

Angkanawan Suebpradit 2010: Development of Seaweed Sauce. Master of Science (Fishery Products), Major Field: Fishery Products, Department of Fishery Products.

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To increase the utilization of seaweed, the flavour liking of seaweed sauces were surveyed from 200 consumers. Then, the suitability of each sauce flavour and each kind of seaweed (*Gracilaria* sp., *Solieria* sp. and *Porphyra* sp.), the suitability of seaweeds extract amount, product formula, consumer acceptability and quality changes during storage at 4 °C and 29 ± 3 °C with and without sodium benzoate were studied. It was found that the typical seaweed sauces sorted from the highest to the lowest were sukee, BBQ, and seafood sauce, respectively. According to the preference ranking for color, odor, viscosity, flavor, possibility of being sauce and overall - liking of the initial seaweed sauces, the appropriate seaweed sauces for production were *Solieria* sauce for seafood flavour, *Porphyra* sauce for sukee flavour and *Gracilaria* sauce for BBQ flavour. Seaweed extract of 30 % (w / w) of total ingredients had higher liking score on appearance, color, odor, flavour, viscosity and overall - liking than those of 20 % and 40 % ( $P \leq 0.05$ ). The pH and  $a_w$  of seaweed sauces developed by using mixture design for seafood flavour were 3.64 and 0.97 respectively, for sukee flavour were 4.01 and 0.95 respectively, and for BBQ flavour were 3.93 and 0.93 respectively. The acceptance from 100 consumers to developed seaweed sauces for seafood flavour, sukee flavour and BBQ flavour were 79 %, 95 % and 86 %, respectively at moderately liking score on appearance, color, flavour and overall - liking. All seaweed sauces with or without sodium benzoate, hot filled into glass bottle, steamed at 90 - 100 °C for 10 min and stored at 4 °C and 29 ± 3 °C could be kept more than 12 weeks. During storage for 12 weeks, total bacterial count was less than  $1 \times 10^3$  CFU / g, coliform was less than 3 MPN / g, yeast and mold were less than 10 CFU / g and viscosity decreased slightly.

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Thesis Advisor's signature