

	<b>Standard Operating Procedure</b> <b>Checkweigher and Metal Detection</b> <b>Combination Unit</b>		<b>SOP Number</b> <b>B-801</b>	<b>Revision</b> <b>0</b>
			<b>Effective Date</b> <i>09/21/23</i>	<b>Page</b> <b>Page 1 of 7</b>
<b>Written by/ Date</b> <i>Juan C. Benitez 09-12-23</i>		<b>Reviewed by/ Date</b> <i>[Signature] 09-12-23</i>		<b>Approved by/ Date</b> <i>[Signature] 09-12-23</i>
<b>Title: Gummy Production</b> <b>Manager</b>		<b>Title: Director of Operations</b>		<b>Title: VP of Quality &amp;</b> <b>Regulatory Affairs</b>

## 1.0 Purpose

This procedure defines the process of setup, operation, and cleaning of the combination system checkweigher and metal detection equipment.

## 2.0 Scope

This procedure applies to the checkweigher and metal detection system used during gummy packaging at Ion Nutritional Labs.

## 3.0 Responsibility

- 3.1 It is the responsibility of Production (Gummy) personnel to follow this procedure.
- 3.2 It is the responsibility of the Department Manager/Supervisor to implement this procedure and to ensure that it is being followed.
- 3.3 It is the responsibility of Gummy Management and/or Maintenance & Engineering personnel to keep this procedure aligned with current practices.
- 3.4 It is the responsibility of the Gummy Packaging Lead to complete verification of the proper function of the metal detection unit as required in the BPR.
- 3.5 It is the responsibility of the Gummy Packaging Lead to set the proper lower and upper weight limits as specified in the BPR.
- 3.6 It is the responsibility of QC to ensure that calibrations are completed per calibration program requirements.
- 3.7 It is the responsibility of Maintenance personnel to ensure that PMs are completed per the schedule set in Asset Essentials.

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## **4.0 Definitions**

- 4.1 **Loadcell** – a sensor that converts weight into an electric signal
- 4.2 **PWT** – Powered Weight Table
- 4.3 **QC** – Quality Control
- 4.4 **PM** – Preventative Maintenance
- 4.5 **BPR** – Batch Production Record
- 4.6 **HMI** – Human Machine Interface

## **5.0 References**

- 5.1 B-111, SOP, Cleaning of Manufacturing/Production Areas and Equipment
- 5.2 B-105, SOP, Preparation of Cleaning and Sanitizing Chemicals for Production

## **6.0 Setup Instructions**

- 6.1 Checkweigher
  - 6.1.1 Select the ‘Set-up’ icon on the main HMI Screen.
  - 6.1.2 Select the ‘System Setting’ icon and the setting will display.
  - 6.1.3 Select the correct weight units (grams), and weight mode (Min Weight).
  - 6.1.4 Exit out of the system settings page.
  - 6.1.5 Select the ‘Run’ icon to enter the run screen mode, then select ‘View’ in the run screen mode.
  - 6.1.6 Select the Pack Weights as ‘Net’.
  - 6.1.7 Exit the run mode screen.
  - 6.1.8 Select the Product Setting Icon on the main HMI page.
  - 6.1.9 Enter the upper limit, lower limit, tare weight, and nominal weight (target weight).
  - 6.1.10 Select the Lane Settings Icon on the main HMI display.

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6.1.11 The belt speed and pack rate based on the product.

6.1.12 Exit the Lane Setting screen.

6.1.13 Select the Reject Settings Icon.

6.1.14 Enter the reject and accept time or distance into the Distance/Duration field. These distances or times must be set-up so that an out of specification bottle passing through is rejected off of the equipment and into the reject bin and a bottle in specification passes through and triggers the 'Accept' output display.

6.1.15 Exit the Reject Settings Screen.

6.1.16 Select the Calibration Icon.

6.1.17 Follow the prompts on the HMI to verify that the weights are being captured correctly. Use the product that is going to be run next on the equipment to calibrate the checkweigher.

6.1.18 Save the product for future use and name it the appropriate product name.

## 6.2 Metal Detector Setup Instruction

6.2.1 Select the set-up icon on the main HMI screen, then select the metal detector icon.

6.2.2 Select the back-arrow icon and then learn icon (looks like a graduation cap).

6.2.3 Follow the prompts of the HMI to complete the set-up of the product.

## 7.0 Operation

### 7.1 Turning the machine ON/OFF

#### 7.1.1 Turning the machine ON

7.1.1.1 Ensure that the machine is connected to a suitable power supply and, if a pneumatic reject device is fitted, a suitable air supply.

