PENGARUH KONSENTRASI GLISEROL TERHADAP KETEBALAN, PERMEABILITAS UAP AIR, DAN SIFAT MEKANIK FILM BERBASIS GUM

SKRIPSI

diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sains pada
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LEMBAR HAK CIPTA

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HALAMAN PENGESAHAN

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ABSTRAK

Penggunaan *gum* sebagai *edible film* bisa menjadi salah satu pilihan, seperti *gum* dari biji *Lion's Heart*, biji selada, dan biji kemangi. Penelitian ini merupakan kajian literatur yang melakukan review tentang pengaruh konsentrasi *plasticizer* gliserol terhadap edible film berbasis gum. Studi ini dilakukan dengan mengkaji jurnal dari tahun 2013 - 2020. Berdasarkan data-data dari beberapa artikel tersebut, dapat disimpulkan bahwa penambahan konsentrasi gliserol dapat berpengaruh pada ketebalan, permeabilitas uap air, kuat tarik, dan perpanjangan putus. Saat konsentrasi bertambah maka nilai ketebalan akan ikut bertambah begitu juga dengan perpanjangan putus dan permeabilitas uap air, namun untuk nilai kuat tarik akan berkurang seiring dengan penambahan konsentrasi gliserol. Kondisi terbaik untuk ketebalan dan perpanjangan putus *edible film* ada pada konsentrasi 50%, dan untuk permeabilitas uap air dan kuat tarik ada pada konsentrasi 20% untuk *edible film gum* biji *Lion's* Heart dan konsentrasi 25% untuk *edible film gum* biji selada dan kemangi.

Kata kunci: *edible film*, *seed gum*, konsentrasi, gliserol

ABSTRACT

The use of gum as edible film can be an option, such as gum from Lion's Heart seeds, lettuce seeds, and basil seeds. This research is a literature review that reviews the effect of the concentration of glycerol plasticizer on gum-based edible films. This study was conducted by reviewing journals from 2013 - 2020. Based on the data from these articles, it can be concluded that the addition of glycerol concentration can affect thickness, water vapor permeability, tensile strength, and elongation at break. As the concentration increases, the thickness value will also increase as well as the elongation at break and water vapor permeability, but the tensile strength value will decrease with the addition of the glycerol concentration. The best conditions for thickness and elongation at break of edible films were at a concentration of 50%, and for water vapor permeability and tensile strength were at a concentration of 20% for Lion's Heart seed gum edible film and 25% concentration for lettuce and basil seed gum edible films.

Keywords: edible film, seed gum, concentration, glycerol

DAFTAR ISI

DAFTAR GAMBAR

DAFTAR TABEL

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