

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE			
Department: Production	SOP No.:		
Title: Cleaning, Calibration and Operation of Weighing Balances	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 to the Cleaning, Calibration and Operation of Weighing Balances in
	Production area.
3.0	RESPONSIBILITY:
3.1	Technical associate, Officer, Executive: cleaning, calibration and operation.

3.2 Head Production/QA: SOP compliance

4.0 **DEFINITION (S):**

4.1 NA

5.0 **PROCEDURE**:

5.1 **CLEANING:**

- 5.1.1 Ensure that the power supply is OFF.
- 5.1.2 Clean the platform and display stand with clean wet lint free cloth followed by clean dry lint free cloth.
- 5.1.3 Clean the display panel, and wire with dry lint free cloth.
- 5.1.4 For cleaning of area below balance, remove the balance from its place, clean area below balance as per SOP "Cleaning of Production Area". Again keep the balance on its location after cleaning of area.
- 5.1.5 For cleaning of area below balance (Mettler Toledo 1000 kg and 2000 kg), open side locks of balance, lift the balance with the help of hooks provided on the front side and lock the balance in standing position. Clean balance from lower side. Clean the area below balance as per SOP "Cleaning of Production Area". After cleaning pull down the balance in its position and engage the side locks again.

5.2 **OPERATION:**

- 5.2.1 Ensure the cleanliness of the weighing balance.
- 5.2.2 Check the spirit level of balance. Adjust the spirit level by rotating base screws so that bubble position should be in center. Record it on the respective annexure as 'OK /Not OK'.



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5.2.3	Ensure that side locks are engaged in 1000 and 2000 kg (Mettle	r Toledo) balances.		
5.2.4	Switch On the balance. Ensure zero reading on screen before	any weighing. Place the object to be		
	weighed on the weighing platform of the balance. Balance will	l measure the weight of the object and		
	display it. Wait till the reading on screen stabilize. Remove the	Object.		
5.2.5	Turn 'OFF' the balance after use.			
5.0				
5.3	General Calibration:			
5.3.1	Weighing Balance 6000.0 g (Make-Laxmi Samson, Model SI	EW-6)		
5.3.1.1	Operate the balance as per step no. 5.2.1 to 5.2.4			
5.3.1.2	Switch "ON" the balance, display shows 0.0.			
5.3.1.3	Put 600.0 g calibrated weight on platform.			
5.3.1.4	Press N and PCS simultaneously, display will show 'ENTER'			
5.3.1.5	.5 Press T/Z, display will show 05000 (it indicates 500 g weight).			
5.3.1.6	5.3.1.6 Press 'N' key to change the number and 'S' key to shift the digit on required position. Change the			
	number on display to 06000.			
5.3.1.7	Press T/Z key to save the calibration.			
5.3.1.8	Display shows standard weight i.e. 600.0.			
5.3.2	Weighing Balance 60.000 kg (Make-Laxmi Samson, Model S	SNEW-60)		
5.3.2.1	Operate the balance as per step no. 5.2.1 to 5.2.4.			
5.3.2.2	Switch "ON" the balance, display shows 0.000 kg.			
5.3.2.3	Put 6.000 kg calibrated weight on platform (10 % of total balance	ce capacity).		
5.3.2.4	Press N and PCS simultaneously, display will show 'ENTER'			
5.3.2.5	Press T/Z, display will show 05000 (it indicates 5.000 kg weigh	t).		
5.3.2.6	Press 'N' key to change the number and 'S' key to shift the	digit on required position. Change the		
	number on display to 06000.			
5.3.2.7	Press T/Z key to save the calibration.			
5.3.2.8	Display shows standard weight i.e. 6.000 kg.			
5.3.3	Weighing Balance 60.000 kg (Make-Mettler Toledo, Model-	IND570)		
5.3.3.1	Operate the balance as per step no. 5.2.1 to 5.2.4			
5.3.3.2	Switch "ON" the balance, display shows 0.000 kg.			



