OPTIMIZATION OF pH AND TEMPERATURE STABILITY FROM EXTRACTION OF NATURAL ANTHOCYANIN OF JUNGLE FLAME FLOWER (*Ixora Chinensis*) FOR A POTENTIAL DYE PURPOSES

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ABSTRACT

OPTIMIZATION OF pH AND TEMPERATURE STABILITY FROM EXTRACTION OF NATURAL ANTHOCYANIN OF JUNGLE FLAME FLOWER (*Ixora Chinensis*) FOR A POTENTIAL DYE PURPOSES

Jungle flame flower (*Ixora Chinensis*) or " pokok bunga jejarum" is one of the commercial flowers in Malaysia which *Ixora* is a genus of flowering plant in Rubiaceae family. The flower of "bunga jejarum" is potential sources of anthocyanin which responsible for the bright red colour. Anthocyanins have developed famous as substitute to minimize the using of synthetic dyes. The objectives of this study was to assess the stability of anthocyanin extraction from the jungle flame flower. The sample was collected at Kampung Parit Tinggi, Beting, Kuala Pilah. In this study, the anthocyanin was extracted from the flower petals by sequential soxhlet extraction using two types of solvent which is hexane and ethanol. The total anthocyanin content was determined by using T80+ UV/VIS Spectrometer (PG Instrument Ltd) and calculate which give a result of 361.9915 mg/ 100 g.with measured at wavelength of 505.50 nm. As for stability study, the effect of pH toward anthocyanin extraction was studied at pH range from 2 until 12. The data profile result showed the anthocyanin extract stable in a ph<6 which in moderate-strong acid condition. In the study on temperature stability, the anthocyanin extract was successively heated at temperature started at 10 ^{o}C, 20 ^{o}C, 30 ^{o}C, 40 ^{o}C, 50 ^{o}C, 60 ^{o}C, 70 ^{o}C, and 80 ^{o}C. From the result obtained, the anthocyanin is stable at the temperature range from 20 ^{o}C to 80 ^{o}C. The objectives of study has been done and the from the result, the extraction of colour from *I. Chinensis* flower can be conclude which have an ability to resist for use in high temperature and in acidic condition.

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