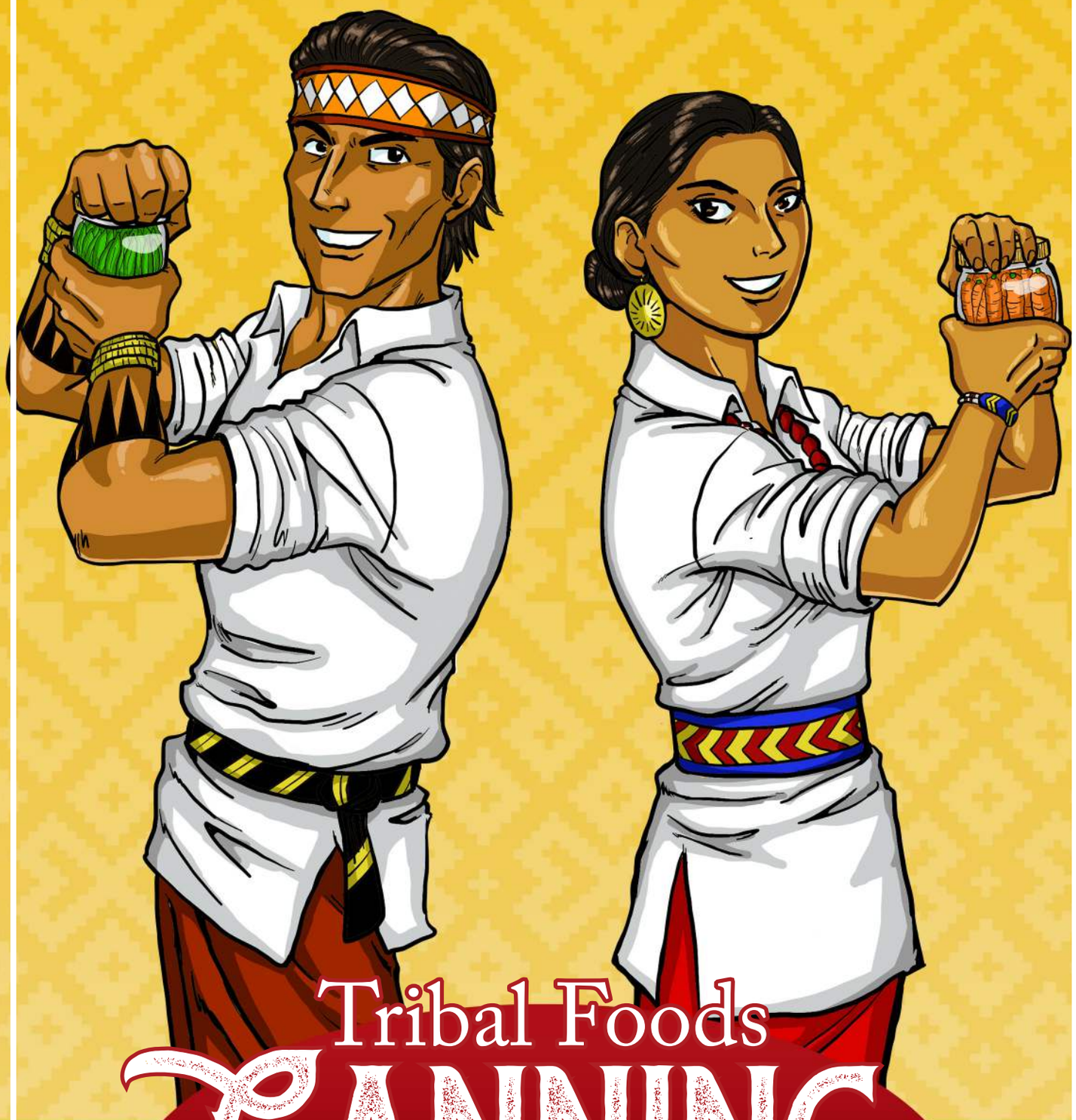
ᏣᎳᎩᏗᏂᏍᎬᏘ



Tribal Foods CANNING Cookbook

EBCI Tribal Foods Distribution would like to extend a huge SGI to the following individuals who shared their wisdom and allowed us to create this book. Thank you to Judy Smith for taking the time to help us learn to can and pick Sochan. Thank you to Marie Junaluska for adding in all the beautiful Cherokee words. Thank you to Christine Kanott and Lisa Taylor for sharing your vast knowledge of canning, including recipes in our book, and for always making the best canned food. Thank you to our Tribal Communications team and especially Michael Pellicone for designing the cover and doing the graphic design. Thank you to our fearless leader Aneva Turtle Hagberg for editing the cookbook and always encouraging your staff to be their best.

This canning guide is for people canning for the first time. The recipes have been based on research conducted by the National Center for Home Food Preservation. This guide contains research-based recommendations for canning safe quality food at home. The first section explains the principles of proper canning and how to achieve safe, high quality canned products. The second section contains USDA recipes for specific foods and many of the recipes come directly from the USDA canning cookbook.

Canning surplus food, whether it is from Food Distribution, a grocery store, or the garden is an excellent way to reduce food waste and improve nutrition security by ensuring you always have nourishing, tasty food when you need it.

Please enjoy this cookbook and look forward to Part 2!

Remember, you can print a copy of this cookbook and all our other resources at our website: **food.ebci-nsn.gov**

-Your friends at EBCI Tribal Foods

Why Can Foods

ᏁᏃ ᎤᏰᏩᏗ ᏴᏕᏩᏗ ᎠᎵᏍᏓᏴᏗ?

Canning has been a safe and economical way to preserve quality food at home. Cherokee people have been canning homegrown food for generations, not only preserving the value of their labor but saving you the cost of buying commercially canned food. Canning favorite foods such as poke salad, Sochan greens, and this way you can enjoy these seasonal foods all year long. If vegetables are handled properly and canned right away, they can contain more vitamins and minerals than the fresh produce sold in your local grocery store.

How canning preserves foods

ᏯᏍᏓ ᎠᏍᏆᏂᎪᏗ ᏕᏩᏓᏛᏛ ᎠᎵᏍᏓᏴᏗ

The high percentage of water in most foods means that they can spoil rather quickly. Proper canning means that you can keep foods for a year past when they would normally spoil on their own. Proper canning practices include:

- Carefully selecting and washing fresh food
- Peeling some items
- Hot packing many foods
- Adding acids (lemon juice or vinegar) to some foods
- Using acceptable jars and self-sealing lids
- Processing jars in boiling water or pressure canner for the correct period of time and at the correct pressure

Collectively, these practices remove oxygen, destroy enzymes; prevent growth of bacteria, yeasts, and molds. To prevent undesirable bacteria, it is important that you have a good vacuum that will provide a tight seal, this will keep liquid in while keeping air and microorganisms out!

Ensuring your canned food is safe

ᎡᏍᏕ ᎢᏰᎫᏩᏁ ᏂᏭᎡᎾ ᏕᏩᏓᏛᏛ ᎠᎵᏍᏓᏴᏗ

All fresh vegetables contain botulinum (botulism-a deadly form of good poisoning), but it is harmless because it only grows in the absence of air (a can).

Most bacteria, yeasts, and molds are difficult to remove from food surfaces. Washing fresh food reduces their numbers only slightly. Peeling root crops, underground stem crops, and tomatoes reduces their numbers greatly. Blanching also helps, but the vital controls are the method of canning and making sure the recommended process times found in this guide are used.

The processing times in this guide are essential to ensure the destruction of the largest expected number of heat resistant microorganisms in home canned foods. Properly sterilized canned food will be free of spoilage if lids seal and jars are stored below 95 degrees Fahrenheit. Storing jars at 50 degrees F to 70 degrees enhances retention of quality.

Food acidity and processing methods

ᏧᎾᏦᏍᏗ ᎠᎴ ᎤᏴᏍᏗ ᎠᏰᏴᏗ ᎠᏢᏍᏓᏴᏗ ᏃᎴ (ᏜᏕᏔᎪᎯᏓ) ᎠᏢᎰᏍᏁᏗ

Food should be processed in a pressure canner or boiling water canner to control bacteria depending on the acidity of the food. Acidity may be natural in some foods such as tomatoes and fruit but for some foods like corn you need to add enough acid to block the growth of bacteria. The term "pH" is a measure of acidity, the lower its value, the more acid the food. The acidity level in foods can be increased by adding lemon juice, citric acid, or vinegar.

Low acid foods have a pH higher than 4.6. Items like red meat, seafood, poultry, milk and all fresh vegetables EXCEPT for tomatoes. Most mixtures of low acid and acid foods have pH values above 4.6 unless their recipes include enough lemon juice, citric acid, or vinegar to make them acid foods (think kraut). Acid foods have a pH lower than 4.6. They include fruits, pickles, sauerkraut, jams, jellies, marmalades, and fruit butters.

Although tomatoes usually are considered an acid food, some are now known to have pH values slightly above 4.6. Figs also have pH values slightly above 4.6 and need to be canned with lemon juice or citric acid. Properly acidified tomatoes and figs are acid foods and can be safely processed in a boiling water canner.

Botulinum spores (botulism) are very hard to destroy at boiling water temperatures; the higher the canner temperature, the more easily they are destroyed. Therefore, all low acid foods should be sterilized at temperatures of 240 to 250F, attainable with pressure canners operated at 10-15 PSIG. PSIG means pounds per square inch of pressure as measured by a gauge. At temperatures of 240-250F, the time needed to destroy bacteria in low acid canned food ranges from 20-100 minutes. The exact time depends on the kind of food being canned, the way it is packed into jars, and the size of jars. The time needed to safely process low acid foods in a boiling water canner range from 7-11 hours; the time needed to process acid foods in boiling water varies from 5-85 minutes.

Process adjustments at high altitudes

ᏕᏚᏏ ᏴᏕᎾᎽᎳ ᎠᏕᏐᏍᏁᏗ ᎠᏫ ᎠᏢᎰᏍᏁᏗ

Using the process time for canning food at sea level may result in spoilage if you live at higher altitudes of 1,000 feet or more. Water boils at lower temperatures as altitude increases. Lower boiling temperatures are less effective for killing bacteria. Increasing the process time or canner pressure compensates for lower boiling temperatures. Therefore, when you use the guides, select the proper processing time or canner pressure for the altitude where you live. If you do not know the altitude, contact your local extension agent at: 828-359-6939 or download the "My Altitude" application on your phone.

Ensuring high quality canned foods

ᎠᏕᏎᏍᏫᏓᏅ ᎣᏍᏫᏓ ᎤᏳᏅᏒ ᎠᎴ ᎤᏑᎶᏅ ᏕᏬᏁᏗ ᎠᎵᏍᏫᏓᏴᏗ

Begin with good quality fresh foods suitable for canning. Can fruits and vegetables be picked from your garden or purchased from nearby producers when the products are at their peak of quality-within 6-12 hours after harvest for most vegetables. For best quality most fruits should be ripened 1 or more days between harvest and canning.

Fresh home-slaughtered red meats and poultry should be chilled and canned without delay. Do not can meat from sickly or diseased animals. Ice fish and seafoods after harvest, eviscerate immediately, and can them within 2 days.

