

Physicochemical Characteristics and Evaluation of Main Volatile Compounds of Fresh and Dehydrated Mango

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Abstract : Mango is one of the most consumed and appreciated fruits in the world, mainly due to its peculiar and characteristic aroma. Since the fruit is perishable, it requires conservation methods to prolong its shelf life. Mango cubes were dehydrated at 40°C, 50°C and 60°C and by lyophilization, and the effect of these processes was investigated on the physicochemical characteristics (color and texture) of the products and monitoring of the main volatile compounds for the mango aroma. Volatile compounds were extracted by the SPME technique and analyzed in GC-MS system. Drying temperature at 60°C and lyophilization showed higher efficiency in retention of main volatile compounds, being 63.93% and 60.32% of the total concentration present in the fresh pulp, respectively. The freeze-drying process also presented features closer to the fresh mango in relation to color and texture, which contributes to greater acceptability.

Keywords : mango, freeze drying, convection drying, aroma, GC-MS

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