

The acute toxicity of *Sargassum fluitans* (Børgesen) Børgesen and *Sargassum natans* (Børgesen) Børgesen on some rats of wistar stock

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1 ABSTRACT

Sargassum fluitans (Børgesen) Børgesen and *Sargassum natans* (Børgesen) Børgesen (Sargassaceae) are two macroscopic, pelagic and invasive brown marine algae found in waters and beaches of many countries, including Côte d'Ivoire. The objective of this study is to contribute to the fight against the pollution of *Sargassum* on Ivorian beaches by enhancing the value of these species (*Sargassum fluitans* and *Sargassum natans*). To reach that objective, the study was to evaluate the acute toxicity and characterize the active principles of the aqueous and ethanol extracts of these two algae. Phytochemical sorting by tube characterisation has revealed the presence of active principles with interesting pharmacological properties. These include polyterpen sterols, polyphenols, catechic tannins, saponins and polysaccharides. The acute toxicity tests were carried out for 14 days on female rats of Wistar strain according to the OECD guideline no.423 (OECD 423, 2001). The single oral administration of 2000, 3000 and 5000 mg/kg as body weight (BW) of the four extracts to the animals did not result in mortality. Moreover, no clinical sign of toxicity was recorded. These different doses of extracts had no significant effects ($p > 0.05$) on the mass weight of the animals compared to the control animals given distilled water. Thus, these different algae extracts had a LD₅₀ higher than 5000 mg/kg of BW according to the OECD guideline. These algae extracts were almost non-toxic or relatively harmless. This study showed the innocuousness of *Sargassum fluitans* and *Sargassum natans* extracts as well as their phytochemical composition.