Maintaining color and flavor in canned food

ᎠᏕᏎᏍᏫᏁᏗ ᎤᎵᏏᏫᏒ ᏃᎴ ᎤᎵᏨ ᏕᏬᏓᏅ ᎠᎵᏍᏫᏓᏴᏗ

To maintain good natural color and flavor in stored canned food, you must:

- Remove oxygen from food tissues and jars,
- Quickly destroy the food enzymes,
- Obtain high jar vacuums and airtight jar seals.

Follow these guidelines to ensure that your canned foods retain optimum colors and flavors during processing and storage

ᎯᎠ ᏗᏍᏫᏓᏳᎾᏍᏫᏗ ᎠᏕᏎᏍᏫᏁᏗ ᏕᏬᏓᏅᏅ ᎤᏲᎢᏍᏫᏗ ᏂᏈᏒᎾ ᎤᎵᏏᏫᏒ ᏃᎴ ᎤᎵᏨ ᎥᏕᏬᏗᏍᏫᎬ ᏃᎴ ᎥᏍᏫᏆᏂᎪᏗᏍᏫᎬ ᎢᏬᎯ

- Use high quality foods which are at the proper maturity and are free of diseases.
- Use the hot pack method, especially with acid foods to be processed in boiling water.
- Don't unnecessarily expose prepared food to the air. Can them as soon as possible.
- While preparing a canner load of jars, keep peeled, halved, quartered, sliced, or diced apples, apricots, nectarines, peaches, and pears in a solution of 3 grams (3,000 milligrams) ascorbic acid to 1 gallon of cold water. This procedure is also useful in maintaining the natural color of mushrooms and potatoes, and for preventing stem-end discoloration in cherries and grapes. You can get ascorbic acid in several forms:
  - o Pure powdered form- seasonally available among canners' supplies in supermarkets. One level teaspoon of pure powder weighs about 3 grams. Use 1 teaspoon per gallon of water as a treatment solution.
  - o Vitamin C tablets- economical and available year-round in many stores. Buy 500-milligram tablets; crush and dissolve six tablets per gallon of water as a treatment solution.
  - o Commercially prepared mixes of ascorbic and citric acid- seasonally available among canners suppliers in supermarkets. If you buy these products, use manufactures directions.
  - o Fill hot foods into jars and adjust headspace as specified in recipes.
  - o Tighten lid on jar securely, but not as tightly as possible.
  - o Process and cool jars.
  - o Store the jars in a relatively cool, dark place, preferably between 50-70 degrees F.
  - o Can no more food than you will use within a year.

Advantages of Hot Packing

ᏬᎯᏍᏛᏗ ᎠᏰᎸᏫ ᎠᏢᏗᏍᏛᏞᏫ ᏕᏩᏔᏗ

Many fresh foods contain from 10% to more than 30% air. How long canned food retains high quality depends on how much air is removed from food before jars are sealed. Raw packing is the practice of filling jars tightly with freshly prepared, but unheated food. Such foods, especially fruit, will float in the jars. The entrapped air in and around the food may cause discoloration within 2-3 months of storage. Raw packing is more suitable for vegetables processed in a pressure canner. For raw packing recipes please use a different reference.

Hot-packing is the practice of heating freshly prepared food to boiling, simmering it 2-5 minutes, and promptly filling jars loosely with the boiled food. Whether food has been hot-packed or raw packed, the juice, syrup, or water to be added to the foods should also be heated to boiling before adding it to the jars. This practice helps to remove air from food tissues, shrinks food, helps keep the food from floating in the jars, increases vacuum in sealed jars, and improves shelf life. Preshrinking food permits filling more food into each jar.

Hot-packing is the best way to remove air and is the preferred pack style for foods processed in a boiling-water canner. At first, the color of hot-packed foods may appear no better than that of raw packed foods, but within a short storage period, both color and flavor of hot packed foods will be superior.

Controlling Headspace

The unfilled space above the food in a jar and below its lid is termed headspace. Directions for canning specify leaving ¼ inch for jams and jellies, ½ inch for fruits and tomatoes to be processed in boiling water, and from 1-1 ¼ inches in low acid foods to be processed in a pressure canner.

This space is needed for expansion of food as jars are processed, and for forming vacuums in cooled jars. The extent of expansion is determined by the air content in the food and by the processing temperature. Air expands greatly when heated to high temperatures; the higher the temperature, the greater the expansion.

Jars and Lids

ᏧᏁᏅᏍᏓᏢ ᏃᎴ ᏗᎫᎡᏁᏗ

Regular and wide-mouth Mason-type, threaded, home canning jars with self-sealing lids are the best choice. They are available in all sizes. Wide mouth jars have openings of about 3 inches, making them more easily filled and emptied. With careful use and handling Mason jars may be reused many times, requiring only new lids each time. When jars and lids are used properly, jar seals and vacuums are excellent and jar breakage is rare.

Most commercial pint and quart size mayonnaise or salad dressing glass jars may be used with new two-piece lids for canning acid foods. However, you should expect more seal failures and breakage. These jars have a narrower sealing surface and are tempered less than Mason jars and may be weakened with repeated contact with metal spoons or knives. Other commercial jars with mouths that cannot be sealed with two-piece canning lids are not recommended for use in canning any food at home.

Jar Cleaning and Preparation

ᏧᏁᏅᏍᏓᏢ ᏗᎫᎯᏣᏅᏍᏗ ᏃᎴ ᏗᎴᏬᎢᏅᏍᏁᏗ

Before every use, wash empty jars in hot water with detergent and rinse will by hand, or wash in a dishwasher. Unrinsed detergent may cause unnatural flavors and colors. Jars should be kept hot until ready to fill with food. Submerge the clean empty jars in enough hot water to cover them in a large stockpot or boiling water canner. Bring the water to a simmer (180F) and keep the jars simmering until it is time to fill them with food.

These washing and preheating methods do not sterilize jars. Some used jars may have a white film on the exterior surface caused by mineral deposits. The scale or hard water film on jars is easily removed by soaking the jars for several hours in a solution containing 1 cup vinegar per gallon, prior to washing and preheating the jars.

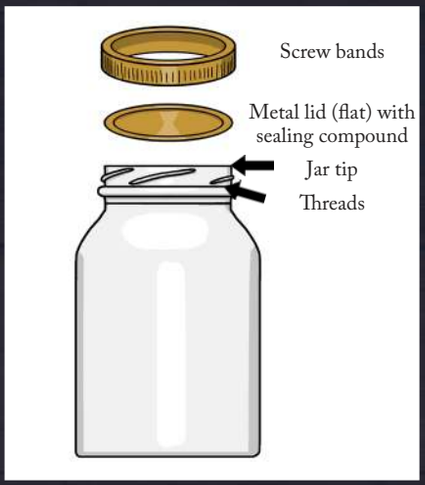
Sterilization of Empty Jars

All jams, jellies, and pickled products processed in less than 10 minutes should be filled into sterile empty jars. To sterilize empty jars after washing in detergent and rinsing thoroughly, submerge them right side up, in a boiling water canner with the rack in the bottom. Fill the canner with enough warm water so it is 1 inch above the top of the jars. Bring the water to a boil, and boil 1 additional minute for each additional 1,000 feet elevation. Reduce the heat under the canner and keep the jars in the hot water until it is time to fill them. Remove and drain hot sterilized jars one at a time, saving the hot water in the canner for processing filled jars. Fill the sterilized jars with food, add lids, and tighten screw bands.

Empty jars used for vegetables, meats, and fruits to be processed in a pressure canner need not be presterilized. It is also unnecessary to presterilized jars for fruits, tomatoes, and pickled or fermented foods that will be processed 10 minutes or longer in a boiling water canner.

Lid Selection, Preparation, and Use

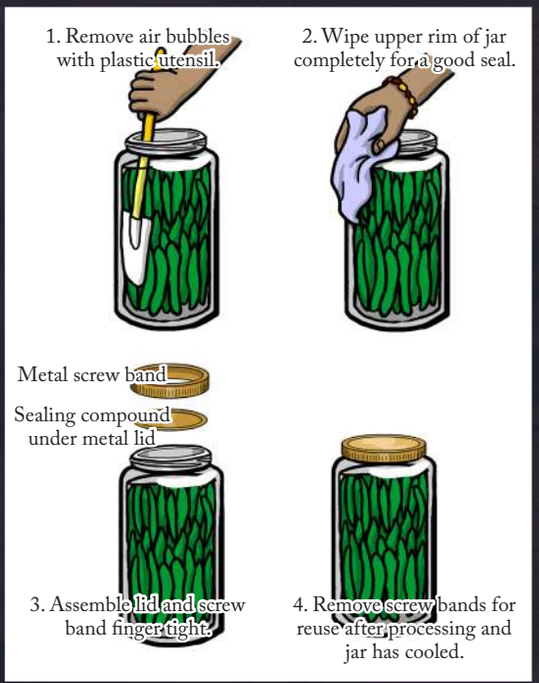
The common self-sealing lid consists of a flat metal lid held in place by a metal screw band during processing. The flat lid is crimped around its bottom edge to form a trough, which is filled with a colored gasket compound. When jars are processed, the lid gasket softens and flows slightly to cover the jar sealing surface yet allows air to escape from the jar. The gasket then forms an airtight seal as the jar cools. Gaskets in unused lids work well for at least 5 years from date of manufacture. The gasket compound in older unused lids may fail to seal on jars.



Buy only the quantity of lids you will use in a year. To ensure a good seal, carefully follow the manufacturers direction in preparing lids for use. Examine all metal lids carefully. Do not use old, dented, or deformed lids, or lids with gaps or other defects in the sealing gasket.

When directions say to fill jars and adjust lids, use the following procedures: After filling jars with food and adding covering liquid, release air bubbles by inserting a flat plastic (NOT METAL) spatula up and down to allow air bubbles to escape. (It is not necessary to release air bubbles when filling jams, jellies, or all liquid foods such as juices.) Adjust the headspace and then clean the jar rim (sealing surface) with a Dampened paper towel. Place preheated lid, gasket side down, onto the cleaned jar sealing surface. Uncleaned jar sealing surfaces may cause seal failures. Then fit the metal screw band over the flat lid. Follow the manufactures guidelines enclosed with or on the box for tightening the jar lids properly.

