

ABSTRACT

This study was conducted for 4 months from January-May 2023 at PT. Sinar Sosro Research & Development department. Shifted trend towards the use of Low Calorie Sweeteners (LCS) in carbonated beverages are emerging due to health problems caused by sucrose. However, the use of a single LCS is not efficient due to lacking sweetness profile, therefore a combination of LCS with synergism properties were needed. One of the best pair of LCS blend in carbonated beverages was erythritol and sucralose. The objective of this study were to investigate the effect of LCS blend in white grape carbonated drink based on hedonic analysis, also to analyze its stability. The materials were prepared according to the formulation, created Formula 1 (Sucrose-based) and Formula 2 (LCS blend-based) carbonated beverages. Fresh state samples went through hedonic analysis by degree of liking with 12 trained panelists and 8 attributes. While the rest of the samples were stored in refrigerator and analyzed for its stability per week until reached 1 month storage period. Based on hedonic analysis, there was a significant difference in white grape aroma and taste between F1 and F2. From the stability analysis between formula, F2 was lighter in color and has lower brix than F1. Moreover, from stability between week shows that color and organoleptic properties were statistically different on both formulas. Therefore, F2 was more preferable than F1 as it is more stable towards changes and have lower calorie to reduce the risk of health problems related to sucrose.

Keywords: Carbonated beverages, Low Calorie Sweetener, Erythritol, Sucralose, Hedonic, Stability