

Balance ID no:	SS-057	Location:	HardShell	Operating Range:	0.0100-209.0000 gm
Balance Capacity:	0.0001 gm	Least Count :	0.0001 gm	Calibration Frequency	12 months
Weight Box / Standard Weight ID No.	HSW-07			Valid Upto:	03/09/2026
Date of Calibration:	01/07/2026			Next Calibration Due on:	01/07/2027
Reason for Calibration	☐ Schedule ☐ Non Schedule _____				

1. Surface level check

Surface level check	Observation
Check the surface level on the level (Bubble) indicator and ensure that the bubble should be in Center	Satisfactory
Calibration Done By : 4005(Tushar Tawde)	

2. Sensitivity and Linearity

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation (Center position)	
Minimum of Entire operation range	0.0100 gm	Actual weight = ± 0.5 % of Selected standard Weight (For Dispensing activity)	0.0100 gm	
30% of Balance capacity	66.0000 gm		Actual weight = ± 0.1 % of actual mass * of Selected standard weight (For Dispensing activity for balance having capacity 220 g or below with least count 0.00001 g or better)	66.0000 gm
50% of Balance capacity	110.0000 gm			110.0000 gm
80% of Balance capacity	176.0000 gm			176.0000 gm
Maximum of Entire operating range	209.0000 gm	Actual weight = ± 1.0 % of Selected standard weight (For other than Dispensing activity)	209.0000 gm	
Calibration done By :		4005(Tushar Tawde)		
* Actual mass of standard weights:				

3. Eccentricity test

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation	
50% of Balance capacity	110 gm	Actual weight = ± 0.5 % of Selected standard Weight (For Dispensing activity) Actual weight = ± 0.1 % of actual mass * of Selected standard weight (For Dispensing activity for balance having capacity 220 g or below with least count 0.00001 g or better) Actual weight = ± 1.0 % of Selected standard weight (For other than Dispensing activity)	1 Position	110.0001 gm
			2 Position	109.9999 gm
			3 Position	110.0000 gm
			4 Position	110.0002 gm
			Center	109.9998 gm
Calibration done By :			4005(Tushar Tawde)	
* Actual mass of standard weights :				

4. Repeatability test

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation (Center Position)
5% of Balance capacity	11.000 gm	Measurement uncertainty (repeatability) shall not be more than 0.002	11.0000 gm
			11.0001 gm
			11.0001 gm
			10.9999 gm
			11.0000 gm
Mean			11.0000 gm
Standard Deviation			0.0001
Value of 0.41d			0.000041
*Repeatability = Standard deviation or 0.41 d × 2/Nominal value of the weight			0.00002
Calibration done By :			4005(Tushar Tawde)

Note : For balance having minimum operating range 310 gm or less than 310 gm in this case calculated standard deviation of 10 replicate measurement is smaller than $0.41d(0.41 * \text{Readability(Scale Interval)})$ value then replace the standard deviation value with $0.41d$ value.

Where "d" is the scale interval (Readability) of balance.

Other balances which have more than 310 g range for that, only $SD * \text{count}$ instead of $0.41*d$ wheather if $0.41*d$ value more than SD.

Remarks: _____

Conclusion : The Calibration of instrument found satisfactory / Not satisfactory

Done By/ Date: 4005(Tushar Tawde) / 01/07/2026

Verified By / Date: 4001(Rahul Lad) / 02/07/2026