

## ABSTRACT

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### **EFFECTS OF STABILIZERS AND EMULSIFIERS ON THE PHYSICOCHEMICAL AND SENSORIAL PROPERTIES OF PRODUCTION INSTANT ICE CREAM**

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(xiv + 51 pages: 18 tables, 3 figures, 10 appendices)

Ice cream has been known to be especially popular among consumers and is served in a variety of ways; one of which is by the use of powdered form of instant ice cream mix that can easily be served by the means of hydration, mixing, and storage in low temperature, which manufacture requires a number of affecting factors to be put into considerations, such as the addition of stabilizers and emulsifiers in the mix to increase the physicochemical and sensorial properties of instant ice cream mix, while keeping the adverse effects of any kind on the final product at bay. In this research, the addition of maltodextrin (DE 15-20), xanthan gum, and DATEM, as well as the research on the optimum concentrations for each composition was carried out as an attempt in product reformulation to achieve physicochemical and sensorial properties comparable to those of commercially available powdered instant ice cream mix products. The products of this research were analyzed for its sensory preferability, total soluble solids, overrun, melting time, viscosity, carbohydrate content, protein content (Kjeldahl method), and crude fat content (Soxhlet extraction method). The results showed that the addition of 20% w/v produces a product with more preferable sensorial properties and the addition of up to 2% w/v stabilizer showed interactions with the final product by affecting the physicochemical and sensorial properties with the stabilizer combination of xanthan gum and DATEM at 1:2 ratio being the most preferable and comparable to commercial instant ice cream products 'Ice Cream Magic: Cokelat Choco Chips' by PT. Pondan Pangan Makmur Indonesia and 'Haan® Ice Cream Mix: Chocolate' by PT. Gandum Mas Kencana.

Keywords : instant ice cream, stabilizers, emulsifiers, physicochemical and sensorial properties

References : 44 (1993 – 2021)