

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

Unit : X

Department : QC

Balance Code No. : BAL2108

Make : METTLER TOLEDO

Std. Weight Box ID. : WB2108

Month and year : September 2025

Capacity (a) (g) : 320.000

Model : MS303S

Least Count (e) (g) 0.001

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

Standard weights for calibration (g)		Tolerance (g)	Accuracy Limits(Std wt +/- Tolerance) (g)
Lower(20.e)/(5% of a)/Minimum capacity of the checkweigher / weighing balance	0.020	$\pm 0.001$	0.019 - 0.021
Middle-I(20% of a)	10.000	$\pm 1.000$	9.000 - 11.000
Middle-II(50% of a)	20.000	$\pm 1.000$	19.000 - 21.000
Upper(80% of a)	21.000	$\pm 1.000$	20.000 - 22.000

**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 (g)		Readings shown (g)	Remark
27.09.2025	09:54	OK	Nil	Lower(20.e)/(5% of a)/Minimum capacity of the checkweigher / weighing balance	0.020	0.020	Ok
				Middle-I(20% of a)	10.000	10.003	Ok
				Middle-II(50% of a)	20.000	20.000	Ok
				Upper(80% of a)	21.000	21.000	Ok

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2. Uncertainty test:

Sr. No.	Standard Weight (g)	Reading displayed on the balance (g)	Remarks
1	10.000	10.000	Ok
2	10.000	20.000	Not Ok
Mean		15.000	-
Standard Deviation (S.D.)		7.0711	-

$$\text{Uncertainty} = \frac{3 \times \text{S.D.}}{\text{Standard Weight (g)}} = 0.000$$

**Acceptance criteria :** Value of uncertainty should be NMT 0.001 g.

**Remark :** Not Complies

	Signature	Date & Time
Performed By	kuldeep (Z)	27.09.2025 & 09:54:34
Checked By	Mangesh (11)	27.09.2025 & 09:54:58
Checked By (Quality Assurance)		