

DEVELOPMENT OF A READY TO SERVE FLAVOURED COFFEE BEVERAGE

Y.A.N.T. Jayasinghe¹, I.V.A.D.C.S. Induruwa² and
C.A.K. Dissanayake¹

¹*Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*

²*Postharvest Division, Export Agriculture Research Centre, Department of Export Agriculture, Matale, Sri Lanka.*

Coffee is one of the most commonly consumed beverages in the world. However, flavour incorporated coffee beverages are less common in the world market. Therefore, a was conducted to develop ready-to-Serve flavoured coffee beverages with ginger and cinnamon oleoresins. Three brewing methods, hot, cold and brewing at room temperature were tested to compare the physicochemical and sensory properties. Utilizing the selected hot brewing method, pure black coffee (PBC), ginger flavoured (GF) and cinnamon flavoured (CF) coffee beverages were formulated with additions of sugar, citric acid, and sodium bicarbonate. Sensory evaluations were conducted in selecting the optimal formulation. Following the pasteurization, the products were stored in a refrigerator (4°C). Hot brewing was identified as the best method with the highest extraction yield ($16.80 \pm 1.05\%$), sensory properties and physicochemical properties (pH, Brix value). Colour values (L^* , a^* , b^*) of the hot brewed coffee were 20.1 ± 0.10 , 17.5 ± 2.06 and 40.5 ± 6.05 respectively. Physicochemical analysis revealed that GF beverage has the highest total polyphenol content (254.48 ± 4.80 mg GAE 100 g^{-1}). No significant difference was recorded for caffeine contents (64.36 ± 0.51 - 65.31 ± 0.83 mg 180 mL^{-1}) among three beverages. The proximate compositions (moisture, ash, protein and fat) of all beverages were not significantly different. GF beverage showed the highest Brix value (12.29°) and highest preference in all sensory attributes. The titratable acidity and pH of the three beverages were not significantly different. The pH, Brix values and titratable acidity were not significantly changed during the storage under refrigerated conditions for 2 months. No yeast or mould counts were detected, and total plate counts were within the safe limits even after 2 months of storage. The study confirmed that ready-to-Serve beverages can be successfully developed using hot brewing techniques with ginger and cinnamon Flavors with a storage life of more than 2 months under refrigerated conditions.

Keywords: Brewing, Caffeine, Extraction yield, Oleoresins, Storage