

## Effect of *Kappaphycus alvarezii* Seaweed Powder on Quality Parameters of Chicken Meat Spread

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A meat spread is a semi-liquid colloidal suspension used in food preparation or consumed directly. *Kappaphycus alvarezii* is a seaweed species widely used in the food industry, which has high antioxidant properties. Therefore, the present study was conducted to elucidate the effect of incorporating seaweed powder (*Kappaphycus alvarezii*) in chicken meat spread on its quality parameters. Preliminary trials were conducted to determine the suitable levels of vegetable fat spread (i.e. 20%, 30%, 40% [w/w]) and spices. Seaweeds were oven dried (60°C, time) and ground to prepare its powder. The control and four meat spread samples (seaweed powder percentage 0%, 1%, 2%, 3%, 4%) were then prepared according to the commercial guidelines. A sensory evaluation was conducted using a 7-point hedonic scale and 30 untrained panelists to select the best level of seaweed powder for the chicken meat spread. All samples were tested for proximate composition, pH, color, water holding capacity, microbial quality, and TBARS value over a one-month storage period at a temperature of 4°C. Accordingly, 30% fat spread and 1% and 2% seaweed powder levels were selected as the best levels during the sensory evaluation. Results further showed that meat spread with 2% seaweed had the highest hardness, ash content, and pH value ( $p < 0.05$ ). The 1% sample had the highest water holding capacity, lightness, and fat content ( $p < 0.05$ ). Furthermore, TBARS and total plate count values were decreased with the increasing levels of seaweed powder with storage ( $p < 0.05$ ). *Salmonella* and *Escherichia coli* were absent in all samples. The addition of *Kappaphycus alvarezii* can potentially enhance the quality parameters of chicken meat spread and reduce the rate of lipid oxidation during storage.

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**Keywords:** Seaweeds, Antioxidant, TBARS value, *Salmonella*, Fat spread