

Purification and Anticoagulant Activity of Sulfated Polysaccharides Isolated from the Green Marine Alga *Caulerpa cupressoides*

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The low standard quality and current shortage in obtaining heparin (HEP) for use in cardiac surgeries have led concern in the international market. Sulfated polysaccharides (SP) of seaweeds have been considered as promising substitutes for HEP. Thus, it was objected to extract sequentially total SP (TSP) from *Caulerpa cupressoides* (Chlorophyceae) with papain in 0.1 M sodium acetate buffer (pH 5.0) containing 5 mM cysteine and 5 mM EDTA, purify by ion exchange chromatography (DEAE - cellulose) and evaluate the potential anticoagulant of SP fractions by the activated partial thromboplastin time (APTT) using plasma normal human and standard HEP (193 IU mg⁻¹). The obtained fractions were also analyzed by agarose gel electrophoresis. The total yield was 4.61% and similar chromatographic profiles of TSP were obtained on both extractions, when three different fractions of SP (F I; F II and F III) eluted at concentrations of 0.5; 0.75 and 1.0 M of NaCl, respectively, were obtained. *C. cupressoides* SP were capable of modifying the APTT only fractions eluted with 0.75 M of NaCl, whose activities were 24.62 and 25.76 IU mg⁻¹, respectively, and the electrophoresis procedure suggested that the charge density among fractions was a prerequisites to exhibit the activity. Therefore, SP fractions isolated from *C. cupressoides* were less potent than HEP.

Key-words: *Chlorophyceae*, *Sucessive extractions*, *sulfated polysaccharides*, *APTT*.

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