**ABC Restaurant**

**123 Main Street S.E.**

**Minneapolis, MN 55404**

**LIC#:**

**Email:**

**Phone:**

**HACCP Plan**

**Reduced Oxygen Packaging**

**Fish (Fillet)**

**SOP’s**

ROP procedures

Cleaning and sanitizing

Employee practices

Training program

# [Month, Day, Year] Vacuum packaging raw fish

Minneapolis Environmental Health  
505 Fourth Ave S, Room 520  
Minneapolis MN 55415  
612-673-2301

[www.minneapolismn.gov/Health](http://www.minneapolismn.gov/Health)  
[www.minneapolis.gov/HACCP](http://www.minneapolis.gov/HACCP)

Logo, company name

Description automatically generated

**Products:** Raw fish fillets (specify)

**Ingredients:** Raw seafood/fish fillets with no additional ingredients added (or specify added ingredients)

**Intended use:** Served in the restaurant to diners

**Time/shelf-life:** 30 days held frozen. Product must be removed from vacuum upon removal from freezer/thawing.

**Process description (specify)**

ABC Restaurant’s reduced vacuum packaging (ROP) processes are limited to raw seafood/fish fillets. These products are packaged for in-house restaurant use only. ROP allows seafood to stay fresh and save cooler/freezer space. We:

·       Purchase the raw seafood/fish fillets from approved and licensed suppliers

·       Inspect seafood upon receiving for quality and ensure temperature is 41°F or below

·       Properly train employees in ROP processes to ensure thorough understating of this HACCP plan

·       Conduct ROP operations only in designated areas of the kitchen

·       **Remove all packaged seafood/fish fillets from their bags prior to thawing**

·       **Keep fish frozen before, during, and after ROP**

·       **Keep records onsite for at least 6 months**

**Equipment list: (Attach all equipment specification sheets to end of document)**

* Refrigerator: Specify
* Freezer: Specify
* Vacuum packager: Specify
* ROP bags: Specify
* Thermometers: Specify

**HACCP team members:**

Name Title/role

* John Doe Executive chef
* Jane Doe Sous chef
* Bob Doe Sous chef
* Jen Doe Sous chef

**Recipe(s) (Specify)**

**\*Please add product recipes to be vacuum packaged including all ingredients, preparation steps, and corresponding weights\***

# Flow diagram



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Verified by (Name) Signature Date