Do Not Retighten Lids After Processing Jars



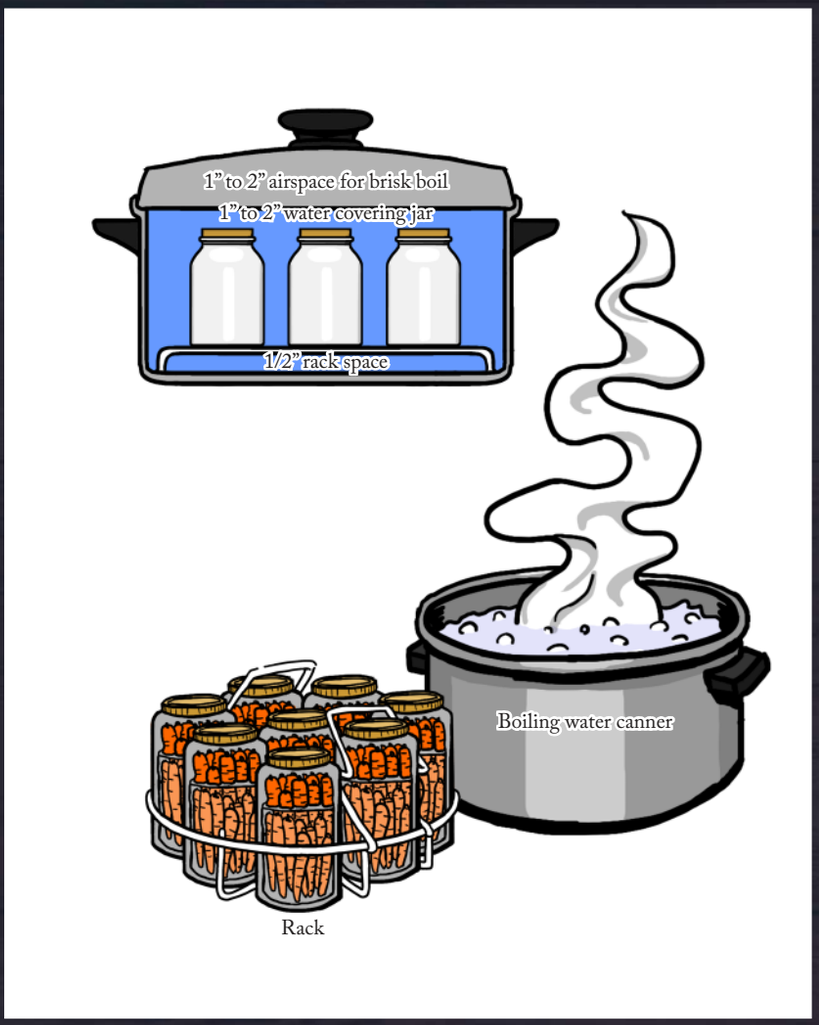
As jars cool, the contents in the jar contract, pulling the self-sealing lid firmly against the jars to form a high vacuum.

- If rings are too loose, liquid may escape from jars during processing, and seals my fail.
- If rings are too tight, air cannot vent during processing, and food will discolor during storage. Over tightening also may cause lids to buckle and jars to break, especially with raw packed, pressure processed food.

Screw bands are not needed on stored jars. They can be removed easily after jars are cooled. When removed, washed, dried, and stored in a dry area, screw bands may be used many times.

If left on stored jars, they become difficult to remove, often rust, and may not work properly again.

Recommended Canners



Equipment for heat processing home canned food is of two main types- boiling water canners and pressure canners. Most are designed to hold seven-quart jars or eight to nine pints. Small pressure canners hold four-quart jars.

LOW ACID FOODS MUST be processed in a pressure canner to be free of botulism risks. Although pressure canners may also be used for processing acid food, boiling water canners are recommended for this because they are faster. A pressure canner would require from 55 to 100 minutes to process a load of jars; while total time for processing most acid foods in boiling water varies from 25-60 minutes. A boiling water canner loaded with filled jars requires about 20-30 minutes of heating before its water begins to boil. A loaded pressure canner requires about 12-15 minutes of heating before it begins to vent; another 10 minutes to vent the canner; another 5 minutes to pressurize the canner; another 8-10 minutes to process the acid food; and another 20-60 minutes to cool the canner before removing jars.

Boil Water Canners

These canners are made of aluminum or porcelain-covered steel. They have removable perforated racks and fitted lids. The canner must be deep enough so that at least 1 inch of briskly boiling water will be over the tops of jars during processing.

Some boiling water canners do not have flat bottoms. A flat bottom MUST be used on an electric range. Either a flat or ridged bottom can be used on a gas burner.

To ensure uniform processing of all jars with an electric range, the canner should be no more than 4 inches wider in diameter than the element on which it is heated.

Follow these steps for successful boiling water canning

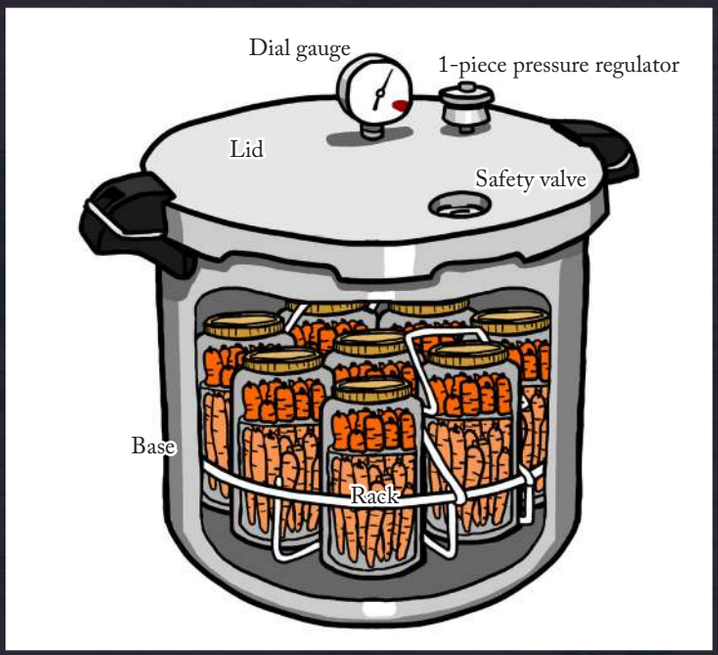
1. Before you start preparing your food, fill the canner halfway with clean water. This is approximately the level needed for a canner load of pint jars. For other sizes and numbers of jars, the amount of water in the canner will need to be adjusted so it will be 1-2 inches over the top of the filled jars.
2. Preheat water to 140F for raw packed foods and to 180F for hot packed foods. Food preparation can begin while this water is preheating.
3. Load filled jars, fitted with lids, into the canner rack and use the handles to lower the rack into the water; or fill the canner with the rack in the bottom, one jar at a time, using a jar lifter. When using a jar lifter, make sure it is securely positioned below the neck of the jar (below the screw band of the lid). Keep the jar upright at all times. Tilting the jar could cause food to spill into the sealing area of the lid.
4. Add more boiling water, if needed, so the water level is at least 1 inch above jar tops. For process times over 30 minutes, the water level should be at least 2 inches above the tops of the jars.
5. Turn heat to its highest position, cover the canner with its lid, and heat until the water in the canner boils vigorously.
6. Set a timer for the total minutes required for processing the food.
7. Keep the canner covered and maintain a boil throughout the process schedule. The heat setting may be lowered a little as long as a complete boil is maintained for the entire process time. If the water stops boiling at any time during the process. Bring the water back to a vigorous boil and begin the timing of the process over, from the beginning.
8. Add more boiling water, if needed, to keep the water level above the jars.
9. When jars have been boiled for the recommended time, turn off the heat and remove the canner lid. Wait 5 minutes before removing jars
10. Using a jar lifter, remove the jars and place them on a towel, leaving at least 1inch space between the jars during cooling. Let jars sit undisturbed to cool at room temperature for 12-24 hours.

Pressure Canners

Pressure does not destroy microorganisms, but high temperatures applied for an adequate period of time DO kill microorganisms.

The success of destroying all microorganisms capable of growing in canned food is based on the temperature obtained in pure steam, free of air, at sea level.

At sea level, a canner operated at a gauge pressure of 10.5 lbs provides an internal temperature of 240F.



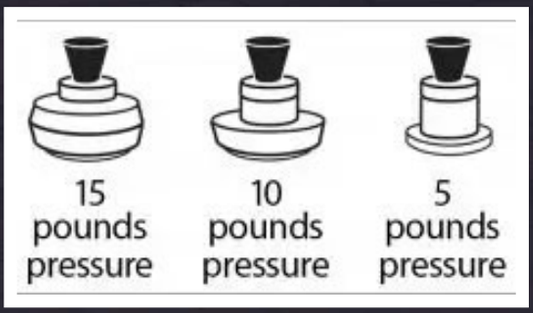
Two serious errors in temperatures obtained in pressure canners occur because:

1. Internal canner temperatures are lower at higher altitudes. To correct this error, canners must be operated at increased pressures specified in this publication for appropriate altitude ranges.

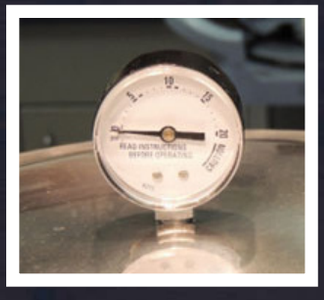
2. Air trapped in a canner lowers the temperature obtained at 5, 10, or 15 pounds of pressure and results in under processing. The highest volume of air trapped in a canner occurs in processing raw packed foods in dial gauge canners. These canners must be vented 10 minutes before they are pressurized.

To vent a canner, leave the vent port uncovered on newer models or manually open petcocks on some older models. Heating the filled canner with its lid locked into place boils water and generates steam that escapes through the petcock or vent port. When steam first escapes, set a timer for 10 minutes. After venting for 10 minutes, close the petcock or place the counterweight or weighted gauge over the vent port to pressurize the canner.

Weighted-gauge models exhaust tiny amounts of air and steam each time their gauge rock or jiggles during processing. They control pressure precisely and need neither watching during processing nor checking for accuracy. The sound of the weight rocking or jiggling indicates that the canner is maintaining the recommended pressure. The single disadvantage of weighted gauge canners is that they cannot correct precisely for higher altitudes. At altitudes above 1,000 feet, they must be operated at canner pressures of 10 instead of 5, or 15 instead of 10, PSI.



Check dial gauges for accuracy before each year. Gauges that read high cause under processing and may result in unsafe food. Low readings cause over processing. Pressure adjustments can be made if the gauge reads up to 2 pounds high or low. Replace gauges that differ by more than 2 pounds. Every pound of pressure is very important to the temperature needed inside the canner for producing safe food, so accurate gauges and adjustments are essential when a gauge reads higher than it should. If a gauge is reading lower than it should, adjustments may be made to avoid over-processing, but are not essential to safety. Gauges may be checked at your county's cooperative Extension offices or contact the pressure canners manufacturer for other options.



Handle canner lid gaskets carefully and clean them according to the manufacturer's directions. Nicked or dried gaskets will allow steam leaks during pressurization of canners. Keep gaskets clean between uses. Gaskets on older model canners may require a light coat of vegetable oil once per year. Gaskets on newer model canners are pre-lubricated and do not benefit from oiling. Check your canners instructions if there is any doubt that the gasket you use has been pre-lubricated.

Lid safety fuses are thin metal inserts or rubber plugs designed to relieve excessive pressure from the canner. Do not pick at or scratch fuses while cleaning lids. Use only canners that have the Underwriter's Laboratory Approval to ensure their safety.

