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| **Wake County Department of Environmental Services**  **Reduced Oxygen Packaging of Raw MEAT, Raw POULTRY, Cheeses, Raw & Frozen FISH, and/or Raw Vegetables/Cook Chill/Sous-Vide**  **HACCP Application Packet** | Wake_County_Logo_Color.jpg |

Name of Establishment: Type establishment name here

Plan Date: Type most up-to-date submittal date here

Address of Establishment: Type addess of establishment here

Name of Primary Contact: Type HACCP contact name here

Email of Primary Contact: Type HACCP contact email here

Phone Number of Primary Contact: Type HACCP contact phone number here

Signature of Primary Contact: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Please refer to sections 3-502.12 and 8-201.14 of the 2009 NC Food Code for the requirements to conduct Reduced Oxygen Packaging (ROP).** |

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| **Refer to** [**http://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006810.htm**](http://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006810.htm) **and** [**http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx**](http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx) **for information on HACCP principles, definitions, examples, and more.** |

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| **This is intended to be tool/guide/template for creating your own, complete, HACCP plan. Feel free to use any parts of this guide in your HACCP plan. Attach flowcharts, hazard analyses, SOPs, and any other required components.** |

**Write name of establishment here**

Name of Establishment(s)-*If multiple locations, list all*

**Add facility ID number here (can be found on most recent inspection report)**

Facility ID Number(s)-*If multiple locations, list all*

**Write HACCP process here**

HACCP Process(es)

**Table of Contents (Must include all of these components with page numbers listed):**

*Intent & Validation………………………………………………………………………………………….…..…...Page*

*Overview of process(es)……………………………………….……………………………………….……………Page*

*Process description(s) (for each process)……………………..................................................*Page

*Flow diagram(s) (for each process)……………………………………………………………………….……Page*

*Hazard Analysis(es) (for each process)……………………….………………………………………………Page*

*Critical Control Point (CCP) Chart(s) (for each CCP)……………………………………………..……..Page*

*Sous-Vide or Cook Chill Process(es) (if applicable).........................................................Page*

*Labeling………………………………………………………………………………………………………….………...Page*

*Verification & Record Keeping Procedures…………………………………………………….…………..Page*

*Standard Operating Procedures (SOPs/SSOPs)..............................................................Page*

*Monitoring Logs…………………………………………………………………………………………………………Page*

*Equipment specification sheets……………………………………………………………….…………………Page*

**Intent**

Explain the purpose for the process and why a HACCP plan is required. A HACCP plan is required when you are working outside of NC Food Code parameters (or within the parameters for Reduced Oxygen Packaging without a variance). Generally speaking the ***intent*** will always be to control potential hazards, but you must identify the potential hazards in your product and process. A common pathogen chart is included in this packet for guidance.

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| *(Example)*  The purpose of vacuum packaging raw meat is to extend the shelf life of our raw meats in refrigeration. In creating a packaging atmosphere with reduced oxygen we limit the growth of spoilage bacteria which increases our quality but removes common indicators of time/temperature abuse in meat (off color; texture; odor). Reduced oxygen does NOT limit the growth of pathogens and also creates an environment that allows for the growth of *Clostridium botulinum* which causes botulism. Refrigerated temperatures (41°F) will control the growth and/or toxin production of some pathogens but *Clostridium botulinum* and *Listeria monocytogenes* are able to multiply well in refrigeration. For this reason, *C. botulinum* and *L. monocytogenes* become the pathogens of concern for Reduced Oxygen Packaging (Food Code Annex 3, page 432). |

**Validation**

***Validation*** is the process of demonstrating that the HACCP system as designed can adequately control potential hazards to produce a safe, unadulterated product. Explain how your HACCP plan will control for the potential hazards identified in your intent. You must include reference material. A validated recipe may be required. For Reduced Oxygen Packaging, you may use NC Food Code and Food Code Annex 3 for reference.

