

Partial Substitution of Flour by Date Seed Powder into Cookies

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Abstract

The United Arab Emirates (UAE) are one of the top date producing countries in the world, which leads to significant amounts of generated waste, in the form of date seeds. Furthermore, type-2 diabetes incidences in the UAE are among the highest in the world. As date seed are nutritionally rich (Habib et al., 2014), especially in antioxidants and fibre, efforts have been made in the past to incorporate date seed powder into baked goods (Platat et al., 2015). With the aim of reducing waste and improving cookies quality in terms of nutritional value, the effects of substituting date seed powder (DSP) into cookies were studied. Cookies with three addition levels (2.5, 5.0 and 7.5%) of fine date seed powder from four date varieties, locally named Khalas, Sukkary, Zahidi, and Fardh, were prepared. Two types of flour were used (white flour and whole wheat) at two different baking temperature 180 and 200 °C. The incorporation of date seed powder had no or slight influence on moisture, ash, fat, and protein content of the baked cookies, while it significantly affected their colour and hardness; the higher level of addition, the darker and crispier were the resulting cookies. The sensory analysis indicated that the date seed powder containing cookies were acceptable in terms of smell, taste, texture, and overall acceptability. Overall analysis indicated that cookies with acceptable physical characteristics and improved nutritional profile can be produced with partial replacement of the wheat flour.

Keywords: waste utilisation, flour substitution, cookies, date seed powder

References

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