

UNRIPE BANANA FLOUR AS AN INGREDIENT TO INCREASE THE UNDIGESTIBLE CARBOHYDRATES OF PASTA.



## ABSTRACT

Banana is a starchy food that contains a high proportion of undigestible compounds, such as resistant starch and non-starch polysaccharides. There is an excess of production and large quantities of bananas are lost. The objective of this study was to use unripe banana flour as a food ingredient to make pasta (spaghetti) of high quality, on the basis of low-carbohydrate digestibility, and increased resistant starch and antioxidant phenolics contents.

Formulations consisting of 100% durum wheat semolina (control) and mixtures of semolina:banana flour of 85:15, 70:30 and 55:45 were prepared for spaghetti processing.

Nutritional composition, in vitro kinetics of starch digestion and antioxidant capacity were determined. The addition of banana flour increased the indigestible fraction and the content of phenolic compounds in the spaghetti. As a consequence of the compositional changes, a slow, low rate for the enzymatic hydrolysis of carbohydrates was observed. Moreover, banana flour spaghetti possessed increased antioxidant capacity.

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Autores: Maribel Ovando-Martínez, Sonia Sáyago-Ayerdi, Edith Agama-Acevedo, Isabel Goñi, Luis A. Bello-Pérez\*

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