



canning notes

These rules are listed in the approximate order of the canning procedure:

- 1. Before starting** to work, examine all jars and lids for possible small chips, nicks and other defects by running your fingertips around the jar rim. Should the sealing rim of a jar or lid be chipped or otherwise damaged, discard it, since it will not permit an airtight seal.
- 2. Cleanliness** is especially of utmost importance. Wash canning jars in hot soapy water, and then rinse them in clean, hot water. If mold has formed in used jars (because they were stored in a damp cellar), submerge jars in boiling water for ten minutes. Mold and fungus spores are not killed at temperatures below 212°F, so the temperature of a dishwasher (about 140°F) is not high enough.
- 3. Carefully examine rubber rings** before processing. Possible cracks can be best detected by holding the rubber ring between the thumbs and forefingers of both hands and tugging lightly while turning bit by bit. A safe seal can only be achieved by using perfect rubber rings. Always use new rubber rings.
- 4. Submerge rubber canning rings in boiling water** for 2-3 minutes. Leave them in the hot water until they are needed. It is not necessary to sterilize jars and lids unless the processing time is less than 10 minutes. (Fruit juices are processed only 5 minutes, for example.) To sterilize jars and lids, boil them for 10 minutes.
- 5. When filling hot foods** (example, precooked hot jam) into the jars, place the jars on a towel, rack or wooden cutting board to keep jars from cracking.
- 6. What is the proper headspace?**
Pack foods up to within ½ inch of the jar rim; add liquids as well as sugar syrups to the same height. Some foods can be packed raw into jars with boiling liquid added. Other foods should be precooked and packaged hot with hot liquid into jars. See each recipe for packing instructions.
- 7. Sweetening** (natural and artificial)
According to long experience, recently confirmed by new research, sugar should not be added dry to the foods, but as syrup. Add the required amount of water and bring the syrup to a rolling boil for a short time. Pour the hot syrup over the food in the jars. Artificial sweeteners should not be used for canning. They can be added at the table.
- 8. After filling** the jars, carefully wipe the jar rim.
- 9. When using the WECK Round Rim jars**, apply the rubber ring to the sealing rim of the lid. It is best to apply the rings before filling the jars. Leave the lids with the attached rings in hot water, until both can be placed together on the jar. The uncomplicated sealing method of the WECK jars prevents dislodgment of the rubber canning ring and seals which are not airtight can be avoided.
- 10. Closing the packed jars by means of spring clamps:**
During processing, the jar is then tightly closed by means of two canning clamps made of rust-proof stainless steel and having an exactly adjusted, permanent spring action. Hold the canning clamps, arranged directly across from each other, into the stacking depression in the lid. Then press them down until they click under the protruding rim of the jar.
- 11. In the canner**, the jars should be placed on a rack. It does not matter if the jars touch each other or the kettle wall. They should not, however, be wedged into the canner so tightly that the jars cannot move at all; a little space for jar movement is necessary for good results.
- 12. After you have placed the jars on the rack** in the canner, fill water into the canner high enough so that the jars are completely submerged in the water. If you place two or more rows of jars on top of each other, or if low jars are

processed together with high ones, the water level will always depend on the height of the highest jars. If two layers of jars are being processed, a second rack must be used between the layers so that the water can circulate freely around all the jars. The jars should be completely covered by one to two inches of water. The spring action of the clamps keeps them sealed, and no water from outside can enter the jars.

13. **Important:**

When you start to process the jars, the temperature of the water bath has to have approximately the same temperature as that of the jar contents. Jars filled with raw-packed food therefore must be started in warm water, jars filled with hot food (in the case of precooked food) accordingly in hot water. In no case, however, should you add hot or boiling water to the canner for jars filled with raw-packed food; the water reaches the prescribed processing temperature too quickly, but the jar contents are not yet heated up to the required temperature. Thus, the thermostat merely indicates the temperature of the boiling water, but not the temperature of the food in the jars. The results: the processing times prescribed by the recipes are insufficient; failures will then be inevitable because not all the bacteria and spores have been eliminated inside the jar; the processing temperature of the interior was simply too low. When placing the jars in the canner, it is absolutely necessary that the food in the jars have roughly the same temperature as the water that is poured into the kettle. And remember: always heat the canner slowly.

14. **When processing your jars**, carefully observe the temperatures and heating times specified in the recipe section of the WECK Home Canning Guide. Do not cut down the processing times under any circumstances! The processing time starts when the canner reaches a full rolling boil. The time needed to heat up the water in the canner does not count! The thermostat then holds the set temperature by controlling the heating element which keeps the water at a constant temperature.

