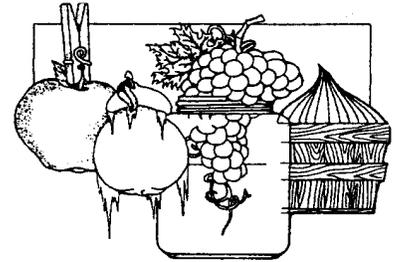


Quality for Keeps



Information for those who produce and preserve food

Add herbs to vinegar or oil with care

Flavored vinegars and oils add sparkle to salads and cooked dishes, but there can be big safety concerns when preparing these condiments.

Flavored vinegars are fairly safe when made under clean conditions and stored in the refrigerator. Flavored oils have the potential to be unsafe if not stored properly.

Flavored oils. When herbs, vegetables, dried tomatoes, or garlic are covered in oil, there is no air around the added ingredients. Most organisms cannot survive without oxygen, but the *Clostridium botulinum* bacteria thrive in the absence of oxygen. *Clostridium botulinum* is in our environment, so if these organisms are on the foods added to oil, food-borne illness can result.

Botulism organisms need a lack of oxygen, lack of acid, a food source, moisture, and favorable temperatures to grow. *Clostridium botulinum* bacteria is the microorganism that makes a pressure canner necessary to safely can low acid foods. This bacteria produces toxins that can lead to serious health problems, such as breathing difficulty with possible respiratory failure, difficulty swallowing, double vision, weakness with paralysis, and possibly death.

Garlic and vegetables added to oils are the most risky. Botulism bacteria can produce the hazardous poisons that cause illness, if held at room temperatures in the oil mixture.

Commercial seasoned oils are made with added preservatives to prevent the botulism bacteria from producing toxins. **Seasoned oils may not be safely prepared or processed at home for shelf storage.**

When vegetables, herbs or garlic are added to oil at home, store the mixture in the refrigerator promptly, and keep no more than 3-4 days. **Discard any home-made seasoned oils which are left at room temperature more than two hours.**

Flavored vinegars. These high acid products do not pose a risk for botulism. However, E-coli, another bacteria that has the potential to make people very sick, is a concern. To prevent problems, prepare and store flavored vinegars properly. Use glass, foodgrade containers that can be sealed with a screw top, cap or cork. Clean the containers by washing, then submerge the jars in hot water and simmer 10 minutes. Turn the jars upside down on a towel, but fill while the jars are still warm.

Select the type of vinegar based on desired flavor. Apple cider vinegar is good for fruits, distilled white vinegar provides a milder taste for herbs, and wine vinegar works best for garlic or tarragon. Wine and rice vinegars are more likely to encourage bacterial growth since they contain protein, so careful storage is important.

Vinegar flavored with fresh herbs. Choose three to four sprigs of the best leaves and flowers. Before

adding herbs to vinegar, sanitize the sprigs by dipping into a solution of one teaspoon of household bleach in six cups of water. After dipping in the solution, rinse well under cold running water, and pat dry.



Vinegar flavored with dried herbs. Use three tablespoons of dried herbs for each pint of vinegar.

Fruit flavored vinegar. Wash fruit thoroughly; peel and cut into smaller pieces if necessary. Use the peel of an orange or lemon, one to two cups of strawberries or raspberries, or one to two cups of peach or pear pieces for each pint of vinegar. Combinations of fruits with herbs and spices yields unique flavor variations. Before adding to vinegar, thread garlic cloves or jalapeno peppers on bamboo skewers to allow for easy removal.

Source: <http://www.ext.colostate.edu/pubs/foodnut/09340.html>

Source: <http://extension.psu.edu/food-safety/food-preservation/faq/prepared-vegetables-and-herbs-stored-in-oil>

(See vinegar preparation on page 4)

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Don't get caught short on supplies

To obtain a top-quality preserved product always start by reading approved USDA recipes or preserving instructions.

Sometimes people start the preservation process before gathering all needed equipment and supplies. Stopping in the middle of preserving food to look for items or ingredients, or go purchase supplies, can be very frustrating and time consuming. Before starting to preserve food, read the recipe, jot down all equipment needed and gather those items. Below is a suggested list of ingredients. It is a good idea while looking at the recipe/instructions, mark supplies needed on an inventory sheet.



Canning. Check supply of jars and rings. Use only jars designed for canning. Check jars for chips or cracks. Always use new lids. Buy an extra box of lids in case some of them are damaged, or some jars need reprocessing. Make sure rings are free of rust.	✓
Jars, rings, lids	
Extra lids	
Sugar (1 pound=2cups)	
Ascorbic acid	
Pectin (be sure which type—they are not interchangeable)	
Canning salt	
Vinegar, at least 5% acidity	
Lemon juice (bottled only)	
Ice	
Spices or seasoning	
Cheese cloth	

Freezing. Food may be frozen in either rigid containers or flexible bags or wrappings. To preserve the quality of frozen produce, straight-sided containers designed for freezing should be moisture vapor resistant, durable, leak proof, stable at freezing temperatures, resistant to oil and water, provide a barrier to absorption of flavors and odors, and be easy to seal and label. Freezer bags need to possess the same qualities.	✓
Containers, freezer bags, or freezer wrap	
Freezer tape	
Ice	
Sugar (1 pound=2 cups)	
Ascorbic acid	

Drying. Storage containers that hold the amount of dried foods to be used in a recipe are best. Every time a package is re-opened, food is exposed to air and moisture that lower quality of food. Home canning jars, plastic freezer containers with tight-fitting lids, plastic freezer bags, or vacuum packaging are good options.	✓
Containers, freezer bags, or vacuum sealing materials	
Pretreatments for fruits	
Ascorbic acid	
Fruit juice	
Sugar	
Honey	
Corn syrup	
Plastic wrap	
Non-stick spray	
Marinade for jerky	

Stash home preserved foods wisely

To insure quality products when preserving food at home, follow recommended storage methods and techniques.

