

Utilization of silkworm (*Bombyx mori*) pupal residue powder in masala cookies

G.V. Vishaka, D. Vijayalakshmi, T.K. Narayanaswamy and K. Geeta

The results of the experiment carried out on the development of silkworm pupal Masala Cookies (SPMC) with incorporation of silkworm pupal residue powder (SPRP) revealed that, 7 per cent SPRP incorporated was found to be best accepted with scores for appearance (7.8), colour (7.6), texture (8.0), aroma (7.4), taste (7.6) and overall acceptability (7.6). Silkworm pupal masala cookies had better nutrient content as compared with the control masala cookies (0 % SPRP). The 7 per cent SPRP incorporated SPMC contained 16.6 g protein, 79.3 g carbohydrate, 51.3 g fat, 854 kcal energy, 114.5 mg calcium and 6.6 mg iron. Microbial population of SPMC in initial day was found to be nil in case of all groups of microorganisms like bacterial, *E. coli* and molds. Bacteria of 6.10×10^4 CFU and molds of 3.50×10^2 CFU was noticed on 90th day of storage. Interestingly, no *E. coli* was observed from initial to 90th day of storage. The mean sensory evaluation scores of silkworm pupal masala cookies were recorded from initial day to end of storage study period for the best accepted SPMC (7 %). There was decrease in the overall acceptability from initial (7.4) to 90th day of storage (6.6). Microbial population of SPRP and protein in initial day was found to be nil in case of all groups of microorganisms like bacterial, *E. coli* and molds. Bacteria of 6.97×10^4 CFU and 7.63×10^4 CFU and molds of 4.73×10^2 CFU and 5.07×10^2 CFU was noticed on 90th day of storage. Interestingly, no *E. coli* was observed from initial to 90th day of storage. The SPRP contained 140 mg of phytic acid and 0.2 mg of tannin/ 100g of powder. The production cost of control and SPMC was Rs. 20 /100g.

Key Words : Silkworm, Pupa, Cookies, Nutrient analysis, Storage

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