



24th June 2024

Subject: Declaration of Supplier Evaluation for Cacao Mass as under FDA Foreign Supplier Verification Program (FSVP) for small importer

I, Zhiwen Teh, hereby declare that as the FSVP importer, I have meticulously evaluated and verified that Mu Gelato has undertaken all essential measures to effectively control the hazards identified under the FSVP modified requirements for small importers.

Through comprehensive assessments of their processes, from sourcing to production of chocolate coated coffee beans to their final shipment, I can affirm that stringent preventive controls, monitoring, and corrective actions have been systematically implemented to mitigate potential risks.

Our commitment to maintaining food safety and quality standards is resolute, and I stand behind the accuracy and completeness of this evaluation. It is with confidence that I confirm Mu Gelato's compliance with the FSVP small importer regulations, ensuring the delivery of safe and reliable cacao nibs to our valued partners at TrueTech Inc.

This declaration of evaluation is based on the following hazard analysis outcome and the subsequent preventive control that has been put in place

Hazard Analysis

Critical control points

This section identifies the critical control points in the process from harvesting to shipping chocolate coated coffee bean candy to TrueTech Inc. These are where preventive controls can be applied to minimize or eliminate the risk of food safety hazards.

These hazards can include biological, chemical, or physical contaminants that could pose a risk to human health if not properly managed. Identifying and controlling critical points is crucial for ensuring the safety of imported food products and preventing potential health risks to consumers.



Sorting

Coffee beans and cacao beans are inspected and sorted to remove any foreign particles or mold growth, ensuring that only clean beans proceed to the next stage.

Roasting

Roasting cacao and coffee beans brings out their rich flavors. Controlled temperatures and times are employed to achieve the desired flavor profile while minimizing the formation of undesirable compounds like acrylamide.

Cracking and Winnowing

The roasted cacao beans are cracked to remove the outer shell, yielding cacao nibs. Winnowing is performed to separate nibs from the shells, ensuring that the final product is free from shell fragments.

Grinding

The grinding process breaks down cacao nibs into a fine paste (chocolate mass) through mechanical friction and heat, with controls in place for temperature, particle size, and metal detection to ensure a safe and quality product.

Coating

Coffee beans are passed through a temperature-controlled chocolate melting unit known as the chocolate coating pan, where they are evenly coated with chocolate. The chocolate coating process is conducted at a minimum temperature of 145°F (63°C) to prevent contamination. Immediately after coating, the chocolate-coated coffee beans are cooled to 40°F (4°C) or below within 2 hours to prevent bacterial growth.

Packaging

The final product, chocolate coated coffee bean, is carefully packaged in a controlled environment to maintain freshness and prevent contamination. Airtight packaging is used to protect against oxidation and moisture.

Shipping

Chocolate coated coffee bean candies are shipped to their destination using proper packaging to ensure they reach their destination in optimal condition. Temperature and humidity controls are maintained during shipping to preserve quality.



These objective descriptions outline each stage of the chocolate coated coffee' journey and highlight key considerations to ensure compliance with FSVP regulations.

Identification of potential hazards at critical points

This section highlights the hazards identified at various stages from harvesting to the shipping of cacao nibs from Coopercabruca to TrueTech Inc in the USA

Sorting:

- **Physical Hazards:** Inclusion of foreign objects during sorting.

Roasting:

- **Biological**
 - Acrylamide Formation
 - Over-Roasting
- **Physical Hazards:** Foreign objects like metal fragments from roasting equipment.

Cracking and Winnowing:

- **Biological**
 - Particulate Contamination
 - Cross-Contamination
- **Physical Hazards:**
 - Inclusion of shell fragments or foreign materials in cracked cacao beans.

Grinding

- **Physical Hazards:**
 - Metal fragments (e.g., from equipment wear)

Coating

- **Physical Hazards:**
 - Foreign objects in chocolate (e.g., metal, wood, plastic, glass, shell fragments)
 - Inadequate cleaning/sanitation of coating pan and utensils
- **Biological Hazards**
 - Mold growth on coffee beans or in chocolate
 - Yeast fermentation in chocolate coating



- E. coli contamination from environmental sources
- **Chemical Hazards:**
 - Contamination from cleaning/sanitizing agents

Processing and Packaging:

- **Biological Hazards:** Cross-contamination from other ingredients.
- **Chemical Hazards:** Residues from cleaning agents or equipment.
- **Physical Hazards:**
 - Inclusion of foreign objects during the packaging process.
 - Metal fragments from processing equipment.

Shipping:

- **Biological Hazards:**
 - Humidity Exposure
 - Cross-Contamination
- **Physical**
 - Physical damage due to improper packaging or handling during transit.