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| *(Example)*  In controlling for the growth of *Clostridium Botulinum* and *Listeria monocytogenes* we will control the growth of other foodborne pathogens as well. Raw meat has high levels of competing (spoilage) bacteria. This acts as a secondary barrier to pathogen growth as most foodborne pathogens don’t compete well with other microorganisms. When followed as written, the ROP methods in NC Food Code all control for the growth and/or toxin production of *C. botulinum* and *L. monocytogenes*. (Food Code Annex 3, page 432). This HACCP plan follows all methods in NC Food Code Reduced Oxygen Packaging Without a Variance for foods with a high level of competing organisms. |

**INTENT**

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**VALIDATION**

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**Overview of Processes**

Example:

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| --- | --- | --- |
| **Menu Item** | **Process** | **Ingredients** |
| Ex: Beef brisket | Cook sous vide | Beef brisket, water, cider, salt, sugar, peppercorns, and bay leaves |

The following is a blank Overview chart for your use. Electronic forms are available at <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>

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| **Menu Item** | **Process** | **Ingredients** |
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**Describe the intended consumer (check all that apply) – Please note that food cooked using sous vide or cook-chill** must be prepared and consumed on the premises, or prepared and consumed off the premises but within the same business entity with no distribution or sale of the packaged product to another business entity or the consumer (3-502.12(D)(2)(a)).

On-site consumption, general population

Off-site consumption, general population

Institutional

Elderly adults, immunocompromised persons, or pre-school aged children

Other: Insert intended consumer here if not listed above

**Time/Shelf-Life:**

*Must be 14 days or less for Raw MEAT, POULTRY, or Vegetables/30 days or less for Cheeses and held below 41°F at all times (3-501.12 (B)(4)). For Cook-Chill must be 72 hours or less (3-501.12 (D)(2)(e)(i-iv)). Raw FISH must be kept FROZEN before, during, and after packaging.* ***Refer to Shelf-Life Chart for further guidance.***

**Vendor:**

**Equipment List (REQUIRED) (Check each piece of equipment below that you have in your facility. All equipment must be ANSI-certified. Attach specification sheets for all specialized equipment that will be used to the end of the application. Refrigeration specification sheets are not required.)**

**Circulator** (**mandatory** for Sous-Vide)

**Data Logger** (**mandatory** for Cook Chill/Sous-Vide *(3-501.12 (D)(f))*)

**Refrigerator(s): (List refrigeration unit type i.e. walk-in cooler, prep refrigerators)**








**Thermometer(s)**

**Vacuum Packager(s)**

**Vacuum Packaging Bags**

**Other equipment: (List below and make sure to attach specification sheets for specialized equipment)**



**HACCP Team Members (Ex: General Manager, Executive Chef, etc.)**



**Process Description(s) EXAMPLE** (Each process should have a description page and a corresponding Flow Diagram, Hazard Analysis, and CCP Chart)**-\_\_\_\_\_\_\_ROP of Raw MEATs\_\_\_**(8-201.14(B)(1-2)

**Ingredients** (List all ingredients needed for HACCP process i.e. raw meats, spices, marinades): **Raw pork shoulder, raw beef ribs, spices, marinades**

**Materials** (List all materials for HACCP process i.e. vacuum bags, food grade tape)**: Vacuum sealer bags, labels**

**Equipment** (List all equipment used for HACCP process i.e. thermometer, vacuum sealer, circulator)**: Vacuum sealer, walk-in cooler, walk-in freezer**

