

ABSTRACT

EFFECT OF CONCENTRATIONS OF HYDROCOLOIDS ON PHYSICO-CHEMICAL AND SENSORY PROPERTIES OF BANANA SIAM (*Musa sp*) FRUIT LEATHER

by

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Banana is considered as an important crop plant due to its high economic value which also good dieatary source. The objectives of this research was to develop Banana Fruit Leather made of banana Siam by adding of Carrageenan and Alginate at different concentrations. Treatments were concentrations of carrageenan or alginate at 0, 0.1, 0.3, 0.6, 0.9 and 1.2% w/w respectively followed by identification of physico-chemical and sensory properties of resulted banana products. Research was arranged in a complete Randomized Block Design (RCBD) nonfactorial with three replications. Data were analyzed with analysis of variance and followed by orthogonal polynomial test at 5% level of significant. The results showed that concentrations of Carrageenan significantly affect tensile strength which was optimal at concentration of 0.62 % with tensile strength of 5,2 MPa. Sensory characteristic of texture was optimal at carrageenan concentration of 0.51 % with sensory score 3.27 (a bit plastic). Overall acceptance was optimal

at carrageenan concentration of 0.31 % with sensory score 3.44 (a bit like).
However, additional of Alginates were not significantly affect physico chemical
and sensory properties of Banana Siam Fruit Leather.

Keywords : carrageenan, alginate, banana siam, fruit leather

ABSTRAK

PENGARUH KONSENTRASI DUA JENIS HIDROKOLOID TERHADAP SIFAT FISIKOKIMIA DAN SENSORI *FRUIT LEATHER* PISANG SIAM (*Musa sp.*)

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Pisang merupakan tanaman buah penting yang memiliki nilai ekonomi tinggi dan sumber pangan yang baik. Penelitian ini bertujuan untuk mengembangkan produk *fruit leather* berbahan baku pisang dengan menentukan pengaruh konsentrasi dua jenis hidrokoloid (karagenan dan alginat) terhadap sifat fisiko-kimia dan sensori *fruit leather* pisang Siam. Perlakuan yang digunakan adalah penambahan karagenan atau alginat dengan konsentrasi masing-masing 0; 0,3; 0,6; 0,9; dan 1,2 % (b/b) lalu dianalisis fisikokimia dan sensorinya. Penelitian disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) non-faktorial dengan tiga ulangan. Data dianalisis sidik ragam dan dianalisis lebih lanjut menggunakan uji polinomial ortogonal pada taraf 5%. Hasil penelitian menunjukkan bahwa penambahan karagenan berpengaruh nyata terhadap kuat tarik pada konsentrasi optimal 0,62 % dengan nilai 5,2 (MPa), tekstur pada konsentrasi optimal 0,51 % dengan skor 3,27 (agak plastis), serta berpengaruh sangat nyata terhadap

penerimaan keseluruhan pada konsentrasi optimal 0,31 % dengan skor 3,44 (agak suka). Sedangkan penambahan alginat tidak berpengaruh nyata terhadap sifat fisikokimia dan sensori *fruit leather* pisang siam.

Kata kunci : karagenan, alginat, pisang siam, *fruit leather*