K-STATE Research and Extension

You Asked It!

Tips From the Rapid Response Center

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

August 2020

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What is Cyclosporaiasis?

www.cdc.gov/parasites/cyclosporiasis/resources/pdf/Cyclosporiasis_General-Public_061214.pdf

A recent foodborne illness outbreak in bagged salad mixes was found to be contaminated with the parasite *Cyclospora*. This parasite is found in feces contaminated food or water. Illness occurs due to ingestion as opposed to being directly passed from one person to another.

The time between becoming infected and becoming sick is usually about one week. *Cyclospora* infects the small intestine (bowel) and usually causes watery diarrhea, with frequent, sometimes explosive, bowel movements. Other common symptoms include loss of appetite, weight loss, stomach cramps/pain, bloating, increased gas, nausea, and fatigue. Vomiting, body aches, headache, fever, and other flu-like symptoms may be noted. Some people who are infected with *Cyclospora* do not have any symptoms. If not treated, the illness may last from a few days to a month or longer. Symptoms may seem to go away and then return one or more times (relapse). It's common to feel very tired.

If a food is connected to any foodborne illness recall, never eat the food. Either throw it away or return it to the store for a refund. Before handling any food, wash your hands thoroughly. Wash fresh fruits and vegetables with running water and scrub when possible. Refrigerate cut, peeled or cooked produce and away from raw meat or poultry.

Learn more at www.cdc.gov/parasites/cyclosporiasis/index.html and a webinar at www.fightbac.org/free-resources/recorded-webinars/.

Canning Tomatoes: Don't Forget the Acid!

Tomatoes may have that tasty zing that makes them tart and tasty. But in reality, they are not as acidic as they seem, especially when canning tomatoes.

Tomatoes have a pH value around 4.6 which makes them unsafe to can by themselves, with many varieties above 4.6. All tomatoes must be acidified with either citric acid, bottled lemon juice, or vinegar with 5% acidity in both water bath and pressure canning processing.

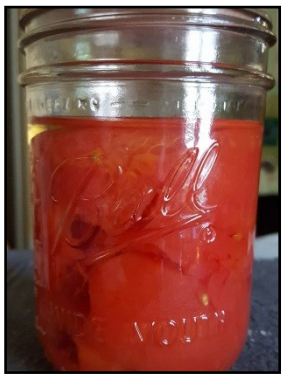
Without this added acid, tomatoes will likely ferment and spoil. Learn more in Preserve it Fresh, Preserve it Safe: Tomatoes.

Why Do Home Canned Foods Lose Liquid?

As with any problems when cooking, there are many reasons to answer a question. For pressure canning, here are some reasons for the question above:

- Improper headspace to allow for food expansion.
- Pressure canner was not exhausted for 10 minutes before pressurizing.
- Pressure too high.
- Unsteady heat source caused pressure fluctuation.
- Removing pressure regulator before pressure dropped completely.
- Rapid temperature changes or drafts blowing on the canner.
- Lids not applied correctly.
- Raw pack was used instead of hot pack.
- Did not leave canner closed for 10 minutes after pressure dropped completely.

Source: www.gopresto.com and https://nchfp.uga.edu/how/general/cannedfoodproblems.html



The headspace for most tomato products should be 1/2 inch.

For instructions on freezing peaches, see Preserving Peaches at www.bookstore.ksre.ksu.edu/pubs/mf1182.pdf

Are White-Fleshed Peaches Safe to Can?

There is evidence that some varieties of white-flesh peaches are higher in pH (i.e., lower in acid) than traditional yellow varieties. The natural pH of some white peaches can exceed 4.6, making them a low-acid food for canning purposes. At this time there is no low-acid pressure process available for white-flesh peaches nor a researched acidification procedure for safe boiling water canning.

Freezing is the recommended method of preserving white-flesh peaches.

Source: Dr. Elizabeth Andress, University of Georgia Extension

Preserving Potatoes

Are you digging up potatoes? While you are digging, think about how to preserve them. Potatoes can be canned, frozen or dehydrated. For canning, they must be pressure canned as they are a low acid vegetable. For instructions, see pp. 6-7 of our K-State Preserve it Fresh, Preserve it Safe: Vegetables publication. It also has tips to easily freeze potatoes.

For more information on freezing potatoes, see Penn State Extension Freezing Potatoes information for whole small potatoes, French fried potatoes, and prepared potatoes.

For information on dehydrating potatoes, see the University of Georgia publication Preserving Food: Drying Fruits and Vegetables. These are a great addition to soups and casseroles.