**Process**: Describe each step of your HACCP process, step-by-step. From start to finish.

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| *Example:*  Process of **ROP of Raw MEATs**:   1. **Receiving of Raw MEATs (1)**    * *MEAT products to be vacuum packaged must be received at 41°F or below. If above 41°F it will not be accepted by restaurant operator.* 2. **Cold Storage of Raw MEATS (2)**    * *MEAT products will be stored at 41°F or below in the walk in cooler.* 3. **Preparation (3)**    * *MEAT products will be prepared in small batches to assure temperatures don’t exceed limits (41°F), keep items for vacuum sealing in the cooler as long as possible, removing for the shortest period of time possible for packaging (less than 30 minutes).* 4. **Vacuum Packaging (4)**    * *Once vacuum sealed, the temperature of the product being packaged must be verified at or below 41°F using properly calibrated thermometer at the time of packaging. Take a temperature reading between two packages, pressing them together on the thermometer probe and record temperature in the Cold Holding Log. If meat is above 41°F rapidly chill it to 41°F (within 30 minutes).* 5. **Labeling (5)**    * After product temperature is measured, product is labeled. If product will be frozen the freeze date must be written on label. 6. **Cold Holding (6)**    * Once vacuum sealed temperature of product must not exceed 41°F. 7. **Cooking (7)**    * *Product pulled for thawing the day prior to cooking, the date the product is pulled from the freezer is written on label. (Pre-freeze and post-thaw dates may not exceed 14 days).*    * *Within 14 days product is cooked to at least 145°F/155°F. MEAT products that are vacuum sealed for storage CANNOT BE COOKED VIA SOUS-VIDE.* 8. **Hot Holding (8)**    * *Product is held hot at 135°F or above.* 9. **Served To Customer (9)**    * *Product is served directly to customer.* |

**\*\*\*Each process description MUST have a corresponding flow diagram. A blank sheet is on the next page for your own use. Electronic forms can be found at** <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>

|  |
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| **Write Process Description here**  **Ingredients** (List all ingredients needed for HACCP process i.e. raw meats, spices, marinades):    **Materials** (List all materials used for HACCP process i.e. vacuum bags, food grade tape)**:**    **Equipment** (List all equipment used for HACCP process i.e. thermometer, vacuum sealer, circulator)**:**    **Process**: Describe each step of the HACCP process, step-by-step. From start to finish. |

**Insert or attach FLOW DIAGRAMS by specific food /category type (Raw MEAT, Raw POULTRY, Raw Vegetables, Raw & Frozen FISH, Cheese, Cook-Chill Items, Sous-Vide Items) identifying CRITICAL CONTROL POINTS (CCPs).** Start the flow diagram when thefood is received into your facility and end when food is served to the consumer. (Refer to 8-201.14 (B(1-2))) in 2009 NC Food Code; prefer **simple** box diagrams; Number flow diagram boxes to correspond to subsequent charts (such as hazard analyses) or any other references.)

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| A **CCP** is a point, step or procedure at which controls can be applied and a food safety hazard can be prevented, eliminated or reduced to acceptable (critical) levels. Determine if a step is a Critical Control Point (CCP) based on the following questions. If the answer is **YES** to all 3 questions below, it is a **CCP**.  • Is the identified hazard likely to occur?  • Are there preventive measures for each hazard?  • Is this the last point in which control can be applied to prevent, reduce or eliminate hazards?  A **critical limit** is a maximum and/or minimum value to which a biological, chemical or physical parameter must be controlled at a **critical** **control point (CCP)** to prevent, eliminate or reduce to an acceptable level of occurrence of a food safety hazard.The critical limits for ROP of raw MEATs will be a combination of Cold Storage Temperature and Holding Time based on type of food and process. |

**An example of a flow chart is on the following page. Fillable flow charts can be found at** <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>

**Critical Limit Quick Reference Chart**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Foods** | **41°F** | **38°F** | **34°F** | **frozen** |
| **MEATs** | 14 days | 14 days | 14 days | Indefinite |
| **POULTRY** | 14 days | 14 days | 14 days | Indefinite |
| **FISH** | Not allowed | Not allowed | Not allowed | Indefinite |
| **Cheese** | 30 days | 30 days | 30 days | Indefinite |
| **Raw fruits and vegetables** | 14 days | 14 days | 14 days | Indefinite |
| **Cook-chill and Sous-vide** | (cooled to 34°F prior to holding) 72 hours | 72 hours | 30 days | Indefinite |

