

☐ residue differed from one another.

polyacrylamide gel disk electrophoresis and isoelectric focusing (pI 10.0). The molecular weight was estimated to be 11,300 in native state and 5500 in guanidine HCl by the sedimentation equilibrium method, respectively. Succinylated purothionin A also provided the molecular weight of 5500 and two distinct polypeptides (purothionin A-I and A-II) were isolated by DE-52 column chromatography. As shown in Table I, the amino acid compositions of purothionin A, A-I and A-II were characteristic in extremely high content of cysteic acid and lack of methionine, tryptophan and histidine. Determination of amino acid sequence was carried out by the combination of sequence analyzer and manual Edman degradations of tryptic digests of each polypeptide after cleavage of disulfide bonds. The amino acid sequences of purothionin A-I and A-II are given in Fig. 1. Purothionin A-I and A-II have only five residues different from one another and they are quite basic. Although purothionin A is a dimeric form in its nature state, it is uncertain at the present moment that component A-I or A-II alone produces a dimer or the combined form of A-I and A-II does.

Purothionin has been separated into purothionin α and β by Redman *et al.*⁵⁾ Identity

of purothionin α and A is doubtful, because differences were detected in their amino acid compositions. No free SH-groups were found in purothionin A-I and A-II and the determination of disulfide bonds is now in progress.

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