

Product Description

Management Objective & Contact Information	
<u>HACCP Plan Title:</u> Reduced Oxygen Packaging (ROP)	
<u>Management Objective:</u> Maintain the safety of our cheese product and guarantee safe consumption for customers.	<u>Contact Person:</u> Thomas Palchak
	<u>Phone:</u>
	<u>Email:</u> trp1@psu.edu

Product Description
<ul style="list-style-type: none">● <u>Used How:</u> Sold for consumption.● <u>Packaging:</u> Packaged in Reduced Oxygen Packaging which is an air tight plastic cover.● <u>Shelf Life & Storage:</u> Cheese will have a shelf life of 6 months and be stored at a temperature no greater than 45^oF. Have a First In First Out rotation.● <u>Where Sold:</u> Will be sold from the display case in the Berkey Creamery Store.● <u>Labeling Instruction:</u> Product name, date packed, expiration date, ingredients, weight, nutritional panel, storage directions(Keep refrigerated)

HACCP Team

Member	Contact
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Standard Operating Procedures

Only food handlers that are trained in the use of the reduced oxygen packaging equipment and process of reduced oxygen packaging and have a thorough understanding of the HACCP plan shall operate or conduct ROP operations. Documentation of ROP training must be maintained in the employee training record.

1. Ensure that facilities in the area where ROP operations are to be conducted are clean and sanitary and are in good physical condition. ROP operations must only be conducted in a designated area. This area must not be located in the retail area or any public area where post process contamination may occur. No packaging of ready-to-eat foods can be conducted while raw foods are present or are being processed in the same room. Only properly cleaned and sanitized equipment is to be used in the operation.
2. Ensure that all equipment is operating properly and safely. Ensure that equipment involved in the ROP process has been properly cleaned and sanitized according to sanitation standard operating procedures. This equipment may include but is not limited to: tables, cutting boards, slicer, knives, tongs, trays etc.
3. Ensure that food handlers are in compliance with Berkey Creamery's Good Manufacturing Practices (GMPs)
4. Assemble appropriate packaging materials, labels, etc. that are necessary to complete the operation.
5. Assemble products that are to be packaged. Products that are to be ROP'd shall remain at room temperature no longer than 30 min. during the packaging process, so only remove sufficient quantities to comply with this guideline.
6. Place food in the packaging materials. Food employees must limit their hand contact with exposed ready-to-eat foods wearing gloves or other approved food dispensing utensils. Employees shall follow ROP training program and GMP's.
7. Place bags and vacuum machine ensuring that adequate space is provided around each package. Ensure that machine settings are appropriate for the product being packaged (For cheese : Vac-36, Gas - 01, Seal - 1.7, Cool -3.1). It is important that a full vacuum is provided. Start machine and wait for the lid to open indicating the process is complete.
8. Remove the packages from the machine. Visually check the seal to ensure that is tight and that there are no materials in the seal. Make note of any indicators of a faulty seal such as wrinkles or an incomplete seal. Packages with a faulty seal should be repackaged. Trim excess packaging as required.
9. Weigh and label each package. Ensure that all required information is provided on the label. Employee shall follow the labeling SOP's. Record products packaged in the quantity on ROP packaging log.

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10. CCP #1: products shall be stored/displayed under refrigeration. To reduce the potential for growth of these pathogens, ROP products must be stored at cooler temperatures of 45°F or less. Employees must monitor the cooler temperatures at least twice a day to ensure that foods are not allowed out of the temperature requirements for extended periods of time. Temperatures should be recorded on the temperature recording log. The manager will visually verify daily the temperatures are being recorded as required by the operator. If the product exceeds 45°F or more, for less than a period of four hours, the product will be immediately moved to another cooler under proper refrigeration. Affected products must be cooled to below 45°F within the remaining time (total product time of the CL cannot exceed four hours). If the product exceeds 45°F, for more than a period of four hours, the product will be discarded. Appropriate measures will be taken to repair the cooler.

11. Products reaching the expiration date shall be removed from sale and discarded. Products that are pulled from the sale are recorded on the ROP products who log.

Reduced Oxygen Packaging-Training Program

While the process of packaged foods using a reduced oxygen method extends the shelf life of a product, it also can pose a serious public health threat.

A thorough understanding of the HACCP plan, the use of ROP equipment, and the SOPs are critical to safe operation. Areas of focus include: products that can be packaged, temperature control, and the prevention of cross contamination, and health and personal hygiene of food handlers.

- **State regulations limit the types of food that can be packaged using ROP.** Berkey Creamery's HACCP plan lists the foods that can be packaged using ROP:
 1. Cheese
 2. Cheese spreads
 3. Cured meats
 4. Ice Cream Sandwich's
- Temperature control is a very important factor in keeping all potentially hazardous food safe. Extended shelf life and decreased oxygen concentration allow certain pathogens to multiply and reduced oxygen conditions. To reduce the potential for growth of these pathogens, products must be stored at a cooler temperature of 45°F or less. Employees must monitor the cooler temperatures at least twice a day to ensure that foods are not allowed to be out of temperature requirements for extended periods of time.
- Raw foods must be handled separately from cooked and ready to eat foods to avoid cross contamination. Utensils, equipment and work services used for raw food must be thoroughly cleaned and sanitized prior to using for cooked or ready-to-eat foods. In addition, ensure that the ready-to-eat foods are stored so that juices from raw products

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cannot drip or otherwise come into contact with them. Food handlers can also be a source of cross-contamination through improper hand washing, or soiled clothing or aprons.

