In addition to the "9-2" and "12-3" peptides, a "10" peptide with the composition Thr_1, Ile_1, Asp_1, Ser_2, Pro_1, Gly_1, Val_1, Leu_1, Glu_1, Ala_1, Try_1 was isolated from the chymotrypsin hydrolysate. We may note that the presence of tryptophan, which is split off in the course of acid hydrolysis, may distort the results of amino acid analysis and therefore the composition of the peptide "10" will be refined in the course of the structural investigations.

Taking into account the results obtained previously in a study of the structure of the fragment B-1 [3], it may be considered that porcine pepsin has the C-terminal sequence Asp-Val-Pro-Thr-Ser-Ser-Gly-Glu-Leu-Tri-(Thr_1, Ile_1, Asp_1, Ser_2, Pro_1, Gly_1, Val_1, Leu_1, Glu_1, Ala_1, Try_1)-Ile-Leu-Gly-Asp-Val-Phe-Ile-Arg-Gln-Tyr-Tyr-Thr-Val-Phe-Asp-Arg-Ala-Asn-Asn-Lys-Val-Gly-Leu-Ala-Pro-Val-Ala.

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SYNTHESIS OF d,l-CARNITINE (VITAMIN BT)

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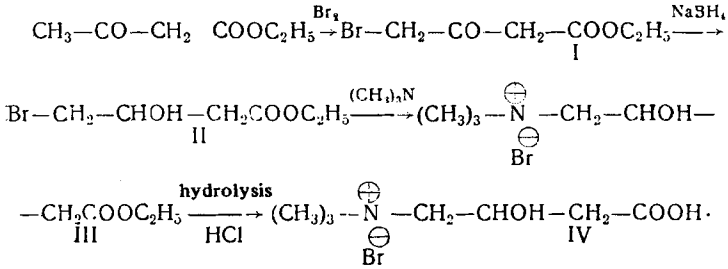
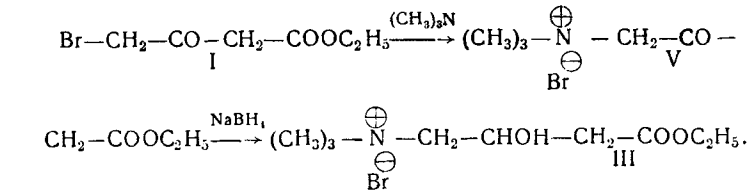
We have synthesized d,l-carnitine by the method of D'alo and Messerini [1] from acetoacetic ester by the following scheme:



To simplify the synthesis, the intermediate products, γ-bromoacetoacetic ester (I) and ethyl γ-bromo-β-hydroxybutyrate (II), were subjected to further reactions without preliminary purification. Carnitine was isolated in the pure form from the final mixture of products by means of ion-exchange chromatography on the cation-exchanger Dowex 50W × 8. The yield of carnitine chloride was 7% calculated on the initial acetoacetic ester.

The yield of carnitine increased to 10% if the scheme of synthesis was varied in such a way that I was subjected to amination instead of II, with subsequent reduction of the resulting γ-trimethylaminoacetoacetic ester salt V:



The d,l-carnitine chloride that we obtained was identical with the l-carnitine chloride isolated from rat muscle with respect to its mobility on paper chromatograms; it gave the characteristic coloration with Dragendorff's reagent and reacted with bromophenol blue, forming the corresponding complex [2]. Because of the exceptional hygroscopicity of carnitine chloride [3], the product obtained was not subjected to recrystallization: it had mp 190–192° C (decomp.). According to the literature [4], mp 195–196° C.

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