**Example: ROP of Raw MEATs-Flow Diagram**

Insert your own **flow diagrams** here (Attach additional pages as needed) One flow diagram is required for each Raw MEAT, Raw & Frozen FISH, Raw POULTRY, Raw Vegetable, Cheese, Cook-Chill, or Sous-Vide product. If all Raw MEATs are prepared the same, only ONE flow diagram is needed for all Raw MEATs. The same applies to all other items. 8-201.14 (B(1-2))). **Make sure each Process Description, Flow Diagram, Hazard Analysis, and CCP Chart have matching titles.**

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| A great, free, software for building flow charts is Lucid Charts. However, you are welcome to use any software you would like. Here is a link to Lucid Chart’s website: <https://www.lucidchart.com/?utm_source=bing&utm_medium=cpc&utm_campaign=lucidchart_unitedstates>  Additionally, you can utilize Microsoft Word SmartArt to create flow charts you can easily edit in Microsoft Word. |

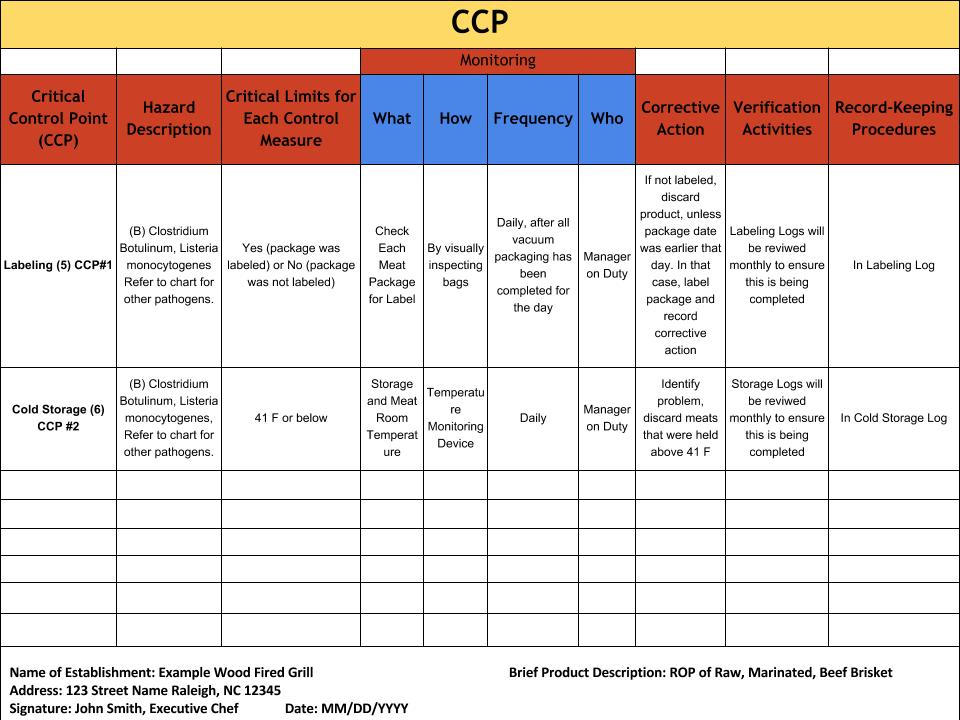
**Hazard Analyses** Each flow diagram must have a corresponding Hazard Analysis Chart. An example of a Hazard Analysis is below. Blank charts are available for you to copy and use for EACH of your flow diagrams. Biological hazards must be specific. It is **REQUIRED** that each HACCP plan control for *Listeria monocytogenes,* and *Clostridium botulinum.* A common pathogen chart is available at the end of this packet. (8-201.14(B(1-2))&(E))

