



TOMATOES

Tomatoes are classified as an acid food. Because of this, they may be safely canned in a boiling water bath canner using specific directions. Recent research has shown that, for tomato products, pressure canning will result in a higher quality, more nutritious product. Directions for canning a variety of tomato products are given on the following pages. Follow the exact method as listed in each recipe. Green tomatoes can be safely canned using directions for canning tomatoes in a boiling water bath.

GENERAL DIRECTIONS FOR CANNING TOMATOES IN A BOILING WATER BATH

Caution! Altitude Adjustments

- The times given in this publication for processing tomato products are for canning in the Edmonton area (Edmonton's altitude is 2200 ft/671 m).
- If canning outside the Edmonton area, adjustments in time and pressure may be necessary for different altitudes. For altitudes higher than 3000 ft/914 m (Banff, Calgary, Jasper, Lethbridge areas), add 5 minutes to sterilizing and boiling water bath processing times. Please contact the ATCO Blue Flame Kitchen for more information.

Sterilizing Jars

- Use only commercial canning jars; they are made of tempered glass that can withstand the heat of processing. Discard any jars with chips and cracks.
- To sterilize jars, place on rack in canner and cover with water. Bring to a boil and boil for 15 minutes at altitudes of 1001 - 3000 ft (Edmonton's altitude is 2200 ft/671 m). (See **Caution! Altitude Adjustments.**)
- **Sterilizing jars in an oven or dishwasher is not recommended.** Heating glass jars in an oven subjects them to uneven temperature extremes and can result in breakage. Dishwasher temperatures may not be high enough or time period long enough for sterilizing jars.

Preparing Lids

- Two part metal canning lids need to be prepared before using. Refer to **specific** manufacturer's instructions on treating lids.
- Lids can be used only once but screw bands can be reused as long as they are in good condition.
- Do not reuse lids from commercially canned foods for home canning.

Preparing Tomatoes

- Select disease-free, preferably vine-ripened, firm tomatoes. Do not use tomatoes from dead or frost-killed vines.
- Prepare tomatoes according to instructions in recipes.
- Prepare only the amount of tomato or tomato product that can be processed at one time.

Filling Jars

- Tomatoes may be packed raw or preheated and packed hot into jars. Follow specific directions as given in each recipe.
- If given a choice, the **hot pack method** produces a higher quality product.
- Fill hot sterilized jars, one at a time, leaving specified headspace.
- To remove air bubbles, slide a nonmetallic utensil, such as a narrow rubber spatula or plastic knife, between food and sides of jar. Add more liquid to obtain proper headspace, if necessary.
- Wipe jar rims thoroughly with a clean damp cloth.
- Place heated lid on jar. Screw two part metal canning lids down fingertip tight; do not adjust lids after processing. Screw metal bands with glass lids down tightly and then turn back 1/2 inch; retighten band when jar is removed from canner.

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Acidifying Tomatoes

- To ensure the safety of tomatoes, they **must** be acidified regardless of processing method used.
- Citric acid, bottled lemon juice or vinegar may be used. However, citric acid is preferable, as it does not contribute any additional flavour. Vinegar may cause undesirable flavour changes. Sugar may be added if product is too acidic.
Pints: Use 1/4 tsp citric acid **or** 1 tbsp bottled lemon juice **or** 2 tbsp vinegar and 1 tsp sugar (sugar optional)
Quarts: Use 1/2 tsp citric acid **or** 2 tbsp bottled lemon juice **or** 4 tbsp vinegar and 2 tsp sugar (sugar optional)

Processing Jars

- Place filled jars on a rack in a canner containing hot or simmering water. For **raw pack**, have water in canner hot but not simmering. For **hot pack**, have water simmering. Add boiling water if necessary to cover jars by 1 - 2 inches. Do not pour water directly on jars.
- Cover canner and start to count time when water returns to a full rolling boil. Boil gently and steadily for recommended processing time adding boiling water if necessary to keep jars covered.
- Remove jars immediately from canner when processing time is completed. Place jars on a rack, dry towels or a cutting board. Leave space between jars and allow to cool, undisturbed, away from drafts. **Do not invert jars** or seals may be broken.
- After 24 hours, check to see if lids have sealed. A good vacuum seal is one in which the lid curves downward. Tilt jars with glass lids on their sides. If jars do not leak, they have sealed.
- Treat any unsealed jars of tomatoes as fresh. Tomatoes may be eaten immediately, refrigerated, frozen or recanned. If recanning food, the whole process must be repeated within 24 hours.
- Label sealed jars with contents and date. Screw bands may be removed from cooled jars. Store jars in a cool dry place for up to one year.