Using Pressure Canners

Follow these steps for successful pressure canning:

1. Put 2-3 inches of hot water in the canner, always follow the directions with USDA processes for specific foods if they require more water added to the canner. Place filled jars on the rack, using a jar lifter. MAKE SURE THE JAR LIFTER IS SECURELY POSITIONED BELOW THE NECK OF THE JAR. Always keep the jar upright. Tilting the jar could cause food to spill into the sealing of the lid. Fasten canner lid securely.
2. Leave weight off vent port or open petcock. Heat at the highest setting until steam flows freely from the open petcock or vent port.
3. While maintaining the high heat setting, let the steam flow (exhaust) continuously for 10 minutes, and then place the weight on the vent port or close to the petcock. The canner will pressurize during the next 3-5 minutes.
4. Start timing the process when the pressure reading on the dial gauge indicates that the recommended pressure has been reached, or when the weighted gage begins to jiggle or rock as the canner manufactures describes.
5. Regulate heat under the canner to maintain a steady pressure at or slightly above the correct gauge pressure. Quick and large pressure variations during processing may cause unnecessary liquid losses from jars. Follow the canner manufacturer's directions for how the canner's gauge should indicate it is maintaining the desired pressure. IMPORTANT: If at any time pressure goes below the recommended amount, bring the canner back to pressure and begin the timing of the process over, from the beginning (using the total original process time). This is important for the safety of the food.
6. When the timed process is completed, turn off the heat, remove the canner from heat if possible, and let the canner depressurize. DO NOT FORCE COOL THE CANNER! Forced cooling may result in unsafe food or food spoilage. Cooling the canner with cold running water or opening the vent port before the canner is fully depressurized will cause a loss of liquid from jars and seal failures. Force-cooling may also warp the canner lid of older model canners, causing steam leaks. Depressurization of older models without dial gauges should be timed. Standard size heavy walled canners require about 30 minutes when their vent lock piston drops to a normal position.
7. After the canner is depressurized, remove the weight from the vent port or open the petcock. Wait 10 minutes, unfasten the lid, and remove it carefully. Lift the lid away from you so that the steam does not burn your face.
8. Remove jars with a jar lifter, and place them on a towel, leaving at least 1-inch spaces between the jars during cooling. Let jars sit undisturbed to cool at room temperature for 12-24 hours.

Selecting the Correct Processing Time

When canning in boiling water, more processing time is needed for most raw-packed foods and for quart jars than is needed for hot-packed foods and pint jars. To destroy microorganisms in acid foods processed in a boiling water canner, you must:

- Process jars for the correct number of minutes in boiling water.
- Cool the jars at room temperature.

The food may spoil if you fail to add process time for lower boiling-water temperatures at altitudes above 1,000 feet, process for fewer minutes than specified, or cool jars in cold water. To destroy microorganisms in low acid foods processed with a pressure canner, you must:

- Process the jars using the correct time and pressure specified for your altitude.
- Allow the canner to cool at room temperature until it is completely depressurized.

The food may spoil if you fail to select the proper process times for specific altitudes. Failure to exhaust canners properly, process at lower pressure than specified, process for fewer minutes than specified, or cool the canner with water.

Cooling Jars

When you remove hot jars from a canner, do not re-tighten their jar lids. Re-tightening of hot lids may cut through the gasket and cause seal failures. Cool the jars at room temperature for 12-24 hours. Jars may be cooled on racks or towels to minimize heat damage to counters. The food level and liquid volume of raw packed jars will be noticeably lower after cooling. Air is exhausted during processing and food shrinks. If a jar loses excessive liquid during processing, do not open it to add more liquid. Check for sealed lids as described below.

Testing Jar Seals

After cooling jars for 12 to 24 hours, remove the screw bands and test seals with one of the following options:

Option 1. Press the middle of the lid with a finger or thumb. If the lid springs up when you release your finger, the lid is unsealed.

Option 2. Tap the lid with the bottom of a teaspoon. If it makes a dull sound, the lid is not sealed. If the food is in contact with the underside of the lid, it will also cause a dull sound. **If the jar is sealed correctly, it will make a ringing, high pitched sound.**

Option 3. Hold the jar at eye level and look across the lid. **The lid should be concave (curved down slightly in the center).** If the center of the lid is either flat or bulging, it may not be sealed.

Jams and Jellies

ᏜᏝᏫᏝᏅ ᏜᏝᏧᏝᏅ ᏃᎴ ᎤᏝᏁᏅ ᏜᏝᏧᏝᏅ

Jams and jellies are preserved easily because the sugar itself acts as a preservation. Jam is a fruit boiled thick with sugar. Most jam recipes call for a 2:1 ratio of sugar to fruit by weight or volume. Some jam recipes that are really trying to hold down on the sugar content will give you a 1:1 ratio. Jelly generally has a 1:1 ratio, 1 c. juice to 1 c. sugar. Elly making depends on having proper amounts of fruits, pectin, acid, and sugar. Jellying is a chemical change based on the presence of pectin and acid.

Pectin: Pectin is the key to jelly. It's a natural substance in some fruits, especially under ripe ones, that "jells" when heated and combined with acid from the fruit and sugar. Apples are usually rich in pectin. Natural ripening causes the pectin to break down. So, if your fruit is overripe, your jelly will never get firm no matter how long you boil it. Peaches, strawberries, and cherries don't have much pectin. You can combine pectin-rich fruits with pectin poor fruits, use commercially prepared pectin, or make your own.

No-Sugar Pectin can be ordered online or found at your local Walmart.

Homemade Pectin from Apples To make this, you can use your left-over skins and cores of apples you plan to can, or the whole cut up apple. Boil 2 pounds of apples with 4 cups of water for about 45 minutes. Extract the juice through a cloth or jelly bag without using pressure. Boil the resulting juice for 15 minutes. Can the pectin if you won't be using it right away. Use a cup of this pectin per 1 cup pectin weak fruit juice. When making jellies using this combination of apple pectin juice and other fruit juice, ¾ cups of sugar per 1 cup liquid is usually correct.

Jelly Making Without Pectin: Only use firm fruits naturally high in pectin. Select a mixture of about ¾ ripe and ¼ under ripe fruit. One pound of fruit should yield at least a cup of clear juice. Do not use commercially canned or frozen fruit juice because their pectin content is too low. Using peels and cores adds pectin to the juice during cooking of the fruit and will increase jelly firmness.

Wash all fruits thoroughly before cooking. Cut firm, larger fruits into small pieces. Crush soft fruits or berries. Add water to fruits as needed. Put fruit and water into a large saucepan and bring to a boil. Simmer, stirring occasionally, for time listed or until the fruit is soft. When the fruit is tender, press lightly through a colander. Then let juice drip through a double layer of cheese cloth or a jelly bag. Excessive pressing or squeezing of cooked fruit will cause cloudy jelly.

Using no more than 6-8 cups extracted fruit juice at a time, measure and combine the proper quantities of juice, sugar, and lemon juice and heat to boiling. Stir until the sugar is dissolved. Boil over high heat, stirring frequently, until the jelly point is reached.

Jams and Jellies

Apple Jelly: Add 1 cup of water per 1 pound of fruit. Simmer 20-25 minutes before extracting juice. To each 1 cup strained juice add ¾ cup sugar. Optional add 1 ½ teaspoons lemon juice. If you start with 4 cups juice, your jelly yield will be 4-5 half pints.

Blackberry Jelly: Add ¼ cup of water per 1 pound of fruit. Simmer 5-10 minutes before extracting juice. To each 1 cup strained juice, add ¾ cup of sugar. From 4 cups of juice, your jelly will yield 7-8 half pints of jelly.

Grape Jelly: Add ¼ cup water per 1 pound of fruit. Simmer 5-10 minutes before extracting juices. For each 1 cup strained juice and ¾ cup of sugar. Jelly yield from 4 cups of juice will be 8-9 half pints.

Testing Jelly Doneness

Use a jelly or candy thermometer. Boil to a temperature of 220 degrees F at sea level., 218 F at 1,000 feet, 216F at 2,000 feet, 214F at 3,000 feet, 212F at 4,000 feet, 211F at 5,000 feet, 209F at 6,000 feet, 207F at 7,000 feet, and 205F at 8,000 feet of altitude.

When Jelly is Done

Remove it from the heat and quickly skim off foam. Using a widemouthed funnel, ladle the jelly into sterile jars, leaving ¼ inch headspace. Adjust lids and freeze or can.

- **Freezing:** If you use commercial pectin, you can freeze your jams and jellies. Use plastic freezer containers. Good instructions will be on your package of Sure-Jell or Jam or Jelly Pectin. Frozen uncooked jam keeps that delicious fresh fruit flavor but will be softer than cooked jams.

- **Canning.** Pour hot water into sterile half-pint or pint canning jars, leaving ¼ inch headspace. To sterilize empty jars, put them open side up on a rack in a boiling water canner. Fill the canner and jars with hot (not boiling) water to 1 inch above the top of the jars. Boil jars for 10 minutes. Remove and drain hot sterilized jars one at a time and fill with food. Food residue should be removed from each jar's sealing edge with a clean, damp paper towl. New 2-piece canning lids (sterilized in hot water according to manufacturer's directions) should be put on.

After screw bands are tightened, process jars in a boiling-water canner. Fill the canner half-full with water and preheat to 180F. Load sealed jars into the canner rack and lower them with handles, or load one jar at a time with jar lifter onto rack in canner. Add water until you have a level of 1 inch above jars. Cover. When water is boiling vigorously, lower heat to maintain a gentle boil. Process all jellies and jams in ½ pint or pint jars for 5 minutes if you live at 1-1,000 feet; for 10 minutes at 1,001-6,000 feet; or for 15 minutes above 6,000 feet. After the processing time is over remove jars from the canner with ajar lifter and place on a towel or rack. Do not re-tighten screw bands. Air cool jars 12-24 hours. Remove screw bands and check lid seals. Jelly and jams are best if consumed within a year. **NOTE: Don't put a jam or jelly into a quart jar; it won't jell. Don't double a recipe.**

Jams and Jellies
ᏕᏝᏫᏝᏅ ᏕᏝᎸᏝᏅ ᏃᎴ ᎤᏝᏁᏅ ᏕᏝᎸᏝᏅ

Jellies and Jams with Added Pectin

Fresh fruits and juices as well as some commercially canned or frozen fruit juices, may be used with commercially prepared powdered or liquid pectin. The order of combining ingredients depends on the type of pectin used. Complete directions for a variety of fruits will be provided with your pectin packaging. Jelly or jam made with added pectin requires less cooking and will often give a larger yield. Remember to buy new pectin each year, old pectin may not jell well.

Strawberry-Rhubarb pectin Jelly

You will need 1 ½ pounds of red rhubarb stalks, 1 ½ quart of ripe strawberries, ½ teaspoon of butter or margarine, 6 cups of sugar, and 6 ounces of liquid pectin. Wash and cut the rhubarb into 1-inch pieces and blend or grind. Wash, stem, and crush strawberries, one layer at a time, in a large saucepan and simmer for 10 minutes. Strain juice with a jelly bag or a double layer of cheesecloth. Combine and mix 3 ½ cups of juice and sugar. Add butter if desired to reduce foaming. Bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full rolling boil; boil hard for 1 minute, stirring constantly. Remove from heat and quickly skim off foam. Pour into sterile half pint jars, leaving ¼ inch headspace. Adjust lids and process in a boiling water canner. The yield will be about 7 half pints.