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- 5.3.3.3 Press menu key, display show, Login, Home, Setup, Scale, Application, Terminal, Communication and Maintenance.
- 5.3.3.4 Press right > key on Scale, display will show, Type, Capacity & Increment, Calibration and Zero.
- 5.3.3.5 Go to Calibration with down \lor Key and press enter key.
- 5.3.3.6 Press down \lor key 4 times, and then press \rightarrow ymbol Key.
- 5.3.3.7 Display show TEST LOAD, Press enter key
- 5.3.3.8 Set the weight 6.000 Kg using numbers key. Press "C" to delete the numbers if required.
- 5.3.3.9 Put standard weight 6 kg on balance platform.
- 5.3.3.10 Press enter key.
- 5.3.3.11 Press start ve to start calibration,
- 5.3.3.12 Display will show Capture Span OK.
- 5.3.3.13 Press key 3 times to go to home screen.
- 5.3.3.14 Display will show standard weight 6.000 kg.

5.3.4 Weighing balance 60.0 Kg (Make-Mettler Toledo, Model- ICS685)

- 5.3.4.1 Operate the balance as per step no. 5.2.1 to 5.2.4
- 5.3.4.2 Switch "ON" the balance, display shows 0.000 kg.
- 5.3.4.3 Press Menu key, display will show, Menu, Database, Memory, External, routine test, Corner load test, Calibration log and Slide show.



- 5.3.4.4 Select Menu with $\sqrt{\text{symbol key}}$.
- 5.3.4.5 Enter login password and press the ' (Enter Key'.
- 5.3.4.6 Display will show as Scale, Application, Terminal, Communication and Maintenance Press (Enter Key' on scale and Scale1 will appear on display. Press (Enter Key' on Scale1 and Scale1 menu will open on display.
- 5.3.4.7 Move the cursor on Linearization and Calibration with the help of up and down key
- 5.3.4.8 Press () Enter Key' on Linearization and Calibration



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- 5.3.4.9 Now press on weight mbol key.
- 5.3.4.10 Display will show 'PRELOAD'. Again press ' Enter Key'.
- 5.3.4.11 Set the weight 6.000 kg with the help of up and town key. \blacksquare
- 5.3.4.12 Now place 6 kg weight on balance platform.
- 5.3.4.13 Display will show 6.000
- 5.3.4.14 Press ' Enter Key'.
- 5.3.4.15 Display will show 'PRELOAD'.
- 5.3.4.16 Remove weight from platform and press (Enter Key'. Display will show 'CALIBRATION PASS' and green screen will open.
- 5.3.4.17 Enter technician name and press on $\sqrt{\text{symbol key}}$.
- 5.3.4.18 Press power key and system will ask to save the settings. Press $\sqrt{}$ symbol key to save the settings.
- 5.3.4.19 Wait till display will show 0.000 kg.

5.3.5 Weighing balance 150.00 Kg (Make-Mettler Toledo, Model- IND235)

- 5.3.5.1 Operate the balance as per step no. 5.2.1 to 5.2.4
- 5.3.5.2 Ensure the cleanliness of the weighing balance
- 5.3.5.3 Ensure spirit level of balance is in center.
- 5.3.5.4 Long press the 'Enter Key' display will show "**PASS0D**"
- 5.3.5.5 Enter O, P, O, P and press O Enter Key' continuously for 21 times.
- 5.3.5.6 Display will show 10 CAL---09 CAL---08CAL and "FULL Ld". Now again press (E) Enter Key' display shows "0000150" for 150 Kg.
- 5.3.5.7 Now use " \leftarrow F1 & F2 \rightarrow " to move cursor Left and Right.
- 5.3.5.8 Use ^(C) & ^(T) key to change the digit 0,1,2,3,4,5,6,7,8,9.
- 5.3.5.9 Enter 0000015 by using " \leftarrow F1, F2 \rightarrow , \bigcirc & (F)".
- 5.3.5.10 Now place 15.00 Kg of weight on balance platform and press (Enter Key', display shows done then F1.3.3.



