Optimization of Processing of Starfruit (*Averrhoa carambola*) Cider

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Abstract

Fruits are generally considered to be highly nutritious. They are excellent sources of essential vitamins, minerals, fibre and antioxidants. Fruit based cider is an excellent solution for extending the shelf life of fruits. The main objective of this study to optimize of processing of starfruit (*Averrhoa carambola*) cider and to evaluate qualities of the fermented starfruit cider. The cider was prepared with different fermented temperature conditions with three (03) replicates and stored in tightly closed brown coloured glass bottles. Physiochemical properties, sensory attributes and microbial count were analysed at once a week. The data were analysed using SPSS software and they were interpreted at 0.05 significance level. There were significantly differences between treatments of pH value, TSS, alcohol, ABV (sig<0.05). The PH was increased, while the TSS and ABV were decreased by week. Significant changes in the alcohol were observed. Furthermore, the SG, titratable acidity and volume were constant throughout the aging. Considering the quality performances, T3 had the highest scores for overall acceptability and it had lowest total plate count in two weeks' fermentation compared to other treatments. Based on the evaluation, T3 was best sample under fermented temperature condition.

Keywords: Alcohol levels, Fermented temperature, Optimization, Physiochemical properties, Starfruit cider