

Instructions for Reduced Oxygen Packaging HACCP Guidance Templates

The purpose of the Reduced Oxygen Packaging Guidance HACCP Templates for Raw meats and Cook-chill processes is to provide guidance in developing a HACCP plan.

1. There must be a thorough understanding of HACCP principles when developing a HACCP plan.
2. Please refer to the “Reduced Oxygen Packaging Fact Sheet”
3. Please refer to the information sheet “What is needed in a HACCP Plan.”

ROP HACCP Plan must contain the following:

1. A list of products that will be reduced oxygen packaged.
2. Equipment list/equipment spec sheets.
3. Flowcharts for each product must be included with CCPs identified.
4. Hazard Analysis charts must be completed for each product with CCPs identified.
5. HACCP charts must be completed for each product.
6. The HACCP plan must include process descriptions for each product which includes but not limited to:
 - Ingredients
 - Equipment/Materials
 - Preparation steps
 - Monitoring procedures
7. Standard Operating procedures must be included but not limited to:
 - Training program procedures
 - Cleaning and sanitizing procedures
 - Thermometer calibration procedures
 - Designated work area procedures
8. Monitoring Logs must be included such as:
 - Product temperature log
 - Product date/label log
 - Thermometer calibration log
9. Make sure your HACCP plan is complete and customized to the processes in **YOUR** establishment or your HACCP plan will not be approved and you will not be able to conduct reduced oxygen packaging.

ABC RESTAURANT

123 Main Street
Oklahoma City, OK 73118

HACCP PLAN

**For Reduced Oxygen Packaging Raw Meats
& Poultry**

General SOP's
Cleaning and Sanitizing
Employee Practices
ROP Procedures
Training Program

HACCP Based SOP's

Cold Storage Procedures

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VACUUM PACKAGING RAW MEATS

- Products:** Raw meats (beef, goat and lamb) and poultry (chicken)
- Ingredients:** Raw meats and poultry with no additional ingredients added
- Intended Use:** Retail Sale
- Time/Shelf-Life:** 14 Days under cold storage ($\leq 41^{\circ}\text{F}$)

PROCESS DESCRIPTION

ABC Restaurant's reduced vacuum packaging (ROP) processes are limited to raw meats and poultry which are packaged in-house and sold directly to consumers. We purchase all of meats and poultry from approved and licensed suppliers and inspect them during receiving for temperature (41°F or below) and quality. The handling, prepping, packaging and monitoring of vacuum packaged products are conducted by employees who have thorough understanding of this HACCP plan and are trained in the reduced oxygen packaging processes. The ROP operations are conducted only in the designated areas of the kitchen and all vacuum packaged meats and chicken are labeled properly including a use-by date of 14 days from date of packaging, and stored in coolers maintaining temperatures of 41°F or below.

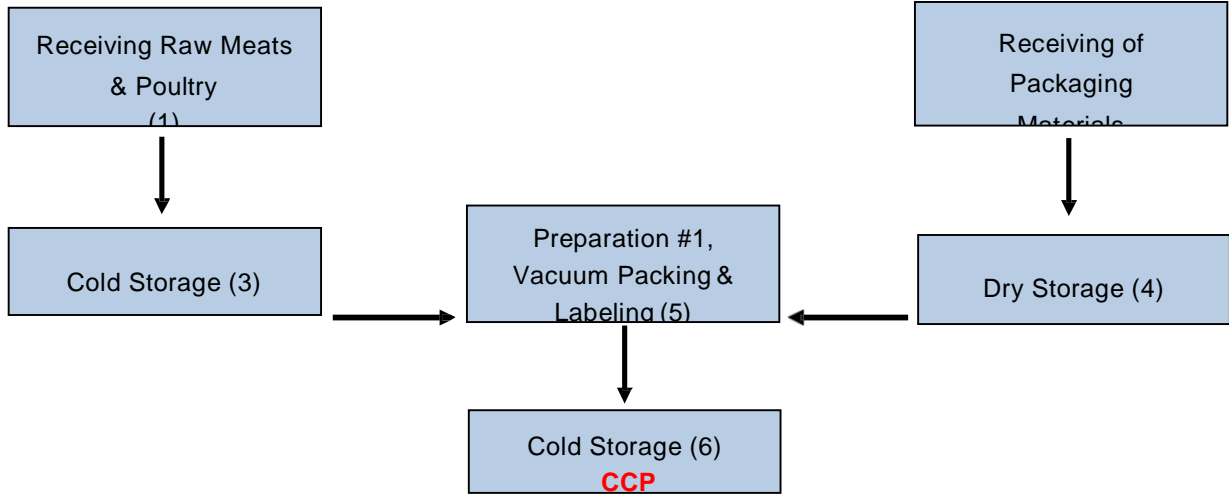
EQUIPMENT LIST (Include make, model and specification sheet)

