Effects of Addition of Seaweed (*Kappaphycus alvarezii*) on the Quality of Reduced Salt Chicken Patties

ABSTRACT

This study was conducted to determine the effect of salt reduction and the addition of seaweed (*Kappaphycus alvarezii*) on the quality of chicken patties. In this study, a control sample (1.5% salt and without seaweed) and four chicken patties formulations were studied using two levels of salt (1% and 1.5%) and two levels of seaweed (2% and 4%). The addition of seaweed was shown to improve water holding capacity, emulsion stability and cooking loss ($p<0.05$) on reduced salt chicken patties (1% salt). Besides, the addition of seaweed decreases the shrinkage of diameter and thickness on chicken patties ($p<0.05$). However, the addition of seaweed made the patties darker (lower L^*- value) ($P<0.05$). Furthermore, the hardness, chewiness, cohesiveness and elasticity increased with seaweed addition ($p<0.05$) due to the dietary fibre content in seaweed. Reduced salt chicken patties (1.0%) with seaweed (2% and 4%) showed lower water holding capacity and emulsion stability than chicken patties with seaweed and 1.5% salt content ($p<0.05$). However, the water holding capacity and emulsion stability of the reduced salt chicken patties (1%) were higher than the control sample ($p<0.05$). The sensory evaluation showed that the chicken patty with 1.5% salt and 4% seaweed had the highest overall acceptability. However, the overall acceptability of the chicken patties with reduced salt (1%) with 4% seaweed was significantly higher than that of the control sample ($p < 0.05$). In conclusion, the use of seaweed has the potential to improve the textural properties and emulsion stability of reduced salt chicken patties.