Mulberry Jelly

You will need 3 pounds of ripe mulberries, ½ cup lemon juice, 7 cups of sugar and 2 packets of liquid pectin. Wash and sort berries; remove stems. Put mulberries in a saucepan and crush. Heat gently until juice starts to flow. Cover and simmer for 15 minutes. Place in jelly bag and squeeze out juice. Measure 3 cups of juice into a very large pot; add lemon juice and sugar and mix well. Bring quickly to a hard boil over high heat, stirring constantly. Add pectin all at once. Bring to a full rolling boil, (a boil that cannot be stirred down); boil hard for one minute, stirring constantly. Remove from heat; skim off foam with a metal spoon. Pour at once into clean, hot jars, leaving only ¼ inch headspace. Wipe rims of jars with a dampened clean paper towel; adjust two-piece metal canning lids. Process in a boiling water canner.

Fruit

Preparing and Using Syrups

Measures of water and Sugar

		For 9-Pint Load*		**For 7-Qt Load**		
Syrup Type	**Approx % Sugar**	**Cups Water**	**Cups Sugar**	**Cups Water**	**Cups Sugar**	**Fruits Commonly Packed in Syrup ****
Very Light	10%	6-1/2	3/4	10-1/2	1-1/4	Approximates natural sugar levels in most fruits and adds the fewest calories.
Light	20%	5-3/4	1-1/2	9	2-1/4	Very sweet fruit. Try a small amount the first time to see if your family likes it.
Medium	30%	5-1/4	2-1/4	8-1/4	3-1/4	Sweet apples, sweet cherries, berries, grapes.
Heavy	40%	5	3-1/4	7-3/4	5-1/4	Tart apples, apricots, Sour cherries, gooseberries, nectarines, peaches, pears, plums.
Very Heavy	50%	4-1/4	4-1/4	6-1/2	6-3/4	Very sour fruit. Try a small amount for the first time to see if your family will like it.

* This amount is also adequate for a 4-quart load.

**Many fruits that are typically packed in heavy syrup are excellent and tasteful products when packed in lighter syrups. It is recommended that lighter syrups be tried, since they contain fewer calories than the added sugar.

Procedure: Heat water and sugar together. Bring to a boil and pour over raw fruits in jars. For hot packs, bring water and sugar to boil, add fruit, reheat to boil, and fill into jars immediately.

Fruit

Ascorbic Acid ᏧᎾᏕᏅᏗ / ᎤᏓᏅᏗ

Commercially prepared mixes of ascorbic and citric acid are seasonally available among canners' supplies in supermarkets. Sometimes citric acid powder is sold in supermarkets, but it is less effective in controlling discoloration. If you choose to use these products, follow the manufacturer's directions.

Apples ᏒᏍᏔ

An average of 19 pounds is needed per canner load of 7 quarts; an average of 12-1/4 pounds is needed per canner load of 9 pints. Select apples that are juicy, crisp, and preferably both sweet and tart.

Wash, peel, and core apples. To prevent discoloration, slice apples into water containing ascorbic acid (see note above). Raw packs make poor quality products. Place drained slices in a large saucepan and add 1 pint water or very light, light syrup per 5 pounds of sliced apples. Boil 5 minutes stirring occasionally to prevent burning. Fill hot jars with hot slices and hot syrup or water, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed.

Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. Use pints or quarts. 0-1,000 ft-20 minutes, 1,001-3,000 ft-25 minutes, 3,001-6,000ft 30 minutes, above 6,000 feet 35 minutes.

			Canner Pressure (PSI)	Process time at altitudes of			
Type of Fruit	**Style of Pack**	**Jar Size**		**0-2,000 ft**	**2,001 - 4,000 ft**	**4,001 - 6,000 ft**	**6,001 - 8,000 ft**
Apple Sauce	**Hot**	**Pints** **Quarts**	**8** **10**	**6** **6**	**7** **7**	**8** **8**	**9** **9**
Berries	**Hot**	**Pints or Quarts**	**8**	**6**	**7**	**8**	**9**
Whole Cherries	**Hot**	**Pints** **Quarts**	**8** **10**	**6** **6**	**7** **7**	**8** **8**	**9** **9**
Fruit Purees	**Hot**	**Pints or Quarts**	**8**	**6**	**7**	**8**	**9**
Peaches	**Hot**	**Pints or Quarts**	**10**	**6**	**7**	**8**	**9**
Pears	**Hot**	**Pints or Quarts**	**10**	**6**	**7**	**8**	**9**
Rhubarb	**Hot**	**Pints or Quarts**	**8**	**6**	**7**	**8**	**9**

Fruit

Applesauce ᎠᏕᎾᏍ ᏒᏕᎳ

An average of 21 pounds is needed per canner load of 7 quarts; an average of 13-1/2 pounds is needed per canner load of 9 pints. A bushel weighs 48 pounds and yields 14 to 19 quarts of sauce- an average of 3 pounds per quart.

Wash, peel, and core apples (peeling is not necessary but it will make the sauce more textured). If desired, slice apples into water containing ascorbic acid to prevent browning.

Place drained slices in an 8-to-10-quart pot. Add ½ cup water. Stirring occasionally to prevent burning, heat quickly until tender (5 to 20 minutes depending on the maturity and variety).

Use an immersion blender and process the sauce, or if you prefer chunk style sauce just leave. Sauce may be packed without sugar. If desired, add 1/8 cup of sugar per quart of sauce. Taste and add more, if preferred.

Reheat sauce to a rolling boil. Fill hot jars with hot sauce, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

To process 0-1,000 feet (pints 15 minutes, quarts 20 minutes); 1,001-3,000 feet (pints 20 minutes, quarts 25 minutes); 3,001-6,000 feet (pints 20 minutes, quarts 30 minutes); Above 6,000 feet (pints 25 minutes, quarts 35 minutes).

Berries - Whole ᎤᏓᏔᏍ - ᎤᏂᏃᏍᏓᏓ

Blackberries, blueberries, currants, dewberries, elderberries, gooseberries, huckleberries, mulberries, raspberries. An average of 12 pounds is needed per canner load of 7 quarts; an average of 8 pounds is needed per canner load of 9 pints. Choose ripe, sweet berries with uniform color.

Wash 1 or 2 quarts of berries at a time. Drain, cap, and stem if necessary. Prepare and boil your preferred syrup (see page on syrups), if desired. Add ½ cup syrup, juice, or water to each clean jar. Hot pack your berries in boiling water for 30 seconds and drain. Fill hot jars and cover with hot juice, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with dampened clean paper towel. Adjust lids and process.

Recommended process time for berries, whole in a boiling water canner for pints or quarts: 0-1,000 feet 15 minutes, 1,001-3,000 feet 20minutes, 3,001-6,000 feet 20 minutes, above 6,000 feet 25 minutes.

Fruit

Cherries - Whole ᏔᏬ - ᎤᏂᏃᏍᏝ

Sweet or Sour. An average of 17 ½ pounds is needed per canner load of 7 quarts; an average of 11 pounds is needed per canner load of 9 pints. A lug weighs 25 pounds and yields 8 to 12 quarts an average of 2 ½ pounds per quart. Select bright, uniformly colored cherries that are mature (of ideal quality for eating fresh or cooking).

Stem and wash cherries. Remove pits if desired. If canned unpitted, prick skins on opposite sides with a clean needle to prevent splitting. Cherries may be canned in water, apple juice, white grape, or syrup. In a large saucepan add ½ cup water, juice, or syrup for each quart of drained fruit and bring to a boil. Fill hot jars with cherries and cooking liquid, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rim of jars with a dampened clean paper towel. Adjust lids and process. Recommended process time for Cherries, whole in a boiling-water canner. FOR PINTS 0-1,000 ft. 15 minutes, 1,001-3,000 ft. 20 minutes, 3,000-6,000ft 20 minutes, Above 6,000 feet 25 minutes. FOR QUARTS 0-1,000 ft. 20 minutes, 1,001-3,000 feet 25 minutes, 3,001-6,000 feet 30 minutes, Above 6,000 feet 35 minutes.

Fruit Purees ᎤᏪᏍᎩᏢ ᎤᏝᏩᏅ

These recommendations should not be used with bananas, tomatoes, cantaloupe, and other melons, papaya, ripe mango or coconut. There are no home recipes recommendations available for purees of these products.

Stem, wash, drain, peel, and remove pits if necessary. Measure fruit into large saucepan. Crushing slightly if desired. Add 1 cup hot water for each quart of fruit. Cook slowly until fruit is soft, stirring frequently. Press through sieve or food mill. If desired for flavor, add sugar to taste. Reheat pulp to boil, or until sugar dissolves if added. Fill hot into hot jars, leaving ¼ inch head space. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean towel. Adjust lids and process. Recommended process time for Fruit Purees in a boiling water canner. For pints or quarts 0-1,000 feet 15 minutes, 1,001-6,000 feet 20 minutes, Above 6,000 feet 25 minutes.

Fruit

Peaches - Halved or Sliced ᏆᎾ - ᎠᏰᏢ ᏗᏍᏉᏁᏓ ᎠᎴ ᏗᏍᏁᏓᏁᏓ

An average of 17 ½ pounds is needed per canner load of 7 quarts; an average of 11 pounds is needed per canner load of 9 pints. A bushel weighs 48 pounds and yields 16-24 quarts and average of 2 ½ pounds per quart.

Choose ripe, mature fruit of ideal quality for eating fresh or cooking. Dip fruit into boiling water for 30-60 seconds until skin loosens. Dip quickly in cold water and slip off skins. Cut in half, remove pits and slice if desired. To prevent darkening, keep peeled fruit in ascorbic acid solution. Prepare and boil a very light, light, or medium syrup. Or pack peaches in water, apple juice, or white grape juice.

Remove air bubbles and adjust headspace if needed. Wipe rim of jars with dampened clean paper towel. Adjust lids and process.

Recommended process time for Peaches, halved or sliced in boiling water canner. For PINTS 0-1,000 feet 20 minutes, 1,001-3,000 25 minutes, 3,001-6,000 feet 30 minutes, above 6,000 feet 35 minutes. QUARTS 0-1,000 feet 25 minutes, 1,001-3,000 feet 30 minutes, 3,001-6,000 feet 35 minutes, above 6,000 feet 40 minutes.

Pears ᏎᏗᎢᎶᎾᏫᏗ

An average of 17 ½ pounds is needed per canner load of 7 quarts; an average of 11 pounds is needed per canner load of 9 pints. A bushel weighs 50 pounds and yields 17 to 25 quarts and average of 2 ½ pounds per quart. Choose ripe, mature fruit of ideal quality for eating fresh or cooking.

Wash and peel pears. Cut lengthwise in halves and remove core. A melon baller or metal measuring spoons is suitable for coring pears. To prevent discoloration, keep pears in an ascorbic acid solution. Prepare in very light, light, or medium syrup or pack pears in apple juice, white grape juice, or water. Boil drained pears in 5 minutes in syrup, juice, or water. Fill hot jars with hot fruit and cooking liquid, leaving ½ 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 pears, halved in boiling water. PINTS 0-1,000 feet 20 minutes, 1,001-3,000 25 minutes, 3,001-6,000 feet 30 minutes, above 6,000 feet 35 minutes. QUARTS 0-1,000 feet 25 minutes, 1,001-3,000 feet 25 minutes, 3,001-6,000 feet 35 minutes, above 6,000 feet 40 feet.

