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Potential for dried shrimp processing industry in coastal area of Negombo lagoon and influence of different processing methods on quality of dried shrimp

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Shrimp is a well accepted seafood item due to good taste and eating qualities. The West Coast of Sri Lanka contributes about 55% to the small shrimp production and part of this shrimp is utilized for making dried fish for the local market. Production information on shrimp from Negombo was also collected.

During this study, the shrimp samples were collected from Negombo Market. These samples were used to study, the effect of salt concentration on cooking method, drying temperature, duration of drying and packing material on the shelf life and post harvest quality of shrimp. The shrimp washed, salted, pressure cooked and dried before packing using different packaging systems. The sensory evaluation was used to select the best treatment for further processing. The results of this study revealed, whole shrimp salted at 5% (weight basis), and pressure cooked and dried at 70^{0}C for 20 minutes yielded best product. In the case of peeled shrimp, salted (4% weight basis) pressure cooking for 15 minutes and drying at 70^{0}C for 2 hrs produced the best result.

The test samples in storage were analyzed in weekly interval for Total volatile nitrogen (TVN), Tri methyl amine (TMA) and Total bacterial count (TBC). Analysis revealed that, the TVN in dried whole shrimp were 27.67 mg/100g, 35.58 mg/100g and 39.53 mg/100g respectively for samples in polystyrene carton, normal polythene and without packaging at the end of six –week period. TMA values for the above samples were 16.8 mg/100g, 21 mg/100g and 26.13 mg/100g respectively for whole dried shrimp. Similarly the TVN value for peeled dried shrimp were 11.85 mg/100g, 16.8 mg/100g and 21 mg/100g respectively packed in the same material.