

POLYPEPTIDES OF N_1 -URACILYL- α -ALANINE
AND N_1 -THYMINYL- α -ALANINE

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UDC 547.854.4'466

Continuing our investigations of the synthesis of peptides constructed from nucleic amino acid residues [1, 2], we have undertaken the preparation of higher-molecular-weight homopyrimidylpeptides containing β -(N_1 -uracilyl)- α -alanine (I) or β -(N_1 -thyminy)- α -alanine (II) residues.

Polypeptides of this type could be synthesized by polycondensation using the hydrobromides of the p-nitrophenyl esters of I and II. We first developed methods for the preparation of N_α -carbobenzoxy-derivatives of I and II and the p-nitrophenyl esters of these N_α -carbobenzoxy nucleic amino acids and methods for the decarbenzoylation to prepare the necessary hydrobromides of the p-nitrophenyl esters of I and II.

The molecular weights of the polypeptides synthesized by polycondensation were estimated by two independent methods: gel filtration on Sephadexes and sedimentation in an ultracentrifuge.* Both methods gave results which coincided, and the average molecular weights of the polypeptides obtained were on the order of 2000.

LITERATURE CITED

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*The authors extend their thanks to the director of the Department of Sedimentation Analysis of the Laboratory of Bioorganic Chemistry of Moscow State University, Doctor of Biological Sciences V. Ya. Chernyak for his consultations and assistance in carrying out the determinations with the ultracentrifuge.

Institute of Organic Synthesis, Academy of Sciences of the Latvian SSR, Riga. M. V. Lomonosov Moscow State University. Translated from Khimiya Geterotsiklicheskikh Soedinenii, No. 4, p. 570, April, 1971. Original article submitted October 20, 1970.