Writing Food Safety Plans

What is a Food Safety Plan?

A Food Safety Plan, also often referred to as a HACCP Plan (Hazard Analysis Critical Control Point) is a set of written procedures that will help to eliminate, prevent or reduce food safety hazards that may cause your customer to become ill or injured. Food Safety Plans begin at the receiving/storage stage as the food enters the premises and follows that food until the point where it is served or purchased.

Under the *Food Premises Regulation*, every operator of a food service establishment and food premises where carcasses are handled or where food is processed or prepared must develop, maintain and follow a Food Safety Plan to ensure that a health hazard does not occur in the operation of the facility. A Food Safety Plan must be completed and approved before a permit/approval will be issued by an Environmental Health Officer.

Some of the most common practices that lead to foodborne illnesses include improper cooling and cold storage, advanced preparation, inadequate reheating, cross-contamination, and inadequate cooking. Food Safety Plans focus on the critical steps within the preparation of the food to prevent these practices from occurring.

Below is an example of a general Food Safety Plan that outlines typical steps in the food preparation process. Your process may not follow this template exactly, so ensure that you tailor your plan to match the process you follow.

Preparation Step	CCP *	Potential Hazards	Critical Limits (Food Safety Standards)	Monitoring Actions	Corrective Actions
Receiving	**Y**	Contamination of food Growth of pathogens	Food is obtained from approved sources	Verify with supplier if in doubt	Return unsuitable food to the supplier
			Refrigerated food temperature is 4^{O}C or less upon receipt	Check temperature of food and record	
			Food is wholesome, free of pests; packaging is undamaged	Visually inspect food and packaging	
Storage	**Y**	Growth of Pathogens	Perishable food is stored at **4^{O}C or colder**	Check temperature of food/cooler and record	Adjust temperature setting or service the unit Move food to alternate storage unit Discard food held above 4^{O}C for more than 2 hours
			Store frozen food at **-18^{O}C or colder**	Check temperature of food/cooler and record	
			Thaw frozen food: • In cooler/refrigerator • Under cold running water • In microwave, just prior to use	Observe thawing practice	Modify practices; discard contaminated food
Preparation	**Y**	Contamination of food	Sanitize food contact surfaces and equipment prior to use	Verify proper sanitizer concentration with	Modify practices; discard contaminated food

			Practice food employee hygiene: • No ill employees • Frequent hand washing • Cuts, burns and abrasions treated and covered • Clean clothing worn • Hair restrained • No jewelry • Clean fingernails	test strips Observe practices Observe staff	Require rewashing of hands if necessary Ill workers to be assigned non-food handling duties or excluded from work
Cooking	**Y**	Survival of pathogens	Cook food to an internal temperature of: • **74^{O}C**	Check internal temperature, using a probe thermometer, at the thickest part of the food	Continue cooking until the required internal food temperature is reached
Hot Holding	**Y**	Growth of pathogens	Hold potentially hazardous foods at or above **60^{O}C**	Check internal temperature, using a probe thermometer, at the thickest part of the food and record temperature	Adjust temperature setting or service unit; Move food to alternate storage unit; Discard food held below 60^{O}C for more than 2 hours
Cooling	**Y**	Growth of pathogens	Cool foods: **60^{O}C to 20^{O}C** within **2 hours**; then from **20^{O}C to 4^{O}C** within **4 hours**; Total cooling time should be **6 hours or less** Maintain at **4^{O}C** or colder. Cooling methods: • Use shallow storage containers • Use an ice bath • Use an ice wand • Wait until food is cold before covering	Check internal temperature, using a probe thermometer, of the food at various times during cooling; use a timer to ensure that food is cooled within the appropriate timeframe	Discard food if cooling times and temperatures are not met
Reheating	**Y**	Survival of pathogens	Reheat foods to **74^{O}C** within 2 hours	Check internal temperature, using a probe thermometer, at the thickest part of the food	Continue cooking until the required internal food temperature is reached Discard food that takes more than 2 hours to reach **74^{O}C**

*Dependent on specific process and food products

Food Safety Plan Components

When writing a Food Safety Plan, you have to consider the components below:

Potentially Hazardous Foods

Describe the procedures to follow when handling any potentially hazardous foods that are served in your establishment. **Potentially hazardous foods** are those that are capable of supporting the growth of disease-causing microorganisms or the production of toxins. These are usually foods that are considered perishable. Examples:

- Foods of animal origin (meat, fish, dairy, eggs, etc.)
- Foods of plant origin (vegetables, fruits, etc.) that have been cut or cooked
- Raw seed sprouts (alfalfa, bean sprouts, radish sprouts, etc.)
- Cooked starches (pasta, rice, etc.)
- Soybean proteins (soy milk, tofu, etc.)

