

Tomatoes Basic & Fancy

Food Safety

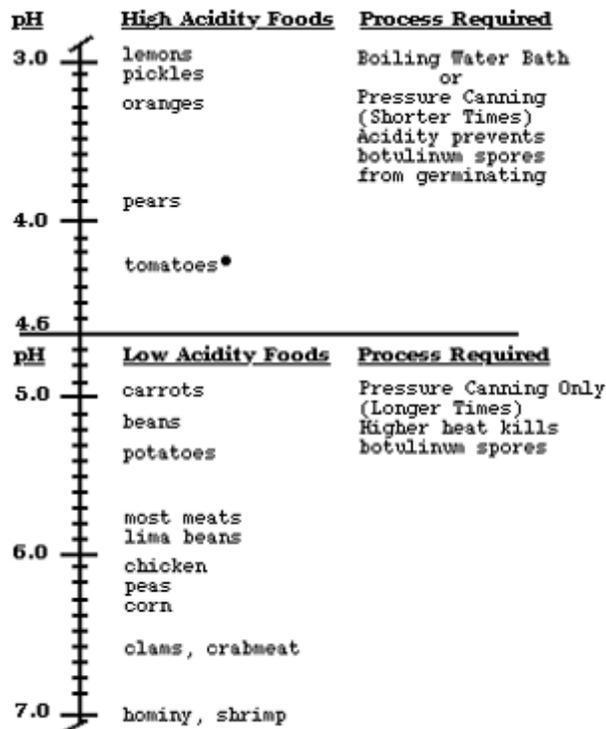
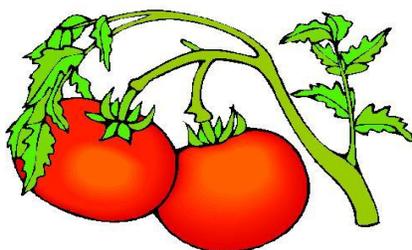
Contrary to popular belief, tomatoes are not a high acid food. They are borderline high acid with a pH of approximately 4.6. This is too close to the dividing line between high and low acid foods. As a result, homemade tomato products must be acidified by adding bottled lemon juice, citric acid or vinegar before they are heat processed in a boiling water or a pressure canner. For this reason, it is important to use a recipe from a safe source and to acidify your tomato products correctly, for both boiling water canning as well as pressure canning.

Today's tomato hybrids are developed to be less acidic. This is especially true for Roma-type tomatoes, which are popular for sauces. Once other vegetables, such as peppers, onions, celery and herbs are added, the acidity is lowered even further. Therefore, one needs to either follow a tested recipe from a safe source, or pressure can tomato sauces. Boiling water canning is only used for high acid foods.

If your tomato products are not correctly processed your product could be unsafe for consumption. Mold, *E. coli*, or botulism are real food hazards if the product is not processed correctly.

Selecting Tomatoes

The home canner should use the best quality, vine ripened tomatoes whenever possible. Most of today's tomatoes have been bred for sweetness versus acidity. For this reason, additional acid must be added to canned tomatoes, tomato puree, tomato sauce and tomato juice in the form of either bottled lemon juice, citric acid or vinegar that has an acidity of at least 5%. Green (unripe) tomatoes are more acidic than ripe tomatoes and can be canned safely by the boiling water method. Do NOT use tomatoes from dead or frost-killed vines as the tomatoes may be lower in acid. Tomatillos may also be canned in a boiling water canner but must be acidified the same as tomatoes.



*USDA recommends addition of acid to tomatoes to ensure proper acidity (pH below 4.6)

Canned Tomatoes

Sort tomatoes, picking out any that are spoiled or green. If tomatoes are excessively dirty, wash with a solution containing one tablespoon of chlorine bleach in one gallon of water. To peel tomatoes, dip tomatoes in boiling water long enough to crack the skins (about 1 minute). Cutting a shallow X in the blossom end of the tomato speeds this process. Dip in cold water. Peel and remove cores. Save any juice to add to the hot liquid in which you boil the tomatoes.

