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QUALITY EVALUATION OF READY-TO-EAT CASHEW NUT CURRY UNDER FROZEN STORAGE

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ABSTRACT

Cashew nut curry is a popular traditional Sri Lankan dish. This study was conducted to develop and evaluate the quality of a ready-to-eat cashew nut curry stored under frozen storage. The curry was prepared in the traditional Sri Lankan method and packed in high density polyethylene (HDPE) and metalized polyethylene (MP) vacuum pouches separately, and stored at -18°C for 3 months. Samples were drawn and tested for proximate analysis, peroxide value, free fatty acid value, pH value, antioxidant scavenging activity, viscosity of gravy, microbial and sensory qualities. During three month frozen storage, the peroxide values (PV) increased from 0.365 to 3.425 mEq O_2/kg for cashew nut curry packaged in HDPE pouch and to 2.469 mEq O_2/kg for cashew nut curry packaged in MP pouch. A marginal decreases in antioxidant scavenging activity percentage values (29.45–19.09) for HDPE pouch and (29.45–20.36) for MP pouch were also observed during 3 month storage. Values for free fatty acid (0.42 and 0.40 as a percentage of oleic acid) pH (5.73 and 5.80) and viscosity values of gravy (9.1 and 8.8 Pas) were not significantly different among the samples stored in HDPE and MP pouches at the end of 3 month storage. During storage, the total plate count (TPC) and yeast and mold count were found to be decreasing over period of storage in both packages ($<10^1$ for TPC and $<10^0$ for yeast and mold) indicating that the product was microbiologically safe. Sensory scores indicated that the cashew nut curry stored under both packages were within acceptable limits for 3 months under -18°C storage. The best overall protection and quality of the product was highest in the samples packed in metalized polyethylene vacuum pouches.

KEYWORDS: Cashew Nut Curry, Frozen Storage, Packaging, Peroxide Value, Antioxidant Scavenging Activity

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