

Loveland Facility Food Safety Plan

Granulated Sugar

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Plan Approval

Plant/Warehouse Manager:



Date: 04/06/2023

Local HACCP Coordinator:



Date: 04/06/2023

Facility Information

Facility Name:	Loveland Facility
Facility Address:	1149 Madison Avenue, Loveland, Colorado 80537
Phone:	303.659.2151 / Local Lead Phone: 970.690.7908
Plant/Facility Manager:	Joe Toste
Local HACCP Coordinator:	Lacey Messing
Number of Employees:	<10
Temporary Employees:	Yes
Facility Description:	The Loveland facility operates the sugar warehouse portion of a non-operational beet sugar factory. This warehousing facility receives granulated sugar in bagged or bulk form and the product is either stored in eight concrete silos or warehoused. Bulk product is screened and loaded into bulk railcars or packaged into flexible intermediate bulk container (FIBC) totes. Packaged product is loaded into boxcars, dry van trailers, or containers.

Food Safety

Products:	Granulated Sugar		
Third Party Audit Standard:	AIB Consolidated Standards for Inspection		
Certification Body:	AIB International		
Import Capability:	Yes		
Ingredients/Raw Materials:	Granulated Sugar		
Packaging:	FIBC Totes		
Prerequisite Programs :	1. Personnel Practices	2. Employee Training	3. Equipment Calibration
	4. Integrated Pest Management	5. Facility & Equipment Maintenance	6. Cleaning & Sanitation
	7. Air & Water Programs	8. Physical Contaminant Prevention & Control	9. Product Storage & Warehousing
	10. Sanitary Transportation	11. Allergens & Sensitizing Agents	12. Chemical Control & Approval
	13. Supplier Approval	14. Visitors	

Team

Joe Toste	Warehouse Manager	AIB Training
Mike McClain	Maintenance Lead	AIB Training
Lacey Messing	Food Safety & Quality Professional	Preventive Controls Qualified Individual
Kelly Malone	Quality Assurance Manager	Preventive Controls Qualified Individual



Product Description

**NATIONAL
SUGAR
MARKETING**

Document No.: PD-01

General Product Information

Product Name:	Granulated Sugar
Technical Name:	Sucrose
Product Description:	Sucrose is a nonreducing disaccharide composed of glucose and fructose bonded by an oxygen atom. It is derived from sugar beets or sugar cane and is used as a food and a sweetener.
Ingredients:	Crystalline sucrose
Intended Use:	This product is used as an ingredient in many food products and functions as a sweetener.
Intended Consumer:	Granulated sugar is sold as retail or distributed to food processors that provide products to the general public, including high risk groups.
Shelf Life:	5 years, 70%RH, 90°F
Labeling Instructions:	None
FDA Classification:	GRAS 21 CFR 184.1854
Storage:	Silo storage, ambient. Packaged product is warehoused.
Distribution:	Granulated sugar is distributed in bulk or packaged form. Bulk sugar is transported by bulk rail or truck. Packaged sugar is distributed by trailer or container.

Technical Information

Chemical Formula:	$C_{12}H_{22}O_{11}$
Water Activity (a_w):	0.22 ¹
Moisture:	0.04% Max.
Sulfites:	2 to 5 ppm. Must be less than 10 ppm.
Microbiological:	Will not support the growth of vegetative pathogens. ^{2,3} Meets ISBT ⁴ and NFP ⁵ standards for use in carbonated beverages and canned foods.

Preventive Controls

Process Control:	CCP Metal Detection (CCP 1 Bulk or Tote Metal Detector)
Allergen Control:	None
Sanitation Control:	None
Supply-Chain Control:	Approved Supplier for Sugar Ingredient and Third-Party Audit Report

¹ [Water Activity Values of Select Food Ingredients and Products](#)

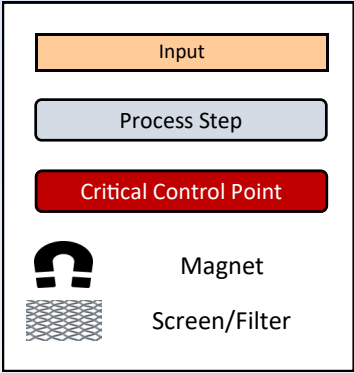
² [Microbial Risk Assessment: Pathogen Challenge Evaluations of Granulated and Liquid Sugar](#)

³ [Fate of Bacterial Pathogens and Indicator Organisms in Liquid Sweeteners](#)

