

ABSTRACT

The work reported in this thesis was carried to study the proteases of Allium sepa, Nigella sativa and Carum copticum and to compare their characteristics. The enzymes were extracted at pH 7 and pH 10 from Nigella sativa and Carum capticum respectively. Crude extracts were subjected to ammonium sulphate precipitation. Two fractions at 64 % and 80 % ammonium sulphate concentrations were obtained from Nigella sativa and three at 39 %, 62 % and 80 % concentration from Allium sepa.

The resulting fractions were subjected to gel filtration chromatography and their characteristics were determined. The results indicated that Fraction I from Nigella sativa contained three proteases, A, B and C and so did the Fraction II i.e. D, E and F. The over all picture showed that proteases of Nigella sativa contained a mixture of acidic and neutral proteases.

The results of gel filtration chromatography for Allium sepa showed that fraction II contained two proteases i.e. A and B and so did the Fraction-III i.e. C and D. The overall picture showed that proteases of Allium sepa contained a mixture of neutral and alkaline proteases. These results were compared with the proteases of Carum copticum which has been reported as a mixture of proteases of acidic and alkaline protease. From the results it is concluded that the enzymatic composition of all the proteases obtained from all three sources is different from each other.