

Balance ID no:	HC-103	Location:	Hardshell	Operating Range:	0.0100-209.0000 g
Balance Capacity:	0.0001 g	Least Count :	0.0001 g	Calibration Frequency	12 months
Weight Box / Standard Weight ID No.	HSW-07			Valid Upto:	30/09/27
Date of Calibration:	04/09/27			Next Calibration Due on:	04/09/28
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 : 4001(Rahul)	

2. Sensitivity and Linearity

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation (Center position)	
Minimum of Entire operation range	0.0100 g	Actual weight = ± 0.5 % of Selected standard Weight (For Dispensing activity)	0.0100 g	
30% of Balance capacity	66.0000 g		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 g
50% of Balance capacity	176.0000 g			176.0000 g
80% of Balance capacity	110.0000 g			110.0000 g
Maximum of Entire operating range	209.0000 g	Actual weight = ± 1.0 % of Selected standard weight (For other than Dispensing activity)	209.0000 g	
Calibration done By :		4001(Rahul)		
* Actual mass of standard weights:				

3. Eccentricity test

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation	
50% of Balance capacity	110 g	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	108.8900 g
			2 Position	110.0000 g
			3 Position	108.9000 g
			4 Position	110.0000 g
			Center	111.1000 g
Calibration done By :			4001(Rahul)	
* Actual mass of standard weights :				

4. Repeatability test

Weight Selection for calibration	Selected weights	Acceptance Criteria	Actual Observation (Center Position)
5% of Balance capacity	11.0000 g	Measurement uncertainty (repeatability) shall not be more than 0.002	11.0000 g
			10.8900 g
			11.1100 g
			11.0000 g
			10.9000 g
			11.1000 g
			11.0000 g
			10.9100 g
			11.0900 g
			11.0000 g
Mean			11.0000 g
Standard Deviation			0.0819
Value of 0.41d			0.000041
*Repeatability = Standard deviation or 0.41 d × 2/Nominal value of the weight			0.01489
Calibration done By :			4001(Rahul)

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 $0.41d(0.41 \times \text{Readability(Scale Interval)})$ 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 * count instead of $0.41 \times d$ wheather if $0.41 \times d$ value more than SD.

Remarks: _____

Conclusion : The Calibration of instrument found satisfactory / Not satisfactory

Done By/ Date: 4001(Rahul) / 04/09/27

Verified By / Date: 4005(Tushar) / 04/09/27