



PHARMA DEVILS

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Production	SOP No.:
Title: Calibration of Checkweigher	Effective Date:
Supersedes: Nil	Review Date:
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1.0 OBJECTIVE:

To lay down a procedure for Calibration of Checkweigher (Model:MT-S), Make: Mettler Toledo)

2.0 SCOPE:

This procedure is applicable for Calibration of Checkweigher (**Model:** MT-S),
Make: Mettler Toledo) in production department.

3.0 RESPONSIBILITY

Technical Associate: Operation and cleaning.

Officer/ Executive Production: Supervision

IPQA: Verification.

Head Production: SOP Compliance

4.0 DEFINITION (S):

NA

5.0 PROCEDURE:

5.1 Caution

5.1.1 Ensure that the Checkweigher is free from dust.

5.1.2 Ensure that Checkweigher is installed on firm support.

5.1.3 Ensure that Checkweigher platform is not touching to any surface.

5.1.4 Do not keep the Checkweigher platform loaded in the "OFF" condition.

5.1.5 Check for the proper earthing of the Checkweigher wherever available.

5.1.6 Avoid impact/mechanical shocks to the Checkweigher.

5.2 Zero Error Checking

5.2.1 Check for the "ZERO" display and record the same in respective annexure.

5.2.2 If there is error in 'ZERO' display, it may be due to the following:

5.2.2.1 The checkweigher is not in level.

5.2.2.2 The mechanical or electrical defect.

5.2.2.3 The platform is not cleaned.

5.2.2.4 Some extraneous matter hampering the smooth operation of the platform.

5.2.3 Put 'ON' the checkweigher.



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5.2.4 If spirit level is not in order correct it by adjusting the base-mounting pad.

Note: Zero error of the checkweigher must be checked before use to avoid erroneous weights.

5.2.5 Frequency:

- (a) Daily in morning.
- (b) After any maintenance.
- (c) After resuming of the power.
- (d) Relocation of Checkweigher.

5.3 CALIBRATION:

5.3.1 Daily Calibration

5.3.1.1 Check the cleanliness of the checkweigher.

5.3.1.2 Put 'ON' the checkweigher and wait till it displays 0.0 g.

5.3.1.3 Check Zero error as per step 5.2.

5.3.1.4 Get the fractional weight box and ensure that the standard weights are duly calibrated.

5.3.1.5 Calibrate the checkweigher with 1% and 50% of its total capacity (600g) and record the same in the respective Annexure-I.

5.3.1.6 Place the weights of 6 g in the center of the checkweigher platform.

5.3.1.7 Screen display shows the weight placed on plate form.

5.3.1.8 Record the same in its respective daily calibration Annexure-I.

5.3.1.9 Then repeat the same procedure for 300 g weight refer to point no. 5.3.16 to 5.3.1.8 and record the same in Annexure-I.

5.3.1.10 Tolerance: The variation should be \pm least count of the Checkweigher or $\pm 0.1\%$ of the standard weights used whichever is higher.

5.3.1.11 If the variation does not found within the limit. Put the "OUT OF CALIBRATION" label and follow the step no. 5.6