7.1.1.2 Turn the isolator switch, located on the left-hand side of the machine, in a clockwise direction. This switches on the electrical supply to the machine.

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7.1.1.3 The machine loads operating software, which takes around 45 seconds to complete, during which it will also calibrate the touchscreen.

7.1.2 Turning the machine OFF

7.1.2.1 Ensure that the conveyor is off.

7.1.2.2 Turn the isolator switch, located on the left-hand side of the machine, in a counterclockwise direction. This switches off the electrical supply to the machine.

7.2 Logging In

7.2.1 Ensure that the equipment is on the Mode Select screen.

7.2.2 Select the Set-Up button.

7.2.3 Select the “key” symbol.

7.2.4 Select the relevant user level.

7.2.4.1 Operator

7.2.4.2 Supervisor

7.2.4.3 Engineer

7.2.4.4 Service Mode

7.2.5 Enter the appropriate password and select OK.

7.3 Adding a New Product

7.3.1 Ensure that the equipment is on the Mode Select screen.

7.3.2 Select the Setup button.

7.3.3 Select the “green Cylinder” symbol.

7.3.4 Update the options and parameter values for the new product as required.

7.3.5 Select Store to save the new product settings.

7.3.6 Select OK to save all changes.

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#### 7.4 Selecting a Product

- 7.4.1 Ensure that the equipment is on the Mode Select screen. The Mode Select screen displays by default when the machine starts.
- 7.4.2 Select the Products button.
- 7.4.3 Select the product you wish to run.
- 7.4.4 Select Recall to load the stored settings for the new product and close the screen.
- 7.4.5 The chosen product is now selected.

#### 7.5 Calibrating a Product

- 7.5.1 Ensure that the equipment is on the Mode Select screen.
- 7.5.2 Select the Calibrate button.
- 7.5.3 Select Calibrate.
- 7.5.4 Enter the Gross Calibration Weight, which is the product weight, including packaging.
- 7.5.5 Select Enable Rejects if you want the system to reject any over/underweight samples that you send through the system during the calibration process.
- 7.5.6 Select Measure Pack Length if you want the system to automatically calculate the pack length by measuring the first pack passed through the system and update the value entered in the Product Settings screen.
- 7.5.7 Select Next.
- 7.5.8 You are prompted to pass sample packs through the system. These packs should be fully representative of the current product being run.
- 7.5.9 During calibration, the percentage progress bar shows the current status of the calibration. After each pass, it will progressively advance to the 100% mark, at which point calibration is complete. The screen then displays the Standard Deviation of weights passed and the Calibration Factor.
- 7.5.10 Select Accept to accept the conditions and Retry to restart the calibration process.

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7.5.11 A short report will be sent to the connected printer, confirming the date and time of calibration and also the actual weight calibrated.

## 7.6 Performing an Emergency Stop

7.6.1 Press the red emergency stop button located on the front panel. The conveyor will automatically stop.

7.6.2 To restart the machine after the emergency stop button has been pressed, proceed as follows:

7.6.2.1 Ensure that any condition which caused the emergency stop has been corrected.

7.6.2.2 Turn the red emergency stop button clockwise. The button will pop out to its original position. The power supply to the conveyor is now restored.

7.6.2.3 Push the white start button to restart the conveyor.

7.6.3 The machine is now ready to start inspecting the selected product.

## 8.0 Cleaning

8.1 Prepare cleaning agents as outlined in SOP B-105 Preparation of Cleaning and Sanitizing Chemicals for Production.

8.2 Follow SOP B-111 Cleaning of Manufacturing/Production Areas and Equipment to ensure proper cleaning and sanitization are performed for this type of equipment and that these activities are properly documented.

8.3 Disassembly of this equipment is not required or recommended. Contact the Maintenance Department if necessary.

8.4 The CW3 and IQ4 Combination System is designed to be wet cleaned using a mild detergent, and then thoroughly rinsed with potable water. A damp cloth should be used to clean the touchscreen.

- 8.5 Under no circumstances should the machine be subjected to a high-pressure cleaning regime.
- 8.6 Detergents are typically alkaline solutions. Disinfectants typically contain chlorine or ammonia. Every three to four weeks, it is typical to revert to acid-based cleaning solutions to remove any buildup of lime scale on the stainless steel parts.
- 8.7 The system is not resistant to cleaning with alcohol-based fluids such as isopropanol, ethanol, methanol, and methylated spirit. Damage can occur if you use alcohol-based solutions.

### 9.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	09/11/23	New procedure.	N/A	J. Ramirez