

The nomogram is based on the principle expressed in formula (2). Log D and log λ are plotted along the axes of ordinates, but instead of the logarithms each division is assigned the value of the magnitude at which the logarithm is taken (D and λ , respectively). In view of this there is no necessity for any mathematical operations whatever. Of course, if desired, it is not difficult to plot a nomogram with different ranges of D and λ .

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MODIFICATION OF LYSOZYME BY MONOMYCIN A IN THE PRESENCE OF A WATER-SOLUBLE CARBODIIMIDE

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The lysozyme of hens' egg protein is a globular protein consisting of a single polypeptide chain including 129 amino acid residues. An excess of 19 positive groups over 11 negative groups (taking the N and C-terminal groups into account) imparts highly basic properties to the protein molecule [1, 2].

Monomycin A (paromomycin) has five free amino groups, the most reactive NH_2 group being that of deoxystreptamine [3, 4].

As the main method of condensing lysozyme with monomycin A we selected the carbodiimide method [5] and, as experiment showed, the most promising substances in this respect proved to be water-soluble carbodiimides [6, 7].

The product of the condensation of lysozyme with monomycin A was obtained with a three-fold excess of 1-cyclohexyl-3-(2-morpholinoethyl)carbodiimide and monomycin A per COOH group of the protein (pH 4.8; 20°C; 24 h). The preparation was purified by dialysis.

The homogeneity of the preparation obtained was checked by paper electrophoresis in the 1 N CH_3COOH and the $\text{HCOOH}-\text{CH}_3\text{COOH}-\text{H}_2\text{O}$ (28:20:52) systems. The formation of a covalent complex of lysozyme and monomycin was confirmed by the composition of an acid hydrolysate of this complex determined with the aid of a Hitachi type KLA-3B amino acid analyzer. As markers we used glucosamine, deoxystreptamine (components of monomycin A), and an acid hydrolysate of lysozyme.

The results of the amino acid analysis showed that condensation had formed a covalent lysozyme-monomycin A complex in which there was one mole of monomycin A to one mole of lysozyme.

The results of physicochemical and biological investigations of the lysozyme-monomycin complex obtained will be published in the near future.

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