

**DAIRY PROCESSOR
(Time-Based)**

APPENDIX A

O*NET-SOC CODE: 51-3092.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

WORK PROCESSES

	Approximate Hours
A. Employee Safety	500
<ol style="list-style-type: none">1. Follow employer-specific procedures regarding the selection, proper use, and care of Personal Protective Equipment (PPE).2. Recognize chemical hazards in the workplace and utilize safe work practices, including chemical labeling, Safety Data Sheet (SDS) review and use of PPE.3. Develop a basic understanding of the Occupational Safety and Health Administration (OSHA) regulations pertaining to dairy processing plants.4. Learn and follow all employer safety procedures pertaining to confined space, lock-out/tag-out, chemical safety, ladders, machine guarding and fall prevention.	
B. Cleaning and Sanitizing	500
<ol style="list-style-type: none">1. Perform Cleaning-in-Place (CIP) process on equipment and silos.2. Monitor cleaning processes for correct temperature, chemical concentration and flow.3. Continuously monitor the cleanliness of equipment and implement plant sanitation programs.4. Verify cleaning effectiveness using swabs, pH checks, and visual inspections.5. Develop skills to troubleshoot CIP and Clean-Out-of-Place (COP) equipment (pumps, lines, chemical tanks and cleaning equipment).	
C. Raw Milk Receiving and Handling	300
<ol style="list-style-type: none">1. Learn and perform the various step of receiving raw milk:	

- a. Receive milk trucks and verify the shipping and CIP paperwork.
- b. Collect milk samples from the trucks/trailers.
- c. Perform milk testing for antibiotics, freshness and water content.
- d. Clear milk trucks for unloading.
- e. Unloading raw milk into the tank/silo.
- f. Perform CIP of trailers and silos.
- g. Follow loadout procedures for finished liquid products.
2. Obtain Milk Dealer's License through New York State Agriculture and Markets (if applicable).
3. Manage silos and production lines (preparation, coordination, and sampling).
4. Understand pre-pasteurization processing (milk component testing, monitoring silo temperatures, full silo testing to clear for pasteurization).

D. Processing Operations

1500

1. Learn the proper management of silos and production lines (preparation, coordination and sampling).
2. Understand and manage High Temperature Short Time (HTST) pasteurization operations.
3. Inspect process flows, including walking product flow lines.
4. Learn to properly batch products following plant procedures.
5. Manage product flows according to the production plan.
6. Calculate and monitor product recipes and specifications.
7. Prepare and inspect equipment for production:
 - a. Verify cleanliness of production equipment.
 - b. Load product recipes and verify production set points.
 - c. Verify correct product flow paths.
8. Perform seal checks where applicable (State sealed equipment).

E. Manage Production Equipment

1500

1. Learn about and operate a milk separator.
2. Understand the pasteurization process and learn how to operate the HTST/pasteurizer.

3. Learn how to set up silos and tanks for production and CIP.
4. Develop a basic understanding of Reverse Osmosis (RO), Filtration, Evaporation and Spray Drying (where applicable).
5. Learn how to operate filling, packaging and palletizing equipment.
6. Understand and follow procedures for the storage of finished products.

F. Troubleshoot **500**

1. Develop the necessary skills for troubleshooting the following dairy processing equipment/systems:
 - a. Pasteurization;
 - b. Filling;
 - c. CIP;
 - d. Packaging;
 - e. Palletizing;
 - f. Warehousing.
2. Work collaboratively to identify and troubleshoot quality concerns:
 - a. Identify root causes of quality concerns;
 - b. Implement corrective actions;
 - c. Develop proper preventative maintenance programs to strategically reduce the risk of quality issues.

G. Manage Documentation Processes **300**

1. Maintain all operations paperwork including:
 - a. Traceability documents
 - b. Equipment checks
 - c. Sanitation documents
 - d. Documents needed for compliance with regulatory requirements

H. Food Safety and Quality Assurance **500**

1. Understand food safety programs and Good Manufacturing Practices (GMPs).
2. Obtain product samples throughout the operations process and verify proper specifications.
3. Perform lab testing including component testing, micro testing, plating, etc.

4. Perform environmental swabbing to monitor the environment for food safety concerns.
5. Participate in customer and regulatory audits when necessary to maintain customer certifications and regulatory compliance.
6. Ensure supplier quality of raw materials utilizing food safety programs.

I. Management

400

1. Assist with managing regulatory compliance including completing paperwork and working with inspectors and auditors.
2. Develop departmental goals including Key Performance Indicator's (KPI) and metrics.
3. Assess and identify areas for continuous improvement plantwide.
4. Develop an understanding of the performance review process.

Approximate Total Hours 6,000

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <https://dol.ny.gov/public-work-and-prevailing-wage>.

DAIRY PROCESSOR
APPENDIX B
RELATED INSTRUCTION

Safety

1. General Workplace Safety
2. Lock-Out/Tag-Out Training
3. Confined Space Training
4. Hearing Conservation Training
5. First Aid/CPR/AED Training
6. PPE Training
7. Forklift Training
8. OSHA 10-Hour Course for General Industry
9. Sexual Harassment Prevention Training – MUST comply with Section 201-g of the Labor Law
10. Right to Know/Safety Data Sheets (SDS)
11. Fire extinguisher training
12. Refrigeration & Ammonia Safety
13. Fall protection and ladder safety
14. Machine Guarding & Safety

Food Safety & Quality

1. Good Manufacturing Practices
2. Dairy Microbiology
3. Regulatory overview and requirements
4. Hazards associated with dairy products
5. Food safety programs
6. Food safety plan development
7. Required tests
8. Basic Overview of Dairy Microbiology, Raw Milk Quality
9. Influence of Raw Milk Quality on Pasteurized Milk Quality & Shelf-Life
10. Factors Influencing the Quality and Shelf-Life of Dairy Products
11. Quality systems

12. 3rd party auditing (where applicable)
13. Environmental monitoring programs
14. Finished product requirements
15. Food safety culture
16. 5S

Production Operations

1. Required receiving and processing parameters
2. HTST processing operations
3. Clean and sanitize systems
4. Product-specific manufacturing processes
5. Preventive maintenance program training
6. Troubleshoot mechanical issues
7. Troubleshoot food safety and quality issues
8. Understand product flow paths and operations
9. Unit operations for processing equipment
10. Understanding production plans

Management

1. Supervisory Leadership
2. Project Management
3. Interpersonal Skill building
4. Communication/listening
5. Inclusion and Diversity
6. Conflict Resolution
7. Coach and Teach
8. Develop and meet KPI's
9. Provide Performance Feedback
10. Cyber Security
11. Microsoft office suite
12. Production and inventory software systems
13. Create and manage production plans
14. Respectful workplace/diversity training

A minimum of 144 hours of Related Instruction is required for each Apprentice for each year.

Appendix B topics are approved by New York State Education Department.