Critical Control Points

For each potentially hazardous menu item, create a food safety plan using a step by step procedure that identifies the critical control points.

Critical Control Points (Critical Steps): A Critical Control Point (CCP) is a step in the preparation process where a food safety hazard can be controlled. Subsequent steps in the preparation process will not eliminate the hazard if it is not controlled at this point. Some items will have more than one CCP. Clearly identify these steps for each potentially hazardous food item. Examples of where CCPs may exist:

- receiving
- storage
- preparation
- cooking
- hot holding
- cooling
- reheating

Not all steps are always considered critical. Some may be considered critical steps for some menu items, but not other menu items. It depends on how the item is prepared.

Critical Limits

Critical Limit (Food Safety Standard): A Critical Limit is a measurable standard or limit that must be met to control the food safety hazard at a Critical Control Point. Examples:

- cold storage temperature of $4^{O}C$ or less
- final cook temperature of $74^{O}C$
- hot holding temperature of $60^{O}C$ or more
- cooling food from $60^{O}C$ to $20^{O}C$ within 2 hours and $20^{O}C$ to $4^{O}C$ within 4 hours

Monitoring Actions

Describe how you will ensure that the critical limits are adhered to. Monitoring can include measuring an internal temperature, visually assessing food, or observing practices. All monitoring results are to be recorded.

Taking Corrective Action

Determine action(s) required when a critical limit is not met. Some examples:

- Cook the product longer
- Reheat the product
- Discard the product

Types of Food Safety Plans

There are three types of food safety plans that can be used to control food safety hazards in your establishment: recipe, flowchart and process based.

Recipe Based Food Safety Plans

Recipe based food safety plans incorporate the food safety plan components into a standard recipe. Additional information, such as sanitation instructions, can also be added if necessary.

Flowchart Based Food Safety Plans

Flowchart based food safety plans are often used in food manufacturing. They provide excellent detail, but a separate flowchart is required for each item. This can be a challenge in establishments where the menu changes on a regular basis.

Process Based Food Safety Plans

The process based food safety plan involves grouping together menu items that are processed in the same way. One plan can be applied to a number of different menu items. Some of the common processes used to prepare foods include:

- **No Cook**: items such as salads, sandwiches
- **Cook – Serve**: items such as steaks, burgers, chicken strips
- **Cook – Chill – Serve**: items such as potato salad, chicken salad
- **Cook – Chill – Reheat – Serve**: items such as soups, pasta sauce

The appendix below contains examples and templates of Food Safety Plans for you to reference, as well as the general minimum standards or critical limits that need to be met and their corresponding corrective actions. Record Monitoring Sheets are also included for your convenience.

Writing a Food Safety Plan

Choose the type of plan that is the easiest for you to use. Regardless of the style, the process for developing the plan is the same:

1. Review your menu and identify all of the potentially hazardous items
2. For each item, identify the:
    - **critical control points**
    - **critical limit(s)** for each critical control point
    - **monitoring** actions required for each critical limit
    - **corrective actions** required if a critical limit is not met

3. Include any other information necessary to control food safety hazards
4. Once you have the plan completed, review using the checklist below:

Food Safety Plan Checklist

- ☐ Does the food safety plan include all the potentially hazardous foods?
- ☐ Does the plan content match the menu?
- ☐ Are the CCPs included and do they appear to be correct?
- ☐ Are the critical limits included, measurable and specific?
- ☐ Are the monitoring steps included in the food safety plan and are they reasonable?
- ☐ Do employees have the tools needed for monitoring (thermometers, sanitizer test strips, etc.)?
- ☐ Are the corrective actions outlined for each CCP and are they appropriate to control the hazard?

Using Your Food Safety Plan

Train Your Staff

Once your food safety plan is completed and reviewed by the Environmental Health Officer, the next step is to put it into action. Train your staff to use the plan and identify those who are responsible for using it.

Measure Food & Equipment Temperatures

Use a calibrated thermometer to measure food temperatures. The following table suggests testing frequencies for different steps:

Storage & Handling	Testing Frequency	Comments
Coolers/Refrigeration Units	2x per day or more	Regularly check built in thermometers against a 2nd thermometer known to be accurate (i.e., recently calibrated)
Cold-holding	2x per day or more	Check cooling inserts and foods held on ice
Hot-holding	2x per day or more	Randomly check 1 food item in each holding unit 2 hours after commencement of hot-holding
Cooking/Re-heating	On each instance	Check cooking and reheating temperatures for each food item.

