

The Effect of Time and PH on Enzymatic Hydrolysis of olive proteome

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ABSTRACT

Olive contains some protein and fat, that can be used as an energetic food source. It also contains antioxidant compounds. The olive oil-pressing residue is a source of feeding livestock, poultry and aquatic animals that can reduce environmental pollution and ratio costs. In addition, a limited amount of that utilized as fertilizer and fuel. The purpose of the present study was to investigate the enzymatic hydrolysis of Shenge olive meal by using the trypsin enzyme and examine the highest degree of hydrolysis by utilizing the OPA test. In this study, after preparing the sample, the trypsin enzyme with 1% concentration was used and the activity of 0.2 (Anson-E / g) at 37 °C and 2, 3.5 and 5 hours, and the utilized PH were 5, 6 and 7. After the enzymatic hydrolysis, enzyme inactivation was performed at 85°C and then the hydrolyzed proteins were separated by centrifuge with 5000 g in the supernatant. The results showed that in the first stage of hydrolysis, highest Degree of hydrolysis (49.01%) was achieved at 5 hours and the second stage of hydrolysis, Maximum degree of hydrolysis (17.7%) were at PH=7. According to the results, the trypsin enzyme promoted proteins' hydrolysis and increased the amino compounds in the meal. Amino compounds, in addition to creating or strengthening the pragmatic properties, can be used to boost diet due to the richness of amino acids, and they are economical regarding the price.

Key words: olive, Protein hydrolysis, trypsin, OPA