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## Yogurts enriched in casein phosphopeptides

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**B** io active peptides can be generated during milk fermentation by starter cultures or exogenous proteolytic enzymes. Phospho peptides derived from caseins (CPP) have demonstrated anti-cariogenic activity due to their ability to link minerals mainly Ca and P. In this work, yogurts enriched with CPP were obtained by hydrolysis with trypsin of milks fortified with different levels of casein from skim milk powder and CaCN (calcium caseinate). A comparative study of acidity, peptide profile and anti-cariogenic activity between hydrolyzed and control yogurts were performed during fermentation and/or storage. The hydrolysis of milk with trypsin (E/S 1:9000) was made at 40° C for 1 hour previously at fermentation process. CPP were isolated by selective precipitation with ethanol/calcium chloride and analyzed by HPLC-RP. The protective effect of yogurt extracts on hydroxyapatite (HA) demineralization by acid attack was determined measuring the contents of Ca and P released from HA. The presence of CaCN produced a delay in the fermentation process for hydrolyzed yogurts. The post acidification was more pronounced for hydrolyzed yogurts than controls. The peptide profiles revealed the presence of CPP only in those yogurts made with hydrolyzed milk and their levels were higher in yogurts prepared with the inclusion of caseinate. Starter culture has not the ability to produce these bio active compounds during yogurt making regardless of the casein content into milk. The hydrolyzed yogurts had a higher anti-cariogenic activity than controls. The highest values of protection of HA by CPP presence (15%) were found in yogurts made from milk with 4% SMP. Slight variations in protective effects were observed during storage.

## Biography

Bergamini Carina V has completed his PhD in Biological Sciences at Universidad Nacional del Litoral (UNL), Argentina. She is a Researcher at Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) since 2008 and she works in the Instituto de Lactología Industrial (UNL/CONICET) (Santa Fe, Argentina). She is a uthor of scientific papers and book chapters mainly focused on the study of strategies to increase the production of interesting compounds from sensorial or biological viewpoint in fermented dairy products.

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