

## RINGKASAN

Gula kelapa cair adalah salah satu produk olahan nira kelapa yang dibuat melalui evaporasi nira pada suhu yang tidak terlalu tinggi hingga mencapai *end point*. Permasalahan yang sering muncul dalam gula cair adalah terjadinya kristalisasi sukrosa selama penyimpanan dan kenampakan yang kurang jernih. Salah satu upaya yang dapat dilakukan yaitu dengan dekrystalisasi menggunakan asam. Namun perlu dicari kisaran pH yang tepat. Penelitian ini bertujuan untuk 1) Mengetahui pengaruh penggunaan jenis asam dan variasi pH nira kelapa terhadap sifat kimia dan sensori gula kelapa cair, 2) Menentukan perlakuan jenis asam dan variasi pH nira kelapa yang menghasilkan gula kelapa cair dengan sifat kimia dan sensori terbaik, 3) Mengetahui perubahan sifat fisik dan kimia gula kelapa cair selama penyimpanan.

Penelitian ini merupakan penelitian eksperimental dengan Rancangan Acak Kelompok (RAK). Faktor yang diteliti terdiri atas 2 yaitu: jenis asam (A) yaitu asam sitrat (A1) dan asam asetat (A2); variasi pH nira kelapa (P) yaitu 4,0 (P1), 4,5 (P2), dan 5,0 (P3). Pengamatan yang dilakukan meliputi derajat keasaman (pH), total padatan terlarut, viskositas, *browning intensity*, kadar air, kadar abu, gula reduksi, gula total, sukrosa, persentase kristal, warna, aroma, rasa manis, rasa asam, dan kesukaan.

Hasil penelitian menunjukkan bahwa kombinasi perlakuan yang menghasilkan gula kelapa cair dengan sifat kimia dan sensori terbaik adalah perlakuan penambahan asam asetat dan nira kelapa pH 4,5 (A2P2). Kombinasi tersebut menghasilkan gula kelapa cair dengan derajat keasaman (pH) (4,71), total padatan terlarut (73,31 °Brix), viskositas (907,5 cPs), *browning intensity* (0,47), kadar air (25,12%), kadar abu (2,13%), gula reduksi (7,13%), gula total (70,78%), sukrosa (63,65%) persentase kristal (4,43%), warna 2,63 (kuning kecoklatan), aroma 3,02 (agak khas), rasa manis 3,92 (agak manis), rasa asam 3,9 (agak asam), dan kesukaan 3,25 (agak suka). Selama penyimpanan, kadar gula reduksi mengalami penurunan. Sedangkan kadar gula total dan sukrosa mengalami peningkatan.

## ***SUMMARY***

Liquid coconut sugar is one of the processed products of coconut sap that is made through evaporation of the sap at temperatures that are not too high until it reaches the end point. The problem that often arises in liquid sugar is the occurrence of sucrose crystallization during storage and a less clear appearance. One effort that can be done is by decrystallization using acids. But it is necessary to find the right pH range. This study aims to 1) Determine the effect of the use of acid types and pH variations of coconut juice on the chemical and sensory properties of liquid coconut sugar, 2) Determine the treatment of acid types and pH variations of coconut sap that produce liquid coconut sugar with the best chemical and sensory properties, 3) Know the changes in physical and chemical properties of liquid coconut sugar during storage.

This research is an experimental research with randomized block design (RBD). The factors studied consisted of 2, namely: type of acid (A) namely citric acid (A1) and acetic acid (A2); The variation of the pH of coconut juice (P) is 4.0 (P1), 4.5 (P2) and 5.0 (P3). Observations made include acidity (pH), total dissolved solids, viscosity, browning intensity, water content, ash content, reducing sugar, total sugar, sucrose, percentage of crystal, color, aroma, sweet taste, sour taste, and liking.

The results showed that the combination of treatments that produced liquid coconut sugar with the best chemical and sensory properties was the treatment of adding acetic acid and coconut juice pH 4.5 (A2P2). The combination produces liquid coconut sugar with acidity (pH) (4.71), total dissolved solids (73.31 ° Brix), viscosity (907.5 cPs), browning intensity (0.47), water content (25, 12%), ash content (2.13%), reducing sugar (7.13%), total sugar (70.78%), sucrose (63.65%) percentage of crystal (4.43%), color 2, 63 (brownish yellow), 3.02 aroma (somewhat typical), sweet taste 3.92 (slightly sweet), sour taste 3.9 (slightly sour), and 3.25 (rather like). During storage, reducing sugar levels decrease. While total sugar and sucrose levels have increased