15. **When the required processing time is up**, remove the jars from the canner. Place jars on a rack, wooden cutting board, or towel, and allow them to cool down undisturbed. The jars should not cool down in the water bath, since in that case the heating time is lengthened and the canned foods may become too soft or turn unsightly due to overcooking. Nor is it advisable for the same reason to cover the processed jars with a towel. Keep jars away from a cold draft, and avoid placing them on a cold surface or cooling them quickly by means of cold water.

16. **Very important:**

After removing the processed jars from the canner leave the canning clamps on the jars until the jars are completely cooled. When the jars are cold however, it is absolutely necessary to take off the clamps. They are now no longer required to keep the jars sealed. If you remove the canning clamps, you can easily check to see if the jar is actually sealed by trying slightly to lift off the lid (so-called lid-lifting test). In the first few days after processing you should carry out sealing checks of your jars by this lid-lifting test and always before you open each jar. Note: in the seal on the WECK jars, the pull tab of the rubber ring on the sealed jars quite clearly faces downwards. If you arrange the jars correctly on your shelves, you can simply check them by visual inspection to ensure that they still face down. This facet of the seals will prove the stackability of the WECK jars and arrange them on top of each other.

17. **In the storage area**, the jars should not be subjected to direct sunlight. The room has to be kept frost-free. It is not necessary that the canned jars be stored in a cool basement or cellar. It is sufficient if they are kept at room temperature.

18. **In order to open your canning jars**, pull the protruding tab of the rubber ring, until you hear a "ps-s-st", indicating that air has been sucked into the jar. The vacuum in the jar has thus been equalized, and the lid and rubber ring can now be easily taken off. Never use sharp objects, such as knives, scissors, or screwdrivers, since they will damage the jar rim or lid. If the rubber rings sticks to the jar or the tab is torn off, the jar can be opened easily by attaching three canning clamps and placing the jar upside down in hot water for several minutes.



How the WECK® method works and what goes on inside the jar during processing

The WECK canning method which has proven its reliability over the past nine decades is based on two simple principles which act together. They are based on laws of nature and can neither be altered nor improved.

First Principle:

The natural, normal spoilage of fruit is caused by microorganisms (e.g. yeast, bacteria, mold, spores, etc.) which are present in large numbers in foods as well as in the air. During processing, all these microorganisms living in the food being canned and in the air trapped in the jar are killed. The jar is sealed off from the surrounding air by means of the lid, rubber ring and spring clamps.

Second Principle:

During the heating process, pressure higher than normal is created in the jar. As a consequence, hot air, steam and sometimes even small amounts of liquid are forced out of the jar between the rubber ring and the jar rim. The lid and rubber rings which are fixed on the jar by means of the spring action of the clamps act similarly to a one-way valve, i.e., they allow air, steam and sometimes even some liquid to escape from the interior of the jar, but do not allow air and cooking water to enter the jar from the outside. As the jar is cooling down after processing, a vacuum is created inside. The normal pressure of the air surrounding the jar presses the lid down onto the jar rim and onto glass; this pressure causes a firm and permanent seal of the jar.

How the WECK jar stays sealed and how it should be opened

Jar ready for processing

Lid and rubber ring applied and clamped on with two spring clamps.

Jar during processing

The jar contents expand due to heating. Pressure is created within the jar. The spring clamps allow air, steam and sometimes even some liquid to escape from the jar, but not to enter it.

Jar after cooling down

A vacuum now prevails in the jar. The normal pressure of the surrounding air outside the jar presses the lid down on the jar, thus firmly sealing it. The spring clamps required during the canning process are now unnecessary and should definitely be removed after the jars have cooled down.

The processed, cooled-down jar remains sealed exclusively by means of the normal air pressure exerted on the jar lid. No additional mechanical device or force is required.

If you want to open a jar: Simply pull on the tab of the rubber canning ring away from the jar until you hear a "ps-s-st"; this sound indicates that air has entered the jar, thereby destroying the vacuum which was created by processing, and releasing the lid from the jar. The lid and rubber ring can now be easily removed.

Reasons why jars become unsealed:

Case 1 occurs

If the jar, the lid or the rubber canning ring is defective or even only slightly damaged, and you failed to detect this before processing. In this case, air surrounding the jar may enter it and equalize the vacuum created in the interior of the jar during the heating process. Thus, the lid loosens shortly after processing, in many cases even while the jars are cooling down.

Case 2 occurs

When the jar, the lid and the rubber canning ring are perfect, but not all the bacteria in the canned food have been killed (for example, the temperature was too low or the heating time too short). In the course of time (several days, weeks or even months after processing), gasses will push the lid up as soon as they have reached the same pressure as the air outside the jar, which until that point had kept the jar sealed.

Why is it absolutely necessary to remove the spring clamps after the processed jars have cooled down?

