

STRUCTURAL FEATURES OF ANTICOAGULANT SULFATED GALACTANS FROM GREEN SEAWEED *Codium isthmocladium*.

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Since the first description of sulfated polysaccharides from seaweeds, these compounds have been tested for biological/pharmacological activities, including anticoagulant activity. We have extracted sulfated polysaccharides from the green seaweed *Codium isthmocladium* by proteolytic digestion, followed by separation into five fractions respectively by sequential acetone precipitation. The agarose gel electrophoresis reveals that only the fraction 0.9 showed a unique band of sulfated polysaccharides, which later was submitted to ion exchange and molecular sieving chromatographies. Two fractions were eluted at 2,0M (Gal 1) and 3,0M NaCl (Gal 2) from ion exchange resin. They showed a molecular weight of ~6,4 and ~7,4 kDa respectively. Chemical, infra-red, NMR ¹H and methylation analysis showed that they are β -(1→3) homogalactans with galactose residues sulfated at C-4 and/or C-6. Gal 1 and Gal 2 have 50% and 61% of 4,6-SO₄-galactose residues, respectively. Gal 2 has a potent anticoagulant activity capable to prolong the coagulation to double baseline value (APTT test) with and 0.7 μ g as HMW heparin (0,6 μ g) whereas 6,3 μ g Gal 1 was needed to obtain the same effect. These results suggest that these galactans mainly Gal 2 have a potential application as anticoagulant drugs.

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