

## Pressure Canners (info taken from National Center for Home Preservation/USDA Canning Guide)

[http://www.uga.edu/nchfp/publications/uga/using\\_press\\_canners.html](http://www.uga.edu/nchfp/publications/uga/using_press_canners.html)

[http://www.uga.edu/nchfp/publications/usda/2\\_USDAcanningGuide1\\_06.pdf](http://www.uga.edu/nchfp/publications/usda/2_USDAcanningGuide1_06.pdf)

Pressure canners for use in the home have been extensively redesigned in recent years. Models made before the 1970's were heavy-walled kettles with clamp-on or turn-on lids. They were fitted with a dial gauge, a vent port in the form of a petcock or counterweight, and a safety fuse. Modern pressure canners are lightweight, thin-walled kettles; most have turn-on lids. They have a jar rack, gasket, dial or weighted gauge, an automatic vent/cover lock, a vent port (steam vent) to be closed with a counterweight or weighted gauge, and a safety fuse. Pressure canners come deep enough for one layer of quart or smaller size jars, or deep enough for two layers of pint or smaller size jars. The USDA recommends that a canner be large enough to hold at least 4 quart jars to be considered a pressure canner for its published processes.

Today's pressure canner may have a *dial gauge* for indicating the pressure or a *weighted gauge*, for indicating and regulating the pressure. *Weighted gauges* are usually designed to "jiggle" several times a minute or to keep rocking gently when they are maintaining the correct pressure. Read your manufacturer's directions to know how a particular weighted gauge should rock or jiggle. *Dial gauge* canners will usually have a counterweight or pressure regulator for sealing off the open vent port to pressurize the canner. This weight should not be confused with a weighted gauge and will not jiggle or rock as described for a weighted gauge canner. Pressure readings on a dial-gauge-only canner are only registered on the dial and only the dial should be used as an indication of the pressure in the canner. One manufacturer now makes a dial-gauge system where either the dial or the weighted gauge may be used.

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 240°F.

**Weighted-gauge models** exhaust tiny amounts of air and steam each time their gauge rocks 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 use each year and replace if they read high by more than 2 pounds at 5, 10, or 15 pounds of pressure. Gauges that read high cause under-processing and may result in unsafe food. Low readings cause over-processing and may indicate that the accuracy of the gauge is unpredictable. 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 overprocessing, but are not essential to safety. See below for information on where your dial gauge can be checked for accuracy.

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 canner's instructions if there is doubt that the particular 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 (UL) approval to ensure their safety.

Replacement gauges and other parts for canners are often available at stores offering canning equipment or from canner manufacturers. When ordering parts, give your canner model number and describe the parts needed.

## **California Counties Providing Pressure Canner Inspection OR Pressure Gauge Testing**

### Eldorado County Master Food Preserver Program

Either send or bring in lids with the gauge attached and return postage OR drop the lid off and pick it up at the county office. The entire pot can also be brought in for evaluation. In 2009 there was no charge for this service.

### Solano and Yolo County

Drop off the whole pressure canner. They inspect the entire pot and test it at all three basic temperatures that home canners might use. \$20.00 fee.

### Non-UC Testing Services

Embarcadero Home Cannery

Web site: <http://ehcan.com>

2026 Livingston Street

Oakland, CA 94606

Phone: 510-535-2311

Email: [ehcan@hotmail.com](mailto:ehcan@hotmail.com)

Dial gauges are tested for approximately \$5 plus return postage. Individuals would remove the gauge and mail it to EHC. They will test it using their master gauge and return it with a report as to its accuracy and invoice. They sell new gauges for \$21. Once mailed, EHC will return within a week.

**NATIONAL PRESTO INDUSTRIES, INC.**

Consumer Services Department

3925 N. Hastings Way

Eau Claire, WI 54703-2209

Phone: 1-800-877-0441 1 – 800-368-2194.