Preventative Controls

We have evaluated that the following are sufficient preventive measures put in place by Cooperca to prevent the risk of hazards introduced throughout the entire process of preparing roasted cacao nibs, from harvesting to shipping.

Implementation at critical control points

Sorting

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Mold growth	Biological	Medium	Medium	Visual inspection of coffee and cacao beans for signs of mold growth	Laboratory at University of Florianopolis will provide certification that mold growth levels in cacao nibs are below the regulatory limits..



Inclusion of foreign objects during drying and sorting process	Physical	Medium	Medium	Coffee and Cacao beans are processed through sieve	Visibility ensure there are no more foreign objects after the sieving process
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Roasting

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Microbial Growth (salmonella)	Biological	Medium	High	The roasting process itself will kill off the microbial growth. The internal temperature of the cacao nibs during roasting reaches 180°C for 30 minutes.	Laboratory at University of Florianopolis will provide certification that Mycotoxin levels in cacao nibs are below the regulatory limits..
Acrylamide Formation	Biological	Medium	Low	Daily cleaning to ensure properly functioning equipment Required maintenance is performed when malfunction is observed before cacao nibs are processed	Machine is cleaned everyday Mechanics will provide certification that maintenance has been done.
Over-Roasting	Biological	Low	Low	Daily cleaning to ensure properly functioning equipment Required maintenance is performed when malfunction is observed before cacao nibs are processed	Machine is cleaned everyday Mechanics will provide certification that maintenance has been done.
Foreign objects like metal fragments from roasting equipment.	Physical	Medium	Medium	The stove is sealed during roasting Regular maintenance is done on the stove.	Mechanics will provide certification that maintenance has been done.

Cracking and Winnowing

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
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Particulate Contamination	Biological	Low	Low	The machine is sealed. Daily cleaning to ensure properly functioning equipment Required maintenance is performed when malfunction is observed before cacao nibs are processed	Mechanics will provide certification that maintenance has been done.
Cross-Contamination	Biological	Low	Low	Clean and sanitize winnowing equipment between batches. Implement proper allergen controls to prevent cross-contact. The facility only processes cacao nibs	No cross-contact with allergens should occur during winnowing. Visual check to ensure undesirable ingredients are in the facility
Inclusion of shell fragments or foreign materials in cracked cacao beans.	Physical	Medium	Low	Use proper cracking and winnowing equipment to minimize shell fragments. Implement visual inspections and sieving to remove foreign materials. Workers are to wear hair mesh and gloves.	Shell fragments in cracked cacao beans shall be less than 3%.

Grinding

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Metal fragments	Physical	Low	High	Proper maintenance, metal detection	No metal fragments in cacao mass

Coating

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Foreign objects in chocolate	Physical	Moderate	High	Visual inspection of chocolate coating	100% visual inspection
Inadequate cleaning/sanitization of coating pan and utensils	Physical	High	Moderate	Cleaning/sanitation verification Visual inspection of equipment	Visual inspection: no residue/contamination



Mold growth on coffee beans or in chocolate	Biological	Low	High	Chocolate coating: 105°F - 115°F (40°C - 46°C) for melting, 80°F - 90°F (27°C - 32°C) for cooling Visual inspection for mold	Laboratory at University of Florianopolis will provide certification that Mold growth levels in coffee beans and chocolate are below the regulatory limits..
Yeast fermentation in chocolate coating	Biological	Moderate	High	Visual inspection for fermentation	Laboratory at University of Florianopolis will provide certification that Mycotoxin levels in cacao nibs are below the regulatory limits..
E. coli contamination from environmental sources	Biological	Low	High	Environmental monitoring Employee hygiene training Handwashing verification	Environmental monitoring: <1 CFU/cm² Handwashing frequency before processing any batch of candy Employee hygiene training: annual refresher
Contamination from cleaning/sanitizing agents	Chemical Hazard	Moderate	Moderate	Labeling and storage of chemicals Training on chemical handling	Storage: designated area, labeled containers Training: annual refresher

Processing and Packing

Hazard		Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Mycotoxin Contamination	Biological	Low	Medium	Implement proper drying and storage practices to prevent mold growth. Regularly test for mycotoxins and reject contaminated batches. Package is sealed properly to ensure against moisture content	Airtight packaging material should be free from signs of visible damage



Oxidation	Biological	Medium	Low	NA	NA
Metal fragments from processing equipment.	Biological	Low	Low	Implement effective quality control measures to detect and remove foreign objects during processing. Regularly inspect equipment for signs of wear or damage.	Visual inspection that the final product should be free from foreign objects.
Foreign objects introduced during the packaging process.	Physical	Low	Low	Implement controls to prevent foreign objects from entering packaging materials. Use metal detectors or sieves to catch any contaminants before sealing.	The final packaged cacao nibs should be free from foreign objects.
Residues from heavy metals.	Chemical	Low	Medium	Implement a rigorous cleaning and sanitation program to ensure that heavy metals are not introduced during the packing and process of cacao nibs in the facilities.	Visual inspection that no restricted heavy metal content should be present in the packing facility.