PHARMA DEVILS STANDARD OPERATING PROCEDURE SOP No.: **Department:** Production Title: Cleaning, Calibration and Operation of Weighing Balances **Effective Date:** Supersedes: Nil **Review Date: Issue Date:** Page No.: Now press "F1" key 03 times display shows "SAVE" again press () Enter Key'. By pressing () 5.3.5.11 Enter Key' calibration is saved and display show standard weight i.e. 15.00 kg. Remove the weight from balance platform. 5.3.5.12 5.3.6 Weighing Balance 300.00 kg (Mettler Toledo IND235) 5.3.6.1 Operate the balance as per step no. 5.2 Ensure the cleanliness of the weighing balance 5.3.6.2 5.3.6.3 Ensure spirit level of balance is in center. Long press the 'D' Enter Key' display will show "**PASS0D**" 5.3.6.4 Enter ^(O), ^(F), ^(O), ^(F) and press ^(C) Enter Key' continuously for 21 times. 5.3.6.5 Display will show 10 CAL---09 CAL---08CAL and "FULL Ld". Now again press () Enter Key' 5.3.6.6 display shows "0000150" for 150 Kg. Now use " \leftarrow F1 & F2 \rightarrow " to move cursor Left and Right. 5.3.6.7 Use 0 & 1 key to change the digit 0,1,2,3,4,5,6,7,8,9. 5.3.6.8 Enter 0000030 by using " \leftarrow F1, F2 \rightarrow , \bigcirc & T". 5.3.6.9 Now place 30.00 Kg of weight (10% of total balance capacity) on balance platform and press (5.3.6.10 Enter Key', display shows done then F1.3.3. Now press "F1" key 03 times display shows "SAVE" again press (E) Enter Key'. By pressing (E) 5.3.6.11 Enter Key' calibration is saved and display show standard weight i.e. 15.00 kg. Remove the weight from balance platform. 5.3.6.12 Weighing Balance 1000.0 kg (Make-Mettler Toledo) 5.3.7 5.3.7.1 Operate the balance as per step no. 5.2.1 to 5.2.4 5.3.7.2 Switch "ON" the balance, display shows 0.0 kg. 5.3.7.3 Press down \lor key, display will show menu symbol. key, display show, Login, Home, Setup, Scale, Application, Terminal, 5.3.7.4 Press menu Communication and Maintenance Press right > key on Scale, display will show, Type, Capacity & Increment, Calibration and Zero 5.3.7.5 Go to Calibration with down V Key and press enter 5.3.7.6 key.



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5377	Press down \vee key 4 times and then press solution Key		
5.3.7.8	Display show TEST LOAD, Press enter key		
5.3.7.9	Set the weight 100 Kg (10% of balance capacity) using number	s key. Press C to delete the numbers if	
	required.		
5.3.7.10	Put standard 100.0 kg on balance platform and Press enter key	· •-	
5.3.7.11	Press start key to start calibration,		
5.3.7.12	Display will show Capture Span OK.		
5.3.7.13	Press key 3 times to go to home screen.		
5.3.7.14	Display will show standard weight 100.0 kg.		
5.3.8	Weighing balance 2000.0 Kg (Make-Mettler Toledo)		
5.3.8.1	Operate the balance as per step no. 5.2		
5.3.8.2	Ensure the cleanliness of the weighing balance		
5.3.8.3	Ensure spirit level of balance is in center.		
5.3.8.4	Switch "ON" the balance, display shows 0.0 kg.		
5.3.8.5	Long press the ' Enter Key' display will show "ENTER CO	ODE"	
5.3.8.6	Again press ' 🕒 Enter Key'.		
5.3.8.7	Display will show as Scale, Application, Terminal and Commun	nication	
5.3.8.8	Press ' 🕞 Enter Key' on scale and display will show,		
	Scale Identification		
	Linear and Calib.		
	Display unit and Res.		
	Zero		
5.3.8.9	Again press ' 🕒 Enter Key' on scale and display will show,		
	Identification		
	Linear and Calib.		
	Display unit and Res.		
	Zero		



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- 5.3.8.10 Move the cursor to Linear and Calib. With the help of up and down key and press ' Enter Key'. Balance will show Last Calibration
 - Auto print Calib.

