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Michelle A. Lloyd
foodmichelle@gmail.com

Lynn V. Ogden

See next page for additional authors

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Authors
Michelle A. Lloyd, Lynn V. Ogden, and Oscar A. Pike

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Quality of hermetically packaged nonfat dry milk in long-term storage

M.A. Lloyd (michelle_lloyd@byu.edu), L.V. Ogden, and O.A. Pike

Department of Nutrition, Dietetics and Food Science Brigham Young University Provo, UT 84602

CONCLUSIONS

There is a general decline in sensory quality of NFDM during long-term storage. NFDM packaged in sealed metal cans will retain both sensory and nutritional quality for at least five years. The sensory quality of NFDM stored in hermetically sealed cans does not necessarily reflect its nutritional quality. There needs to be a better understanding of the mechanisms that affect the sensory and nutritional attributes, the quality of NFDM currently stored in No. 10 cans, and the conditions in residential storage, which would likely be acceptable to the users in an emergency situation.

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REFERENCES


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A new study published in the Journal of Dairy Science evaluated the sensory and nutritional quality of hermetically packaged nonfat dry milk (NFDM) stored for up to five years. The research found that the sensory and nutritional quality of NFDM was maintained for at least five years when stored in hermetically sealed cans. The results indicate that NFDM can be a reliable food source in emergency situations where other food may not be available.

The researchers studied the effects of storage conditions on the sensory and nutritional quality of NFDM. They found that NFDM stored at non-abusive temperatures and storage times was unaffected in this water activity range. Unpublished data on shelf-life for milk using weibull hazard method. Lebensm. Wiss. Technol. 31(8):415-419.

Though many factors affect the nutritional quality of NFDM, the researchers found that the sensory and nutritional attributes of NFDM stored in hermetically sealed cans were relatively stable. Unlike Mercurio and Tadjalli (1979) who found significant losses of vitamins B1 and B2 in NFDM stored for 20 years in a sealed metal canister in a basement, the data showed that the vitamins were fairly stable and did not deteriorate during long-term storage. The researchers concluded that NFDM could be considered acceptable for use in an emergency situation.