

Preparation of Nam-Nam (*Cynometra cauliflora*) Wine and Evaluation of Its Biochemical Properties

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Cynometra cauliflora ("Nam-Nam") is a fruit associated with well-known pharmacological effects and possesses folk medicinal values in treating several diseases. However, this seasonal fruit has short shelf-life under tropical conditions. The production of functional beverage (wine) from this fruit can preserve its nutraceuticals and health boosting properties and reduce post-harvest losses. Hence, the main aim of the present study was to prepare wine using *C. cauliflora* fruit and to conduct sensory evaluation and phytochemical analysis of the wine. Nam-Nam wine was prepared by fermentation of ameliorated must of *C. cauliflora* using *Saccharomyces cerevisiae*. In this study, by changing sugar percentage, three different wine samples were initially formulated as 0%, 10% and 50%. To identify if consumers prefer wine samples, sensory evaluation test was conducted based on five-point hedonic scale (appearance, color, aroma, texture and taste) using 30 panelists. Then consumer preferred wine sample was screened for preliminary phytochemicals using standard methods. Further, physicochemical parameters (titratable acidity and pH) of the wine was measured. In sensory analysis, 50% sugar added Nam-Nam wine sample was selected as the most preferred wine sample. Formulated Nam-Nam wine was rich with alkaloids, terpenoids, flavonoids phytochemicals. The sugar content of the initial formulation remarkably decreased after fermentation and pH of the wine sample increased from pH 3.8 to 4.4. The titratable acidity of final product was 0.9 %TA. In conclusion, an acceptable fruit wine can be produced from Nam-Nam fruit, which can help to reduce postharvest losses. Moreover, producing a functional wine from Nam-Nam could be more effective than conventional methods of preserving nutrients present in the original fruit juice. Further research needs to be conducted to test alcohol content, anti-mitotic activity and anti-diabetic effect of the Nam-Nam wine.

Keywords: *Cynometra cauliflora*, Nam-Nam, phytochemicals, wine