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Process Step** | **Potential Hazards**  (B) Biological  (C) Chemical  (P) Physical | **Is this hazard significant?** | **Justification of Decision** | **Preventative Measures** | **Is this step a Critical Control Point (CCP)?** |
| Receiving Raw MEATs  (1) | (B)***Clostridium botulinum****,* ***Listeria monocytogenes****, Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | 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 |
| Cold Storage of Raw MEATs  (2) | (B)***Clostridium botulinum****,* ***Listeria monocytogenes****, Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | Yes | Potential Growth of Pathogens | All meat and poultry will be immediately stored in coolers and freezers. | No |
| Preparation  (3) | (B)***Clostridium botulinum****,* ***Listeria monocytogenes****, Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | Yes | Potential Growth of Pathogens | ROP packaging will be opened prior to cooking and time product will be in the temp. danger zone during assembly - minimized and monitored. | No |
| Vacuum Packing (4) | (B)***Clostridium botulinum****,* ***Listeria monocytogenes****, Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | No | Potential Growth of Pathogens due to cross-contamination is likely. | Time product will be in the temp. danger zone during assembly will be minimized and monitored. | No |
| Labeling (5)  **CCP #1** | (B ***Clostridium botulinum****,* ***Listeria monocytogenes,*** *Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | Yes | Improperly Labeled Products will Result in Outdated or Unsafe Products | Each bag with be properly labeled with product name, date packaged, and ‘Use-By’ date | Yes  **CCP #1** |
| Cold Storage (6)  **CCP #2** | (B)***Clostridium botulinum****,* ***Listeria monocytogenes****, Clostridium perfringens, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita* | 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  **CCP #2** |
| Cooking (7) | (B)***Listeria monocytogenes****, Escherichia coli STEC/VTEC, Salmonella spp., Staphylococcus aureus, Yersinia enterocolita, Taenia spp., Toxoplasma gondii, Trichenella spiralis, Hepatitis A* | Yes | Survival of Bacterial Spores if Products are not Properly Cooked to Correct Internal Temperatures. | Products will be cooked to the appropriate minimum internal temperatures | No |
| Served to Customer (8) | *Norovirus, Hepatitis A* | Yes | If food isn’t handled properly after cooking contamination could occur | Gloves or utensils will be used a barrier. Bare hand contact will be prohibited. | No |

Blank Hazard Analysis Chart. One Hazard Analysis Chart per Flow Diagram. (8-201.14(B(1-2))&(E)). Blank charts are available in electronic format at <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>

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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 Critical Control Point (CCP)?** |
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**Critical Control Point Charts** (If CCP column indicates ‘yes’ in Hazard Analysis Chart, then a CCP chart is required. The first two lines are completed in example chart. A blank chart follows. (8-201.14(D)). Blank charts are available in electronic form at <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>



The following page is a blank CCP chart for your use. Electronic forms are available at <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx>

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CCP** | | | | | | | | | |
|  |  |  | Monitoring | | | |  |  |  |
| **Critical Control Point (CCP)** | **Hazard Description** | **Critical Limits for Each Control Measure** | **What** | **How** | **Frequency** | **Who** | **Corrective Action** | **Verification Activities** | **Record-Keeping Procedures** |
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**Name of Establishment:** **Type establishment name here Product Description:** **Type brief product description here**

**Address:** **Type establishment address here**

**Date:** **Type date here MM/DD/YYYY Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**For SOUS-VIDE and COOK-CHILL only** (skip this step and go to labeling if you are not using sous-vide or cook-chill). (3-502.12(D)(1-4))

After food is cooked then rapidly cooled in the bag from 135°F to 70°F in 2 hours then from 70°F to 41°F in an additional 4 hours, choose your method of final cooling and cold storage (check one) (3-501.12 (D)(2)(e)(i-iv)):

**Cooled to 34°F** within 48 hours of reaching 41°F and held at **34°F** until consumed or discarded within **30 days** after the date of packaging

**Cooled to 34°F** within 48 hours of reaching 41°F, removed from refrigeration equipment that maintains a 34°F food temperature and then held at 41°F or less for no more than **72 hours**, at which time the food must be consumed or discarded

**Cooled to 38°F** or less within 24 hours of reaching 41°F and held there for no more than **72 hours** from packaging, at which time the food must be consumed or discarded

**Held frozen** with **no shelf life restriction while frozen** until consumed or used

Describe how your facility will comply with the following requirements during cold storage after meeting cooling parameters.