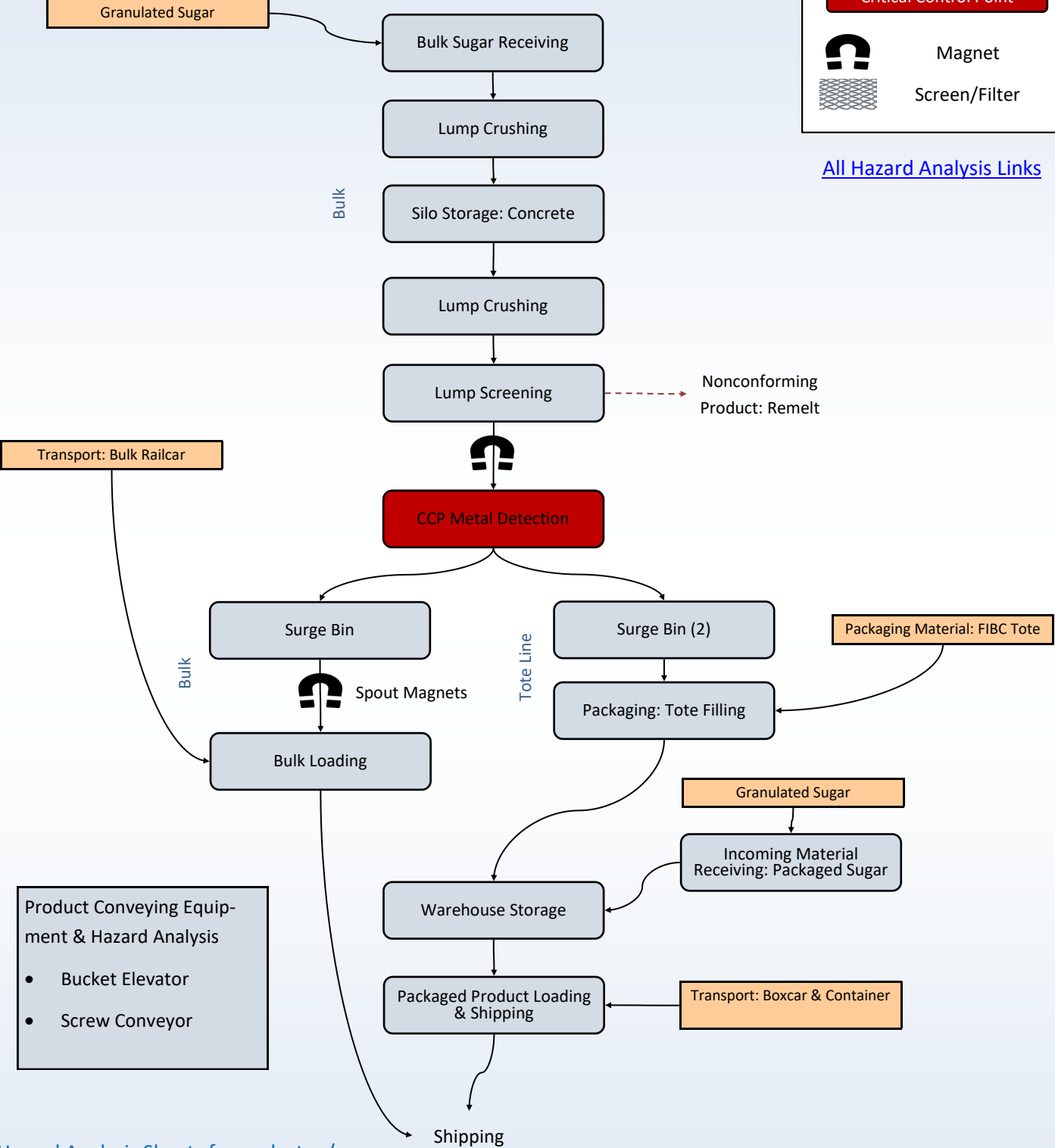
⁴ ISBT

⁵ GMA Canner's Standard

Process Flowchart: Granulated Sugar



[All Hazard Analysis Links](#)



Hazard Analysis Sheets for each step/ input are available through internal links or by customer request.

Process Preventive Control: Critical Control Point Summary

Process Control Step:		CCP Metal Detection (CCP 1 Bulk & Tote Metal Detector)
Hazard(s):		Metal
Parameters, values, or critical limits:		Functioning metal detector that can detect 1.5 Fe, 1.8 NF, 2.0 SS, and 2.0 Al mm spheres.
Monitoring:	What:	All bulk and tote product passes through an operating metal detector and previously packaged product has gone through a metal detector at supplier's facility.
	How:	Monitor according to SOP 6.3-01 CCP Monitoring: Metal Detector .
	Frequency:	Conduct the monitoring prior to startup if exceeded 24 hours. Monitoring will occur after each vessel. Tote products are tested prior to startup, every 2.5 hours of operation, and at the end of daily operations.
	Who:	Permanent trained staff
Corrective Action:		Operator notifies supervisory personnel. Supervisory personnel complete corrective action according to SOP 6.3.4-03 HACCP Deviation: Metal Detector .
Verification:	Monitoring Activity:	Supervisory personnel verify the monitoring activity through record review within 7 days of record generation. The review is indicated by a signature and date.
	Food Safety Plan:	The food safety plan is incorporated into annual internal audits. The plan, CCP selection, and CL determination are reviewed/assessed annually.
Validation:	Critical Control Point:	CCP selection is reevaluated annually in light of emerging technological and regulatory information. This review is documented on record Validation .
	Critical Limits:	CL or parameter selection is reevaluated annually in light of emerging technological and regulatory information. This review is documented on record Validation .
	Scientific & Technical Information:	Decisions for the hazard analysis, CCP selection, and CL selection have been based on scientific and technical information. This information is posted to the corporate intranet and may be accessed through this link .
Records:		Monitoring Activity: 6.3-01.0 Critical Control Point: Packaged Product Metal Detector or 6.3-01.1 Critical Control Point: Bulk Loading Metal Detector . Records are retained for three years.

