

Guidelines for using a Steam Canner for Home Food Preservation*

The **University of Wisconsin-Madison** conducted research showing that an atmospheric **Steam Canner** may be used to safely can **naturally acid foods** such as peaches, pears, and apples, or **acidified-foods** such as salsa or pickles. The atmospheric steam canner uses only ~2 quarts of water (compared to 16 quarts, or more, in a boiling water canner) so you heat less water and processing can start more quickly. **Safe processing in a steam canner requires that all the following criteria are met:**



Back to Basics Steam Canner
Image credit: nchfp.uga.edu

- Foods must be **high in acid**, with a pH of 4.6 or below. Foods may naturally be high in acid (most fruits) or have added acid. Either a Boiling Water Canner or a Steam Canner may be used to safely preserve foods high in acid.
- An **up-to-date, research-tested recipe** is used. **Approved recipes** for boiling water canning may be safely adapted for use in a steam canner. Acceptable recipes are available from sources such as the National Center for Home Food Preservation: <https://nchfp.uga.edu/> or Wisconsin's Safe Food Preservation series: <https://fyi.extension.wisc.edu/safefood/> (see Safe Preserving Recipes)
- Make the following adjustments to an approved recipe for a boiling water canner: **at the processing step, place filled jars on the canner rack above hot/preheated water. Place the lid on the canner and heat, on high, until the canner vents. A full 6-8" column of steam will flow out of the vent holes in the canner. Once the canner continuously produces a full column of steam from both vents for at least 30 seconds, start timing.** Process time is based on the time for a boiling water canner. Adjust heat, as needed to ensure the canner vents during the entire process time.
- Jars are processed in **pure steam at 210-212°F**. Steam must flow freely from the canner vent(s) during the **entire process**, or the food is considered under-processed/unsafe. NOTE: To check canner operation, run a test trial with a stem thermometer in one of the ports to check processing temperature.
- **Adjust processing time for elevation.** Add processing time for elevations 1,000 feet above sea level, as directed in a research-tested recipe. Check elevation: <https://www.advancedconverter.com/map-tools/find-elevation-of-address>
- Jars must be **heated prior to filling** and filled with hot liquid (raw or hot pack). Jars of **half-pint, pint, or quart size** may be used, depending on the jar size acceptable in the recipe.
- Processing time should be limited to **45 minutes or less, including any modification for elevation**. The processing time is limited by the amount of water in the canner base. When processing food, the canner should **not be opened** to add water. Regulate heat so that the canner maintains a temperature of 210-212°F. **A canner that is boiling too vigorously can boil dry within 20 minutes.** If a canner boils dry, the food is considered under-processed and therefore potentially unsafe.
- Cool jars in **still, ambient air**. Jars should be cooled on a rack or towel away from drafts.

***NOTE:** only the Back-to-Basics and the Victorio dome-style canner models tested in our laboratory are known to produce safe food when a tested recipe is used. Please check with the manufacturer regarding other models or types of steam canner. Rev. 5/2021 bhingham@wisc.edu



Victor Steam Canner with temperature indicating dial in the lid



Extension
UNIVERSITY OF WISCONSIN-MADISON

Reference: P. Willmore, M. Etzel, E. Andress, and B. Ingham. 2015. Home Processing of Acid Foods in Atmospheric Steam and Boiling Water Canners. *Food Protection Trends*. 35:150-160.