Pickling Salt

- Pickling salt may be added for seasoning if desired but does not help to preserve the food. Use 1/2 tsp per pint or 1 tsp per quart.

TOMATOES - WHOLE OR HALVED Packed in Water or Tomato Juice

- Wash tomatoes. Dip into boiling water for 30 - 60 seconds or until skins split. Then dip into cold water, slip off skins and remove cores. Leave whole or halve.
- **Hot Pack** Place prepared tomatoes in saucepan and cover with water or tomato juice (homemade or commercial). Bring to a boil and boil gently for 5 minutes. Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired. Pack hot tomatoes into jars, leaving 1/2 inch headspace. Fill jars to 1/2 inch from top with hot liquid. Remove air bubbles with a spatula. Wipe jar rims thoroughly. Seal and process (see **PROCESSING TIMES FOR TOMATOES**).
- **Raw Pack** Heat water or tomato juice (homemade or commercial) for packing tomatoes to a boil. Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired. Pack prepared tomatoes in jars, leaving 1/2 inch headspace. Fill jars to 1/2 inch from top with hot liquid. Remove air bubbles with spatula. Wipe jar rims thoroughly. Seal and process (see **PROCESSING TIMES FOR TOMATOES**).

TOMATOES - WHOLE OR HALVED No Added Liquid

- Wash tomatoes. Dip into boiling water for 30 - 60 seconds or until skins split. Then dip into cold water, slip off skins and remove cores. Leave whole or halve.
- **Raw Pack** Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired. Fill jars with raw tomatoes, pressing until spaces between them fill with juice. Leave 1/2 inch headspace. Remove air bubbles with spatula. Wipe jar rims thoroughly. Seal and process (see **PROCESSING TIMES FOR TOMATOES**).

TOMATOES - CRUSHED

- Wash tomatoes. Dip into boiling water for 30 - 60 seconds or until skins split. Then dip into cold water, slip off skins, remove cores and quarter.
- **Hot Pack** Place 2 cups tomato quarters in a large saucepan. Heat quickly to a boil while crushing and stirring to extract juice. Stirring constantly, maintain boil and slowly add remaining quarters, 2 cups at a time. **Do not** crush these tomatoes as they will soften with heating and stirring. When all tomatoes are added, boil gently 5 minutes. Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired. Pack hot crushed tomatoes into jars, leaving 1/2 inch headspace. Remove air bubbles with spatula. Wipe jar rims thoroughly. Seal and process (see **PROCESSING TIMES FOR TOMATOES**).

PROCESSING TIMES FOR TOMATOES

Boiling Water Bath (see Caution! Altitude Adjustments)				
	Packed in Water	Packed in Tomato Juice	No Added Liquid	Crushed
Pints	45 minutes	90 minutes	90 minutes	40 minutes
Quarts	50 minutes	90 minutes	90 minutes	50 minutes
Pressure Canner		Dial Gauge or Weighted Gauge 15 lb pressure		
Pints or Quarts	10 minutes	25 minutes	25 minutes	15 minutes

TOMATO PASTE

8 quarts peeled, cored chopped tomatoes (48 large) 1 1/2 cups chopped red bell peppers (about 3) 2 bay leaves 1 tsp salt 1 clove garlic, optional

Combine first 4 ingredients and cook slowly 1 hour. Press through a fine sieve. Add garlic and continue cooking slowly until thick, about 2 1/2 hours. Stir frequently to prevent sticking. Remove garlic and bay leaves. Pour boiling hot paste into hot sterilized half-pint jars, leaving 1/4 inch headspace. Remove air bubbles with a spatula. Wipe jar rims thoroughly. Seal and process in a boiling water bath for 50 minutes (see **Caution! Altitude Adjustments**).

Yield: 9 half-pints.

Note: There is no need to acidify this recipe due to the long cooking which will concentrate the acid from the tomatoes. It is safe to process in a boiling water bath due to the high acid content. **Do not deviate** from the proportions in any manner.

UNSEASONED TOMATO SAUCE

- **Hot Pack** Wash tomatoes and remove stems. Slice or quarter tomatoes into a large saucepan. Crush, heat and simmer for 5 minutes before juicing.
- Press heated tomato mixture through a sieve or food mill to remove skins and seeds. Simmer in Dutch oven until volume is reduced by 1/3 for thin sauce or by 1/2 for thick sauce.
- Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired.
- Ladle sauce into jars, leaving 1/4 inch headspace. Remove air bubbles with a spatula.
- Wipe jar rims thoroughly. Seal and process.

