

**OPTIMIZATION OF EXTRACTION TIME, TEMPERATURE, pH
AND STABILITY ON LIGHT OF DRAGON FRUIT (*Hylocereus
polyrhizus*) PEEL**

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ABSTRACT

OPTIMIZATION OF EXTRACTION TIME, TEMPERATURE, pH AND STABILITY ON LIGHT OF DRAGON FRUIT (*Hylocereus polyrhizus*) PEEL

Dragon fruit (*Hylocereus polyrhizus*) or known as “buah naga” or “buah mata naga” is one of tropical fruit in Malaysia comes from family Cactaceae. The peel of dragon fruit is often considered as a waste. Therefore, this study was focused at exploring the possibility of using the peel of dragon fruit as a natural colorant using simple water extraction method. The total natural pigment content was determined by using UV/Vis Spectrometer and characterized by FTIR Spectroscopy. The samples were subjected to a series of extraction time in the range of 1 to 6 hours, temperature at 25 to 100 °C and varied ranges of pH from 2 to 12. The optimum extraction for natural pigment of extraction time, temperature and pH were 4 hours, 25 °C and at pH 5 respectively. For determination of stability on light, sample extraction of natural pigment was more stable compare to control of natural pigment. In conclusion, the natural pigment extracted from peels of dragon fruit by using solvent extraction method and optimization of extraction parameters possesses an ability to be used as natural colorant.