

## **Cottage Foods Academy**

# Non-Potentially Hazardous Foods List

## **Guidance Document for Minnesota Cottage Foods Producers**

Last Revised: September 3, 2025

This guidance document is offered as a tool for Minnesota cottage food producers (CFPs) to better understand the foods that: are allowed, are not allowed, or maybe could be allowed; under <a href="Minnesota Statute 28A.152">Minnesota Statute 28A.152</a>, the Minnesota Cottage Foods Law. This list is not all-encompassing, and is often updated. Any food suggestions are welcome, particularly foods in languages other than English. Please email suggested additions to <a href="mailto:info@mfma.org">info@mfma.org</a>.

For the most part, the MN Cottage Foods Law is based on food science. Only "non-potentially hazardous (NPH) foods," as defined in Minnesota Rules, part 4626.0020, subpart 62, are allowed. This means they cannot be 'potentially hazardous,' as defined in subpart 62, A., or must have a pH of 4.6 or lower, or a water activity of .85 or lower. This list is divided into 10 categories. The "Acid,"

To search for words in this document:
Press the Ctrl key and the F key to
activate the "Find" box. Type the word
in the Find box.

Acidified, Home-canned and Home-processed Foods" category is specified in law to be restricted to these foods: "pickles, vegetables, or fruits having an equilibrium pH value of 4.6 or lower or a water activity value of .85 or less." Based on MN's NPH foods definition in the law, the following foods do NOT qualify as cottage foods: egg dishes, making dairy products (e.g., cheese, yogurt, ghee), meats, poultry, fish, seafood. Rule of thumb: if the food requires refrigeration for food safety, it will not qualify in MN as a cottage food. If the food requires refrigeration for food quality, then it may qualify. Additionally, by law, THC edibles are NOT food therefore cannot be a cottage food or used in cottage foods.

It is the responsibility of CFPs to ensure the foods sold are legal under this exemption from licensing. For the pH foods, there are <u>hundreds of tested recipes</u> that meet the  $\leq$  4.6 pH value. If you use a non-standard recipe, you can test the pH of your finished product using <u>this suggested method</u> in the Appendix. For the water activity recipes, there are fewer tested recipes. This list provides guidance for known foods that meet the water activity of  $\leq$  0.85. We also list some <u>tested recipes</u> in the Appendix.

- Go to the Cottage Foods Academy as the 1-stop shop for everything you need to know about the cottage foods industry in Minnesota.
- To access the required training and application to become a registered cottage foods producer go to MDA's cottage foods website.

Once registered as a MN Cottage Food Producer, we recommend you join the Facebook group MN Registered Cottage Food Producers Group. This group is highly supportive and a wonderful source of information and sharing.

## LOOKING for the Pet Treats Non-Potentially Hazardous Foods List? Click here.

## **NPH Foods Categories**

- 1. Acidic, Acidified, Home-canned and Home-processed Foods
  - i. Fruits
  - ii. Pickled Foods
  - iii. Vegetables
  - iv. <u>Fermented Foods</u>
  - v. Vinegars
  - vi. <u>Condiments</u>
  - vii. <u>Ingredients</u>
- 2. Baked Foods
- 3. Beverages
- 4. Candy, Confections
- 5. Dried, Dehydrated, and Roasted
- 6. Freeze-Dried Foods
- 7. Frozen Foods
- 8. <u>Icings, Fillings, Frostings, Sugar Art, Toppings</u>
- 9. Jams, Jellies, Preserves, Fruit Butters, Syrups
- 10. Hemp Foods