Shipping

Hazard	Type	Probability	Severity of Illness or injury	Preventive Controls	Critical Limit
Humidity Exposure	Biological	Medium	Low	The package used for shipping will be sealed and resistant to humidity. Use sturdy and appropriate packaging materials to protect cacao nibs during shipping.	Package should be well sealed. During visual inspection upon arrival of cargo, the package should not be damaged.
Cross-Contamination	Biological	Low	Low	The package used for shipping will be sealed and resistant to humidity. Use sturdy and appropriate packaging materials to protect cacao nibs during shipping.	Package should be well sealed. During visual inspection upon arrival of cargo, the package should not be damaged.
Physical damage due to improper packaging or handling during transit.	Physical	Medium	Low	The package used for shipping will be sealed and resistant to humidity. Use sturdy and appropriate packaging materials to protect cacao nibs during shipping.	Package should be well sealed. During visual inspection upon arrival of cargo, the package should not be damaged.



Prevention against allergens introduction

We have access that these are sufficient preventive measures put in place by Mu Gelato to prevent the risk of allergen introduction and cross-contact throughout the entire process of preparing roasted cacao nibs, from harvesting to shipping and it is in compliance with safety requirements under FDA FSVP regulations.

Allergent	Probab ility	Severity of Illness or injury	Preventive Controls
Milk	Medium	Medium	A clear label that contents of package contains milk
Eggs	Medium	Medium	No eggs will be brought on the facility
Fish & Crustacean shellfish	Low	Medium	No fish & crustacean shellfish will be brought on the facility
Tree nuts	Low	Medium	No tree nuts will be brought on the facility
Peanuts	Medium	High	No peanuts will be brought on the facility
Wheats	Medium	Medium	No wheats will be brought on the facility
Soybeans	Low	Medium	No soybeans will be brought on the facility

Prevention against intentional adulterations

We have access that these are sufficient preventive controls put in place by Coopercabrua to prevent intentional adulteration throughout the entire process of preparing roasted cacao nibs, from harvesting to shipping and it is in compliance with safety requirements under FDA FSVP regulations.

Potential Adulterations	Description	Preventive Controls
Dilution with Inferior Ingredients	Chocolate coated coffee bean candy could be mixed with cheaper or inferior ingredients to increase volume, which might decrease the quality and nutritional value of the product.	An integrity seal will be adhered to the package prior to leaving the facility
Addition of Undeclared Allergens	Adding allergenic ingredients like nuts, dairy, or soy without proper declaration on the label can pose a risk to consumers with allergies.	All facilities will not undeclared allergens
Mislabeling Origin	Falsely labeling the origin of the cacao and coffee beans	We will conduct a taste sampling test



	could deceive consumers about the source and quality of the product.	since the taste is very specific to the location
Use of Unauthorized Additives	Adding unapproved additives, preservatives, or flavors to the roasted cacao nibs could be harmful to consumers' health.	No additives are being introduced in the entire process as it is entirely organic.
Adulteration with Unsafe Substances	Adding unsafe substances or contaminants that may not be detectable through routine testing can pose health risks.	No additives are being introduced in the entire process as it is entirely organic.
Contamination with Heavy Metals	Chocolate coated coffee bean candy could be contaminated with heavy metals like lead or cadmium, which can be harmful if consumed over time.	Lab Test to provide certification that there are no traces of heavy metals.
Use of Unsanitary Processing	If the chocolate coated coffee bean candy are processed in unsanitary conditions, they could become contaminated with pathogens that may cause foodborne illnesses.	FitoSanitario certification will be provided for each shipment
Substitution with Lower-Quality Varieties	Substituting higher-quality cacao and coffee beans with lower-quality varieties could affect the flavor, aroma, and overall quality of the product.	We will conduct a taste sampling test since the taste is very specific to the location.
Economic Adulteration	Mixing chocolate and coffee bean with fillers or additives to reduce production costs while maintaining the appearance of quality.	Lab test to provide certification that there are no traces of unauthorized additives within the shipment.

Sincerely,

Zhiwen Teh
President
TrueTech Inc (EIN: 88-3411514)
admin@truesight.me
+1 415 300 0019