

Development of Healthy Drink from Nipa Sap Vinegar

Krairuch Thetmee and Nualrahong Thepwiwatjit

Faculty of Science and Technology, Dhonburi Rajabhat University

2016

The objectives of this research were to 1) develop formula for Nipa palm vinegar drink and 2) study the quality change during storage of the Nipa palm vinegar drink. The result yielded 4 formulas of vinegar drink which were nipa sap formula, butterfly pea formula, roselle- jujube formula and gac fruit formula. Honey was used as a sweetener in all formulas except nipa sap formula. The development process started with determining the ratio of each composition in the formula so that the product would have amount of acetic acid and total soluble solid closed to those of vinegar products in the market. The just-about-right scale (JAR) was used to evaluate the prototypes regarding the level of color, sourness and sweetness for all formulas and the thickness for gac fruit formula. The results from 50 panelists by purposive sampling revealed that nipa sap and gac fruit formula were rated at just right while butterfly pea formula needed lower color intensity and roselle- jujube formula needed more sweetness. The results from 9-point hedonic scale from 100 panelists by purposive sampling indicated that the overall acceptance scores of the developed products were 7.45, 7.71, 7.82, and 7.83, respectively (like moderately to like very much). The optimal nipa sap formula consisted of 7.69% vinegar and 92.31% nipa sap while butterfly pea and gac fruit formula consisted of 7.69% vinegar, 11.54% honey and 80.77% butterfly pea extract or gac fruit juice. The optimal roselle- jujube formula consisted of 7.69% vinegar, 15.38% honey and 76.92% roselle- jujube juice. All products could be kept at room temperature and cold storage (4°C) for 2 months without any change in pH, total soluble solid and acetic content. The microbiological qualities in all products were at safe level.

Keywords: Healthy drink, vinegar, nipa sap