



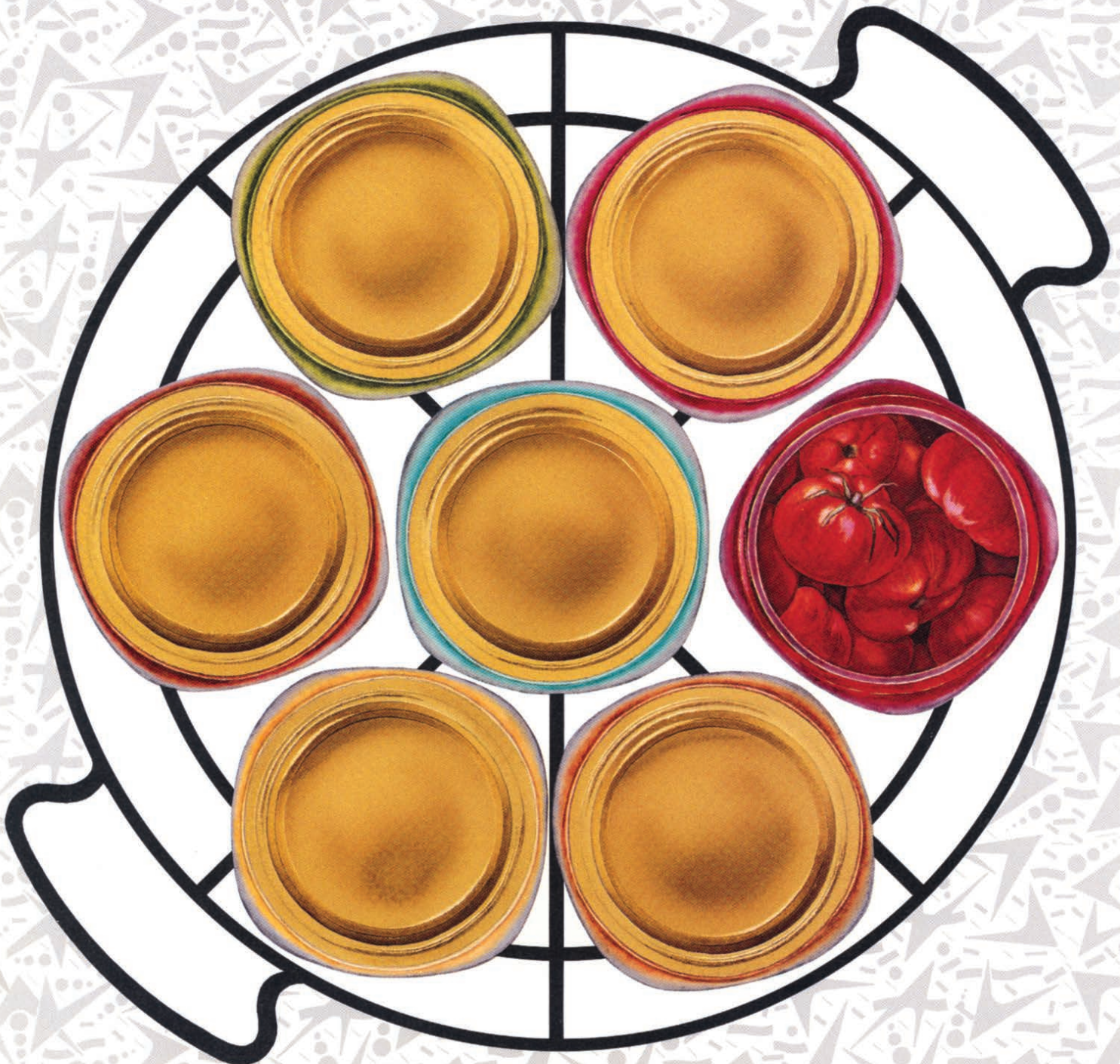
United States
Department of
Agriculture

National Institute
of Food
and Agriculture

Complete Guide to
Home Canning

Guide 3

**Selecting, Preparing,
and Canning Tomatoes
and Tomato Products**



Guide 3

Selecting, Preparing, and Canning Tomatoes and Tomato Products

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General

Quality: Select only disease-free, preferably vine-ripened, firm fruit for canning.

Caution: Do not can tomatoes from dead or frost-killed vines. Green tomatoes are more acidic than ripened fruit and can be canned safely with any of the following recommendations.

Acidification: To ensure safe acidity in whole, crushed, or juiced tomatoes, add 2 tablespoons of bottled lemon juice or 1/2 teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or 1/4 teaspoon citric acid. Acid can be added directly to the jars before filling with product. Add sugar to offset acid taste, if desired. Four tablespoons of a 5 percent acidity vinegar per quart may be used instead of lemon juice or citric acid. However, vinegar may cause undesirable flavor changes.