Freezing. Freeze all foods quickly after they are packed and sealed. Do not overload freezer when adding fresh foods. A good guide is to add no more than 2 to 3 pounds of unfrozen food per cubic foot of storage space in freezer. Adding more unfrozen food will result in delayed freezing and diminished quality. Food should freeze solid within 24 hours. Setting freezer control about 10°F colder a day ahead of time and leaving space between packages improves quality. After freezing, keep frozen foods at a consistent 0°F.

Keep a freezer inventory, label food clearly; maintain organization of items. The less time the door remains open helps prevent potential temperature fluctuations. Keeping the freezer door closed retains quality.

A full freezer is most efficient. Store jugs of water in freezer if there is excess space to:

- Extend time freezer stays cold in case of a power outage.
- Provide water for emergency usage.
- Help the freezer work more efficiently.

Canning. Allow home-canned products to cool for twelve to twenty-four hours after processing; then store. Test jars of food for proper sealing, wipe jars clean, and remove rings. Label and date.

Store canned foods in a cool, dark, dry space with a temperature of 50° to 70°F. For best quality, avoid storing above 95°F, or near heat sources, such as hot pipes, a range, a furnace, a dish washer, or in direct sunlight. Excess heat, or freezing and thawing, can reduce quality of canned foods.

Corroded lids, freezing, or excess heat could break seals, which will lead to spoilage of foods.

If jars must be stored where they may freeze, wrap jars in newspapers then place jars in a heavy carton. Cover carton with extra newspapers and blankets. Place older canned goods in front, so they will be used first. Use canned goods within one year.

Drying. Store dried foods in a cool, dry, dark area. Storage temperature will determine how long dried foods will retain their quality. Foods stored at higher temperatures will not last as long, because heat reduces food quality.

After drying, allow fruits to cool; follow by conditioning fruit for seven to ten days. Store most dried fruits up to 1 year at 60°F, or 6 months at 80°F. Vegetables do not have to be conditioned, but have about half the shelf-life of fruits.

Moisture and insects are big threats to dried products. Glass canning jars make it easy to see if any moisture or mold is forming. If moisture is noticed right away, food can be used or re-dried. Discard any dried food which shows signs of mold.

Refrigeration. Keep refrigerator set at 40°F. Refrigeration storage preserves quality and freshness of many fresh fruits and vegetables.

- All cut fruits and vegetables, and fresh juice must be refrigerated.
- Apples and citrus fruits can be stored at room temperature, but will last longer if refrigerated.
- Apricots, apples, avocados, figs, kiwi, nectarines, papaya, peaches, pears, tomatoes, plums, and cut melons should be refrigerated, but they produce ethylene gas which can cause other vegetables to ripen too fast.

- Asparagus, snap beans, broccoli, cabbage, carrots, cauliflower, cucumbers, squash, eggplant, and lettuce will be negatively affected by ethylene gas; store these vegetables separately from the foods that produce this gas.
- Other fresh produce that should be stored in the refrigerator are: celery, green onions, leafy greens, peas, beets, sweet corn, radishes, herbs, mushrooms, grapes, strawberries, and berries.

Source: University of Missouri Extension, <http://extension.missouri.edu>

Strawberry Vinegar

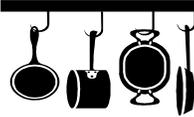
- 4 cups fresh strawberries
- 3 cups cider vinegar
- 1/4 cup sugar

Clean strawberries, remove stems and halve; set 1/4 cup aside. Place remaining strawberries in a large bowl. Pour vinegar over strawberries; cover and set aside for 1 hour. Transfer vinegar and strawberries to a large sauce pan. Add sugar, bring to a boil. Cover, reduce, heat and simmer for 10 minutes. Strain strawberry mixture, pressing out as much liquid as possible. Pour vinegar into a clean and sterilized quart jar. Add reserved strawberries. Cover tightly. Store in the refrigerator.

Yield: approx. 1 quart.

Source: <http://www.ext.colostate.edu/pubs/foodnut/09340.html>

THE RECIPE BOX



Steps to make flavored vinegars

To make vinegar. Place suggested amounts of prepared herbs, fruit, vegetables, or seasonings in warm sterilized jars.

Heat vinegar to 190° F, or just below boiling. Pour vinegar into jars and cap immediately. Set aside to allow flavors to develop.

After three to four weeks, strain vinegar through dampened cheesecloth or coffee filters, until vinegar is no longer cloudy. Throw out fruit, vegetables or seasoning.

Pour strained vinegar into freshly sterilized jars. Herbs or fruit prepared as before may be added before tightly sealing jars.

Store in refrigerator for six to eight months, or in a cool dark place for two to three months.

Do not use any flavored vinegars and oils if they are left in warm sunny places for decorations.

Source: <http://www.ext.colostate.edu/pubs/foodnut/09340.html>



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