



# PREPARATION

## Making Pickled Peppers

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Pickled peppers and mixed vegetable-pepper home-canned products are commonly prepared by many Colorado households. These products also have been implicated in botulism deaths due to the use of untested recipes, under-acidified products, addition of too much oil, or lack of processing.

### Quick Facts

Use only fresh, blemish-free vegetables and up-to-date, research-based recipes when pickling peppers and pepper blends.

Use pure, granulated, non-iodized canning or pickling salt, high grade vinegar of 5 percent acidity, and fresh spices.

Process pickled peppers in a boiling water bath for the altitude-adjusted length of time specified in a tested recipe.

For oil peppers, use only fresh vegetable oil in the amounts specified in tested recipes.

### Ingredients

**Peppers.** A variety of peppers work well for home canning. Common varieties are Cubanelle, Hungarian, yellow wax, sweet cherry, sweet banana and sweet bells. Thick-fleshed peppers with firm waxy skins and bright, glossy color, free from defects, give the best pickled products. Avoid peppers that are soft, shriveled or pliable, and dull or faded in color. As with all pickled products, the shortest time from pick to pack offers the highest quality pickled product.

Cut large peppers (Cubanelle or bells) into jar-size pieces. Remove seeds and white inner core. Smaller varieties may be packed whole but must be slit to allow the vinegar solution to enter the hollow portion of the pepper. Make two small slits through the flesh of each whole pepper.

**Other vegetables.** For vegetable-pepper blends, follow a recipe with tested proportions. Select fresh, tender but firm vegetables. If the vegetables and peppers cannot be used within one or two hours after harvesting, refrigerate without washing. Thoroughly wash all vegetables in cold water before pickling.

**Salt.** Use noniodized canning or pickling salt. Noncaking materials added to table salt may make the solution cloudy.

**Vinegar.** Use a high grade cider or white distilled vinegar of 5 percent acidity (50 grain). White vinegar may be preferred with light-colored peppers or vegetables to retain color or if clear liquid is desired. Do not use vinegars of unknown acidity. For a less acidic flavor, add a small amount of sugar. This offsets the sharp acid flavor without affecting the pH or acidity of a product.

**Caution:** The acidity in a pickled product is as important to its safety as it is for taste and texture. There must be a minimum, uniform amount of acid throughout the mixed product to prevent growth of botulinum bacteria. Use only recipes with tested proportions of ingredients. **Do not alter vinegar/water proportions** in the recipe.

**Spices.** Spices lose their flavor quickly. For best results, always use fresh spices in home canning.

**Garlic.** If desired for flavor, use mature, fully-dried, white-skinned garlic, free of blemishes. Garlic contains a water-soluble pigment that may turn blue or purple. A blue-green color may develop in pickles made with stored red-skinned garlic. Immature garlic, garlic that is not fully dry, or red-skinned varieties may turn blue, purple or blue-green. Except in the case of a bright blue-green color resulting from abnormally high concentrations of copper-sulfate, such color changes do not indicate the presence of harmful substances.

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**Caution:** Wear plastic or rubber gloves when handling hot peppers. Hot pepper juice can be caustic to eyes or skin.

To review the steps of packing, sealing and processing pickled products, see fact sheet 9.304, Making Pickles.

For information on canning chili, pimentos or other pepper products see 9.348, Canning Vegetables.

**Table 1: Recommended process time for Colorado mix in a boiling water-bath canner.**

Style of pack/ Jar size	Process time at altitudes of:	
	6,000 ft. or less	Above 6,000 ft.
Raw:		
Half-pints or pints	10 min	15 min
Quarts	15 min	20 min

**Table 2: Recommended process time for pickled peppers in a boiling water-bath canner.**

Style of pack/ Jar size	Process time at altitudes of:	
	6,000 ft. or less	Above 6,000 ft.
Raw:		
Half-pints or pints	10 min	15 min
Quarts	15 min	20 min

**Oil.** Specific problems exist when canning pickled peppers in oil. Follow the recommended amount of oil (2 tablespoons per pint) and allow proper headspace. Peppers in oil need additional processing time over recipes not containing oil. If peppers to be home-canned contain oil, take care that no ingredients touch the jar rim or flat lid. The oil tends to soften the natural rubber-based lining found in some brands of home-canning lids and may result in loosening of the seal over time.