Pie Filling

Apple Pie Filling RSW ÞPoƉY SGJ

Quantities of Ingredients Needed:

	1 Quart	7 Quarts
Blanched, sliced fresh apples	3-½ cups	6 quarts
Granulated Sugar	¾ cup+2 tbsp.	5 ½ cups
Clear Jel	¼ cup	1 ½ cups
Cinnamon	½ tsp.	1 tbsp.
Cold water	½ cup	2 ½ cups
Apple Juice	¾ cups	5 cups
Bottled Lemon Juice	2 tbsp.	¾ cups
Nutmeg (optional)	1/8 tsp	1tsp.

Use firm, crisp apples. Stayman, Golden Delicious, Rome, and other varieties of similar quality are suitable. If apples lack tartness, use an additional ¼ cup of lemon juice for each 6 quarts of slices.
Yield 1 or 7 quarts. See table above.

Wash, peel, and core apples. Prepare slices ½inch wide and place in water containing ascorbic acid (find commercially available product and follow directions) to prevent browning. For fresh fruit, place 6 cups at a time in a gallon of boiling water. Boil each batch 1 minute after the water returns to a boil. Drain but keep heated fruit in a covered bowl or pot.

Combine sugar, Clear Jel and cinnamon in a large kettle with water and apple juice. If desired add nutmeg. Stir and cook on medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil for 1 minute, stirring constantly.

Fold in drained apples immediately and fill hot jars with mixture without delay, leaving 1 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with dampened clean paper towel. Adjust lids and process immediately.

Recommended process time for Apple pie filling in a boiling water canner. Pack Hot in Pints or quarts. 0-1,000 feet 25 minutes, 1,001-2,000 feet 30 minutes, 3,001-6,000 feet 35 minutes, above 6,000 feet 40 minutes.

Pie Filling

Blueberry Pie Filling ᚩᚷᚩ ᚦᚹᚩᚤ ᛊᚷᛇ

Quantities of Ingredients Needed:

	1 Quart	7 Quarts
Fresh or thawed blueberries	3-½ cups	6 quarts
Granulated Sugar	¾ cup+2 tbsp.	6 cups
Clear Jel	¼ cup+1 tbsp.	2 ¼ cups
Cold water	½ cup	2 ½ cups
Bottled Lemon Juice	2 tbsp.	¾ cups

Select fresh, ripe, and firm blueberries. Unsweetened frozen blueberries may be used. If sugar has been added, rinse it off while fruit is still frozen. Yield 1 quart or 7quarts. Wash and drain fresh blueberries. For fresh fruit, place 6 cups at a time in 1-gallon boiling water. Boil each batch 1 minute after the water returns to a boil. Drain but keep heated fruit in a covered bowl or pot.

Combine sugar and Clear Jel in a large kettle. Stir. Add water and if desires, food coloring. Cook on medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil for 1 minute, stirring constantly.

Fold in drained berries immediately and fill hot jars with mixture without delay, 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 immediately.

Pie Filling

Cherry Pie Filling ᚹᚩ ᚦᚩᛞᚣ ᛊᚷᛇ

Quantities of Ingredients Needed:

	1 Quart	7 Quarts
Fresh or thawed sour cherries	3-½ cups	6 quarts
Granulated Sugar	1 cup	7 cups
Clear Jel	¼ cup + 1tbsp	1 ¾ cups
Cold water	1 1/3 cup	9 1/3 cups
Bottled Lemon Juice	1 tbsp. + 1tsp	1/2 cups
Cinnamon (optional)	1/8 tsp.	1tsp.
Almond extract (optional)	¼ tsp	2 tsp.

Select fresh, very ripe, and firm cherries. Unsweetened frozen cherries may be used. If sugar has been added, rinse it off while the fruit is still frozen. Yield 1 or 7 quarts.

Rinse and pit fresh cherries and hold them in cold water. To prevent the stem end from browning use ascorbic acid solution that you can buy in your grocery store. For fresh fruit place 6 cups at a time in 1-gallon boiling water. Boil each batch 1 minute after the water returns to a boil. Drain but keep heated in a covered pot or bowl.

Combine sugar and Clear Jel in a large saucepan and add water. If desired, add cinnamon and almond extract. Stir mixture and cook over medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil for 1 minute, stirring constantly. Fold in drained cherries immediately and fill hot jars with mixture without delay, leaving 1 inch head space. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process immediately.

Recommended process time for Cherry Pie filling in a boiling water canner. Process time at altitudes of (in pints or quarts) 0-1,000 feet 30 minutes, 1,001-3,000 feet 35 minutes, 3,001-6,000 feet 40 minutes, and above 6,000 feet 45 minutes.

Pie Filling

Peach Pie Filling [illegible]

Quantities of Ingredients Needed:

	1 Quart	7 Quarts
Sliced Fresh peaches	3-½ cups	6 quarts
Granulated Sugar	1 cup	6 cups
Clear Jel	¼ cup+1 tbsp.	2 ¼ cups
Cold water	¾ cup	2 ½ cups
Bottled Lemon Juice	¼ cup	¾ cups
Cinnamon (optional)	1/8 tsp.	1 tsp.
Almond extract (optional)	¼ tsp.	1 ¾ cups

Select ripe, but firm fresh peaches. Yield's 1 quart or 7 quarts. Peel peaches. To loosen skins, submerge peaches in boiling water for approximately 30-60 seconds, and then place them in cold water for 20 seconds. Slip off skins and prepare slices ½ inch think.

Place slices in water containing ½ teaspoon of ascorbic acid crystals or 500 milligram vitamin C tablets in 1 gallon of water to prevent browning. For fresh fruit, place 6 cups at a time in 1 gallon of boiling water. Boil each batch 1 minute after the water returns to a boil. Drain but keep heated fruit in a covered bowl or pot.

Combine water, sugar, Clear Jel, and if desired, cinnamon and or almond extract in a large kettle. Stir and cook over medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil sauce 1 minute more, stirring constantly. Fold in drained peach slices and continue to heat mixture for 3 minutes. Fill hot jars without delay, leaving 1 inch head space. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process immediately.

Recommended process time for Peach Pie Filling in a boiling water canner. Pack Hot, Pints or Quarts 0-1,000 feet 30 minutes, 1,000 feet to 3,000 feet 35 minutes, 3,000-6,000

Canning Tomato Products
ᏅᏬᎫᎾᏫᏗ ᏗᏕᎶᏁᏗ

General Information About Canning Tomatoes

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

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 ½ teaspoons of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or ¼ teaspoon of citric acid. Acid can be added directly to the jars before filling with product. Add sugar to offset the taste, if desired.

When a procedure in this guide for canning tomatoes offers both boiling water and pressure canning options, all steps in the preparation 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.

Use of 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.

Canning Tomato Products
ᎤᏅᎫᎯᏍᏓᏗ ᏗᎦᎶᏁᏗ

Tomatoes crushed (with no liquid added) ᎤᏅᎫᎯᏍᏓᏗ ᏗᎦᏞᏫᏞᏅ (ᎠᎹ ᏗᏜᏴᏅ ᏂᎨᏒᎾ)

Crushed tomatoes will make a high-quality product, ideally suited for use in soups, stews, and casseroles. 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 17-20 quarts of crushed tomatoes, an average of 2 ¾ pounds per quart.

Wash tomatoes and dip in boiling water for 30-60 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 the 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 for 5 minutes. Add bottled lemon juice or citric acid to jars. See acidification directions in the general information about tomatoes.

Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars immediately with hot tomatoes, leaving ½ inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Remember to add acidifications for all canning options.

Recommended process time for water packed whole tomatoes in a boiling water canner. Hot packed Pints 0-1,000 feet 40 minutes, 1,001-3,000 feet 45 minutes, 3,001-6,000 feet 50 minutes, 6,000+ feet 55 minutes. Quarts 1-1,000 feet 45 minutes, 1,001-3,000 feet 50 minutes, 3,001-6,000 feet 55 minutes, above 6,000 feet 60 minutes.

Recommended process time for Water Packed Whole tomatoes in a dial gauge pressure canner. Hot packed Pints Process time 15 minutes: 0-2,000 feet 6lb, 2,001-4,000 feet 7lbs, 4,001-6,000 feet 8lbs., 6,001-8,000 feet 9lbs. Quarts Process time 10 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommended process time for water packed whole tomatoes in a weighted-gauge pressure canner. Hot packed. Pints process time 15 minutes. 0-1,000 feet 5 pounds, above 1,001 10 pounds. Quarts process time 10 minutes. 0-1,000 feet 15 pounds, above 1,000 feet 15 pounds.

Canning Tomato Products
ᎤᏅᎫᎯᏍᏛᏗ ᏗᏕᎶᏁᏗ

Standard tomato Sauce
ᏰᎵᏍᏙ ᏗᏁᎵᎽ ᎤᏅᎫᎯᏍᏛᏗ ᎠᏬᏰᏗ

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 10-12 quarts 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 7-9 quarts of thick sauce (an average of 6 ½ pounds per quart).

Prepare and press as for making tomato juice. Simmer in large-diameter sauce pan until sauce reaches desired consistency. Boil until volume is reduced by about 1/3 for thin sauce, or by ½ for thick sauce. **Add bottled lemon juice or citric acid to jars.** Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars, leaving ¼ 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).

Recommended process time for Standard Tomato Sauces in boiling water canner. Pack Hot in **Pints** 0-1,000 feet 35 minutes, 1,001-3,000 feet 40 minutes, 3,001-6,000 feet 45 minutes, above 6,000 feet 50 minutes. **Quarts** 0-1,000 feet 40 minutes, 1,001-3,000 feet 45 minutes, 3,001-6,000 feet 50 minutes, above 6,000 feet 55 minutes.

Recommended process time for Standard Tomato Sauce in a dial gauge pressure canner. Hot packed **Pints** Process time 20 minutes: 0-2,000 feet 6lb, 2,001-4,000 feet 7lbs, 4,001-6,000 feet 8lbs., 6,001-8,000 feet 9lbs. **Quarts** Process time 15 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Standard Tomato Sauce in a weighted gauge pressure canner.

