

Organoleptic evaluation of some home based recipes incorporating neutraceuticals single and multiple blends

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ABSTRACT

The study was undertaken to evaluate the organoleptic characteristics of the food products prepared by incorporating neutraceuticals singly and in blended forms. Three variants were prepared with incorporation of neutraceuticals at 7 per cent, 14 per cent, 21 per cent along with a bland neutraceutical free variant to serve as control. The four variants were prepared and served fresh to 15 semi-trained persons for the evaluation of organoleptic characteristics like colour, flavour, taste, texture and overall acceptability. Results revealed that the first two variants were accepted as well as control in terms of all the sensory attributes but not the third variant. Thus, it can be concluded that the two neutraceuticals can be successfully incorporated up to 14 per cent level.

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INTRODUCTION

Belief in healing powers of foods is not a new concept and has been a widely held view for generations and dating back to the time of Greek physician Hippocrates (460-377BC). There was little distinction between food and drugs till the dawn of the era of modern medicine. The practice of medicine itself consisted largely of the wise choice of natural food products. Hippocrates clearly recognized the essential relationship between food and health and emphasized that differences of diseases depend on nutriment (Andlauer and Furst, 2002).

The search for specific constituents of plant, animals, minerals and those of microbial origin which are beneficial to our mental and physical health has made us coin the term 'neutraceuticals'. The term coined by *Stephen de Felice* (De Felice, 1992) combining nutrients and pharmaceuticals referred initially to food extracts that can be used as preventive drugs or dietary supplements (Prakash *et al.*, 2004). They have been popularized by the foundation for the innovation in medicine by defining them as any substances that may be considered as food or part of a food and provide medical or health benefits, including the prevention and treatment of disease (De Felice, 1992). Thus, they are the hybrids of both nutrients and medicinal principles and fall into the grey area between foods and medicines. They are found in a number of products emerging from (a) the food industry, (b) the herbal

and dietary supplement market and (c) the pharmaceutical industry. They range from isolated nutrients, dietary supplements; genetically engineered "designer" foods, herbal products and processed products such as cereals and soups. They can be grouped in different ways, depending on the food sources, mode of action and chemical structures (Lee *et al.*, 2004).

Lycopene, a member of the carotenoid family is a lipid soluble antioxidant that is synthesized by many plants and microorganisms but not by humans. It is a highly unsaturated, 40 carbon acyclic molecule containing 11 conjugated and 2 unconjugated double bonds arranged in all trans configuration. It is present in many fruits and vegetables. However, tomatoes and processed tomato products (juice, sauce, soup, pizza and spaghetti sauce) constitute the major sources and accounts for more than 85 per cent of all the dietary sources of lycopene. The other sources include water melon (23-72ug/g), pink grape fruit (33.6ug/g), guava (54ug/g) and papaya (20-53ug/g) (Rao and Agarwal, 1999). The lycopene content differs with the varieties of tomatoes and increases as the fruit ripens. It varies from 0.85mg to 13.6 mg/100g (Tapiero *et al.*, 2004). The lycopene levels are lower for peeled tomatoes as the removed peel is known to have higher content (Nguyen and Schwartz, 1998). The concentration of lycopene is two folds higher in pericarp than in locular cavity and that of β -carotene is four