عنوان مقاله:

Optimize the extraction of phenolic compounds of jujube (Ziziphus Jujube) using ultrasound-assisted extraction method

محل انتشار:

اولین همایش الکترونیکی نوآوری در فراوری مواد غذایی (سال: 1391)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Ultrasound-assisted extraction method was applied for phenolic compounds extraction from jujube by the simultaneous maximization of the yieldin the total phenolics using the response surface methodology. A Box-Behnken was used to investigate the effects of four independent variables, namely time(20-50 min), temperature (20-50 ˚C), sound intensity (60-100%) and solvent composition (40-80%) on the dependent variables (amount of total phenolic content and antioxidant activity). A second-order polynomial model was used to describe the experimental data regarding the total phenolics. Correlation coefficient (R2) of the model for total phenolic content was 0.98. Optimal conditions for total phenolic content weretemperature 480C, 72% solvent composition, soundintensity 96% and 48 min. In optimal conditions, the Corresponding author: M.Sc. student, Department of Food Scienceand Technology, Sabzevar Islamic Azad University Sabzevar, Iran.tell: 09155332604, 05118797754. email:hamed _fooladi2002@yahoo.com total phenolic content 15.8 mg gallic acid equivalent /g dry matter was predicted by the .model. Under optimized conditions the experimental values agreed with the values predicted by models

کلمات کلیدی:

Jujube; phenolic compounds; ultrasoundassisted extraction; response surface methodology