1. Food must be held in a refrigeration unit that is equipped with an electronic system that continuously monitors time and temperature and is visually examined for proper operation twice daily (3-501.12 (D)(2)(f)). *Provide a sample of this log at the end with other log sheets*: Describe how your facility will accomodate this requirement

2. If transported off-site to a satellite location of the same business entity, verifiable electronic monitoring devices must be used to ensure that times and temperatures are monitored during transportation (3-501.12 (D)(2)(g)): Describe how your facility will accomodate this requirement

**\*\*\***Maintain the records required to confirm that cooling and cold holding refrigeration time/temperature parameters are required as part of the HACCP PLAN and: Make such records available to your Health Inspector upon request, and keep such records for **at least 6 months** (3-501.12 (D)(3)).

\*\*\***Additional Required Logs for Sous-Vide and/or Cook-Chill:** Cooling and cold holding logs (3-501.12 (D)(3)).

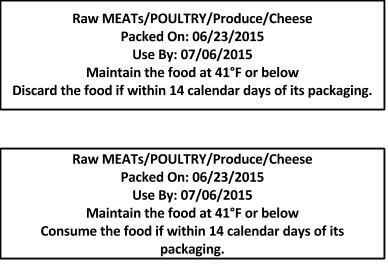
**For SOUS-VIDE and COOK-CHILL only (continued)**

**Provide signed statements stating:**

* That food prepared by cook-chill and/or sous vide will be prepared and consumed on the premises, or prepared and consumed off the premises but within the same business entity, and that no sale or distribution of the packaged product to another business entity or consumer will occur (3-501.12(D)(2)(a)).
* That one or both of the following statement(s) is/are true (3-501.12(D)(2)(d)):
  + (1) Food produced using a cook-chill system will be bagged while the food is above 135°F and/or
  + (2) Food produced using a sous vide process will be bagged immediately before cooking.

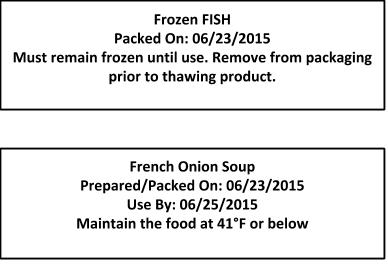
These are the **labeling** requirements.(3-501.12(B)(3)):

1. Does your label have a packaging date on it? Choose an item.
2. Does your label have a ‘use by’ or discard date on it?Choose an item.
3. Does your label have the **required** instructions written on it? Choose an item.
   1. **‘Maintain the food at 41°F or below’ (or as required based on shelf-life)**, and
   2. **‘Discard the food if within 14 calendar days (or as required based on shelf-life) of its packaging’ (if served for on-premises consumption), or ‘Consume the food within 14 calendar days (or as required based on shelf-life) of its packaging’ (if served or sold for off-premises consumption)** (3-502.12(B)(3(a-b)))**.**



*This label would be appropriate for a restaurant that vacuum packages food and then cooks and serves it in-house.*

*This label would be appropriate for a market that vacuum packages food and then sells those packages to consumers.*



*This label would be appropriate for vacuum packaging frozen, raw, FISH products.*

*This label would be appropriate for an item packaged via cook-chill.*

**\*\*\*Attach sample label(s) on the next page for approval.**

**\*\*\*You must print labels that are moisture resistant that will last 14 days. Weatherproof labels can accommodate this and can be printed using Microsoft Word.**

**Example Labels for approval:**

|  |
| --- |
| Attach a label in this box for approval. Attach other labels as needed below. |

|  |
| --- |
| Attach a label in this box for approval. Attach other labels as needed below. |

|  |
| --- |
| Attach a label in this box for approval. Attach other labels as needed below. |

**Verification & Record Keeping** (8-201.14 (D)(4)&(6))

HACCP **verification** is defined as those activities, other than monitoring, that ensure the HACCP system is operating according to the plan. Verification is done to determine:

* that the HACCP plan is being implemented properly;
* that practices used are consistent with the HACCP plan;
* that the HACCP system is working to control significant hazards; and
* whether or not modifications of the HACCP plan are required to reduce the risk of recurrence of deviations.

