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In SP, about 60 % of total water-soluble proteins were TIs which were recognized as storage proteins (Lin and Chen, 1980). Maeshima et al. (1985) pointed that the storage proteins of SP reduced from 4.41 to 0.067 mg/g tissue after sprouting. Li and Oba (1985) also pointed that the storage proteins of SP reduced from 3.22 to 0.18 mg/g tissue after one year storage at 10 to 12 .degree.C. So, it is clear that SPTIs serve as storage proteins to provide nitrogen sources during sprouting or storage. Yeh et al. (1997b) reported that SPTI expressed in transgenic tobacco plants confer resistance against Spodoptera litura. SPTIs can also function as protective agents against insects. But so far there are few reports concerning the degradation of SP root storage protein during sprouting. In this work we report for the preliminary results that SPTIs were degraded by an aspartic type protease. In order to start the work, we used a trypsin-Sepharose 4B affinity column (Hou and Lin, 1997a) to purified SPTIs from dormancy SP roots as substrates for purified aspartic type protease. Figure 1 showed the chromatogram of protease purification on a commercial pepstatin-agarose column. After washing with 20 mM Tris-HCl buffer (pH 7.9) containing 200 mM NaCl (buffer 1) the bound proteases were eluted batchwise firstly with the same buffer containing 450 mM NaCl (buffer 2) for 15 fractions and then eluted batchwise with 50 mM phosphate buffer (pH 11.5) containing 500 mM NaCl (buffer 3) for another 15 fractions. We found that most of the protease activities were eluted by buffer 3. These buffer 3 fraction was pooled, adjusted to pH 7.9, and then dialyzed against 20 mM Tris-HCl buffer (pH 7.9) for further use.