Perform Calib.

- Span adjustment
- 5.3.8.11 Move the cursor to Perform Calib. And press OK.
- 5.3.8.12 Display will show 'PRELOAD'. Again press OK.
- 5.3.8.13 Set the weight 200.0 kg with the help of up and frown key. \prod
- 5.3.8.14 Now place 200.0 kg weight on balance platform (10% of total balance capacity).
- 5.3.8.15 Display will show 200.0 $^{\circ}$.
- 5.3.8.16 Press OK.
- 5.3.8.17 Display will show 'PRELOAD'.
- 5.3.8.18 Remove weight from platform and press OK. Display will show 'PASS' or 'ABORT'. If display show PASS it means calibration is successful. Press power key and system will ask to save the settings. Press 'OK' to save the settings.
- 5.3.8.19 Display will show 0.0 kg.
- 5.3.8.20 If display show 'ABORT' repeat the calibration process 5.3.7.5 to 5.3.7.18.

5.4 **Daily Verification:**

- 5.4.1 Operate the balance as per step no. 5.2.
- 5.4.2 Ensure the cleanliness of the weighing balance.
- 5.4.3 Check the spirit level, bubble position should be in center. If bubble position is not in center, correct it by adjusting the base screws. Record it on the respective Annexure as 'OK /Not OK.
- 5.4.4 Switch "ON" the balance, display shows 0.0 appear.
- 5.4.5 Perform the daily verification as follows:

Balance Capacity	Operating Range (1 to 80% of balance	Standard Weights to be used for calibration
	capacity)	



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6000 g	60.0 g to 4800.0 g	60.0 g	1200.0 g	3000.0 g	4800.0 g
60.000 Kg	0.600 Kg to 48.000 Kg	0.600 Kg	12.000 g	30.000 Kg	48.000 g
150.00 Kg	1.50 Kg to 120.00 Kg	1.50 Kg	30.00 Kg	75.00 Kg	120.00 g
300.00 Kg	3.00 Kg to 240.00 Kg	3.00 Kg	60.00 Kg	150.00 Kg	240.00 g
1000.0 Kg	10.0 Kg to 800.0 Kg	10.0 Kg	200.0 Kg	500.0 Kg	800.0 Kg
2000.0 Kg	20.0 Kg to 1600.0 Kg	20.0 Kg	400.0 Kg	1000.0 Kg	1600.0Kg

5.4.6 Put the standard weight on the weighing platform as per mention table for respective capacity balance.

5.4.7 Record the readings in the respective format as given in the respective annexure Annexure-I "Daily Balance Verification Record (6000 g)", Annexure-II "Daily Balance Verification Record (60 Kg)", Annexure-III "Daily Balance Verification Record (150 Kg)", Annexure-IV "Daily Balance Verification Record (1000 Kg)" and Annexure-VI "Daily Balance Verification Record (2000 Kg)".

Note: Reading observed on balance should not vary more than 0.1 % of the standard weight will that used for calibration. In case, if 0.1 % tolerance is not practically readable on balance, least count of that particular balance shall be considered as tolerance limit for the respective standard weight or nearest possible readable weight w.r.t. 0.1 % tolerance shall be considered as tolerance for respective standard weight.

