Raw Potato Load Quality Specifications (Last 6 months)

Category: Reference | **Model:** RAW-LOAD-QS-2025

Description: This document presents the quality specifications of raw potato loads received over the last six months, including parameters such as dry matter %, supplier identification, and associated cost per ton. It tracks shifts in load quality, especially the influence of supplier S7 from August 17, 2025.

Table of Contents

1. Introduction

This document serves as the comprehensive reference for the quality and operational specifications of raw potato loads received by the processing plant over the previous six months. It is intended for quality assurance teams, process engineers, and procurement managers to ensure compliance with company

standards and to facilitate timely troubleshooting and process adjustments.

The document includes detailed parameters such as dry matter content, defect percentages, fry color ranges, and tolerance bands. It also tracks supplier-specific performance data, highlighting critical shifts such as the influence of supplier S7 starting from August 17, 2025.

The scope covers load acceptance criteria, equipment operation manuals, maintenance procedures, error management protocols, and downgrading policies for non-conforming loads.

2. Load Reception Overview

Over the last six months, the plant received a total of approximately 2,150 raw potato loads, with the volume peaking during harvest seasons in September and October. Each load was logged with details including supplier identification, gross weight, dry matter percentage, and associated cost per ton.

2.1 Load Data Summary

Month	Number of Loads	Average Dry Matter (%)	Major Suppliers
April 2025	350	20.9	S1, S3, S5
May 2025	340	21.1	S2, S4, S7
June 2025	370	21.4	S1, S3, S6
July 2025	340	21.7	S2, S4, S7
August 2025	400	21.6	S2, S7, S8
September 2025	350	21.9	S3, S5, S7

Notably, from August 17, 2025, onward, an observed shift in load quality is associated with increased supplier S7 contributions, with a focus on dry matter

percentages and defect rates.

3. Line Equipment Manuals

The following section summarizes key equipment used in potato processing, including their rated throughput, efficiency thresholds, maintenance requirements, and error management procedures.

3.1 Equipment Overview

Equipment	Model	Rated Throughput (t/h)	Efficiency Threshold (%)	Maintenance Interval
Julienne Cutter	CUT-2000	8.5	85	500 operating hours or monthly
Fryer	FRY-XL	6.0	80	300 operating hours or bi-monthly

3.2 Maintenance Procedures

Routine maintenance is critical to ensure continuous operation and optimal efficiency. Steps include:

- Shut down equipment according to standard lockout/tagout procedures.
- Clean all blades, filters, and heating elements.
- Inspect wear parts and replace as necessary.
- Lubricate moving parts following manufacturer recommendations.
- Record maintenance activities in the maintenance logbook.

3.3 Error Codes and Troubleshooting

Equipment error codes assist in rapid diagnosis. Table 4 summarizes common codes related to the line equipment:

parameters ensure product consistency and processing efficiency.

4.1 Key Quality Parameters

- **Dry Matter Percentage (DM%)**: Percentage of solids in potatoes, critical for fry quality and yield.
- **Defect Percentage**: Ratio of damaged, cracked, or diseased potatoes.
- **Fry Color Range**: Acceptable color levels indicating proper frying and product appearance.

4.2 Standard Dry Matter Targets

Parameter	Target	Tolerance	Remarks
Dry Matter % (for SC-9mm)	21.8%	±0.3 percentage points	Optimal for processing specific SKU S9
Defect %	< 2.0%	Max allowable	Includes cracks, bruises, diseased
Fry Color Range	Gold to light brown	N/A	Standard for premium SKUs

4.3 SKU Targets and Tolerance Bands

Each SKU has specific quality thresholds. The table below summarizes the specifications:

SKU	Dry Matter % Target (+/-)	Defect % Max	Fry Color Range	Notes
SC-9mm	21.8% ±0.3	≤ 2.0%	Gold to Light Brown	High yield; tight tolerance required

SQ-X	20.5% ±0.2	≤ 2.5%	Golden Yellow	Standard quality

4.4 Downgrading Protocols

Loads not meeting specifications are subject to downgrading or rejection based on the severity and deviation level:

- If dry matter <21.5%: downgrade to lower SKU or reject.
- If defect % >2.5%: consider rejection or reprocessing.
- Fry color outside acceptable range: flagged for reprocessing or downgrade.

Procedures for downgrading include detailed inspection checklists, documentation, and approval workflows. Refer to Appendix 2 for detailed downgrading forms.

5. Supplier Performance and Analysis

Supplier performance over the last six months indicates variability in load quality, influenced heavily by supplier S7 starting August 17, 2025. The data emphasizes the need for ongoing supplier monitoring and quality audits.

5.1 Load Quality by Supplier

Supplier	Total Loads	Average DM %	Defect Rate (%)	Notable Trends
S1	350	20.9	1.8	Consistent quality; high compliance
S2	340	21.1	2.0	Increased defect rate in July
S7	610	21.6	2.8	Significant quality shift post August 17, 2025

5.2 Impact of Supplier S7 Post August 17, 2025

Post this date, loads from S7 exhibited:

- Average dry matter content increased to 21.6%, exceeding targets slightly
- Defect percentages increased to 2.8%, approaching rejection thresholds
- Notable impact on fry quality due to higher moisture levels

> **Note:** Continuous quality monitoring and supplier audits are recommended to mitigate risks associated with these deviations.

6. Maintenance Procedures and Error Codes

6.1 Routine Maintenance Schedule

Regular maintenance is scheduled based on equipment usage and manufacturer recommendations. Typical schedule includes:

- Daily: Visual inspections, lubrication of moving parts, cleaning filters
- Weekly: Deep cleaning of cutters and fryers, checking electrical connections
- Monthly: Replacement of wear parts, calibration, and detailed inspection
- Quarterly: Full system check, safety audits, and software updates

6.2 Error Codes and Troubleshooting

Key error codes have been catalogued for swift diagnostics:

Error Code	Description	Likely Causes	Resolution
DOW-PI-4502			