

Title Physicochemical changes in Mazafati date fruits incubated in hot acetic acid for accelerated ripening to prevent diseases and decay

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Abstract

A method was developed and optimized for the accelerated ripening of date fruits of cultivar 'Mazafati' to prevent diseases and decay. The date fruits were incubated in hot acetic acid solution 0.5% at 40 ± 1 °C for 72 h. During the process some physicochemical changes in the fruits were studied and were found to be comparable with the changes in the fruits that naturally ripened on the tree. Fruit firmness, water insoluble solid (WIS), protein, pH, $L^*a^*b^*$ and E decreased during accelerated ripening whereas in control samples at 4 °C increased. Total solid (TS), total soluble solid (TSS) and acidity were slightly higher in treated fruits compared to control fruits. The greatest loss of fruit firmness occurred during the first 12 h of incubation. Organoleptic tests also showed little difference between the naturally ripened fruits on trees and accelerated ripened fruits in hot acetic acid. Overall there was no difference between the fruits and were readily acceptable to consumers.