Hot packed. **Pints** process time 20 minutes. 0-1,000 feet 5 pounds, above 1,001 10 pounds. **Quarts** process time 15 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

Canning Tomato Products

Spaghetti Sauce without Meat

Ingredients:

- 30 pounds of tomatoes
- 1 cup chopped onions
- 5 cloves garlic, minced
- 1 cup chopped celery or green peppers
- 1-pound fresh mushrooms, sliced or diced
- 4 ½ teaspoon of salt
- 2 tbsp oregano
- 4 tbsp minced parsley
- 2 tsp black pepper
- 2 tbsp sugar
- 2 tbsp vegetable oil

Procedure: CAUTION: DO NOT INCREASE THE PROPORTION OF ONIONS, PEPPERS, OR MUSHROOMS Wash tomatoes and dip in boiling water for 30-60 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. Sauté onions, garlic, celery or peppers, and mushrooms (if desired) in vegetable oil until tender. Combine 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 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 canner.
Hot packed **Pints** Process time 20 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. **Quarts** Process time 25 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Standard Tomato Sauce in a weighted gauge pressure canner.
Hot packed. **Pints** process time 20 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds.
Quarts process time 25 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

Canning Tomato Products

Spaghetti Sauce with Meat

Ingredients:

- 30 lbs of tomatoes
- 2-2 ½ pounds of ground beef
- 5 cloves of minced garlic
- 1 cup of chopped onions
- 1 cup of chopped celery or green peppers
- 1lb. of diced mushrooms
- 4 ½ tsp of salt
- 2tbsp minced parsley
- 2tbsp of oregano
- 2 tsp of black pepper
- ¼ cup of brown sugar

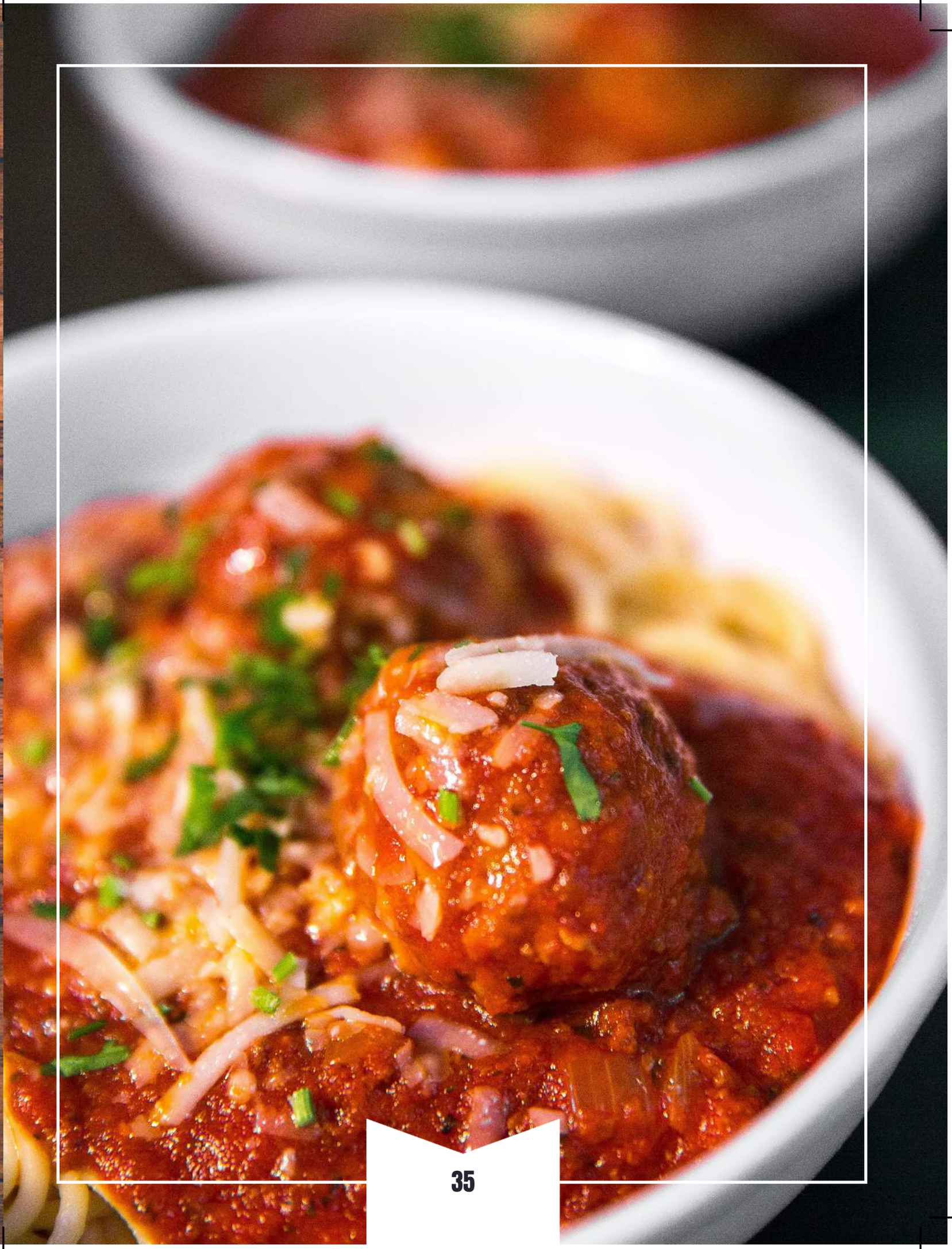
Yields about 9 pints. **CAUTION: DO NOT INCREASE THE PROPORTION OF ONIONS, PEPPERS, OR MUSHROOMS** Wash tomatoes and dip in boiling water for 30-60 seconds or until skins split. Dip in cold water and slip off skins. Remove cores and quarter tomatoes. Boil for 20 minutes, uncovered, in large saucepan. Put through food mill or sieve. Sauté beef or sausage until brown. Add garlic, onion, celery or green pepper, and mushrooms. 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 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 dampened clean paper towel. Adjust lids and process.

Recommended process time for Spaghetti Sauce with Meat in a dial gauge canner.

Hot packed **Pints** Process time 60 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. **Quarts** Process time 70 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Standard Tomato Sauce in a weighted gauge pressure canner.

Hot packed. **Pints** process time 60 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds. Quarts process time 70 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.



Salsa Recipes

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 vined 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.

Salsa Recipes

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 for some or all the chilies. Canned chiles may be used in place of fresh. However, DO NOT INCREASE THE TOTAL AMOUNT 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. This will result in changing the final acidity of the mixture and a potentially unsafe canned salsa.

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.

Spices and Herbs

add a 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.

Onions

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

You may change the amount of spices, if desired.
DO NOT CAN SALSAS THAT DO NOT FOLLOW THESE OR OTHER TESTED RECIPES.

Salsa Recipes
ᎠᎴᎯᏍᏛᏓᏅ ᎠᎸᏯᎾ ᎠᏓᏎᎵᎯ

Roma Tomato Salsa (thicker salsa)
ᎶᎻ ᎤᏅᏗᎯᏍᏛᏁ ᎠᎸᏯᎾᎢ (ᎠᏂᏍᏛᏓ)

Ingredients:

- 7 quarts peeled, cored, chopped Roma tomatoes
- 4 cups seeded, chopped long green chilies
- 5 cups chopped onion
- ½ cup seeded, finely chopped jalapeno peppers
- 6 cloves garlic, finely chopped
- 2 cups bottled lemon or lime juice
- 2 tbsp salt
- 1 tbsp black pepper
- 1 tbsp ground cumin (optional)
- 3 tbsp oregano leaves (optional)
- 2 tbsp fresh cilantro (optional)

Yield: About 16 to 18 pints

Procedure: **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 chili peppers as described on prior page. Wash tomatoes and dip in boiling water for 30-60 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 ½ 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 Standard Tomato Salsa using Roma tomatoes in boiling water canner. Pack Hot in **Pints** 0-1,000 feet 15 minutes, 1,001-3,000 feet 20 minutes, 3,001-6,000 feet 25 minutes, above 6,000 feet 50 minutes.

Salsa Recipes
ᎠᏅᎯᏍᏛᏓᏙ ᎠᏮᏫᎾ ᎠᏓᏎᏢᎯ

Slicing Tomato Salsa (thinner salsa)
ᏁᏫᎾᎰᏍᏛᏁ ᏬᏙᏧᎯᏍᏛᏁ ᎠᏮᏫᎾ (ᏑᎰᎠᎰᎢ)

Ingredients:

- 4 cups peeled, cored, and chopped tomatoes
- 2 cups seeded, chopped long green chilies
- ½ cup seeded, chopped jalapeno peppers
- ¾ cup chopped onion
- 4 garlic cloves, 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

Yields about 4 pints

Procedure: **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 chili peppers. Wash tomatoes and dip in boiling water for 30-60 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 1/2inch 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 Standard Tomato Salsa using Slicing Tomatoes in boiling water canner.
Pack Hot in **Pints** 0-1,000 feet 15 minutes, 1,001-3,000 feet 20 minutes, 3,001-6,000 feet 25 minutes, above 6,000 feet 50 minutes.

BEETS

ᎩᏚᏲ ᎠᏂᏝᏬᎩ

By Christine Kanott and Lisa Taylor

An average of 21 pounds (without tops) is needed per canner load of 7 quarts; an average of 13 ½ pounds is needed per canner load of 9 pints. Beets with a diameter of 1 to 2 inches are preferred for whole packs. Beets larger than 3 inches in diameter are often fibrous.

Trim off beet tops, leaving an inch of stem and roots to reduce bleeding of color. Scrub well. Cover with boiling water. Boil until skins slip off easily; about 15 to 25 minutes depending on size. Cool, remove skins, and trim off stems and roots. Leave baby beets whole. Cut medium or large beets into ½ cubes or slices. Halve or quarter very large slices. Add 1 teaspoon of salt per quart to the jar if desired. Fill hot jars with hot beets and fresh hot water; with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Beets in a dial gauge canner.

Hot packed Pints Process time 30 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. Quarts Process time 35 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Beets in a weighted gauge pressure canner.

Hot packed. Pints process time 30 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds. Quarts process time 35 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

Vegetables

Corn - Whole Kernel 4M - OhZoU JGSR

An average of 31-1/2 pounds (in husks) of sweet corn is needed per canner load of 7 quarts; an average of 20 pounds is needed per canner load of 9 pints. A bushel weights 35 pounds and yields 6-11 quarts-an average of 4 ½ pounds per quart.

Select ears containing slightly immature kernels of ideal quality for eating fresh. Canning of some sweeter varieties, or too immature kernels may cause browning. Can a small about, check color and flavor before canning large quantities.

Husk corn, remove silk, and wash. Blanch 3 minutes in boiling water. Cut corn from cob at about ¾ the depth of the kernel.

CAUTION!!!! DO NOT SCRAPE COB

Hot pack- To each clean quart of kernels in a saucepan, add 1 cup of hot water, heat to boiling and simmer 5 minutes. Add 1 teaspoon of salt per quart to the jar, if desired. Fill hot jars with corn and cooking liquid, leaving 1 inch headspace.

Recommended process time for Whole Kernel Corn in a dial gauge canner.

Hot packed Pints Process time 55 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. Quarts Process time 85 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Whole Kernel Corn in a weighted gauge pressure canner.

Hot packed. Pints process time 55 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds. Quarts process time 85 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

Vegetables

Creamed Corn 4M DSO

An average of 20 pounds (in husks) of sweet corn is needed per canner load of 9 pints. A bushel weighs 35 pounds and yields 12-20 pints. An average of 2 ¼ pounds per pint. Select ears containing slightly immature kernels, or of ideal quality for eating fresh.

Husk Corn, remove silk, and wash ears. Blanch ears 4 minutes in boiling water. Cut corn from cob at about the center of kernel. Scrape remaining corn from cobs with the table knife.

Hot pack- to each quart of corn and scrapings, in a saucepan, add two cups of boiling water. Heat to boiling. Add ½ teaspoon salt to each jar, if desired. Fill hot pint jar with hot corn mixture, leaving 1 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with dampened clean paper towel. Adjust lids and process.

Recommended process time for Cream Style Corn in a dial gauge canner.
Hot packed Pints Process time 85 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs.