If a problem is discovered, take immediate action to correct it.

We recommend recording both temperatures and any corrective actions taken. Log sheets are included at the end of this document. We suggest keeping temperature records on site for three months.

Review the Food Safety Plan periodically to ensure that it is complete and matches the menu. Your plan must be maintained on site.

For more information on Food Safety Plans, please review **Ensuring Food Safety: Writing Your Own Food Safety Plan – The HACCP Way** available on the BCCDC's Food Guidelines & Information website: http://www.bccdc.ca/foodhealth/foodguidelines/default.htm

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FOOD SAFETY PLAN

Business Name: _____

Address: _____

_____

Owner/Operator: _____

Food Premises Regulation - B.C. Reg. 210/99

Food handling procedures

23 (1) In this section:

"critical control point" means a location in a food service establishment or a step in the establishment's procedures where failure to comply with the Act or this regulation may result in a health hazard;

"critical limit" means standards that must be met to ensure that a health hazard does not occur at a critical control point.

(2) Every operator of a food service establishment must develop, maintain and follow written procedures to ensure that a health hazard does not occur in the operation of the establishment.

(3) The written procedures required by subsection (2) must include
(a) identification of all critical control points,
(b) critical limits for those critical control points,
(c) the procedures to be followed to ensure adherence to the critical limits, and
(d) the actions to be taken in the event that the critical limits are not adhered to.

(4) Every operator of food premises where carcasses are handled or where food is processed or prepared must develop, maintain and follow written procedures referred to in subsection (2) that
(a) comply with subsection (3), and
(b) are approved by a health officer.

Date Prepared/Reviewed: _____

Menu Item Food Safety Plan Guidelines

Menu Item:	Include foods that are prepared in the same manner per plan.
Receiving: **CP**	**Critical Limits**: Include where items are purchased and if received frozen or fresh. **Monitoring**: What checks are done to ensure a safe product; e.g., temperature or visual checks. **Corrective Action**: What will be done if the product is damaged or rendered unsafe; e.g., discard or return to supplier.
Storage: **CP**	**Critical Limits**: Where will the product be stored and at what temperature. (4°C/40°F or -18°C/0°F). **Monitoring**: How will you ensure the product will remain safe? e.g., temperature checks. **Corrective Action**: What will be done if the storage temperature becomes unsafe; e.g., phone repair man, transfer food to working cooler.
Preparation: **CP**	Avoid contamination: wash hands, use clean and sanitized work surfaces and equipment. Use approved thawing method if required. Potentially hazardous foods ≤ 1hour preparation time.
Cooking: **CCP**	**Critical Limits**: Include how items are cooked as well as the safe cooking temperatures (min. 74°C / 165°F). **Monitoring**: What procedures are in place to ensure the food is cooked properly; e.g., check with probe thermometer, visual checks. **Corrective Action**: What will be done if the food item isn't properly cooked when checked during cooking; e.g. continue cooking to 74°C.
Holding: **CCP**	**Critical Limits**: Will the item be cold held (4°C / 40°F or colder) or hot held (60°C / 140°F or hotter). **Monitoring**: How will you ensure the food remains safe; e.g., check with probe thermometer. **Corrective Action**: What will be done if the temperature drops below 60°C/140°F; e.g., reheat to 74°C if within 2 hours or discard. If cold holding temperature rises above 4°C / 40°F, cool rapidly if within 2 hours or discard.
Cooling: **CCP**	Use shallow pans, cooling wands and, ice baths to cool from 60°C to 20°C in less than 2 hours and from 20°C to 4°C in less than 4 hours. Maintain at 4°C or colder.
Reheating: **CCP**	Reheat quickly to 74°C/165°F for at least 15 seconds, reheat once and discard leftovers.