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## **Appendix**

**Tested Recipes** 

**Food Testing Labs** 

Where to buy pH Meters

Where to buy Water Activity Meters

How to Test the pH in Your Food Product

How to Test the Water Activity in Your Food Product

**Educational Resources** 

## **Acknowledgments**

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Acidic, Acidified, Home-Canned and Home-Processed		
FRUITS – FRUITS		
Allowed	Not Allowed	Exceptions
Fruits that have an equilibrium pH value of ≤ 4.6 and are heat treated to kill vegetative cells, are considered 'acid.' Following are fruits with pH ranges ≤ 4.6 (Source: Clemson University).  • Apples: 3.20 - 4.00 • Apple Juice: 3.35-4.00 • Apple Sauce: 3.10-3.60 • Apricot nectar: 3.78 • Apricots, pureed: 3.42-3.83 • Aronia (chokecherry): 3.31-4.28 • Blackberries, Washington: 3.85-4.50 • Blueberries, Maine: 3.12-3.33 • Blueberries, frozen: 3.11-3.22 • Cherries, California: 4.01-4.54 • Cherries, red, water pack: 3.25-3.82 • Cherries, Royal Ann: 3.80-3.83 • Chokecherries: 3.31-4.28 • Fruit cocktail: 3.60-4.00 • Gooseberries (Jostaberry): 2.8-3.2 • Grapes, Concord: 2.80-3.00 • Grapes, Niagara: 2.80-3.27 • Grapes, seedless: 2.90-3.82 • Grapefruit: 3.00-3.75 • Kiwi: 3.1-3.96 • Lemon juice: 2.00-2.60 • Lime juice: 2.00-2.35 • Lime: 2.00-2.80 • Loganberries: 2.70-3.50 • Nectarines, yellow flesh: 3.92-4.18 • Oranges, Florida: 3.69-4.34	<ul> <li>Fruits that have an equilibrium pH value of &gt; 4.6.</li> <li>Elderberries: 4.73-5.19 (see Jams section)</li> <li>Pawpaw: 5.5-5.9</li> <li>Non-acidified, home-canned bananas, figs; melons, e.g., cantaloupe, honeydew, watermelon.</li> <li>White-fleshed peaches or white-fleshed nectarines. (The natural pH of some white peaches or nectarines can exceed 4.6 pH, making them a low-acid food for canning purposes. (Currently, there is no low-acid pressure process available for white-flesh peaches or nectarines, or an acidification procedure for safe water bath canning.)</li> <li>Raw, un-canned and unpasteurized juice or cider, fruit, or vegetables, are not allowed because they require refrigeration for safety</li> </ul>	<ul> <li>Fruit ciders, fruit juices, including tomato: allowed, if final product meets the pH criteria and are home-canned or pasteurized according to current research tested methods.</li> <li>Home-canned acidified or pickled bananas, figs; melons, e.g., cantaloupe, honeydew, watermelon; using a standardized recipe or test results verifying it meets final product pH ≤ 4.6.</li> <li>These fruits' final home-canned and acidified product might not qualify as their upper pH range can exceed 4.6 pH.</li> <li>Apricots: 3.30-4.80</li> <li>Mangoes, green: 3.40-4.80</li> <li>Nectarines, white flesh: &gt; 4.6</li> <li>Peaches, white flesh: &gt; 4.6</li> <li>Persimmons: 4.42-4.70</li> </ul>

Acidic, Acidified, Home-Canned and Home-Processed			
FRUITS – FRUITS			
Allowed	Not Allowed	Exceptions	
Orange juice, California: 3.30-4.19			
Orange juice, Florida: 3.30-4.15			
Peaches, yellow flesh: 3.30-4.05			
Pears, Bartlett: 3.50-4.60			
• Pimiento: 4.40-4.90			
• Pineapple: 3.20-4.00			
• Plums, Blue: 2.80-3.40			
• Plums, Red: 3.60-4.30			
• Pomegranate: 2.93-3.20			
• Prunes: 3.63-3.92			
Raspberries: 3.22-3.95			
• Rhubarb: 3.10-3.40			
• Strawberries: 3.00-3.90			

Acidic, Acidified, Home-Canned and Home-Processed		
PICKLED FOODS – PICKLED FOODS – PICKLED FOODS		
Allowed	Not Allowed	Exceptions
Pickled foods that have an equilibrium pH value of	Pickled fruits or vegetables that have an	
≤ 4.6 and are heat treated to kill vegetative cells.	equilibrium pH value of > 4.6.	
<ul><li>Pickled asparagus</li><li>Pickled beets</li></ul>	<ul> <li>Refrigerator or freezer pickled foods</li> <li>Pickled meats, eggs, fish, and seafood are</li> </ul>	
Pickled cantaloupe	prohibited by the cottage food law. M.S.	
Pickled carrots	28A.152, subd. 1. (a) (2) (i).	
Pickled chow chow relish	Pickled bison	
Pickled corn relish	<ul> <li>Pickled eggs</li> </ul>	
<ul> <li>Pickled green or yellow beans (Dilly Beans)</li> </ul>	<ul> <li>Pickled fish</li> </ul>	
Pickled green tomatoes	<ul> <li>Pickled meats</li> </ul>	

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Acidic, Acidified, Home-Canned and Home-Processed PICKLED FOODS – PICKLED FOODS		
Allowed Not Allowed Exceptions		
<ul> <li>Pickled okra</li> <li>Pickled summer yellow squash</li> <li>Pickled 3-bean salad</li> <li>Pickled watermelon rinds</li> <li>Pickles, sweet or dill</li> </ul>	Pickled seafood	

