CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT REPORT

UTILIZATION OF GUAVA FRUIT FERMENTATION AS WINE

ARRANGED BY

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Surabaya, September 13th, 2024

Pierre Clyde Weber Tjhai

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PREFACE

Praise to God, for giving me strength and letting me through all the difficulties so I was able to finish this Culinary Innovation and New Product Development Report.

I also take this opportunity to express my gratitude to:

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ABSTRACT

This study explores the use of red guava (*Psidium guajava L.*) as a fermentation substrate for winemaking, focusing on its unique flavor profile and potential health benefits due to its high vitamin C content. The study evaluates the fermentation process over a four-week period, monitoring variables such as pH, sugar content, and yeast activity to understand their impact on the quality and characteristics of the resulting guava wine. Red guava is known for its nutritional benefits, including relieving menstrual pain, lowering blood sugar levels, improving heart health, facilitating digestion, and boosting the immune system. The fermentation of guava 'must' involve the conversion of sugars like glucose and fructose into ethanol by Saccharomyces cerevisiae, with the process influenced by factors like temperature, pH, and substrate concentration. The study highlights the significance of racking and aging in enhancing wine quality, including improvements in taste, aroma, and phenolic content. Sensory evaluation confirms that aged guava wine has desirable sensory attributes, making it a potentially valuable addition to the wine industry.

Keyword: *Guava, Fermentation Process, Simple Syrup, Winemaking, Yeast*

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