Menu Item Food Safety Plan Guidelines

Menu Items:	
Receiving: **CP** 4°C (40°F) -18°C (0°F)	**Critical Limits**:
	Monitoring:
	Corrective Action:
Storage: **CP** 4°C (40°F) -18°C (0°F)	**Critical Limits**:
	Monitoring:
	Corrective Action:
Preparation: **CP**	Avoid contamination: wash hands & use clean and sanitized cutting boards and utensils. Approved thawing method if required. Potentially hazardous foods ≤ 1 hour preparation time.
Cooking: **CCP** 74°C (165°F)	**Critical Limits**:
	Monitoring:
	Corrective Action:
Holding: **CCP** 4°C (40°F) or 60°C (140°F)	**Critical Limits**:
	Monitoring:
	Corrective Action:
Cooling: **CCP**	Use shallow pans, cooling wands, ice baths, to cool from 60°C to 20°C in less than 2 hours and from 20°C to 4°C in less than 4 hours. Maintain at 4°C or colder.
Reheating: **CCP**	Reheat quickly to 74°C (165°F) for at least 15 seconds, reheat once and discard leftovers.

Recipe Based Food Safety Plan Example

Beef Stew Recipe Based Food Safety Plan	
Ingredients	**Weights and Measures**
Stewing beef (pre-cooked)	2.5 kilograms
Beef stew base, Beef consommé, Beef gravy	1 can (each)
Vegetables (frozen)	2 packages
Seasoning	1 packet
Water	5 litres
	PREPARING
	1. Pour beef stew base, beef consommé, and beef gravy into stockpot. Add water and seasoning. Stir with wire whisk until all seasoning is dissolved.
	COOKING
	2. Preheat stove. Begin heating beef stew mix.
	3. Break up any clumps in the frozen vegetables. Add to the beef stew mix. Stir with long-handled spoon.
Critical Control Point	4. Add cooked stewing beef and stir. **Continue heating beef stew until 74°C (165°F) or hotter is reached for at least 15 seconds.** Simmer for 30 minutes. *Continue cooking.*
	SERVING AND HOLDING
	5. Serve immediately, or
Critical Control Point	6. **Hold beef stew at 60°C (140°F) or hotter in hot hold unit, and cover if possible. Do not mix new product with old.** *Reheat to 74°C (165°F) if stew is less than 60°C (140°F) for 2 hours or less. If more than 2 hours, discard.*
	COOLING
Control Point	7. Cool in shallow pans with a product depth not to exceed 2 inches. **Product temperature must reach 20°C (70°F) within 2 hours and then reach 4°C (40°F) within 4 hours (6 hours total).** Stir frequently. *Discard product that is not cooled to 4°C in 6 hours.*
	8. Store at a product temperature of 4°C (40°F) or colder in the cooler. Cover.
	REHEATING
Critical Control Point	9. **Reheat beef stew to a product temperature of 74°C (165°F) or hotter for at least 15 seconds within 2 hours - one time only.** *Continue to reheat or discard if temperature not reached within 2 hours.*
Sanitation Instructions:	
Measure all temperatures with a cleaned and sanitized thermometer. Wash hands before handling food, after handling raw foods, and after any activity that may contaminate hands. Wash, rinse, and sanitize all equipment and utensils before and after use. Return all ingredients to refrigerated storage if preparation is delayed or interrupted.	

Process Based Food Safety Plan Template

Complex Food Preparation

Menu Items (list): ___

Preparation Steps	Is Preparation Step a CCP? (yes/no)	Critical Limit	Check for Critical Limit (Monitoring)	Corrective Action
Receive Food				
Cold Holding				
Preparation				
Cook (list cooking temperatures for individual foods)				
Cooling				
Reheating				
Hot Holding				

Process Based Food Safety Plan Template

Food Preparation with no Cook Step

Menu Items (list): _____

Preparation Steps	Is Preparation Step a CCP? (yes/no)	Critical Limit	Check for Critical Limit (Monitoring)	Corrective Action
Receive Food				
Cold Holding				
Preparation				
Cold Holding				

1. Review the preparation steps for menu items grouped in this process.
2. Identify which preparation steps are critical steps in your food operation.
3. Set a critical limit for critical steps.
4. Identify how the critical limit should be checked.
5. Determine the action food handlers will take if the critical limit is not met.