After processing, the spring action of the clamps is replaced by the natural force exerted on the vacuum inside the jar from the pressure of the air outside the jar. If you were to leave the spring clamps on the jar, you would not, by trying to lift off the lid, be able to test whether the jar was properly processed and sealed or not. This simple, but extremely important seal-test (the "lid-lifting" test) cannot be performed when using jars with a thread type, a wire-bail type of closure or any other mechanical sealing devices.

Is there any other reason why WECK does not produce home-canning jars with mechanical sealing devices?

Yes, and it's a reason of utmost importance: Your personal safety. In case the contents of a jar should spoil for any reason (for example, as described in Case 2) the gases formed by spoilage inside the jar must be free to push up the lid so that it lies loosely on top of the jar. This warning signal is so clear and strikingly plain that it is best suited to protect you and your family from the dangers of consuming spoiled canned food unknowingly. For this extremely important reason of personal safety, a reason which is still more important than the practical ones mentioned above, WECK has consistently refused to produce jars with mechanical wire bail seals for home-canning purposes. In case of spoilage, these mechanical seals cannot produce the strikingly clear warning signal of the loose lid.



FREEZING IN GLASS FRUITS AND VEGETABLES

Freezing in a glass container is an excellent way to keep foods air tight and prevent Freezer burn. Jars with large mouth openings and straight sides should be used, and lids should be tight fitting. WECK Round Rim jars with plastic “Keep Fresh” covers are perfect for freezing foods. The ¼ liter mold jars and the 1 liter tulip jars have straight sides and 3.875 inch opening, and the “Keep Fresh” lids fit securely on the jars.

When glass jars are used for freezing, all basic freezing principles apply. In addition, these two guidelines should also be followed:

- 1) Leave proper headspace to avoid breakage. Foods expand when they Freeze, so headspace is very important.
- 2) Avoid extreme changes in temperature. Hot foods, such as soups, should be cooled before putting jars into the freezer

BASIC FREEZING TIPS

- >Select produce of optimum quality
- >Work quickly and in small quantities
- >Freeze foods as soon as they are packaged
- >Set freezer at 0 degrees F. or below
- >Leave space between jars during freezing so air can circulate and foods freeze quickly.
- >Store jars close together when food is frozen for best freezer efficiency

FREEZING FRUITS

- 1) Wash and drain fruit before removing pits or cores. Cut into pieces if necessary.
- 2) Treat light-colored fruits with ascorbic acid or anti-darkening agent to prevent browning.
- 3) Pack food into jars leaving proper headspace.



HOME CANNING

Stackable Round Rim Jars

FREEZING FRUITS, contd

Proper headspace for freezing fruits:

Syrup Pack	Dissolve 1 part sugar in 2 parts water, then chill. Pack fruit into jars and pour over fruit. Leave ½ inch headspace for ¼ liter and ½ liter jars and 1 inch for 1 liter jars. Seal
Sugar Pack	Coat fruit pieces with sugar then pack into jars leaving ½ inch headspace. Seal
Tray Pack	Freeze fruit on a tray for 1 hour then pack into jars. Very small headspace is needed since fruit is already frozen. Seal. (This method is also called IQF or Individually Quick Frozen.)
Dry Pack	Firm fruits, such as blueberries, can be packed directly into jars without first freezing on a tray. Leave ½ inch headspace. Seal.

FREEZING VEGETABLES

- 1) Wash and drain vegetables before removing skins or hulls. Cut into pieces if necessary.
- 2) Blanch vegetables before freezing to inactivate enzymes. Follow times in blanching chart. Use 1 gallon of water for 1 pound of vegetables.
- 3) Chill vegetables in ice water for same time as blanching time, then drain or let dry on paper towels.
- 4) Pack vegetables into jars:

Dry Pack Pack vegetables into jars leaving ½ inch headspace. Seal.

Tray Pack (IQF) Freeze vegetables pieces for 1 hour then pack into jars. Very little headspace is needed since vegetables are already frozen. Seal. (Vegetables remain loose with this packing method.)

BLANCHING TIMES FOR VEGETABLES

<u>VEGETABLE</u>	<u>TIME*</u>	<u>VEGETABLE</u>	<u>TIME*</u>
Asparagus, med.	2 min.	Green	2 min.
Beans, green & wax	3	Kohlrabi, cubed	1
Beans, lima & pinto	3	Okra, med	3
Broccoli flowerets	3	Peas, edible pod	2
Brussel sprouts	4	Peas, green	2
Cabbage shredded	1 ½	Potatoes, new	3-5
Carrots, sliced	2	Summer Squash	3
Cauliflower, flowerets	3	Turnips, cubed	2
Corn	5-6		
Eggplant	4		

*Blanching times given are for boiling water. Double times when using steam.