Quality and Sensorial Characteristics of Raw-Vegan Bars

Liana-Claudia SALANŢĂ, Maria TOFANĂ*, Sonia SOCACI, Cristina BARTA, Carmen POP

Department of Food Science, Faculty of Food Science and Technology, University of Agricultural Sciences and Veterinary Medicine, 3-5 Manastur St., Cluj-Napoca, Romania

*Corresponding author, e-mail: maria.tofana@usamvcluj.ro

ABSTRACT

Increased consumer interest in healthier food products is driven by a variety of factors including growing awareness of the link between diet and health, the desire to age ‘gracefully’ by maintaining good health, greater convenience in meeting nutritional needs and preventing chronic diseases. In raw food diet, food is consumed predominantly or exclusively as uncooked and unprocessed raw food; the main components of the diet are fruits, nuts, seeds, and sprouted grains and beans. The aim of this study was to obtain two raw-vegan bars using dry raw materials and to establish the physicochemical and sensory characteristics of the products. Raw-vegan bars were formulated using fruits and seeds (cranberries, figs, raisins, raspberries, cashew, chia seeds, etc.) and binding agents (honey). Raw-vegan bars stands out among healthy due to their balanced nutritional content and convenience.

Keywords: bars, raw-vegan, dry raw materials.

INTRODUCTION

Nowadays, people consume foods not only to cover the nutritional requirements, they also demand for healthy, natural and convenient foods that show biological activity (Guevara-Arauza et al., 2011). Increased consumer interest in healthier food products is driven by a variety of factors including growing awareness of the link between diet and health, the desire to age ‘gracefully’ by maintaining good health, greater convenience in meeting nutritional needs and preventing chronic diseases (Malla et al., 2013). In raw food diet, food is consumed predominantly or exclusively as uncooked and unprocessed raw food; the main components of the diet are fruits, nuts, seeds, and sprouted grains and beans (Koebnick et al., 2005).

AIMS AND OBJECTIVES

The aim of this study was to obtain two raw-vegan bars using dry raw materials and to establish the physicochemical and sensory characteristics of the products.

MATERIALS AND METHODS

Raw-vegan bars were formulated using fruits and seeds: figs (*Ficus carica*), raisins (*Vitis vinifera* L.), dates (*Phoenix Dactylifera*), cranberries (*Vaccinium vitis idaea*), raspberries (*Rubus idaeus*), cashew (*Anacardium occidentale*) and chia seeds (*Salvia columbariae*). Basic formulation is presented in Table 1.

To achieve the proposed goal, the content in dry matter %, acidity %, vitamin C, the antioxidant capacity (potassium permanganate method) and sensory parameters were determined for the analyzed samples. The physicochemical analyses of samples were analyzed according to standards of AOAC (Association, 2000) and Tofană and Socaci, 2011. The determination of ascorbic acid consist in the extraction of ascorbic acid from the test sample with a solution of hydrochloric acid (HCl) and titration with a solution of potassium iodate (KIO3) to a blue color which must persist for 30 seconds. Antioxidant properties screening by the potassium permanganate assay: the
method is based on the redox reactions between the antioxidant sample and the potassium permanganate in sulfuric acid media, leading to sample discoloration. For the sensory analysis the traditional 9-point hedonic test was used, to assess the average degree of liking or disliking of products.

RESULTS AND DISCUSSION
Two raw-vegan bars (P1 and P2) were obtained based on dates and figs. Some physicochemical parameters of the products were determined, like dry matter (52.42-87.48%), acidity (0.03-0.04 % malic acid) and vitamin C (28.16-35.2 mg/100g). According to potassium permanganate method, the sample P2 had the highest antioxidant capacity. Sensorial analysis showed that the two formulas were well accepted although texture obtained lower scores for both samples. The sensory analysis results shown the most appreciated raw-vegan bar with figs (P2). Foods like dates and figs, can be used successfully to develop new formulation of fruits bars.

CONCLUSIONS
The fruits bars have a high vitamin C content and present antioxidant capacity. Raw-vegan bars stands out among healthy fast foods due to their balanced nutritional content and convenience.

REFERENCES