



food safety

WSU Extension - Guidelines for Freeze Dryers

The use of freeze dryers is *NOT* recommended, nor supported at this time. This will be re-evaluated as more information and research becomes available.

General information (for educational purposes): Freeze dryers cost approximately \$4500-5000 but can cost as low as \$3500. Although they appear to be large units, they are considered countertop freeze dryers. Freeze dryers work by bringing food to a very cold temperature. The dryer then creates a vacuum to cause the frozen water to turn into a gas. The goal of freeze dryers is 100% water removal without the losses encountered with dehydration and canning. Water loss eliminates most other reactions during storage, but due to the drying process the food keeps its shape. Packaging is important to prevent re-absorption of moisture.



WSU Extension does *NOT* support or recommend the use of freeze dryers for home food preservation for the following reasons:

1. Researched methods and processes are not available for consumers
2. Freeze drying can result in food appearing processed when it is really under-processed
3. Thicker pieces of food (such as small chunks of meat) tend to dry incompletely
4. Ensuring correct processing is difficult at home and without prior experience. For example, it is nearly impossible to determine if a small cube of meat has been dried throughout, and especially within the interior of the meat cube.
5. Preventing the growth of *Clostridium botulinum* (the microbe that causes botulism) is extremely dependent on the remaining amount of water available in the product. If there is too much water remaining in the product, even if the product appears dry on the exterior, the microbe that causes botulism may be able to grow.