Purification of inhibitor of protease from *Albizia niopoides* seeds

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Proteinase inhibitors (PI) are widely distributed in plants, being particularly abundant in legume seeds. They represent an important family of natural defense proteins and they seem to be involved in the regulation of endogenous plant proteases. Recently, some of them have shown promising health benefits in humans as anti-inflammatory, antimicrobial and chemotherapeutic agents via protease inhibition. In this work was purified inhibitor of protease (TI) from *Albizia niopoides* seeds by FPLC Superdex G-50 chromatography, 4B-trypsin affinity and Reverse Phase HPLC and then characterized by electrophoresis. TI had a specific activity of 193.6 trypsin inhibitor units per milligram (TIU mg⁻¹), which was purified to 1,936-fold. A molecular mass of 21 kDa was estimated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) under reducing conditions, which also indicated that TI may consist of two polypeptide chains with molecular masses of approximately 13 and 8KDa, suggesting that it is inhibitor of protease belongs to Kunitz family.

Key words: inhibitor of protease, Kunitz, Purification, *Albizia niopoides*, seeds

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