PURIFICATION AND PARTIAL CHARACTERIZATION OF MILLIINASE, A PROTEINASE FROM *EUPHORBIA MILLII*

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Introduction: Latex is the protective fluid contained in tissue beneath the bark of the rubber tree. Objective: In the present work, a proteinase, here denoted Milliinase, was purified from the latex of *Euphorbia millii* by a combination of gel ion exchange, filtration and affinity chromatography. Results: The enzyme was purified to homogeneity as judged by its migration profile in SDS-polyacrylamide gel stained with coomassie blue, and had a molecular mass of about 30 kDa in the presence of β-mercaptoethanol. The enzyme cleaves the Aα-chain of fibrinogen first, followed by the Bβ-chain, and shows no effects on γ-chain. Milliinase resists heating at 70 °C for 15 min and presented maximum activity in pH about 7.0. The inhibitory effects of ß-mercaptoethanol on the fibrinogenolytic activity revealed the important role of the disulfide bonds in the stabilization of the native structure. Benzamidine and EDTA, specific serine and metalloproteinase inhibitors had no effect on Milliinase activity. Conclusion: In this work, we purified and partially characterized a proteinase from the latex of *Euphorbia millii.*

Keyword: Protease, *Euphorbia millii. Milliinase*