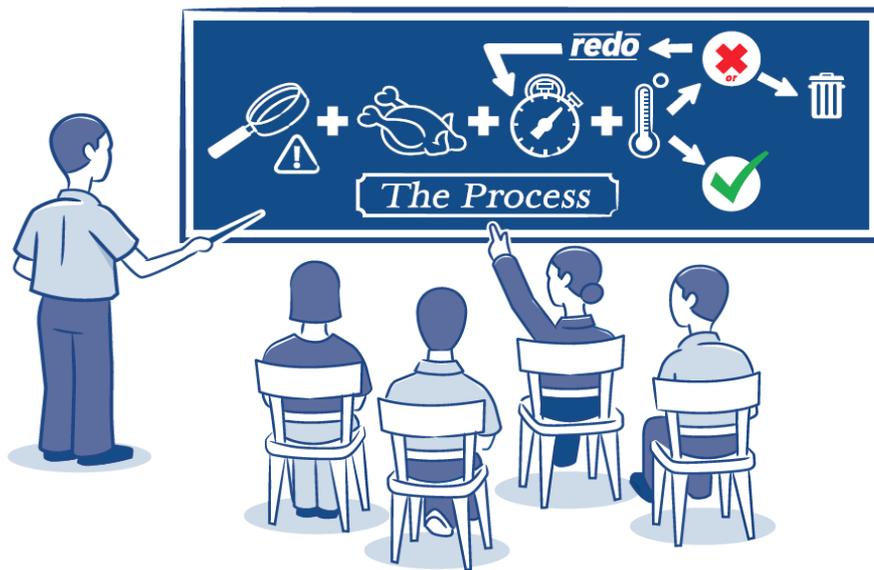


Sample Food Safety Plan MEETS BC REGULATORY REQUIREMENTS

VEGETABLE LASAGNE



Ministry of
Health

Product Description

Product Description	
1. What is your product name and weight/volume?	Vegetable lasagne (500 g, 1.5 kg)
2. What type of product is it (e.g., raw, ready-to-eat, ready-to-cook, or ready for further processing, etc.)?	Baked Ready to eat
3. What are your product's important food safety characteristics (e.g., acidity, A _w , salinity, etc.)?	None
4. What allergens does your product contain?	Milk, egg and wheat.
5. What restricted ingredients (preservatives, additives, etc.) does your product contain, and in what amounts (e.g., grams)?	None
6. What are your food processing steps (e.g., cooking, cooling, pasteurization, etc.)?	Receiving incoming materials, ambient storage, cool refrigerator storage, freezer storage, packaging material storage in a separate location, weighing, mixing, transfer to kettle, can opening, cooking, cooling, assembly/layering, baking, cooling, cutting/portioning, transfer to packaging tray, weighing, modified atmosphere packaging, metal detecting, labeling, case packaging and labeling, palletizing, refrigerator storage or freezer storage, shipping.
7. How do you package your product (e.g., vacuum, modified atmosphere, etc.) and what packaging materials do you use?	Modified atmosphere packaging Lasagne are packaged in plastic trays using modified atmosphere packaging. Packaged trays are packed in corrugated boxes.
8. How do you store your product (e.g., keep refrigerated, keep frozen, keep dry) in your establishment and when you ship your product?	Two options: 1. Keep frozen. Frozen lasagne are shipped in a clean, temperature-controlled truck (less than or equal to -18°C). 2. Keep refrigerated. Fresh lasagne are shipped in a clean, temperature-controlled truck (less than or equal to 4°C).

Product Description	
<p>9. What is the shelf-life of your product under proper storage conditions?</p>	<p>Dependent on the storage option used:</p> <ol style="list-style-type: none"> 1. Frozen product shelf life is 3 months at freezer temperatures (less than or equal to -18°C). 2. Fresh product shelf life is 18 days at refrigerated temperatures (less than or equal to 4°C).
<p>10. How is the best before date to be noted on your product? (When product shelf life is more than 3 month, lot code or manufacturing date is to be printed on product label.)</p>	<p>The best before date is printed on the cardboard box as YY MM DD. Example: 15 JA 04 (January 04, 2015)</p>
<p>11. Who will consume your product (e.g., the general public, the elderly, the immunocompromised, infants)?</p>	<p>Ready to eat product for the general population.</p> <p>Note: Vegetable lasagne are not suitable for people with milk, egg or wheat allergies or gluten intolerance.</p> <p>Frozen product must be thawed before eating.</p> <p>Preparation instructions, such as for thawing, are provided on the label.</p>
<p>12. How might the consumer mishandle your product, and what safety measures will prevent this?</p>	<ol style="list-style-type: none"> 1. Products not stored at correct temperatures can cause illness and can have quality defects – storage and handling instructions are on the label. 2. Products that have passed the best before date can cause illness and can have quality defects – the best before date is printed on the cardboard box. 3. Refreezing can cause quality defects – storage and handling instructions are on the label.
<p>13. Where will the product be sold?</p>	<p>Food service, retail, wholesale and distributor.</p>
<p>14. What information is on your product label?</p>	<p>Individual product label contains information such as product name, weight, ingredients listing including allergens, nutritional table, storage and handling instructions, best before date, preparation instructions, manufacturing company name, address and contact information.</p> <p>Corrugated box label contains information such as product name, best before date, quantity, storage and handling instructions, preparation instructions, manufacturing company name, address and contact information.</p>