Verification procedures may include:

* 1. Establishment of appropriate verification schedules.
  2. Review of the HACCP plan for completeness.
  3. Confirmation of the accuracy of the flow diagram.
  4. Review of the HACCP system to determine if the facility is operating according to the HACCP plan.
  5. Review of CCP monitoring records.
  6. Review of records for deviations and corrective actions.
  7. Review of modifications of the HACCP plan.

Verification should be conducted:

* 1. Routinely, or on an unannounced basis, to assure CCPs are under control.
  2. When there are emerging concerns about the safety of the product.
  3. When foods have been implicated as a vehicle of foodborne disease.
  4. To confirm that changes have been implemented correctly after a HACCP plan has been modified.
  5. To assess whether a HACCP plan should be modified due to a change in the process, equipment, ingredients, etc.
  6. Training and knowledge of individuals responsible for monitoring CCPs.

*Provide the method and frequency for verification.*

**\*\*\*Must include notification of Wake County Environmental Services if any changes are made to the HACCP plan.**

**Record Keeping**

Provide the method for recordkeeping

**\*\*\*Records must be held for six months and kept on site for review during inspection.**

*Example:*

**Verification & Record keeping Procedures**

* HACCP team members will verify that the HACCP protocols are being followed as required by routinely observing employees and confirming monitoring logs are being completed.
* Forms and logs will also be reviewed monthly to ensure they are being completed as required.
* HACCP team will review the HACCP plan to determine if modifications are needed
  + Annually
  + When there are emerging concerns about the safety of the product.
  + When foods have been implicated as a vehicle of foodborne disease.
  + To confirm that changes have been implemented correctly after a HACCP plan has been modified.
  + To assess whether a HACCP plan should be modified due to a change in the process, equipment, ingredients, etc.
* Wake County Environmental Services will be notified any time that there is a modification to the HACCP plan
* All completed forms and logs will be maintained in the HACCP Binder for a minimum of six months, records will be purged as needed during the monthly review.

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**REQUIRED Standard Operating Procedures (SOPs)**: Attach ALL required SOPs

* Prohibition of bare hand contact with ready-to-eat foods (3-502.12(B)(5)(a))
* Identification of a designated work area and the physical barriers or methods used to prevent cross-contamination and how access to the processing equipment is limited to responsible trained personnel familiar with the potential hazards of the operation (3-502.12(B)(5)(b(i-ii)))
* Delineation of cleaning and sanitation procedures for food contact surfaces (3-502.12(B)(5)(c))
* Training program that ensures that food employees and supervisors involved in the reduced oxygen packaging operation understand the concepts required for a safe operation, equipment and facilities, and any food safety issues of concern (3-502.12(B)(6))
* Monitoring procedures for Critical Control Points (8-201.14(D)(3))
* Approved Source SOPs
* Corrective Action/General Exception monitoring SOPs (8-201.14(D)(5))
* Employee Illness/Health Policy (8-201.12) & Employee Hygiene Policy
* SOPs detailing appropriate product rotation/FIFO (**F**irst **I**n, **F**irst **O**ut) procedures
* Handwashing SOPS (training, corrective action, proper handwashing procedure)
* Thermometer Calibration SOPs
* *For Sous-Vide Only:* SOPs describing circulating water bath use; detailing how temperatures will be monitored throughout cooking process
* *For Cook-Chill Only:* SOPs describing the hot-fill of bags and cooling processes that will take place to ensure appropriate cooling parameters are met
* Attach any other SSOPs/SOPs that are referenced in Hazard Analyses, Flow Diagrams, Critical Control Point Charts, or anywhere else in this document

\*\*\***All SSOPs & SOPs that aren’t described above must be attached. Any SOPs or SSOPs referenced in HACCP plan *are required* be attached (8-201.14(D))**. Some pre-made SSOPs and SOPs can be downloaded and printed here: <http://sop.nfsmi.org/HACCPBasedSOPs.php>. \*\*\***Samples of required SOPs and Logs can be found at** <http://www.wakegov.com/food/healthinspections/resources/Pages/HACCP.aspx> **. Please note that they are generalized and must be adjusted to your facilities operations.**

***\*\*\*Wake County Environmental Services Department reserves the right to require additional SOPs other than the ones listed above* (8-201.14(E))*.***

\*\*\***Monitoring Logs** that correspond to CCPs, SSOPs, and/or SOPs must be attached. Some pre-made Monitoring Logs can be downloaded and printed here: <http://www.nyc.gov/html/doh/downloads/pdf/rii/rii-hazards-blank-form.pdf>.