Boiling Water Bath (see **Caution! Altitude Adjustments**)

Pints 40 minutes Quarts 45 minutes

Pressure Canner **Dial Gauge or Weighted Gauge 15 lb pressure**

Pints or Quarts 15 minutes

TOMATO JUICE

- Wash tomatoes and remove stems. Slice or quarter tomatoes into a large saucepan. Crush, heat and simmer for 5 minutes before juicing.
- Press heated tomato mixture through a sieve or food mill to remove skins and seeds.
- Add a specified amount of acid to hot jars (see **Acidifying Tomatoes**). Add salt, if desired.
- Return juice to the boil and fill jars, leaving 1/2 inch headspace.
- Wipe jar rims thoroughly. Seal and process.

Boiling Water Bath (see **Caution! Altitude Adjustments**)

Pints 40 minutes Quarts 45 minutes

Pressure Canner **Dial Gauge or Weighted Gauge 15 lb pressure**

Pints or Quarts 15 minutes

TOMATO VEGETABLE MIXTURES

- Unless a tested recipe is used, all tomato vegetable mixtures **must** be processed in a pressure canner, according to directions for the vegetable in the mixture with the longest processing time.
- Tomato vegetable mixture recipes in this publication may have shorter processing times because they have been tested for both pH and heat penetration. When the exact amounts in these recipes are used, these mixtures can be processed using the times given.

STEWED TOMATOES (PRESSURE CANNING ONLY)

2 quarts peeled, cored chopped tomatoes 1/4 cup chopped onion 2 tsp sugar
1/4 cup chopped green bell pepper 2 tsp celery salt 1/4 tsp salt

Combine all ingredients. Cover and cook 10 minutes, stirring occasionally to prevent sticking. Pour hot mixture into hot sterilized jars, leaving 1/2 inch headspace. Remove air bubbles with a spatula. Wipe jar rims thoroughly. Seal and process in a dial gauge or weighted gauge pressure canner at 15 lb pressure:

Pints 15 minutes Quarts 20 minutes

Yield: 3 pints.

FREEZING TOMATOES

Select firm ripe tomatoes for freezing. Tomatoes and tomato products have an optimum freezer storage time of 1 year.

WHOLE TOMATOES

- Wash tomatoes. Blanch 30 - 60 seconds in boiling water. Dip quickly in cold water and slip off skins.
- Core; leave whole or cut into pieces.
- Package in freezer containers. For best quality, cover with commercial or homemade tomato juice, leaving 1 inch headspace. Seal and freeze.
- *Tomatoes may also be frozen without blanching; however, skins and cores may be difficult to remove during cooking.*

TOMATO JUICE

- Wash, core and cut tomatoes into pieces.
- Place in Dutch oven; heat to boiling. Simmer 2 - 3 minutes; strain.
- Cool; package in freezer containers, leaving 1 inch headspace. Seal and freeze.

UNSEASONED TOMATO SAUCE

- Prepare as for whole tomatoes. Cut into pieces.
- Place in Dutch oven; heat to boiling. Boil gently, uncovered, for 1 hour or until thickened. Stir occasionally to prevent scorching.
- Puree in a food processor or blender. Strain to remove seeds, if desired.
- Cool; package in freezer containers, leaving 1 inch headspace. Seal and freeze.
- *For additional flavour, onion and green bell pepper may be added to tomatoes during cooking.*

STEWED TOMATOES

- Prepare as for whole tomatoes. Cut into pieces.
- Place in Dutch oven and simmer for 10 - 20 minutes.
- Cool; package in freezer containers, leaving 1 inch headspace. Seal and freeze.
- *For variety, celery, onion and green bell pepper may be added to tomatoes during cooking.*

GREEN TOMATOES

- Wash and core firm green tomatoes.
- Slice 1/4 inch thick.
- Pack slices into freezer containers, separating layers with freezer wrap. Allow 1/2 inch headspace. Seal and freeze.

TOMATO TIPS

- 1 lb green or red tomatoes = 2 large, 3 medium or 4 small tomatoes or 2 cups chopped tomatoes
- 2 1/2 - 3 lb fresh tomatoes = 1 quart canned tomatoes
- 25 lb tomatoes = 10 quarts canned tomatoes
= 10 - 15 pints tomato juice
- 1 lb cherry tomatoes = 20 - 24 cherry tomatoes or 2 cups chopped cherry tomatoes
- 3 lb tomatoes (approximately) = 28 oz /796 mL can tomatoes
- Ideally, ripe tomatoes should be stored at room temperature. Chilling diminishes their flavour and texture. However, ripe tomatoes will keep longer if stored in a plastic bag in the refrigerator.

Recipes in this publication are based on American measures of 2 cups per pint and 4 cups per quart.

The ATCO Blue Flame Kitchen information and recommendations contained in this publication have been researched and are in accordance with the current guidelines published by the Cooperative Extension Service, University of Georgia. We acknowledge their assistance.