- Refrigerators: _____
- Thermometers: _____
- Vacuum Packager: _____

HACCP TEAM MEMBERS

NAME	TITLE/ROLE
_____	_____
_____	_____
_____	_____
_____	_____

FLOW DIAGRAM



Verified by (Name)

Signature

Date

HAZARD ANALYSIS

PROCESS STEPS					
Process Step	Potential Hazards (B) Biological (C) Chemical (P)Physical	Is this hazard significant?	Justification of Decision	Preventative Measures	Is this step a CCP?
Receiving Raw Meats & Poultry (1)	(B) Pathogens, Salmonella, and E. coli 0157:H7, Campylobacter jejune, Clostridium Botulinum, etc.	Yes	Fresh meat and poultry are known to contain pathogens	Meat and poultry will be purchased from approved suppliers and received at proper temps.	No
Receiving Packaging Materials (2)	(C) Deleterious Chemicals (P) Foreign Material.	No	Non-food packaging materials might have been treated/washed w/chemicals not suitable for food contact surfaces	Letters of guarantee ensuring packaging materials are appropriate for product use will be kept on file	No
Cold Storage of Raw Meats & Poultry (3)	(B) Pathogens, Salmonella, and E. coli 0157:H7, Campylobacter jejune, Clostridium Botulinum, etc.	Yes	Potential Growth of Pathogens	All meat and poultry will be immediately stored in coolers and freezers.	No
Dry Storage of Packaging Materials (4)	(P) Foreign Material.	No	Visible foreign material that could compromise product safety; rodent droppings, insects, etc.	Visual inspection of packaging materials to ensure no foreign material is present.	No
Preparation #1, Vacuum Packing & Labeling (5)	(B) Pathogens, Salmonella, and E. coli 0157:H7, Campylobacter jejune, Clostridium Botulinum, etc.	No	Potential Growth of Pathogens due to cross-contaminations is likely Improperly Labeled Products will Result in Outdated or Unsafe Products	Time product will be in the temp. danger zone during assembly will be minimized and monitored. Each bag with be properly labeled with product name, date packaged, and 'Use-By' date	No
Cold Storage (6) CCP #1	B) Pathogens, Salmonella, and E. coli 0157:H7, Campylobacter jejune, Clostridium Botulinum, Listeria, etc.	Yes	Potential Growth of Pathogens if Proper Temperatures are Not Maintained.	ROP packaged and labeled products will be monitored for time and temperature control.	Yes

HACCP FORM

CCPs									
(1) Critical Control Point	(2) Hazard Description	(3) Critical Limits	Monitoring				(8) Corrective Action	(9) Verification Activities	(10) Record-keeping Procedures
			(4) What	(5) How	(6) Frequency	(7) Who			
Cold Storage	Pathogens	Temperatures: 41°F or less Time Limit: 14 days or less	Temperature of ROP Product will be measured and recorded. Date on ROP product labels will be checked and recorded	Use of thermometers and visual check of cooler/freezer temperatures monitoring device Visual check of the labels on the bag	2x Daily Daily	Designated food worker Designated food worker	Immediately discard product if temperature of ROP product exceeds 41°F and identify and eliminate cause of deviation. Identify out of date products and discard them.	Product Temperature Log will be reviewed daily by the executive chef or the manager on duty. Product Date and Label Log will be reviewed daily by the executive chef or the manager on duty.	Product Temperature Log Thermometer Calibration Log Product Date and Label Log

STANDARD OPERATING PROCEDURES FOR VACUUM PACKAGING

Only foodservice employees trained in the use of the reduced oxygen packaging equipment and have a thorough understanding of the HACCP plan shall conduct ROP operations.