When a procedure in this Guide for canning tomatoes offers both boiling water and pressure canning options, all steps in the preparation ("Procedure") are still required even if the pressure processing option is chosen. This includes acidification. The boiling water and pressure alternatives are equal processes with different time/temperature combinations calculated for these products.

Recommendation: Use of a pressure canner will result in higher quality and more nutritious canned tomato products. If your pressure canner cannot be operated above 15 PSI, select a process time at a lower pressure.

TOMATO JUICE

Quantity: An average of 23 pounds is needed per canner load of 7 quarts, or an average of 14 pounds per canner load of 9 pints. A bushel weighs 53 pounds and yields 15 to 18 quarts of juice—an average of 3-1/4 pounds per quart.

Procedure: Wash, remove stems, and trim off bruised or discolored portions. To prevent juice from separating, quickly cut about 1 pound of fruit into quarters and put directly into saucepan. Heat immediately to boiling while crushing. Continue to slowly add and crush freshly cut tomato quarters to the boiling mixture. Make sure the mixture boils constantly and vigorously while you add the remaining tomatoes. Simmer 5 minutes after you add all pieces.

If you are not concerned about juice separation, simply slice or quarter tomatoes into a large saucepan. Crush, heat, and simmer for 5 minutes before juicing.

Press both types of heated juice through a sieve or food mill to remove skins and seeds. **Add bottled lemon juice or citric acid to jars.** See acidification instructions on page 3-5. Heat juice again to boiling. Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars with hot tomato juice, leaving 1/2-inch headspace. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Tomato Juice in a boiling-water canner					
Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints	35 min	40	45	50
	Quarts	40	45	50	55

Recommended process time for Tomato Juice in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints or Quarts	20 min	6 lb	7 lb	8 lb	9 lb
		15	11	12	13	14

Recommended process time for Tomato Juice in a weighted-gauge pressure canner					
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of		
			0–1,000 ft		Above 1,000 ft
Hot	Pints or Quarts	20 min	5 lb		10 lb
		15	10		15
		10	15		Not recommended

TOMATO AND VEGETABLE JUICE BLEND

Quantity: An average of 22 pounds of tomatoes is needed per canner load of 7 quarts. No more than 3 cups of other vegetables may be added for each 22 pounds of tomatoes.

Procedure: Crush and simmer tomatoes as for making tomato juice (see page 3-5). Add no more than 3 cups of any combination of finely chopped celery, onions, carrots, and peppers for each 22 lbs of tomatoes. Simmer mixture 20 minutes. Press hot cooked tomatoes and vegetables through a sieve or food mill to remove skins and seeds. **Add bottled lemon juice or citric acid to jars.** See acidification directions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired. Reheat tomato-vegetable juice blend to boiling and fill immediately into hot jars, leaving 1/2-inch head-space. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Tomato-Vegetable Blend in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints	35 min	40	45	50
	Quarts	40	45	50	55

Recommended process time for Tomato-Vegetable Blend in a dial-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	20 min	6 lb	7 lb	8 lb	9 lb
	or Quarts	15	11	12	13	14

Recommended process time for Tomato-Vegetable Blend in a weighted-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of	
			0–1,000 ft	Above 1,000 ft
Hot	Pints or Quarts	20 min	5 lb	10 lb
		15	10	15
		10	15	Not recommended

TOMATOES-CRUSHED (with no added liquid)

A high-quality product, ideally suited for use in soups, stews, and casseroles. This recipe is similar to that formerly referred to as “Quartered Tomatoes.”

Quantity: An average of 22 pounds is needed per canner load of 7 quarts; an average of 14 fresh pounds is needed per canner load of 9 pints. A bushel weighs 53 pounds and yields 17 to 20 quarts of crushed tomatoes—an average of 2-3/4 pounds per quart.

Procedure: Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins, and remove cores. Trim off any bruised or discolored portions and quarter. Heat one-sixth of the quarters quickly in a large pot, crushing them with a wooden mallet or spoon as they are added to the pot. This will exude juice. Continue heating the tomatoes, stirring to prevent burning. Once the tomatoes are boiling, gradually add remaining quartered tomatoes, stirring constantly. These remaining tomatoes do not need to be crushed. They will soften with heating and stirring. Continue until all tomatoes are added. Then boil gently 5 minutes. **Add bottled lemon juice or citric acid to jars.** See acidification directions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars immediately with hot tomatoes, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Crushed Tomatoes in a boiling-water canner					
Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints	35 min	40	45	50
	Quarts	45	50	55	60

Recommended process time for Crushed Tomatoes in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints or Quarts	20 min	6 lb	7 lb	8 lb	9 lb
		15	11	12	13	14