Acidic, Acidified, Home-Canned and Home-Processed		
VEGETABLES – VEGETABLES – VEGETABLES		
Allowed	Not Allowed	Exceptions
<ul> <li>Vegetables that are acidified and have an equilibrium pH ≤ 4.6 and are heat-treated to kill vegetative cells.</li> <li>Bloody Mary Mix</li> <li>Minnesota Tomato Mixture</li> <li>Tomatoes, acidified with bottled lemon juice, citric acid, or vinegar.</li> <li>Tomatillos, acidified</li> <li>Tomato juice, acidified</li> <li>Tomato paste with citric acid</li> <li>Tomato sauce, acidified</li> <li>Vegetable juice blend, acidified</li> </ul>	<ul> <li>Final vegetable foods that have an equilibrium pH value of &gt; 4.6.</li> <li>Fresh vegetable juice that has not been heat treated</li> <li>Frozen vegetables</li> <li>Hummus</li> <li>Pesto</li> <li>Home-canned low-acid foods: vegetables, soups, stews; legumes/pulses, e.g., chickpeas, lentils, dry peas, beans</li> </ul>	Because many factors affect the acidity level of tomatoes, USDA recommends adding acid to all home-canned tomatoes and tomato products. See Appendix for more information.

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Acidic, Acidified, Home-Canned and Home-Processed		
FERMENTED FOODS – FERMENTED FOODS – FERMENTED FOODS		
Allowed	Not Allowed	Exceptions
Fermented fruit, vegetables, pickles, sauerkraut, that have an equilibrium pH value of ≤ 4.6.  • Kimchi	Fermented fruit, vegetables, pickles, sauerkraut, that have an equilibrium pH value of > 4.6.  Black garlic – the production of black garlic is	
<ul> <li>Pickles</li> <li>Sauerkraut</li> <li>Water Kefir soda</li> <li>Kombucha with alcohol content not more than one-half of one percent by volume.</li> <li>Sourdough starter culture fermented to ≤ 4.6 verified by home pH testing.</li> </ul>	<ul> <li>an oxidation &amp; crystallization process, not a fermentation process.</li> <li>Fermented products requiring refrigeration for food safety.</li> <li>Fermented products with alcohol content greater than one-half of one percent by volume.</li> </ul>	

Acid, Acidified, Home-Canned and Home-Processed  VINEGARS – VINEGARS		
Allowed	Not Allowed	Exceptions
Vinegar and infused vinegars with an equilibrium pH value of ≤ 4.6	Vinegar and infused vinegars with an equilibrium pH value of >4.6	
	Oil based flavored vinaigrettes.	

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Acid, Acidified, Home-Canned and Home-Processed		
CONDIMENTS – CONDIMENTS - CONDIMENTS		
Allowed	Not Allowed	Exceptions
Condiments that have an equilibrium pH value	Condiments that have an equilibrium pH value of	Bacon as an ingredient: store bought shelf stable
of ≤ 4.6 and heat treated to kill vegetative	> 4.6.	bacon added to sauces is allowed. The BBQ sauce
cells.		must consist of less than 2% by weight of cooked
	<ul> <li>Fruit based chutneys with nuts</li> </ul>	bacon. Final product pH must have an equilibrium of
Barbecue sauce	Pesto	<b>≤</b> 4.6.
Catsup / Ketchup	<ul> <li>Fresh sauces like guacamole or salsa</li> </ul>	
Chili sauce	requiring refrigeration	Thickened with Regular Clearjel®, Thermoflo®,
• Chutneys	Corn & Bean Salsa	ThickGel® are safe alternatives to thicken
Fruit salsas	Salsa canned in quart jars.	home-canned or jarred sauces.
Honey, flavored	Oils such as sunflower, flaxseed, canola,	
Syrups –Simple Syrups (1:1 water/sugar	rapeseed.	Home-canned caramel and chocolate dessert sauces.
ratio) just flavored	Infused oils	See <u>Tested Recipes</u> .
Horseradish has a pH > 5.4, therefore it      Horseradish has a	Oil based flavored vinaigrettes.	
must be acidified to be a cottage food	<ul><li>Mayonnaise</li><li>Flavored with alcohol and final alcohol</li></ul>	A hot-fill-hold process may be used instead of boiling
product. See <u>Tested Recipes</u> below.		water or steam canning for some acidified products like salsa and sauces that have a pH < 4.1 or lower, a
<ul><li>Mustard</li><li>Pepper sauce</li></ul>	content is more than one-half of one percent by volume.	smooth consistency, and a pre-cook step. See
Salsa, chile	<ul> <li>Thickened with tapioca, cornstarch, flour,</li> </ul>	Appendix for more information.
Salsa, green tomato	arrowroot, etc.	Appendix for more information.
Salsa, tomato	Coffee Syrups	
<ul> <li>Salsa Verde (tomatillos green salsa)</li> </ul>	conce syrups	
Taco sauce		
Flavored with alcohol. Final alcohol		
content must be less than one-half of one		
percent by volume.		
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Acid, Acidified, Home-Canned and Home-Processed		
INGREDIENTS – INGREDIENTS - INGREDIENTS		
Allowed	Not Allowed	Exceptions
<ul> <li>Ingredients' final product has an equilibrium pH value of ≤ 4.6 or water activity value of ≤ 0.85 and heat treated to kill vegetative cells.</li> <li>Fruit toppings like peach, sweet cherry</li> <li>Pie filling (thickened with ClearJel® or Thermflo®): apple, blueberry, cherry, peach, green tomato</li> <li>Lemon or lime curd</li> <li>Cornstarch in baked foods.</li> <li>Flavored with alcohol. Final alcohol content must be less than one-half of one percent by volume.</li> </ul>	<ul> <li>Ingredients' final product has an equilibrium pH value of &gt; 4.6 or water activity value of &gt; 0.85.</li> <li>Pie fillings thickened with tapioca, cornstarch, arrowroot, or flour added before canning.</li> <li>Mincemeat pie filling</li> <li>Mole paste</li> <li>Pineapple, orange, raspberry, rhubarb, etc. curd (only lemon or lime curd has a safe research tested home canning method)</li> <li>Lemon or lime curd flavored with ginger or herbs like thyme.</li> <li>Flavored with alcohol and final alcohol content is more than one-half of one percent by volume.</li> <li>Extracts/Vanilla Extract when selling as a cottage food product because the final alcohol content is higher than allowed (must be one-half of one percent by volume or less). Note: Extracts/Vanilla extracts are allowed as ingredients in baked goods.</li> </ul>	<ul> <li>Pie fillings thickened with Regular Clearjel®, Thermoflo®, ThickGel® are safe alternatives to thicken home-canned or jarred fillings or toppings before water-bath canning.</li> <li>Ball preserving has tested recipes for a home canned chocolate cranberry sauce and a chocolate raspberry sauce safe for water bath canning. See Appendix for more information.</li> <li>Packaged sweet dessert sauces (not home canned), like caramel and chocolate, with a water activity ≤ 0.85 are allowed. Refrigerate or freeze the product for quality.</li> <li>A cold-fill-hold process may be used for some products as an alternative to the boiling water or steam canning process. Products must have a pH or 3.3 or below or acidified with pH of 3.5 or 3.8. Must include a pre-cook and a cooling step. See Appendix for more information.</li> </ul>

