PUBLIC HEALTH INSPECTIONS
DENVER PUBLIC HEALTH & ENVIRONMENT

Canning/Jarring Guidance

Canning and jarring is an age-old method used to preserve food to prevent bacterial growth and spoilage. When done correctly, the heat, reduced oxygen and/or acidity used from canning and jarring methods destroys harmful bacteria such as *Clostridium botulinum* and spoilage enzymes. The following guidelines are to standardize retail manufacturer's methods of canning/jarring to ensure that the risk for *Clostridium botulinum* and other harmful bacteria are controlled. **All canning/jarring processes shall be approved by the Department of Environmental Health prior to production.**

What to do if you have an operator canning or jarring:

1. If the process has not yet been approved by our department, cease and desist activity and place products on hold.
2. Have the operator submit standard operating procedures and a standardized recipe for each product and flavor.
    a. The standard operating procedures shall include how a consistent headspace will be provided. The minimum headspace should be 6% of the container volume.
3. Have the operator provide test results for pH and/or water activity from an approved third-party food laboratory.
    a. One sample from three separate batches of each product and flavor required.
    b. If the product is non-homogenous, the chunkiest part of the mixture shall be the part chosen to test. The lab shall blend this mixture before testing to get an accurate pH of the product.
    c. Use Tables A or B under the definition of Potentially Hazardous Food in our current rules and regulations to determine if phf or non-phf.

Please Note:

- Processed fruit jams, jellies and preserves will not be asked to follow the department protocol for canned and jarred foods provided they meet product identity standards as described in 21 CFR Part 150 – Fruit Butters, Jellies, Preserves and Related Products.
- If the proposed process is deemed out of our scope of expertise, further evaluation through a process authority may be required.

Once steps 1-3 have been completed, determine if a HACCP plan is required. One process may require more than one type of HACCP plan. For canning/jarring, an ROP HACCP and Acidifying HACCP may both be required.

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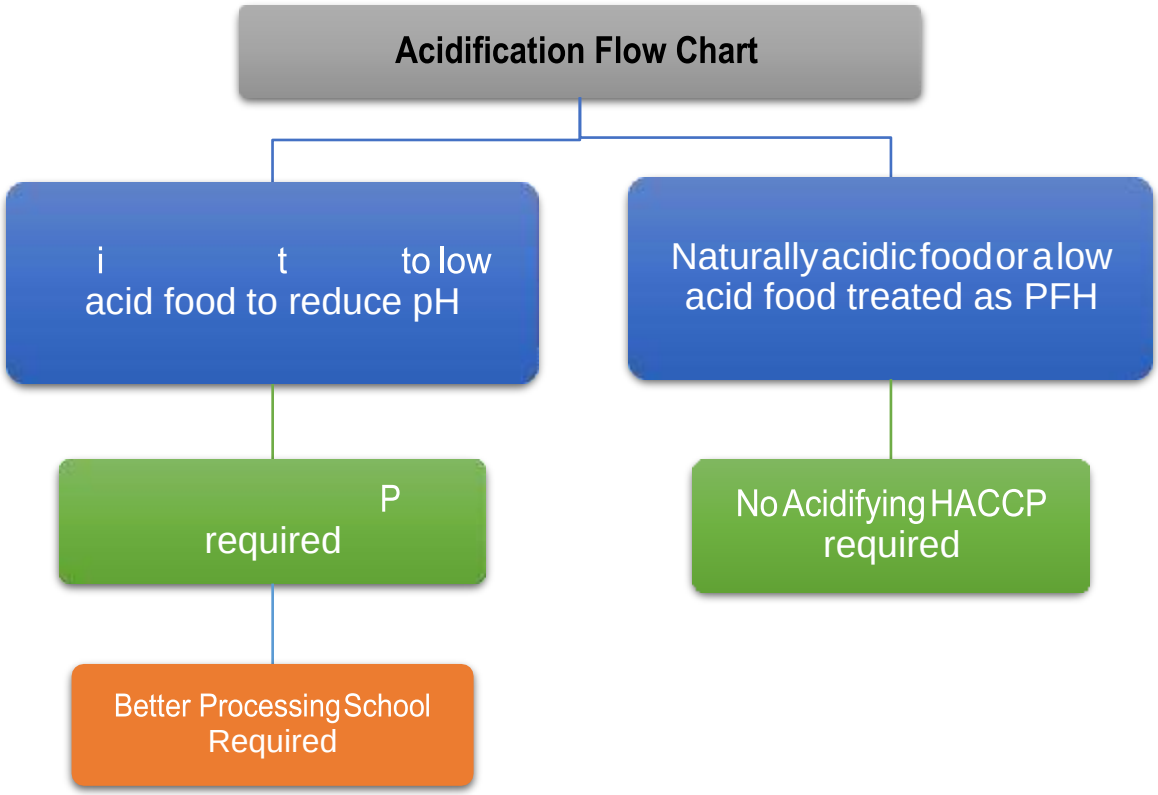
Acidification

Determine if an Acidification HACCP plan is required using the following flow chart:



- Acidification can be accomplished with any food grade acid such as vinegar (acetic acid), citric acid, lactic acid, malic acid, or phosphoric acid.

