

RESEARCH AND DEVELOPMENT FINAL PROJECT

BLACK RICE MILK KEFIR



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RESEARCH AND DEVELOPMENT FINAL PROJECT

“BLACK RICE MILK KEFIR”

(High Anthocyanin in Black Rice Milk Kefir to Decrease Blood Sugar Level)

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PREFACE

As a part of the Diploma Curriculum and in order to gain practical knowledge in the field of Culinary Art, we are required to make a Research and Development as Final Project. In this project report, we have included detail of ingredients, cooking methods, nutrition facts, marketing strategy, and also product calculation.

Doing this project report helped us to enhance our knowledge regarding the work in to the attitude of consumer towards this new product, whether it can be acceptable or not.

Finally, we would like to thank our lecturer for their help in supervise our product and making this report.

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EXECUTIVE SUMMARY

Diabetes Mellitus (DM) is a group of metabolic disorders disease characterized by elevated blood sugar level or hyperglycemia conditions due to insufficient secretion or ineffective insulin performance in the body. Decreased insulin sensitivity causes blood glucose could not enter in the cell so it could not be metabolized by the body to produce energy to support daily activities. Antosianin is a compound that has a strong antioxidant activity and beneficial to body health. Antosianin has the potential of antidiabetic activity that plays a role in lowering a body's blood sugar levels. Black rice has antosianin content of 150-350 mg/100 g with DPPH radical capture activity of 68-85%. Black rice is a potential substrate to be applied as a functional drink that is black rice milk kefir, so the purpose of this research is to know the synergistic effect of black rice milk kefir on the decrease of hyperglycemia through *in-vitro* test of inhibition method of α -glucosidase enzyme and to know the phytochemical compound as an antidiabetic agent on black rice milk kefir products.