Studying the effects of fish muscle incorporation on storage stability of a novel corn-fish snack

ABSTRACT

To investigate the effect of minced fish incorporation on storage stability of a puffed corn-fish snack, treatments including 15% silver carp (Hypophthalmichthys molitrix) meat and 85% corn (seasoned and unseasoned) were produced by a twin screw extruder. The peroxide values (PVs) of treatments increased ($P<0.05$) with storage time and reached a peak in the 12th week, then the values declined following a quadratic model. The fish was the least significant factor ($P<0.05$), meaning that incorporation of minced fish slightly affected the PV. Conversely, the seasoning was the most significant factor ($P<0.05$) followed by storage time. The total volatile base nitrogen and free fatty acid concentration of treatments increased linearly during storage. No significant difference ($P>0.05$) was found for crispiness and color. Also, no microbial growth was observed during storage. The storage stability of the seasoned corn-fish snack and the control was obtained 28 and 33 weeks, respectively.

Keyword: Corn-fish snack; Storage; Minced fish