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Quality characteristics of functional pita bread supplemented with date seed powder

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Abstract

The United Arab Emirates (UAE) is the fourth leading country producing 12% of the world palm dates (FAO 2010).Date seed, a major by-products of the date fruit processing industry,accounts for approximately 10% of the fruit weight. Date seedis composed mainly of dietary fiber (75-80%) and isan important source of polyphenols and natural antioxidants.Consumption of dietary fiber has a protective effect against the development of diet-related disorders (cardiovascular disease, type 2 diabetes, high cholesterol levels) while polyphenolic compounds and antioxidants are associated with decreased incidence of cancers.

Functional pita bread was produced by replacing 5, 10, 15 and 20% of pita breadflourwith date seed powder (DSP). Bread made from wheat flour and whole wheat flour were used as controls. Previous studies indicated that pita bread containing DSP had similar nutritional properties as regular and whole wheat breads with higher fiber, flavonoids and antioxidant capacity. Sensory properties and consumer acceptance of the bread samples were investigated.DSP incorporation affected pita bread appearance and color significantly. Appearance quality of pita bread decreased with increasing the level of DSP. Pita bread containing 5% DSP had better sensory quality compared to whole wheat pita bread. Pita bread containing 10% DSP had similar sensory quality as the whole wheat bread pita bread and increasing DSP level above 10% significantly decreased bread sensory quality.

Acceptable and high quality functional pita bread (excellent source of dietary fiber, flavonoids and antioxidants) could be produced by incorporating up to 10% date seed powder.

Biography

Isameldin B. Hashimhas completed his PhD at The University of Georgia, Athens, GA. USA. He isan Associate professorat the Food Science Department, College of Food and Agriculture, UAEU. He has published more than 35 papers in reputed journals.