

3.1.4.

## Refining Materials



The Processing Department (PD) worker [henceforth to be referred to as PD Worker] retrieves a pump truck from the PD Pump Truck area and goes to the SD area. The PD Worker retrieves the Processing Tracking Ledger sheet and places 20 units of product onto the pump truck, bringing the units to the main PD floor's temporary storage area. The pump truck is immediately returned to the PD Pump Truck area, and the PD Worker updates the stockroom inventory to reflect the units removed.

The PD Worker next calibrates the 'Huller machine' and will step through a repetitive set of steps wherein the PD Worker will need to add 1 unit of product at a time to the machine that

is currently being utilized. To add 1 unit, the PD Worker will need to take the following actions:

- 1) Retrieve 1 unit of Coffee Beans from Temp Storage
- 2) Add 1 unit of Coffee Beans to the machine's hopper
- 3) Process unit through the machinery
- 4) Remove the processed unit from machinery and transfer the processed unit of coffee beans into the transfer bin
- 5) Record processing result(s) in Processing Tracking Ledger sheet
- 6) Place transfer bin in temporary storage





After the 'Huller Machine' processes each unit there, will be an amount of waste produced, which the machine automatically separated from the product. This waste must be discarded in the nearby waste bin. After all of the 20 units have been processed, this waste bin will need to be emptied in the outdoor dumpster.

PD Worker will proceed to calibrate the 'Cleaning Machine,' stepping through the identical steps as outlined within the 'Huller machine' activity with only one additional step now added. After steps 1 – 6 has been completed, PD Worker will be required to check the Cleaning Machine for any areas where the machine may have become clogged. If the machine is clogged, then PD Worker will utilize a power washer for clearing out any blockages. The cleaning cycle takes roughly 2-minutes, upon completion the worker will double-check to ensure that the machine has been properly cleansed, if it remains clogged then the blockage cleaning cycle will repeat, else, the PD Worker will continue through the process of cleaning the coffee beans.

Upon completion of cleaning, a member from the Roasting Department [henceforth to be referred to as RD Worker] will retrieve a 10-gram sample from each of the units' transfer bins. This sample will be added to the Grading Machine, which will automatically test the

coffee beans for acidity levels, quality and various other measures. Once the Grading Machine has provided the results, a letter grade will be assigned to the corresponding coffee bean 20Kg unit. The 10-gram sample is then dumped into the nearby waste bin. This process will continue until all 20 units have been tested. After Grading, the RD Worker, will preheat the roasting machine and begin the same steps as outlined within the 'Huller machine' activity.

After the roasting has been completed, the Packaging and Sales Department (PSD) Worker [henceforth to be referred to as the PSD Worker] will retrieve 1 unit of roasted beans at a time, 20 units total, and add them to the conveyor belt. PSD Worker will next turn on the packaging machine and insert an empty 1Kg bag for packaging. The machine will slowly auto-feed beans into the packaging bag; once the bag is filled, the PSD Worker will turn off the packaging machine as it would continually add more beans if not shut down. The PSD Worker will use the 'sealer' to seal the 1Kg bag of finished product and place it on the sales storage shelves. The PSD Worker will continue these steps until 20x 1Kg bags have been filled, at which point the PSD Worker will update the Processing Tracking Ledger Sheet. Once all 20 units of coffee beans have been processed, the PSD Worker will update Inventory following the same steps as depicted in the earlier SD activity.