

HACCP Plan

Hazard analysis critical control point (HACCP) is a preventive approach to food safety. It identifies food safety hazards in the food production process and designs measurements to reduce those hazards to a safe level.

HACCP includes having a written plan that addresses identified critical control points (CCPs) where illness or injury is reasonably likely to occur in the absence of the hazard's control.

Submit the completed HACCP plan and provide all documents relating to your establishment's HACCP plan to the Department of Health and Human Services, Food and Lodging Unit by email (foodandlodging@nd.gov), fax (701-328-0340), or mail (600 E. Boulevard Ave., Dept. 325, Bismarck, ND 58505-0200). If you have further questions, please contact us at: 701-328-1291.

Establishment information

Establishment Name: 123 Pickles	Date: MM/DD/YYYY
Establishment Address: 123 Ave.	
City, State, ZIP code: Any City, ND, XXXXX	License Number: XXXX
Owner/Corporate Name: ABC Pickles	
Mailing Address (if different): same as establishment	
City, State, ZIP code:	
Primary Contact for HACCP Plan: General Manager	Phone: XXX-XXX-XXXX
Primary Contact Email Address: gmgr@email.com	

HACCP team

Name	Job Title or Description
<i>Joe Smith</i>	<i>General Manager</i>
<i>Sue Smith</i>	<i>Assistant Manager</i>
<i>Ted Smith</i>	<i>Food Worker</i>
<i>Frank Smith</i>	<i>Quality Control Officer</i>

Template adapted from the Minnesota Department of Health

Reason for this HACCP plan*

Please check one of the following:

- New HACCP plan
- Modification of existing HACCP plan

Activity or food category

Please check one or more of the following:

- Curing food
- Custom processing animals for personal use
- Operating and maintaining molluscan shellfish tanks
- Reduced oxygen packaging (ROP) - ROP methods include vacuum packaging, cook-chill, sous vide, modified atmosphere packaging (MAP), and controlled atmosphere packaging (CAP)
- Smoking food as a method of food preservation rather than as a method of flavor enhancement
- Sprouting seeds or beans
- Using food additives or adding components, such as vinegar, to preserve food rather than as a method of flavor enhancement, or to render the food so that it is not time and temperature control for safety food
- Other:

*Please consult with the Regulatory Authority to determine if a variance is required.

Product details

Provide product name, ingredients list, recipe/directions, and process description. Additional scientific documentation, as required by the Regulatory Authority, addressing the food safety concerns involved for this HACCP activity shall be provided.

Product: *Dill Pickles*

Ingredients: *Pickling cucumbers, sugar, salt, vinegar, pickling spice, dill*

Recipe/directions: *Dill Pickles (standard recipe and process from Ball® Blue Book™ at: www.freshpreserving.com/recipes/dill-pickle-recipe)*

Ingredients and Canning Materials:

- *4 lbs. pickling cucumbers (about 16 small to medium)*
- *3 cups sugar*
- *2 Tbsp. salt*
- *6 cups vinegar*
- *2 Tbsp. mixed pickling spice*
- *Dry dill (1 head per jar)*
- *6 (16 oz.) pint glass preserving jars with lids and bands*

Directions:

1. *Wash jars, lids, and bands in warm soapy water. Set lids and bands aside.*
2. *Prepare boiling water canner. Heat jars in simmering water until ready for use. Do not boil.*
3. *Wash cucumbers. Drain. Cut cucumbers into 1/4-inch thick slices, discarding ends.*
4. *Combine sugar, salt, and vinegar in a large saucepan. Tie spices in a spice bag and add to vinegar mixture. Bring to a boil. Reduce heat and simmer 15 minutes. Keep hot until ready for use. Remove spice bag.*
5. *Pack cucumbers into hot jars leaving 1/2-inch headspace. Place one head of dill in each jar.*
6. *Ladle hot liquid over cucumbers leaving 1/2-inch headspace. Remove air bubbles. Wipe rim. Center lid on jar. Apply band and adjust until fit is fingertip tight.*

Process description:

Ingredients are combined according to the recipe. Vinegar is included to render the food so that it is not a time and temperature control for safety food. Dill pickles are labeled and sold in jars at retail. All product ingredients are purchased from approved and licensed suppliers and inspected during receiving for quality. The handling, preparation, packaging, and monitoring of products are conducted by employees who have a thorough understanding of this HACCP plan and are trained in the acidification process.

