

Effects of bamboo dietary fibre on meat semi-finished products

Viktor Rudyk¹, Olena Tyshchenko¹, Svitlana Usatiuk¹

¹National University of Food Technologies, 68, Volodymyrska str., Kyiv, Ukraine,
lленаusatiuk@gmail.com

Dietary fibre is an essential macro-nutrient for human body, but the average fibre intake for children and adults are less than half of the recommended levels. It is required to enhance fibre consumption from foods. So, the development of food technologies with using dietary fibre preparations is timely. Bamboo dietary fibre out of shoots was chosen as a fortificant for meat semi-finished products. Bamboo shoots are a rich source of insoluble dietary fibre (more than 96 %) such as cellulose, hemicelluloses and lignin. The dietary fibre preparation out of bamboo shoots is an odourless and tasteless fibrous white powder with different lengths, 30, 75, 90, 200 and 500 microns. Their main technological properties that depend on the fibre length are water absorption capacity and oil absorption capacity. Water is absorbed in the fibre microfibrils by capillarity and will stay there due to hydrogen bonds. The capillary space can also absorb oils and fats. Therefore, oil and water will not separate out during heat treatment and storage, independent of temperature and pH. Experimentally bamboo fibre with a length of 90 microns was chosen. Dietary fibre was added in the amount about 3...5 % to a popular meat semi-finished product such as beefsteak. It was found that bamboo dietary fibre positively effects on sensory and structural and mechanical properties of finished product. Bamboo dietary fibre is a technological and nutritional ingredient in the technology of meat semi-finished products. The prospective application of bamboo fibre preparation is fat replacement, calorie reduction and dietary fibre fortification. The consumption of meat semi-finished products with bamboo dietary fibre is associated with health benefits for human: lower risk for developing coronary heart disease, stroke, hypertension, diabetes, obesity, and certain gastrointestinal diseases.

KEY WORDS

(bamboo fibre, meat semi-finished product)

Indicate type of presentation: Oral Poster