

## **Development of A Fish Burger Incorporating Sea Lettuce (*Ulva lactuca*) and Catla (*Calla calla*)**

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Catla fish has limited scope for consumption due to presence of intermuscular bones. This investigation was carried out to develop high protein and fiber containing ready to eat catla fish burger, incorporating seaweed (*Ulva lactuca*). Control fish burger was prepared without adding seaweed. Recipe development was carried out with different levels of spices. Suitable amount of spices were determined by preliminary trials. Four different levels (0.5%, 1%, 1.5% and 2%) of *Ulva lactuca* powder were tested. On the basis of sensory evaluation results; 0.5% (w/w) incorporated seaweed sample was found suitable due to significance difference ( $p < 0.05$ ) in taste, color, flavor, appearance and overall acceptability. Cooked burgers were packed in polyethylene bags in safety manner for further use. Proximate analysis revealed that seaweed incorporated fish burger contains higher amount of protein and fiber compared to regular fish burgers. Color of the burgers treated with seaweed (*Ulva lactuca*) showed significant difference for  $a^*$  value compared with control. Shelf life studies were carried out by using microbiology and pH tests. The present study of seaweed incorporated fish burger showed slightly increased in pH from 5.47-6.47 up to 14<sup>th</sup> day where no significant increase observed ( $p > 0.05$ ). When pH of the control burger ranging from 6.16-6.6 stored at freeze temperature ( $-18^{\circ}\text{C}$ ). *E.coli* and *Salmonella* they did not present in the both seaweed incorporated and control burgers which were negative in samples because of the hygienic preparation, handling of product and it is not subjected to cross contamination. Proximate composition of seaweed incorporated catla fish burger recorded as 62.83%, 16.25%, 2%, 12.43%, and 7.21% respectively for crude moisture, protein, fiber, fat and ash. It can be concluded that 0.5% (w/w) *Ulva lactuca* incorporated fish burger increase not only the protein and fiber content but also it fulfil the nutritional requirement of consumer.

Keywords: Fish burger, *Catlacatla*, Seaweed powder; *Ulva lactuca*