- 5.4.8 A balance is considered satisfactory for use if the readings are found within acceptance limit of the balance as mentioned in the respective Annexure for a balance.
- 5.4.9 If the reading is exceeding the acceptable limit, write remarks as 'General Calibration Required'. Perform general calibration and perform daily verification. If then also balance do not measure weight within limit affix "OUT OF CALIBRATION" tag and inform the head of the department and engineering department for necessary action and record the same in balance calibration record.
- 5.4.10 Do not use a balance till the problem is rectified.
- 5.4.11 After rectification, re-calibrate the balance before use and enter the same in the respective Annexure.
- 5.4.12 Correct the zero error by pressing the \bigcirc or T icon.
- 5.4.13 Use the Standard weights duly certified by the Weights and Measures Department.
 Note: 1) Daily verification for 6000 g weighing balance is to be updated in Annexure-I Daily Balance Verification Record (6000 g)".



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2) Daily verification for 60 Kg weighing balance is to be updated in Annexure-II "Daily Balance Verification Record (60 Kg)".

- Daily verification for 150 Kg weighing balance is to be updated in Annexure-III "Daily Balance Verification Record (150 Kg)".
- 4) Daily verification for 300 Kg weighing balance is to be updated in Annexure-IV "Daily Balance Verification Record (300 Kg)".
- 5) Daily verification for 1000 Kg weighing balance is to be updated in Annexure-V "Daily Balance Verification Record (1000 Kg)".

6) Daily verification for 2000 Kg weighing balance is to be updated in Annexure-VI "Daily Balance Verification Record (2000 Kg)".

5.5 Monthly Eccentricity Check:

- 5.5.1 Operate the balance as per step no. 5.2.
- 5.5.2 Perform the General calibration as per step no 5.3 & 5.4 for respective capacity weighing balances.
- 5.5.3 Now select the standard weight of checking the Eccentricity accuracy for balance based on the capacity as mentioned below:

Balance capacity	Standard weights to be used	Tolerance (± 0.1%)	Acceptance Limit
6000 g	600 g	± 0.5 g	599.5 g – 600.5 g
60 Kg	6 Kg	$\pm 0.006 \text{ Kg}$	5.994 Kg – 6.006 Kg
150.0 Kg	15 Kg	± 0.02 Kg	14.98 Kg – 15.02 Kg
300.0 Kg	30 Kg	$\pm 0.03 \text{ Kg}$	29.97 Kg – 30.03 Kg
1000.0 Kg	100 Kg	± 0.1 Kg	99.9 Kg – 100.1 Kg
2000.0 Kg	200 Kg	$\pm 0.2 \text{ Kg}$	199.8 Kg – 200.2 Kg

- 5.5.4 Place the standard weights at five different points of the platform (all the four corners and middle) for the checking the eccentric accuracy of the balance and record the same in Annexure- VII "Monthly Balance Eccentricity Inspection Record".
 - 1. : Left (upper corner) of platform
 - 2. : Left (Lower corner) of platform



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3. : Right (Upper corner) of Platform4. : Right (Lower corner) of platform5. : Middle of platform						
5.5.5 Display weight at five locations shall be approximately same. R	eading observed on balance should not					

vary more than 0.1 % of the standard weight.

- 5.5.6 If the results are exceeding the acceptable limit, inform to maintenance department for necessary corrective action.
- 5.5.7 Ensure that the standard weights are certified by the measures department.
- 5.5.8 Monthly Eccentricity of the balance capacity 6000 g, 60 Kg, 150 Kg,300 Kg, 1000 Kg & 2000 Kg to be done in the start of shift and record in Annexure –VII "Monthly Balance Eccentricity Inspection Record.
 - 1. The standard weights used for calibration of the balances should be cleaned with a dry lint free cloth and are to be kept in Weight Box / trolley. Handling of standard weights should be done with cotton gloves.
 - 2. Daily verification is to be performed in start of day shift.

