STANDARD OPERATING PROCEDURE

Department: Production	**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector	**Effective Date:**
Supersedes: Nil	**Review Date:**
Issue Date:	**Page No.:**

1.0   OBJECTIVE:

1.1   To lay down a procedure for cleaning and operation of Checkweigher cum metal detector.

2.0   SCOPE:

2.1   This procedure is applicable for cleaning and operation of Checkweigher cum Metal Detector in production department.

3.0   RESPONSIBILITY:

3.1   TA and TTA   : Cleaning and operation.

3.2   Officer, Executive-Production : Supervision.

3.3   IPQA   : Verification and implementation of SOP.

3.4   Manager-Production   : SOP compliance.

4.0   DEFINITION (S):

4.1   NA

5.0   PROCEDURE:

5.1   **CLEANING:**

5.1.1   Ensure that all the materials of previous batch are removed from the packing cubicle.

5.1.2   Remove "EQUIPMENT STATUS " label and affix "TO BE CLEANED" label on the machine with date and sign of the production officer.

5.1.3   Switch "OFF" the all-utility supply before cleaning.

5.1.4   Clean the control panel with clean and dry lint free cloth.

5.1.5   Clean the top and outer surface of machine with the dry lint free cloth.

5.1.6   Clean inside surface of metal detector and Checkweigher, conveyer belts and its assembly, by dry lint free cloth.

5.1.7   Clean the rejection tray with dry lint free cloth.

5.1.8   Replace "TO BE CLEANED" label and affix "CLEANED" label on the machine with date and sign of the production officer.

	PHARMA DEVILS	
	PRODUCTION DEPARTMENT	

	STANDARD OPERATING PROCEDURE	
Department: Production		**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector		**Effective Date:**
Supersedes: Nil		**Review Date:**
Issue Date:		**Page No.:**

5.1.9   Record the cleaning activity in equipment usage log as per SOP "Making entries in equipment usage and cleaning log sheet."

5.1.10   Clean the surrounding area as per SOP "Cleaning of production area".

5.2   **Metal Detector Setting Procedure:**

5.2.1   Turn "ON" the ON/OFF knob of Checkweigher, metal detector will turn "ON" and opening screen will displayed on the screen.

5.2.2   Start conveyor belt by pressing conveyer start button.

5.2.3   Press "SET UP" on the control panel. Red color "LED" light will glow.

5.2.4   Enter the password by pressing "UP/DOWN" arrow key on the control panel. For confirmation press "ENTER".

5.2.5   Press "RHS" arrow and "DEFECT THR" option will be opened and press "ENTER" key then set minimum possible threshold of machine which is 50.

5.2.6   Pass the five containers contain product separately from metal detector.

5.2.7   Record the S_{max} value each times in respective BPR.

5.2.8   Press "RHS" arrow key. Product phase degree screen will open. Press "ENTER" key. Curser will appear. Set the product phase degree by trial and error method such that the product signal value should be minimum and signal value with bids should be maximum. Press "DISPLAY" key.

5.2.9   Pass bottle contain product with Ferrous bids 1.0 mm disc, record S_{max} value

5.2.10   Pass product with Non Ferrous bids 1.5 mm disc, record S_{max} value.

5.2.11   Pass product with SS bids 2.0 mm disc,record S_{max} value.

5.2.12   Set the threshold value in between the maximum S_{max} value of product and minimum S_{max} value of bids.

5.2.13   Press "SET UP" on the control panel. Red color "LED" light will glow.

5.2.14   Enter the password by pressing "UP/DOWN" arrow key on the control panel. For confirmation press "ENTER".

5.2.15   Press "RHS" arrow. Edit product screen will open. Press "ENTER". Edit product name, edit the product name by pressing "UP/DOWN" arrow key.

	PHARMA DEVILS	
	PHARMA DEVILS **PRODUCTION DEPARTMENT**	

STANDARD OPERATING PROCEDURE		
Department: Production	**SOP No.:**	
Title: Cleaning and Operation of Checkweigher cum Metal Detector	**Effective Date:**	
Supersedes: Nil	**Review Date:**	
Issue Date:	**Page No.:**	

5.2.16   Press "RHS" arrow. Edit batch number screen will open. Press "ENTER". Edit batch number, edit the batch number by pressing "UP/DOWN" arrow key.

5.2.17   Press "RHS" arrow key. Operator delay screen will open. Load the operator delay by pressing "UP/DOWN" arrow key.

5.2.18   Press "RHS" arrow key. Hold delay screen will open. Load the hold delay by pressing "UP/DOWN" arrow key.

5.2.19   Press "RHS" arrow key. Product limit screen will open. Load the product limit signal by pressing "UP/DOWN" arrow key.

