

quand le N-COOH ne dépasse pas 1-2% du N-total tout au moins. Il est tout à fait possible que, dans de nombreux cas, les endopeptidases engendrent encore beaucoup moins d'acides aminés libres qu'on le croit communément.

2. Chaque enzyme libère un *seul* acide aminé en manifestant une spécificité analogue à celle établie par BERGMANN *et al.* sur des peptides synthétiques (sauf dans le cas, d'ailleurs assez douteux, de la chymotrypsine). Toutefois, c'est la phénylalanine qui est libérée par la pepsine et non la tyrosine, comme on aurait pu le penser^{6,7}.

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Reçu le 15 septembre 1951

MACROMOLECULAR PROPERTIES OF CARRAGEENIN

by

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Carrageenin, a polysaccharide obtained from the marine algae *Chondrus crispus* is predominantly composed of D-galactose residues linked 1:3 with an ethereal sulphate on C₄¹. Such a structure does not account for the entire molecule and recently JOHNSTON AND PERCIVAL² isolated L-galactose from a resistant fragment poor in sulphate groups and showing evidence of a branched structure. Their interpretation is that the molecule is complex but they admit the possibility that carrageenin is a mixture as suggested by earlier workers³.

An electrophoretic analysis was undertaken on four samples, within the intrinsic viscosity range from 3.4 to 11.2, since separation should have been possible if the components differed in their content of ionizing sulphate groups. This analysis revealed considerable spreading but no evidence of separable components and all samples had similar mean mobilities.

The same samples were then used to estimate the molecular parameters of carrageenin by sedimentation and diffusion studies. Over the three-fold range in intrinsic viscosity the molecular weight increased from 110,000 to 530,000, the axial ratio from 160 to 340 and the diameter of the ellipsoid of rotation from 9.9 to 13.5 Å assuming no solvation. These are mean values since all samples were polydisperse and two components were revealed during sedimentation. The more rapidly sedimenting component, absent in the sample of lowest viscosity, increased to about 12% of the most viscous sample. Since the mean values are comparable with those reported for cellulose⁴, it appears that the major component of carrageenin has a linear structure. The more rapidly sedimenting minor component must differ in size or shape and it may be branched but this cannot be established from these measurements.

Full details of this investigation will be published later in this journal*. Work is continuing on the characterization of the two components found during sedimentation.

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Received October 1st, 1951

* Manuscript received August 13th, 1951 (Ed.).