

Home Canning



This fact sheet is provided to assist you with compliance of the **Ontario Food Premises Regulation 493/17** pursuant to the *Health Protection and Promotion Act*.

Home canning used to be a term for canning done at home but is now commonly used for small-scale canning operations that produce canned products for sale at stores, farmers' markets, and food establishments.

Home canning has had a renewed popularity largely because of people's interest in preserving seasonal, fresh, and locally produced foods in environmentally friendly packaging. However, if home-canned products are not produced properly they can cause serious food-borne illness.

All home canning operations require a separate hand washing sink and adequate dishwashing equipment except when preparing high-acid foods that have a pH less than 4.6, such as pickles, jams and preserves. These food items still require a sink to wash hands, but it doesn't have to be strictly for hand washing.

If you are starting a home canning business from your home or in a commercial kitchen, your kitchen will be subject to inspection and you must notify our department before you begin preparing and selling food to the public. If your kitchen is already inspected by our department and you want to start preparing home canned goods, please speak to your local Public Health Inspector (PHI).

Due to the vulnerable populations served in childcare centres and/or long-term care facilities, home canning is not advised in these facilities.

Illness and Risks Associated with Home Canning

There have been many outbreaks of botulism associated with home-canned food products, especially low-acid foods like vegetables and meats.

These risks occur due to improper processing methods and insufficient addition of acid. As a result, spores of *Clostridium botulinum* bacteria germinate and produce a harmful neurotoxin.

It is very important to use a validated recipe from a reputable source, such as recipes from **The National Centre for Home Food Preservation, Ball Corporation** or **Bernardin**. A validated recipe is one that has undergone verification tests that inactivate *C. botulinum* spores using specific temperatures, processing times and acidification requirements, thus rendering the product safe to eat. Recipes must be followed exactly as written. By changing the recipe, you can unknowingly produce an unsafe product. Reducing sugar content, salt, or vinegar can change the acid levels and the water activity (a_w) allowing bacteria to grow in the product.

Home canning can be classified as either high-acid (low-risk) or low-acid (high-risk). Each type must be prepared differently and safely to prevent the growth of *C. botulinum*.

1. High-Acid Foods (Low Risk)

High-acid or acidified foods have a pH of less than 4.6. A boiling water canner that heats food to 100°C (212°F) is sufficient to use for high-acid/acidified foods. The length of time for thermal application of canned food is indicated in the validated recipe and varies based on the can size and ingredients. The heating will kill the vegetative bacteria and most yeasts and moulds, but it will not deactivate the spore of pathogenic bacteria such as *C. botulinum*. The natural acid in fruit or the addition of acid (vinegar, ascorbic acid, lemon juice) will prevent *C. botulinum* spores from growing.

Adapted from Wellington-Dufferin Guelph Health Unit



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Most fruit-based jams, jellies, and vinegar-based pickles are high-acid foods. Tomatoes are sometimes a borderline high-acid food and may need the addition of an acid for a safer canned product.

If using a recipe that has not been validated (i.e. family recipe), recipes must be submitted to the Durham Region Health Department (DRHD) for review and must be sent to a private laboratory to determine pH and water activity. Once the recipe has been tested and approved, this recipe must be followed exactly as written. Any changes to the recipe (i.e. ingredient type/ amounts, processing times etc.) would require approval by the DRHD.

2. Low-Acid Foods (High Risk)

Low-acid foods have a pH of greater than 4.6. Naturally low-acid foods such as vegetables, meat, seafood, soups, antipasto, mushrooms, and chili sauce must be prepared in a pressure canner to reach the proper temperature needed to kill *C. botulinum* spores. All low-acid food processing must utilize a validated recipe only and a pressure canner capable of reaching **116°-121°C/ 240°-250°F for 20-100 min.**

The ideal environment for dangerous *C. botulinum* toxin to be produced is a low-acid, oxygen-free environment.

As a producer you must follow these guidelines to ensure your product is safe for sale to the public. Your PHI may conduct any of the following actions when finding home-canned products for sale:

1. Request the removal of a product from sale or distribution until laboratory documentation is provided proving the pH and a_w of the processed product.
2. Request documentation of the scientifically validated recipe of a product.
3. Utilize the Health Protection and Promotion Act (HPPA) to seize and destroy the product if it is believed to be a health hazard.
4. Seize samples of canned food products for laboratory testing by Public Health Laboratories.

In summary, all high risk/low-acid canned products offered for sale or served in a restaurant must meet the following criteria:

1. Be prepared utilizing a scientifically validated recipe.
2. Be prepared in a pressure canner with the time and temperature monitored and recorded.
3. Have a Food Safety Plan created and utilized for documentation.
4. Have laboratory documentation for the pH and a_w of all potentially high risk/low-acid foods that the PHI deems necessary.

If you have any further questions or want to start canning food products, please contact your Public Health Inspector at 905-668-2020.

References and Sources of Validated Recipes

USDA Complete Guide to Home Canning from the United States Department of Agriculture
https://nchfp.uga.edu/publications/publications_usda.html#gsc.tab=0

Bernardin Recipes
<http://www.bernardin.ca/pages/recipes/3.php>

Ball Recipes
<https://www.freshpreserving.com>

So Easy to Preserve from the National Center for Home Food Preservation at the University of Georgia
<https://www.fcs.uga.edu/extension/so-easy-to-preserve>

Further Resources

Public Health Ontario
<https://www.publichealthontario.ca/-/media/documents/H/2014/home-canning.pdf?la=en>

Health Canada
<https://www.canada.ca/en/health-canada/services/general-food-safety-tips/home-canning-safety.html>

Standards Council of Canada - Accredited Laboratories
<https://www.scc.ca/en/search/laboratories>

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