1. **Receiving Raw Meat/Poultry:** Inspect meat and poultry products upon receiving for temperature and quality and verify product temps are at or below 41°F.
2. **Receiving Packaging Materials:** Inspect the condition of dry goods and packaging materials upon receipt. Verify products are in good condition.
3. **Cold Storage:** Immediately store all perishable products in the designated coolers with temperatures at or below 41°F.
4. **Dry Storage:** Store non-perishable products in clean location that is separated from any potential sources of contamination.
5. **Preparation #1, Vacuum Packaging & Labeling:** Assemble products, ingredients, packaging materials, labels, etc. necessary to the operation. Assemble products that are to be vacuum packaged and ensure products remain at room temperature no longer than 30 minutes during the packaging process.

Place product in the packaging materials. Place bags in the vacuum machine ensuring that adequate space is provided around each package. Ensure that machine is working properly and settings are appropriate for the product being packaged. Start the machine and wait for the lid to open indicating that the process is complete. Remove packages from the machine. Visually check the seal to ensure that it is tight and that there are no food materials in the seal. Packages with a faulty seal should be re-packaged. Trim excess packaging as required.

Properly label each package with name of product, product net weight, ingredients list in descending order of predominance, business name and address including zip code. The label must include statement indicating product *must be kept refrigerated or frozen and use-by date* that must be within 14 days of reduced oxygen packaging or the original manufacturer's "sell by" or "use by" date, whichever occurs first.

6. **Cold Storage (CCP):** Place ROP packages in coolers immediately after vacuum packaging and labeling.
 - **Critical Limit:** Products must be at or below 41°F and held in ROP packages for no more than 14 days.
 - **Monitoring:** The designated employees must measure and record temperatures of ROP products at least twice a day during business operating times and record temperatures on the Product Temperature Log.

The designated employees must also visually check labels of ROP products for use-by dates and record the check and any corrective action on Product Date/Label Log.

- **Corrective Action:** If actual product temperature measures above 41°F, discard the product and notify the Manager on Duty that the cooler is not properly working. Record corrective actions on the Product Temperature Log.

If the Use-By dates are past the designated date, discard the product and record corrective actions on the Product Date and Label Log.

- **Verification:** Manager on Duty must verify that designated employees are monitoring and checking ROP product temperatures and use-by dates daily by visually monitoring employees during their shift and reviewing Product Temperature Logs and Product Date/Label Logs on daily basis.

SANITATION STANDARD OPERATING PROCEDURES (SSOPs)

EMPLOYEE HYGIENE AND PRACTICES

1. Hands are to be thoroughly washed in a designated hand sink with soap and water, paying particular attention to the areas underneath the fingernails and between the fingers by scrubbing thoroughly with a using a fingernail brush. Dry with single use towels. Handwashing 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 as 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 kept trimmed, filed, free of nail polish, and maintained so the edges are cleanable and not rough.
3. Eating and drinking is prohibited in areas where contamination of exposed food, clean equipment, utensils, unwrapped single service and single use articles could occur. A food employee may drink from a closed beverage container in a food prep area 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 to prevent contamination of food, equipment, utensils, linens, and single-service and single-use articles.
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. No jewelry (except a wedding band or other plain ring) is allowed during handling of food.