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BAKED FOODS		
Allowed	Not Allowed	Exceptions
	<ul> <li>Sesame Balls (rice flour dough wrapped over a filling of lotus paste or red bean paste, then deep fried &amp; rolled in sesame seeds).</li> <li>Recipes from Come and Bake It 1 &amp; 2 editions tested as potentially hazardous including: sweet potato cinnamon bread, pumpkin scones, carrot cake, pumpkin roll filling, pumpkin pie, lemon zucchini bread, applesauce nut bread, pumpkin layer cake, pumpkin muffins, pumpkin layer cake, pumpkin blondies, cake mix pumpkin cake, cream cheese kolaches, banana bread, savory cheddar cheese quick bread, cheddar cheese herb yeast bread.</li> <li>Home rendered lard, bacon grease, or other animal fats unless they are part of a baked product, e.g., pie crust or cupcakes.</li> <li>Steamed Buns, e.g., Kas Las Paus or Kalapao – yeast-based or baking powder bun filled with beef or pork sausage, or hard-boiled egg.</li> <li>Steam Rolls or Steam Rice Roll Cakes, e.g., Fawn Kauv or Banh Cuon –steamed rice roll cake with mushrooms, pork stir fry, noodles, or meat fillings.</li> <li>Steamed layer cake, steamed rice cakes</li> <li>Cakes topped with bottles of alcohol / liquor.</li> <li>Perogies</li> </ul>	