Recommended process time for Crushed Tomatoes in a weighted-gauge pressure canner					
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of		
			0–1,000 ft		Above 1,000 ft
Hot	Pints or Quarts	20 min	5 lb		10 lb
		15	10		15
		10	15		Not recommended

STANDARD TOMATO SAUCE

Quantity: For thin sauce—an average of 35 pounds is needed per canner load of 7 quarts; an average of 21 pounds is needed per canner load of 9 pints. A bushel weighs 53 pounds and yields 10 to 12 quarts of sauce—an average of 5 pounds per quart. For thick sauce—an average of 46 pounds is needed per canner load of 7 quarts; an average of 28 pounds is needed per canner load of 9 pints. A bushel weighs 53 pounds and yields 7 to 9 quarts of thick sauce—an average of 6-1/2 pounds per quart.

Procedure: Prepare and press as for making tomato juice, see page 3-5. Simmer in large-diameter saucepan until sauce reaches desired consistency. Boil until volume is reduced by about one-third for thin sauce, or by one-half for thick sauce. **Add bottled lemon juice or citric acid to jars.** See acidification directions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars, leaving 1/4-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Standard Tomato Sauce in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints	35 min	40	45	50
	Quarts	40	45	50	55

Recommended process time for Standard Tomato Sauce in a dial-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	20 min	6 lb	7 lb	8 lb	9 lb
	or Quarts	15	11	12	13	14

Recommended process time for Standard Tomato Sauce in a weighted-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of	
			0–1,000 ft	Above 1,000 ft
Hot	Pints or Quarts	20 min	5 lb	10 lb
		15	10	15
		10	15	Not recommended

TOMATOES—WHOLE OR HALVED (packed in water)

Quantity: An average of 21 pounds is needed per canner load of 7 quarts; an average of 13 pounds is needed per canner load of 9 pints. A bushel weighs 53 pounds and yields 15 to 21 quarts—an average of 3 pounds per quart.

Procedure for hot or raw tomatoes filled with water in jars: Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split; then dip in cold water. Slip off skins and remove cores. Leave whole or halve. **Add bottled lemon juice or citric acid to jars.** See acidification directions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired. For hot pack products, add enough water to cover the tomatoes and boil them gently for 5 minutes. Fill hot jars with hot tomatoes or with raw peeled tomatoes. Add the hot cooking liquid to the hot pack, or hot water for raw pack to cover, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Water-Packed Whole Tomatoes in a boiling-water canner					
Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot and Raw	Pints	40 min	45	50	55
	Quarts	45	50	55	60

Recommended process time for Water-Packed Whole Tomatoes in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot and Raw	Pints or Quarts	15 min	6 lb	7 lb	8 lb	9 lb
		10	11	12	13	14

Recommended process time for Water-Packed Whole Tomatoes in a weighted-gauge pressure canner					
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of		
			0–1,000 ft		Above 1,000 ft
Hot and Raw	Pints or Quarts	15 min	5 lb		10 lb
		10	10		15
		1	15		Not recommended

TOMATOES—WHOLE OR HALVED (packed in tomato juice)

Quantity: See whole tomatoes packed in water (page 3-9).

Procedure: Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water. Slip off skins and remove cores. Leave whole or halve. **Add bottled lemon juice or citric acid to the jars.** See acidification instructions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired.

Raw pack—Heat tomato juice in a saucepan. Fill hot jars with raw tomatoes, leaving 1/2-inch headspace. Cover tomatoes in the jars with hot tomato juice, leaving 1/2-inch headspace.

Hot pack—Put tomatoes in a large saucepan and add enough tomato juice to completely cover them. Boil tomatoes and juice gently for 5 minutes. Fill hot jars with hot tomatoes, leaving 1/2-inch headspace. Add hot tomato juice to the jars to cover the tomatoes, leaving 1/2-inch headspace.

Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Tomato Juice-Packed Whole Tomatoes in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot and Raw	Pints or Quarts	85 min	90	95	100

Recommended process time for Tomato Juice-Packed Whole Tomatoes in a dial-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot and Raw	Pints or Quarts	40 min	6 lb	7 lb	8 lb	9 lb
		25	11	12	13	14

Recommended process time for Tomato Juice-Packed Whole Tomatoes in a weighted-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of	
			0–1,000 ft	Above 1,000 ft
Hot and Raw	Pints or Quarts	40 min	5 lb	10 lb
		25	10	15
		15	15	Not recommended

TOMATOES—WHOLE OR HALVED (packed raw without added liquid)

Quantity: See whole tomatoes packed in water (page 3-9).