Acidity Chart	
Bottled Lemon Juice	1 Tablespoon per Pint 2 Tablespoons per Quart
Citric Acid	¼ Teaspoon per Pint ½ Teaspoon per Quart
Vinegar, 5% acidity	2 Tablespoons per Pint 4 Tablespoons per Quart

Hot Pack: Bring whole or halved, peeled tomatoes to a low boil over medium heat. Add lemon juice to jars. Pack hot tomatoes into hot jars. Cover with the hot water in which the tomatoes were heated. Leave ½" headspace. Add salt, if desired (1 tsp. to each quart jar or ½ tsp. to each pint jar). Remove air bubbles. Wipe the rims clean. Place lids and rings on jars, tightening rings finger tight. Process pints for 40 minutes and quarts for 45 minutes in a boiling water canner.

Raw Pack: Remove jars from hot water. Add lemon juice to jars. Pack raw, whole or halved, peeled tomatoes into hot jars. Cover tomatoes in jars with boiling water. Leave ½" headspace. Add salt, if desired (1 tsp. for each quart or ½ tsp. for each pint). Remove air bubbles. Wipe the rims clean. Place lids and rings on jars, tightening rings finger tight. Process pints for 40 minutes and quarts for 45 minutes in boiling water canner.

Note: If you use boiling tomato juice instead of boiling water to cover tomatoes, processing time is 85 minutes for both pints and quarts.

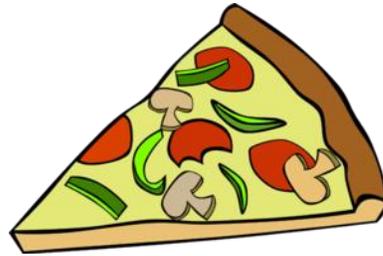
Source: National Center for Home Food Preservation http://www.uga.edu/nchfp/how/can3_tomato.html



RECIPE: *Pizza Sauce*

Yield: About 4 pints

- 13 cups fresh plum tomato puree (See tip below)
- ½ cup bottled lemon juice
- 2 tsp dried oregano
- 1 tsp freshly ground pepper
- 1 tsp salt
- 1 tsp garlic powder



Prepare canner, jars and lids.

Place half of the tomato puree in a large stainless steel saucepan. Bring to a boil over high heat, stirring occasionally. Maintaining a constant boil, add remaining tomato puree, 1 cup at a time. Stir in lemon juice, oregano, pepper, salt and garlic powder. Boil hard, stirring frequently, until mixture is the consistency of a thin commercial sauce, about 15 minutes. Remove from heat.

Ladle hot sauce into hot jars, leaving ½" headspace. Remove air bubbles, adjust headspace if necessary. Wipe rims; place lids and rings on jars. Tighten rings only finger tight. Process jars for 35 minutes in a boiling water canner. Adjust for altitude.

Source: Ball Complete Book of Preserving, 2006

Tip: You will need about 9 lbs. of plum tomatoes to make the tomato puree. To make fresh tomato puree, pass quartered tomatoes through a food mill or strainer. If you do not have a food mill or strainer; blanch, peel, core, seed and chop tomatoes. Place in a colander and let stand for 15 minutes. Discard liquid and puree tomatoes in a food processor fitted with a metal blade.

RECIPE: *Spiced Tomato Jam*

Yield: About 5 half pints

- 3 cups tomatoes, peeled and chopped (about 2½ lbs.)
- 1 ½ tsp grated lemon rind
- ½ tsp ground allspice
- ½ tsp ground cinnamon
- ¼ tsp ground cloves
- ¼ cup bottled lemon juice
- 4 ½ cups sugar
- 1 box powdered regular pectin

Place chopped tomatoes in saucepan and heat slowly to simmering, stirring constantly to prevent sticking. Cover and simmer 10 minutes, stirring occasionally. Measure 3 cups of cooked tomatoes and put in a large pot. Add lemon rind, spices and lemon juice. Stir in powdered pectin. Bring to a boil over high heat, stirring constantly. Stir in sugar all at once. Stir and bring to a full rolling boil that cannot be stirred down. Boil hard for 1 minute, stirring constantly. Remove from heat. Skim foam if necessary.