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BEVERAGES		
Allowed	Not Allowed	Exceptions
<ul> <li>Final beverage product pH ≤ 4.6 or water activity &lt;0.85.</li> <li>Packaged items, i.e. jar and lid examples, including but not limited to:</li> <li>Fermented beverages (see Fermented Foods section)</li> <li>Soft drinks, packaged</li> <li>Teas, packaged</li> <li>Dry drink mixes / blends, in packages</li> <li>Pasteurized or home-canned high-acid juices</li> <li>Lemonade and fruit flavored ades, packaged</li> <li>Shrubs (vinegar based non-alcoholic concentrated syrup that combines fruit juice, sugar, vinegar).</li> <li>Switchels (vinegar-based blend of water, flavorings, apple cider).</li> <li>Tinctures with vinegar as base liquid.</li> </ul>	<ul> <li>Final beverage product pH &gt; 4.6 or water activity &gt; 0.85.</li> <li>Prepared, ready-to-serve beverages like coffee, tea, lemonade are considered food service requiring licensing.</li> <li>Coffee syrup (coffee concentrate with added sugar) is a low-acid food for canning, and there are no approved research-tested canning recipes for canning/bottling coffee syrup.</li> <li>Fresh squeezed juice</li> <li>Tri-Color Drink (Nam Vam or Na Va) or Tri—Color Dessert (Ché Ba Máu).</li> <li>Tapioca Coconut Drink (Nab Vam).</li> <li>Bubble Tea, Boba Tea</li> <li>Cold brew coffee, tea require refrigeration for food safety.</li> <li>Tinctures with an alcohol base.</li> </ul>	<ul> <li>Fruit ciders, fruit juices, including tomato products, are allowed if home-canned or pasteurized according to current research tested methods and the final product meets the pH criteria.</li> <li>Raw, un-canned and unpasteurized juice is not allowed because it requires refrigeration.</li> <li>A cold-fill-hold process may be used for some beverages as an alternative to the boiling water or steam canning process. Products must have a pH of 3.3 or below or acidified with pH of 3.5 to 3.8. Must include a pre-cook and a cooling step. Instructions here:         https://foodsafety.wisc.edu/assets/coldfill2019.pdf     </li> </ul>

CANDY, CONFECTIONS		
Allowed	Not Allowed	Exceptions
Final product does not require refrigeration for	Final product does not require refrigeration for	
food safety and has a final water activity value of ≤	food safety and has a final water activity value of	
0.85.	> 0.85.	
Bon bons	<ul> <li>Flavored with alcohol and final alcohol</li> </ul>	
Brittle	content is more than one-half of one percent	

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	CANDY, CONFECTIONS		
Al	lowed	Not Allowed	Exceptions
	Candied or caramel apples without a stick inserted. Caramels Chocolate Chocolate, ground Chocolate-covered, non-perishable foods, such as nuts, dried fruits, marshmallows, & pretzels Cotton candy Fudge Gummies Hard candy Hot Chocolate Bombs or Cocoa Bombs Popcorn balls Flavored with alcohol. Final alcohol content must be less than one-half of one percent by volume.	<ul> <li>by volume. E.g., liquid filled chocolate with a liqueur filling.</li> <li>Candied or caramel apples with sticks inserted in the apples as they are a high risk for <i>Listeria Monocytogenes</i> bacterial growth requiring refrigeration for food safety.</li> <li>Chocolate-covered fresh fruit, e.g., berries, pineapple, melon</li> <li>Anything containing raw eggs</li> <li>Cream based filling</li> <li>Tapioca desserts, e.g., Nab Vam, Tri Color Dessert, Ché Ba Máu</li> </ul>	

DRIED, DEHYDRATED, ROASTED FOODS		
Allowed	Not Allowed	Exceptions
Final product water activity value of ≤ 0.85.	Final product water activity value of > 0.85.	Freeze drying note: Unlike other food preservation methods, freeze drying doesn't kill
Baking mixes	<b>Rule of thumb</b> : if the food was not $\leq$ 0.85 (or	bacteria that might be present in the food. Only
Chiwda (Indian snack mix)	<4.6pH) before freeze drying, it is not allowed.	non-potentially hazardous foods can be freeze
Coconut	E.g., almond milk or cow milk yogurt / pudding:	dried under MN's cottage foods law; freeze
Coffee beans	is >0.85 before freeze drying, so therefore not	drying a potentially hazardous food does not
Culinary lavender	allowed.	make it non-potentially hazardous. See
Dates	Cooked tapioca	Appendix for more information.
Dry drink mixes / blends, in packages	Jerky: fish, meat, poultry, seafood	
Flour milled from grains		

