

Valorisation of virgin coconut oil application in mayonnaise production as functional Ingredient

ABSTRACT

Mayonnaise is favourable by large number of consumers due to the pleasant taste that can enhance the appetite. However, several commercial mayonnaises are produced by using high concentrations of oil that may cause high threats of developing several diseases due to the link to health issues. On the other hand, oils known for health promoting properties such as virgin coconut oil are underutilized even though having high potential as plant-based alternative healthy oil that can be used in mayonnaise production. In this study, virgin coconut oil was used to partially and/or fully replace soybean oil that is commonly used in mayonnaise production. Three mayonnaise samples were prepared by using three oil combinations including 100% virgin coconut oil, 50%: 50% soybean oil: virgin coconut oil and 100% soybean oil. The antioxidant activity, physiochemical properties, lipid profile and sensory evaluation of the mayonnaise samples were determined by using standard methods. The results showed significantly higher antioxidant activity for the mayonnaise sample prepared with 100% virgin coconut oil in comparison to other two samples. No significant differences were observed for the physical properties including pH and colour. However, 100% virgin coconut oil mayonnaise sample had the largest droplet size, lowest texture firmness and lowest viscosity among the samples. The sensory evaluation demonstrated higher preference to the 100% soybean oil mayonnaise that scored total of 7.050, while the 100% virgin coconut oil mayonnaise scored 5.57 for overall acceptability. The findings of this study demonstrated high potential for using virgin coconut oil in mayonnaise production to improve the quality and the biological functions of the product while maintaining the organoleptic properties.

Keyword: Mayonnaise; Functional foods; Bioactive ingredients; Coconut oil; Healthy foods