



CHEMICAL COMPOSITION, STARCH DIGESTIBILITY AND ANTIOXIDANT CAPACITY OF TORTILLA MADE WITH A BLEND OF QUALITY PROTEIN MAIZE AND BLACK BEAN.

ABSTRACT

Tortilla and beans are the basic components in the diet of people in the urban and rural areas of Mexico. Quality protein maize is suggested for tortilla preparation because it presents an increase in lysine and tryptophan levels. Beans contain important amounts of dietary fiber. The objective of this study was to prepare tortilla with bean and assesses the chemical composition, starch digestibility and antioxidant capacity using a quality protein maize variety. Tortilla with bean had higher protein, ash, dietary fiber and resistant starch content, and lower digestible starch than control tortilla. The hydrolysis rate (60 to 50%) and the predicted glycemic index (88 to 80) of tortilla decreased with the addition of bean in the blend. Extractable polyphenols and proanthocyanidins were higher in the tortilla with bean than control tortilla. This pattern produced higher antioxidant capacity of tortilla with bean (17.6 $\mu\text{mol Trolox eq/g}$) than control tortilla (7.8 $\mu\text{mol Trolox eq/g}$). The addition of bean to tortilla modified the starch digestibility and antioxidant characteristics of tortilla, obtaining a product with nutraceutical characteristics.

<http://www.mdpi.com/1422-0067/13/1/286>

CEPROBI - IPN

Autores: Eva M. Grajales-García, Perla Osorio-Díaz*, Isabel Goñi, Deisy Hervert-Hernández, Salvador H. Guzmán-Maldonado and Luis A. Bello-Pérez.

Revista: International Journal of Molecular Science. Volume: 13, Issue 1, pages 286-301.