

Comparative effects of pre-treatments before dehydration of osmosed of pineapple, papaya, mango and banana

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Effects of osmotic process, pre- treatments and hot air drying of the reduction of moisture content and sensory characteristics were studied on four fruit types (pineapple, papaya, mango and banana).

Firm ripe fruits were cut into 1x1x1 cm pieces. They were osmo-dehydrated in a saturated sugar solution (2 kg/ L) for 15 h, and determined the moisture content using a moisture meter (AMB 50). After the osmotic process they were divided into four lots and three of them were treated with Sodium metabisulphite, citric acid and lime juice. Treated samples and the control sample were then dried in a laboratory drier at 65° C for four hours. Moisture contents were determined at the end of the hot air drying. Sensory evaluation was conducted for final dried product after 2 weeks of preparation by a panel of 10 judges using five- point Hedonic scale. Results obtained were analyzed using Kruskal Wallis test.

After osmosis the reduction of moisture percentage was lowest in pineapple (8.3%) and highest in banana (39.7%). After the whole drying process, reduction of moisture percentages lie between 40-60% for all fruit types with different treatments. Moreover, sugar treated final dried products gave the lowest reduction of moisture in comparison with the other treatments.

According to the results of the sensory evaluation, dried products made with lime juice treatment obtained the highest scores for all sensory characters.