

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

Unit : X

Department : QC

Balance Code No. : Bal_23

Make : METTLER TOLEDO

Std. Weight Box ID. : WGTB-001, WB-002

Month and year : August 2025

Capacity (gm) : 320.000

Model : MS303S

Least Count (gm) : 0.001

Tolerance: +/- Least count of the balance OR +/- 0.1 % of Standard weight whichever is higher.

Standard weights for calibration (gm)		Tolerance (gm)	Accuracy Limits(Std wt +/- Tolerance) (gm)
Lower(20.e)/(5% of a)/Minimum capacity of the checkweigher / weighing balance	0.020	± 0.001	0.019 - 0.021
Middle-I(20% of a)	10.000	- 0.003 + 0.006	9.997 - 10.006
Middle-II(50% of a)	20.000	- 0.004 + 0.005	19.996 - 20.005
Middle(3)	30.000	- 0.005 + 0.006	29.995 - 30.006
Middle(4)	40.000	- 0.004 + 0.007	39.996 - 40.007
Middle(5)	50.000	- 0.005 + 0.006	49.995 - 50.006
Middle(6)	64.000	- 0.004 + 0.005	63.996 - 64.005
Middle(7)	160.000	- 0.003 + 0.004	159.997 - 160.004
Upper(80% of a)	256.000	- 0.004 + 0.001	255.996 - 256.001

Note:

1. Adjust zero error before starting the weighing operation.
2. Check against standard weights daily before starting the activity.
3. If more than one standard weight is used for verification then record the standard weight / identification No. of all individual weights used for verification. (E.g. For verification of 200g, if three weights viz. 50g, 50g & 100g is used then record standard weight/identification No. of all the three weights)

Date	Time	Spirit Level (OK/ Not OK)	Zero Error	Standard weights kept on the balance (gm)		Readings shown (gm)	Remark	Performed by	Checked By
01.08.2025	12:23	OK	Nil	Lower(20.e)/(5% of a)/Minimum capacity of the checkweigher / weighing balance	0.020	0.020	Ok	kuldeep(Z)	Mangesh(11)
				Middle-I(20% of a)	10.000	10.000	Ok	kuldeep(Z)	Mangesh(11)
				Middle-II(50% of a)	20.000	20.000	Ok	kuldeep(Z)	Mangesh(11)
				Middle(3)	30.000	30.000	Ok	kuldeep(Z)	Mangesh(11)
				Middle(4)	40.000	40.000	Ok	kuldeep(Z)	Mangesh(11)

Date	Time	Spirit Level (Ok/ Not Ok)	Zero Error	Standard weights kept on the balance (gm)		Readings shown (gm)	Remark	Performed by	Checked By
				Middle(5)	50.000	50.000	Ok	kuldeep(Z)	Mangesh(11)
				Middle(6)	64.000	64.000	Ok	kuldeep(Z)	Mangesh(11)
				Middle(7)	160.000	160.000	Ok	kuldeep(Z)	Mangesh(11)
				Upper(80% of a)	256.000	256.000	Ok	kuldeep(Z)	Mangesh(11)

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3. Repeatability test:

Sr. No.	Standard Weight (gm)	Reading displayed on the balance (gm)	Remarks
1	0.020	0.020	Ok
2	0.020	0.020	Ok
3	0.020	0.020	Ok
4	0.020	0.020	Ok
5	0.020	0.020	Ok
6	0.020	0.020	Ok
7	0.020	0.020	Ok
8	0.020	0.020	Ok
9	0.020	0.020	Ok
10	0.020	0.020	Ok
Mean		0.020	-
Standard Deviation (S.D.)		0.0000	-

Repeatability (%) = $\frac{2 \times (0.41 \times d)}{\text{Standard weight (gm)}} \times 100 = 4.10$

Acceptance criteria : Repeatability is NMT 0.10 %

Remark : Not Complies

Calibration Done By: kuldeep (Z)

Checked By:
(Quality Assurance)

Date & Time: 01.08.2025 & 12:23:06

Date & Time: