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Aqueous Enzymatic Extraction of Oil and Protein Hydrolysates from Peanut

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Aqueous enzymatic extraction (AEE) is a safe and efficient vegetable-oil extraction process that may also result in edible protein hydrolysates. In this study, an AEE process was developed to recover oil and protein hydrolysates from blanched peanut. The enzyme type and enzyme concentration for the most efficient extraction were selected. Under the condition of pH8.50, 60°C, an enzyme level of 1.5% and 8 h incubation, peanut protein hydrolysates (PPH) yield of 82.5% and oil yield of 92.2% were achieved when using alcalase2.4L. The fatty acid composition of oil obtained by AEE vs. hexane-extraction was very similar. The good oil quality could save the refine cost for edible. The functional properties of PPH were first investigated and they showed good effects of scavenging DPPH (α -diphenyl- β -picrylhydrazyl) free radical and inhibiting the angiotensin-I-converting enzyme (ACE).

Keywords: [aqueous enzymatic extraction](#), [peanut](#), [free oil](#), [protein hydrolysates](#)
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