

Study of the enzymes presents in Hass variety avocado (*Persea americana Mill, var. Hass*)

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The avocado (Persea americana Mill.) Is a climacteric fruit native to mesoamècic with a high energy content coming mainly from fats. There are more than 300 varieties of avocado, the most known worldwide is the Hass. The enzymatic content of this fruit is very evident, since the action of Polifenoloxidasa (PFO, E.C. 1.14.18.1) is identified with the change of coloration that the fruit presents when it has contact with oxygen. For this reason, PFO is the most studied enzyme in avocado, but it is not the only one, so a study was carried out on the activity of hydrolase enzymes such as lipase, invertase, lysozyme, amylase, catalase and protease, as well as oxidative enzymes, PFO and peroxidase.

In order to carry out this study, mature avocados were identified, identifying them with the help of a weather sheet, the skin of the pulp was separated, the pulp was defatted, they underwent a filtering process with a centrifuge at 4000 Rpm and at the same time two solutions were made in water. and 5% NaCl from both parts of the avocado separately to determine the best solubility conditions of the enzymes, identifying in both solutions a good affinity.

In the results, the presence of all the enzymes in the potato and fruit shell was discovered, with the exception of the amylase that had no activity in the shell. The enzymes that had the greatest stability in NaCl were PFO, invertase, lysozyme, catalase and protease, on the contrary, the ones that showed the greatest activity and stability in water were lipase and amylase.

This study can open the interest to isolate the enzymes found, name them, study more thoroughly their activity and stability to be brought to the industry.

Biography

L.N. Samantha Yssel Huerta Oropeza study for nutritionist in a ETAC University in a State of Mexico in the 2012, the social service is carried out in the dietetic service in General Hospital to Ecatepec in Mexico City (2012-2013). Work for four years (2012-2016) in private practice for pregnant and lactating in the Angeles Hospital in the Mexico City. For one year (2016-2017) taught at a private university, where she taught classes such as diet and nutrition during lactating and pregnan.

In mid of the year 2017 she began the Master of Science in Food at the National School of Biological Sciences of the National Polytechnic Institute in Mexico City, where where under the direction of the M.C. Maria Teresa Cruz I Victoria and Dra. Blanca Estela Barragàn Huerta, draws a project on the research of enzymes and antioxidants in different varieties of avocado from Uruapan Michoacan Mexico.

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