Preparation for Same Day Service

Process Based Food Safety Plan Template

Menu Items (list):				
Preparation Steps	**Is Preparation Step a CCP? (yes/no)**	**Critical Limit**	**Check for Critical Limit (Monitoring)**	**Corrective Action**
Receive Food				
Cold Holding				
Preparation				
Cook (list cooking temperatures for individual foods)				
Hot Holding				

General Process Based Food Safety Plan Example

Step	Food Safety Hazards	CCP?	Critical Limits	Monitoring the Critical Steps	Corrective Action
Receiving	Contamination Pathogens Toxins Parasites	Yes/No	Obtain meat, eggs, poultry, fish, shellfish, dairy from approved facility	Check paper work each load	Reject product if not from an approved source
Receiving	Contamination Pathogen growth	Yes/No	PHF Temperature <4°C	Visual inspection, check temperature before unloading	Reject load if contaminated or >4°C if PHF
Storage	Growth of pathogens	Yes/No	PHF Temperature <4°C	Check food and air temperature every 4 hours	Immediately cook food if temperature >4°C, lower cooler temperature
Preparation	Growth of pathogens and toxin development	Yes/No	PHF's out of refrigeration <1 hour	Note time PHF's taken from temperature control	Cook immediately or cool rapidly using ice
Cooking	Pathogen growth	Yes	63°C/15 sec 68°C/15 sec 74°C/15 sec *Time/Temp is dependent on product	Check temperature at the end of cooking	Continue heating until temperature achieved
Hot Holding	Pathogen growth and toxin development	Yes	>60°C	Check temperature in hot hold unit every 2 hours	Reheat to 74°C if temperature drops below 56°C. Adjust hot table temperature
Cooling	Pathogen growth	Yes/No	Cool from 60°C to 20°C within 2 hours and from 20°C to 4°C in 4 hours	Check food temperature every hour	Discard food if standard not met
Reheating	Pathogen survival	Yes	Reheat to 74°C. Reheating must take less than 2 hours	Check temperature of food every hour	Discard if time/temperature parameters not met

General Minimum Standards and Corrective Actions

Handling Step	Minimum Standards	Corrective Action
Receiving	Received in good condition Obtained from an approved source Cold food 4^{O}C (40^{O}F) or less Frozen food -18^{O}C (0^{O}F)	Reject product
Refrigerate/Thaw	Cold hold at 4^{O}C (40^{O}F) or less Thaw foods at 4^{O}C (40^{O}F) or less	If more than 4^{O}C (40^{O}F) for more than 2 hours, throw out
Prepare	Clean hands Clean and sanitize work surfaces Healthy worker with clean attire Maximum 2 hour preparation time	Change policies and practices Throw out food
Cook	Cook to at least 74^{O}C (165^{O}F) or use minimum temperatures for each food	Continue cooking to required temperature
Reheat	Reheat foods to at least 74^{O}C (165^{O}F) within 2 hours	If reheating takes more than 2 hours, throw out
Hot-Hold	Hot-hold at 60^{O}C (140^{O}F) or more	If temperature is less than 60^{O}C (140^{O}F) for more than 2 hours, throw out
Cool	Cool from 60^{O}C (140^{O}F) to 20^{O}C (70^{O}F) within 2 hours and from 20^{O}C (70^{O}F) to 4^{O}C (40^{O}F) within 4 hours	Throw out food

MONTHLY TEMPERATURE LOG SHEET

MONTH:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
FRIDGES (4ºC or less)																															
FREEZERS (-18ºC or less)																															
HOT HOLDING (60ºC or higher)																															
DISHWASHER																															
wash temp. (60ºC or higher)																															
rinse (82ºC) (>50 ppm chlorine)																															

Temperature Monitoring Log (Single Unit with Corrective Action)

Month: _____

Unit			
Date	^{O}C	Initials	Corrective Action
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
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30			
31			

Monitoring:	**Corrective Action:**
Required temperatures are as follows: • Coolers: at or below 4^{O}C • Freezers: at or below -18^{O}C • Reheat/Cook: above 74^{O}C • Hot-holding: at or above 60^{O}C	Apply following action as appropriate: • Adjust temperature setting • Have unit serviced • Move food to alternate unit • Discard if exceeds 2 hrs in danger zone

Cooling Log

Date	Food Item	Temperature (^{O}C)			Total cooling complete in 6 hours or less (Y/N)	Corrective Actions (if total cooling not complete in 6 hours or less)
		Initial	After 2 hours	After 6 hours		

Cooling Procedure
Cool foods as follows:

60^{O}C to 20^{O}C in **2 hours**; then from **20^{O}C to 4^{O}C** in **4 hours**;
(Total cooling time should be **6 hours or less**)

Good practices include:

- Shallow storage containers
- Use an ice bath
- Use an ice wand
- Wait until food is cold before covering

Monitoring:

- Check cooling methods every 2-3 months or when Food Safety Plan is first implemented

Corrective Actions:

- Discard food held above 20^{O}C, but less than 60^{O}C for more than 2 hours
- Discard food held above 4^{O}C, but at or below 20^{O}C for more than 4 hours