

عنوان مقاله:

Response Surface Methodology to Optimize Hydrolysis Parameters in Production of Antioxidant Peptides from Wheat Germ Protein by Alcalase Digestion and Identification of Antioxidant Peptides by LC-MS/MS

محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 21، شماره 4 (سال: 1398)

تعداد صفحات اصل مقاله: 16

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خلاصه مقاله:

The antioxidant capacity of wheat germ protein hydrolyzed by Alcalase was optimized using Response Surface Methodology (RSM). The optimum hydrolyzing parameters were found at temperature of ۵۲.۲۸°C, time ۲۳۳ minutes, and E/S ۱.۴۶ %. The amino acids profiles of intact and hydrolyzed proteins showed that Wheat Germ Protein Hydrolysate (WGPH) had higher percentage of hydrophobic amino acids than that of intact protein. WGPH prepared in optimum condition was fractionated by RP-HPLC. The obtained fractions were subjected to ABTS assay for antioxidant capacity evaluation. The fraction with higher antioxidant value was then exposed to further analysis by LC-ESI/MS/MS. The sequences of the peptides were found to be TVGGAPAGRIVME (۱۲۵۷.۶۶ Da) and (GNPIPREPGQVPAY (۱۴۹۴.۷۷ Da

کلمات کلیدی:

.ABTS assay, Amino acids profiles, Bioactive peptides, RSM

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1817183>