5.3   **Check Weigher Setting**

5.3.1   Open the compressed air valve and ensure that the compressed air pressure should not be less than 5 Kg/cm^2.

5.3.2   Switch "ON" the control panel of checkweigher and wait till it shows product detail screen will appear.

5.3.3   Press "setup 1" to show the display menu.

5.3.4   Press "SETUP 1" Key on the operating panel, display will show.

SELECT PRODUCT

VIEW/EDIT PRODUCT DATA

DYNAMIC COMPENSATION

CALIBRATION

5.3.5   To set the new product bring the cursor to view/edit product data, with the help of arrow key.Press "ENTER".Display will shows:

PRODUCT NAME   #

BATCH NO.   #

TARGET WEIGHT   #

PRODUCT LENGTH   #

UPPER LIMIT   #

LOWER LIMIT   #

SPEED   #

STANDARD OPERATING PROCEDURE		
Department: Production		**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector		**Effective Date:**
Supersedes: Nil		**Review Date:**
Issue Date:		**Page No.:**

OPERATE DELAY (MD)	#
OPERATE DELAY (CW)	#

5.3.6   Bring the cursor to "PRODUCT NAME" and press enter key,display will show "ENTER PASSWORD". Feed the password and press, "ENTER".Feed the required

Product name by using the arrow keys.

5.3.7   Bring the cursor to "BATCH NO" and press enter key. Feed the required batch no. by using the numeric keys and arrow keys foe enter of alphabets.

5.3.8   Bring the cursor to "TARGET WEIGHT" and press enter key. Take the average gross weight of the 20 good filled Containers and feed the value by using numeric key and press "Enter".

5.3.9   Bring the cursor to ''PRODUCT LENGTH'' and press enter key. Feed the diameter of Containers by using the numeric key.

5.3.10   Bring the cursor to "UPPER LIMIT'' and press ''ENTER'' key then feed the required value by the numeric key.(Upper limit is the maximum allowable weight from ''TARGET WEIGHT'' and is TARGET WEIGHT +1 g.

5.3.11   Bring the cursor to "LOWER LIMIT'' and press enter key. Feed the required value by using the numeric keys.(Lower limit is the minimum allowable weight from ''TARGET WEIGHT'' and is TARGET WEIGHT -1g.

5.3.12   Bring the cursor to "SPEED'' and press enter key. Feed the required speed by using the numeric keys.

5.3.13   Bring the cursor to "MD DELAY" and press enter key. Feed the required value by using the numeric keys. ''MD delay'' is the delay for reject mechanism to be activated after the object leaves the weighing conveyer.Feed trhe MD delay in milliseconds by pressing numeric key and pressure key. Higher the speed Lower the ''MD delay''.

5.3.14   Bring the cursor to "CW DELAY'' and press enter key. Feed the required value by using the numeric keys. It is delay for reject mechanism to remain in "ON'' condition.

5.3.15   Press " SET UP 1" key for display.

5.3.16   Bring the cursor to "DYNAMIC COMPENSATION" and press enter key. It becomes "ON" .Dynamic compensation is used to compensate the weight difference of the pack when it is in motion and in static condition.

	PHARMA DEVILS	
	PRODUCTION DEPARTMENT	

	STANDARD OPERATING PROCEDURE	
Department: Production		**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector		**Effective Date:**
Supersedes: Nil		**Review Date:**
Issue Date:		**Page No.:**

5.3.17   Bring the cursor to "NEW DYNAMIC COMPENSATION" and press enter key. Pass the earlier Containers 20 times. The conveyor will stop automatically after 20th time and display will shows the compensation checkweigher is ready with dynamic compensation.

5.3.18   Bring the cursor to "SET ZERO" and press enter key. After delay it will show 0000.0 g.

5.3.19   Now machine is ready for operation.

   NOTE: Dynamic compensation depends on speed of the conveyor target weight and product length so if either of these are changed or in case of power failure dynamic compensation has to be done again.

5.4   **OPERATION:**

5.4.1   Remove the "CLEANED" status label and affix "EQUIPMENT STATUS'' label on the machine.

5.4.2   Press "SETUP 1" key.

5.4.3   Bring the cursor to "SELECT PRODUCT'' and press enter key. Bring the cursor to the product, which is to be weighed and press enter key.