5.3.1.12 Frequency: A) Daily in morning.
B) After the resuming of the power after power failure.

5.4 Full Scale Calibration

5.4.1 Check the cleanliness of the checkweigher.

5.4.2 Put 'ON' the checkweigher and wait till it displays 0.0 g.

5.4.3 Check the Zero error as per step No.5.2

5.4.4 Get the fractional weight box of standard weights.



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- 5.4.5** Ensure that the standard weights are duly calibrated.
- 5.4.6** Calibrate the Checkweigher with 1%, 20%, 50% and 80% of its total capacity (600g) and record in the respective Annexure-II.
- 5.4.7** Place the weights of 6 g in the center of the checkweigher platform.
- 5.4.8** Display shows the weight placed on plate form.
- 5.4.9** Record the same in its respective monthly calibration Annexure-II.
- 5.4.10** Then repeat the same procedure with 120 g, 300 g and 480 g weights one by one refer to point no. 5.4.7 to 5.4.9 by placing each standard weight in ascending order on center of checkweigher platform.
- 5.4.11** Check the observations for the variation (if any) and record the same in Annexure-II.
- 5.4.12** Tolerance: The variation should be \pm least count of the checkweigher or \pm 0.1% of the standard weights used whichever is higher.
- 5.4.13** If the variation found within the limit then affixed calibration label dully filled and sign by production officer.
- 5.4.14** If the variation does not found within the limit.
Put the "OUT OF CALIBRATION" label and follow the step 5.6.
- 5.4.8** **Frequency**
A) Monthly.
B) After any maintenance.
- 5.6** **MAINTENANCE:**
- 5.6.1** If the checkweigher is out of calibration inform to concerned service agency for rectification.
- 5.6.2** After rectification recalibrate the checkweigher (Full scale Calibration).
- 5.6.3** Record the same in its respective monthly calibration Annexure-II.
- 5.6.4** All the records relating to servicing and calibration to be maintained.
- 6.0** **ABBREVIATION (S):**
SOP : Standard Operating Procedure
g : gram
wt. : Weight
- 7.0** **REFERENCES (S):**
SOP No.: Status labeling



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8.0 ANNEXURE (S)

Annexure-I : Checkweigher Daily Calibration Record

Annexure-II : Checkweigher Monthly Calibration Record

9.0 DISTRIBUTION:

9.1 **Master Copy** : Quality Assurance

9.2 **Controlled copy (S)** : Production department, Quality Assurance

9.3 **Reference copy (S)** : Production department



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ANNEXURE I

Checkweigher Daily Calibration Record

Department : Production Month/Year :

Capacity : 600.0g Equipment ID:

Least Count : 0.2 g Standard Weight Box ID:.....

Tolerance : Least count of the checkweigher or 0.1 % of standard weight whichever is higher.

Frequency : Daily in morning and after resuming of power after power failure.

STANDARD WEIGHTS		TOLERANCE	ACCURACY LIMIT
1% of Capacity(600g)	6.0 g	± 0.2 g	5.8 g - 6.2 g
50% of Capacity(600g)	300.0 g	± 0.3 g	299.8g – 300.4 g

Date	# Spirit Level	*Zero Error	Reading Shown On Checkweigher		Remarks	Checked By
			6.0 g	300.0 g		

Mark “Ok” if spirit bulb in order and mark “NOT OK” if spirit bulb not in order.
 * Mark “Ok” if display shows “ZERO” and mark “NOT OK” if display shows not ZERO.



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ANNEXURE II Checkweigher Monthly Calibration Record

Department : Production Month/Year :
Capacity : 600.0 g Equipment ID:
Least Count : 0.2 g Standard Weight Box ID:.....
Tolerance : Least count of the balance or 0.1 % of standard weight whichever is higher.
Frequency : Monthly/After any maintenance.

STANDARD WEIGHTS		TOLERANCE	ACCURACY LIMIT
Lower (1% of Capacity)	6.0 g	± 0.2 g	5.8 g -6.2 g
Middle 1((20% of Capacity)	120.0 g	± 0.2 g	119.8 g – 120.2 g
Middle 2 ((50% of Capacity)	300.0 g	± 0.3 g	299.8 g – 300.4g
Upper ((80% of Capacity)	480.0 g	± 0.48 g	479.4 g- 480.6g

Date	#Spirit Level	*Zero Error	Reading Shown On Checkweigher				Remarks	Checked By
			6.0 g	120.0 g	300.0 g	480.0 g		

Mark "OK" if spirit level is in order and mark "NOT OK" if spirit level not in order.
* Mark "OK" if display shows "ZERO" and mark "NOT OK" if display not shows "ZERO".