Intended use and consumer

Please check one or more of the following to indicate how the product will be used.

- Ready-to-eat; served in the food establishment to consumers.
- Ready-to-eat; distributed to satellite location; served at satellite location to consumers.
- Ready-to-eat; packaged and sold in the food establishment for home use.
- Ready-to-eat; packaged and sold wholesale to another food establishment for retail sale.
- Raw; served in the food establishment to consumers.
- Raw; distributed to satellite location; served at satellite location to consumers.
- Raw; packaged and sold in the food establishment for home use.
- Raw; packaged and sold wholesale to another food establishment for retail sale.
- Other:

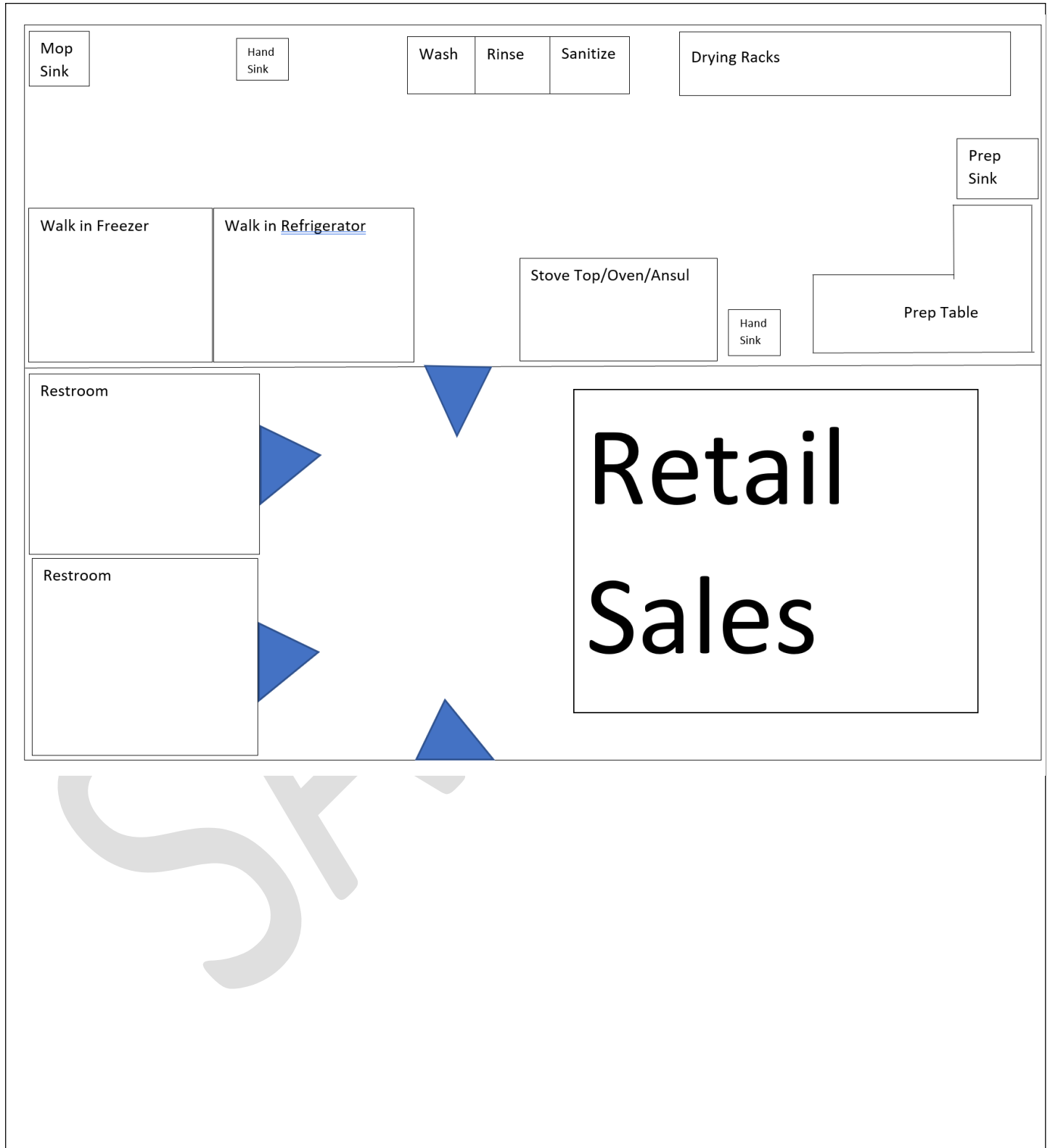
Shelf life

For each storage method included in this HACCP plan, indicate the maximum time products will be stored.

