

Raw Milk Receiving Procedure

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Document Control

Field	Value	Field	Value
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Approval Matrix

Role	Name / Title	Signature	Date
Prepared By	Lead Food Technologist, GIFSQ	[On File]	July 10, 2026
Reviewed By	HACCP Team Leader, GIFSQ	[On File]	July 12, 2026
Approved By	Director of Quality Assurance, GIFSQ	[On File]	July 16, 2026

Revision History

Revision No.	Date	Section(s) Modified	Detailed Description of Changes	Author
1.0	October 12, 2025	All	Initial Draft release for internal review.	EFS Operations Team
2.0	July 16, 2026	All	Overhauled styling layout using auto-adapting mobile card conversion rules. Removed horizontal scroll wrappers on container blocks.	QA Director, GIFSQ

1. Purpose

To establish a standardized, highly regulated, and secure process for receiving, inspecting, sampling, evaluating, accepting, and unloading raw milk shipments. This procedure ensures only raw milk meeting approved food safety, quality, regulatory, and customer requirements enters the production facility's storage silos, mitigating downstream contamination risks.

2. Scope

This Standard Operating Procedure applies directly to all incoming liquid raw milk road tankers arriving at the manufacturing facility. The procedure begins at the moment the vehicle enters the plant premises, spans through all physical checks, sampling protocols, laboratory testing, and controlled transfer, and concludes with empty tanker clearance, system cleaning handovers, and final log documentation.

3. References

- ISO 22000:2018: Food safety management systems - Requirements for any organization in the food chain.
- Codex Alimentarius: General Principles of Food Hygiene (CXC 1-1969).
- Codex Alimentarius: Code of Hygienic Practice for Milk and Milk Products (CXC 57-2004).
- GFSI Reference Document: Underpinning FSSC 22000, BRCGS, and SQF scheme requirements.
- HACCP Principles: Hazard Analysis and Critical Control Point system guidelines.
- Company Quality Manual: Section 4.2 - Raw Material Quality Specifications.

4. Responsibilities

Role	Pre-unloading Responsibility	Unloading & Post-unloading Responsibility
Receiving Operator	Verify manifest details, inspect security seals, perform external tanker checks, and complete the physical inspection checklist.	Connect sanitized hoses, monitor the transfer pump and inline filter pressures, disconnect lines, and initiate CIP protocols.
QC Technician	Aseptically collect representative samples from the tanker. Perform temperature, rapid chemical, physical, and microbiological tests.	Record laboratory analytical values, issue transfer clearance documents, and log the sample disposition.
QA Officer / Supervisor	Review raw documentation, verify seal integrity matching logs, inspect test results, and issue the official signed transfer clearance.	Investigate deviations, manage non-conformances (NCR), coordinate tanker rejections, and approve corrective actions.
Plant Engineer	Ensure receiving pump, flow meters, sensors, and safety grounding lines are calibrated and fully operational.	Maintain preventive maintenance schedules and troubleshoot mechanical or automation failures in the receiving bay.

5. Competency & PPE Requirements

5.1 Competency Requirements

Personnel executing this SOP must hold active training certifications in:

- Aseptic sampling protocols for liquid food products.
- Operating rapid antibiotic residue detection test kits.
- Chemical handling safety (WHMIS/OSHA) for sanitizing solutions.

- HACCP prerequisite programs (PRPs), food defense, and allergen control.

5.2 Required Personal Protective Equipment (PPE)

Activity	Mandatory PPE Item	Standard Specification
Tanker Access & Sampling	Fall Protection Harness, Safety Goggles, High-Grip Safety Boots.	Ansi-compliant harness, splash-proof goggles, steel-toe slip-resistant boots.
Chemical Sanitization	Chemical Resistant Gloves, Face Shield, Apron.	Nitrile heavy-duty gloves, full face shield, liquid-impermeable apron.
Standard Connection Setup	Safety Helmet, Safety Glasses, Nitrile Gloves.	Class E protective helmet, scratch-resistant safety glasses, single-use sterile gloves.

6. Food Safety Hazard Evaluation

The raw milk receiving step serves as a vital safeguard for the processing facility. The table below outlines the primary hazards and corresponding control measures managed within this procedure:

Hazard Category	Identified Hazard Agent	Control Mechanism & Action Limit Reference
Biological	Pathogen multiplication (e.g., <i>Listeria monocytogenes</i> , <i>Salmonella enterica</i>) due to cold-chain breakdown.	Verify raw milk temperature complies with approved company specifications and regional regulations before allowing transfer.
Chemical	Veterinary drug residues (e.g., Beta-lactams, Tetracyclines), allergen contamination, or sanitizing residues.	Mandatory rapid screening of samples from each compartment. Rejection of any positive load.
Physical	Insects, stones, metal particles, straw, or gasket fragments.	In-line physical verification of intake strainers (duplex filtration system mesh check).
Food Fraud	Water dilution (adulteration) or addition of unapproved chemical neutralizers.	Perform freezing point determination and pH/titratable acidity analysis on all intake samples.
Food Defense	Deliberate tampering or contamination of the cargo.	Verify security seals are intact and their serial numbers match the transport documentation exactly.