5.6 **Container weighing and printing procedure on Mettler Toledo, Model- IND570**

- 5.6.1 Start the balance as per step 5.2. Display will show 0.000 kg.
- 5.6.2 Press 1 symbol key to start the weighing and printing mode then press enter key.
- 5.6.3 System will ask for user name and password.
- 5.6.4 Use **1**symbol key to change the writing mode in alphabets and numeric.
- 5.6.5 Press enter key to take the cursor in user name column. Enter user name and again press enter. Cursor will move to password then enter password.
- 5.6.6 Press enter key then press OK symbol key.
- 5.6.7 Display will show container weighing, press OK symbol key.
- 5.6.8 Display will show Gross, End batch and Tare symbols.
- 5.6.9 Press Tare key. System will ask for product information, press enter key.
- 5.6.10 Now enter Product Name and Batch No. as per BMR. Press OK symbol key.
- 5.6.11 Display will show "Place empty container on scale and press OK".
- 5.6.12 Place empty container with polybag on balance platform and press OK symbol key.
- 5.6.13 System will ask for Tare ID. Press Enter to add Tare ID.



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- 5.6.14 For LHS container enter Tare ID as L1, L2, L3 and for RHS container enter Tare ID as R1, R2, R3......
- 5.6.15 After providing Tare ID press enter key, then press Tare symbol key. Tare weight of this container will be stored in system.
- 5.6.16 To continue taring of containers again press enter key, place empty container, provide Tare ID and press OK symbol key.
- 5.6.17 Take tare weight of two containers and place L1 container on LHS and R1 on RHS of compression machine.
- 5.6.18 To take gross weight press back symbol key. System will exit from tare weighing.
- 5.6.19 Press Gross symbol key. Display will show , at and OK key.
- 5.6.20 Press 'All' symbol key. Display will show tare weight of all containers with Tare ID.
- 5.6.21 Select the Tare ID from up $^{\Lambda}$ and down \vee key and press OK symbol key.
- 5.6.22 Put the filled container on balance platform and press 'Print' key. Printout will come with Serial No., gross, tare and net weight of that container. System will ask for reprint the slip. Press 'No' key to continue.
- 5.6.23 Put the duly signed weight slip of individual container in between the two polybags of container.
- 5.6.24 To re-enter tare weighing system for taking tare weight of next containers press back symbol key and enter tare weighing system as per step 5.6.12 to 5.6.15.
- 5.6.25 Take Gross weight of containers online to avoid the mix up of containers with different Tare IDs.
- 5.6.26 Take printouts of all containers throughout the batch.
- 5.6.27 After completion of batch press back symbol key. Display will show Gross, End Batch and Tare symbols.
- 5.6.28 Press 'End Batch' key. System will ask for confirmation. Press 'Yes' to confirm end batch.
- 5.6.29 System will print Gross, Tare and Net wt. of all containers from 1 to last container along with total of gross wt. Tare wt. and Net wt. System will ask for reprint the slip. Press 'No' key to exit the container weighing system.
- 5.6.30 Attach duly signed final weight slip of all containers with BMR.

5.7 **Precaution**

- 5.7.1 Keep the balance on stable surface
- 5.7.2 Ensure no strong wind drift / wind currents.



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- 5.7.3 Don't put any object on the balance while the scale is in off position.
- 5.7.4 Warm up the balance for few seconds before operation.
- 5.7.5 Do not apply strong solvent for cleaning the scale.
- 5.7.6 Avoid to apply the over load, it may damage the load cell permanently.
- 5.7.7 Handling of standard weights should be done with cotton gloves.

6.0 ABBREVIATION (S):

- 6.1 SOP : Standard Operating Procedure
- 6.2 Wt. : Weight
- 6.3 BMR : Batch Manufacturing Record

7.0 **REFERENCE** (S):

- 7.1 SOP: Status labeling.
- 7.2 SOP: Cleaning of Production Area.

