

PENGARUH PENAMBAHAN TEPUNG TULANG IKAN TUNA DAN NATRIUM BIKARBONAT TERHADAP SIFAT FISIK, KIMIA, DAN TINGKAT KESUKAAN *COOKIES MOCAF*

INTISARI

Tepung tulang ikan tuna mengandung kadar kalsium yang tinggi, namun pemanfaatannya belum optimal. Oleh karena itu perlu dilakukan penambahan tepung tulang ikan tuna dan natrium bikarbonat dalam pembuatan *cookies mocaf*. Tujuan penelitian ini untuk mengetahui pengaruh penambahan tepung tulang ikan tuna dan natrium bikarbonat terhadap sifat fisik, kimia, dan tingkat kesukaan *cookies mocaf*.

Penelitian dilakukan dalam dua tahap yaitu pembuatan tepung tulang ikan tuna dan pembuatan *cookies mocaf*. Tepung tulang ikan tuna dibuat dengan cara pembersihan, pelunakan tulang ikan dengan presto selama 2 jam, pengeringan pada suhu 65°C, penggilingan, dan pengayakan. Pembuatan *cookies mocaf* dilakukan dengan cara pencampuran bahan, pengadonan hingga kalis, pencetakan, pemanggangan dengan oven pada suhu 150°C selama 20 menit. Rancangan percobaan yang digunakan yaitu rancangan acak kelompok faktorial dengan empat taraf penambahan tepung tulang ikan tuna (2%, 4%, 6%, dan 8%) dan dua taraf penambahan natrium bikarbonat (0,25% dan 0,5%). Analisis yang dilakukan adalah tingkat kekerasan, tingkat pengembangan volume, intensitas warna, kadar air, dan kalsium. Perlakuan *cookies mocaf* terbaik dilakukan analisis kadar air, protein, serat kasar, dan kalsium.

Berdasarkan hasil penelitian menunjukkan bahwa *cookies mocaf* dengan penambahan tepung tulang ikan tuna dan natrium bikarbonat disukai panelis. Semakin tinggi penambahan tepung tulang ikan tuna, *cookies mocaf* semakin keras, tingkat pengembangan volume semakin rendah, intensitas warna kuning semakin tinggi, kadar kalsium semakin tinggi, dan tingkat kesukaan pada taraf agak disukai. Semakin tinggi penambahan natrium bikarbonat, tingkat kekerasan semakin rendah, tingkat pengembangan volume semakin tinggi, intensitas warna kuning semakin tinggi, namun kadar kalsium tidak berpengaruh, dan tingkat kesukaan semakin disukai. Penambahan tepung tulang ikan tuna 6% dengan natrium bikarbonat 0,5% merupakan *cookies mocaf* perlakuan terbaik dengan tingkat kekerasan 10 kg, tingkat pengembangan volume 36,35%, intensitas warna kuning 19,5, kadar air 4,98% (bb), protein 2,85% (bb), serat kasar 0,28% dan kalsium 4,41% (bk). Tingkat kesukaan warna, aroma, rasa, tekstur, dan keseluruhan pada taraf agak disukai.

Kata kunci : tepung *mocaf*, tepung tulang ikan tuna, kalsium tulang ikan, natrium bikarbonat, *cookies mocaf*

EFFECT OF TUNA FISH BONE MEAL AND SODIUM BICARBONATE ADDITION ON PHYSICAL, CHEMICAL PROPERTIES, AND PREFERENCE LEVEL OF MOCAF COOKIES

ABSTRACT

Tuna fish bone meal contains high calcium levels, but the utilization does not optimal. Therefore needs to add tuna fish bone meal and sodium bicarbonate to make mocaf cookies. The purpose of this research is to determine effect of tuna fish bone meal and sodium bicarbonate addition on physical, chemical properties, and preference level of mocaf cookies.

The research was conducted in two stages, firstly making tuna fish bone meal, secondly making mocaf cookies. Tuna fish bone meal was made by cleaning, breaking fish bones with pressure cooker for 2 hours, drying at 65°C, grinding and sifting. Mocaf cookies was made by mixing ingredients, kneading until smooth, printing, and baking in oven at 150°C for 20 minutes. The experimental design used factorial randomized block design with four levels of tuna fish bone meal (2%, 4%, 6%, and 8%) and two levels of sodium bicarbonate (0.25% and 0.5%). The parameters analyzed were the hardness level, the loaf volume, color intensity, preference level, water content, and calcium. The best treatment of mocaf cookies was analyzed for water content, protein, crude fiber, and calcium.

According to the result showed that mocaf cookies added by fish bone meal and sodium bicarbonate was liked by panelists. The higher addition of tuna fish bone meal, mocaf cookies was getting harder, the loaf volume was lower, the yellow intensity was higher, the calcium level was higher, and the preference level was little bit preferred. The higher addition of sodium bicarbonate, the hardness level was lower, the loaf volume was higher, the yellow intensity was higher, but the calcium level does not affected, and the preference level was increasingly preferred. The 6% addition of tuna fish bone meal with 0.5% addition of sodium bicarbonate is the best treated mocaf cookies with the hardness level 10 kg, the loaf volume 36.35%, yellow intensity 19.5, water content 4.98% (wb), protein 2.85% (wb), crude fiber 0.28% and calcium 4.22% (db). The preference level for color, aroma, taste, texture, and overall level were little bit preferred.

Keywords: mocaf flour, tuna fish bone meal, calcium of fish bone, sodium bicarbonate, mocaf cookies