Fax No. : (082) 227-0435

Value Error : http://metro11.rsl.gov.ph
rsl.davao@gmail.com

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1. APPROVED BY: [Signature]
Chief Calibration Technicians

[illegible]

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY - DAVAO

CALIBRATION CERTIFICATE

Request Reference No.: R11-092022-MET-1363
Sample Code: MET-02503
Calibration Item: Beam Balance*
Make/Model: Ohaus / N1111
Serial Number: LCL-233-0047*
Calibrated at (On-site): Physics Central Laboratory

Date Submitted: September 26, 2022
Date Calibrated: September 27, 2022

Capacity: 2000 g
Readability: 0.1 g
Actual Scale Interval: 0.1 g

Submitted by: UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS*
Address: Bai Matabay Plang Avenue, Poblacion, Kabacan, North Cotabato*

CALIBRATION RESULTS

REPEATABILITY: Test Load: 200 g
ECCENTRICITY: Test Load: 200 g

Trial	Indication (g)
1	200.2
2	200.2
3	200.2
4	200.2
5	200.2
6	200.2
7	200.2
8	200.2
9	200.2
10	200.2

Position	Indication (g)	Error (g)
1	200.2	0.0
2	199.5	-0.4
3	200.2	0.0
4	199.5	-0.7
5	200.5	0.3
6	200.2	0.0

Standard Deviation: 0.00 g

ERRORS OF INDICATION:

Test Load (g)	Standard Mass Used (g)	Balance Indication (g)	Error (g)	Coverage Factor, k	Expanded Uncertainty (g)
0	0.00000	0.0	0.0	0.00	0.00
2	1.99996	2.0	0.0	1.97	0.001
20	10.99961	10.0	-0.2	1.97	0.000
200	199.99810	200.2	0.2	1.98	0.41

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UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS
Bai Matabay Plang Avenue, Poblacion, Kabacan, North Cotabato

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CALIBRATION HISTORY

Name of Equipment: Beam Balance
Control Number: LCL-233-0047*
Brand/Model: Ohaus

Serial Number: 1*
Calibration Cycle: 1*

PHYSICS CENTRAL LABORATORY

Calibration Verification Date	Calibration Due Date	Calibration Result	Calibrated/Verified by:	Location	Remarks	Noted By:
10-15-2019	10-16-2019	Not Calibrated	DOST		Requested for Calibration	
09-27-2022		Calibrated	DOST-Region XI	On-site	In good condition	1 st cycle

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY - DAVAO

CALIBRATION CERTIFICATE

Request Reference No.: R11-092022-MET-1363
Sample Code: MET-02504
Calibration Item: Beam Balance*
Make/Model: Ohaus / N1111
Serial Number: LCL-233-0057*
Calibrated at (On-site): Physics Central Laboratory

Date Submitted: September 26, 2022
Date Calibrated: September 27, 2022

Capacity: 2000 g
Readability: 0.1 g
Actual Scale Interval: 0.1 g

Submitted by: UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS*
Address: Bai Matabay Plang Avenue, Poblacion, Kabacan, North Cotabato*

CALIBRATION RESULTS

REPEATABILITY: Test Load: 200 g
ECCENTRICITY: Test Load: 200 g

Trial	Indication (g)
1	200.9
2	200.9
3	200.9
4	200.9
5	200.9
6	200.9
7	200.9
8	200.9
9	200.9
10	200.9

Position	Indication (g)	Error (g)
1	200.9	0.0
2	200.5	-0.4
3	201.0	0.1
4	200.4	-0.5
5	200.2	-0.7
6	200.9	0.0

Standard Deviation: 0.00 g

ERRORS OF INDICATION:

Test Load (g)	Standard Mass Used (g)	Balance Indication (g)	Error (g)	Coverage Factor, k	Expanded Uncertainty (g)
0	0.00000	0.0	0.0	0.00	0.00
2	1.99996	2.0	0.0	1.97	0.001
20	10.99961	20.0	0.0	1.97	0.000
200	199.99810	200.9	0.9	1.98	0.41