8.0 ANNEXURE (S):

Annexure no.	Title of Annexure	Format No.	Mode of execution
Annexure-I	Daily Balance Verification Record (6000 g).		Logbook
Annexure-II	Daily Balance Verification Record (60 Kg).		Logbook
Annexure-III	Daily Balance Verification Record (150 Kg).		Logbook
Annexure-IV	Daily Balance Verification Record (300 Kg).		Logbook
Annexure-V	Daily Balance Verification Record (1000 Kg).		Logbook
Annexure-VI	Daily Balance Verification Record (2000 Kg).		Logbook
Annexure-VII	Monthly Balance Eccentricity Inspection		Logbook
	Record		LUGUUUK

- 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 (19)



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10.0 REVISION HISTORY:

S.No.	Version No.	Change Control No.	Reason (s) For Revision	Details of Revision	Effective Date
1.	00		New SOP	NA	

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ANNEXURE I

Daily Balance Verification Record (6000 g)

Location		Balance ID No.	
Least Count	0.5 g	Capacity	6000 g

Month / Year: _____

Standard weights			Tolerance		Acceptance limit					
Lower (1%)		60.0 g			$\pm 0.06 \approx \pm 0.5 \ g$			59.5 g – 60.5 g		
Middle-I (20	%)		1200.0 g		± 1.2 g			1198.8 g -	- 1201.2 g	
Middle-II (50	0%)		3000.0 g		± 3.0 g			2997.0 g -	- 3003.0 g	
Upper (80 %)		4800.0 g		± 4.8 g			4795.2 g -	- 4804.8 g	
Date	C			R	eading sh	own on Baland	ce		Remarks	Ckd By
Date	Spirit Le	evel	60.0 g		1200.0 g	3000.0 g		4800.0 g	Kellial K5	CKU. Dy



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ANNEXURE II Daily Balance Verification Record (60 Kg)

Location		Balance ID No.	
Least Count	0.002 Kg	Capacity	60 Kg

Month / Year: _____

Standard weights				Т	olerance		Acceptance limi	it	
Lower (1 %)		0.60	00 Kg		± 0.0006 ?	$\pm 0.0006 \approx \pm 0.002 \ Kg$		0.598 Kg – 0.602 Kg	
Middle-I (20	%)	12.0	000 Kg		± 0.012 Kg		11.988 Kg –	11.988 Kg – 12.012 Kg	
Middle-II (50)%)	30.0	000 Kg		± 0.030 K	g	29.970 Kg -	30.030 Kg	
Upper (80 %)	48.0	000 Kg		± 0.048 K	g	47.952 Kg -	48.048 Kg	
Date	Spirit Le	evel]	Reading sh	own on Baland	ce	Remarks	Ckd. By
			0.600 Kg	12	.000 Kg	30.000 Kg	48.000 Kg		

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ANNEXURE III

Daily Balance Verification Record (150 Kg)

Location		Balance ID No.	
Least Count	0.02 Kg	Capacity	150 Kg

Month / Year: _____

	Standar	d wei	ghts		Tolerance			Acceptance limit			
Lower (1 %))		1.50 Kg		± 0.002 ≈	$\pm 0.002 \approx \pm 0.02 \ Kg$			1.48 Kg - 1.52 Kg		
Middle-I (20)%)		30.00 Kg		± 0.03 K	g		29.97 Kg -	- 30.03 Kg		
Middle-II (5	0 %)		75.00 Kg		± 0.075 H	$Kg \approx \pm 0.07 Kg$		74.93 Kg -	- 75.07 Kg		
Upper (80 %)		120.00 Kg		± 0.12 K	g		119.88 Kg	- 120.12 Kg		
Date	a			R	eading sh	own on Balanc	e		Romarks	Ckd By	
Date	Spirit Le	evel	1.50 Kg	•	30.00 Kg	75.00 Kg		120.00 Kg	Kennai KS	CKU. Dy	

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ANNEXURE IV

Daily Balance Verification Record (300 Kg)

