

# A STUDY OF THE INDIVIDUAL PEPTIDES OF A PEPSIN HYDROLYZATE OF PEPSIN

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The structure of methionine-containing [1] and tryptophan-containing [2, 3]\* peptides of pepsin has been described previously. A pepsin hydrolyzate of pepsin was separated on Sephadex G-50 and Bio-Gel P-2 resins and on Dowex 1 × 2 anion-exchange resin. Fractions D 8, D 15, and C 5 were isolated [2]. On further separation with the aid of Dowex 50 × 2, chromatography, and high-voltage paper electrophoresis, these fractions yielded in the homogeneous state – apart from tryptophan- and methionine-containing peptides – another seven peptides.

The amino-acid sequences of the peptides isolated from the peptic hydrolyzate of pepsin were as follows:

Peptide No.	Structure of the peptide
D 812	Leu-Ser-Gly
D 872	Tre-Val
D 89	Ala-Tyr-Leu
D 152	Leu-(Phe, Tyr)
C 511	Gly-Gly-Ser
C 571	Ile-Gly-Gly-Leu
C 594	Ile-Leu

The structure of the peptides shown gives us additional information on the amino-acid sequences of porcine pepsin. In the determination of the amino-acid sequences the dinitrophenylation, the dansylation, and the methylthiohydantoin methods were used, in association with dinitrophenylation, hydrazinolysis, and hydrolysis with carboxypeptidase A.

There is no doubt that this information will prove necessary in a description of the complete structural formula of porcine pepsin. Moreover, certain conclusions concerning the specificity of pepsin at pH 5.0 can be drawn from the structure of these peptides.

## LITERATURE CITED

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\* Reference [3] missing in Russian original – Publisher.

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