

عنوان مقاله:

بهینه سازی استخراج ترکیبات آنتی اکسیدانی از پوست انگور (*Vitis vinifera* L.) با کمک پیش تیمار اولتراسونیک

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خلاصه مقاله:

Grapes are one of the most important agricultural products which could be used either as a fresh fruit or a processed food. In Iran, grapes are very crucial agricultural and commercial products. Every year, a massive volume of grapes waste is made by the units of grape Doshab producers, so the producers are engaging with many problems of waste disposal. Grapes waste is a valuable source of natural pigment and antioxidant compounds specifically polyphenols compounds. Extracting antioxidant compounds from cheap primary materials like grapes waste is a suitable method for various food and pharmaceutical industries. In this research and aim to finding optimum state for extracting phenolic compounds from Shani grapes skin, response surface method (RSM) and central composite design (CCD) with 3 independent variables (extraction time using ultrasonic bath, liquid to solid phase ratio and ethanol solvent concentration) were applied. The optimum condition for extraction of this compound was 59.06% concentration of ethanol, 16.08 ml/g liquid to solid phase ratio and 24.12 min extraction time. The research results have shown that the extract of Shani grapes skin contains 8 different phenolic compounds, which among them epigallocatechin and catechin had highest concentration. Consequently, by finding optimum condition of phenolic compounds extraction, these compounds could be produced in pilot scale for utilizing in food and pharmaceutical industries.

کلمات کلیدی:

Shani grapes skin, phenolic compounds, natural antioxidant, ultrasonic waves, پوست انگور شانی، ترکیبات فنولی، آنتی اکسیدان های طبیعی، امواج اولتراسونیک

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