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DRIED, DEHYDRATED, ROASTED FOODS		
Allowed	Not Allowed	Exceptions
<ul> <li>Fruit</li> <li>Fruit leathers</li> <li>Grains</li> <li>Garlic</li> <li>Granola, cereals, trail mixes</li> <li>Herbs</li> <li>Her Blends</li> <li>Hot Pepper Chips / Hot Chili Snacks (e.g., Kao Soi, Guizhou, Yunnan-style) if other ingredients added don't change the final product from a shelf-stable food.</li> <li>Legumes &amp; pulses such as beans, lentils, peas, beans, soybeans, and peanuts.</li> <li>Milled cornmeal, flaxseed, flour, etc.</li> <li>Mushrooms, mushroom jerky, etc. Must be dried, dehydrated only; not roasted.</li> <li>Nut mixes</li> <li>Onions</li> <li>Pasta noodles without eggs</li> <li>Popcorn &amp; Popcorn Snacks</li> <li>Potato chips</li> <li>Seasonings, seasoning salt</li> <li>Seeds like pumpkin, sunflower</li> <li>Soup mixes (dry)</li> <li>Spices, spice blends</li> <li>Tea (dry)</li> <li>Tomatoes</li> <li>Tree nuts and legumes, coated or uncoated</li> <li>Vegetable leathers like pumpkin or mixed vegetable</li> <li>Vegetables</li> </ul>	<ul> <li>Roasted vegetables or fruits, e.g., peppers, carrots, tomatoes, etc.</li> <li>Dried noodles with eggs</li> <li>Fresh, frozen, or cooked pasta</li> <li>Popcorn, kettle corn made onsite at a farmers' market or community event. This is food service and requires a food license from MDA.</li> <li>Fresh or Fried Egg or Spring Rolls</li> <li>Freeze Dried cheesecake, pudding, yogurt, dairy, eggs, ice cream, meat, fish, seafood &amp; poultry.</li> <li>Noodle Soup, e.g., Kaopia, Khao Piak Sen</li> <li>Nut Butters</li> <li>Steamed Rolls (e.g., spring roll filled with vegetables and/or meat.</li> </ul>	

DRIED, DEHYDRATED, ROASTED FOODS		
Allowed	Not Allowed	Exceptions
Vegetarian-based soup mixes (dry).		

FREEZE-DRIED FOODS		
Allowed	Not Allowed	Exceptions
Final product pH $\leq$ 4.6 or water activity $\leq$ 0.85.	Final product pH > 4.6 or water activity > 0.85.	Freeze drying note: Unlike other food preservation methods, freeze drying doesn't kill
<ul> <li>Freeze dried candy, jello, fruit, vegetables, herbs, approved frostings in the <u>Come &amp; Bake</u> <u>It books</u>.</li> </ul>	<ul> <li>Freeze Dried cheesecake, pudding, yogurt, dairy, milk, eggs, ice cream, meat, fish, seafood, poultry.</li> <li>Cut fruit, vegetables</li> </ul>	bacteria that might be present in the food. Only non-potentially hazardous foods can be freeze dried under MN's cottage foods law; freeze drying a potentially hazardous food does not make it non-potentially hazardous. See <a href="#">Appendix</a> for more information.

FROZEN FOODS		
Allowed	Not Allowed	Exceptions
Final product pH $\leq$ 4.6 or water activity $\leq$ 0.85.	Final product pH > 4.6 or water activity > 0.85.	
<ul> <li>Any allowable cottage food that meets the pH or water activity parameters may be frozen.</li> <li>Fruit-based frozen treats, e.g., popsicles, sorbet, ice snow cones, etc.</li> <li>Fruit juices need to be heat treated</li> </ul>	<ul> <li>Non-dairy soft serve</li> <li>Frozen fruit and vegetables</li> <li>Frozen uncooked or partially cooked bread doughs, batters, pies, etc.</li> <li>Ice milk, ice cream, or ice pops made with dairy.</li> </ul>	

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FROZEN FOODS		
Allowed	Not Allowed	Exceptions
<ul> <li>Whole fruit can be added (but not cut fruit due to being potentially hazardous)</li> <li>Note: Imported frozen berries were identified as the source of several viral outbreaks of both Norovirus and Hepatitis A. Boiling berries for one minute to make juice prior to re-freezing is best practice to eliminate pathogens.</li> </ul>	<ul> <li>Freeze Dried cheesecake, pudding, yogurt, dairy, milk, eggs, ice cream, meat, fish, seafood, poultry.</li> <li>Fruit-based frozen treats using cut<sub>1</sub> fruits</li> <li>Uncooked freezer jam, jellies, preserves.</li> </ul>	