Learn more about acidification: http://necfe.foodscience.cals.cornell.edu/acid-and-acidified-foods

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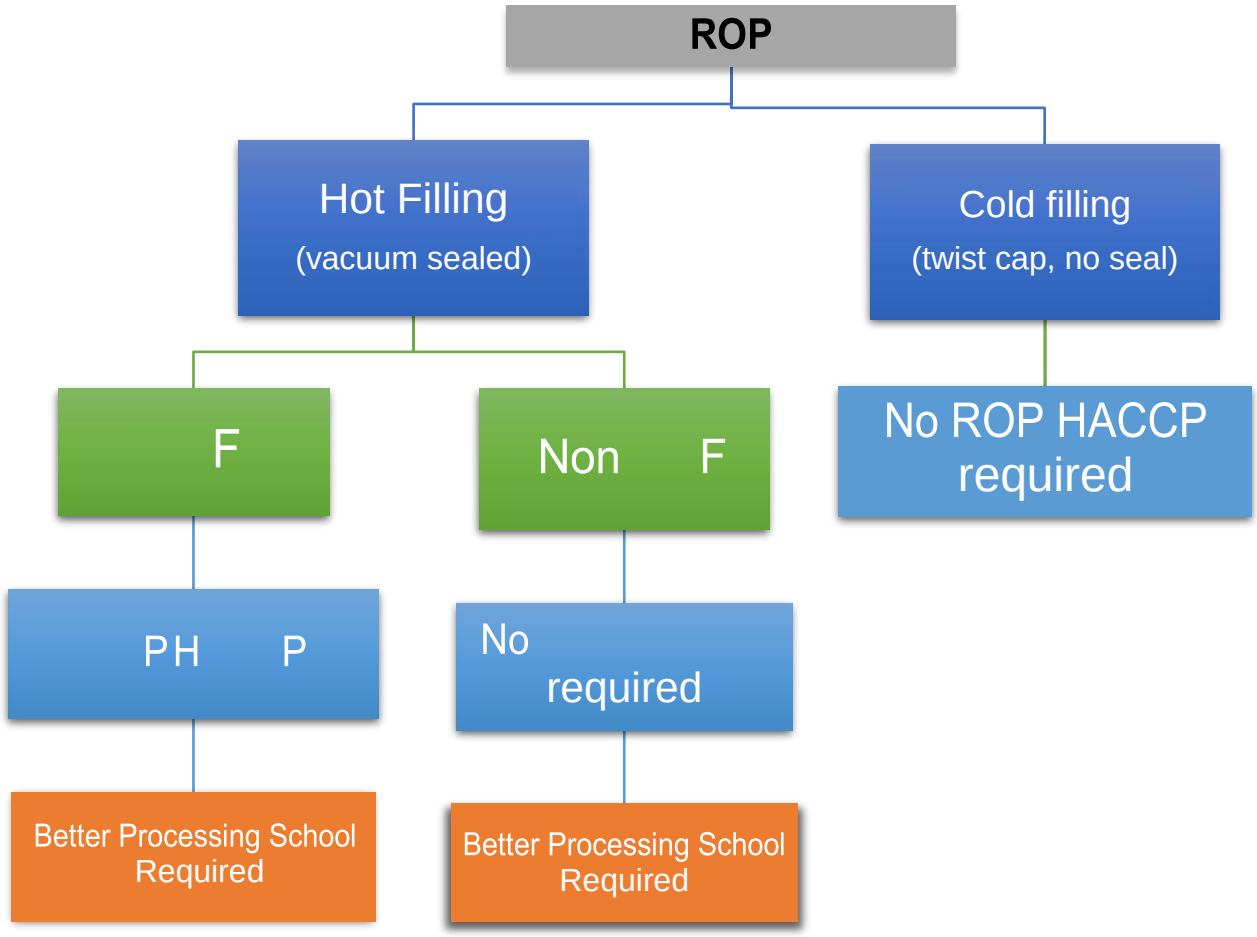
Reduced Oxygen Packaging (ROP)

Determine if an ROP HACCP is required using the following flow chart:



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Definitions

Cold Fill- Cooling a product down to 41°F or below prior to filling the sterilized jars, then screwing on the lid (no suction or vacuum).

Hot Fill- Filling sterilized jars with a boiling or simmering liquid, sealing the jar with a sterilized lid and inverting the jar, or pouring hot brine over the food product. This process must create a vacuum seal.

Hot Bath Canning- Sterilized and heated glass jars are filled, sealed and submerged in boiling water for a specific amount of time to create a seal or suction on the can.

Pressure Canning- Involves a heavy, thick pot that is fitted with a steam-venting lid. Jars are placed in the pot with a couple of inches of water, the lid is screwed tight over the top of the pot and the jars are processed in the pressure cooker to temperatures of 240°F and higher.

Low Acid Food – When the raw or initial product has a pH above 4.6.

Acid Food – When the raw or initial product has a pH below 4.6.

Acidification- An acidified food is a low-acid food to which acid(s) or acid food(s) are added and which has a finished equilibrium pH of 4.2 or below.

Reduced Oxygen Packaging - Vacuum packaging, in which air is removed from a package/jar of food and the package/jar is hermetically sealed so that a vacuum remains inside the package. (includes hot filling, hot bath canning, and pressure canning)

Headspace - The unfilled space in a can or jar between the top of the food or liquid and the underside of the lid. The correct amount of headspace is essential to allow for expansion as the jars are heated and for the formation of a strong vacuum seal as the jars cool. The minimum headspace should be 6% of the container volume.

Better Processing School:
- Required for the person in charge of canning/jarring.
- Teaches operators about main critical factors of concern in the canning/jarring process and ensures they have the full knowledge to produce a safe product.
- Can be accessed here: http://ucfoodsafety.ucdavis.edu/Better_Process_Control_School_Online/