Web Address: [www.gopresto.com](http://www.gopresto.com)

Email: [contact@gopresto.com](mailto:contact@gopresto.com)

Presto will test Presto canners for no charge. Simply send gauge to them (prefer shipment by UPS; allow turn around time of more than two weeks, so plan ahead!)

## **Doing it yourself:**

### **Pressure Canner Tester:**

NATIONAL PRESTO INDUSTRIES, INC.  
Consumer Services Department  
3925 N. Hastings Way  
Eau Claire, WI 54703-2209  
Phone: 1-800-877-0441 1 – 800-368-2194.  
Web Address: [www.gopresto.com](http://www.gopresto.com)  
Email: [contact@gopresto.com](mailto:contact@gopresto.com)

Available for purchase: A **pressure canner tester** that **uses air pressure** rather than steam, therefore it's much quicker. Item #81288. (about \$75)

### **Maximum Registering Thermometer:**

Maximum registering thermometers may be ordered from Service Supply System, Inc., 2400 North Walnut Road, Turlock, CA 95380. (209) 667-1072. Catalog #21466-1 measures 100-300°F in 2°F divisions.

## **USING A MAXIMUM REGISTERING THERMOMETER TO TEST YOUR PRESSURE CANNER GAUGE**

### **Additional Resources**

Pressure Canner Inspection Form (Master Gauge Testing Unit)  
<http://www.uga.edu/nchfp/educators/GAUGEinspect07.pdf>

Guidance for providing Pressure Canner Inspection (Ohio State University)  
<http://fcs.osu.edu/prof-resources/files/Pressure%20Canner%20Gauge%20Testing%202.pdf>

Using and caring for your pressure canner

<http://info.ag.uidaho.edu/pdf/PNW/PNW0421.pdf>



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## USING A MAXIMUM REGISTERING THERMOMETER TO TEST YOUR PRESSURE CANNER GAUGE

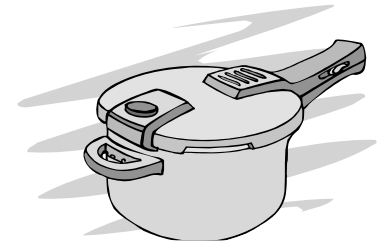
A maximum registering thermometer can be used to quickly, simply, and conveniently test the accuracy of your steam pressure canner gauge. These thermometers operate on the same principle as thermometers designed to measure fevers: the highest temperature attained is recorded, and doesn't recede until the thermometer is shaken down. A few cautionary notes: make sure the thermometer you purchase records the temperature range in which you're interested. A range of 100-300 °F is recommended.

To shake down, grasp the thermometer firmly below the cap on the upper end. Shake in an arc, until the mercury is below the temperature to be measured. The thermometer is glass enclosed in a heat resistant plastic, and is quite fragile.

Allow the thermometer to cool to room temperature before taking a reading. Readings should be taken in the right position, since a vacuum exists above the mercury column, and the column will move if held horizontally.

### To test your gauge:

- Fill your canner with 2 inches of water. Make sure a rack is in place to prevent the jar from coming in contact with the bottom of the canner.
- Place the thermometer upright in an empty pint jar. Place the jar on the rack and heat water to a boil.
- Secure the lid of your canner according to your manufacturer's instructions. Allow a full stream of steam to vent from the petcock for 10 minutes before putting the pressure regulator in place.
- Watching your gauge carefully, bring the pressure up to the desired level. Hold at the level to be tested for 5 minutes, being very careful not to let the pressure exceed the desired level at any time.
- Turn off heat. Allow your canner to cool 5 minutes after pressure has returned to zero, as indicated by your gauge. Open the lid carefully, lifting the side away from you first to allow steam to escape, and to protect yourself from the heat.
- Remove the thermometer from the canner. Allow to cool to room temperature before taking a reading. If you're testing 5 psi, the thermometer should read 228°F; 240°F for 10 psi; and 250°F for 15 psi.
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August 2006



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