Ulva sp. from Brittany, a curse or a golden resource?

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Résumé

The dual nature of *Ulva* sp., commonly known as sea lettuce, in Brittany, France is explored. *Ulva sp.* is notorious for causing green tides, which are massive algal blooms that can cover beaches and coastal areas, partly due to nutrient enrichment from agricultural runoff. These blooms pose significant environmental and economic challenges, including ecosystem disruption, oxygen depletion in water bodies, and the release of toxic gases during decomposition. Despite these challenges, the green seaweed *Ulva* sp. presents numerous opportunities for sustainable development. It serves as a sustainable feedstock for biorefineries, enabling the production of valuable bioactive products such as sulfated polysaccharides make it a valuable feed supplement in livestock, enhancing animal nutrition and health. Furthermore, *Ulva* sp. contains active compounds that are utilized in dermo-cosmetic applications, particularly in anti-aging and wound healing strategies, due to its ability to stimulate anabolic and catabolic pathways of extracellular matrix metabolism. Additionally, it is edible and rich in proteins, vitamins, and minerals, making it a nutritious food source and a valuable food supplement in hospital catering. The presentation highlights the potential of *Ulva sp.* in numerous applications whose biological activities and/or physico-chemical properties are tested in the laboratory. The extraction process is crucial, as it influences the composition and concentration of bioactive compounds in the extracts. Overall, the presentation emphasizes that *Ulva* biomass is not merely a pollution problem but a potential solution for various industrial and environmental applications.

Mots-Clés: Ulva sp., extraction, biological activities, applications

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