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Soup powder production from Kilka (*Clupeonella engrauliformis*) and a Determination of Its Shelflife

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Abstract

This study was conducted to determine a proper formulation for Kilka soup powder preparation, and to find its nutritive value, as well as its shelflife. Newly caught fish were dried in the oven after having been prepared and cooked, then converted into powder in a mortar. The resultant powder was processed with different additives to make Kilka soup powder in three formulae. The best formula was chosen using Hedonic's method. In order to determine the shelflife, tests of TVN, peroxide, total microbial count and organoleptic tests were made at predetermined time intervals for a duration of 120 days. The results indicate that TVN changes from 5.56 to 21.5 mg/100g., peroxide from 1.39 to 4.28 meq/kg. and total microbial count from 9×10^4 to 2.2×10^2 /g. Percentage protein and fat in the samples decreased from 52.05 and 5.8 to 46.3 and 4.9, respectively. TVN and peroxide changes are shown to be in a linear relationship with temperature and shelflife. These results as well as the results of organoleptic tests suggest that the samples remain in good conditions for a period of about 60 days, before being deteriorated. Also statistical tests indicated that at a level of $p < 0.05$ the results were significant. Thus the shelflife of the product was finally determined to be about 60 days.

Keywords: Kilka soup powder, TVN, Peroxide, Total microbial count, Shelflife, Food value.

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