

CAUTION

Because chiles are naturally low in acid, canning them requires special precautions that differ from those followed when canning high-acid fruits. Growth of micro-organisms particularly must be avoided. Some bacteria cause food spoilage, while others produce toxins that cause illness or death. For example, *Clostridium botulinum* is a harmless bacteria in air. In little or no acid, an air-free canning jar, and temperatures between 40°F and 120°F, this bacteria grows and produces a deadly toxin that can cause serious damage to the central nervous system or death when eaten in even minute amounts.

Pressure processing is the only safe way to can chiles and other non-acid foods. Boiling water produces steam. Steam under pressure raises the temperature much higher than it normally would be without pressure. To prevent botulism, the internal temperature of canned chiles and other non-acid foods must reach 240°F. This guide provides the correct processing times and canner pressures for canning chiles safely in New Mexico.

To prevent the risk of botulism, chiles and other low-acid and tomato foods **not** canned according to the 1994 USDA recommendations in this guide should be boiled even if no signs of spoilage are detected. Boil food for a full 10 minutes at altitudes below 1,000 feet. Add an additional minute of boiling time for each 1,000 feet of elevation. Boiling destroys botulism toxin. If in doubt, always boil foods before tasting.

At Altitude (ft)	Boil Foods (minutes)
2,000–2,999	12
3,000–3,999	13
4,000–4,999	14
5,000–5,999	15
6,000–6,999	16
7,000–7,999	17
8,000–8,999	18
9,000–9,999	19

SELECTING AND PREPARING CHILES

Selecting Chiles

Select chiles that are mature, heavy for their size, smooth and symmetrical, bright green in color, fresh, and crisp. Avoid misshapen pods, shriveled skin, mold, soft spots, and bruises. Approximately 9 pounds of chiles will make 9 pints of canned chiles.

Blistering

The tough outer skin must be removed from chiles. Blistering the skin by one of the following methods makes removal easy.

Handling pungent chiles can burn hands and eyes. Protect hands with a thin layer of solid fat or wear rubber gloves. Keep hands away from eyes while working with chiles. Wash hands before and after going to the bathroom and before touching other people, such as picking up a baby.

Wash and dry chiles. With a knife, make a small slit in the side to allow steam to escape. Be sure heat source is very hot. Turn chiles frequently to prevent scorching and ensure even blistering. Remove from heat and spread chiles on a flat surface in a single layer to cool before peeling. For easier peeling, place in a pan and cover with a damp towel for a few minutes.

The following are three heat-source methods for blistering chiles:

Oven or broiler method. Place chiles in a hot oven or broiler 400–450°F for 6–8 minutes until skin blisters so that it can be pulled away from the flesh.

Range top method. Place chiles on a hot electric or gas burner after covering burner with a layer of heavy wire mesh.

Outdoor grill method. Place chiles on a charcoal grill about 5–6 inches above glowing coals.

If chiles are not processed within two hours after blistering, place them in shallow containers in the

refrigerator to prevent spoiling. This applies both to purchased, roasted chiles as well as to those roasted at home.

SALT

If desired, add 1/4 teaspoon of salt per half-pint, or 1/2 teaspoon salt per pint. Salt may be omitted, as it is used only for flavor. For best results, do not use salt substitutes for canning because heat causes some substitutes to become bitter or develop a metallic taste. Instead, add salt substitutes just before serving.

GENERAL CANNING PROCEDURES

Use regular and wide-mouth Mason jars with self-sealing lids held in place by screw-on metal bands. The bands hold the lids in place during the processing and cooling periods.

Mason jars are made from tempered glass to resist high temperatures. Only half-pint and pint jars should be used for canning green chiles.

Inspect jars carefully for cracks or chips; discard faulty ones. Wash jars in hot, soapy water and rinse thoroughly or in the dishwasher. Keep jars hot in the dishwasher, a sink of hot water, or a warm oven until they are filled.