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UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS
Bai Matabay Plang Avenue, Poblacion, Kabacan, North Cotabato

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CALIBRATION HISTORY

Name of Equipment: Beam Balance
Control Number: LCL-233-0057*
Brand/Model: Ohaus

Serial Number: 1*
Calibration Cycle: 1*

PHYSICS CENTRAL LABORATORY

Calibration Verification Date	Calibration Due Date	Calibration Result	Calibrated/Verified by:	Location	Remarks	Noted By:
10-15-2019	10-16-2019	Not Calibrated	DOST		Requested for Calibration	
09-27-2022		Calibrated	DOST-Region XI	On-site	In good condition	1 st cycle

UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS
Bai Matabay Plang Avenue, Poblacion, Kabacan, North Cotabato

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY - DAVAO

CALIBRATION CERTIFICATE

Request Reference No. R11-092022-MET-1363
Sample Code MET-02506
Calibration Item Beam Balance
Make/Model Ohaus / 100000 Series
Serial Number LCL-235-0138
Calibrated at (On-site) Physics Central Laboratory

Date Submitted September 29, 2022
Date Calibrated September 27, 2022

Capacity 2510 g
Repeatability 0.1 g
Actual Scale Interval, d 0.1 g

Submitted by UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS
Address Bldg. Malabuyang Plang Avenue, Poblacion, Kabacan, North Cotabato

CALIBRATION RESULTS

REPEATABILITY: Test Load 2000 g
ECCENTRICITY: Test Load 100 g

Trial	Indication (g)	Position	Indication (g)	Error (g)
1	1998.0	1	100.0	0.0
2	1998.0	2	100.0	0.0
3	1998.0	3	100.0	0.0
4	1998.0	4	98.0	-2.0
5	1998.0	5	95.0	-1.0
6	1998.0	1	100.0	0.0
7	1998.0			
8	1998.0			
9	1998.0			
10	1998.0			

Standard Deviation 0.00 g

ERRORS OF INDICATION:

Test Load (g)	Standard Mass Used (g)	Balance Indication (g)	Error (g)	Coverage Factor, k	Expanded Uncertainty (g)
0	0.00000	0.0	0.0	0.00	0.00
100	99.99910	100.0	0.0	1.98	1.148
500	499.99823	499.5	-0.4	1.98	5.725
1000	1000.00488	999.0	-1.0	1.98	11.46
2000	1999.84318	1998.0	-1.8	1.98	22.91
2500	2499.73850	2497.5	-2.2	1.98	28.64

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Address : Cor. Duranillo and Friendship Bldg., Delgado Avenue City
Tel. No. : (082) 277-0110 ext. 216 Fax No. : (082) 221-4408
Website : <http://dost.gov.ph>
Email : rdost@dot.gov.ph

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EMANUEL M. VILLANUEVA
Chief Administration Officer

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CALIBRATION HISTORY

Name of Equipment Beam Balance
Control Number LCL-235-0138
Brand/Model Ohaus (Triple Beam)

Serial Number
Calibration Cycle 1st and 2nd

PHYSICS CENTRAL LABORATORY

Calibration Verification Date	Calibration Due Date	Calibration Result	Calibrated/Verified by	Location	Remarks	Noted By
10-24-2022		Calibrated	CAMPDOL ANALYTICA	On-site	In good condition	1 st cycle
10-24-2018	10-28-2018	Not Calibrated	DOST		Requested for Calibration	
09-12-2013		Calibrated	DOST Region XI	On-site	In good condition	2 nd cycle

USDA-EDL-004 Physics Central Laboratory Prepared by: Jolly Grace B. Navarro

2. Compliance on practices on receiving request and releasing of tools/ gadgets, apparatus etc by the laboratory technician or aide



3. Compliance on Laboratory Safety

- In laboratory settings, lab safety is of paramount importance. It is not only protects the well being of researchers, lab personnel and students doing experiments but also safeguards the environment and public health. Understanding the potential risks and hazards involved in lab work to implementing safety protocols and procedures is crucial, to ensure regulatory compliance working environment.

