Formulation and development of a soy-based cookie with high nutritional content and strong antioxidant capacity

*J. Lanza¹; N. Acosta¹; O. Guacache¹; R. Fabbro¹ y A. Redondo¹. Dirección de Investigaciones en Alimentos. Instituto Nacional de Nutrición. Caracas, Venezuela

*e-mail: joseglanza82@gmail.com

The soy protein for its high nutritional value has emerged as an option to meet protein requirements in populations without access to a balanced diet. The National Institute of Nutrition of Venezuela developed the "Nutrigalleta" made from soy. This product as a highly attractive snack option that provides a variety of macro and micronutrients and it is an excellent source of protein calories, vitamins A and E. Also, it has high quality dietary and digestibility fiber, and due to isoflavone soy content, antioxidant properties are added to the product. The purpose of this study is compare the nutritional and physical-chemical properties of the main raw material (fresh soy and crude soy), crude mixture and Nutrigalleta ready-made. Then, determine whether these properties are maintained during various stages of development of this cookie. Each of the products was performed proximal analysis, determination of the fatty acid profile and evaluation of antioxidant capacity by DPPH technique (Rosas and Savedra, 2005). Protein content for all tested products (fresh soy: 13.9 g/100g; crude soy: 34.3g/100g; crude mixture: 17.1g/100g and cookie: 19.1g/100g) are within the optimum values required nutritional level. As to the antioxidant capacity (% Activity: approximately 80%) is expected to remain stable during the entire process of making the product, by detecting the inhibition of free radicals evaluated during the entire process. The results so far show that the Nutrigalleta developed has a high nutritional value to be provided to vulnerable populations in times of contingency.