

Home Canning

This fact sheet is provided to assist you with compliance with Food Premise Regulation 562 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.

Home canning is not permitted in daycares due to the risk associated with vulnerable populations. High-acid (low risk) foods such as jams or pickles may be permitted in long-term care homes and other institutions provided approval is given by Wellington-Dufferin-Guelph Public Health. Please contact your area Public Health Inspector for more information.

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. It must specify processing time, temperature, measured ingredients, and container size. 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 into two categories: high-acid foods (low risk) and low-acid foods (high risk). Each type must be prepared differently and safely to prevent the growth of *C. botulinum*.

High-Acid Foods (Low Risk)

High-acid 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 foods. The natural acid in fruit or the addition of acid (vinegar, ascorbic acid, lemon juice) will prevent *C. botulinum* from growing. The heating will kill most yeasts, moulds, and bacteria.

Most fruit-based jams, jellies, and vinegar-based pickles and relishes are high-acid foods. The addition of sugar and salt will make these foods safe by lowering the moisture content. Tomatoes are sometimes a borderline high-acid food and may need the addition of an acid for a safer canned product.

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, chutneys, 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 scientifically validated recipe 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.

Canning of low-acid foods (high risk) is not recommended in long-term care homes or institutions due to the risk of botulism associated with these products.

Low Risk

High Risk

3.0

4.6

7.0

High-acid
Jams/jellies/vinegar/pickles

Low-acid
Vegetables, soup, meats

As a producer you must follow these guidelines to ensure your product is safe for sale to the public. Your Public Health Inspector 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 two (2) representative samples of a canned product 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 HACCP 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.

Resource for pH Values of Food

<http://www.cfsan.fda.gov/~comm/lacf-phs.html>

References and Sources of Validated Recipes

USDA Complete Guide to Home Canning from the United States Department of Agriculture
http://www.uga.edu/nchfp/publications/publications_usda.html

The *Blue Book* from the Ball Corporation
<http://www.bernardin.ca/pages/recipes/3.php>

So Easy to Preserve from the National Center for Home Food Preservation at the University of Georgia
<http://www.uga.edu/nchfp/>

Further Resources

Public Health Ontario
http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Documents/Home_Canning_Part0_Blenkinsop_2014.pdf.

http://www.publichealthontario.ca/en/eRepository/Home_Canning_2014.pdf.

Health Canada
<http://healthycanadians.gc.ca/eating-nutrition/safety-salubrite/food-canning-conserve-aliment-eng.php>

<http://www.omafra.gov.on.ca/english/food/inspection/botulism-2011.htm>

If you have questions about home canning, contact a Public Health Inspector at 1-800-265-7293 ext. 4753.

If you are a long-term care home or other institution, and have questions about home canning, contact a Public Health Inspector at 1-800-265-7293, ext. 4752.