

Extraction of Natural Colorant from Red Raspberry (*rubus idaeus* linn.) And its application in food sistem

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Abstract

Red raspberry fruit has not been optimally utilized even though it contains anthocyanin pigment. The pigment can be used as a natural colorant which also function as antioxidant. The aim of this study was to determine the appropriate solvent for anthocyanin extraction from red raspberry fruit and its possibility for food colorant. The research was started with preliminary research to determine appropriate acidulants (citric, acetic and tartaric acid) with levels of 0,1 ;0,25;0,5 ;0,75 and 1 %. The main research was divided into three stages, which were: (1) to determine the appropriate solvent of extraction (aquadest, ethanol and etil acetate); (2) the best extract was determined its color stability in pH of 1,2,3,4,5,6,7,8,9 and (3) to examine the pigment solubility into some food system (aqua96%dest, 25% of acetic acid, 96% of ethanol and coconut oil). The best extract also was examined its solubility in carbonated drink (pH of 3.69), pasteurized milk (pH of 6.49) and yogurt (pH of 2.6). the results showed that the extraction using aquadest with 0.75% of tartaric acid resulted in the highest total anthocyanin and showed the best color intensity. This extract was stable at pH of 2-5 and its solubility was best in aqueous system with low pHs, thus it can be applied for aqueous product with low pHs.

Key words: *red raspberry fruit, anthocyanin, food colorant, aquadest, pHs*