Effect of osmotic dehydration on chemical composition of grapes during raisin preparation

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ABSTRACT

The process of osmotic dehydration followed by tray drying was studied on grapes for raisin preparation. Grapes were dried out by osmosis using sugar syrup at grapes to sugar syrup ratio of 1:4, which were then dried in a commercial tray dryer maintained at 50°C temperature to obtained raisin. The grapes were dipped in sugar syrup of 60, 65 and 70° B concentration in beakers having fruit to syrup ratio 1:4 at 40, 45 and 50°C temperature and time of immersion was 6, 7 and 8 hr for osmotic dehydration. The effective diffusivity for water loss and solid gain were determined by Factorial Completely Randomized Block Design. From this it was concluded that, acidity and ascorbic acid decreases with increase in syrup concentration, temperature of solution and time of concentration. Total, reducing and non-reducing sugar increases with increase in syrup concentration, temperature of solution and time of concentration.

Key words: Osmotic dehydration, Chemical composition and raisin