Refrigerated: Best if used by 3 months of production date

Layout of production area

Provide a hand drawing, blueprint, or other diagram of the production area. Include all areas involved with this HACCP activity. Important details may include: sink types and locations, equipment locations, receiving, storage, preparation, and processing areas.



Equipment and materials

List all equipment and materials used for this HACCP activity. Include manufacturer names and model numbers. Attach specification sheets, if available.

Stoves: Make ABC, Model 123

Canning Rack: Make ABC, Model 123

Glass Preserving Jars, Lids, & Bands: Brand ABC

Kitchen Utensils, Ladle, Funnel, Knives, & Slicer: Brand ABC

Jar Lifter, Magnet, Measuring Cups & Spoons: Brand ABC

Walk-In Cooler: Make ABC, Model 123

Timer: Make ABC, Model 123

pH Meter: Make ABC, Model 123

Distilled Water: Brand ABC

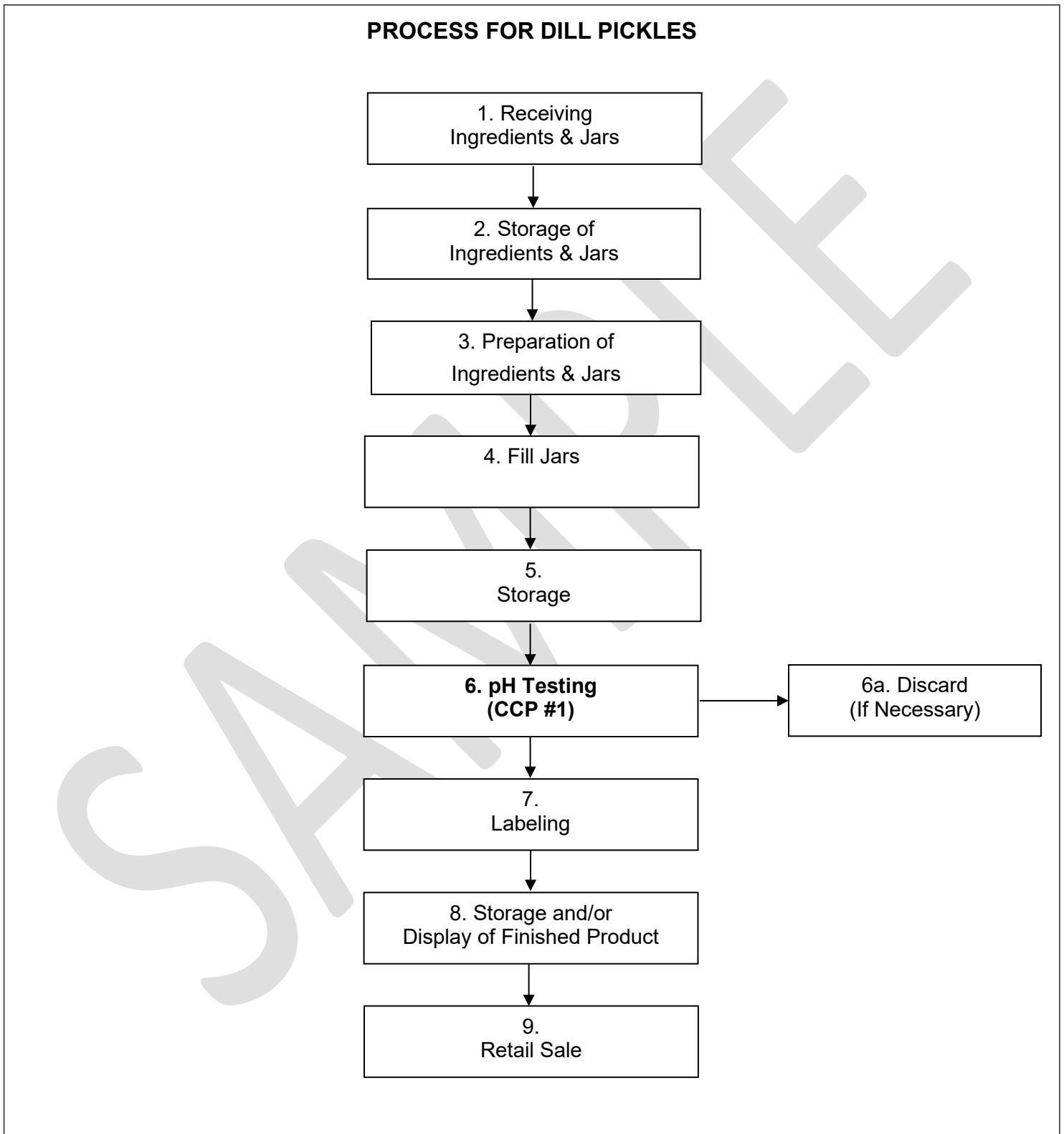
Buffer Solutions 4.0 & 7.0: Brand ABC, Lot 123

