RINGKASAN

Gula kelapa terbuat dari bahan baku utama nira kelapa. Nira yang dimasak sangat mempengaruhi mutu gula kelapa. Nira mudah mengalami kerusakan karena adanya aktifitas mikrobia. Nira juga mudah terkontaminasi dan terfermentasi secara alami yang menyebabkan pH nira turun (asam). Untuk menjaga kualitas nira kelapa, maka perlu adanya bahan tambahan berupa bahan pengawet. Adapun pengawet yang dapat ditambahkan pada nira kelapa berupa pengawet kapur dan kayu nangka, kapur dan kulit buah manggis, tangkis serta pengawet sodium metabisulfit. Perbedaan jenis pengawet tersebut memungkinkan adanya perbedaan daya stabilitas produk gula kelapa yang dihasilkan selama penyimpanan. Penelitian ini bertujuan untuk: 1) mengetahui pengaruh jenis pengawet nira terhadap stabilitas mutu gula kelapa cetak selama penyimpanan, 2) mengetahui pengaruh lama penyimpanan terhadap stabilitas mutu gula kelapa cetak yang menggunakan jenis pengawet yang berbeda, 3) mengetahui jenis pengawet nira yang dapat memberikan stabilitas terbaik selama penyimpanan.

Penelitian ini menggunakan metode eksperimental. Rancangan percobaan yang digunakan adalah *Split Plot Design* dengan rancangan dasar yaitu Rancangan Acak Kelompok (RAK). Penelitian ini terdiri dari 2 faktor, yaitu jenis pengawet nira sebagai *main plot* (petak utama) dan lama penyimpanan sebagai *sub plot* (anak petak). Faktor jenis pengawet nira (L) terdiri dari 4 taraf, yaitu sodium metabisulfit (L1); kombinasi kapur dan kayu nangka (L2); kombinasi kapur dan kulit buah manggis (L3); pengawet nira alami merek TANGKIS (L4). Faktor lama penyimpanan (P) terdiri dari 5 taraf, yaitu 0 hari (P1); 14 hari (P2); 28 hari (P3); 42 hari (P4); 56 hari (P5). Terdapat 20 kombanasi perlakuan dan pengujian dilakukan sebanyak 2 kali sehingga diperoleh 40 unit percobaan. Variabel yang diamati pada penelitian ini teridiri dari variabel fisik dan kimia, meliputi: 1) Tekstur objektif, 2) Intensitas *browning*, 3) Kadar air, 4) Kadar gula reduksi, 5) Kadar sukrosa, 6) Total padatan tidak terlarut, 7) Kadar abu. Data yang diperoleh dianalisis menggunakan analisis ragam, kemudian jika hasil analisis menunjukkan pengaruh nyata, maka dilanjutkan dengan Uji *Duncan's Multiple Range Test* (DMRT) pada taraf 5%. Sedangkan penentuan jenis pengawet nira terbaik menggunakan Uji Indek Efektivitas.

Hasil penelitian menunjukkan jenis pengawet nira yang berbeda menghasilkan nilai intensitas *browing*, kadar air, kadar gula reduksi, kadar sukrosa dan total padatan tidak terlarut gula kelapa cetak yang berbeda selama penyimpanan, namun nilai tekstur objektif dan kadar abu gula kelapa cetak menunjukkan tidak adanya perbedaan. Lama penyimpanan meningkatkan intensitas *browning*, kadar air, dan kadar gula reduksi, serta menurunkan intensitas kecerahan, tekstur, kadar sukrosa, dan kadar abu. Jenis pengawet TANGKIS menghasilkan gula kelapa cetak dengan stabilitas terbaik selama penyimpanan.

SUMMARY

Palm sugar is made from primary raw material coconut molasses. Nira cooked greatly influences the quality of Palm sugar. Nira is easily damaged due to the activities of mikrobia. Nira is also easily contaminated and naturally fermented which causes the pH of nira down (acid). To maintain quality coconut molasses, then the need for additional material in the form of preservatives. As for preservatives that can be added in the form of preservatives coconut molasses limestone and wood jackfruit, mangosteen rind and chalk, badminton and sodium metabisulfit preservative. The different types of preservatives allows the distinction power stability of coconut sugar products produced during storage. This research aims to: 1) find out the influence of the type of preservative nira against quality stability of coconut sugar print during storage, 2) know the influence of prolonged storage of stability against the quality of sugar Palm print that uses a type of preservative different, 3) knowing the kind of preservative can provide stability nira best during storage.

The research uses experimental methods. The experimental design used was A Split Plot Design with a basic design that is a random Design Group (RAK). This research consisted of two factors, namely the type of preservative nira as main plot and prolonged storage as sub plots. Factor the type of preservative nira (L) consists of 4 levels, namely sodium metabisulfit (L1); the combination of lime and wood of the jackfruit (L2); the combination of lime and mangosteen rind (L3); a preservative is a natural brand TANGKIS (L4). Retention factor (P) consists of 5 levels, IE 0 day (P1); 14 days (P2); 28 days (P3); 42 days (P4); 56 days (P5). There were 20 kombanasi treatment and testing is done twice so acquired 40 units of the experiment. The variables observed in this research include from physical and chemical variables, includes: 1) texture of the objective, 2) intensity of browning, 3) moisture content, 4) reduction of sugar levels, 5) levels of sucrose, 6) Total solids dissolved, not 7) levels of ash. The data obtained were analyzed using analysis of variety, then if the analysis results show the influence of real, then continued with the Test Duncan's Multiple Range Test (DMRT) at the 5% level. Whereas the determination of the type of preservative nira best use Test Effectiveness Index.

The results showed different types of preservatives nira produces the value of the intensity of browsing, water levels, sugar levels, reduction of the levels of sucrose and total dissolved solids do not print different Palm sugars during storage, but the value of the texture of grey levels objective and coconut sugar print shows the absence of difference. Prolonged storage increase the intensity of browning, moisture content, and the reduction of sugar levels, as well as lowering the intensity of the brightness, textures, levels of sucrose, and the levels of ash. Types of preservatives coconut sugar producing TANGKIS print with best stability during storage.