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Use of response surface methodology to optimization of extraction of enzymes from pineapple pulp  
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<sup>4</sup>Vacuum frying is a method to produce crispy snacks with good taste and texture and at the same time contain low oil content. Ready to eat fruits and vegetables that do not contain any artificial preservatives are getting popular amongst consumers. Pineapple has the potential to be processed into a snack using vacuum frying and would be an alternative snack

product to dried fruit, fruit roll! leather, candied fruit, confectionery jelly and sweets for the consumers to choose from.

Different pretreatments were carried out on pineapple varo Moris to explore the effect of blanching, syruping and freezing

on the fried snack produced by vacuum frying. Pineapple snacks produced by blanching, followed by syruping and

freezing were much better in appearance and texture as compared to snacks produced without any treatment, blanching

alone or a combination of blanching and syruping pretreatments. Some physical characteristics of pineapple varo Moris,

organoleptic results on the fried products, recovery and observations are presented

A pedido da Pesquisadora co-autora segue o trabalho original enviado para o evento publicado incorretamente (pdf anterior)

Use of response surface methodology to optimization of extraction of enzymes from pineapple pulp

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extraction.

The enzymatic reactions are very important for food. They are responsible for the formation of highly desirable compound, but can cause disorders and undesirable consequences. The physiological behaviour of vegetables and fruits is already known, so that most of its deterioration changes in flavour, colour and nutritional value are caused by enzymes of the Oxidoreductases group, mainly peroxidases (PER) and polyphenol oxidase (PPO); The degradation of pectic polysaccharides involves two important enzymatic processes whose action is due to pectin methylesterase (PME) and polygalacturonase (PG) enzymes which affect the consistency and texture of fruit during ripening and postharvest handling. Pineapple is a tropical fruit very appreciated by consumers, but its physical-chemical and biochemical composition varies according to the time and place of production, and maturity stage. In order to optimize the extraction process of enzymes PER, PPO, PME and PG from pineapple pulp (cv. Peróla) the methodology of response surface was used (STATISTICA 7.0) to study the effect of pH (from 4.0 to 8.0) and NaCl concentration (from 0.0 to 2.0 M) of the buffer solution used in the extraction of the enzymes. The results showed that the best conditions for enzymes extraction were 1.0 M NaCl, pH 6.0 for PER (4752.9 UI/g), 1.0 M NaCl and pH 3.5 for PME (5.8 UI/g), 2.0 M NaCl and pH 7.4 for PG (0,000034 UI.g.h<sup>-1</sup>) and 2.0 M NaCl and pH 4.0 for PPO (81.6 UI/g).

Keywords: peroxidase, polyphenol oxidase, pectin methylesterase, polygalacturonase, enzymatic