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Alginate Addition on Geblek (#640)

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Abstract- *The objective of this research was to obtain the appropriate alginate addition to the best physical, chemical, and sensory characteristics of Geblek. The experiment was arranged in a non-factorial Random Complete Block Design (RCBD) in four replications. The treatment given on each replication was the alginate addition that consisted of six different levels, they were 0% (A0), 1% (A1), 2% (A2), 3% (A3), 4% (A4), dan 5% (A5) (w/w). The data were evaluated by using The Smallest Real Difference Test (SRD) of 5%. The results showed that the appropriate concentration of alginate addition was 1% with the following criteria texture was not tough; preferred by panelists based on texture, colour, and taste attributes; has a hardness value of 0.475 mm/g/dt; water content of 39.864%;oil absorption of 5.567%, fat contentof 3.905% protein of 5.849%, ash of 2.039%, and carbohydrate of 40.776%.*

Keywords: *Alginate, Geblek, and quality of Geblek*

I. Introduction

Cassava was one of agricultural commodities in Indonesia which has a important role in fulfilling the national food needs because of its abundant availability. Fresh cassava tuber has a very low economic value at the big harvest time. Therefore, it requires effort to increase the added value of cassava tuber . One of cassava tuber diversification process was geblek.

Geblek was one kind of traditional food from Kulonprogo, Yogyakarta. Raw materials of geblek were wet starch, cassava dregs, coconut slices or grated coconut and spices (Koesoemawardani, et al., 2016). The colour of geblek was cloudy white, printed in small ball or can be formed in another custom, when it was bitten likes a sluggish cracker, its taste was savory and most tasty was consumed a few minute after fried in while warm (Sije, 2013; Koesoemawardani, et al., 2016). One of the problem of geblek was its texture become hard in cold condition. Therefore, the innovation to improve its texture was dobe by using a binder material that can synergize with cassava tuber , especially in making geblek.

Ji-Sheng et al. (2011) states that alginate has groups of hydroxyl and numerous carboxyl, which determine the physicochemical and biological characteristics of alginates, even affecting their reactive functional groups. Thus, alginate was very flexible to be used in many potential applications of foodstuffs (Abd El-baki, 1982; Sim, 2011; Santana et al., 2013; Khoury et al., 2014; Fransiska et al., 2014; Rockower, et al, 1983 ; Ahmed et al., 1983) and non-foodstuffs (Davies et al., 1994; Mandal, 2006; Liew, et al., 2006). Therefore, this research uses alginate to improve the texture of geblek. The purpose of this research was to obtain appropriate addition amount of alginate in the making of geblek, in order to produce the best physical, chemical, and sensory characteristics of geblek.

II. Materials and Methods

The materials for making geblek were cassava tubers , sodium alginate, water, garlic, salt, coconut pulp, and grated coconut, while the other materials are materials for analyst. The tools were geblek processing tools, glass and instrument tools for analysis.