Ladle hot jam into hot jars, leaving ¼" headspace. Remove air bubbles; adjust headspace if necessary. Wipe rims; place lids and rings on jars. Tighten rings only finger tight. Process jars 10 minutes in a boiling water canner, adjusting for altitude.

Source: National Center for Home Food Preservation, 2015

RECIPE: *Tomato Garden Juice Blend*

Yield: 14 pints or 7 quarts

- 22 pounds tomatoes
- ¾ cup diced carrots
- ¾ cup chopped celery
- ¾ cup chopped green pepper
- ½ cup chopped onion
- ¼ cup chopped parsley
- 1 Tbsp. salt (optional)
- Bottled lemon juice



Wash and core tomatoes. Cut into quarters. Combine tomatoes and vegetables in a large saucepot; simmer 20 minutes, stirring to prevent sticking. Juice the tomatoes in a food processor or food mill. Strain juice to remove peels and seeds. Stir in salt, if desired. Heat juice 5 minutes at 190°. Do not boil. Add 1 tablespoon of lemon juice to each pint jar, 2 tablespoons lemon juice to each quart jar.

Ladle hot juice into hot jars, leaving ¼" headspace. Remove air bubbles; adjust headspace if necessary. Wipe rims; place lids and rings on jars. Tighten rings only finger tight. Process pints for 35 minutes, quarts for 40 minutes in a boiling water canner, adjusting for altitude.

Source: *Ball Blue Book, 2009*

RECIPE: *Dried Tomatoes In Olive Oil*

Yield: About 1 ½ cups

- 1 Tbsp red wine vinegar (5%)
- 2 Tbsp water or wine
- ½ tsp salt
- ⅓ tsp cayenne or Tabasco
- ¼ tsp dried marjoram
- ½ tsp dried thyme
- ½ tsp dried rosemary
- 1 to 4 cloves of garlic (to your taste)
- 3 oz dried tomatoes (1¼ -1½ cup)
- 1 bay leaf
- 1 cup olive oil

Blend first 8 items. Pour over dried tomatoes and bay leaf in a quart jar. Shake container and let stand 6 to 8 hours, turning occasionally until liquid is absorbed. These are general instructions. Add olive oil. The choice of herbs is yours. Try adding black peppercorns, dried basil, leaving out the cayenne or Tabasco or leaving out the salt.

NOTE: This must be refrigerated and used within 4 days or frozen for long-term storage. It is not shelf stable.



RECIPE: *Spicy Tomato Salsa*

Yield: 6 pints

- 6 pounds tomatoes (about 12 large) peeled, seeded and diced into ¼" pieces
- 6 jalapeno peppers, remove stems and seeds
- 9 dried hot chili peppers
- 3 cups diced red onion (about 2 medium)
- 1 ½ cups chopped cilantro, tightly packed
- ¾ tsp crushed red pepper
- ¾ cup red wine vinegar

Remove seeds from dried chili peppers. Put dried peppers into a small bowl. Pour boiling water over the peppers just to cover. Secure plastic wrap over bowl and let peppers steep for 15 minutes. Drain off one half of the water. Puree chili peppers and remaining water in a food processor until smooth, about 1 minute.

Combine all ingredients in a large non-reactive saucepan. Bring mixture to a boil over medium-high heat. Reduce heat to a simmer (180°F); simmer 10 minutes or until thickened.

Ladle hot salsa into hot jars, leaving ½" headspace. Remove air bubbles. Clean jar rim. Center lid on jar and adjust band to fingertip-tight. Process pint jars 15 minutes. Turn off heat and remove cover. Let jars cool 5 minutes. Remove jars from canner; do not retighten bands if loose. Cool 12 hours. Test seals. Label and store jars in a cool dark place.

Note: when cutting or seeding hot peppers, wear rubber gloves to prevent hands from being burned.

