

Evaluation of *Scenedesmus obliquus* Carotenoids as Food Colorants, and Antioxidant Activity in Functional Cakes

Authors : Hanaa H. Abd El Baky, Gamal S. El Baroty, Eman A. Ibrahim

Abstract : Microalgae *Scenedesmus obliquus*, the carotenoids (astaxanine and β -carotene) were identified as the major bioactive constituents. In this work we prepared functional pre-biotic cakes to increase general mental health. Functional cakes were formulated by adding algal carotenoids at 2 and 4 mg/100g to flour and the cakes were stored for 20 days. Oxidative stability of both functional cake products were examined during storage periods by DPPH and TBA assays, and the results revealed that both values in functional food products were significantly much lower than that in untreated food products. Data of sensory evaluation revealed that treated biscuits and cakes with algae or algae extracts were significantly acceptable as control for main sensory characteristics (colour, odour/aroma, flavour, texture, the global appreciation, and overall acceptability). Thus, it could be concluded that functional biscuits and cakes (very popular and well balanced nutritional food) had good sensory and nutritional profiles and can be developed as new niche food market.

Keywords : *Scenedesmus obliquus*, carotenoids, functional cakes antioxidant, nutritional profiles

Conference Title : ICNFF 2015 : International Conference on Nutraceuticals and Functional Foods

Conference Location : Jeddah, Saudi Arabia

Conference Dates : January 26-27, 2015