ABSTRACT

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UTILIZATION OF SEAWEED FLOUR (*Kappaphycus alvarezii*) AS FILLER IN TEMPEH NUGGET MAKING

(xvii + 80 pages: 23 figures, 20 tables, 35 appendices)

Tempeh is a food product high in protein and has distinctive soy aroma. This scent is less favored and tempeh has to be processed into other preferable food products such as tempeh nuggets. Tempe has a soft texture, making addition of fillers to be necessary as to improve the texture of tempeh. Commonly used nugget fillers are tapioca flour, wheat flour, and corn starch. Seaweed (*Kappaphycus alvarezii*) flour can serve as a filler material of the processed products and is also high in fibre. Cassava flour was substituted with seaweed flour (*Kappaphycus alvarezii*) of 5 (five) concentration and one (1) control of 0%, 10%, 20%, 30%, 40%, 50%. Physical tests conducted on tempeh nuggets are color, texture (hardness, springiness, cohesiveness, chewiness), and frying loss. Subsequent storage test was conducted with three (3) types of tempeh nuggets namely nugget controls 0% without preservatives, nugget controls 0% with preservatives, and nuggets with the best formulations without preservatives. Tempeh nuggets with 50% substitution of seaweed flour were selected as the best formulation having the most similar texture, color, and frying loss to that of commercial chicken nuggets. Based on fibre test results, the fiber content of tempeh nuggets with 50% substitution of seaweed flour produced a higher value of 9.88%, compared to control tempeh nuggets 0% (no flour substitute seaweed) with 4.24%. Storage test in freezer (-20°C) showed nuggets with 50% substitution of seaweed flour cannot maintain the physical quality of tempeh nuggets.

Keywords : Dietary fiber, nugget, seaweed flour, storage, tempeh.
References : 49 (1985-2015)