New Potatoes
Photo: USDA Flickr

Home Canning Mistakes

Learn more about safely canning foods at https://www.rrc.k-state.edu/preservation/index.html

Many resources show home canning methods that are not safe. Here are a few:

- **Canning in the oven**—Canning jars may not withstand the thermal shock and can break. Also, oven heating filled jars of food is slow and can encourage potential bacteria growth.
- **Open kettle canning**—This is filling jars and closing them without further heat processing. This also includes inverting jars or setting the jars in the sun. Without water bath canning or pressure canning, spoilage will likely occur and food will be lost or people may become sick.
- **Electric multi-cookers** — While some electric multi-cookers have a "canning" button, no research is available to back up this function. Use these appliances for cooking only!
- **The jar sealed, it has to be safe!** - What happened prior to putting a lid on the jar is critical to canned food safety. Just because a jar seals does not guarantee safety.

Reprocessing Home Canned Food

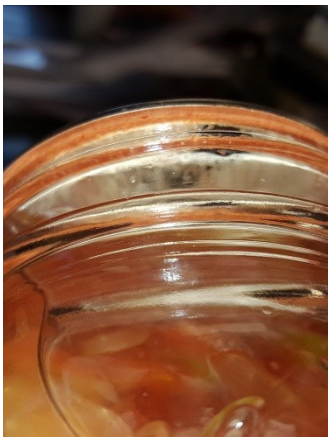
Oops! The lids didn't seal! I used the wrong pressure! Can these jars be saved?

Home canned foods can be reprocessed within 24 hours of initial processing. Remove the lid and replace with a new lid. Change jars if the necessary because of nicks in the jar rim. Reprocess the food using the proper procedures for that food.

Another option is to store the jars in the refrigerator and use within a few days or freeze for later use. If freezing, be sure to have at least 1 1/2 inches headspace for expansion.

Do not use jars of food that become unsealed during storage for an unknown reason.

http://nchfp.uga.edu/how/store/store_home_canned.html



Sources: https://nchfp.uga.edu/questions/FAQ_canning.html#13 and https://extension.psu.edu/frequently-asked-preservation-question-pinholes-in-lids

What are Pinholes in Canning Lids?

Natural compounds in some foods, particularly acids, corrode metal and make a dark deposit on the underside of jar lids. This deposit on lids of sealed, properly processed canned foods is harmless. This is commonly referred to as pinholes.

Sometimes they are caused by how the lids are handled. Lifting lids out of water with a metal tool may scratch the enamel on the lid providing a pathway for acids to work their way through the lid. More often, it is simply a chemical reaction with the metal and the food in the jars. As a reminder, today's canning lids do not require pre-heating prior to applying them to the jar. Simply wash and dry them and they are ready to use.

Pinholes are harmless unless holes go all the way through the lid. Salt can also cause corrosion on lids. Using proper headspace can reduce contact of the food with the lid. If food is stored too long, acids may create pinholes. Discard the contents of any jar if the pitting has gone completely through the lid — the jar would be unsealed and the contents could be unsafe.

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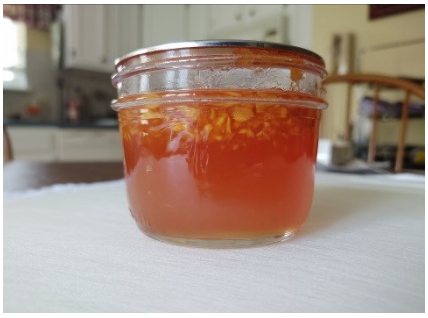
Knowledge for Life

Tips to Prevent Jam from Separating



Source: https://bit.ly/2AYJwVu

Fruits such as strawberries and peaches make tasty jam, but sometimes the pulp separates from the jellied portion. Here are tips to help prevent separation.

- Always use ripe fruit.
- Crush the fruit into very small pieces.
- Cook the jam the recommended amount, do not undercook it.
- When the jam is removed from the heat, gently stir, off and on, for about 5 minutes and then fill jars. It will still be very hot.
- Process the jam in either a water bath canner or a steam canner. After processing, lift the jar rack, full of jars, above the water in the water bath canner and let them sit for 5 minutes before moving them to a cooling rack. After the processing time has been reached in a steam canner, take the lid of the canner partially off and let the jars sit for 5 minutes before cooling the jars on a rack.
- Jars should seal fairly quickly after processing. If the jam starts to separate after the lids have sealed, gently turn the jars upside down. In an hour, gently turn them right-side up. Continue this process until it is evident that the jam will not separate.

ask an EXPERT

Karen Blakeslee, M.S.

On the Web at
www.rrc.ksu.edu

Mold Growth in Home Canned Food

So you've put a lot of work into canning food at home, but still find a jar or two that has mold growth. Is it safe to eat?

Mold on jelly
Photo: Penn State University

Mold growth in foods can raise the pH of the food. In home canned products, this could mean that the high acid products could become low acid and therefore run the risk of botulism or other bacterial spoilage. Thus, any home canned product that shows signs of mold growth should be discarded.

USDA and microbiologists now recommend against even scooping out the mold on jams and jelly products and using the remaining jam or jelly, even though that used to be suggested.

Source: https://nchfp.uga.edu/questions/FAQ_canning.html#15