

**OPTIMIZATION PARAMETERS OF *BRASSICAE OLARACEA* (RED
CABBAGE)**

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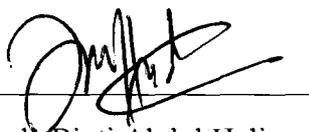
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This Final Year Project entitled “**Optimization Parameters of *Brassicae Olaraceae* (Red cabbage)**” was submitted by Fatin Farhana Binti Azmi, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by



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ABSTRACT

OPTIMIZATION PARAMETERS OF *BRASSICAE OLARACEAE* (RED CABBAGE)

Red Cabbage (*Brassicae Olaracea*) is one of vegetables that can be obtained all over the world. Red cabbage was known not only according to their health benefits, but also characterized as brilliant purple color that enriched by anthocyanin. Thus, red cabbage have potential to be alternative natural food colorant. This study focus on factor that influenced stabilization such as time extraction, temperature, pH and stability of light. Extraction of natural pigment used three different solvent which were ethanol, acetone and distilled water. Total natural pigment was determined by using UV-Vis Spectrometer. Red cabbage sample were subjected to extraction time in the range of 1 to 6 hours, then temperature was studied at range from room temperature to 140 °C. Next, the effect of pH on the natural pigment was studied at ranged from pH 1 to pH 14. For determination of stability on light, control and optimized sample were put under the light at 7 hours per day for 5 hours. In conclusion, extraction by using ethanol gave the highest amount of natural pigment at 6 hours, 120 °C and pH 3. Thus, this study of optimization parameter maybe can enhanced the usage of red cabbage as natural colorant in food industry.