Chemical characterization of proteases extracted from wild thistle (Cynara cardunculus)

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Three protease fractions were obtained by purification of a thistle extract with ammonium sulfate. The optimum pH and temperature on the proteolytic activity of the crude extract was found to be 5·7 and 37°C, respectively. The crude extract had a lower clotting activity and a stronger proteolytic activity than commercial rennets. However, the protease fractions showed a sharp increase in clotting activity and a decrease in proteolytic activity compared to the extract, indicating the proportion of the extract proteolytic activity within the fractions. Therefore, the ammonium sulfate fractionation gives clotting activity and proteolytic activity in a ratio close to a commercial fungal rennet extracted from Mucor miehei. The electrophoretic pattern of the fractions showed qualitative differences in the number and intensity of bands. However, the major differences were detected in the 50% ammonium sulfate fraction, which also had the highest milk-clotting activity. Therefore, correlations