7. Acceptance Criteria

Parameter	Acceptance Target	Reference / Verification Method
Supplier Status	Active on the Approved Supplier List.	Supplier Registry check (SOP GIFSQ-DAI-QA-012).
Documentation	Manifest, Wash Certificate (? 48 hours), Security Seal Log completed.	Manual paperwork inspection by the Receiving Operator.
Temperature	Must comply with the organization's approved specifications and applicable regulatory limits.	Calibrated digital probe thermometer (calibrated via SOP GIFSQ-DAI-ENG-001).
Somatic Cell Count (SCC)	Compliant with company raw material purchasing standards and regulatory thresholds.	Somatic Cell Counter testing (SOP GIFSQ-DAI-LAB-006).
Drug Residues	Completely negative for Beta-lactams, Tetracyclines, and other specified residues.	Rapid residue analysis (SOP GIFSQ-DAI-LAB-005).
Organoleptic	Natural creamy-white color, free of off-odors, sour smell, curdling, or sediment.	Sensory validation by QC Technician (at room temperature).
pH / Acidity	Must fall within the range specified by local regulatory requirements and plant specifications.	pH Meter calibration and Titratable Acidity check (SOP GIFSQ-DAI-LAB-011).

8. Step-by-Step Operating Procedure

8.1 Preparation & Arrival

Verify that the receiving bay is clear of obstructions and has been sanitized. Upon tanker arrival, ensure the driver sets the parking brake and places wheel chocks on the tires. The operator must confirm that the vehicle's electrical ground wire is connected to prevent static spark hazards.

8.2 Document & Seal Inspection

The Receiving Operator must request and review the transport manifest, driver's log, and the tanker's wash certificate. Check that the wash certificate timestamp indicates the internal wash was performed within 48 hours. Locate all security seals on the tanker dome lid, rear valve housing, and side compartments. Compare each seal number with those recorded on the manifest. If any seal is broken, missing, or mismatched, immediately halt the operation and flag the load.

8.3 Sampling & Temperature Verification

Don appropriate PPE and ascend the tanker platform using the safety cage. Open the dome port cover with care. Sanitize the dome collar with a 70% Isopropyl Alcohol wipe. Activate the tanker's agitator for at least 15 minutes (or as specified by the raw material intake manual) to ensure complete homogeneity of temperature and butterfat composition. Extract a representative sample using a sterile, single-use sampling dipper and transfer it to sterile bottles (refer to SOP GIFSQ-DAI-QC-001). Simultaneously, measure and record the core temperature of the milk using a calibrated probe thermometer.

8.4 Laboratory Analysis

The QC Technician must immediately run organoleptic tests, rapid antibiotic residue screening, pH, titratable acidity, and freezing point analysis on the sample. Keep the tanker isolated and the transfer valve capped during the analysis. No connection is permitted until the lab issues a signed clearance document.

8.5 Unloading Operation

Once the QA Officer issues the signed approval, the operator may proceed with transfer. Thoroughly clean and sanitize the tanker outlet and plant inlet valves. Inspect the food-grade transfer hose, ensuring it is clean and that the sanitary gaskets are in good condition. Securely lock the hose connections. Set the routing on the automation panel to direct the flow to the designated raw milk storage silo. Start the transfer pump, open the valves slowly, and monitor the process. Check the sight glass and inline duplex filters constantly for pressure spikes, which could indicate blockages.

8.6 Post-Unloading & Sanitization

When the tanker is empty, run the transfer pump for an additional 60 seconds to purge remaining milk from the pipeline. Close all plant intake valves and disconnect the transfer hose. Fit sanitized dust caps over all open connection ports. Wash and sanitize the transfer hoses and return them to their sanitary storage rack. The receiving operator must then direct the empty tanker to the CIP bay (SOP GIFSQ-DAI-SAN-001) for washing, and record the receiving times, silo destination, and final volume in the receiving log.

9. Corrective Actions

Identified Deviation	Immediate Corrective Action	Escalation & Documentation
Milk temperature exceeds specification	Do not unload. Take a backup temperature reading using an alternate calibrated thermometer.	Notify the Production Supervisor and QA Manager immediately. Initiate a formal Non-Conformance Report (NCR).
Positive Antibiotic Residue	Halt all actions. Ensure the tanker hose remains disconnected and locked. Apply red quarantine tags to the outlet valve.	Escalate to the QA Director. Issue a formal tanker rejection, notify the supplier, and file an NCR and CAPA ticket.
Security seal mismatch or damage	Hold the tanker. Do not open the dome lid or access the cargo. Preserve the scene.	Initiate Food Defense incident protocol (SOP GIFSQ-DAI-FS-011). Notify security and plant management immediately.
Physical debris found in inline filter	Stop the transfer pump. Isolate the duplex filter, clean the screen, and visually inspect the milk.	Log the incident in the receiving checklist. Increase filtration monitoring frequency for the remainder of the load.

9.1 Operational Performance Metrics (KPIs)

Key Performance Indicator (KPI)	Target Threshold	Monitoring Frequency
First-Time Right Unloading Clearance	≥ 98.5%	Monthly Review

Tanker Turnaround Efficiency Time	≤ 90 Minutes	Weekly Verification
CIP Sanitation Compliance Rating	100.0% Pass Rate	Per Sanitation Cycle

10. Records & Document Retention

All completed records generated under this standard operating procedure must be archived securely and kept in accordance with company document retention policies.

10.1 Mandatory Records

- GIFSQ-DAI-PRO-001-FRM01: Raw Milk Receiving Form (complete with seal numbers, temperature, and times).
- GIFSQ-DAI-PRO-001-LOG01: Daily Raw Milk Intake Log Sheet.
- GIFSQ-DAI-PRO-001-CHK01: Pre-Unloading Tanker Inspection Checklist.
- GIFSQ-DAI-LAB-004-REP01: Laboratory Analytical Clearance Report.
- GIFSQ-DAI-QA-007-REC01: Non-Conformance Report (if applicable).

10.2 Record Retention Policy

Retain all receiving, testing, and sanitation logs for a minimum of 3 years, or as mandated by applicable local regulations and customer standards, whichever is longer. Store digital records on the company's secure document control system with daily automatic backups.

11. Process Flow