



Missouri Department of Health and Senior Services

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Technical Bulletin RFP25-01

TO: Local Public Health Agency Administrators
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THROUGH: Dusty Johnson, Chief, Bureau of Environmental Health Services 

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FROM: Paige Anderson, Retail Food Program Manager, Bureau of Environmental Health Services 

SUBJECT: Freeze Dried Food Products for Retail Sale

DATE: February 14, 2025

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This Technical Bulletin is to supplement the Informational Release RFP23-01 "Freeze Dried Non-Shelf Stable and Shelf Stable Products for Retail Sale" issued April 14, 2023.

Freeze dried foods continues to be a topic of great interest throughout Missouri. More individuals are looking to produce freeze dried food products for a variety of reasons, such as extending the products shelf-life. Individuals wanting to make and sell freeze dried products to the end consumer will need to be in contact with the appropriate Local Public Health Agency (LPHA) for their jurisdiction. Freeze dried products do not fall under the Missouri Cottage Law. However, some low-risk products may still be exempted from inspection under the food code (19 CSR 20-1.025).

Freeze drying is a stabilizing process to rapidly remove moisture to lower water activity levels to a point that will no longer support biological activity or chemical reactions. In recent years,

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with the increased interest in freeze drying food products, more research has been conducted into these products.

Shelf stable, non-potentially hazardous (PHF) candies have no additional food safety considerations and may fall under the exemption in the food code under the definition of “Food Establishment.” If local ordinances do not allow for this exemption, the freeze-dried product will need to be produced in an approved and inspected facility.

Naturally acidic fruit and vegetables that have a pH of 4.6 or below that are freeze dried may be allowed under the exemption in the food code if local ordinances allow. If local ordinances do not allow for this exemption, the freeze-dried product will need to be produced in an approved and inspected facility. These foods are unlikely to support pathogenic growth, but may be subject to spoilage if the freeze-drying process is not completed correctly. To ensure that these foods are freeze dried appropriately, the regulatory authority should ask questions including:

- How does the producer ensure that the food has been sufficiently dried?
- What kind of packaging is used? The packaging used will need to be appropriate for freeze dried foods.
- Is there a food grade oxygen absorber in the package with the food?
- How soon after drying is the food packaged? This will need to be done fairly quickly after the food product has been sufficiently dried.

PHF and neutral pH fruits and vegetables, such as ice cream and elderberries, pose more significant food safety hazards during the freeze-drying process. Freeze-drying is a method of preservation and is not an effective cook/kill step for pathogens. Freeze-drying these food products will need to be completed in an approved and inspected facility under a special process. Products that are produced in an inspected and facility shall also be prepared using equipment that are appropriate for the types of food items that are stated in the special process. Documentation of the equipment will need to be provided with the special process application to ensure that the equipment is appropriate. For more information regarding special processes, please visit the [Environmental Health Operational Guidelines \(EHOG\) and EHOG Appendix](#).

Several common foods along with their typical pH value can be found here:

https://www.clemson.edu/extension/food/food2market/documents/ph_of_common_foods.pdf.

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