## Colorado Mix (Pickled Pepper Vegetable Blend)

- 2 1/2 pounds peppers, mild or hot as desired
- 1 pound cucumbers, cut into 1/2-inch chunks
- 2 to 4 carrots, cut into 1/2-inch chunks
- 1/2 pound cauliflower, cut into 1-inch flowerettes
- 1 cup peeled pickling onions
- 7 to 14 garlic cloves, as desired
- 6 cups vinegar
- 3 cups water
- 2 tablespoons pickling salt
- 2 tablespoons sugar, if desired

**Yield:** Makes 7 to 8 pints

**Procedure:** Wash and prepare vegetables. Slit small peppers. Core large peppers and cut into strips. Remove blossom end of cucumbers and cut into chunks. Peel and chunk carrots. Break cauliflower into flowerettes. Pack vegetable medley into hot, **sterilized** jars, leaving 1/2-inch headspace. In 3-quart saucepan, bring vinegar, water, salt and sugar to a boil. Pour hot solution over mix in jars, leaving 1/4-inch headspace. Remove air bubbles. Add liquid to bring headspace to 1/4 inch. Wipe jar rims. Add pretreated lids and process in boiling water bath. For best flavor, store jars five to six weeks before opening.

## Pickled Peppers

- 2 pounds Hungarian or banana peppers\*
- 2 pounds sweet peppers (in strips)\*
- 1 pound cherry peppers\*
- 1 Jalapeno per jar (if desired for hotness)
- 1 clove garlic per jar
- 6 cups vinegar
- 2 cups water
- 1 tablespoon plus 1 teaspoon pickling salt
- 1 tablespoon sugar, if desired

\*Note: May use a variety of peppers to equal 5 pounds (4 quarts).

**Yield:** Makes 7 to 8 pints

**Procedure:** Wash peppers. Small peppers may be left whole with two small slits in each pepper. Core and cut large peppers into strips. Pack one clove garlic and a variety of peppers tightly into clean, hot, **sterilized** jars, leaving 1/2-inch headspace. Combine vinegar, water, salt and sugar. Bring to boil and reduce to simmer. Pour hot pickling solution over peppers, leaving 1/4-inch headspace. Remove air bubbles. Readjust headspace to 1/4 inch. Wipe jar rims. Add pretreated lids and process in boiling water bath. For best flavor, store jars five to six weeks before opening.

## Hot Peppers Marinated in Oil

3 pounds hot peppers (Jalapenos or other varieties)

7 to 14 cloves garlic

7 tablespoons dried oregano

5 cups vinegar

1 cup water

1 tablespoon plus 1 teaspoon pickling salt

3/4 cup vegetable or olive oil

**Yield:** Makes 7 to 8 pints

**Note:** Improper procedures when canning vegetables in oil can result in **risk of botulism**. Read the section on oil and follow **exactly** the recommended procedures and tested recipe below.

**Procedure:** Wear rubber gloves when handling hot chilies. Do not touch the eyes or face. Wash peppers. Make two small slits in each whole pepper. Pack one or two garlic cloves and one tablespoon oregano into each clean, hot, **sterilized** pint jar. Pack peppers tightly into jars, leaving 1-inch headspace. Combine vinegar, water, salt and oil and bring to a boil. Simmer 5 minutes. Pour hot solution over peppers, leaving 1-inch headspace. Make sure oil is equally distributed across jars. There should be no more than two tablespoons of oil per pint. Carefully wipe the jar lip so it is free of all oil. Add pretreated lids. Process in boiling water bath. For best flavor, store jars five to six weeks before opening.

**Table 3: Recommended process time for hot peppers marinated in Oil in a boiling water-bath canner.**

Style of pack/ Jar size	Process time at altitudes of:	
	6,000 ft. or less	Above 6,000 ft.
Raw:		
Half-pints or pints	15 min	20 min
Quarts	20 min	25 min

## Marinated Refrigerated Peppers

Remember, all pickled pepper products stored at room temperature must be processed, to avoid the risk of botulism toxin development during storage. The boiling water-bath processing step can be omitted **if pickles are stored in the refrigerator**. Use the following procedure.

Wash peppers. Small peppers may be left whole with two small slits in each pepper. Core and cut large peppers into strips.

Sterilize jars, lids and screwbands. Pack peppers tightly into sterilized jars, leaving 1/2-inch headspace.

For each 6 cups of brine, combine 5 cups vinegar, 1 cup water and 1 tablespoon pickling salt. Bring to a boil, reduce heat and simmer five minutes.