Procedure: Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water. Slip off skins and remove cores. Leave whole or halve. **Add bottled lemon juice or citric acid to the jars.** See acidification instructions on page 3-5. Add 1 teaspoon of salt per quart to the jars, if desired.

Fill hot jars with raw tomatoes, leaving 1/2-inch headspace. Press tomatoes in the jars until spaces between them fill with juice. Leave 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the Procedures above for any of the processing options.)

Recommended process time for Raw Whole Tomatoes Without Added Liquid in a boiling-water canner					
Style of Pack	Jar Size	Process Time at Altitudes of			
		0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Raw	Pints or Quarts	85 min	90	95	100

Recommended process time for Raw Whole Tomatoes Without Added Liquid in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Raw	Pints or Quarts	40 min	6 lb	7 lb	8 lb	9 lb
		25	11	12	13	14

Recommended process time for Raw Whole Tomatoes Without Added Liquid in a weighted-gauge pressure canner					
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of		
			0–1,000 ft	Above 1,000 ft	
Raw	Pints or Quarts	40 min	5 lb	10 lb	
		25	10	15	
		15	15	Not recommended	

TOMATOES WITH OKRA OR ZUCCHINI

Quantity: An average of 12 pounds of tomatoes and 4 pounds of okra or zucchini is needed per canner load of 7 quarts. An average of 7 pounds of tomatoes and 2-1/2 pounds of okra or zucchini is needed per canner load of 9 pints. (Use about 3 pounds tomatoes to 1 pound vegetable.)

Procedure: Wash tomatoes and okra or zucchini. Dip tomatoes in boiling water 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins and remove cores, and quarter. Trim stems from okra and slice into 1-inch pieces or leave whole. Slice or cube zucchini if used. Bring tomatoes to a boil and simmer 10 minutes. Add okra or zucchini and boil gently 5 minutes. Add 1 teaspoon of salt for each quart to the jars, if desired. Fill hot jars with mixture, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Variation: You may add four or five pearl onions or two onion slices to each jar.

Recommended process time for Tomatoes with Okra or Zucchini in a dial-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	30 min	11 lb	12 lb	13 lb	14 lb
	Quarts	35	11	12	13	14

Recommended process time for Tomatoes with Okra or Zucchini in a weighted-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of	
			0–1,000 ft	Above 1,000 ft
Hot	Pints	30 min	10 lb	15 lb
	Quarts	35	10	15

TOMATILLOS

Quantity: An average of 14 pounds is needed per canner load of 7 quarts; an average of 9 pounds is needed per canner load of 9 pints. A bushel weighs 32 pounds and yields 14 to 16 quarts—an average of 2 pounds per quart.

Quality: Select unblemished firm, deep bright green tomatillos with a dry papery husk.

Procedure: Remove the dry outer husks entirely from the tomatillos and wash the fruit well. Leave whole; do not peel or remove seeds. **Add bottled lemon juice or citric acid to jars.** Follow the acidification amounts for tomatoes on page 3-5. Add enough water to cover the tomatillos in a large saucepan and boil them gently until tender, about 5 to 10 minutes. Drain and fill hot tomatillos loosely into hot jars, leaving 1/2-inch headspace. Fill hot jars with boiling water, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Process the same as Water-Packed Whole Tomatoes, hot pack, on page 3-10.

SPAGHETTI SAUCE WITHOUT MEAT

30 lbs tomatoes
 1 cup chopped onions
 5 cloves garlic, minced
 1 cup chopped celery or green peppers
 1 lb fresh mushrooms, sliced (optional)
 4-1/2 tsp salt
 2 tbsp oregano
 4 tbsp minced parsley
 2 tsp black pepper
 1/4 cup brown sugar
 1/4 cup vegetable oil

Yield: About 9 pints

Procedure: Caution: Do not increase the proportion of onions, peppers, or mushrooms.

Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water and slip off skins. Remove cores and quarter tomatoes. Boil 20 minutes, uncovered, in large saucepan. Put through food mill or sieve. Saute onions, garlic, celery or peppers, and mushrooms (if desired) in vegetable oil until tender. Combine sauteed vegetables and tomatoes and add remainder of spices, salt, and sugar. Bring to a boil. Simmer, uncovered, until thick enough for serving. At this time the initial volume will have been reduced by nearly one-half. Stir frequently to avoid burning. Fill hot jars, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Spaghetti Sauce Without Meat in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	20 min	11 lb	12 lb	13 lb	14 lb
	Quarts	25	11	12	13	14

Recommended process time for Spaghetti Sauce Without Meat in a weighted-gauge pressure canner					
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of		
			0–1,000 ft	Above 1,000 ft	
Hot	Pints	20 min	10 lb	15 lb	
	Quarts	25	10	15	