9. Food Employees shall report to the Person in Charge when they have a symptom such as:
- Diarrhea
 - Vomiting
 - Sore throat with fever
 - Jaundice
 - A boil, infected wound or other lesion containing pus that is open or draining unless: if on the hands or wrists, unless a finger cot or other impermeable cover protects the lesion and a single use glove is worn if on exposed portions of the arms, the lesion is protected by an impermeable cover.
10. Food Employees shall report to the Person in Charge when they are diagnosed with the following:
- Hepatitis A
 - Norovirus
 - Salmonella
 - Shiga toxin-producing E. Coli
 - Shigella

The Person in Charge shall impose the proper restrictions and exclusions according to rule.

CLEANING AND SANITIZING

Equipment Food Contact Surfaces

Properly cleaned and sanitized 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 suspend and help remove various food soils. Chemical sanitizers (chlorine, quaternary ammonia, etc.) reduce the numbers of pathogens and other microorganism to insignificant levels.

The cleanup process must be completed in accordance with following procedures:

- **Pre-cleaning:** Equipment and utensils shall be pre-flushed, presoaked, or scraped as necessary to eliminate excessive food debris
- **Washing:** Equipment and utensils shall be effectively washed to remove or completely loosen soils using manual or mechanical means. Only approved chemicals are to be used in this process.
- **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, brushing, or pressure spraying methods. Exposure time is important to ensure effectiveness of the chemical.

Ensure that an appropriate chemical test kit is available and routinely used to ensure that accurate concentrations of the sanitizing solutions are being used.

Frequency of Cleaning Equipment, Food Contact Surfaces and Utensils:

1. Before each use with a different type of raw animal food, including beef, fish, lamb, pork, or poultry;
2. Each time there is a change from working with raw foods to working with ready to eat foods;
3. Between uses with raw fruits or vegetables and with potentially hazardous foods;
4. At any time during the operation when contamination may have occurred.
5. If used with potentially hazardous foods, throughout the day at least once every four hours
6. Utensils and equipment that are used to prepare food in a refrigerated room that maintains the utensils, equipment, and food under preparation at 41°F or less and are cleaned at least once every 24 hours
7. Before using or storing a food thermometer.
8. For equipment used for storage of packaged or un-packaged food, including coolers, and the equipment is cleaned at a frequency necessary to eliminate soil residue.
9. For ice bins, at a frequency necessary to preclude accumulation of soil or mold.
10. Food contact surfaces of cooking equipment shall be cleaned at least once every 24 hrs.
11. Non-food-contact surfaces of equipment shall be cleaned at a frequency necessary to prevent accumulation of soil residues.

HACCP TRAINING FOR EMPLOYEES

Understanding the potential hazards associated with reduced oxygen packaging.

While the process of packaging foods using a reduced oxygen method extends the shelf life, it also can pose a serious public health threat. Generally, bacteria survive under conditions where there is oxygen present (aerobic conditions) or where oxygen is not present (anaerobic conditions). Some bacteria have the ability to adapt to either condition.

Under traditional packaging conditions (aerobic conditions), spoilage bacteria would normally thrive and the product would spoil before the more hazardous types of bacteria might become a problem. During the process of 'vacuum packaging' or 'reduced oxygen packaging', the air inside the package (which is approximately 21% oxygen) is eliminated, creating anaerobic conditions and thereby changing the types of bacteria that can survive in the package. Spoilage organisms are eliminated, but several types of pathogenic bacteria survive and actually thrive under these conditions.

The pathogen of greatest concern is **Clostridium botulinum**. While botulism bacteria will normally be killed in a cooking step, spores of the bacteria may survive and could grow and produce toxin if the conditions are right. These conditions are similar to those that occur in

a vacuum/reduced oxygen package. Other pathogens of concern may be **Listeria monocytogenes**, *Yersinia enterocolitica*, *Campylobacter jejuni*, and *Clostridium perfringens*.

CONCEPTS REQUIRED FOR A SAFE OPERATION

A thorough understanding of this HACCP plan, the use of the reduced oxygen packaging equipment, and the HACCP based standard operating procedures is necessary for the safe operation of the restaurant's vacuum packaged products. Areas to focus on include: products that can be packaged, time and temperature control, prevention of cross contamination, and health and personal hygiene of food handlers.

