



PHARMA DEVILS

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Production	SOP No.:
Title: Operation, Cleaning and Calibration of Weighing Balances (Make: Essae; Model: AJ-3200E)	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

Vernacular SOP: No

1.0 OBJECTIVE:

1.1 To lay down a procedure for cleaning, calibration and operation of Weighing balances.

2.0 SCOPE:

2.1 The procedure is applicable for the cleaning, calibration and operation of weighing balances in General Block.

3.0 RESPONSIBILITY:

3.1 Officer, Executive Production :Performing the calibration

3.2 IPQA : Verification

3.3 Operator : Operation and cleaning

3.4 Head Production : Ensure compliance and implementation of the SOP.

4.0 DEFINITION(S):

4.1 NA

5.0 PROCEDURE:

5.1 Cleaning

5.1.1 Ensure that electric connection is disconnected to the balance.

5.1.2 Clean the platform with clean wet lint free cloth dip in purified water followed by clean dry lint free cloth.

5.1.3 Clean the main body of the balance with a clean dry lint free cloth.

5.2 General Calibration

5.2.1 Ensure the cleanliness of the weighing balance.

5.2.2 Check the spirit level and rectify it if necessary. (If spirit level is not provided on balance, use portable spirit level and check the level by placing the spirit level at five different points of the platform (all the four corners and middle). If not in order, correct it by adjusting the base screws.

5.2.3 Record it on the respective Annexure-I (“Daily Calibration of Weighing Balances (Make:Essae;Model:AJ-3200E)”) as ‘OK /Not OK’.

5.2.4 Press the ‘ON/OFF’ to switch ‘ON’ the balance and display shows 0.00 g.

5.2.5 Select the standard of checking the eccentric accuracy for balance based on capacity as mentioned below:



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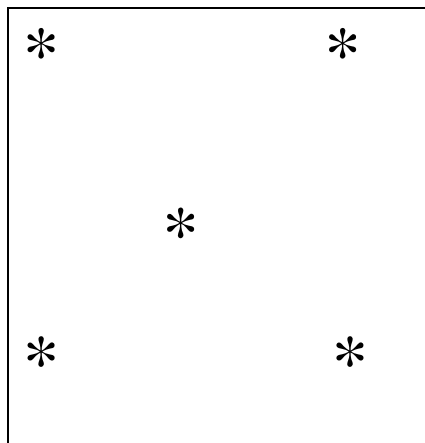
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Balance capacity	Standard weight to be used	Tolerance ($\pm 0.1\%$)	Acceptance Limit
3200.00 g	1500.00 g	1500.00 \pm 1.5 g	1498.50 g -1501.50 g

5.2.6 Place standard weights at five different location on platform for checking the eccentric accuracy of balance and record the same in Annexure-II (“Eccentricity check record of Weighing Balances (Make: Essae; Model: AJ-3200E”).



In fig. * indicate the location on balance platform at which weight to be put.

- 5.2.7 Reading observed on balance should not vary more than the $\pm 0.1\%$ of standard weight.
- 5.2.8 If the result are exceeding the acceptance limit affix the “OUT OF CALIBRATION” label and inform to maintenance department for necessary action.
- 5.3 Daily Calibration
- 5.3.1 Operate the balance as per step no. 5.2.
- 5.3.2 Put the standard weight on the platform as mentioned in table.

Balance Capacity	Operating Range balance capacity	Standard Weights to be used for calibration			
3200.00 g	30.00 g to 2400.00 g	30.00 g	600.00 g	1500.00 g	2400.00 g

- 5.3.3 Place the standard weight of 30.00g, 600.00g, 1500.00g, and 2400.00g one by one on platform and check the readings.
- 5.3.4 Record the reading in respective format as given in Annexure-I (“Daily Calibration of Weighing Balances (Make: Essae; Model: AJ-3200E”).



