

# Food Preservation

## Frequently Asked Questions

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### General Preservation Questions

**Q:** *When are the best times to pick/harvest fruits and vegetables for canning and freezing?*

**A:** It is best to harvest produce early in the morning or during the coolest time of the day.

To gain the best quality, it's also a good idea to freeze or can vegetables as soon as possible after they are picked. If you must hold them, keep them refrigerated. In research done at Pennsylvania State University, peas held four hours at room temperature before blanching lost 50 percent of their sugar content.

### Freezing Questions

**Q:** *How do I freeze kiwifruit?*

**A:** Kiwi can be frozen sliced, crushed or whole. It is high in acid and adding sugar will improve the flavor to help keep the fruit firm. Slices may be frozen individually by placing on a cookie sheet and freezing. When frozen, package in freezer bags. These slices are good for garnishes.

For syrup pack: Use 3 cups sugar to 4 cups water. For dry sugar pack: Use 1 cup sugar for 1 quart kiwi slices. Toss to coat before packing. For crushed fruit: Use 1 cup sugar for 1 quart fruit (or to taste).

**NOTE:** Kiwi contains enzymes that break down protein. Therefore, frozen and fresh kiwi must be heated to boiling before it is used in gelatin dishes. Frozen kiwi can be used to tenderize meat. Small whole fruits may be frozen for this purpose.

**Q:** *Is it safe to re-freeze leftovers?*

**A:** When deciding which foods can or cannot be refrozen, keep food safety in mind. The quality of foods that are refrozen is affected. Therefore, label these foods and use them as soon as possible.

In general:

- Leftover roasted meats such as beef, pork, ham, chicken, turkey (with dressing and gravy) and Swiss steak (with gravy) freeze quite well.
- Fried foods don't freeze well because they may become rancid after a short time and develop a warmed-over flavor when reheated.

- Meat loaf may be frozen—either cooked or uncooked.
- Casserole dishes containing macaroni, spaghetti, noodles, or rice may be frozen in baking dishes or freezer containers. Be sure to heat until center is bubbly or 165°F on a food thermometer.
- Leftovers frozen in small amounts will have a warmed-over flavor when reheated because they have already been completely cooked.

**Q:** *Can I freeze fruit using Equal™ (aspartame)?*

**A:** Some research has shown that strawberries and peaches sweetened with Equal™ are comparable in quality to sugar-sweetened frozen fruit. To sweeten strawberries or peaches, substitute Equal for the amount of sugar you would normally use. Equivalent amounts are given on the package. Use the dry pack method rather than the syrup pack.

For other fruits, which haven't been researched yet, try replacing half the sugar you would ordinarily use with Equal™. Since this procedure is still being researched, prepare and taste test a small experimental batch before freezing large quantities of fruit with Equal™.

## Canning Questions

**Q:** *Is it safe to can thawed frozen meat?*

**A:** Yes, as long as the meat has been thawed in the refrigerator.

Refrigerator Thawing: Allow 24 hours for every 5 pounds of meat. Once thawed, can the meat within 2 days. When ready to can, do not let thawed meat remain at room temperature for more than 2 hours.

**Q:** *Can I preserve fruits without sugar?*

**A:** Most frozen fruits have better texture and flavor when packed in sugar or syrup. Fruits that freeze especially well without sweetening include raspberries, blanched apples, blueberries, gooseberries and rhubarb.

Fruit can be canned with no sugar added. Use fully ripe, firm fruit for best flavor. The use of an antioxidant such as ascorbic acid will result in better color when no sugar is used.

Fruit being prepared for canning can be either hot packed or cold packed. Hot packing is preferred to extract the natural liquid and flavor from the fruit.

Unsweetened fruit can be packed in jars in the following ways: use water, the fruit's own juice, or other unsweetened juice. It's better not to add artificial sweeteners before canning because they may change the flavor. If you want to sweeten your canned fruit with an artificial sweetener, add it when you serve it.

**Q:** *Can Splenda® (sucralose) be used in preserving food?*

**A:** Granular Splenda® does not provide preservative properties like sugar. There has not been any published research work with using sucralose in the canning of fruits at

home. According to the National Center for Home Food Preservation (NCHP), using Splenda® instead of sugar should work as a sugar substitute for syrup recipes used in canning fruits because the product is heat-stable. Some people have reported an aftertaste when used in various products, so it's possible for flavor to change during storage.

In other cases, where sugar is important, like some preserves or pickled fruits, it is **NOT** recommended that Splenda® be substituted for sugar if the product is to be canned for shelf stability. You could use Splenda® as the optional sweetener in a jam or jelly made with a no-sugar needed pectin, such as Mrs. Wages™ Lite Home Jell® Fruit Pectin or Ball® No-Sugar Needed Pectin. With these low-methoxyl pectins, no sugar is required at all. Sugar substitutes can be added as desired simply for flavor. The package inserts with these pectins give instructions on when to add the sugar substitutes (usually after all the cooking and just before filling the jars).