Recommend process time for Cream Style Corn in a weighted gauge pressure canner.
Hot packed. Pints process time 85 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds.

Mushrooms Whole or Sliced LOP - OhZWL DS JSVMB

An average of 14 ½ pounds is needed per canner load of 9 pints; an average of 7 ½ pounds is needed per canner load of 9 half pints – an average of 2 pounds per pint. Select only brightly colored, small to medium size domestic mushrooms with short stems; tight veils (unopened caps), and no discoloration.

The USDA cautions against canning wild mushrooms.

Trim stems and discolored parts. Soak in cold water for 10 minutes to remove dirt. Wash in clean water. Leave small mushrooms whole; cut large ones. Cover with water in a saucepan and boil for 5 minutes. Fill hot jars with hot mushrooms, leaving 1 inch headspace. Add ½ teaspoon of salt per pint to the jar, if desired. For better color, add 1/8 teaspoon of ascorbic acid powder, or a 500 milligram tablet of vitamin C. Add fresh hot water, 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 Mushrooms in a dial gauge canner.
Hot packed Half Pints or Pints Process time 45 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs.

Recommend process time for Mushrooms in a weighted gauge pressure canner.
Hot packed. Half Pints or Pints process time 45 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds.

Vegetables

Mixed Vegetables

ᏗᏁᏍᏚᏓᎾᏍ ᎠᏫᏒᎾᏍ ᎤᏮᏍᏒᎯ

Ingredients:

- 6 cups sliced carrots
- 6 cups cut; whole kernel sweet corn
- 6 cups cut green beans
- 6 cups shelled lima beans
- 4 cups whole or crushed tomatoes
- 4 cups diced zucchini

Optional mix: You may change the suggested proportions or substitute other favorite vegetables except **leafy greens, dried beans, cream style corn, squash and sweet potatoes.**

Except for zucchini, wash and prepare vegetables as described previously for each vegetable. Wash, trim, and slice or cube zucchini; combine all vegetables in a large pot or kettle and add enough water to cover pieces. Add 1 teaspoons salt per quart to the jar, if desired. Boil 5 minutes and fill hot jars with hot pieces and liquid; leaving 1 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with dampened clean paper towel. Adjust lids and process.

Recommended process time for Mixed Vegetables in a dial gauge canner.

Hot packed Pints Process time 75 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. Quarts Process time 90 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Mixed Vegetables in a weighted gauge pressure canner.

Hot packed. Pints process time 75 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds. Quarts process time 90 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

PEPPERS

ᎤᏂᏲᎢ - ᎤᎾᏓᏅᎩ ᎠᏎ ᎤᏂᏕᎾᏍᏓᏁ

*****Hot or Sweet, including chiles, jalapeno, and pimento.**

An average of 9 pounds is needed per canner load of 9 pints. A bushel weighs 25 pounds and yields 20-30 pints, an average of 1 pound per pint. Select firm yellow, green, or red peppers. Do not use soft of diseased peppers.

Select your favorite peppers.

IF YOU CHOOSE, HOT PEPPERS, 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.

Small peppers may be left whole. Large peppers may be quartered. Remove cores and seeds. Slash two or four slits in each pepper, and either blanch in boiling water or blister skins using one of two methods:

- Oven or broiler method to blister skins. Place peppers in a hot oven (400F) or broiler for 6-8 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 damp cloth.
(This will make peeling peppers easier.)

POLK GREENS

GAILY DIGS

By Christine Kanott and Lisa Taylor

When picking polk salad greens, pick the top 12 inches of the plant and stem. You want to make sure to get the tender parts. **Pick polk salad when green (NOT RED).** Wash only small amounts of greens at one time. Drain water and continue rinsing until water is clear and free of grit. Cut up greens and stalks in about one inch (or bite sized pieces). Toss out the original inch of the stalk that you cut from the plant. That piece will look brown and make your canned product look different.

Blanch greens for 15 minutes. Add ½ teaspoon of salt to each quart jar. Fill hot sterilized jars with greens and add fresh boiling water after you have packed the jars tight. Make sure to leave one 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 Greens in a dial gauge canner.

Hot packed **Pints** Process time 70 minutes: 0-2,000 feet 11lb, 2,001-4,000 feet 12lbs, 4,001-6,000 feet 13lbs., 6,001-8,000 feet 14lbs. **Quarts** Process time 90 minutes. 0-2,000 feet 11lbs, 2,001-4,000 feet 12 pounds, 4,001-6,000 feet 13 pounds, 6,001-8,000 feet 14 pounds.

Recommend process time for Greens in a weighted gauge pressure canner.

Hot packed. **Pints** process time 70 minutes. 0-1,000 feet 10 pounds, above 1,001 15 pounds. Quarts process time 90 minutes. 0-1,000 feet 10 pounds, above 1,000 feet 15 pounds.

!!! If you want a real treat, cut the stem off the a whole jalapeno or cayenne pepper and place it in the jar before your process it. "you will get a tiny sizzle when you eat your pickled beet"

Hominy Without Lye

USDA Extension Service used to have home canning directions for lye hominy. This procedure was removed from the publications in the 1980's due to poor availability of food grade lye, concerns over the safety of handling lye in the home, and lack of popular interest. The directions have remained in print in the University of Georgia's So Easy to Preserve book. Food grade lye is not something you purchase over the counter in stores, and it is not easy to locate. It is also very expensive and extremely hazardous to use. For that reason, we no longer recommend using it in the old USDA/So Easy to Preserve home canning directions for making hominy. After reviewing several sources and talking to someone who has made lye hominy in the past, we are offering a recommendation which removes the hulls from the corn with a baking soda solution instead of lye. Be advised we have not tested the quality of the hominy made this way. In fact, since this product is still somewhat high risk unless rinses are performed very thoroughly, and this process is so time consuming and involves such a large quantity of heat and water resources, it is more advisable to purchase commercially produced canned hominy.

First, the original procedure, from So Easy to Preserve,4th ed. (Cooperative Extension Service, The University of Georgia, 1999, p. 66):

(Original) Lye Hominy

(about 6 quart jars)

Hot Pack - Prepare lye hominy in a well ventilated room. Place 2 quarts of dry field corn in an enamel pan; add 8 quarts of water and 2 ounces of lye. Boil vigorously for 30 minutes, then allow to stand for 20 minutes. Rinse off lye with several hot water rinses. Follow with cold water rinses to cool for handling. It is very important to rinse the corn thoroughly.

Work hominy with hands until the dark tips of kernels are loosened from the rest of the kernel (about 5 minutes). Separate the tips from the corn by floating them off in water or by placing the corn in a coarse sieve and washing thoroughly.

Add sufficient water to cover the hominy by about 1 inch. Boil 5 minutes and change the water. Repeat four times. Cook until the kernels are soft (30 to 45 minutes) and drain. Pack hot hominy into hot jars, leaving 1 inch headspace. Add ½ teaspoon salt to pints; 1 teaspoon to quarts, if desired. Fill jars to 1 inch from top with boiling water. Remove air bubbles. Wipe jar rims. Adjust lids and process.

Process in a **Dial Gauge Pressure Canner** at **11** pounds pressure OR in a **Weighted Gauge Pressure Canner** at **10** pounds pressure:

Pints.....60 minutes
Quarts.....70 minutes

Caution! Altitude Adjustments:

In a Dial Gauge Pressure Canner

- At altitudes of 1001-2000 feet, the pressure is not increased; process at 11 pounds pressure.
- At altitudes of 2001-4000 feet, process at 12 pounds pressure.
- At altitudes of 4001-6000 feet, process at 13 pounds pressure.
- At altitudes of 6001-8000 feet, process at 14 pounds pressure.

In a Weighted Gauge Pressure Canner

- At altitudes above 1000 feet, process at 15 pounds pressure.

The substitution recipe we are providing:

HOMINY WITHOUT LYE

Preparing Hominy - Prepare hominy in a well ventilated room. Use 2 Tablespoons of baking soda to 2 quarts of water for 1 quart of dry field corn; you can double the recipe if your stainless steel pot is large enough. Add the baking soda to the water; bring to a boil while stirring to dissolve the baking soda. Then add the dry field corn, stirring continuously to prevent sticking. Boil vigorously for 30 minutes, stirring occasionally. Then allow to stand for 20 minutes. Rinse off the baking soda solution with several changes of hot water. Follow with cold water rinses to cool for handling. It is very important to rinse the corn thoroughly.

Work hominy with hands under running water until the dark tips of kernels are loosened from the rest of the kernel. (When working the hulls to remove the dark tips, do so under running water in a colander so the shelled kernels have little contact with the remaining unshelled corn with hulls that still have baking soda solution on them.) Separate the tips from the corn by placing the corn in a coarse sieve and rinsing thoroughly.

Hot Pack - Add sufficient water to cover the hominy by about 1 inch. Boil 5 minutes and change the water. Repeat this process with clean water each time for 4 more times. In fresh water again, cook the rinsed kernels until the kernels are soft (30 to 45 minutes) and drain. Meanwhile, prepare fresh boiling water to be used when filling jars for canning. Fill the hot hominy into clean, hot jars, leaving 1 inch headspace. Do not shake or press down! Add ½ teaspoon canning salt to pints or 1 teaspoon to quarts, if desired. Fill jars to 1 inch from top with fresh boiling water. Remove air bubbles. Re-adjust headspace if necessary. Wipe jar rims with dampened clean paper towel. Adjust lids and process.

Process in a **Dial Gauge Pressure Canner** at **11** pounds pressure OR in a **Weighted Gauge Pressure Canner** at **10** pounds pressure:

Pints.....60 minutes
Quarts.....70 minutes

Caution! Altitude Adjustments:

In a Dial Gauge Pressure Canner

- At altitudes of 1001-2000 feet, the pressure is not increased; process at 11 pounds pressure.
- At altitudes of 2001-4000 feet, process at 12 pounds pressure.
- At altitudes of 4001-6000 feet, process at 13 pounds pressure.
- At altitudes of 6001-8000 feet, process at 14 pounds pressure.

In a Weighted Gauge Pressure Canner

- At altitudes above 1000 feet, process at 15 pounds pressure.

USDA Nondiscrimination Statement

In accordance with federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex (including gender identity and sexual orientation), religious creed, disability, age, political beliefs, or reprisal or retaliation for prior civil rights activity.

Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication to obtain program information (e.g., Braille, large print, audiotape, American Sign Language), should contact the agency (state or local) where they applied for benefits. Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay Service at (800) 877-8339.

To file a program discrimination complaint, a Complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form which can be obtained online at: https://www.usda.gov/sites/default/files/documents/ad-3027.pdf, from any USDA office, by calling (833) 620-1071, or by writing a letter addressed to USDA. The letter must contain the complainant's name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to:

1. **mail:**
   Food and Nutrition Service, USDA
   1320 Braddock Place, Room 334
   Alexandria, VA 22314; or
2. **fax:**
   (833) 256-1665 or (202) 690-7442; or
3. **email:**
   FNSCIVILRIGHTSCOMPLAINTS@usda.gov

This institution is an equal opportunity provider.

Check out our website for more recipes
and program information: **food.ebci-nsn.gov**