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Abstracts

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probiotic&fiber combination (15%) were most frequently used for fortification purposes. It was noticed that phytochemicals and fish oils were seldom used for food fortification and no products with added phytosterols were found.

Conclusions: This investigation identified several problems concerning fortified foods on Serbian market, including lack of legislative, inadequate labeling and health claims.

Key Words: fortified food, market, Serbia

27/259. Nutrition and Healthy Lifestyle

Origanum virens endemic from Portugal: a novel antifungal activity with antioxidant capacity

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Introduction: *Origanum virens* is widely used in Portuguese cuisine. Spices are common food adjuncts, which have been used as flavoring, seasoning, and coloring agents and sometimes as preservatives throughout the world for years. Many spices have been recognized to have medicinal properties and possess many beneficial effects on health, such as antioxidant activity, digestive stimulant action, anti-inflammatory, antimicrobial, hypolipidemic, anticarcinogenic potential. Although it is use as food condiment, it is also used in traditional medicine as antiseptic.

Objectives: An improved procedure for determination of the residual DPPH (1,1-diphenyl-2-picrylhydrazyl) free radical concentration was proposed taking into account the absorbance of both DPPH free radicals and DPPH nonradical stable form. The antifungal activity of *Origanum virens* essential oil on *Candida albicans* ATCC 10231 and physico-chemical characterization were evaluated.

Method. Design: The calculated residual DPPH free radical concentrations were compared with those obtained from a calibration curve and variation coefficients below 10 % were found. The essential oil were obtained from the aerial parts of the plant by hydro-distillation and minimal inhibitory concentration (MIC) as well as the minimal lethal concentration (MLC) were used in order to assay the antifungal activity against *Candida albicans*.

Results: MIC and MLC values were 0,005% and 0,040% respectively, ranging from 0,005% to 0,080% of essential oil. Concentrations, lower than MIC values strongly prevent fungal growing. It is difficult to attribute the activity of a complex mixture to particular constituents. The percentage decrease of DPPH standard solution was recorded with 65.0% for Portuguese *Origanum virens*.

Conclusions: This study supports the contention that traditional

medicines remain a valuable source in the potential discovery of natural product pharmaceuticals. Significant antioxidant activity showed by *Origanum virens* provide a scientific validation for the traditional use of these plants. Further work on isolation and identification of active compounds and its efficacy needs to be done.

Key Words: *Origanum virens*; antioxidan activity, antifungal activity, physico-chemical characterization

27/260. Nutrition and Healthy Lifestyle

Physicochemical characteristics and antioxidant activity of Baobab (*Adansonia digitata*) fruit. A traditional medical Angolan plant.

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Introduction: A medicinal plant is any plant in which one or more of its organ contains substances that can be used for therapeutic purposes on which are precursors for the synthesis of useful drugs. In the recent years, in the attempt to counteract the oxidative stress damages, the strategy of implementing the diet with antioxidants, especially deriving from natural sources, is becoming more and more convincing. Several studies have been directed toward the evaluation of several naturally antioxidant properties of many naturally occurring botanicals and herbs, potentially useful as nutraceutical ingredients.

Objectives: The biochemical composition and nutritive value of the fruit of the baobab fruit (*Adansonia digitata*) were studied.

Method. Design: Proportions of the various components of the fruit (pulp and seeds) were examined, and the various physicochemical characteristics of the pulp and seed were analysed. The antioxidant activity was assessed by DPPH method.

Results: The pulp was characterized by a low water content (6,7%), high acidity level (1,5%), and high contents of total soluble solids (79,5 °Brix), ascorbic acid (600,7 mg 100 g⁻¹) and total phenolics (504 mg 100 g⁻¹). Seeds baobab fruit showed lower values, namely in total soluble solids (40,1 °Brix), ascorbic acid 295,6 mg 100 g⁻¹) and total phenolics (145,3 mg 100 g⁻¹). The antioxidant activity, with DPPH assay, revealed significant statistics (p < 0.05) between samples (pulp and seed), showing more antioxidant activity in pulp fruit, with 87,7% versus 50% obtained in seeds.

Conclusions: This current study reports on the phytochemical screening and antioxidant capacity of Baobab fruit which is known for its centenary use in traditional African medicine. This study was conducted as an initial step to elucidate the therapeutical, nutraceutical and cosmeceutical potential of these plant products until all the active components of these plants will be clearly established.