NCHP has developed three canning recipes using Splenda®. 1) Pickled sweet cucumber slices, 2) pickled beets, 3) pickled cantaloupe. They are under the "How do I...Pickle" category, as well as National Center fact sheets, <http://www.uga.edu/nchfp/publications/nchfp/factsheets.html>.

**Q:** *Can I use the hot water bath to process pepper jelly/jam or do I need to use the pressure canner?*

**A:** Acid, sugar and pectin are required ingredients for jelly or jam products. As a result, the water bath process is acceptable for pepper jelly or jam. Most pepper jam/jelly recipes include vinegar, lemon juice, sugar and pectin.

**Q:** *Where can I get the thickener ClearJel® for pie filling?*

**A:** ClearJel® is a commercial thickener composed of a modified food starch. This starch produces the correct thickening, even after the fillings are canned and baked. Other starches (such as cornstarch or tapioca) break down and result in a runny filling.

ClearJel® is not currently available in most grocery stores. In many areas, mail order is the only source. You may find ClearJel® in some cooperatives, stores that sell cooking ingredients in bulk, or stores selling cake decorating or candy-making supplies.

The following mail order sources are known for ClearJel®:

- Kitchen Krafts, (800) 298-5389, [www.kitchenkrafts.com](http://www.kitchenkrafts.com)
- Sweet Celebrations, (800) 328-6722, [www.sweetc.com](http://www.sweetc.com).

Call for prices and shipping costs. One pound is approximately \$5.00; 5 pounds is \$25.00.

There are approximately 2 - 3 cups in 1 pound of ClearJel®. Most home-canned fruit pie filling recipes require about 1½ to 2¼ cups per 6 - 7 quarts of pie filling.

**Q:** *When I've canned pie fillings using ClearJel®, the filling seems to leak out the jars. What can I do to prevent this?*

**A:** Following the recommended recipes by the National Center for Home Food Preservation ([http://www.uga.edu/nchfp/how/can\\_02/canpie.html](http://www.uga.edu/nchfp/how/can_02/canpie.html)) should result in a safe and quality product. Here are some hints from Dr. Elizabeth Andress, Director of the Center:

- Slice the apples into thin slices, no more than ½” thick.
- Blanch the apples as directed, working in small batches. Blanching stabilizes the product and also helps to remove air trapped in the apple cells.
- Cook the sugar and Clearjel® mixture as directed working in a large kettle. The mixture needs to come rapidly to temperature and to maintain heat even when the apple slices are added. Working in a too-small kettle will prevent the product from cooking properly – somewhat like too much product hinders jam and jelly making.
- Don’t increase headspace to try and prevent product over-flow; it won’t work.
- Air trapped in the apple tissue may be a prime ‘suspect’ in product over-flow. As the air expands and leaves the cells and the jar, it carries product along with it. Effective blanching and using thin apple slices may help release trapped air.
- If you have tried everything to no avail, try switching apple varieties. Many things can influence the success of the product, including apple variety, growing conditions, length of storage, etc.

**Q:** *How do I can dried beans so they are ready to use (e.g. kidney beans for chili)?*

**A:** Select mature dry beans. Sort out and throw away any defective or discolored beans. To rehydrate the beans, use one of the following methods: Place beans in a large pot, cover with water and let stand in a cool place for 12 - 18 hours and then drain. Cover beans with boiling water in a saucepan and boil 2 minutes. Remove from heat and soak 1 hour and then drain.

Cover the drained beans with fresh water and boil 30 minutes. Fill hot beans into hot jars, leaving 1-inch headspace. Add ½ teaspoon salt to pints or 1 teaspoon to quarts, if desired. Fill jar to 1 inch from top with boiling water. Remove air bubbles. Adjust lids and process. Process in a dial gauge pressure canner at 11 pounds pressure OR in a weighted gauge pressure canner at 10 pounds pressure: Pints = 75 minutes; Quarts = 90 minutes.

**Q:** *Why does my canned salsa curdle the cheese when I mix the two together for a dip?*

**A:** It may be due to a chemical reaction from the vinegar and cheese. Hard cheeses like cheddar tend to curdle when heated. Try using a processed cheese like Velveeta or American cheese.

**Q:** *Is there a recipe for cream of tomato soup that is safe to can?*

**A:** Home-developed recipes, like soup, may be dangerous when canned unless research-tested recipes are used. NEVER thicken soups with cornstarch, flour or tapioca before canning. There is no safe method for canning milk or milk products at home that yields an edible product. We suggest you can your tomato soup without milk or thickener and add the milk/cream or thickener when you are ready to serve it.

## Equipment Questions

**Q:** *What do I do if the pressure canner lid is stuck?*

**A:** Sometimes a lid on the pressure canner will become “stuck” if the lid is not removed when the pressure has reached zero. NEVER try to hurry the cooling of any canner or force it open by pouring cold water over it. This “shock treatment” could cause the seals to loosen, the liquid to siphon off, or jars to break.

