



PHARMA DEVILS

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Production

SOP No.:

Title: Cleaning, Verification & Operation of Load Cell

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 Load cell.

2.0 SCOPE:

2.1 This procedure is applicable to the Cleaning, Calibration and Operation of Load cell in production area.

3.0 RESPONSIBILITY:

3.1 Technical associate Production : Cleaning and Operation

3.2 Officer and Executive : Supervision

3.3 IPQA Officer and Executive : For Verification

3.4 Head Production : SOP compliance

4.0 DEFINITION (S):

4.1 NA

5.0 PROCEDURE:

5.1 CLEANING

5.1.1 Remove the cladding from the foot of the tank.

5.1.2 Dry - Clean the Cladding, Load cell and panel of load cell by lint free duster.

5.1.3 Reassemble the cladding to the foot of the tank.

Frequency: - After each Cleaning of the Tank.

5.2 Operation of Load Cell for Sugar dissolving Tank (Capacity – 2000 Liters)

5.2.1 Switch 'ON' the electric panel of the Tank.

5.2.2 The different button on the load cell panel are as –

HOLD	NETT / GROSS	TARE	ZERO
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HOLD: Used to hold the present weight on display. Same key to be used again to release the HOLD operation.

NETT / GROSS: This command is used to change the display from showing Nett weight to Gross weight and Vice Versa.



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TARE: When pressed, the displayed gross weight is stored in memory as Tare weight for nett weight calculation. It is possible to tare the weight up to 100 % of the gross capacity. (i.e. the total capacity of the Load Cell is capacity x 2 in terms of weight.)

ZERO: When pressed, the displayed reading becomes zero.

5.2.3 Start operation after stabilized the reading on zero if not then set Zero with the help of Zero Button on the panel.

5.2.4 The readings with respect to the weight are shown on the panel, Record the reading of the weight on the respective BMR if required.

5.3 Load cell weight verification

5.3.1 Physically verify the tank is cleaned.

5.3.2 Check the calibration status of the weighing balance, it should be calibrated.

5.3.3 Check the temperature of purified water is $25 \pm 1^\circ\text{C}$, if not, maintain it.

5.3.4 Place the SS container on the weighing balance and tare it.

5.3.5 Weigh 49.80 kg of purified water , it will be equivalent to 50 liters of purified water (considering density of water 0.99602 gm/ml)

5.3.6 Manually Transfer the purified water to the tank.

5.3.7 Ensure that there is no loss during transfer.

5.3.8 Verify the weight on the load cell and record the observation in Annexure-I.

5.3.9 The difference between theoretical weight (Tw) and checked weight (Cw) should be in prescribed tolerance limits.

5.3.10 Repeat the step no.5.3.3 to 5.3.9 with 49.80 kg purified water till required volume of purified water is transferred to the tank i.e. 3000 liter for 3000 liter tank, 2000 liter for 2000 liter Tank & 1000 liter for 1000 liter tank.

5.3.11 If the verification is satisfactory, affix the calibration label to the side of the load cell panel as per Reference SOP.

5.3.12 If the verification is not satisfactory, the apparatus shall be rectified & calibrated by engineering department Re verify the apparatus after maintenance.

Frequency: Once in a year.

5.4 **Operation of Load Cell for Manufacturing Tank (Capacity – 1000 Liters & 3000 Liters)**



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5.4.1 Switch 'ON' the Mains selector switch situated on the panel board, the screen on the panel is starts automatically.

5.4.1.1 The functions provided on the main screen and load cell panel board are :



5.4.1.2 By touching respective option on screen the display produce following result -



Screen weight becomes zero.



When touch on screen the display gross weight is stored in memory as tare weight for net weight calculation.



Preset tare – Not for use.



Not in use.



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For operation on Auto Mode or on Manual Mode.



When press this button on panel board the operation stops Immediately



Indicator for emergency switch(glows Red)



Use this push button for start the operation.



Use this push button for stop the operation.



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Use this selector switch for 'ON' and 'OFF' the main supply for the Load cell panel.



When glows (red) indicates the coarse valve is open.



When glows (red) indicates the fine valve is open.



Use this selector switch for 'ON' and 'OFF' the pump.



Use this functional key switch for start the pump.



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5.4.2 Start the operation after stabilizes the reading on zero, if not then set zero by touching the zero option on screen.

5.4.3 On main screen touch 'Menu', it is password protected, enter the password 'XXXXX' (Refer SOP) the screen will show :-

Main Menu

Recipe

System setup

Status

Totals

Info

Home

5.4.3.1 Touch Recipe ,the screen will show:-

Select Task

All Task

Task 1

Back

5.4.3.1.1 Touch All task, the screen will show :-

Select Recipe

Recipe Number

Number



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5.4.3.1.2 Select the Recipe number by touching edit option or by touching .
10 Numbers of Recipes can be use for feeding different values.
For recipe Number 1 touch 'OK'

5.4.3.1.3 Touch Recipe then touch Task 1,the screen will show :
Recipe Number
Name

5.4.3.1.4 Touch Edit, the screen will show :
Edit Recipe fields 001-005

Touch the first edit option (it is required quantity of the sorbitol in kilogram) the screen will show :-

Edit Recipe fields

Min. 0.0
Max. 99999.9
Feed the value by editing it and then touch 'OK'

5.4.3.1.5 Touch second edit option on screen, feed the quantity by touching the edit option (Keep this value up to 10, the quantity which is feed in this option is dispensed in slow speed from the pneumatic valve into the respective tank, this quantity is included with the required quantity)
Touch 'OK'

5.4.3.1.6 Touch the third edit option .The value must be 0.0 ensure it on the screen.
Touch 'OK', again touch 'OK' and again touch 'OK' for return to main screen.



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5.4.4 On the main screen touch the option Recipe, it is password protected, enter the password 'xxxxx', the screen will show :

Select Task

All Task

Task 1

Home

5.4.4.1 Touch the option All Task or Task 1, the screen will show :

Recipe 1	Recipe 2
Recipe 3	Recipe 4
Recipe 5	Recipe 6
Recipe 7	Recipe 8
Recipe 9	Recipe 10

The first blank option is Recipe Number 1.

5.4.4.2 Touch the Recipe Number which was selected on the 5.4.3.1.2 select this recipe by touching it, the screen will come to main screen

NOTE : The least count for Manufacturing tank 1000 liters, 2000 liters is 0.5 Kg & least count for manufacturing tank 3000 liters is 1.0 Kg.

6.0 ABBREVIATION(S):

- 6.1 Q.A : Quality Assurance.
6.2 SOP : Standard operating procedure
6.3 Kg. : Kilogram
6.4 Gm : Gram
6.5 ml : Milliliter
6.6 No. : Number
6.7 BMR : Batch Manufacturing Record

7.0 REFERENCES:



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7.1 SOP– Verification of sugar dissolving tank, manufacturing tank and Holding tank.

7.2 SOP– Procedure for password protection of PLC system.

8.0 ANNEXURE (S):

Annexure no.	Title of Annexure	Format No.	Mode of execution
Annexure-I	Verification record of load cell		Logbook

9.0 DISTRIBUTION (S):

9.1 Master copy : Quality Assurance

9.2 Controlled Copy(s) : Production department (1), Quality Assurance (1)

9.3 Reference copy (s) : Production department (1)

10.0 REVISION HISTORY:

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

