

# Republic of the Philippines

## DEPARTMENT OF SCIENCE AND TECHNOLOGY

Regional Office No. 13-CARAGA

Regional Standards and Testing Laboratory

## **TEST REPORT** 07-2017-BAL-212Met

Sample No.

: Met-458

Type of Job

: ON-SITE CALIBRATION

Date Calibrated

: July 18, 2017

Sample

: Top Loading Balance

Manufacturer

: KERN

Model Serial No. : EW 6200-2NM

Resolution

: 151203150

: 0.01 g

Capacity

: 6200 g

Company

: SURIGAO STATE COLLEGE OF TECHNOLOGY

Address

: Narciso Street, Surigao City

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This instrument was calibrated using reference standard traceable to SI Units as maintained by the National Metrology Laboratory- ITDI, Philippines. The following results were obtained:

#### I. Eccentricity Test, 3000 g

Load Position	Indication (g)	Deviation of Indication relative to the center (mg)
Ave. Center (1)	2999.98	
front left (2)	2999.97	-5.00
back left (3)	2999.96	-15.00
back right (4)	2999.98	5.00
front right (5)	2999.99	15.00

3		4
	1	
2		5

### II. Repeatability Test

Using a test load of 3000 g for ten (10) measurements, the standard deviation is 5.270 mg.

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Postal Address:

CSU Campus, Ampayon

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#### III. Test for Errors of Indication

Measurement Number	Test Load (g)	Indication (g)	Error (g)	Uncertainty of Measurement ( <u>+g</u> )
1	0.0000	0.00	0.00	0.011
2	50.0000	50.00	0.00	0.011
3	200.0003	200.00	0.00	0.011
4	1500.0008	1500.00	0.00	0.014
5	3000.0049	3000.00	0.00	0.022
6	4500.0058	4499.98	-0.03	0.030
7	5999.9989	5999.96	-0.04	0.039

#### **UNCERTAINTY OF MEASUREMENT:**

The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k=2. It has been determined in accordance with EA-4/02 M: 2013. The value of the measurand lies within the assigned range of values with a probability of 95%.

#### IV. Remarks:

- 1. The above values are those obtained at the time of test and refer only to the particular instrument calibrated.
- 2. The end-user shall determine the suitability of this instrument for its intended
- 3. This report shall not be reproduced in any form, except in full, without written approval of the laboratory.

Calibrated by

ENGR. MANOLITO R. TAPANGAN

Laboratory Analyst

Reviewed by:

GIDEON M. TANGHAL Laboratory Analyst

Certified Correct and Approved for Release by:

JENNIFER J. DEJARME Chief Laboratory Analyst

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# II. Repeatability Test at Half and Full Load

Load (g)	Difference (g)	Maximum Permissible Error (MPE)
500	0.0	<u>+</u> 0.1 g
1000	0.0	<u>+</u> 0.2 g

## III. Departure from Nominal Value (Increasing & Decreasing Load)

Load (g)	Increasing Load Reading (g)	Error (g)	Decreasing Load Reading (g)	Error (g)	Maximum Permissible Error (MPE)	Uncertainty of Measurement ( <u>+g</u> )
10	10.0	0.0	10.0	0.0	+ 0.1 g	0.06
20	20.0	0.0	20.0	0.0	+ 0.1 g	0.06
50	50.0	0.0	50.0	0.0	+ 0.1 g	0.06
100	100.0	0.0	100.0	0.0	+ 0.1 g	0.06
200	200.0	0.0	200.0	0.0	+ 0.1 g	0.06
500	500.0	0.0	500.0	0.0	+ 0.1 g	0.06
750	750.0	0.0	750.0	0.0	+ 0.2 g	0.06
1000	1000.0	0.0	1000.0	0.0	+ 0.2 g	0.06

Environmental Conditions : Relative Humidity

: 49.0%

Ambient Temperature

: 25.5°C

Counter Weights	Number of Holes	Number of Leaded Holes
10 g	-	<del>-</del>
20 g (1)	=	<del>-</del>
20 g (2)	-	
50 g	-	-
100 g	-	· -
200 g (1)	-	-
200 g (2)	-	-
500 g	-	-

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#### IV. Remarks:

- 1. The uncertainty of measurement is estimated at 95% level of confidence with a coverage factor k=2.
- 2. The above values are those obtained at the time of test and refer only to the particular instrument calibrated.
- 3. The end-user shall determine the suitability of this instrument for its intended use.
- 4. This report shall not be reproduced in any form, except in full, without written approval of the laboratory.

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