5.4.4   Press "WEIGHT DISPLAY" key 0000.0 g appears on screen, then press "SET ZERO".

5.4.5   Before starting the operation ensure that the Containers taken for the setting are removed from the line.

5.4.6   Press the "CONVEYOR START" key to start the conveyor.

5.4.7   Start passing the Containers on the checkweigher.

5.4.8   Ensure that the tower lamp indications and its rejection mechanism is functioning by passing the Containers with less weight and higher weight as per the frequency given in the BPR.

5.4.9   Tower lamp in case of correct fill value glows green lamp.

5.4.10   At the end of activity, press "CONVEYOR STOP" to stop the conveyor. Switch "OFF" the mains of the checkweigher and close the compressed air valve.

5.4.11   Wait till the white line on the screen disappears to restart the checkweigher.

PHARMA DEVILS
PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE	
Department: Production	**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector	**Effective Date:**
Supersedes: Nil	**Review Date:**
Issue Date:	**Page No.:**

5.4.12   Check the rejection of the checkweigher and check the Containers for correct fill value. If any discrepancy is observed take corrective action.

5.5   **CHALLENGE TEST PROCEDURE:**

5.5.1   Pass the normally filled Containers (as per pack size mentioned in BPR) through Checkweigher.

5.5.2   The challenge test "PASS" if bottle pass through checkweigher and record the observation in BPR.

5.5.3   Remove some (approx. more than 1 g) tablets from bottle and pass this container from Checkweigher.

5.5.4   The challenge test "PASS" if bottle rejected by Checkweigher and record the observation in BPR.

5.5.5   Put more tablets (approx. more than 1 g) tablets into bottle and pass this container with more tablets from checkweigher to perform challenge test.

5.5.6   The challenge test "PASS" if bottle rejected by checkweigher and record the observation in BPR.

      Frequency: At start, after every one hour,at the end of operation and after any maintenance breakdown.

5.7   **Verification of checkweigher:**

5.7.1   Verify the checkweigher at start of operation by standard weight of 20 gm,400 gm, 1000 gm, and 1600 gm record the observation in Annexure I

5.7.2   Weight and measurement department on annual bases does calibration of checkweigher.

6.0   ABBREVIATION (S):

6.1   Smax : Signal Maximum

6.2   SOP   :Standard Operating Procedure

6.3   MT Delay: Metal Detector Time Delay

6.4   BPR: Batch Packing Record

6.5   RHS: Right Hand Side

PHARMA DEVILS
PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Production	**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector	**Effective Date:**
Supersedes: Nil	**Review Date:**
Issue Date:	**Page No.:**

6.6   CW Delay: Checkweigher Time Delay

6.7   S.S- Stainless Steel

6.8   V/v – volume/volume

6.9   IPA- Isopropyl alcohol

6.10   TTA – Training Technical Associate.

6.11   TA - Technical Associate.

7.0   REFERENCES (S):

7.1   SOP: Making entries in equipment usage and cleaning log sheet.

7.2   SOP: Cleaning of production area.

8.0   ANNEXURE (S):

Annexure no.	Tittle of Annexure	Format no.	Mode of Execution
Annexure I	Cleaning check list Checkweigher cum metal detector.		Logbook

9.0   DISTRIBUTION:

9.1   **Master Copy:** Quality Assurance

9.2   **Controlled copy (S) :** Production department (01),QA department (01)

9.3   **Reference copy (S) :** Production department (01)

10.0   REVISION HISTORY:

S.No.	Version No.	Change control No.	REASON (S) FOR REVISION	DETAILS OF REVISION	Effective Date

STANDARD OPERATING PROCEDURE		
Department: Production		**SOP No.:**
Title: Cleaning and Operation of Checkweigher cum Metal Detector		**Effective Date:**
Supersedes: Nil		**Review Date:**
Issue Date:		**Page No.:**

ANNEXURE I

CHECKWEIGHER DAILY VERIFICATION

Department: Packing		Capacity: 2000 g	Least Count: 0000.2 g
Equipment I.D.No.		Standard Weight Box ID	
Tolerance: Least count of the balance or 0.1% of the standard weight whichever is higher			
Frequency: Daily before start of operation.			

STANDARD WEIGHT	TOLERANCE	ACCURACY LIMIT
20 g	± 0.02g	0019.8g to 0020.2g
400 g	± 0.4g	0399.6g to 0400.4g
1000 g	± 1.0g	0999.0g to 1001.0g
1600 g	± 1.6g	1598.4g to 1601.6g

Date	#Spirit level	#Zero Error	Reading shown on Checkweigher				#Remark	Checked by
			20.0 gm	400.0 gm	1000.0 gm	1600.0 gm		

Put 'OK' or 'NOT OK' in observation.