TECHNOCHEMICAL COMPARISON OF PREDOMINANT INHIBITORS IN SOME FOOD STUFFS

By

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Approval Sheet

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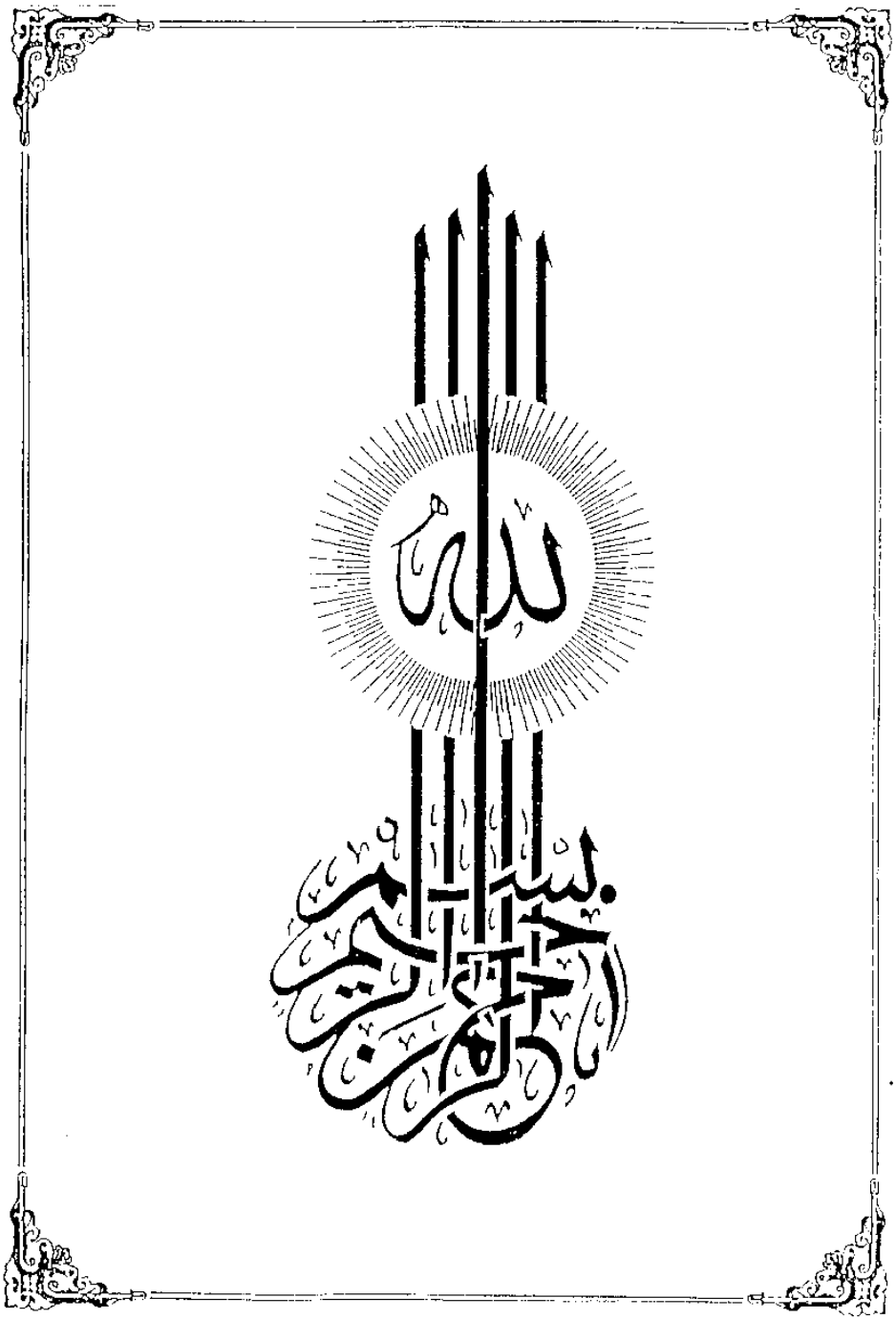

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ABSTRACT

The problem at hand is dealing with the activity of alpha amylase inhibitor in some legumes; i.e. lentile, white bean and soybean. The activity of the inhibitor was considered after specific heat treatment; i.e. 95°C for 3 min followed by soaking in plain water for 30 min. On the other hand, the aforementioned legumes were processed in the form of lentil soup, cooked white bean and roasted soybean and the thermal as well as the kinetic aspects of the alpha amylase inhibitor were concerned for comparison between the tested samples.

The calculation of activation energy that required for inhibiting one mole of the two fractions of alpha amylase inhibitor isolated from the investigated samples was also considered.

On the other hand, the organoleptic evaluations of the processed lentil, white bean and soybean samples were given.

The presence of (HCN) as an inhibitor in plums, apricots and grapes samples was studied. Such inhibitor was also determined in the dried forms of the previous samples i.e., prunes, apricots and raisins. The changes that occur in (HCN) concentration during steps of processing as well as during storage for 6 months at room temperature of ghe aforementioned dried samples were also given.

Trials were carried out for the isolation of protease inhibitor from potato tubers. The resultant inhibitor was used in manufacturing of beef sausage and chicken patties.

X-ray analysis, infrared spectrum,free amino acids, and Transmission electron as well as scanning electron microscopes were used to trace the capability of the added protease inhibitor to control the activity of proteases enzymes during storage of the investigated samples for two weeks at $4^{\circ}C$.

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C O N T E N T S

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