

## Increasing yield of panela type cheese like using a modified maize-soy protein and transglutaminase

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The art of cheese making has been practiced for centuries; the cheese maker is always looking for ways to improve the finished product yield and this becomes critical in geographical areas where milk supply is scarce. The incorporation of proteins other than dairy is a challenge because of the low functionality of the ingredients, yielding products with poorer sensory characteristics. The aim of this project was to produce panela cheese analogs (PCA) with different levels of vegetable protein (maize-soy) and transglutaminase (TG) to obtain, in terms of physicochemical, sensorial and yield evaluation, the optimum percentage of vegetable protein and TG concentration. Physicochemical parameters obtained were: moisture, crude fat, protein, pH, Aw, color and texture. Pasteurized cow milk (3.1% protein and 3.3% fat), water, butyric fat, a modified maize-soy protein, calcium chloride, flavor and carrageenan were homogenized and used as initial material. The mixture was coagulated with rennet (38 °C, 30 min), before cutting the curd and the addition of TG (38 °C, 15 min). The whey was drained and salt and titanium dioxide were added and mixed. The curd was pressed into molds for two hours to obtain 400 g products per triplicate. The results suggested the use of vegetable/milk protein up to 50/50 ratio with TG to produce CAP with similar physicochemical and sensorial characteristics but increased yield compared to a panela-type cheese with 100% milk.

### Biography

Cristina Chairez Jimenez has completed Agro Industrial Engineering at the age of 22 years from Universidad Autónoma de Aguascalientes. Chairez-Jiménez has for worked 20 months at Research and Development Department in industry of additives foods like a colorants, preservatives, stabilizers, texturizing, and things like that. Currently, she is a student of Master of Science in Biotechnology from School of Food and Biotechnology, Instituto Tecnológico y de Estudios Superiores de Monterrey. She will be finishing the master's in December 2013.

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