# Hazard analysis

| **Process steps** | | | | | |
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| **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 seafood / fish (1) | (B) Pathogens, Clostridium Botulinum, Listeria | Yes | Fresh seafood and fish fillets are known to contain pathogens | Seafood and fish fillets will be purchased from approved suppliers and received at proper temps. | No |
| Receiving of packaging materials (2) | (C) Deleterious Chemicals  (P) Foreign material. | No | Food packaging materials may have been damaged/contaminated during shipment and not suitable for food storage use | Inspect packaging at receiving to ensure integrity. Reject adulterated packaging materials. Ensure vacuum packaging bags are food grade. | No |
| Cold storage (3) | (B) Pathogens, Clostridium Botulinum, Listeria | Yes | Potential growth of pathogens | All seafood and fish fillets 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. Store in approved area within facility. | No |
| Freezing fish (5)  **CCP #1** | (B) Pathogens, Clostridium Botulinum, Listeria | Yes | All fish fillets must be frozen prior to ROP process being conducted. | Seafood/fish fillets will be frozen prior to ROP process | **Yes** |
| Vacuum packing & labeling (6)  **CCP #2** | (B) Pathogens, Clostridium Botulinum, Listeria | Yes | Potential growth of pathogens due to cross-contamination  Potential growth of pathogens if proper temperatures are not maintained  Potential growth of pathogens if thawing products are kept in an anaerobic environment | Time product will be in the temp. danger zone during assembly will be minimized and monitored.  Seafood/fish fillets will be frozen before, during and after ROP.  Designate an approved area for ROP. Ensure station and equipment are cleaned and sanitized prior to ROP of separate types of raw animal food.  Ensure seal is complete. No debris in bag or seal.  Each bag with be properly labeled with a statement reading “keep frozen and open prior to thawing”. | **Yes** |
| Frozen storage (7) **CCP #3** | B) Pathogens, Clostridium Botulinum, Listeria | Yes | Potential growth of pathogens if proper temperatures are not maintained | ROP packaged and labeled products will be monitored for temperature control. | **Yes** |
| Bag opened / seal broken  Thawing (8)  **CCP #4** | B) Pathogens, Clostridium Botulinum, Listeria, toxin formation | Yes | Potential for growth of pathogens and cross contamination  Potential growth of pathogens if thawing products are kept in an anaerobic environment  Pathogenic bacteria growth and toxin formation due to time and temperature abuse of fish and seafood products can cause consumer illness. | ROP packaging will be opened / seal must be broken prior to thawing and amount of time product spends in temperature danger zone will be minimized.  Thaw fish using only approved thawing methods listed in MN 4626.0380. | **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** |
| Freezing fish **CCP 1**  Vacuum packing & labeling  **CCP 2**  Frozen storage  **CCP 3**  Bag opened / seal broken  Thawing  **CCP 4** | Pathogens:  C.botulinum  Pathogens:  C.botulinum  Pathogens:  C.botulinum  Pathogens:  C.botulinum  Toxin formation | **Temperatures:** Fish must be frozen at or below 32°F.  **Proper Labeling:**  A proper label will be affixed to each package stating “keep frozen and open prior to thawing”    **Temperatures:**  Freezer:  32°F or less  Oxygen must be introduced into the environment during the thawing process | Product will be placed in freezer  Properly affixed label will be added to each ROP package.  Product in freezer will be checked daily to confirm items are in a frozen state.  Condition of seal  Type of bag used | Freezer temperature gauge, product will be checked to confirm frozen state.  Use of a label-maker or other waterproof labeling device  Freezer temperature gauge, product will be checked to confirm frozen state.  Visual check to make sure product is removed from bag prior to thawing | 1x Daily  Each bag will be labeled  Daily for frozen product  Whenever product is removed from the freezer | Designated food worker  Designated food worker  Designated food worker  Designated food worker | If freezer temperature rises above 32°F, and fish is no longer in frozen state this product cannot be vacuum sealed.  If a label is observed missing from a bag of ROP food product. A label will be printed and added if production occurred on same date. Otherwise, product will be discarded.  Immediately discard product if product temperature exceeds  32°F, identify and eliminate cause of deviation  Any product found in thawing state still within its ROP packaging will be discarded | Confirm fish is in frozen state  Presence of accurate labels will be verified to be in place on each bag before placing product into freezer unit by the designated HACCP team member.  Refrigeration & Product Label Log will be reviewed daily by the executive chef or the manager.  Record on thawing log | **Freezing & Product Label Log**  **Freezing & Product Label Log**  Maintain for 6 months  **Frozen Storage Log**  Maintain for 6 months  **Thawing log** |

# Vacuum packaging procedures

*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 seafood/fish fillets:** Inspect seafood/fish fillet products upon receiving for temperature and quality and verify product temps are at or below 41ºF.
2. **Receiving packaging materials:** Inspect the condition of dry goods and packaging materials upon receipt. Verify products are in good condition. Verify only food grade bags are used for ROP of seafood/fish fillets.
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 a clean location that is separated from any potential sources of contamination.
5. **Freezing prior to ROP (CCP 1):** All seafood/fish fillets intended for ROP will be frozen prior to vacuum sealing.
6. **Vacuum packaging & labeling (CCP 2)**: Assemble products, ingredients, packaging materials, labels, etc. necessary to the operation. Assemble products that are to be vacuum packaged. Ensure products remain at room temperature no longer than necessary and do not begin to thaw 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 a statement stating, “open prior to thawing”.

**For products sold for retail sale** additional labeling requirements are as follows: The product must be stored in a designated container that has a label that states product “must be kept refrigerated or frozen” and “must be discarded if past use-by-date”. Standard labeling is also required (1. common name of the food; 2. ingredient list; 3. Net weight; 4. manufacturer name and location; 5. allergen declaration). Appropriate safe handling instruction labeling is also required.

1. **Frozen storage: (CCP 3):** Place ROP packages in freezer immediately after vacuum packaging and labeling.

* **Critical limit:** Products must be at or below 32°F while held in ROP packages.
* **Monitoring**: The designated employees must visually check and record temperatures of units holding ROP products at least once a day during business operating times and record temperatures on the Refrigeration & Product Label Log.