SPAGHETTI SAUCE WITH MEAT

- 30 lbs tomatoes*
- 2-1/2 lbs ground beef or sausage*
- 5 cloves garlic, minced*
- 1 cup chopped onions*
- 1 cup chopped celery or green peppers*
- 1 lb fresh mushrooms, sliced (optional)*
- 4-1/2 tsp salt*
- 2 tbsp oregano*
- 4 tbsp minced parsley*
- 2 tsp black pepper*
- 1/4 cup brown sugar*

Yield: About 9 pints

Procedure: To prepare tomatoes, follow directions for Spaghetti Sauce Without Meat, page 3-13. Saute beef or sausage until brown. Add garlic, onion, celery or green pepper, and mushrooms, if desired. Cook until vegetables are tender. Combine with tomato pulp in large saucepan. Add spices,

salt, and sugar. Bring to a boil. Simmer, uncovered, until thick enough for serving. At this time initial volume will have been reduced by nearly one-half. Stir frequently to avoid burning. Fill hot jars, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Spaghetti Sauce With Meat in a dial-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	60 min	11 lb	12 lb	13 lb	14 lb
	Quarts	70	11	12	13	14

Recommended process time for Spaghetti Sauce With Meat in a weighted-gauge pressure canner

Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of	
			0–1,000 ft	Above 1,000 ft
Hot	Pints	60 min	10 lb	15 lb
	Quarts	70	10	15

MEXICAN TOMATO SAUCE

2-1/2 to 3 lbs chile peppers

18 lbs tomatoes

3 cups chopped onions

1 tbsp salt

1 tbsp oregano

1/2 cup vinegar

Yield: About 7 quarts

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Wash and dry chiles. Slit each pepper along the side to allow steam to escape. Blister skins using one of these two methods:

Oven or broiler method to blister skins – Place peppers in a hot oven (400°F) or under a broiler for 6 to 8 minutes until skins blister.

Range-top method to blister skins – Cover hot burner (either gas or electric) with heavy wire mesh. Place peppers on burner for several minutes until skins blister.

After blistering skins, place peppers in a pan and cover with a damp cloth. (This will make peeling the peppers easier.) Cool several minutes; peel off skins. Discard seeds and chop peppers. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Coarsely chop tomatoes and combine chopped peppers and remaining ingredients in large saucepan. Bring to a boil. Cover. Reduce heat and simmer 10 minutes.

Fill hot jars, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Mexican Tomato Sauce in a dial-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–2,000 ft	2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft
Hot	Pints	20 min	11 lb	12 lb	13 lb	14 lb
	Quarts	25	11	12	13	14

Recommended process time for Mexican Tomato Sauce in a weighted-gauge pressure canner						
Style of Pack	Jar Size	Process Time	Canner Pressure (PSI) at Altitudes of			
			0–1,000 ft		Above 1,000 ft	
Hot	Pints	20 min	10 lb		15 lb	
	Quarts	25	10		15	

EASY HOT SAUCE

8 cups (64 ounces) canned, diced tomatoes, undrained
 1-1/2 cups seeded, chopped Serrano peppers
 4 cups distilled white vinegar (5%)
 2 tsp canning salt
 2 tbsp whole mixed pickling spices

Yield: About 4 half-pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Place mixed pickling spices in a spice bag and tie the ends firmly. Mix all ingredients in a Dutch oven or large saucepot. Bring to a boil, stirring occasionally. Simmer another 20 minutes, until tomatoes are soft. Press mixture through a food mill. Return the liquid to the stockpot, heat to boiling and boil for another 15 minutes. Fill hot sauce into hot half-pint jars, leaving 1/4-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Easy Hot Sauce in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Half-pints	10 min	15	20

CAYENNE PEPPER SAUCE

3 lbs hot peppers (for example, Anaheim, Hungarian, Jalapeños)
 1/3 cup minced garlic
 4 cups sliced onion
 1/3 cup stemmed, chopped cilantro
 3 cans (28 ounces each) diced tomatoes
 3 cups cider vinegar (5%)
 2-1/2 cups water

Yield: About 5 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Wash, trim and slice peppers and onions into rings, using a mandolin slicer or a food processor. In a 10-quart Dutch oven or stockpot, mix together all ingredients. Bring to a boil and boil 1 hour. Reduce heat slightly and simmer 1 additional hour. Turn heat off, and cool mixture slightly. Puree vegetables in a blender about 2 minutes per blender batch. Return pureed mixture to stockpot and bring carefully just to a boil. (The mixture will start to spatter as it gets close to boiling; heat slowly while stirring constantly, being careful not to get burned by splashing sauce.) Turn off heat. Fill hot sauce into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Cayenne Pepper Sauce in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	10 min	15	20

