6. SUMMARY

One among the important technologies is the processing of fish species into various fish food products. The development of keropok and fish wafers from raw fish (*S. capistratus*) species is the main theme in the present study. The quality of raw material and quality of developed products in relation with microbiological, biochemical, biophysical and sensory evaluation tests were carried out. The methods adopted and results obtained in the present study are summarised below.

The methodology used are

- The collection and subjection of fishes to microbiological, biochemical, biophysical and sensory analyses (quality evaluation).
- Development of keropok and fish wafers (fishery food products)
- Storing of the developed products at room temperature, in polythene bags for about 75 days.
- Examining the products for quality changes (by employing microbiological, biochemical, biophysical and sensory analyses) at a regular interval of 15 days, for a storage / study period of 75 days.

From the above investigation, the results obtained are summarized below:

- Microbes were found in Too Least To Count (TLTC = < 30 CFU/g) levels in the raw fillet as well as the products, throughout the study period (due to the sticking on to aseptic processing procedures). It was
1 x 10^2 to 8 x 10^2 CFU/g in keropok and 2 x 10^2 to 10 x 10^2 CFU/g in fish wafers) from initial to 75 days of storage.

- The protein content was remained same or slightly increased from the initial day of preparation to 75 days of storage condition in both products (keropok : 36.44 to 36.97% ; fish wafers : 38.28 to 40.23%).

- The carbohydrate content was decreased slightly in both keropok and fish wafers (keropok : 46.86 to 46.76% ; fish wafers : 45.79 to 44.84%) from initial to 75 days of storage condition.

- An increase in the lipid content could be noted (keropok : 14.42 to 15.10% ; fish wafers : 13.27 to 13.91%) in the fishery products throughout the study period.

- The TMA, TVB-N and FFA contents were increased rapidly to elevated ranges. The TMA level of keropok was 1.46 to 38.96 mg/100g and fish wafers was 0.71 to 19.84 mg/100g. TVB-N level of keropok was 3.57 to 60.97 mg/100g and fish wafers was 2.33 to 51.1 mg/100g. FFA level of keropok was 7.00 to 14.20% and fish wafers was 7.73 to 21.55% from initial to 75 days storage condition.

- The moisture content of keropok and fish wafers was within the acceptable level. In the initial stage, it was 0.60 and 0.50% in keropok and fish wafers respectively, later in every subsequent stages it decreased slightly and reached 0.40 and 0.30%, respectively during 75th day of storage.
A slight (marginal) increase is found in the pH content of both the samples (keropok = 6.44 to 6.83; fish wafers = 6.50 to 6.78). Therefore both products were considered with slight acidic form.

Based on the results of sensory evaluation study, the prepared products were good and acceptable before 60 days of preparation only.