Blender: Make ABC, Model 123

Clear Plastic or Metal Blender Cups for pH Testing

Food flow diagram

Provide a written flow diagram for foods covered in this HACCP plan. Identify process steps from receiving through service. Identify the critical control points (CCPs) on the flow diagram.



Hazard analysis

Use the chart below to conduct and document the hazard analysis. The HACCP plan shall include CCPs for each identified hazard.

Step from food flow diagram	Identify potential biological (B), chemical (C), and physical (P) hazards introduced, controlled, or enhanced at this step	Does this step involve a hazard of sufficient risk and severity to warrant its control? (Yes/No)	Justification for decision	What preventive measure(s) can be applied for the significant hazards?	Is this step a CCP? (Yes/No)
1. Receiving Ingredients & Jars	<p><i>B – Pathogens: Salmonella, Shiga toxin-producing E. coli, Listeria, yeast, and mold (mycotoxin), Clostridium botulinum</i></p> <p><i>C – Deleterious Chemicals</i></p> <p><i>P – Foreign Material</i></p>	No	<p><i>Yeast and mold (mycotoxin) growth and spores and bacterial pathogens may be present on produce and spices but normally should not be at levels hazardous to public health</i></p> <p><i>When purchased from approved suppliers, ingredients and materials normally do not contain foreign material or chemicals above food safety threshold</i></p>	<p><i>B – Products will be purchased from approved suppliers</i></p> <p><i>C – All chemicals are stored in an area separate from ingredients</i></p> <p><i>P – Visual inspection of ingredients to ensure no foreign material is present</i></p>	No
2. Storage of Ingredients & Jars	<p><i>B – Pathogens: Salmonella, Shiga toxin-producing E. coli, Listeria, yeast, and mold (mycotoxin), Clostridium botulinum</i></p> <p><i>C – Deleterious Chemicals</i></p> <p><i>P – None</i></p>	No	<p><i>Yeast and mold (mycotoxin) growth and spores and bacterial pathogens may be present on produce and spices but normally should not be at levels hazardous to public Health</i></p>	<p><i>All products will be stored in areas separate from chemicals</i></p>	No

