

ABSTRACT

THE EFFECT OF THE USE OF VARIOUS TYPES OF STABILIZER ON THE PHYSICAL AND SENSORY PROPERTIES OF ICE CREAM WITH THE ADDITION OF YELLOW SWEET POTATOES (*Ipomoea batatas* L. Lam)

By

SALMA APRILLIA

The purpose of this study was to determine the effect of various types of stabilizers on the physical and sensory properties of ice cream with the addition of yellow sweet potato and determine the best type of stabilizer that produces ice cream with good physical and sensory properties. The study was arranged in a completely randomized design (CRD) with a single factor and four replications. The single factor treatment was a stabilizer type with 6 levels of CMC 0.5% (P1), 0.5% sodium alginate (P2), 0.5% carrageenan (P3), 0.5% arabic gum (P4), gelatin 0.5% (P5), and 0.5% pectin (P6). The results showed that the use of various types of stabilizers had a significant effect on overrun, texture, color, and overall acceptance, but did not significantly affect the melting speed and stability of the ice cream emulsion with the addition of yellow sweet potato. The best type of stabilizer for ice cream with the addition of yellow sweet potato is 0.5% gelatin (P5) with an overrun value (52.95%), emulsion stability (86.82%), melting speed (27.00 minutes), texture score 4.31 (soft), color score 2.73 (yellowish white), and overall acceptance score 4.44 (like). Yellow sweet potato ice cream with the addition of 0.5% gelatin stabilizer contains fat content (22.18%), protein content (6.29%), total solids content (37.36%), crude fiber content (0.67%), and antioxidant activity (752.32 g/mL).

Keywords : ice cream, yellow sweet potatoes, stabilizer

ABSTRAK

PENGARUH PENGGUNAAN BERBAGAI JENIS *STABILIZER* TERHADAP SIFAT FISIK DAN SENSORI ES KRIM DENGAN PENAMBAHAN UBI JALAR KUNING (*Ipomoea batatas* L. Lam)

Oleh

SALMA APRILLIA

Tujuan penelitian adalah mengetahui pengaruh berbagai jenis penstabil terhadap sifat fisik dan sensori es krim dengan penambahan ubi jalar kuning dan menentukan jenis penstabil terbaik yang menghasilkan es krim dengan sifat fisik dan sensori yang baik. Penelitian disusun dalam Rancangan Acak Lengkap (RAL) dengan faktor tunggal dan empat kali ulangan. Perlakuan faktor tunggal adalah jenis penstabil dengan 6 taraf perlakuan CMC 0,5% (P1), sodium alginat 0,5% (P2), karagenan 0,5% (P3), gum arab 0,5% (P4), gelatin 0,5% (P5), dan pektin 0,5% (P6). Hasil penelitian menunjukkan bahwa penggunaan berbagai jenis penstabil berpengaruh nyata terhadap *overrun*, tekstur, warna, dan penerimaan keseluruhan, namun tidak berpengaruh nyata terhadap kecepatan leleh dan stabilitas emulsi es krim dengan penambahan ubi jalar kuning. Jenis bahan penstabil terbaik es krim dengan penambahan ubi jalar kuning adalah gelatin 0,5% (P5) dengan nilai *overrun* (52,95%), stabilitas emulsi (86,82%), kecepatan leleh (27,00 menit), skor tekstur 4,31 (lembut), skor warna 2,73 (putih kekuningan), dan skor penerimaan keseluruhan 4,44 (suka). Es krim dengan penambahan ubi jalar kuning menggunakan penstabil gelatin 0,5% mengandung kadar lemak (22,18%), kadar protein (6,29%), kadar total padatan (37,36%), kadar serat kasar (0,67%), dan aktivitas antioksidan (752.32 $\mu\text{g/mL}$).

Kata kunci : es krim, ubi jalar kuning, penstabil