

Abstrak – Penelitian ini bertujuan mengetahui konsentrasi natrium bikarbonat yang optimal dalam pembuatan minuman air kelapa (*Cocos nucifera* L.) berkarbonasi. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan konsentrasi NaHCO_3 (0,4%; 0,5%; 0,6%; 0,7%; 0,8%) dan diulang 4 kali. Parameter yang diuji meliputi kadar CO_2 terlarut, pH, total padatan terlarut, total asam tertitrasi, waktu gelembung CO_2 bertahan, uji organoleptik (efek sparkle, rasa, warna, aroma, penerimaan keseluruhan dan perbandingan jamak). Hasil penelitian menunjukkan bahwa konsentrasi NaHCO_3 berpengaruh nyata terhadap kadar CO_2 terlarut, pH, total asam tertitrasi, waktu gelembung CO_2 bertahan, mutu hedonik efek sparkle, mutu hedonik rasa, hedonik rasa, dan uji perbandingan jamak. Namun, tidak memberikan pengaruh signifikan terhadap total padatan terlarut, mutu hedonik aroma, hedonik aroma, hedonik warna, dan penerimaan keseluruhan. Konsentrasi 0,8% menjadi perlakuan terbaik dengan kadar CO_2 terlarut 1818,25 mg/L; pH 6,35; total asam tertitrasi 0,0639%; total padatan terlarut 9,94 °Brix; waktu gelembung CO_2 bertahan selama 69,145 menit; organoleptik mutu hedonik efek sparkle 4,32; mutu hedonik rasa 3,72; mutu hedonik aroma 3,92; hedonik warna 3,44; hedonik aroma 3,44; hedonik rasa 4,36; penerimaan keseluruhan 3,60 dan perbandingan jamak 3,96.

Kata Kunci: Air kelapa, CO_2 , minuman berkarbonasi, natrium bikarbonat

Abstract – This research aims to determine the optimal concentration of sodium bicarbonate in making beverages carbonated coconut water (*Cocos nucifera* L.). The research used a Completely Randomized Design (CRD) with NaHCO_3 concentrations (0,4%; 0,5%; 0,6%; 0,7%; 0,8%) and was repeated 4 times. The parameters tested included dissolved CO_2 levels, pH, total dissolved solids, total titrated acid, CO_2 bubble retention time, organoleptic tests (sparkle effect, taste, color, aroma, overall acceptance and multiple comparisons). The results showed that the concentration of NaHCO_3 significantly affected the dissolved CO_2 levels, pH, total titrated acid, CO_2 bubble retention time, sparkle effect hedonic quality, taste hedonic quality, taste hedonic, and multiple comparison tests. However, it did not have a significant effect on total dissolved solids, aroma hedonic quality, aroma hedonic, color hedonic, and overall acceptance. The concentration of 0,8% was the best treatment with dissolved CO_2 levels of 1818,25 mg/L; pH 6,35; total titratable acid 0,0639%; total dissolved solids 9,94 °Brix; CO_2 bubble time lasted for 69,145 minutes; organoleptic hedonic quality of sparkle effect 4,32; hedonic quality of taste 3,72; hedonic quality of aroma 3,92; hedonic color 3,44; hedonic aroma 3,44; hedonic taste 4,36; overall acceptance 3,60 and multiple comparison 3,96.

Keyword : carbonated beverage, CO_2 , coconut water, sodium bicarbonate