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- 5.3.5 Balance is considered satisfactory for use if reading are found within acceptable limit of balance as mentioned in respective Annexure - I (“Daily Calibration of Weighing Balances (Make:Essae;Model:AJ-3200E”) and place ‘CALIBRATION TAG’ as per SOP(“Status labeling”).
- 5.3.6 If the readings are exceeding the acceptable limit write remark as ‘GENERAL CALIBRATION REQUIRED’. Perform the general calibration and daily calibration. If then also balance do not measure weight within acceptable limit affix ‘OUT OF CALIBRATION’ tag as per SOP (“Status labeling”).
- 5.3.7 Do not use the balance till problem is not rectified.
- 5.3.8 After rectification, re-calibrate the balance (Daily and Eccentricity) before use and enter the same in respective Annexure- I (“Daily Calibration of Weighing Balances (Make: Essae; Model: AJ-3200E” & Annexure- II (“Eccentricity check record of Weighing Balances (Make: Essae; Model: AJ-3200E”).
- 5.3.9 Check for the zero error as per specific operation procedure of balance and enter the reading in the respective Annexure – I (“Daily Calibration of Weighing Balances (Make:Essae;Model:AJ-3200E”) for balance.
- 5.4 Operation
- 5.4.1 Ensure the cleanliness of the balance.
- 5.4.2 Check the spirit level and rectify it if necessary. If not in order rectify it by adjusting base screws given.
- 5.4.3 Ensure the zero reading on screen before any weighing. Place the entity on platform, the balance will measure the weight of entity and display it. Wait till reading on screen will stabilize and then remove the object.
- 5.4.4 Turn ‘OFF’ after end of working day.
- 5.5 **Precaution**
- 5.5.1 Keep the machine on stable surface.
- 5.5.2 Ensure no strong wind drift / wind current.
- 5.5.3 Don’t put any object on balance till it is in ‘OFF’ position.
- 5.5.4 Warm up the machine for 5 minutes before operation.
- 5.5.5 Don’t apply any solvent for cleaning the scale.
- 5.5.6 Avoid to apply the overload, it may damage the load cell permanently.



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6.0 ABBREVIATION (S):

- 6.1 SOP: Standard Operating Procedure.
- 6.2 g :gram

7.0 REFERENCES(S):

- 7.1 SOP: Status labeling

8.0 ANNEXURE(S):

Annexure No.	Title of Annexure	Format no.	Mode of Execution
Annexure I	Daily Calibration of Weighing Balances (Make:Essae;Model:AJ-3200E)		Log Book

9.0 DISTRIBUTION:

- 9.1 **Master Copy** : Quality Assurance
- 9.2 **Controlled copy (S)** : Production department (02), Quality Assurance (01)
- 9.3 **Reference copy (S)** : Production department (05)

10.0 REVISION HISTORY:

S. No.	Version No.	Change Control No.	Reason (S) for Revision	Details of Revision	Effective Date
01	00		New SOP	NA	



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ANNEXURE I

Daily Calibration of Weighing Balances (Make:Essae;Model:AJ-3200E)

Calibrated weight box certificate No. : _____

Limit: $\pm 0.1\%$ of Mass / Std. wt.

Month / Year: _____

Standard Weights		Tolerance ($\pm 0.1\%$)		Acceptance Limit			
LOWER	30.00g	$\pm 0.03\text{g}$		29.97g-30.03g			
MIDDLE-I	600.00g	$\pm 0.6\text{g}$		599.40g-600.60g			
MIDDLE-II	1500.00g	$\pm 1.5\text{g}$		1498.50g-1501.50g			
UPPER	2400.00g	$\pm 2.4\text{g}$		2397.60g-2402.40g			
Date	*Spirit Level	Reading Shown On Balance				Remarks	Checked By
		30.00g	600.00g	1500.00g	2400.00g		

Note: * Record the Spirit level as OK/NOT OK (Bubble position in the center)