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**Development of a potential functional biscuit using cassava (*Manihot esculenta*) and inulin fermented with *Lactobacillus paracasei***

**Ruth Belmares, Samuel Longoria, Mildred Verástegi, Mario Cruz and Juan Carlos Contrera**

Universidad Autonoma de Coahuila, México

Cassava (*Manihot esculenta*) is a cultivar which has been used previously for the development of baked products numerous times. Cassava tubers have been reported to contain 60% water, 38% carbohydrates and the 2% left divided into ash, lipids, proteins and crude fiber. This cultivar also have the special characteristic of lacking gluten, allowing celiac patients to consume the different kinds of products developed from this cultivar. Inulin is a fructooligosaccharide considered a prebiotic and dietary fiber which enhances the development of probiotic bacteria in human's gut and promote healthy bowel's movement. In the present work, a formulation was developed, and using it as a control, fats were substituted by inulin in 5 different levels. On par, flour fermentation was done using *Lactobacillus paracasei* in 5 different fermentation times. Through rheology assays and based on the storage modulus, mainly, the most appropriate were selected for the development of a prototype and its sensory evaluation. In inulin's substitution at 25% the

storage modulus showed a value of  $193,987 \pm 74,130$  Pa, lower in comparison with control and the other treatments. There was no considerable difference in the nutritional content of the biscuits. Regarding the fermentation, storage modulus lowered as the fermentation time increased, at 4 h a value of  $92,348.89 \pm 18,146$  Pa was obtained, considerably lower compared with the control. This treatment also showed an improvement in the nutritional balance by lowering the percentage of carbohydrates to  $29.4 \pm 7.27\%$ . The previously mentioned treatments were chosen to be used in the development of a prototype by combining them and obtaining a storage modulus of  $230,045 \pm 40,301$  Pa. Nutritionally, the prototype is high in carbohydrates reaching a composition of  $55.6 \pm 1.61\%$ . A potentially functional baked product was developed. The product had a good sensorial acceptance, corresponding to the parameter of "I do not like nor dislike" in flavor.

e: ruthbelmares@uadec.edu.mx

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