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Effect of binder materials on physicochemical characteristics and sensory properties of *Catla* sausage

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Abstract

Catla catla is a freshwater fish, which is often considered as a low-valued food fish in Sri Lanka. Value added products such as fish sausages can be developed to enhance the marketability of lower valued food fish. During sausage preparation, binders are added to improve the physicochemical characteristics of the sausages. This study investigated the influence of binder materials (wheat flour or chickpea flour) on the physicochemical characteristics and sensory properties of *Catla* sausage. The prepared sausages i.e.: chickpea flour sausages (CFS) and wheat flour sausages (WFS) were kept in a freezer for 4 weeks and proximate composition and physical properties were analyzed at every two weeks. Sensory evaluation was performed on days 1 and 28 after sausage preparation to assess taste, appearance, color and odor by five-point hedonic scale. Proximate analysis revealed that WFS exhibited significantly higher % moisture (66.15 ±0.96) compared to that of CFS (63.40±2.46). WFS showed significantly higher % protein (43.28±3.14) compared to that of CFS (40.16±5.30). The pH of CFS (6.52±0.22) and WFS (6.50±0.30) were not significantly different. The folding ability of both WFS and CFS showed higher value which was level 5. The study showed that, cooking yield % was not significantly different between WFS (93.64±1.32) and CFS (93.19±1.15). On day 1 CFS received lower scores for appearance (1.40±0.59), color (1.45±0.68), odor (1.35±0.48) and taste (1.63±0.49) which indicated the preferable sensory attributes of CFS. At day 28, CFS received lower scores for appearance (1.00±0.00), color (1.40±0.50) and odor (1.73±0.88) and WFS received higher scores for appearance (2.53±0.74), color (2.80±0.77) and odor (2.93±0.79) which indicated a preference towards CFS compared to WFS. Cost analysis showed the price/sausage for the WFS was Rs.8.56 while that for CFS was Rs.10.22. Despite the production cost of sausages, CFS had a superior sensory attribute that suggested a better consumer preference. The present study indicates that Chickpea flour can be successfully used to prepare the *Catla* sausage.

Keywords

Catla catla, fish sausage, chickpea flour sausage, wheat flour sausage