Annual Variation on Chemical Composition and Antioxidant Activity of Sulfated Polysaccharides from Seaweed *Dictyota menstrualis*

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INTRODUCTION: Sulfated polysaccharides (SP) is a complex group of biopolymers with a wide range of important biological activities and the antioxidant activity is one of the most widely studied properties of SP. However, nothing is know about the influence of annual variation on the composition of SP from brown seaweed and their biological activities. **OBJECTIVE**: The aim of the present study is investigated the possible annual variation in the composition and antioxidant activity of SP from *Dictyota menstrualis* collected on Búzios beach (RN, Brazil) from January to December 2010. **MATERIAL AND METHODS**: The SP was extracted by proteolytic digestion, followed by methanol precipitation. The SP obtained was analysed by agarose gel electrophoresis and chemical analysis. The antioxidant activity was assessed using several methods like total antioxidant capacity, copper chelation, scavenging of hydroxyl radical and of the superoxide radical. **RESULTS AND DISCUSSION**: There was a significant variation in composition and antioxidant activity according to the month of harvest. The yield varied from 17,0 to 86,6 mg of SP/g of dried seaweed. The sulfate/sugar ratio (%/%) varied from 0.09 to 0.75. When the antioxidant tests were analysed, we saw that the data from tests change around the year. **CONCLUSION**: The data demonstrate that there were changes in the composition and antioxidant activity from *D. menstrualis* according to the months of harvest.

Word Keys: seasonal, brown seaweed, biological activities

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