Location		Balance ID No.	
Least Count	0.02 Kg	Capacity	300 Kg

Month / Year: _____

Standard weights			Tolerance			Acceptance limit				
Lower (1 %)			3.00 Kg		± 0.003 ≈	$z \pm 0.02 \text{ Kg}$		2.98 Kg -	3.02 Kg	
Middle-I (20	%)		60.00 Kg		$\pm 0.06 \text{ K}_{\odot}$	g		59.94 Kg – 60.06 Kg		
Middle-II (50	0%)		150.00 Kg		± 0.15 Kg	g		149.85 Kg	– 150.15 Kg	
Upper (80 %)		240.00 Kg		± 0.24 K	g		239.76 Kg	– 240.24 Kg	
Date	Spirit Le	evel		R	leading sh	own on Balanc	ce		Remarks	Ckd. By
			3.00 Kg	(60.00 Kg	150.00 Kg		240.00 Kg		

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ANNEXURE V

Daily Balance Verification Record (Mettler Toledo 1000 kg)

Location		Balance ID No.	
Least Count	0.1 Kg	Capacity	1000 Kg

Month / Year: _____

Standard weights					Tolerance			Acceptance limit			
Lower (1%)		10.0) Kg		± 0.01≈	± 0.1 Kg	9	9.9 Kg – 10.1 Kg			
Middle-I (20	%)	200	.0 Kg		± 0.2 Kg	± 0.2 Kg		199.8 Kg – 200.2 Kg			
Middle-II (50	0%)	500	.0 Kg		± 0.5 Kg		4	99.5 Kg -500.5	5 Kg		
Upper (80 %)	800	.0 Kg		± 0.8 Kg		7	99.2 Kg – 800.	8 Kg		
Date	Spirit Le	evel		R	eading sh	own on Bala	inc	e	Remarks	Ckd. By	
			10.0 Kg	20	0.0 Kg	500.0 Kg		800.0 Kg			
l								l			

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ANNEXURE VI

Daily Balance Verification Record (2000 Kg)

Location		Balance ID No.	
Least Count	0.1 Kg	Capacity	2000 Kg

Month / Year: _____

Standard weights				Tolerance			Acceptance limit				
Lower (1%)		20.0) Kg		± 0.02≈	± 0.1 Kg	1	19.9 Kg – 20.1 Kg			
Middle-I (20	%)	400	.0 Kg		± 0.4 Kg	± 0.4 Kg		399.6 Kg – 400.4 Kg			
Middle-II (50)%)	100	0.0 Kg		± 1.0 Kg		9	99.0 Kg –1001	.0 Kg		
Upper (80 %)	160	0.0 Kg		± 1.6 Kg		1	598.4 Kg – 160	01.6 Kg		
Date	Spirit Le	evel		R	eading sh	own on Bala	nc	e	Remarks	Ckd. By	
			20.0 Kg	40	00.0 Kg	1000.0 Kg		1600.0 Kg			

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ANNEXURE VII

Monthly Balance Eccentricity Inspection Record

Location	Balance ID No.	
Capacity	Least Count	

Month / Year:

the second

Standard Weight Used: _____

Certificate No.:_____

Balance capacity	Standard weights to be used	Tolerance (± 0.1%)	Acceptance Limit
6000 g	600 g	± 0.5 g	599.5 g – 600.5 g
60 Kg	6 Kg	$\pm 0.006 \text{ Kg}$	5.994 Kg – 6.006 Kg
150.0 Kg	15 Kg	± 0.02 Kg	14.98 Kg – 15.02 Kg
300.0 Kg	30 Kg	$\pm 0.03 \text{ Kg}$	29.97 Kg – 30.03 Kg
1000.0 Kg	100 Kg	± 0.1 Kg	99.9 Kg – 100.1 Kg
2000.0 Kg	200 Kg	± 0.2 Kg	199.8 Kg – 200.2 Kg

General Calibration Performed: Yes/No

The platform weighing balance

Date	Spirit	Observed weight (in Kg)					Done by	Ckd. By
	Level*	1	2	3	4	5		
		Left (upper	Left	Right	Right	Middle of		
		corner) of	(Lower corner)	(Upper corner)	(Lower corner) of	platform		
		platform	of platform	of Platform	platform			

Note: *Record the Spirit level as Ok / Not Ok (Bubble position in center)