- The health and personal hygiene of food handlers can also play a critical role in producing a safe ROP food. It is vital that employees who work in the operation properly follow the SOP's and SSOP's and GMP's.

Labeling

Mandatory labeling information:

1. Name of product
2. Name, address including ZIP code of store
3. Net weight statement
4. Complete and detailed ingredient statement in descending order of predominance
5. Allergens (milk, wheat, soy, tree nuts, peanuts, fish, and shellfish) must be declared in common name in ingredient statement or in content statement.
6. Directions how to store.

Sanitation standard operating procedures (SSOP's)

Cleaning and sanitizing procedure (preoperational)

Properly clean and sanitize food contact surfaces are critical to ensuring a safe, sanitary operation. Use of approved cleaners and sanitizers will reduce levels of pathogenic organisms to prevent cross contamination of the product. Detergent cleaners since then and help remove various food soils. Chemical sanitizers reduce the number pathogens and other microorganisms.

The cleanup process must be completed in accordance with the following procedure:

- Pre-cleaning - equipment and utensils shall be pre-flushed, pre-soaked, or scrape as necessary to eliminate excessive food debris.
- Washing - equipment and utensils shall be effectively washed to remove or completely loosen soils using a manual or mechanical means. Only approved chemicals are to be used in this process. Mix concentration according to manufacturer's recommendations.
- Rinsing - washed utensils and equipment shall be rinsed to remove abrasives and to remove or dilute cleaning chemicals with water.
- Sanitizing - after being washed and rinsed, equipment and utensils must be sanitized with an approved chemical by immersion, manual swabbing, Russian or pressure spraying methods. Concentration and exposure times are pouring to ensure effectiveness of chemical. Refer to the manufacturer's label for concentrations and times.

Frequency of cleaning (operational)

Equipment, food contact surfaces and utensils shall be cleaned in a time frame as follows:

1. Between uses with raw fruits or vegetables and with potentially hazardous foods
2. At any time during the operation when contamination may have occurred
3. If used with potentially hazardous foods, throughout the day at least once every four hours
4. Utensils and equipment that are used to prepare food and must be cleaned at least once every four hours when in use
5. Before using or storing a food temperature measuring device
6. Equipment used for storage of package or unpackaged food, including coolers, and equipment is cleaned at a frequency necessary to eliminate soil residue
7. For ice bins, a frequency necessary to preclude accumulation of soil or mold
8. Cooking equipment shall be cleaned at a frequency to prevent the accumulation of food residues

Non-food contact surfaces of equipment shall be cleaned at a frequency necessary to prevent accumulation of soil residues

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Employee Practices

1. Hands are to be thoroughly washed for 20 seconds and a detergent hand sink with soap and water, pink titular attention to the areas underneath her fingernails and between the fingers by scrubbing thoroughly with a fingernail brush. Dry with a single use towel. Hand washing is to be done at the following times:

- After using the toilet, in the toilet room
- After coughing, sneezing, using a tissue, using tobacco, eating or drinking
- After handling soiled equipment or utensils
- Immediately before engaging in food preparation activities
- During food preparation activities necessary to remove soil and prevent cross contamination
- When switching between raw and ready-to-eat foods
- Other times as needed to maintain good sanitation

2. Fingernails must be trimmed, filed, free of nail polish, and maintained so the edges are cleanable and not rough. Artificial nails are prohibited.

3. Eating and drinking is prohibited in areas where contamination of expose food, clean equipment, utensils, unwrapped single service in single-use articles could occur. If the employee may drink from a closed beverage container as long as it is handled to prevent contamination.

4. Effective hair restraints must be worn in processing areas.

5. Smoking and other uses of tobacco are prohibited.

6. Clean outer clothing must be worn each day and changed as often as necessary throughout the day (when moving from a raw food operation to a ready-to-eat evaporation).

7. Frocks and aprons used by employees are to be hung in a designated area when not in use. They are not to be worn in the toilet area, eating areas and locker rooms.

8. Footwear is to be kept clean.

9. No jewelry is allowed during handling of food.

10. Employee shall report the person in charge when they have a symptom caused by illness, infection, or other source that is:

- Associated with diarrhea, vomiting or other acute gastrointestinal illness
- Jaundice
- A boil, infected limb, or other lesion containing pus that is open or draining unless: if on the hands and wrists, and covered by a finger cot or other impermeable cover that protects the lesion and a single use glove is worn if on exposed portions of the, the lesion is protected by an impermeable cover.
- The person in charge shall impose the proper restrictions and exclusions according to proper GMP's