ICINGS, FILLINGS, FROSTINGS, SUGAR ART, TOPPINGS		
Allowed	Not Allowed	Exceptions
Final product pH $\leq$ 4.6 or water activity $\leq$ 0.85.	Final product pH > 4.6 or water activity > 0.85.	Dairy and cream cheese-based frostings tested recipes that meet the water activity
<ul><li>Icings, Fillings, Frosting</li><li>Buttercream using a tested recipe.</li></ul>	<ul> <li>Eggs, cream, milk or cream cheese based; unless the final product using these</li> </ul>	≤ 0 .85 or pH ≤ 4.6.
<ul> <li>Cookie dough frosting; must use commercially heat-treated flour.</li> </ul>	ingredients is documented as a non-potentially hazardous food.	<ul> <li>Recipes from Come and Bake It 1 &amp; 2 tested as non-potentially hazardous are allowed:</li> </ul>
<ul><li>Gum paste</li><li>Flat</li></ul>	<ul> <li>Non-edible ingredients such as luster dust, glitter, decorations, disco dust, twinkle dust,</li> </ul>	cream cheese buttercream, maple cinnamon cream cheese frosting, marshmallow cream
<ul><li>Fondant</li><li>Fudge</li></ul>	shimmer powder, petal dust, marked as "non-edible" or "for decoration only"	cheese frosting, cream cheese sour cream frosting, orange cream cheese frosting,
<ul><li>Glaze</li><li>Royal icing with meringue powder</li></ul>	<ul><li>without an ingredient list.</li><li>Flavored with alcohol and final alcohol</li></ul>	traditional cream cheese frosting, faux cream cheese frosting, chocolate ganache, Swiss
	content is more than one-half of one percent by volume.	and no-cook meringue buttercreams, fluffy boiled icing, lemon curd, Seven minute
Sugar Art  • Cake toppers	Fresh whipped cream	frosting, French vanilla buttercream, fluffy
<ul><li>Cream cheese mints</li><li>Cupcake toppers</li></ul>	<ul> <li>Recipes from Come and Bake It 1 &amp; 2     editions that tested as potentially hazardous</li> </ul>	buttercream frosting, American buttercream, caramel fillings, caramel coconut pecan
	including: Italian meringue buttercream,	sweet potato frosting, coconut-pecan

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ICINGS, FILLINGS, FROSTINGS, SUGAR ART, TOPPINGS		
Allowed	Not Allowed	Exceptions
<ul> <li>Edible luster dust, glitter, decorations (non-toxic does not mean edible, edible decoration will have a list of ingredients on the label)</li> <li>Modeling chocolate figurines</li> <li>Sugar flowers</li> <li>Other decor items</li> <li>Edible images printed on icing/wafer sheets.</li> </ul>	Chocolate French Buttercream, Pineapple curd, Brown Sugar Swiss Meringue Buttercream, and cooked flour buttercream.  Cut <sub>1</sub> fresh fruits	frosting, maple cinnamon cream cheese frosting, pumpkin cream cheese filling, cooked flour frosting.
<ul> <li>Toppings</li> <li>Stabilized commercial non-dairy whip cream products.</li> <li>Dried or freeze-dried fruit</li> <li>Edible flowers</li> <li>Herbs like culinary lavender, mint</li> <li>Whole fruit</li> <li>Fruit peels or zest</li> <li>Bacon topping, cooked and commercially sourced. Final product consists of less than 2% by weight of cooked bacon.</li> <li>Flavored with alcohol. Final alcohol content must be less than one-half of one percent by volume.</li> </ul>		

JAMS, JELLIES, PRESERVES, FRUIT BUTTERS, SYRUPS		
Allowed	Not Allowed	Exceptions
Final product pH $\leq$ 4.6 or water activity $\leq$ 0.85 and heat-treated to kill vegetative cells.	Final product pH > 4.6 or water activity > 0.85.	Non-tested recipes using low-acid ingredients require testing.
	<ul> <li>Pumpkin, squash, sweet potato butters</li> </ul>	
• Conserves	Bacon jam (bacon, onions, vinegar, spices)	

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JAMS, JELLIES, PRESERVES, FRUIT BUTTERS, SYRUPS		
Allowed	Not Allowed	Exceptions
<ul> <li>Fruit butters</li> <li>Fruit syrup</li> <li>Sorghum syrup</li> <li>Jam</li> <li>Jelly</li> <li>Marmalades</li> <li>Preserves</li> <li>Cooked fruit-based freezer jam, jelly or preserves.</li> <li>Flavored with alcohol, e.g., wine or beer jelly. Final alcohol content must be less than one-half of one percent by volume.</li> <li>Tested recipes for fig preserves, mint jelly, pepper jelly, tomato jam.</li> </ul>	<ul> <li>Flavored with alcohol and final alcohol content is more than one-half of one percent by volume.</li> <li>Uncooked freezer jam, jelly or preserves.</li> </ul>	

HEMP FOODS			
Allowed	Not Allowed	Exceptions	
Final product pH ≤ 4.6 or water activity ≤ 0.85 and heat-treated to kill vegetative cells.  Minnesota follows federal regulations for the manufacture and sale of hemp products. Three products are designated as Generally Recognized as Safe (GRAS). These three all come from the seed of the hemp plant and can be sold as food or added as ingredients to foods and sold in Minnesota.	<ul> <li>Final product pH &gt; 4.6 or water activity &gt; 0.85.</li> <li>While some hemp extracts and cannabinoids are legal in Minnesota (like CBD), it is not legal to add them to food products or dietary supplements because MN law declares them not food.</li> <li>Hemp ingredients that come from hemp plant parts other than the seeds are not allowed as food ingredients. This includes the flower of the hemp plant.</li> </ul>	Click here for the September 2023 guidance on hemp and cannabis.	
1. hulled hemp seeds			

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HEMP FOODS			
Allowed	Not Allowed	Exceptions	
<ul><li>2. hemp seed protein powder</li><li>3. hemp seed oil</li></ul>	Illegal ingredients may be labeled or named as hemp extract, full spectrum CBD oil, PCR extracts, or CBD oil.		

