E-43

EFFECT OF ALKALI TREATMENT ON THE AGAR FROM *GRACILARIA CORTICATA*

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Agar, the polysaccharide complex obtained from red seaweeds is composed of at least three major fractions: (1) a sulphated galactan without gelling potential; (2) a sulphated agarose of low gel strength and (3) a neutral agarose of high gel strength which contains alternating units of 1→4 linked 3,6-anhydro α *L*-galactose and 1→3 linked β *D*-galactose residues. In this paper we report the effect of mild alkali treatment on the relative proportions of agarose, sulphated agarose and the sulphated galactan in agar samples isolated from the red seaweed *Gracilaria corticata*.

Gracilaria corticata was (*a*) extracted with hot water, 100°, pH 6, 2 h and (*b*) pretreated with 2% NaOH, room temperature, 24 h, washed and then extracted as before. The extracts were centrifuged, dialysed and further purified by the freeze-thaw procedure. The alkali treated agar sample had improved gel strength and also a higher 3,6 anhydrogalactose content.[1] Each agar sample (0.1g) was suspended in 50 mM NaCl at room temperature in a glass column and separated into three fractions by washing the agar with 50 mM NaCl at 20°, 50° and 100° to give fractions 1,2 and 3 respectively.[2] Results indicate that mild alkali treatment increased the relative concentration of agarose, but that the relative concentration of sulphated agarose remains almost unchanged. Determination of sulphate content[3] also indicated the absence of sulphate in fraction 3 of both agar samples.

	G.corticata	*G.corticata (after alkali treatment)*
Fraction 1 (sulphated galactan)	53	25
Fraction 2 (sulphated agarose)	28	26
Fraction 3 (agarose)	11	45

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