ABSTRACT

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UTILIZATION OF TERONG ASAM FRUIT (Solanum ferox L) AS FRUIT JUICE
(xiv + 71 pages: 11 figures 20 tables and 31 appendices)

“Terong asam” fruit (Solanum ferox L.) belong to the Solanum genus which contains antioxidants such as phenolic and flavonoids compounds. The utilization of “terong asam” fruit is still limited and therefore it is necessary for product’s diversification, such as in fruit juice. The objective of this research was to investigate the antioxidant activity and the total phenolic and flavonoid of “terong asam”. In addition to that, the optimization blanching, the optimization of sugar to be added in fruit juices and changes in the quality of fruit juice during storage was also performed. Blanching methods used were steam and water blanching for 1, 3 and 5 minutes. The concentration of sugar that was used was 10%, 12.5% and 15%. Storage was done for 6 weeks and each week, the pH, TTA, TSS, total reducing sugar, vitamin C, total flavonoids, total phenolics, antioxidant activity, color, total plate count, S. aureus, E. coli and organoleptic were analyzed. This research showed that the most optimal blanching method and sugar concentration was blanching using hot water for 1 minute and 10% sugar concentration respectively. During storage, the pH, TTA, total reducing sugar, total plate count and “hue” increased. On the contrary, TTA, vitamin C, total flavonoids, total phenolics and antioxidant activity decreased. Fresh and processed fruit juice did not contain S. aureus and E. coli. A panelist slight likely to the overall sour eggplant fruit juice during storage. In conclusion, terong asam fruit juices contain phenolic, flavonoids and antioxidant activity. Storage affects the quality of “terong asam” fruit juice.

Keywords: antioxidant, blanching, fruit juice, Solanum ferox L., storage, quality