#### **APPENDIX**

#### **Tested Recipes**

- 1. <u>Come and Bake It. Volumes I and II</u>. Tested recipes for icings and frostings. NOTE: Only some of the recipes are legal in Minnesota, we use two parameters:  $pH \le 4.6$  or  $aw \le 0.85$  and Texas uses time and temp controls.
- 2. Minnesota Tomato Mixture
- 3. So Easy to Preserve. Tested recipes from the University of Georgia. National Center for Home Food Preservation.
- National Center for Home Food Preservation.
- 5. University of Minnesota Extension Food Preservation.
- 6. Fresh Preserving | Ball® Kerr® Jars & Home Canning.
- 7. Tested horseradish recipe: <a href="https://extension.oregonstate.edu/sites/default/files/documents/8836/sp50793horseradish.pdf">https://extension.oregonstate.edu/sites/default/files/documents/8836/sp50793horseradish.pdf</a>
- 8. Canned chocolate sauce: University of Wisconsin article. <a href="https://fyi.uwex.edu/safepreserving/2013/11/18/safe-preserving-canned-chocolate-sauce./">https://fyi.uwex.edu/safepreserving/2013/11/18/safe-preserving-canned-chocolate-sauce./</a>.
- 9. Cooked fruit-based freezer jams, jellies, preserves. University of Wisconsin. <a href="https://winnebago.extension.wisc.edu/files/2010/09/B2909-Making-Jams-Jellies.pdf">https://winnebago.extension.wisc.edu/files/2010/09/B2909-Making-Jams-Jellies.pdf</a>
- 10. Jams and jellies. National Center for Home Food Preservation. <a href="https://nchfp.uga.edu/how/can7\_jam\_jelly.html">https://nchfp.uga.edu/how/can7\_jam\_jelly.html</a>
- 11. Canning Tomatoes. UMN Extension. <a href="https://extension.umn.edu/preserving-and-preparing/canning-tomato-products-safety-guidelines.">https://extension.umn.edu/preserving-and-preparing/canning-tomato-products-safety-guidelines.</a>
- 12. Canned chocolate cranberry sauce, and chocolate raspberry sauce. Ball preserving has tested recipes for a safe water bath canning.
- 13. A cold-fill-hold process may be used for some products as an alternative to the boiling water or steam canning process. Products must have a pH of 3.3 or below, or acidified with pH of 3.5 to 3.8. Must include a pre-cook and a cooling step. <a href="https://foodsafety.wisc.edu/assets/coldfill2019.pdf">https://foodsafety.wisc.edu/assets/coldfill2019.pdf</a>

## **Food Testing Labs**

## Where to Buy pH Meters

To test the pH of foods, you will need a pH meter and calibration solutions. There are numerous kits available on the market.

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#### Where to Buy Water Activity Meters

#### How to Test the pH in Your Food Product

For home-canned acidified products, test pH 24 hours after processing. For fermented products, test pH upon completion of the fermentation process. For best practices, record the pH value, along with the recipe source, date, and quantity of the batch. You can use University of Minnesota Extension's Canning and pH Testing Record <a href="https://extension.umn.edu/food-safety/food-entrepreneurs">https://extension.umn.edu/food-safety/food-entrepreneurs</a> or use <a href="https://extension.umn.edu/food-safety/food-entrepreneurs">MFMA's Excel spreadsheet</a>.

#### How to Test the Water Activity in Your Food Product

https://extension.umn.edu/food-entrepreneurs/testing-water-activity-cottage-foods

#### **Educational Resources**

The University of Minnesota Extension Food Safety Team's guidance on freeze-dried foods: https://mfma.org/Food-Science-Library

The Minnesota Department of Health guidance on hemp and cannabis in foods. September 2023. <a href="https://www.health.state.mn.us/people/cannabis/edibles/docs/foodoperator.pdf">https://www.health.state.mn.us/people/cannabis/edibles/docs/foodoperator.pdf</a>

1 - **Cut fruit** is "potentially hazardous food" because it is in a form capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms. <u>Minnesota Rules 4626.0020</u>, <u>Subp 62</u>, <u>A. 1</u>. Outside of refrigeration, these microorganisms can multiply rapidly or produce toxins, which make people sick. Please see for more in-depth information: <a href="https://mfma.org/Food-Science-Library">https://mfma.org/Food-Science-Library</a>

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