

Development of a Herbal Iced Tea from Broken Mixed Fannings (BMF) incorporated with Butterfly Pea Flowers (*Clitoria ternatea*)

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Abstract

Tea has been used across the world for decades without any documentation about foodborne illnesses attributable to the good sanitation practices. Tea is proven to be a healthy beverage because of the chemical compounds that contain in tea. Therefore adding a natural herb to tea can amplify the quality and the value of the beverage. Consumption of herbal tea is a one of the methods that can be put into practice to have a healthy life. *Clitoria ternatea* is a Thai herb and capable for lessening the risk of having different illnesses. The study was conducted to develop a herbal iced tea by using *Clitoria ternatea* flowers, Broken Mixed Fannings tea grade and mint flavor. *Clitoria ternatea* single petal blue flowers were collected and cleaned under running tap water. Then the flowers were air dried under room temperature and ground to obtain the desired particle size. By blending *Clitoria ternatea* flowers and Broken Mixed Fannings tea, five treatments were prepared. Sensory analysis was conducted by ten experienced tea tasters to acquire the best dosage of *Clitoria ternatea* flowers and Broken Mixed Fannings tea for herbal iced tea development. Combinations of these functional ingredients extract were prepared and evaluated. Sensory analysis was completed by using Kruskal-Wallis Test in Minitab software. Kruskal-Wallis macros were used to obtain the pairwise differences in the parameters. Conover-Inman Method was used for selection of best treatments. Sensory evaluation results exposed that there were significant differences between treatments with respects to color, taste, aroma, mouth feel and overall acceptability for beverage preference. The findings of microbial study proved that total plate counts in the formulated beverages were secured to use even after kept for one and half months at room temperature. Results of physico-chemical analysis revealed that even though the pH was decreased with the time the beverage was assured for the consumption compared with values of other beverages available in the market.

Keywords: *Clitoria ternatea*, broken mixed fannings, Conover-Inman method, Kruskal-Wallis test, sensory evaluation