

Keeping queso fresco fresh

March 23 2010



Freshly pressed queso fresco is wrapped in cheese cloth. Credit: Wikimedia Commons

Queso fresco, a quintessential ingredient in Mexican cuisine, would retain higher quality in supermarket display cases if stored at a lower temperature. That's the conclusion of a report presented here today at the 239th National Meeting of the American Chemical Society.

The study was part of a broader effort to establish so-called "standards of identity" for the Hispanic foods now finding a new home in the United States, where Hispanics and Latinos now constitute 15 percent of the population. Among other things, the standards would permit inclusion of queso fresco and other foods in the National School Lunch Program, according to Michael H. Tunick, Ph.D., who presented the report.

Queso fresco means "fresh [cheese](#)." It is unaged, snow white, high-moisture, and mild in flavor. The cheese is ideal for accenting salads, enchiladas, and other dishes. Since queso fresco gets soft when heated, it finds other spots on the menu as a filling in many dishes.

"The increasing popularity of Hispanic [food](#) in the US is causing attention to be focused on the chemistry of these products for the first time," Tunick said. He is with the U. S. Department of Agriculture's Agricultural Research Service in Wyndmoor, Penn. "Hispanic-style cheeses are one of the fastest growing styles of cheese in the U.S. because of the growing Hispanic population and the incorporation of the Hispanic cuisine into the American diet. Federal Standards of Identity for Hispanic-style cheese have not been established and, as a result, considerable brand-to-brand variation exists for these cheeses sold in the U.S."

Queso fresco is traditionally consumed fresh, hence its name, but it may be refrigerated for weeks. Tunick's team used [physical chemistry](#) techniques to examine the texture and structure of the cheese during refrigeration.

"In an effort to understand more about the physical chemistry of this product and its impact on shelf life, rheological and microstructural studies were performed on samples refrigerated at 39 degrees Fahrenheit and 50 degrees F. for up to eight weeks," said Tunick.

They found that storage at a typical home refrigerator temperature of 39 degrees F. allows the cheese to retain its characteristic texture for two months. However, some breakdown in structure occurs at 50 degrees F., the standard supermarket display case temperature.

"As the structure starts to break down (as seen by electron microscopy), the texture becomes weaker and more crumbly," Tunick explained.

"Stores could hold the cheese at a lower temperature, but extra refrigeration costs money."

Based on the findings, Tunick suggested that the cheese's sell-by date in stores could be one month, and a "consume-by" date could be a month after that.

"Our research provides the quantitative data required by Federal and State agencies to develop Standards of Identity for use by the cheese industry and specifications needed to bring Hispanic style cheeses into Federal food programs such as the School Lunch Program," said Tunick, "But research is needed to characterize the attributes (chemical, functional, textural, sensorial and microbiological) that make Hispanic-style cheeses unique, to understand the impact of processing conditions on the properties of the cheeses."

Provided by American Chemical Society

Citation: Keeping queso fresco fresh (2010, March 23) retrieved 6 May 2024 from <https://phys.org/news/2010-03-queso-fresco-fresh.html>

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