Products that can be packaged by ROP

State of Oklahoma regulations limit the types of foods that can be vacuum packaged. **ABC Restaurant's** HACCP plan defines the foods that can be packaged using reduced oxygen packaging. **Only the specific products on this list can be reduced oxygen packaged.** Any addition to the above list must first have the approval of the **Manager on Duty** or **Executive Chef**. Changes must be noted in the HACCP PLAN. Foods to be reduced oxygen packaged at the **restaurant** must be limited to one that does not support the growth of *Clostridium botulinum* because of one of the following requirements:

1. has a water activity of 0.91 or less
2. has a pH of 4.6 or less
3. is a food with a high level of competing organisms, including raw meat, raw poultry, or a naturally cultured standardized cheese
4. is a meat or poultry product that was cured at a USDA meat plant and received in an intact package or cured using approved substances (nitrates/nitrites).

By limiting the types of food that can be ROP to those on the list, an additional barrier to the growth of *Clostridium botulinum* is provided and thereby helps to ensure a safe product. In addition, except for fish that is frozen before, during, and after packaging, a food establishment shall not package fish using a reduced oxygen packaging method.

Following are examples of foods that do not meet the above requirements and therefore may NOT be reduced oxygen packaged: Cooked turkey (including whole or sliced turkey breast), cooked roast beef, sandwich spread (including ham salad, chicken salad, etc.), cooked fresh sausage (not cured/smoked such as bratwurst), and fresh salads.

Time and Temperature Control

Temperature control is a very important factor in keeping all potentially hazardous foods safe. But the extended shelf life and decreased oxygen concentration allows certain pathogens to multiply in reduced oxygen conditions. To reduce the potential for growth of these pathogens, products (packaged and unpackaged) must be stored at cooler temperatures of 41° F or less for no more than 14 days unless approval for extended storage is granted by the health department.

Preventing Cross Contamination

Raw foods should be handled separately from cooked and ready to eat foods to avoid cross contamination. Utensils, equipment and work surfaces used for raw foods should be thoroughly cleaned and sanitized prior to using for cooked or ready-to-eat foods. In addition, ensure that ready-to-eat foods are stored so that blood or juices from raw products cannot drip or otherwise come into contact with them. Food handlers can also be a source of cross contamination through improper handwashing, or soiled clothing or aprons.

Employee Health and Hygiene

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 working in this operation follow the Employee Hygiene and Practices guidelines in the Sanitation Standard Operating Procedures (SSOPs).

Product Temperature Log

Instructions: The designated foodservice employee must record the item description, date, time, temperature, corrective action, and initials on this log on a daily basis. The designated supervisor must verify that foodservice workers have taken the required temperatures by visually monitoring food workers during their shift, and must review, initial, and date this log daily. This log should be maintained for a minimum of **6 months**.

Item Description	Date	Time	Temp	Corrective Action	Initials	Verified By

Product Date/Label Log

Instructions: The designated foodservice employee must check the date and label of each vacuum packaged product and ensure they do not exceed the use-by date. The employee must record date and time the product label is checked, any corrective action, and initials on this Log on daily bases. The designated supervisor must verify that foodservice workers have checked ROP product dates and labels by visually monitoring food workers during their shift, and must review, initial, and date this log daily. This log should be maintained on file for a minimum of **6 months**.

Location/ Unit Description	Date	Time	Use-By Date Check?	Corrective Action	Initials	Verified By

Thermometer Calibration Log

Instructions: The designated foodservice employee(s) must record the calibration temperature and corrective action taken each time a thermometer is calibrated. Thermometers intended for measuring hot temperature items must be calibrated in hot water, while those used for cold temperatures must be calibrated in ice water. The designated supervisor must verify and initial that foodservice employees are using and calibrating thermometers properly by making visual observations of employee activities during hours of operation. This log should be maintained for a minimum of **6 months**.

Date	Time	Thermometer ID#	Method Used (Ice Slurry/ Boiling Point)	Thermometer Reading	Accurate (Yes /No)	Corrective Action	Initials	Verified By