

Studies on dehydration of plum using different sugar syrup treatments

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Being highly perishable plums cannot be stored for longer period at ambient condition and only 10 per cent is being processed. There is greater scope and necessity of developing an appropriate technology for drying of plums with long shelf life. Plums are produced around the world, and China is the world's largest producer, The total plum production (of the 10th largest producers) of plum was 9,921,953 MT in 2011. The ripe plums were treated at 100°C for 1 min in boiling water to deactivate the enzyme. The blanched fruits were dipped in sucrose, glucose, fructose and invert sugar syrups at 68°Brix, 72°Brix, 75 ° Brix for 24 hrs for getting desired total soluble solids content. The treated fruits were further dried to 20 per cent moisture in a tray dryer at 60–65°C. Good quality and acceptable dried plums could be prepared by using sucrose syrup treatment at 75°Brix. The chemical analysis of sucrose syrup treated at 75° brix fresh plums and dehydrated plums were carried out with respect to carbohydrate, protein, fat, fibre and ascorbic acid content. No significant loss of nutrient was obtained due to osmotic dehydration. Dried plums prepared using sucrose syrup and packed in aluminium foil pouch and stored at ambient ($27 \pm 2^\circ\text{C}$) as well as refrigerated ($10 \pm 2^\circ\text{C}$) temperature, organoleptic evaluation shows that plum remained in excellent condition up to 3 months.

Key Words : Dehydrated plums, Sucrose, Glucose, Fructose, Invert sugar

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