Step from food flow diagram	Identify potential biological (B), chemical (C), and physical (P) hazards introduced, controlled, or enhanced at this step	Does this step involve a hazard of sufficient risk and severity to warrant its control? (Yes/No)	Justification for decision	What preventive measure(s) can be applied for the significant hazards?	Is this step a CCP? (Yes/No)
3. Preparation of Ingredients & Jars	<p><i>B – Pathogens: Salmonella, Shiga toxin-producing E. coli, Listeria, yeast, and mold (mycotoxin), Clostridium botulinum</i></p> <p><i>C – None</i></p> <p><i>P – Foreign Material</i></p>	<p><i>B – No</i></p> <p><i>P – Yes</i></p>	<p><i>Yeast and mold (mycotoxin) growth and spores and bacterial pathogens may be present on produce and spices but normally should not be at levels hazardous to public health</i></p> <p><i>Potential of broken glass or materials from handling jars</i></p>	<p><i>B – An acceptable standard recipe and process for acidification of the product will be followed</i></p> <p><i>All fresh produce will be rinsed with tap water prior to further preparation</i></p> <p><i>Control measures: Thermal processing and testing steps</i></p> <p><i>C – Jars with lids and bands will be inspected before filling</i></p> <p><i>Control measure: SOPs</i></p>	No
4. Fill Jars	<p><i>B – Pathogens: Salmonella, Shiga toxin-producing E. coli, Listeria, yeast, and mold (mycotoxin), Clostridium botulinum</i></p> <p><i>C – None</i></p> <p><i>P – None</i></p>	Yes	<i>Fill jars to the net weight desired</i>	<i>An acceptable standard recipe and process for acidification of the product will be followed</i>	No
5. Storage	<p><i>B – Pathogens: Clostridium botulinum</i></p> <p><i>C – None</i></p> <p><i>P – None</i></p>	Yes	<i>It takes time for all portions of the processed product to reach a finished product pH below 4.2</i>	<i>All jars from each batch will be stored for at least seven days from the date prepared</i>	No

Step from food flow diagram	Identify potential biological (B), chemical (C), and physical (P) hazards introduced, controlled, or enhanced at this step	Does this step involve a hazard of sufficient risk and severity to warrant its control? (Yes/No)	Justification for decision	What preventive measure(s) can be applied for the significant hazards?	Is this step a CCP? (Yes/No)
6. pH Testing (CCP #1)	<i>B – Pathogens: Clostridium botulinum, Listeria monocytogenes</i> <i>C – None</i> <i>P – None</i>	Yes	<i>Finished product pH below 4.2 controls the pathogen growth and toxin formation</i>	<i>Finished product pH below 4.2</i>	Yes: CCP 1
6a. Discard (If Necessary)	None	N/A	N/A	N/A	N/A
7. Labeling	None	No	<i>Product does not contain allergens and is ready-to-eat</i>	N/A	No
8. Storage and/or Display of Finished Product	<i>B – Pathogens: Clostridium botulinum, Listeria monocytogenes</i> <i>C – None</i> <i>P – None</i>	No	<i>All finished products remain sealed until ready for sale</i>	N/A	No
9. Retail Sale	None	N/A	N/A	N/A	N/A

HACCP plan CCP chart

Complete the chart below. Identify each CCP and describe: the critical limit, method and frequency for monitoring and controlling the CCP, method and frequency for person in charge (PIC) to verify that food employees are following standard operating procedures (SOPs) and monitoring CCPs, corrective action when critical limits are not met, and how records are maintained.

Critical Control point (CCP)	Significant hazard(s)	Critical limits for each hazard	Monitoring				Corrective action(s)	Records	Verification
			What	How	Frequency	Who			
<p>CCP #1 pH Testing</p>	<p><i>B – Pathogens: Clostridium botulinum, Listeria monocytogenes</i></p> <p><i>C – None</i></p> <p><i>P – None</i></p>	<p><i>pH of below 4.2</i></p>	<p><i>pH of finished product</i></p>	<p><i>Use a pH meter</i></p> <p><i>Follow SOPs for preparing product slurry, calibrating pH meter, and testing pH</i></p>	<p><i>Each batch</i></p>	<p><i>Designated food worker</i></p>	<p><i>If product slurry does not meet critical limit, the batch will be discarded</i></p> <p><i>Identify and retrain employee(s) on how to ensure that critical limits are met</i></p> <p><i>Record corrective actions on the Thermal Processing and pH Testing Log</i></p>	<p><i>Thermal Process and pH Testing Log</i></p>	<p><i>PIC will review all records within seven days of completion</i></p> <p><i>All employees will use and maintain equipment per manufacturer's specifications</i></p>

Standard Operating Procedures (SOPs)

Include SOPs that describe how to conduct procedures specific to this HACCP activity. SOPs necessary for this HACCP activity may include: maintenance of specialized equipment (pH meter calibration, cleaning and sanitizing of equipment), and employee training (monitoring, corrective action, record-keeping procedures, and proper formulation of food additives).