\*\*\***Attach Equipment specification sheets**. Often these can be easily found online at manufacturer’s website.

**Common Pathogens**

(This chart is not inclusive, only common pathogens are listed. It is **REQUIRED** that each HACCP plan control for *Listeria monocytogenes,* and *Clostridium botulinum.* Those two species MUST be listed on your hazard analysis charts where appropriate (3-501.12(A))

|  |  |
| --- | --- |
| **Food(s)** | **Common Pathogen(s)** |
| Cereal Crops (Corn, Rice, Wheat, Barley, etc.) | *Bacillus cereus* |
| Dairy & Milk | *Salmonella spp., Listeria monocytogenes, Shigella spp., Staphylococcus aureus* |
| Eggs | *Salmonella spp.* |
| FISH (Fish, Crustaceans Alligator, Frog, Aquatic turtle, Jellyfish, Sea cucumber, Sea urchin, Roe, etc.) | *Bacillus cereus, Salmonella spp., Listeria monocytogenes, Vibrio parahaemolyticus, Anisakis, Clostridium botulinum* |
| MEAT (Beef, Pork, Sheep, Goat, etc.) | *Salmonella spp., Listeria monocytogenes, Bacillus cereus, Clostridium perfringens, Staphylococcus aureus, Escherichia coli 0157:H7, Clostridium botulinum, Trichinella (pork only)* |
| POULTRY (Chicken, Duck, Quail, etc.) | *Clostridium perfringens, Staphylococcus aureus, Salmonella spp., Campylobacter jejuni, Listeria monocytogenes, Escherichia coli 0157:H7, Clostridium botulinum* |
| Fresh Produce | *Clostridium perfringens, Bacillus cereus, Listeria monocytogenes, Shigella spp., Clostridium botulinum* |
| READY-TO-EAT Foods | *Staphylococcus aureus, Listeria monocytogenes, Shigella spp., Salmonella spp., Bacillus cereus, Clostridium botulinum* |
| MOLLUSCAN SHELLFISH | *Vibrio parahaemolyticus, Vibrio vulnificus, Vibrio cholerae, Yersinia spp., Clostridium botulinum* |

**Please see the below link for a more complete list of pathogens:** <http://www.fda.gov/Food/FoodborneIllnessContaminants/CausesOfIllnessBadBugBook/>

**Shelf-Life Chart:**

**Raw MEATs, POULTRY, fruits and vegetables** may be stored for up to 14 days at 41°F or below.

**Hard cheeses, pasteurized process cheeses, or semi-soft cheeses** may be stored for up 30 days at 41°F or below.

**FISH** (alligator, shrimp, fish filets, etc.) must be frozen before during and after packaging.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Foods** | **41°F** | **38°F** | **34°F** | **frozen** |
| MEAT | 14 days | 14 days | 14 days | Indefinite, label must include freezing and thaw dates |
| POULTRY | 14 days | 14 days | 14 days | Indefinite, label must include freezing and thaw dates |
| FISH | Not allowed | Not allowed | Not allowed | Indefinite, label must include freezing and thaw dates |
| Cheese | 30 days | 30 days | 30 days | Indefinite, label must include freezing and thaw dates |
| Raw fruits and vegetables | 14 days | 14 days | 14 days | Indefinite, label must include freezing and thaw dates |
| Cook-chill and Sous-vide | (cooled to 34 prior to holding) 72 hours | 72 hours | 30 days | Indefinite, label must include freezing and thaw dates |