

Extraction of anthocyanins from leaves of *Perilla ocymoides* L. var. *bicolorlaciniata* grown in Vietnam

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Abstract

Anthocyanins are considered secondary metabolites and a natural pigment as safe food additive to create more attractive colors for food products. In this study, anthocyanins were extracted from leaves of *Perilla ocymoides* L. var. *bicolorlaciniata* and the protocol was optimized by using different concentrations of ethanol (30, 35, 40, 45, 50, 55, 60, 65, 70%), organic acids (citric and acetic acids) and raw material ratios (1:5, 1:10, 1:15, 1:20, 1:25), extraction temperatures (35, 40, 45, 50, 55, 60°C), pH (1.5, 2, 2.5, 3, 3.5, 4) and extraction times (30, 60, 90, 120, 150 min). Results showed that temperature, pH, organic acid and extraction time had significant effects on anthocyanins yield. The optimal conditions for maximum anthocyanins yield were the use of 50% ethanol with 0.1% citric acid at 50°C and pH 3.2 with an extraction time of 90 min. Anthocyanin yield was 0.472%.