TOMATO KETCHUP

24 lbs ripe tomatoes
 3 cups chopped onions
 3/4 tsp ground red pepper (cayenne)
 3 cups cider vinegar (5%)
 4 tsp whole cloves
 3 sticks cinnamon, crushed
 1-1/2 tsp whole allspice
 3 tbsp celery seeds
 1-1/2 cups sugar
 1/4 cup salt

Yield: 6 to 7 pints

Procedure: Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water. Slip off skins and remove cores. Quarter tomatoes into 4-gallon stockpot or a large kettle. Add onions and red pepper. Bring to boil and simmer 20 minutes, uncovered. Cover, turn off heat and let stand for 20 minutes. Combine spices in a spice bag and add to vinegar in a

2-quart saucepan. Bring to boil. Remove spice bag and combine vinegar and tomato mixture. Boil about 30 minutes. Put boiled mixture through a food mill or sieve. Return to pot. Add sugar and salt, boil gently, and stir frequently until volume is reduced by one-half or until mixture rounds up on spoon without separation. Fill hot pint jars, leaving 1/8-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato Ketchup in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

COUNTRY WESTERN KETCHUP

- 24 lbs ripe tomatoes
- 5 chile peppers, sliced and seeded
- 1/4 cup salt
- 2-2/3 cups vinegar (5%)
- 1-1/4 cups sugar
- 1/2 tsp ground red pepper (cayenne)
- 4 tsp paprika
- 4 tsp whole allspice
- 4 tsp dry mustard
- 1 tbsp whole peppercorns
- 1 tsp mustard seeds
- 1 tbsp bay leaves

Yield: 6 to 7 pints

Procedure: Follow procedure and process time for regular tomato ketchup (page 3-17).

BLENDER KETCHUP

Use electric blender and eliminate need for pressing or sieving.

- 24 lbs ripe tomatoes
- 2 lbs onions
- 1 lb sweet red peppers
- 1 lb sweet green peppers
- 9 cups vinegar (5%)
- 9 cups sugar
- 1/4 cup canning or pickling salt
- 3 tbsp dry mustard
- 1-1/2 tbsp ground red pepper
- 1-1/2 tsp whole allspice
- 1-1/2 tbsp whole cloves
- 3 sticks cinnamon

Yield: About 9 pints

Procedure: Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins, core, and quarter. Remove seeds from peppers and slice into strips. Peel and quarter onions. Blend tomatoes, peppers, and onions at high speed for 5 seconds in electric blender. Pour into a 3- to 4-gallon stock pot or large kettle and heat. Boil gently 60 minutes, stirring frequently. Add vinegar, sugar, salt, and a spice bag containing dry mustard, red pepper, and other spices. Continue boiling and stirring until volume is reduced one-half and ketchup rounds up on a spoon with no separation of liquid and solids. Remove spice bag and fill hot jars, leaving 1/8-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and follow process times for regular ketchup (see page 3-18).

SALSA RECIPES

The salsas in this Guide, as well as most salsas, are mixtures of low-acid foods, such as onions and peppers, with acid foods, such as tomatoes. It is important that ingredients be carefully measured and that the salsas be made as described to be processed safely in a boiling water canner.

SELECTION AND PREPARATION OF INGREDIENTS

ACIDS

The acid ingredients help preserve canned salsas. You must add the acid to these salsas processed in a boiling water canner because the natural acidity of the mixture without it may not be high enough. The acids are usually commercially bottled lemon juice or vinegar so the acidity level will be standardized. Use only vinegar that is at least 5% acidity; do not use homemade vinegar or fresh squeezed lemon juice because the acidity can vary and will be unknown.

The amounts of vinegar or lemon juice in these recipes cannot be reduced for safe boiling water canning. Sugar can be used to offset the tartness of the acid. An equal amount of bottled lemon juice may be substituted for vinegar in recipes, but do not substitute vinegar for lemon juice. This substitution will result in a less acid and potentially unsafe canned salsa.

TOMATOES

The type of tomato will affect the consistency of salsa. Paste tomatoes, such as Roma, have more, and usually firmer, flesh than slicing tomatoes. They will produce thicker salsas than large slicing tomatoes which usually yield a thinner, more watery salsa.

Canning is not a way to use overripe or spoiling tomatoes. Use only high quality, disease-free, preferably vine-ripened, firm tomatoes for canning salsa or any other tomato product. **Do not use tomatoes from dead or frost-killed vines.** Poor quality or overripe tomatoes will yield a thin salsa and one that may spoil. Green tomatoes or tomatillos may be used for ripe tomatoes in these recipes, but the flavor of the recipe will change.

