Authentic Cotija cheese as a functional food: Study of peptides released during ripening

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Authentic Cotija cheese is an artisanal ripened cheese produced in the mountains of central Mexico, made with raw milk and ripened for at least 3 months; due to its quality, it was awarded best foreign cheese in the 2007 Cheese World Championship. Because of the wide variety of microorganisms fermenting Cotija cheese, several metabolites are produced during ripening that may affect consumers' health, such as bioactive peptides. The aim of this work was to study bioactive peptide production during Cotija cheese ripening and the effect of weather conditions in peptide production. We studied cheeses made in 4 different regions with different microclimates, and followed ripening for 6 months to determine peptide production. Results showed production of peptides with molecular weights ranging from 1 to 6 kDa in all cheeses. Furthermore, when antihypertensive activity of cheese extracts was compared with captopril® a high inhibition of up to 97% was observed, demonstrating that bioactive peptides are produced during Cotija cheese ripening and that authentic Cotija cheese has functional properties that give it a greater added value.

Recent Publications


Biography

Judith Jimenez Guzman is a Food Engineer working at the Food Science Department of the Metropolitan Autonomous University in Lerma, Mexico. She has her expertise in dairy biotechnology, including aspects of enzymology, fermentations and dairy products as functional foods. Besides research work, she does collaborative research and consultant work for several dairy enterprises in Mexico.

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