

EFFECTS OF CARRAGEENAN ON SENSORY  
AND CHEMICAL CHARACTERISTICS OF  
HEALTHY MEATBALLS CONTAINING  
LEGUME FLOURS AS EXTENDERS

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## ABSTRACT

Carrageenan has been reported to be successfully used in food products to improve overall texture. Little research has been done on the effects of carrageenan on chemical and sensory characteristics of low fat meatballs. The objective of this study is to conduct proximate analysis including moisture, fat and protein content in uncooked and cooked meatballs, conduct sensory evaluation of cooked meatballs and examine the effects of carrageenan. The method used to determine the moisture content is by drying the sample in the oven. Soxhlet method was used to determine the fat content and Kjeldahl method was used to determine the protein content. Quantitative Descriptive Analysis (QDA) method was used to conduct the sensory evaluation. Results revealed that samples extended with lentil flour had a higher mean score for moisture and fat content. There was a significant difference ( $P < 0.05$ ) when the cooked samples was determined for moisture and protein content. Addition of 1.5% carrageenan significantly increased the mean scores of firmness, springiness, juiciness and overall acceptability. In conclusion, sample L 1.5 (Sample extended with lentil flour and 1.5% CA) received the highest mean score for moisture, fat and overall acceptability. Carrageenan did not show any significant effects ( $P > 0.05$ ) on the fat and protein content. However, it has significant effects ( $P < 0.05$ ) on moisture content and sensory properties.

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