PROCESS FOR DILL PICKLES

1. **Receiving Ingredients & Jars:** *Ingredients and jars will be purchased from approved suppliers and visually inspected for quality and contamination.*
2. **Storage of Ingredients & Jars:** *Non-perishable products are stored in a clean location that is separated from any potential sources of contamination.*
3. **Preparation of Ingredients & Jars:** *Prepare ingredients and jars according to the recipe directions.*
4. **Fill Jars:** *Fill jars to desired weight.*
5. **Storage:** *All jars from each batch will be stored for at least seven days from the date prepared.*
6. **pH Testing:** *Follow pH Testing SOP for calibration of pH meter, preparation of product slurry, and calibration of pH meter.*
 - **Critical Limit:** *pH below 4.2*
 - **Monitoring:** *Use a pH meter to test one jar from each batch.*
 - **Corrective Action:** *If product slurry does not meet critical limit, the batch will be discarded. Identify and retrain employee(s) on how to ensure that critical limits are met. Record corrective actions on the Thermal Processing and pH Testing Log.*
 - **Records:** *Record all required information on the Thermal Processing and pH Testing Log. Maintain records for at least one year.*
 - **Verification:** *PIC will verify that designated employees have met the critical limit and sign off on Thermal Processing and pH Testing Log within seven days of completion. All food workers shall use and maintain equipment per manufacturer's specifications.*
- 6a. **Discard (If Necessary):** *If CCP 1 is not met, discard the batch.*
7. **Labeling:** *Properly label each package with name of product, product net weight, business name and address including zip code, and batch number. Record batch number on the Thermal Processing and pH Testing Log.*
8. **Storage and/or Display of Finished Product:** *If storing, place product in dry storage area. If intended for display for retail sale, place product on display shelves.*
9. **Retail Sale:** *Product is purchased by consumer.*

PROCEDURE FOR CLEANING AND SANITIZING OF EQUIPMENT

Food-contact equipment and utensils are cleaned every four hours if in use. Non-food-contact surfaces are cleaned at a frequency necessary to prevent accumulation of soil residues.

1. **Pre-cleaning** – Equipment and utensils are pre-cleaned by pre-flushing, presoaking, or scraping as necessary to eliminate excessive food debris.
2. **Washing** – Equipment and utensils are washed in soapy water to remove or completely loosen soils using a manual method. Only approved chemicals are to be used in this process. Mix concentration according to manufacturer's recommendations.
3. **Rinsing** – Washed utensils and equipment are rinsed in water to remove soapy residue prior to sanitizing.
4. **Testing Sanitizer Solution** – Select appropriate test strip (chlorine, quaternary ammonia, or iodine) and test sanitizing solution prior to use daily to ensure appropriate concentration.
5. **Sanitizing** – After being washed and rinsed, equipment and utensils are sanitized with an approved chemical by immersion. Concentration and exposure times are important to ensure effectiveness of the chemical. Refer to the manufacturer's label for concentrations and times.
6. **Air Drying** – Allow all cleaned and sanitized equipment and utensils to air dry before stacking or storing. Do not use towels.

**When a mechanical ware washing machine is used, follow manufacturer's instructions for use.*

PROCEDURE FOR EMPLOYEE TRAINING

Employees will be trained on each step of the food flow chart. Particular attention will be made to critical control points and proper documentation of logs. Employee training will be documented on the Employee Training Log. Employees will not be allowed to process pickles independently until Employee Training Log has been completed.

PROCEDURE FOR PH METER TESTING AND CALIBRATION

To calibrate the pH meter:

- 1. Prior to testing, the electrodes, buffer solutions, product and distilled water need to be at a temperature between 68°F and 86°F.*
- 2. Calibrate pH meter on each day product will be tested, or when readings are in doubt.*
- 3. Calibrate pH meter according to manufacturer's instructions.*
- 4. Only use buffer solutions that have not exceeded the labeled expiration dates.*
- 5. Use pH 4.0 and 7.0 buffer solutions.*
- 6. If the pH meter does not read the buffers correctly, recalibrate the pH meter according to the manufacturer's instructions or replace the meter.*

Prepare product slurry:

