

Extraction and Analysis of Anthocyanins Contents from Different Stage Flowers of the Orchids *Dendrobium Hybrid cv. Ear-Sakul*

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Abstract : *Dendrobium hybrid cv. Ear-Sakul* has become one of the important commercial commodities in Thailand agricultural industry worldwide, either as potted plants or as cut flowers due to the attractive color produced in flower petals. Anthocyanins are the main flower pigments and responsible for the natural attractive display of petal colors. These pigments play an important role in functionality, such as to attract animal pollinators, classification, and grading of these orchids. *Dendrobium hybrid cv. Ear-Sakul* has been collected from local area farm in different stage flowers (F1, F2-F5, and F6). Anthocyanins pigment were extracted from the fresh flower by solvent extraction (MeOH-TFA 99.5:0.5v/v at 4°C) and purification with ethyl acetate. The main anthocyanins components are cyanidin, pelargonidin, and delphinidin. Pure anthocyanin contents were analysis by UV-Visible spectroscopy technique at λ max 535, 520 and 546 nm respectively. The anthocyanins contents were converted in term of monomeric anthocyanins pigment (mg/L). The anthocyanins contents of all sample were compared with standard pigments cyanidin, pelargonidin and delphinidin. From this experiment is a simple extraction and analysis anthocyanins content in different stage of flowers results shown that monomeric anthocyanins pigment contents of different stage flowers (F1, F2-F5 and F6): cyanidin - 3 - glucoside (mg/l) are 0.85+0.08, 24.22+0.12 and 62.12+0.6; Pelargonidin 3,5-di- glucoside(mg/l) 10.37+0.12, 31.06+0.8 and 81.58+ 0.5; Delphinidin (mg/l) 6.34+0.17, 18.98+0.56 and 49.87+0.7; and the appearance of extraction pure anthocyanins in L(a, b): 2.71(1.38, -0.48), 1.06(0.39,-0.66) and 2.64(2.71,-3.61) respectively. *Dendrobium Hybrid cv. Ear-Sakul* could be used as a source of anthocyanins by simple solvent extraction and stage of flowers as a guideline for the prediction amount of main anthocyanins components are cyanidin, pelargonidin, and delphinidin could be application and development in quantities, and qualities with the advantage for food pharmaceutical and cosmetic industries.

Keywords : analysis, anthocyanins contents, different stage flowers, *Dendrobium Hybrid cv. Ear-Sakul*

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