Procedural documentation is available on the corporate intranet through direct links or through the quality assurance tab. This documentation will be made available to customers upon request.

Supply-Chain Program

Hazards Requiring a Supply-Chain-Applied Control:	Hazard analysis determined that incoming bulk and packaged sugar requires a supply-chain-applied control for metal contamination. In the absence of a supplier-applied control, there could be the potential for hazardous metal contamination based on sugar processing equipment and facilities. Some of this product might be warehoused and distributed directly to the customer without further processing.
Preventive Controls Applied by Supplier:	Approved suppliers continually monitor sugar by passing all product through metal detectors or magnets. These actions are documented in a supplier's records.
Verification Activities:	Based on supplier performance and the low risk associated with material, a 2nd or 3rd party audit by a qualified auditor is used to verify supplier's control of metal hazard. Preference is given to GFSI certification.
Verification Procedures:	The Quality Assurance Team will verify that suppliers have the appropriate documentation on an annual basis. These verification activities include: an onsite audit(s) performed by a third-party audit and report provided based on their certification standard. Verify the facility's controls for metal detection and removal. A qualified individual (QI) will conduct onsite audits, third-party auditors or company affiliated PCQI's. Must retain FDA-required records and have access within 24 hours of request from regulatory inspectors. Lastly, supplier must inform the facility of any changes to the product composition or if it includes any allergens. Refer to the Food Safety & Quality Assurance Manual, Supplier Approval Policy.
Verification Records:	Supplier audit report made available – Beet Sugar.
Receiving Facility Procedures:	Receiving facility only accepts product from approved suppliers as outlined on the Approved Supplier Register . Facilities hold and do not accept shipments from unapproved suppliers. If this occurs, it is only permitted during emergency situations provided facilities notify quality assurance and obtain and review, third-party audits. If not, temporary approval may be granted through a second-party audit from a company-affiliated PCQI.
Receiving Records:	Inspection and receipt records are maintained locally.

Amendments	
06/03/2022	Update the supply chain program to match the current supplier approval policy.
03/12/2021	Added 2 to the surge bin for tote machine.
08/17/2020	Removed all hyperlinks to each individual hazard analysis (one link for hazard analysis). Updated the CCP Summary page to "Conduct the monitoring prior to startup if exceeded 24 hours. Monitoring will occur after each vessel".
03/20/2020	Updated Supply Chain links to the NSM website for the Approved Supplier list and beet sugar reports.
03/18/2020	Removed Jeremy Adamson from Corporate HACCP Coordinator.
08/14/2019	Updated the Prerequisite Program to match the new Quality Manual.
03/07/2019	Added Joe Toste and Mike McClain with AIB Training.
04/26/2018	Added Lacey Messing and training.
07/05/2017	Added local lead contact, Silvestre Bello, and contact information. Added tote metal detector monitoring information to every 2.5 hours of operation.
06/20/2016	Removed the local organizational chart. Developed the Supply-Chain Program and added links to the corporate recall procedure.
05/15/2016	Changed the Org Chart to maintenance staff instead of special projects. Added PCQI training for Bill Enderson.
04/23/2015	Corporate SOPs were modified. Quality assurance will verify documentation during internal audits rather than verifying one lot per week. Added Mike McClain to the team to replace Mike Palser.
09/02/2014	Corporate standardization of SOPs. SOPs and blank record copies have been moved from the HACCP plan to the corporate intranet.
05/30/2014	Screens were added to bulk loadout lines. The flow diagram was modified to include changes. Updated SOP and record to facility screen inspections.
12/09/2013	Changed frequency on master plan from between each car to after each car is loaded before yearly shipping season starts. Added Mike Palser to HACCP team.

Training Log	
Pending Date	Joe Toste and Mike McClain pending AIB certificate.
08/26/2016	Lacey Messing PCQI Training
11/01/2011	Joe Toste attended a two-day HACCP course.