Pour vinegar solution over peppers, leaving 1/8-inch headspace. Remove air bubbles. Adjust headspace so that brine covers all peppers. Wipe rims.

Place sterilized flats on jars. Do not put on screwbands. Allow jars to cool. Put on screwbands and wipe jars. Refrigerate six to eight weeks for the pickled flavor to fully develop. Keep refrigerated and use within six months. This pepper product allows the peppers to marinate in a high acid solution, at a cold temperature, and in the presence of air. These conditions are not favorable for botulism toxin formation. It **does not** ensure against other types of spoilage.

## Salsa

Most salsa recipes are a mixture of low-acid foods, such as onions and peppers, and acid foods, such as tomatoes. Use tested recipes to ensure proper acidification.

Use the amounts of each vegetable listed in the recipe. If desired, green tomatoes or tomatillos may be substituted for part or all of the tomatoes. Add the amount of vinegar listed. If desired, you may safely substitute an equal amount of lemon juice for vinegar in a recipe using vinegar. **However, do not substitute vinegar for lemon juice**. This substitution will result in a less acid and potentially unsafe salsa.

Spices do not affect acidity or safety and may be adjusted as desired. Do not thicken salsas with flour or cornstarch before canning. After you open a jar to use, you may pour off some of the liquid or thicken with cornstarch.

### Credits

*Recipes included in this publication were developed and tested by Colorado State University Cooperative Extension, with the assistance of Master Food Preservers from Pueblo, El Paso, Elbert and Boulder counties.*

*The recipes were tested at altitudes below and above 5,000 feet, with pH samples conducted in the food science laboratory at Colorado State University. Recipes also were tested for flavor, texture and overall quality to offer a high quality and safe product.*

*Project coordinators were Marilyn Hill, Cooperative Extension family and consumer sciences agent, Pueblo County, and Pat Kendall, Cooperative Extension food science and human nutrition specialist.*

**Table 4: Recommended process time for chili salsa in a boiling water-bath canner.**

Style of pack/ Jar size	Process time at altitudes of:	
	6,000 ft. or less	Above 6,000 ft.
Hot:		
Half-pints or pints	20 min	25 min

## Chili Salsa

12 cups peeled, cored, chopped tomatoes (choose a meaty variety or squeeze out extra juice)  
 6 cups seeded, chopped chili peppers\*  
 1 1/2 cups finely chopped onions  
 1/4 cup finely chopped garlic  
 1 cup vinegar  
 1 tablespoon salt  
 1/2 teaspoon pepper

\*Use mixture of hot and mild peppers to suit taste.

**Yield:** Makes 6 to 8 pints

**Procedure:** Combine ingredients in large saucepan. Heat to a boil and simmer 10 minutes. Ladle hot into clean pint jars, leaving 1/2-inch headspace. Remove air bubbles, wipe jar rims. Adjust lids and process in a boiling water bath.

## \*Tomato Salsa (Using Paste Tomatoes)

**Note:** Paste tomatoes, such as Roma, are recommended for salsa because they have firmer flesh and produce thicker products. Slicing tomatoes will require a much longer cooking time to achieve a desirable consistency.

7 quarts peeled, cored, chopped tomatoes  
 5 cups seeded, chopped long green chilies  
 4 cups finely chopped onion  
 1/4 cup seeded, finely chopped Jalapeno peppers  
 6-12 cloves garlic, finely chopped  
 2 cups bottled lemon juice  
 2 tablespoons salt  
 1 tablespoon black pepper  
 2 tablespoons ground cumin\*  
 3 tablespoons oregano leaves\*  
 2 tablespoons fresh cilantro\*

\*Optional; use only for desired flavor

**Yield:** Makes 13 pints

**Procedure:** Combine all ingredients except cumin, oregano and cilantro in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 10 minutes. Add spices, if desired, and simmer for another 20 minutes, stirring occasionally. Ladle hot into clean pint jars, leaving 1/2-inch headspace. Remove air bubbles. Add pretreated lids and process in a boiling water-bath canner.

\*Source: *Salsa Recipes for Canning*; PNW395, a Pacific Northwest Extension Publication. Washington, Oregon, Idaho.

**Table 5: Recommended process time for tomato salsa in a boiling water-bath canner.**

Style of pack/ Jar size	Process time at altitudes of:	
	6,000 ft. or less	Above 6,000 ft.
Hot:		
Half-pints or pints	20 min	25 min

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