Reheating the canner and letting it return once again to zero pressure should release the vacuum. You can also use a rubber mallet, gently tapping around the rim to loosen the lid. Then, exert equal downward pressure when turning the cover. Never use a regular hammer. If the canner lid is stubborn due to a sticky sealing ring, it’s time to replace the gasket. (Source: National Presto)

**Q:** *When and where can I get my pressure canner dial gauge checked?*

**A:** Dial gauges should be checked every year for accuracy. Other times when the gauge should be checked:

- After it’s been dropped
- If it has been submerged in water
- If the gauge glass is broken or has fallen out
- When any parts are rusty
- When the pointer is not in the “0” block
- Anytime you believe the gauge may not be accurate

The Presto Company will test dial gauges **FREE!** Remove the gauge from the canner lid, wrap in newspaper, and package in a small sturdy box. Send the package to: PRESTO – Service Department, 3925 North Hastings Way, Eau Claire, WI 54703-3703. The customer pays the postage to Presto. In most cases, the gauge will be returned in a short amount of time. Check with your local County Extension Office to see if there is a local source for testing.

**Q:** *What is the “recipe” for bleach and water to sanitize equipment?*

**A:** Usually it’s 1 tablespoon bleach per 1 gallon of water. Not all bleaches are made from the same concentration. Check the label and follow the directions.

Concentrated ultra bleach contains 6% sodium hypochlorite, rather than the standard 5.25% in “regular” bleach. Here’s the recipe to make a sanitizer:

- Ultra (6%) bleach: 2½ teaspoons per gallon; ¾ teaspoon per quart
- Regular (5.25%) bleach: 1 tablespoon per gallon; 1 teaspoon per quart.

## Miscellaneous Questions

**Q:** *Are homemade, flavored oil-and-vinegar mixtures safe?*

**A:** Commercial flavored oil mixtures have acid added to them to prevent bacterial growth. Currently there are not any approved researched methods or recommendations to acidify homemade herb or vegetables-in-oil mixtures. Instead, it is essential to store these products in the refrigerator, but for no longer than 3 - 4 weeks.

As long as clean and high-quality ingredients (vinegar, herbs, vegetables or fruits) are used, the greatest concern with homemade flavored vinegars should be mold or yeast and then having to throw out your product. If your flavored vinegar starts to mold at any time or show signs of fermentation such as bubbling, cloudiness or sliminess, discard the product and do not use any of the remaining vinegar mixture.

Heat the vinegar to just below the boiling point, or 190 - 195°F. Pour over the flavoring ingredients in jars, leaving 1/4 inch headspace. Wipe rims of jars with a clean, damp cloth. Attach lids, corks or screw caps tightly. Let sit undisturbed to cool. Store in a cool, dark place. Let sit undisturbed for 3 - 4 weeks to develop flavors. Strain the vinegar through a damp cheesecloth or coffee filter one or more times until the vinegar shows no cloudiness. (Skewers of vegetables may be removed first.) Discard the fruit, vegetables and/or herbs.

Store the flavored vinegars in the refrigerator, if possible. Refrigeration will ensure safety and retain freshness and flavors. Otherwise store the unopened bottled vinegars in a cool, dark place. Date the bottles or jars when they are opened and refrigerate, if possible. If properly prepared and bottled, flavored vinegars should keep for up to 3 months in cool storage. Fruit vinegars in particular may start to brown and change flavor after that. Refrigeration of all flavored vinegars may extend the quality for 6 - 8 months. Always keep vinegar bottles tightly sealed. After 6 months, even if there is no sign of spoilage, taste the vinegar before using to make sure the flavor is still good. If a flavored vinegar ever has mold on or in it, or signs of fermentation such as bubbling, cloudiness, or sliminess, throw it away. Harmful bacteria may survive and even multiply slowly in some vinegars. It is important to follow directions carefully, store flavored vinegars in the refrigerator or cool places, and work in a very clean area with sanitary utensils. Also be sure hands are very clean while you work!

**Q:** *What are reliable food preservation books or resources?*

**A:** Use recipes and procedures that were developed in 1990 or later.

Books:

- *Putting Food By*, 4<sup>th</sup> Edition, 1992, written by Janet Greene, Ruth Hertzberg, and Beatrice Vaughan
- *So Easy To Preserve*, 5<sup>th</sup> Edition, 2006, Cooperative Extension Service of the University of Georgia, , <http://www.uga.edu/setp/>
- USDA's *Complete Guide to Home Canning* (1994 – revised 2008/2009), [http://www.uga.edu/nchfp/publications/publications\\_usda.html](http://www.uga.edu/nchfp/publications/publications_usda.html)
- AnswerLine. Provides answers to your questions. Provides research-based information through University of Minnesota Extension and Iowa State University Extension. 1-800-854-1678.
- *The Ball Blue Book® of Preserving* (2004), Alltrista/Jarden Home Brands.