Improving the Palatability and Marketability of Noni Juice, a Medicinal Fruit Juice, Using Rotary Evaporation

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Noni (Morinda citrifolia) is a traditional Southeast Asian medicinal plant with research indicating antioxidant, anti-inflammatory, and anticancer activity, as well as benefits for cardiovascular and joint health. However, noni juice has an unpleasant odor and flavor that limits its palatability and marketability. This study assessed rotary evaporation (rotovap) as a method to deodorize noni juice and improve its palatability. Original and rotovapped noni juice was added to pineapple juice at 10% and 20% concentrations to develop four different juice samples. The rotovapped juices showed the removal of pungent volatile compounds like octanoic and hexanoic acid, indicating deodorization and an improvement in palatability. Other properties like acidity, color, and pH were maintained, suggesting retention of nutritional quality. Overall, rotary evaporation shows promise for removing noni juice odor while maintaining nutritional properties. Although additional data must be collected to accurately assess the retention of nutritional benefits after rotary evaporation, this study offers a method to commercialize noni juice by improving palatability. Additionally, developing noni products highlights the cultural significance of noni in Hawaii as a traditional medicinal plant, supports Hawaii's local economy and decreases an over-dependence on food imports from other states.

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