When recipes call for peeled tomatoes, remove the skin by dipping washed tomatoes into boiling water for 30 to 60 seconds or until skins split. Dip immediately into cold water, then slip skins off and core the tomato.

TOMATILLOS

Tomatillos are also known as Mexican husk tomatoes. The dry outer husk must be removed, but they do not need to be peeled or have the seeds removed. They will need to be washed well after the husk is removed.

PEPPERS

Peppers range from mild to scorching in taste. It is this “heat” factor that makes many salsa fans want to experiment with recipes. Use only high quality peppers, unblemished and free of decay. You may substitute one type of pepper for another, including bell peppers (mild) for some or all of the chiles. Canned chiles may be used in place of fresh. **However, do not increase the total amount (pounds or cups) of peppers in any recipe.** Do not substitute the same number of whole peppers of a large size for the number of peppers of a smaller size (for example, do not use 6 bell peppers or long chiles in place of 6 jalapeños or serranos). This will result in changing the final acidity of the mixture and potentially unsafe canned salsa.

Milder varieties of peppers include Anaheim, Ancho, College, Colorado and Hungarian Yellow Wax. When the recipe calls for “long green chiles” choose a mild pepper. Jalapeño is a very popular hot pepper. Other hot varieties include Cayenne, Habanero, Serrano and Tabasco. Do not touch your face, particularly the area around your eyes, when you are handling or cutting hot chiles. **Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes.**

Usually when peppers are finely chopped in a salsa, they do not need to be peeled. However, many recipes say to peel the recipes, and the skin of long green chiles in particular may be tough after canning. If you choose to peel chiles, or procedures with a recipe direct you to peel the peppers, use the following.

Peeling peppers: Wash and dry peppers; slit each pepper along the side to allow steam to escape. Blister skins using one of these two methods :

Oven or broiler method to blister skins – Place peppers in a hot oven (400°F) or under a broiler for 6 to 8 minutes until skins blister.

Range-top method to blister skins – Cover hot burner (either gas or electric) with heavy wire mesh. Place peppers on burner for several minutes until skins blister.

To peel, after blistering skins, place peppers in a pan and cover with a damp cloth. (This will make peeling the peppers easier.) Cool several minutes; peel off skins. Discard seeds and chop.

SPICES AND HERBS

Spices and herbs add unique flavoring to salsas. The amounts of dried spices and herbs in the following recipes (black pepper, salt, dried oregano leaves, and ground cumin) may be altered or left out. For a stronger cilantro flavor in recipes that list cilantro, it is best to add fresh cilantro just before serving instead of adding more before canning.

OTHER

Red, yellow or white onions may be substituted for each other. **Do not increase the total amount of onions in any recipe.**

IMPORTANT: You may change the amount of spices, if desired. Do not can salsas that do not follow these or other research tested recipes. (They may be frozen or stored in the refrigerator.)

RECIPES

IMPORTANT: Follow the directions carefully for each recipe. Use the amounts of each vegetable (peppers, onions, tomatoes, tomatillos, etc.) listed in the recipe. If the procedures call for chopped tomatoes, use the whole tomato after peeling and coring. Do not drain the tomato, or remove all the liquid and juices. Add the amount of vinegar or lemon juice as listed. The only changes you can safely make in these salsa recipes are to substitute bottled lemon juice for vinegar and to change the amount of dried spices and herbs. Do not alter the proportions of vegetables to acid and tomatoes because it might make the salsa unsafe. Do not thicken salsas with flour, cornstarch or other starches before canning. If a thicker salsa is desired, you can pour off some of the liquid or add these thickening ingredients after opening.

CHILE SALSA (Hot Tomato-Pepper Sauce)

5 lbs tomatoes
2 lbs chile peppers
1 lb onions
1 cup vinegar (5%)
3 tsp salt
1/2 tsp pepper

Yield: About 6 to 8 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Coarsely chop tomatoes and combine them with chopped peppers, onions, and remaining ingredients in a large saucepan. Heat to boil, reduce heat and simmer 10 minutes. Fill hot jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Chile Salsa in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

CHILE SALSA II

10 cups peeled, cored, chopped tomatoes
6 cups seeded, chopped chile peppers (use mixture of mild and hot peppers)
4 cups chopped onions
1 cup vinegar (5%)
3 tsp salt
1/2 tsp pepper

Yield: About 7 to 9 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine ingredients in a large saucepan. Heat to a boil and simmer 10 minutes. Fill hot salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Chile Salsa II in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATILLO GREEN SALSA

5 cups chopped tomatillos (or green tomatoes may be used)
1-1/2 cups seeded, chopped long green chiles
1/2 cup seeded, finely chopped jalapeño peppers
4 cups chopped onions
1 cup bottled lemon juice
6 cloves garlic, finely chopped
1 tbsp ground cumin (optional)
3 tbsp oregano leaves (optional)
1 tbsp salt
1 tsp black pepper

