

Effect of Date Syrup on Starch Gelatinization and Quality of Layer Cakes

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ABSTRACT

Date syrup was used to replace sucrose in yellow and chocolate-flavored layer cakes at 0, 25, 50, 75, and 100% replacement levels. Cakes were evaluated by panels of people trained in sensory evaluation and by physical measurements. Date syrup was found to cause a deterioration in cake volume, cell structure, grain, texture, color, and flavor, which increased with increasing concentration of date syrup. However, chocolate cakes containing 25% date syrup were similar to the sucrose control in all aspects except for being darker in color. The amylograph was used to study the effect of date syrup on the starch gelatinization and pasting characteristics of cake flour. Date syrup delayed gelatinization, but to a lesser extent than did sucrose. Starch gelatinization temperature was inversely related to the extent of sucrose replacement by date syrup, with flour containing 100% date syrup having the lowest gelatinization temperature.