

Abstract

The simplicity and influence from social media are some factors that contribute positively to the continuous growth of the cheese market in Indonesia, including cheese sauce. However, as cheese sauce is made of an oil-in-water emulsion, it is prone to emulsion instability due to the density difference and emulsion pH as the developed sauce has target pH around 4. To improve the stability, synergistic work of stabilizer and emulsifier were used in this study. A preliminary study was conducted for stabilizer selection in terms of the visual texture formed along with emulsifier selection depending on the consistency and emulsion stability of the sauces formed. The selected stabilizer types and emulsifier concentrations were further applied in the main experiment and evaluated for the physicochemical and sensory analysis. The physicochemical analysis showed no significant difference for the pH and emulsion stability with the guar gum samples showed more stable emulsion than xanthan gum. On the other hand, xanthan gum showed a thicker consistency than guar gum with a significant difference found in combination with 1% of OSA starch due to different stabilizer types. In higher OSA starch concentration, the consistency of guar gum sauce becomes watery due to the water competition with starch. Moreover, the consistency result obtained was also aligned with the texture ranking test in which both xanthan gum samples were being more preferred due to its thicker consistency than the other samples. Despite that, no significant differences were observed in the acceptance level of the developed samples.

Keywords: Cheese Sauce, OSA Starch, Physicochemical Analysis, Sensory Analysis, Stabilizers