Source: *Ball Blue Book, Guide to Preserving 2009*

RECIPE: *Fresh Vegetable Salsa*

Yield: 5 pints jars

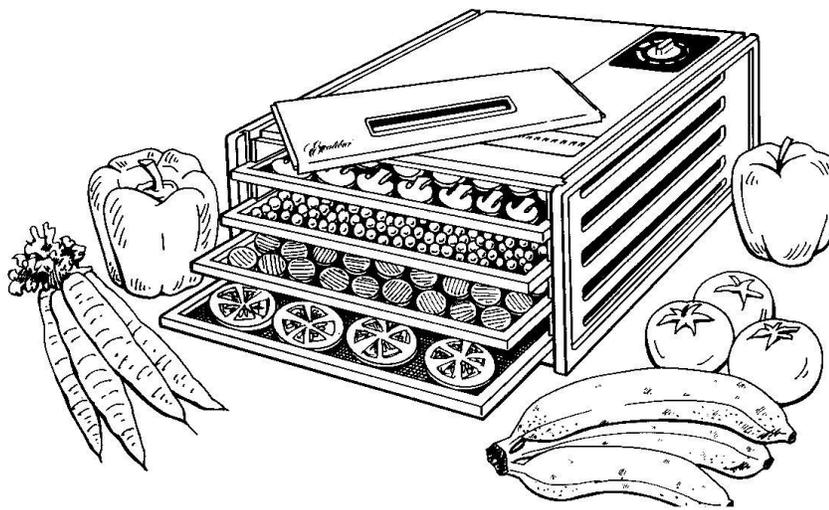
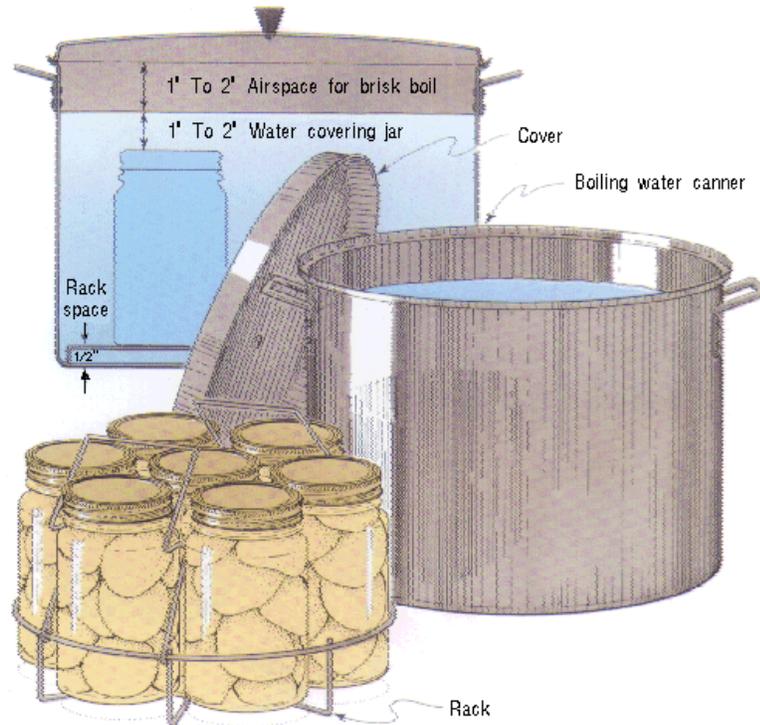
- 7 cups chopped cored peeled tomatoes
- 2 cups coarsely chopped onion
- 1 cup coarsely chopped green bell pepper
- 8 jalapeno peppers, seeded and finely chopped
- 3 cloves of garlic, finely chopped
- 1 (5.5 oz) can tomato paste
- ¾ cup white vinegar (5% acidity)
- ½ cup loosely packed, finely chopped cilantro
- ½ tsp ground cumin

In a large stainless steel saucepan, combine tomatoes, onions, green pepper, jalapeno peppers, garlic, tomato paste, vinegar, cilantro and cumin. Bring to a boil over medium-high heat, stirring constantly. Reduce heat and boil gently, stirring frequently until thickened, about 30 minutes.

Ladle hot salsa into hot jars, leave ½" headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot salsa. Wipe rims. Center the lid on jar. Screw band down until resistance is met, then increase to fingertip tight.

Place jars in canner, ensuring they are completely covered with water. Bring to a boil and process both ½ pint and pint jars for 20 minutes, adjusting for altitude.

Source: *Ball Complete Book of Home Preserving*.



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