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Fish is an excellent source of protein and low fat. The protein in fish is of high quality, containing an abundance of essential amino acids and is very important for people of all ages. Preservation must be seen as a way of storing excess foods that are abundantly available at certain times of the year, so that they can be consumed in times when food is scarce. Abundantly available Batticaloa lagoon fishes were selected for preservation by fish pickle based on survey method. Tilapia, Etroplus and catfish were selected for the laboratory study based on the results of the questionnaire survey to preserve by fish pickle. Pickling and spicing; this method in fish preservation used vinegar and other spices. The growth of bacteria and other organisms is prevented by the acetic acid of the vinegar; the vinegar preserved the fish as well as improves its taste. The three types of fish pickles made from Tilapia, Etroplus and Catfish were stored for 8 weeks period. For storage point of view tilapia fish pickle was select superior by panelist through 9.0 hedonic scales sensory evaluation due to highest overall eating quality. It also retained highest amount of protein (19.84%), fat (6.26%), and ash (1.41%) at the end of 8th week. Catfish pickle had the least overall eating quality. This least mean value might be due to lipid oxidation and protein denaturation. Fresh catfish fish pickle had highest fat content and retained the least mean value of protein, lipid and ash in 8th week. During the storage period, there was no any microbial contamination found in the fish pickles. Therefore, tilapia is the most suitable fish for preservation of fish pickle among the selected fishes.