

REFERENCES

1. L. G. Mzhel'skaya, V. K. Yatsin, and N. K. Abubakirov, KhPS [Chemistry of Natural Compounds], 421, 1966.
2. L. G. Mzhel'skaya and N. K. Abubakirov, KhPS [Chemistry of Natural Compounds], 101, 1967.
3. L. Hough, S. K. N. Jones, and W. H. Wadman, J. Chem. Soc., 1702, 1950.
4. T. Bonner, Chem. Ind., 345, 1960.

27 December 1966

Institute of Chemistry of Plant
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UDC 612.015.1

PHOSPHORUS CONTENT OF HUMAN PEPSIN AND GASTRICSIN

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Khimiya Prirodnkh Soedinenii, Vol. 3, No. 3, p. 219, 1967

We have carried out the determination of phosphorus (after mineralization) of samples of human pepsin and gastricsin purified on anion-exchange cellulose [2] by Filipowicz's method [1]. The purity of the samples of pepsin and gastricsin was shown by the results of a determination of the N-terminal amino acids. In the preparation of human pepsin, the only N-terminal amino acid was valine, and in the sample of gastricsin it was serine. To calculate the number of phosphorus atoms in the gastricsin molecule we used Tang and Tang's results [3] on the molecular weight of gastricsin (36 000). It was found that the gastricsin molecule contains one atom of phosphorus while human pepsin contains no phosphorus. At the same time, these enzymes possess similar catalytic activity [2, 4].

Consequently, the phosphate residue is not essential for the activity of the enzymes of the pepsin group [5-7].

REFERENCES

1. B. Filipowicz, M. Gross, and B. Skoczylas, Analytic Biochem., 5, 187.
2. L. M. Ginodman, A. P. Nesterova, V. N. Orekhovich, I. S. Savoshchenko, and T. A. Solov'eva, Vopr. med. khim., no. 6, 604, 1964.
3. K. Tang and Y. Tang, Federat. Proc., 20, 239, 1962.
4. Y. Tang, S. Wolf, R. Caputto, and R. Trucco, J. Biol. Chem., 234, 1175, 1959.
5. G. E. Perelmann, J. Am. Chem. Soc., 74, 6308, 1952.
6. T. P. Levchuk and V. N. Orekhovich, Biokhim., Moscow, 28, 1004, 1963.
7. T. P. Levchuk, M. I. Leviant, and V. N. Orekhovich, Biokhim., Moscow, 30, 986, 1965.

15 December 1966

Institute of the Chemistry of Natural Compounds,
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UDC 547.466

SYNTHESIS OF PEPTIDES ON A RESIN BY THE MIXED ANHYDRIDE METHOD

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Khimiya Prirodnkh Soedinenii, Vol. 3, No. 3, p. 220, 1967

At the present time we have shown that to create a peptide bond in the solid-phase method of peptide synthesis it is possible to use the mixed anhydride method with the readily accessible alkyl esters of chlorocarbonic acid [2].

As a model synthesis we used the tripeptide H-Gly-L-Phe-L-Ala-OH (I) [3].