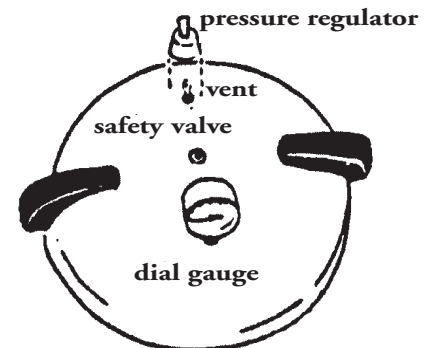
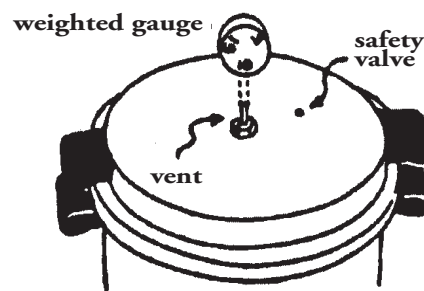
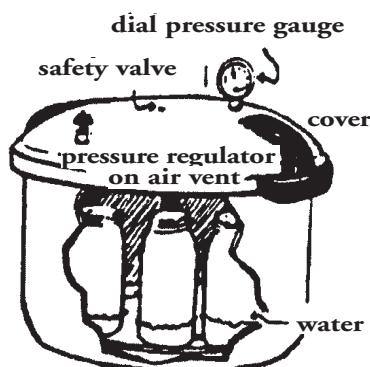
Check metal screw bands for signs of rust or dents. Discard badly corroded or dented bands. Use only new lids and follow manufacturer's directions for preparing lids for canning.

Remove peels, stems, and seeds from chiles. Chiles can be cut in pieces or left whole. Pack chiles loosely and add boiling water. Leave a 1-inch headspace. Using a rubber or plastic spatula or knife that won't nick or scratch the jar, slice between the chiles and the jar to ease out trapped air bubbles.

Use a clean, damp cloth or paper towel to wipe the rim and threads of each jar. Put on a new lid with a screw-on metal band to hold it in place; tighten comfortably. Process using a pressure canner.

FOLLOW THESE STEPS FOR PRESSURE CANNING

1. Put 2–3 inches of hot water in the canner. Place filled jars on the rack using a jar lifter. Fasten canner lid securely.
2. Leave weight off vent port, or open the petcock. Heat at the highest setting until steam flows from the vent port or petcock.
3. Maintain high heat setting, exhaust steam 10 minutes, and then place weight on vent port or close 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 gauge begins to jiggle or rock.
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. Weighted gauges on Mirro canners should jiggle about 2 or 3 times per minute. Gauges on Presto canners should rock slowly throughout the process.
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.** Force cooling may result in food spoilage. Cooling the canner with cold running water or opening the vent port before the canner is fully depressurized will cause loss of liquid from jars and seal failures. Force-cooling also can warp the canner lid of older model canners, causing steam leaks. Depressurization of older models should be timed. Standard-size heavy-walled canners require about 30 minutes when loaded with pints. Newer thin-walled canners cool more rapidly and are



equipped with vent locks. These canners are depressurized 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 2 minutes, unfasten the lid, and remove it carefully. Lift the lid away from you so the steam does not burn your face.
8. Remove jars with a lifter, and place on towel or cooling rack, if desired.

Dial gauges on pressure canners should be checked annually to make sure they are accurate.

Processing Times for Chiles

Jar size	Processing time (minutes)	Pounds of pressure for altitude of			
		2,001–4,000 ft	4,001–6,000 ft	6,001–8,000 ft	8,001–10,000 ft
Half-pint	35	12	13	14	15
Pint	35	12	13	14	15

Note: The above instructions are for dial gauge pressure canners. When using a pressure canner with a weighted gauge in New Mexico, use the 15-pound weight and the time periods given.

TEST FOR JAR SEALS

Remove screw bands when jars have cooled (12–24 hours) and test for vacuum seals by these methods:

- Press the lid center with finger. If the lid springs up when released, it is not sealed.
- Tap the lid with a teaspoon. A sealed jar lid will make a ringing sound.
- Hold the jar at eye level and look across the lid. A sealed jar lid curves down slightly in the center.

