

**CULINARY INNOVATION AND NEW PRODUCT  
DEVELOPMENT REPORT**

**UTILIZATION OF FOOD WASTE (RICE WASHING WATER,  
PINEAPPLE SKIN & PINEAPPLE FLESH JUICE) FOR  
MAKING NATA DE PINARI**



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**2023**

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Surabaya, October 17<sup>th</sup> 2023



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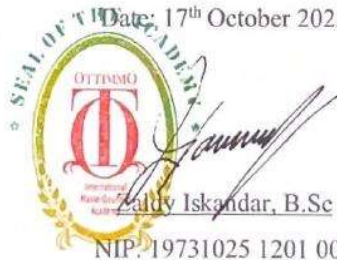
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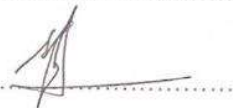
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## **PREFACE**

Praise and gratitude to the One Almighty God, Jesus Christ for all the blessings of power, mercy and grace also spiritual guidance that have been given so that the author can complete the Culinary Innovation and New Product Development Report entitled “Utilization Of Food Waste (Rice Washing Water, Pineapple Skin & Pineapple Flesh Juice) For Making Nata De Pinari”. The writing of this Culinary Innovation and New Product Development report is intended as one of the requirements to obtain a Diploma 3 in Tourism from the Culinary Arts and Baking Pastry Study Program at Ottimmo International Mastergourmet Academy Surabaya and as prerequisite to continue with the upcoming internship program in the sixth semester.

The completion of this report could not have been separated from the help, support, guidance, and prayers from various parties, both directly and indirectly, who willingly expended their energy, time, and thoughts so that the preparation of this report could be realized. Therefore, the author would like to express gratitude to all parties who have assisted in the process of creating this report, especially to:

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3. Chef Anthony Sucipto, A.Md. Par, as my advisor for Culinary Innovation and New Product Development, who consistently supports, motivates, provides advice and guidance to the author, enabling the successful preparation of this report;

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5. Chef Yohanna Prasetio, S.Sn., A.Md. Par, as my second examiner, who has provided critiques and suggestions for improvements on both the product as well as this report, and has devoted her time for consultations to address the issues that occurred during the product manufacturing process, which has been beneficial to the author;
6. My parents and sibling, who consistently provide encouragement, motivation and support, both morally and materially to the author throughout the process of creating this report;
7. All other parties that the author cannot mention individually, who have provided assistance throughout the process of completing this report, both directly and indirectly.

The author acknowledges that in the preparation and writing of this Culinary Innovation and New Product Development report there are still many shortcomings and it is far from perfect. Therefore, the author hopes for criticisms and suggestions to improve this report so that it can be better. In conclusion, the author would like to thank and hopes that this report can be beneficial and contribute to the advancement of nata de coco products in the food industry.

Surabaya, October 17<sup>th</sup> 2023



Kallia Maera Wijaya

## ABSTRACT

Nata de pinari is an innovation from fermented food called Nata de coco that was found in 1949 by a Filipino scientist. The author personally came up with this idea because the author want to lift up the values of rice washing water, pineapple skin and take the advantage also reduce food waste since Indonesia is the second largest producer of food waste.

The difference between Nata de coco and Nata de pinari is that Nata de pinari does not contain coconut water, the author utilizes rice washing water, pineapple skin juice and pineapple flesh juice as substrate for the formation of cellulose layers because these ingredients are rich in vitamins, minerals and carbohydrates as a carbon source, similar to coconut water.

The process of making Nata de pinari requires a fermentation method to form cellulose using a gram-negative bacterium, namely *Acetobacter xylinum*. Nata de pinari has translucent white color, a bland taste but carries a slightly sour and refreshing aroma along with a solid yet chewy texture when bitten. This fermented product is a high-fiber and low-calorie food that is very beneficial for the human digestive system, same as nata de coco that sold commercially.

Nata de pinari will be packaged in food-grade PET plastic jar. The net weight in one jar of nata de pinari is 400 grams and will be sold for Rp 30.000 per jar. In the future, this product can be purchased at several supermarkets, convenience stores and e-commerce platforms.

**Keywords:** Nata De Coco, Food Waste, Fermentation

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