Analysis of the IR spectrum of O-butyl S-chloroformyl dithiocarbonate showed characteristic absorption bands in the following regions (cm^{-1}): 1200 (C=S); 750 (—C—S—); 1800 (—C(=O)—Cl); 1100 (—C=O); 2950, 2870 (CH_3); 1925, 1440 ($—CH_2—$).

O-Ethyl S-chloroformyl dithiocarbonate was obtained with a yield of 50%, bp 29-30°C (0.2 mm Hg); $MR_{D_{calc}} = 45.45$; $MR_{D_{found}} = 45.35$; $n_D^{20} - 1.5572$; $d_4^{20} - 1.3099$.

O-Butyl S-chloroformyl dithiocarbonate was obtained with a yield of 50%, bp 58-60°C (0.2 mm Hg); $MR_{D_{calc}} = 53.62$; $MR_{D_{found}} = 54.18$; $n_D^{20} - 1.5341$; $d_4^{20} - 1.2190$.

The reagents that we synthesized were used in the activation of the α-carboxy groups of N-substituted amino acids for the formation of ester and peptide bonds. As concrete examples we synthesized a number of compounds known in the literature that had been obtained with the aid of other condensing agents [1, 2]. Since O-butyl S-chloroformyl dithiocarbonate proved to be more active than the O-ethyl compound, the results obtained with its aid are given in Table 1.

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SYNTHESIS OF AFFINITY SORBENTS AND THEIR TESTING ON AMYLORIZIN

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In consideration of the hydrophobic nature of the active sites of the proteolytic enzymes of microrganisms, we have synthesized a number of affinity sorbents the ligands of which are hydrophobic amino acids and a number of dipeptides and tripeptides. These ligands were bound to the support used with the aid of dicyclohexylcarbodiimide.

Estimates of the sorption capacities of the sorbents were made by incubating them with an extract of Amylorizin at pH 8.0 followed by washing out the nonsorbed proteins and eluting the sorbed proteolytic enzymes with various concentrations of sodium chloride at the same pH value. All the sorbents were present in the moist state and had different volumes ranging from 5 to 12 cm^3, and therefore, in order to evaluate the results obtained they were recalculated to unit volume (cm^3) of moist sorbent.

The sorption capacities of the sorbents synthesized differed considerably from one another. The largest amount of aminopeptidase (substrate: leucine p-nitroanilide) [1] was sorbed on the sorbent glycyl-phenylalanine-support (22.25 units/cm^3), but at the same time 45.3 units/cm^3 of endopeptidases (proteolytic activity on casein) was sorbed [2]. The sorbent leucyl-glycyl-glycine-support sorbed less than a quarter of the amount of aminopeptiodase (5 units/cm^3) but almost as much of endopeptidases. Comparatively small amounts of these enzymes were sorbed by the other sorbents (Table 1).

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TABLE 1. Sorption and Desorption of the Proteolytic Enzymes of Amylorizin on a Number of Sorbents

Sorbent	Ttl. sorption capacity (act. of moist sorbent, units/cm³		Protein, mg/cm³	Total desorption, % of sorption		
	aminopeptidase	proteolytic		aminopeptidase	proteolytic	protein
1. Leucyl-glycyl-glycine-support	5,6	44,8	5,73	52,9	44,3	51,5
2. Leucine-support	1,6	0,8	0,40	13,1	48,7	10,8
3. Leucine-support	2,0	—	9,09	6,2	—	71,3
4. Leucyl-phenylenediamine-support	0,4	0,7	0,23	33,0	83,0	60,6
5. Glutathione-ox.-support	0,52	0,63	2,48	101,0	113,0	65,2
6. Glutathione-red.-support	0,16	0,21	0,08	99,1	106,3	107,2
7. Glycyl-L-phenylalanine-support	22,25	45,3	74,7	1,0	0,3	6,3

In evaluating the results on the sorption of the total aminopeptidase and proteolytic activities of Amylorizin one may consider as best those sorbents containing oxidized glutathione and leucylglycyl glycine as ligands. By changing the conditions of sorption of the protein on the above-mentioned sorbents and selecting the optimum conditions for desorption from the individual sorbents it is possible to achieve a specific separation of the proteinases and petpidases of Amylorizin. An important advantage of these sorbents is the possibility of their use for purifying proteolytic enzymes directly from Amylorizin extracts containing a large amount of cellulases, dextranases, and other enzymes, and also ballast proteins and pigments.

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SOME PROPERTIES OF TWO LECTINS FROM THE SEEDS OF *Datura innoxia*

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The presence of hemagglutinating activity in extracts of the seeds of *Datura innoxia* was first detected by Boyd [1]. We have isolated and purified two forms of a lectin (I_1 and I_2) from the seeds of this plant [2] with molecular weights, evaluated by gel chromatography, of 150 and 300 kD, respectively. Lectins I_1 and I_2 are glycoproteins. I_1 contains 66% of carbohydrates and I_2 54% (determined from total-nitrogen analysis [3]). The neutral sugars were determined by the GLC method after methanolysis and trimethylsilylation on a Chrom 5 chromatograph with a column (0.3 × 300 cm) containing 5% of SE-30 and with flame-ionization detection. In I_1, L-arabinose, L-fucose, D-xylose, D-mannose, D-galactose, and D-glucose were found in a ratio of 6:1:2:1:2:2, respectively. The carbohydrates of I_2 were L-arabinose, D-xylose, D-mannose, D-galactose, and D-glucose in a ratio of 1:2:1:1:3, respectively. The N-terminal amino acids of the lectins were blocked. As the result of methanolysis in 1 M $HCl/MeOH_{abs}$ at room temperature for eight hours and the TLC of the dansyl derivative, in both cases glutamic acid and glycine were identified. The amino acid compositions were determined on an LKB-4101 amino acid analyzer after hydrolysis in

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