Yield: About 5 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Combine all ingredients in a large saucepan and stir frequently over high heat until mixture begins to boil, then reduce heat and simmer for 20 minutes, stirring occasionally. Ladle hot

salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomatillo Green Salsa in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATO SALSA (USING PASTE TOMATOES)

- 7 qts peeled, cored, chopped tomatoes**
- 4 cups seeded, chopped long green chiles*
- 5 cups chopped onion*
- 1/2 cup seeded, finely chopped jalapeño peppers*
- 6 cloves garlic, finely chopped*
- 2 cups bottled lemon or lime juice*
- 2 tbsp salt*
- 1 tbsp black pepper*
- 2 tbsp ground cumin (optional)*
- 3 tbsp oregano leaves (optional)*
- 2 tbsp fresh cilantro (optional)*

*This recipe works best with paste tomatoes. Slicing tomatoes require a much longer cooking time to achieve a desirable consistency.

Yield: About 16 to 18 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine all ingredients except cumin, oregano and cilantro in a large pot and bring to a boil, stirring frequently, then reduce heat and simmer 10 minutes. Add spices and simmer for another 20 minutes, stirring occasionally. Fill hot salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato Salsa Using Paste Tomatoes in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATO SALSA (USING SLICING TOMATOES)

4 cups peeled, cored, chopped tomatoes
2 cups seeded, chopped long green chiles
1/2 cup seeded, chopped jalapeño peppers
3/4 cup chopped onion
4 cloves garlic, finely chopped
2 cups vinegar (5%)
1 tsp ground cumin (optional)
1 tbsp oregano leaves (optional)
1 tbsp fresh cilantro (optional)
1-1/2 tsp salt

Yield: About 4 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine all ingredients in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 20 minutes, stirring occasionally. Fill hot salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato Salsa Using Slicing Tomatoes in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATO/GREEN CHILE SALSA

3 cups peeled, cored, chopped tomatoes
3 cups seeded, chopped long green chiles
3/4 cup chopped onions
1 jalapeño pepper, seeded, finely chopped
6 cloves garlic, finely chopped
1-1/2 cups vinegar (5%)
1/2 tsp ground cumin (optional)
2 tsp oregano leaves (optional)
1-1/2 tsp salt

Yield: About 3 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and

water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine all ingredients in a large saucepan and heat, stirring frequently, until mixture boils. Reduce heat and simmer for 20 minutes, stirring occasionally. Fill hot salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato Green Chile Salsa in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATO/TOMATO PASTE SALSA

3 qts peeled, cored, chopped slicing tomatoes

3 cups chopped onions

6 jalapeño peppers, seeded, finely chopped

4 long green chiles, seeded, chopped

4 cloves garlic, finely chopped

2 12-ounce cans tomato paste

2 cups bottled lemon or lime juice

1 tbsp salt

1 tbsp sugar

1 tbsp ground cumin (optional)

2 tbsp oregano leaves (optional)

1 tsp black pepper

Yield: About 7 to 9 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine all ingredients in a large saucepan. Bring to a boil. Reduce heat and simmer for 30 minutes, stirring occasionally. Fill hot salsa into hot pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato/Tomato Paste Salsa in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25

TOMATO TACO SAUCE

8 qts peeled, cored, finely chopped paste tomatoes*

2 cloves garlic, crushed

5 cups chopped onions

4 jalapeño peppers, seeded, chopped

4 long green chiles, seeded, chopped

2-1/2 cups vinegar

2 tbsp salt

1-1/2 tbsp black pepper

1 tbsp sugar

2 tbsp oregano leaves (optional)

1 tsp ground cumin (optional)

*This recipe works best with paste tomatoes, as slicing tomatoes will yield a thin watery salsa. If you only have slicing tomatoes available, use the Tomato/Tomato Paste Salsa recipe.

Yield: About 16 to 18 pints

Procedure: Caution: Wear plastic or rubber gloves and do not touch your face while handling or cutting hot peppers. If you do not wear gloves, wash hands thoroughly with soap and water before touching your face or eyes. Peel and prepare chile peppers as described on page 3-20, if desired. Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins, and remove cores. Combine ingredients in a large saucepan. Bring to a boil, then reduce heat and simmer, stirring frequently until thick (about 1 hour). Fill hot sauce into hot pint jars, leaving 1/2- inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Tomato Taco Sauce in a boiling-water canner				
Style of Pack	Jar Size	Process Time at Altitudes of		
		0–1,000 ft	1,001–6,000 ft	Above 6,000 ft
Hot	Pints	15 min	20	25