Incoming Materials

Ingredients	
Canned diced tomatoes	Salt
Diced vegetables (onions, carrots, green peppers, mushrooms, zucchinis, eggplants)	Sugar
Chopped spinach	Corn starch
Minced garlic	Thyme
Ricotta cheese	Oregano
Grated parmesan cheese	Black pepper
Shredded mozzarella cheese	Nutmeg powder
Liquid pasteurized eggs	Lasagne noodles
Vegetable oil	Water
Food contact processing aid materials	
Baking spray	Nitrogen gas
Carbon dioxide gas	
Food contact packaging materials	
Plastic trays	Polypropylene plastic films (non-oxygen permeable films)
Non-food contact packaging materials	
Pre-printed cardboard boxes	Tape
Corrugated boxes	Shrink wrap
Plain labels	Wooden pallets
Ink	
Chemicals (hand washing, sanitation and maintenance)	
Hand soap	Sanitizer
Hand sanitizer	Lubricant
Degreaser	

Food Safety Plan Table: Meets BC Regulatory Requirements

1. Identifying Hazards (Regulatory Requirement*)	2. Identifying Critical Control Points (Regulatory Requirement*)	3. Establishing Critical Limits (Regulatory Requirement*)	4. Establishing Monitoring Procedures (Regulatory Requirement*)	5. Establishing Corrective Actions (Regulatory Requirement*)	6. Establishing Verification Procedures (Pending Regulatory Requirement)	7. Keeping Records (Pending Regulatory Requirement)
<p>Biological hazard: Pathogen growth due to inappropriate gas concentration, resulting in reduced shelf life of the product.</p>	<p>CCP # 1 Modified atmosphere packaging and sealing</p>	<p>Gas proportions must be within these ranges: 28%–30% carbon dioxide, 68%–70% nitrogen, and less than 1% oxygen</p> <p><u>Definitions:</u> <i>Septum:</i> Round thick rubber sticker</p> <p><i>Head space:</i> Inside the packaged product, any unoccupied space between the packaging material and the food product (i.e., space in the package not occupied by the product). The head space is where an accurate gas analysis measurement can be taken.</p>	<ol style="list-style-type: none"> Gas analysis must be performed every hour during packaging, at the end of each packaging run, and every time a gas tank is replaced. Calibrate the gas analyzer to ensure it is working correctly before scanning the packaged product. Remove the protective film from the septum and attach the septum to the product package at a location immediately next to the head space. Use the gas analyzer’s needle to pierce the septum and the packaging film. The needle must go into the head space. The needle must not touch the product inside the package; it must remain in the head space of the packaged product during the analysis. Run the gas analysis and withdraw the needle when the measurement is 	<p>When critical limits are not being met for one or two or all gases</p> <ol style="list-style-type: none"> Immediately stop the line and place all products processed since the last successful check on hold. All products put on hold will be repackaged. If the repackaged product does not pass the monitoring test (i.e. gas analysis test), the product will be destroyed. Investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence. Record all non-conformances and corrective actions taken on the “Daily Gas Analysis Record,” including the date, the time, and initials. 	<ol style="list-style-type: none"> Review the “Daily Gas Analysis Record” to ensure that it has been properly completed. Once per week, ensure that the gas analysis testing follows the written monitoring procedure. If non-conformance is found during the verification procedure, investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence. Record all observations (e.g., the gas analysis results, non-conformances, and corrective actions) on the “Daily Gas Analysis Record,” including the date, the time, and initials. 	<p>Daily Gas Analysis Record</p>

