

Vacuum Packaging

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All right, admit it, there is something very cool about sucking all the air out of a bag of food. When the hum of the vacuum machine starts, all eyes watch to see the crinkly plastic settle down and embrace the curves of whatever type of meat, vegetable or fruit resides inside the clinging sheets of food grade plastic. The rock hard result looks as though it could last forever. Do not be fooled.

Safe preservation of food at home keeps pathogens low and prevents illness. Among the many methods of preserving food, vacuum packaging keeps food safe longer, but cannot substitute for safe food handling processes nor for safe storage practices. Removing the air from the storage container removes the air necessary for spoilage organisms to grow, but remember that not all pathogens require air to multiply.

The organisms responsible for the tell-tale signs of spoiled food, such as color change, bad odor or slimy feeling usually require air to multiply, so packing food in vacuum bags slows these processes. However, some pathogens, or disease causing organisms, such as botulism, actually prefer a low-oxygen environment and will reproduce quickly at room temperature in a moist, low-acid food when deprived of air.

Begin vacuum packaging with the usual safe food handling concerns. Be sure to wash your hands and all food preparation surfaces. Prepare the food for packaging and follow the manufacturer's directions for properly vacuum packaging the product. If the food to be packaged needs to be refrigerated, package and then return the food promptly to the refrigerator or freezer. Any perishable food that has been vacuum packed and left out at room temperature for more than 2 hours should be discarded. This includes vacuum packed food that has been frozen and left to thaw at room temperature. The vacuum packing retards the growth of the organisms which usually spoil food. When these organisms cannot compete with the pathogens that do not require oxygen, then there seems to be even more opportunity for these anaerobic organisms to multiply. Always thaw frozen foods in the refrigerator at 40°F or below. It will take longer to thaw, but will be safer. When cooking these foods, be certain to heat the foods to a safe temperature.

Dry, non-perishable foods such as crackers or nuts can safely be stored in vacuum pack bags. These foods do not have enough moisture to allow bacteria to grow rapidly. Just be careful that the vacuum packaging process does not crush the food! Cracker crumbs have many uses, but may not be the desired result.

When determining the amount of food to put in each container, think about the end use. Pack only enough in each bag to use the entire amount at once. If a vacuum packed bag opens, the oxygen that enters the food resumes the deterioration processes. Use all the food and try to avoid resealing. If the vacuum packed food shows any signs of spoilage or if perishable, vacuum packed food has been left out above 40° for two hours or more, throw it out. Do not take chances with food safety!

Freezing vegetables in vacuum packed bags keeps the produce safe from freezer burn and deterioration. The University of Missouri recommends the following process for freezing green beans:

Beans: green, snap or wax

Select young tender pods when the seed is first formed. Wash in cold water and cut into 1-inch or 2-inch pieces or slice lengthwise.

Water blanch 3 minutes. Cool promptly, drain, package, seal and freeze.

Seal into individual bags with just enough beans for each meal, and enjoy the taste of delicious green beans in recipes or with dips. Be sure to thaw in the refrigerator or drop frozen beans directly into boiling water to cook. Freezing keeps the fresh taste and color, and sealing in the vacuum packages allows safe storage in the freezer.

Questions about safe home food preservation? Call the Master Food Preservers and leave a message at (530) 621-5506. A Master Food Preserver will return the call. The Master Food Preservers are also available free of charge to speak to organizations and clubs about food safety or food preservation topics. Just call the number above to arrange for a speaker for small or large groups. For more information about the public education classes and activities, including the free public classes on food safety and pressure canning, be sure to go to the Master Food Preserver website at http://ceeldorado.ucdavis.edu/Master_Food_Preservers/.