

effectiveness of chemicals being used in the industry is limited. Keeping this in mind, an attempt was made to study the improvement in biochemical quality of frozen cuttlefish (*Sepia pharaonis*) upon treatment with certain imported food grade chemicals (Hidratech_4A and Whitech_3). Dressed cuttlefish were treated with two chemicals Hidratech_4A (0.4%) and Whitech_3 (0.25%) dissolved in chilled freshwater and chilled saltwater. Chilled cuttlefish not treated with any chemical served as control. Cuttlefish were then quick frozen at -40°C in contact plate freezer and stored at -18±1°C. Samples were tested after pre-processing, treatments and freezing and during cold storage at monthly intervals for 7 months. The biochemical quality evaluation included moisture, protein, fat, ash, pH, TMA-N and TVB-N. Study revealed a better quality of treated samples than control. In general, biochemical quality of cuttlefish treated with fresh water was better than the one treated in salt water and control.

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Development of an ethnic ready-to eat fish product 'Ah-eemo' from Indian mackerel (*Rastrelliger kanagurta*) and its quality characteristics

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A *h-eemo* is an indigenous dish of Tripura prepared from small (freshwater) fishes. The fish is wrapped with banana leaf and steam cooked or sometimes by burying it under heap of ash (burned firewood) followed by burning fire over it. The product needs to be consumed within a short period

of time after preparation. Therefore, the objectives of the present work were to improve the method of preparation and to extend the shelf life of *Ah-eemo* without losing its organoleptic characteristics and nutritional quality. Ready-to eat (RTE) *Ah-eemo* was prepared from Indian mackerel (*Rastrelliger kanagurta*) by improving the methodology. Polyester polyethylene laminate (PES-PE) pouches were selected as a packaging material to contain the wrapped fish. The packaging was performed at 93% vacuum. Optimized cooking time and temperature were 35 min and 98°C with reference to organoleptic properties. A refrigerated (2-4°C) storage study was carried out to evaluate the shelf life of the product. Colour & texture, microbial load and biochemical properties such as lipid peroxidation products and nitrogenous compounds have been analyzed. Effect of cooking on protein fractions of '*Ah-eemo*' was studied. SDS-PAGE confirmed no significant change in major protein fractions during the process of cooking. Microbial load of fresh mackerel and *Ah-eemo* were 5.94 log cfu/g and 2.83 log cfu/g respectively. Comparative study of fatty acids profiles for fresh mackerel, marinated mackerel and *Ah-eemo* samples were carried out during the storage period. Significant difference in MUFA content were observed in fresh mackerel and *Ah-eemo* samples. But unlikely, PUFA content showed least variation throughout the study period. EPA and DHA content of *Ah-eemo* varied from 6.81- 9.36% and 19.98-22.66% respectively. Hence, a hygienic and nutritious RTE *Ah-eemo* with a shelf life of 30 days under refrigerated storage was achieved by the improved methodology.