

Designing of Food Products with Seasoned Plant Components Assigned for Obese and Diabetic Individuals

Authors : A. Gramza-Michałowska, J. Skręty, M. Antczak, J. Kobus-Cisowska, D. Kmiecik, J. Korczak, Kulczyński Bartosz

Abstract : Background: Modern consumer highly appreciates the correlation between eating habits and health. Intensified research showed many proofs confirming that food besides its basic nutritional function, possess also significant prophylactic and therapeutic potential. Preventive potential of selected food is commonly used as improvement factor of patients life standard. World Health Organization indicates that diabetes (Diabetes mellitus) and obesity are two of the most common and dangerous diseases. Diet therapy is an element of diabetes education program and a part of healing process, allowing maintaining and remaining the optimal metabolic state of the system. It must be remembered that diabetes treatment should be individualized to each patient. One of highly recommended vegetable for diabetes is asparagus (*Asparagus officinalis* L.), low calories common plant, growing in European countries. Objective: To propose the technology of unsweetened muesli production with addition of new components, we investigated the effects of selected vegetable addition on antioxidative capacity and consumer's acceptance of muesli as representative of breakfast product. Methods: Muesli was formulated from a composition of oat flakes, flaxseed, bran, carrots, broccoli and asparagus. Basic composition of muesli was evaluated as content of protein, lipids, fatty acid composition, ash, selected minerals and calorificity. Antioxidant capacity of muesli was evaluated with use radical scavenging methods (DPPH, ABTS), ORAC value and PCL - photochemiluminescence antiradical potential. Proposed muesli as new product was also characterized with sensory analysis, which included color, scent, taste, consistency and overall acceptance of a product. Results: Results showed that addition of freeze-dried asparagus into muesli allowed to lower the fat content and calorificity of a product according to the base product. No significant loss in antioxidant potential was evaluated, also the sensory value of a product was not negative. Conclusion: Designed muesli would be an answer for obese people looking for healthy snack during the daytime. Results showed that product with asparagus addition would be accepted by the consumers and because of its antidiabetic potential could be a n important factor in prevention of diabetes or obesity. Financial support by the UE Project no PO IG 01.01.00.00-061/09

Keywords : muesli, vegetables, asparagus, antioxidant potential, lipids

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