The designated employees must also visually check labels of ROP products for “open prior to thawing” verbiage.

* **Corrective action:** If ambient freezer temperatures exceed 32°F, check actual product temperatures and if above 32°F, discard the product and notify the Manager on Duty that the cooler is not properly working. Record corrective actions on the Refrigeration & Product Label Log.
* If the “open prior to thawing” label is missing from a package, one will be provided, and the corrective action will be recorded on the Refrigeration & Product Label Log.
* **Verification:** Manager on Duty must verify that designated employees are monitoring and checking ROP product temperatures and use-by dates by visually monitoring employees during their shift and reviewing and signing Refrigeration & Product Label Log daily.

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1. **Bag opened / seal broken / thawing (CCP 4):**  Remove vacuum packaged products from freezer, open the bag prior to thawing under refrigeration and prepare product for cooking according to recipe. Fish must be thawed according to the methods listed in MN 4626.0380.

# 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

1. Fingernails must be kept trimmed, filed, free of nail polish, and maintained so the edges are cleanable and not rough.
2. 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 if it is handled to prevent contamination.
3. Effective hair restraints must be worn in processing areas.
4. Smoking and other uses of tobacco are prohibited.
5. 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 food operation).
6. 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.
7. Footwear is to be kept clean.
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 caused by illness, infection, or other source that is:

* associated with diarrhea, vomiting or other acute gastrointestinal illness
* 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.

*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 unpackaged 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.

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 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 Minnesota 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 an aW of 0.91 or less
2. Has a pH of 4.6 or less
3. A food with a high level of competing organisms such as raw meat, raw poultry, or raw vegetables
4. A meat or poultry product cured at a food processing plant regulated by the USDA using substances specified in Code of Federal Regulations, title 9, subpart C, section 424.21, and is received in an intact package

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.

**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 freezer temperatures of 32 degrees or below. When product is to be thawed, it must be removed from its packaging prior to thawing, and used within 7 days of removal from freezer. Ensure that a properly calibrated temperature measuring device is always used for checking temperatures.

**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).

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| **Freezing and Product Label Log**  **Instructions**: The designated foodservice employee must check the temperatures of seafood/fish fillet products to ensure they are frozen prior to packaging in ROP and record the product/unit location, date, and any corrective actions. Employee must check that each ROP package is appropriately labeled with a statement that reads “keep frozen and break seal prior to thawing”. Employees must initialize this log on daily basis and the designated chef or manager must verify that foodservice workers have verified proper freezing temperatures prior to ROP packaging and checked product labels 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. | | | | | | | |
| **Location / product description** | **Date** | **Frozen prior to packaging?**  **Yes/No** | **Labeled correctly**  **Yes/No** | **Corrective action** | **Initials** | **Verified by** |
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| **Frozen Storage Log**  **Instructions**: The designated foodservice employee must check the temperatures of both products and the units holding ROP seafood/fish fillet products to ensure they are maintained at or below 32 degrees F and record the product/unit location, date, and any corrective actions. Employees must initialize this log on daily basis and the designated chef or manager must verify that foodservice workers have verified proper cold holding freezer 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. | | | | | | | |
| **Location /product description** | **Date** | **Unit temperature** | **Product temperature** | **Corrective action** | **Initials** | **Verified by** |
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| **Thawing Log**  **Instructions**: The designated foodservice employee must check that all ROP seafood/fish fillet products have had the ROP seal broken prior to thawing and record the product/unit location, date, and any corrective actions. Employees must initialize this log on daily basis and the designated chef or manager must verify that foodservice workers have removed ROP seafood/fish fillet products from the back prior to thawing 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. | | | | | | |
| **Location / product description** | **Date** | **ROP Seal broken**  **yes / no** | **Corrective action** | **Initials** | **Verified by** |
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| **Updates / Edits to HACCP Plan Log**  **Instructions**: All edits or changes to an approved HACCP plan must be logged. Tracking changes helps during the inspection and the facility’s annual review. **Significant changes to a HACCP plan must be approved by the City of Minneapolis prior to changing**. Contact a member of our HACCP team to determine if additional approval requirements are necessary for proposed changes. | | |
| **Date** | **Initials** | **Summary of changes** |
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# Equipment specification sheets

**\*Please add required equipment specification sheets listed on page 2\***