

**EFFECT OF ADDITION OF BUTTERFLY PEA AND ROSELLE
FLOWER IN SOY YOGURT**

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

EFFECT OF ADDITION OF BUTTERFLY PEA AND ROSELLE FLOWER
IN SOY YOGURT

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Anthocyanins are known as health-enhancing compounds due to the antioxidant properties. Anthocyanins are present in roselle and butterfly pea in high amount indicating their potential usage as sources for functional food additives. However, the utilization of roselle and butterfly pea were not widely spread even though they grew easily in Indonesia. This study aimed to apply anthocyanins in roselle and butterfly pea as natural antioxidants in soy yogurt, a non-dairy product that is safe to be consumed even by lactose intolerant individuals. Pure roselle, pure butterfly pea and a mix of roselle and butterfly pea in three different concentrations (2.5%, 5%, 10%) were applied. The study showed that soy yogurt added with roselle exhibited higher antioxidant activity than butterfly pea. However, the antioxidant stability of roselle is lower than butterfly pea. Noteworthy, a synergistic effect was observed in soy yogurt with mixed of both flowers, where the lowest decrease of antioxidant activity over 13 days was recorded. On the other hand, addition of roselle and butterfly pea extract reduced the amount of lactic acid bacteria in soy yogurt. However, it was still higher than the SNI quality standard. In sensory evaluation with 32 untrained panelists, the average highest acceptance level was achieved by yogurt without any extracts followed by yogurt with 10% of butterfly pea extract, and then yogurt with 10% of

roselle extract. In summary, this study proved the beneficial usage of roselle and butterfly pea as natural antioxidants in soy yogurt, thus enhances the nutritional value of soy yogurt.

Keywords: Antioxidant activity, butterfly pea, roselle, sensory evaluation, soy yogurt



DEDICATION

I dedicate this thesis to God, and to my parents for the support during my thesis.



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