

FULL SCALE CALIBRATION AND ZERO ERROR RECORD
(Analytical and Precision Weighing Balance)

Unit : X

Department : NA

Month and year : October 2024

Balance Code No. : BAL003

Capacity (gm) : 320.0000

Make : METTLER TOLEDO

Model : ML303

Std. Weight Box ID. : WBI_1,WB003

Least Count (gm) : 0.0001

Tolerance: +/- Least count of the balance OR +/- 0.1 % of Standard weight whichever is higher and value should be rounded off on lower side as per display capacity of balance.

Standard weights for calibration (gm)		Tolerance (gm)	Accuracy Limits(Std wt +/- Tolerance) (gm)
Lower	40.0000	± 1.0000	39.0000 - 41.0000
Middle(1)	64.0000	± 1.0000	63.0000 - 65.0000
Middle(2)	80.0000	± 1.0000	79.0000 - 81.0000
Upper	120.0000	± 1.0000	119.0000 - 121.0000

Note: 1. Adjust zero error before commencing the weighing operation.

2. Check against standard weights on quarterly.

Date	Time	Spirit Level (Ok/ Not Ok)	Zero Error	Standard weights kept on the balance (gm)		Readings shown (gm)	Remark	Performed by	Checked By
07.10.2024	14:26	OK	Nil	Lower	40.0000	40.0000	Ok	Manish(C)	Jordan(23)
				Middle(1)	64.0000	64.0000	Ok	Manish(C)	Jordan(23)
				Middle(2)	80.0000	80.0000	Ok	Manish(C)	Jordan(23)
				Upper	120.0000	120.0000	Ok	Manish(C)	Jordan(23)

FULL SCALE CALIBRATION AND ZERO ERROR RECORD
(Analytical and Precision Weighing Balance)

2. Uncertainty test:

Sr. No.	Standard Weight (gm)	Reading displayed on the balance (gm)	Remarks
1	40.0000	40.0000	Ok
2	40.0000	40.0000	Ok
3	40.0000	40.0000	Ok
4	40.0000	40.0000	Ok
5	40.0000	40.0000	Ok
6	40.0000	40.0000	Ok
7	40.0000	40.0000	Ok
8	40.0000	40.0000	Ok
9	40.0000	40.0000	Ok
10	40.0000	40.0000	Ok
Mean		40.0000	-
Standard Deviation (S.D.)		0.0000	-

Uncertainty =
$$\frac{3 \times \text{S.D.}}{\text{Standard Weight (gm)}} = 0.0000$$

Acceptance criteria : Value of uncertainty should be NMT 0.001 gm.

Remark : Complies

FULL SCALE CALIBRATION AND ZERO ERROR RECORD
(Analytical and Precision Weighing Balance)

3. Repeatability test:

Sr. No.	Standard Weight (gm)	Reading displayed on the balance (gm)	Remarks
1	64.0000	64.0000	Ok
2	64.0000	64.0000	Ok
3	64.0000	64.0000	Ok
4	64.0000	64.0000	Ok
5	64.0000	64.0000	Ok
6	64.0000	64.0000	Ok
7	64.0000	64.0000	Ok
8	64.0000	64.0000	Ok
9	64.0000	64.0000	Ok
10	64.0000	64.0000	Ok
Mean		64.0000	-
Standard Deviation (S.D.)		0.0000	-

Repeatability (%) = $\frac{2 \times (0.41 \times d)}{\text{Standard weight (gm)}}$ X 100 = 0.00

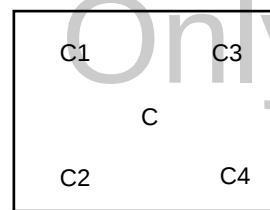
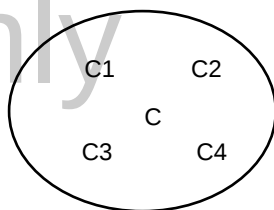
Acceptance criteria : Repeatability is NMT 0.10 %

Remark : Complies

FULL SCALE CALIBRATION AND ZERO ERROR RECORD (Analytical and Precision Weighing Balance)

4. Eccentricity test :

Note: Adjust zero error before commencing the weighing operation .



Sr No.	Standard Weight (gm)	Position	Reading displayed by the balance (gm)	Deviation from center =X-C	Remark
1	80.0000	C	80.0000	-----	Ok
2	80.0000	C1	80.0000	0.0000	Ok
3	80.0000	C2	80.0000	0.0000	Ok
4	80.0000	C3	80.0000	0.0000	Ok
5	80.0000	C4	80.0000	0.0000	Ok

Where, X=C1, C2, C3, C4 i.e. different corners of the balance.

Acceptance criteria : Deviation is not more than 0.05%.

Remark: Complies

Comment: _____

Calibration Done By: Manish (C)

Checked By:
(Quality Assurance)

Date : 07.10.2024

Date :