

**EFFECT OF PRE-TREATMENT AND NUMBER OF EXTRACTIONS ON
COLOR STABILITY OF BUTTERFLY PEA FLOWER EXTRACT**

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STATEMENT BY THE AUTHOR

I here declare that this submission is my own work and to the best of my knowledge, it 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

COLOR STABILITY OF BUTTERFLY PEA FLOWER EXTRACT AFFECTED BY PRE-TREATMENT AND NUMBER OF EXTRACTION

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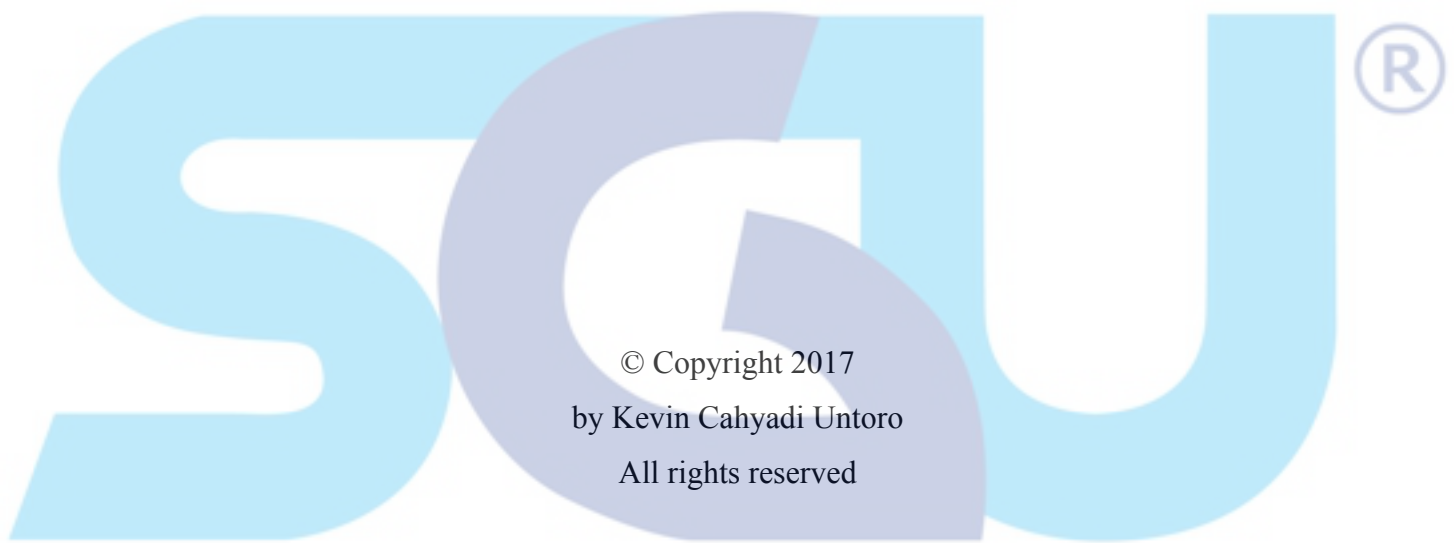
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Butterfly pea flowers had the potential to become food colorant. It contained acylated anthocyanin which known to be more stable than unacylated one. This research was done to know which pre-treatment was suitable to be applied to obtained longer shelf life of butterfly pea flower since it will take long time to transport from rural area to production plant. There were two pre-treatments; sun and oven drying that was compared for selection. In the next step, multiple extractions were done to know how many extractions were needed to obtain high amount of anthocyanin. Then it was stored at three different temperatures; room temperature, 45⁰C and 60⁰C. The results showed that sun drying is preferable to oven drying although it took longer time for the process. Extraction process only need to be done once, since most of anthocyanin already extracted in first extraction. Heat still become a major issue since greater degradation occurred when more intense heat introduced at 45⁰C and 60⁰C. Therefore, careful selection of process for extraction will be needed to preserve more anthocyanin and better color stability.

Keywords: anthocyanin content, butterfly pea flower, color intensity, drying, extraction, heat, pre-treatment, storage, temperature



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DEDICATION

I dedicate this thesis to my beloved family,
who always supporting me during ups and downs,
I dedicate it also to Indonesian farmers that always work hard every day.



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