

ABSTRAK

PENGARUH PERBEDAAN KONSENTRASI CARBOXYMETHYL CELLULOSE (CMC) TERHADAP EDIBLE COATING BERBASIS GLUKOMANAN UMBI PORANG PADA PRODUK BAKSO SAPI

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Edible coating dapat dibuat dari polisakarida pati umbi porang yang mengandung glukomanan tinggi. Glukomanan mengandung polisakarida mannan yang memiliki kemampuan membentuk lapisan film, namun masih perlu dilakukan penambahan Carboxymethyl Cellulose (CMC) agar dapat membentuk lapisan film yang lebih kokoh. Tujuan penelitian ini untuk mengetahui pengaruh konsentrasi Carboxymethyl Cellulose (CMC) terhadap edible coating yang diaplikasikan pada produk bakso sapi.

Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan satu faktor yaitu konsentrasi Carboxymethyl Celulose (CMC) 0%, 1%, 2%, 3%, 4%, 5% dan 6%. Setiap perlakuan diulang 3 kali. Data yang diperoleh diuji kesamaan ragamnya dengan uji Bartlett dan penambahan data diuji dengan uji Tuckey. Data kemudian dianalisis sidik ragam dan seluruh data diolah lebih lanjut dengan uji Beda Nyata Terkecil (BNT) taraf 5%. Pemilihan perlakuan terbaik menggunakan metode De Garmo berdasarkan hasil dari uji skoring, untuk selanjutnya di uji SEM. Hasil penelitian menunjukkan bahwa perlakuan terbaik adalah dengan penambahan konsentrasi CMC 2% pada edible coating mendapatkan nilai pH sebesar 7,47, nilai viskositas sebesar 109.466 cP dan nilai pH bakso, tekstur bakso dan pengujian sesori mengalami penurunan selama penyimpanan suhu ruang, namun lebih baik dibandingkan perlakuan lainnya.

Kata Kunci : Edible coating, umbi porang, cmc, glukomanan, bakso sapi

ABSTRACT

EFFECT OF DIFFERENCES IN CONCENTRATION CARBOXYMETHYL CELLULOSE (CMC) ON GLUCOMANNAN BASED EDIBLE COATING IN BEEF MEATBALL PRODUCTS

By

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Edible coatings can be made from porang tuber starch polysaccharides which contain high glucomannan. Glucomannan contains mannan polysaccharides which have the ability to form film layers, but it still needs to be added Carboxymethyl Cellulose (CMC) in order to form a stronger film layer. The purpose of this study was to determine the effect of Carboxymethyl Cellulose (CMC) concentration on the edible coating applied to beef meatball products.

This study used a Complete Randomized Block Design (RAKL) with one factor, namely the concentration of Carboxymethyl Cellulose (CMC) 1%, 2%, 3%, 4%, 5% and 6%. Each treatment was repeated 3 times. The data obtained were tested for similarity of variance with the Bartlett test and additional data were tested with the Tuckey test. The data were then analyzed for variance and all data were further processed using the Least Significant Difference (LSD) test at 5%. Selection of the best treatment using the De Garmo method, for further SEM testing. The results showed that the best treatment was the addition of 2% CMC concentration to the edible coating to obtain a pH value of 7.47, a viscosity value of 109,466 cP and the pH value of meatballs, meatball texture and seasoning tests decreased during room temperature storage, but was better than other treatment.

Keywords: Edible coating, porang tubers, cmc, glucomannan, beef meatballs