

Intisari

PENGARUH PENAMBAHAN KARAGENAN SEBAGAI BAHAN PENGIKAT TERHADAP KARAKTERISTIK PERISA MAKANAN DARI CANGKANG RAJUNGAN

Hasil samping industri rajungan berupa cangkang dapat diekstraksi menjadi perisa cangkang rajungan. Cangkang diekstrak dengan *deionized water* pada suhu 100°C selama 1 jam. Filtrat pekat cangkang rajungan ditambahkan dengan bumbu dan bahan pengikat berupa karagenan. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi karagenan terhadap karakteristik perisa yang berasal dari cangkang rajungan. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan faktor tunggal konsentrasi karagenan (0%, 2,5%, 5%, 7,5% dan 10% b/v). Pengujian karakteristik perisa cangkang meliputi uji yields, uji kadar air, uji daya serap, uji kelarutan, uji turbiditas, uji viskositas, FTIR (*Fourier Transform Infrared*), SEM (*Scanning Electron Microscopy*) dan uji hedonik (warna, aroma, rasa, tekstur). Hasil penelitian menunjukkan peningkatan yields saat karagenan yang digunakan semakin tinggi konsentrasinya. Kadar air perisa cangkang rajungan sesuai standar 3-5%. Proses pembuatan perisa cangkang rajungan dengan penambahan karagenan memberikan pengaruh nyata terhadap kadar yields, kadar air, daya serap, *solubility*, viskositas, turbiditas dan kadar kalsium ($p < 0,05$). Hasil uji FTIR menunjukkan bahwa penambahan karagenan memberikan pengaruh terhadap konsentrasi gugus fungsi, kenampakan secara mikroskopik menggunakan SEM menunjukkan bahwa semakin tinggi bahan pengikat (karagenan) membuat partikel dalam produk lebih baik. Uji hedonik menunjukkan pengaruh nyata terhadap parameter rasa ($p < 0,05$), sedangkan terhadap warna, aroma, dan tekstur tidak berpengaruh nyata ($P > 0,05$). Perlakuan terbaik berdasarkan tingkat kesukaan terhadap rasa perisa adalah perisa dengan penambahan karagenan 5% (b/v).

Kata kunci : karagenan, cangkang rajungan, perisa makanan, SEM, FTIR.

Abstract

THE EFFECT OF ADDING CARAGEENAN AS BINDING MATERIAL ON THE CHARACTERISTICS OF FLAVORING AGENT FROM CRAB SHELLS

Crab shell flavoring can be made from the byproduct of the crab industry, which is shells. The shells were extracted with deionized water at 100°C for 1 hour. The concentrated filtrate of crab shells is added with spices and a binder in the form of carrageenan. The aim of this study is to ascertain how the concentration of carrageenan affects the flavor attributes of crab shells. A Completely Randomized Design (CRD) comprising a single factor of carrageenan concentration (0%, 2.5%, 5%, 7.5%, and 10% w/v) was the research design employed. Testing for the flavor properties of shells includes hedonic (color, fragrance, taste, and texture) and FTIR (Fourier Transform Infrared), as well as yield, water content, absorption, solubility, turbidity, and viscosity tests. The results of the study indicated that using a higher concentration of carrageenan increased yields. Crab shell flavoring has a water content of 3-5% as per norm. When carrageenan is added to crab shell flavoring, yield levels, water content, absorption capacity, solubility, viscosity, turbidity, and calcium content are all significantly impacted ($p < 0.05$). The findings of the FTIR test indicate that the addition of carrageenan affects the concentration of functional groups; the product's particles appear better the more binder (carrageenan) there is. This was observed by scanning electron microscopy (SEM). The results of the hedonic test indicate that taste parameters are actually affected ($p < 0.05$), while color, scent, and texture are not really affected ($P > 0.05$). Depending on how much taste is preferred, flavor with 5% (w/v) carrageenan added is the optimum treatment.

Key words: carrageenan, crab shells, food flavors, SEM, FTIR.