Verification and Record Keeping

Verification procedures

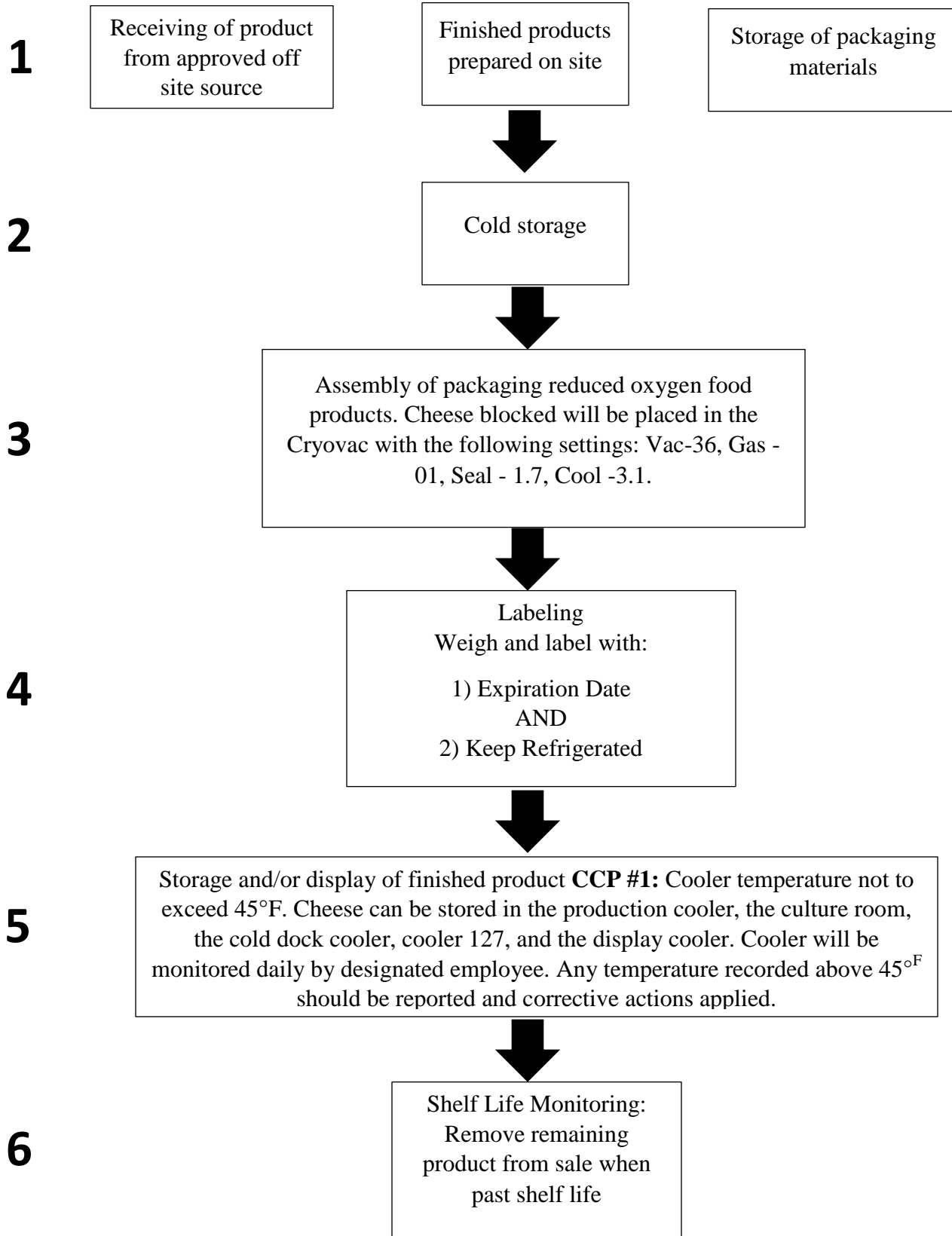
1. All personnel operating parts of the plan will be trained. Complete employee training log for each employee.
2. All monitoring records will be checked for accuracy and completeness prior to sale or within 24 hours. If discrepancies are noted, a corrective action will be applied.
3. Scales used to weigh cure will be checked for accuracy each time a product is made. The scale will be checked for accuracy using a standard way according to manufacturer's recommendations.
4. The HACCP plan will be reevaluated annually or when significant adjustments are made to review the plan to see if it is working and make adjustments when necessary.

Record keeping

The following records will be used in the HACCP food safety system and are included on the following pages:

- Temperature log
- Employee training log

Cheese ROP HACCP Flow Chart



Hazard Analysis Cheese ROP

Process Step	Potential hazard introduced, controlled, or enhanced at this step B=Biological C= Chemical P= Physical	Does this potential hazard need to be addressed in the HACCP plan? (Yes or NO)	Justification made for decision made in previous column	What control measures can be applied to prevent, eliminate or reduce hazards being addressed in the HACCP plan?
1	B: No C: No P: No	No	No Hazard	N.A.
2	B:No C:No P: No	No	No Hazard	N.A.
3	B:No C:No P:No	No	No Hazard	N.A.
4	B:No C:No P:No	No	No Hazard	N.A.
5	B:Yes C:No P:No	Yes	Bacterial growth	Daily monitored temperatures. Disposal of any temperature abused product.
6	B:No C:No P:No	No	No Hazard	N.A.