- 1. Select one jar from each batch.*
- 2. Place 1/2 cup of the solid product with 1/8 cup of distilled water in a clear plastic or metal blender cup.*
- 3. Blend the product for approximately 20 seconds to create uniform slurry.*

Test product pH:

- 1. Use the pH meter to test the pH of the slurry. Do not use pH papers or strips.*
- 2. Record product pH on the Thermal Processing and pH Testing Log.*

Prerequisite programs

Describe facility-wide considerations implemented in all phases of the food operation that allow active managerial control over personal hygiene and cross-contamination. Include standard sanitation operating procedures (SSOPs) that address the following: how employees comply with ND Food Code by preventing contamination from hands, minimizing cross contamination, cleaning and sanitizing procedures, and restriction or exclusion of ill employees. Include a description of the training programs that ensure food safety in the operation.

PROCEDURE FOR EMPLOYEE HEALTH & HYGIENE

1. *Hands are to be thoroughly washed for 20 seconds 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. Dry with single use towels. 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 kept 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 exposed food, clean equipment, utensils, unwrapped single service and single use articles could occur. A food employee may drink from a closed beverage container as long as it is handled to prevent contamination. Smoking and other uses of tobacco are prohibited.*
4. *Effective hair restraints must be worn in processing areas.*
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). Footwear is to be kept clean. 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.*
6. *No jewelry (except a wedding band or other plain ring) is allowed during handling of food.*
7. *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 and wrist, 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 and record on the Employee Illness Log.

Record-keeping

Attach all blank record-keeping forms employees will use for the processes covered in this HACCP plan. Procedures to monitor all SOPs (daily thermometer accuracy log, pH meter calibration log) shall be included. Procedures to monitor all CCPs (temperature logs for cooking, cooling, and storage; product pH testing log; corrective action logs; etc.) shall be included. The PIC shall verify all record-keeping documents by reviewing, dating, and initialing the logs.

SAMPLE

Employee Training Log

Name of Employee: _____

Date of Hire: _____

Documentation of Employee Training		
<i>Topic</i>	<i>Trainee Date & Initials</i>	<i>Trainer Initials</i>
Introduction to Canning – Safety & Hazards		
Receiving Ingredients & Jars		
Storage of Ingredients & Jars		
Preparation of Ingredients & Jars		
Fill Jars		
Storage		
pH Testing (CCP #1)		
pH Calibration		
Discarding Product		
Labeling & Assigning Batch Numbers		
Storage and/or Display of Finished Product		
Retail Sale		
Thermal Processing and pH Testing Log		
Cleaning & Sanitizing Equipment		
Employee Health & Hygiene		
Record Keeping		

I verify that I am competent to perform all duties listed above.

Employee Signature and Date: _____

I have reviewed this training document and verify that this employee is competent to perform all duties listed above.

Employee Signature and Date: _____

Thermal Processing & pH Testing Log

Date & Initials	Product Information				pH Testing			Corrective Actions	Verified by PIC (Initials)
	Recipe	Batch Number	Jar Size	# of Jars Made	pH Meter Calibrated (Yes or No)	pH of Product	CCP #1 Met?		

Employee Illness Log

Instructions: This log should be used to track employee absences due to illness.

- Employees are required to notify the Person in Charge (PIC) of any of the following:
 - Symptoms of vomiting, diarrhea, jaundice, sore throat with fever, and/or infected wounds
 - Diagnosis from a health practitioner of norovirus, hepatitis A, *Shigella*, *Salmonella* Typhi, nontyphoidal *Salmonella*, or Shiga toxin-producing *E. coli*. The PIC is required to record all reports of symptoms and diagnoses and to notify the Regulatory Authority of any of the diagnoses.

Report date	Employee name	Vomiting*	Diarrhea*	Jaundice	Fever	Respiratory (cough, sore throat, runny nose)	Comments or additional symptoms	Date returned to work	Diagnosed with a pathogen? (see list above)	If diagnosed, 1-800-472-2927 or local health agency contacted?
02/20/2020	John Doe	X	X				Sent home	6/15/2019	Yes – norovirus	Yes

***Employees with diarrhea or vomiting CANNOT RETURN TO WORK for at LEAST 24 HOURS after symptoms resolve.**