REPROCESSING UNSEALED JARS

Remove lids from unsealed jars and discard. Check sealing surface of jar for tiny nicks or cracks. If the jar has defects, discard it and replace with another jar. If not, add a new lid and process for the same amount of time within 24 hours. Unsealed jars can be kept in the refrigerator and the food used within 3–4 days, or remove about an inch of the contents and freeze.

STORING CANNED FOOD

Clean the outsides of sealed, cooled jars. Label with date and contents and store in a cool (50–70°F), dark, dry place away from sun, light, or dampness. Canned chiles are best if eaten within one year.

ACCIDENTAL FREEZING

Freezing can cause food in jars to spoil if the jars become unsealed. Freezing and thawing cause food to soften and lose eating quality. Protect jars from freezing by wrapping with layers of newspapers.

IF CANNED FOOD SPOILS

Examine jars carefully before tasting chiles. Check lids for a vacuum seal. **NEVER** taste food from an unsealed jar.

Signs of food spoilage are streaks and dried food at the top of the jar, swollen lids, broken jar seals, rising air bubbles, and any unnatural color. Other indicators include bad or unnatural odor; spurting liquid; white, blue, green, or black mold; and foaming.

Dispose of any food you suspect of being spoiled. For safety, spoiled canned food and containers may need to be detoxified before disposal. Contact your county Extension office for detoxification instructions.

ALTITUDE ADJUSTMENTS

All communities in New Mexico are above sea level, varying from 3,000 to 10,000 feet, with differences even within a county.

Use the chart on the next page to determine the elevation of your community. Then select safe processing times for canning your chile. The boiling temperature of liquids is lower at higher elevations, so food must be processed longer or at a higher pressure at high altitudes.

Elevations of Cities and Towns in New Mexico

City/Town	Elevation (ft)	City/Town	Elevation (ft)
Alamogordo	4,350	Las Vegas	6,450
Albuquerque	5,000	Logan	3,830
Artesia	3,350	Lordsburg	4,250
Aztec	5,650	Los Alamos	7,400
Bayard	5,800	Los Ranchos de Albuquerque	4,950
Belen	4,800	Lovington	3,900
Bernalillo	5,050	Magdalena	6,556
Bosque Farms	4,864	Melrose	4,599
Carlsbad	3,100	Mora	7,200
Carrizozo	5,450	Mosquero	5,550
Chama	7,900	Mountainair	6,500
Cimarron	6,450	Portales	4,010
Clayton	5,050	Raton	6,650
Cloudcroft	8,650	Reserve	5,749
Clovis	4,300	Rio Rancho	5,290
Columbus	4,020	Roswell	3,600
Corona	6,664	Roy	5,900
Corrales	5,005	Ruidoso	7,000
Cuba	7,000	San Jon	4,200
Deming	4,300	Santa Fe	7,000
Dexter	3,500	Santa Rita	6,300
Eagle Nest	8,250	Santa Rosa	4,600
Elida	4,345	Silver City	5,900
Española	5,600	Socorro	4,600
Estancia	6,100	Springer	5,800
Farmington	5,400	Taos	7,000
Fort Sumner	4,050	Texico	4,150
Gallup	6,500	Tierra Amarilla	7,460
Grants	6,450	Truth or Consequences	4,250
Hobbs	3,650	Tucumcari	4,100
Hurley	5,700	Tularosa	4,500
Jemez Springs	6,200	Vaughn	5,950
Las Cruces	3,900	Wagon Mound	6,200

This publication is intended for use by individuals with a basic understanding of canning procedures. For more detailed information consult the *USDA Complete Guide to Home Canning*, which is available through your local county Extension office.

*Original author: Mae Martha Johnson, former Extension Nutrition Specialist.
Content previously reviewed/revised by Alice Jane Hendley, former Food and Nutrition Specialist.*

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.