

Comparing of DPPH Free Radical Scavenging Activity with Colorimetric Method and HPLC Screening Method for Betalains from Dragon Fruit (*Hylocereus*)

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Nowadays cosmetic products are becoming necessary for daily life because It can modify and adjust the skin from rough to smooth, cleansing, treatment, decorate and change looking to beauty and increase confidence, including protect the skin from free radical that is cause to wrinkle skin. In this research focused to compare the antioxidant capacity of betalain from peel and pulp of Taiwan's red dragon fruit and Thai crude extract with colorimetric method and HPLC screening method by using 1,1-Diphenyl-2-picryl-hydrazyl (DPPH) is free radical. The colorimetric method is ineffective analyze substances that have color from natural product so the HPLC screening method will solve this problem and can get the precision more than colorimetric method by used Agilent C18 reverse phase, mobile phase was 65% methanol pumped at a flow rate of 1.2 mL/min and detection wavelength at 517 nm. The antioxidant capacity was shown in term of Inhibitory concentration at 50% (IC₅₀) and Ascorbic acid was used for standard in this method. The IC₅₀ of ascorbic acid, Thai crude extract, peel and pulp of red dragon fruit by colorimetric method shown that 32 ppm, 0.39, 0.37 and 0.62 %(w/v) respectively including IC₅₀ by HPLC screening method shown that 19 ppm, 0.50, 0.14 and 0.59 %(w/v) respectively.

Keywords: Antioxidant, Dragon fruit, Betalain, Colorimetric method, HPLC screening method