1. Identifying Hazards (Regulatory Requirement*)	2. Identifying Critical Control Points (Regulatory Requirement*)	3. Establishing Critical Limits (Regulatory Requirement*)	4. Establishing Monitoring Procedures (Regulatory Requirement*)	5. Establishing Corrective Actions (Regulatory Requirement*)	6. Establishing Verification Procedures (Pending Regulatory Requirement)	7. Keeping Records (Pending Regulatory Requirement)
			finished. 6. Record the results for each gas analysis (carbon dioxide, nitrogen, and oxygen) on the "Daily Gas Analysis Record," including the date, the time, and initials.			
Physical hazard: Presence of hazardous extraneous metallic material in the finished product due to the failure of the metal detector to detect metal and reject the product when metal is detected.	CCP # 2 Metal detecting	Metal detector must detect 2.5 mm ferrous, 2.5 mm non-ferrous, and 3.0 mm stainless steel test samples when the test samples are passed through the detector with the product. The metal detector must reject the product.	1. Test the metal detector at the start, every hour during packaging, and at the end of each packaging run. 2. Test the metal detector by passing a sample piece of metal through the detector to ensure that it is operating effectively and able to detect metal present in the product. 3. Check metal samples of 2.5 mm ferrous, 2.5 mm non-ferrous, and 3.0 mm stainless steel, one at a time. Each check must include all three sample tests. 4. Insert the metal sample into the middle of the product and then pass the product package through the metal detector. A properly operating metal	A. When the metal detector fails to detect a metal test sample 1. Immediately stop the line and place all products processed since the last successful check on hold. 2. All products processed while the metal detector was not functional must be held until they can be passed through a functional metal detector. B. When a product is rejected by the metal detector 1. Inspect the product for the metal piece. For above listed non-conformances (A & B) investigate the cause of the non-	1. At the end of each production day, review the "Daily Metal Detector Check Record" to ensure that it has been properly completed. 2. Once per week, ensure that the monitoring of the metal detector follows the written monitoring procedure. 3. If non-conformance is found during the verification procedure, investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence. 4. Record all observations (e.g.,	Daily Metal Detector Check Record

1. Identifying Hazards (Regulatory Requirement*)	2. Identifying Critical Control Points (Regulatory Requirement*)	3. Establishing Critical Limits (Regulatory Requirement*)	4. Establishing Monitoring Procedures (Regulatory Requirement*)	5. Establishing Corrective Actions (Regulatory Requirement*)	6. Establishing Verification Procedures (Pending Regulatory Requirement)	7. Keeping Records (Pending Regulatory Requirement)
			detector must detect the metal sample in the product. 5. Each time a metal contaminant is detected, the metal detector belt must retract and the rejected product must drop into the rejection box. 6. Record the metal sample check as acceptable (“✓”) (i.e., the metal detector is operating correctly) or not acceptable (“X”) (i.e., the metal detector is not operating correctly) on the “Daily Metal Detector Check Record,” including the date, the time, and initials.	conformance and take necessary corrective actions to prevent reoccurrence. Record all non-conformances and corrective actions taken on the “Daily Metal Detector Check Record,” including the date, the time, and initials.	whether or not the detector is operating effectively, non-conformances, and corrective actions taken) on the “Daily Metal Detector Check Record,” including the date, the time, and initials.	

Daily Gas Analysis Record

Critical Control Point # 1 (Biological)

Critical Limits: Gas proportions must be within these ranges: 28%–30% carbon dioxide, 68%–70% nitrogen, and less than 1% oxygen

Date	Time	Product Name	Batch Number	Carbon Dioxide	Nitrogen	Oxygen	Initials
2015/11/02	10:20	Vegetable lasagne	1	28.5%	68.2%	0.4%	DS
	11:05	Vegetable lasagne	1	28.0%	79.0%	1.8%	DS
	12:07	Vegetable lasagne	1	29.0%	69.8%	0.6%	DS
	13:04	Vegetable lasagne	1	29.0%	69.8%	0.6%	DS
<p><u>Record non-conformance and corrective actions here:</u></p> <p>At 11:05, Batch #1, the product's nitrogen and oxygen results were higher than the critical limit. Products were placed on hold since last successful check at 10:20. All products put on hold were repackaged at 12:07, retested and released for final packaging. DS</p>							
Daily verification:			MN	Date:	2015/11/02		
Weekly verification:			ML	Date:	2015/11/09		

Daily Metal Detector Check Record

Critical Control Point # 2 (Physical)

Critical Limits: Metal detector must detect 2.5 mm ferrous, 2.5 mm non-ferrous, and 3.0 mm stainless steel test samples when the test samples are passed through the detector with the product. The metal detector must reject the product.

Record the metal sample check as acceptable (“✓”) (i.e., the metal detector is operating correctly) or not acceptable (“X”) (i.e., the metal detector is not operating correctly)

Date	Time	Batch Number	Product Name	2.5 mm Ferrous	2.5 mm Non-ferrous	3.0 mm Stainless Steel	Initials
2015/11/02	12:00 (start)	1	Vegetable lasagne	✓	✓	✓	SM
	13:05	1	Vegetable lasagne	✓	✓	✓	SM
	14:07	1	Vegetable lasagne	X	✓	✓	SM
	15:37	1	Vegetable lasagne	✓	✓	✓	SM
	16:04	1	Vegetable lasagne	✓	✓	✓	SM
	17:05	1	Vegetable lasagne	✓	✓	✓	SM
	17:44 (finish)	1	Vegetable lasagne	✓	✓	✓	SM

Record non-conformance and corrective actions here:

At 14:07, a 2.5 mm ferrous test sample was not detected by the metal detector. The line was stopped. Products were placed on hold since last successful check. At 15:30, the metal detector was repaired and calibrated. SM

Daily verification: MN Date: 2015/11/02

Weekly verification: ML Date: 2015/11/09

