



SEAMARK DELIVERABLE 5.4: DEVELOPMENT PLAN FOR CO-EXTRACTION

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Public summary of
confidential report

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Work Package / Task:

WP5 / T5.3 Co-extraction of ulvans,
proteins and minerals for *Ulva sp.*

Keywords:

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services, *Ulva sp.*, green macroalgae

Summary:

A pilot scale extraction was carried out on 60 kilograms of fresh *Ulva sp.* received from the Portuguese partner ALGAplus. After aqueous extraction, screening by ultrafiltration membrane was done to separate the compounds within the liquid extract according to their molecular sizes. All fractions were finally analysed to determine the composition. Two ulvans rich fractions were obtained (Purity > 50% DM), one with high molecular weight (> 150 kDa) and another one with low molecular weight (150 > X > 15 kDa). The 1 kDa filtrate yielded a mineral-rich fraction whose elementary composition has been partially characterized. The residual biomass from the process proved to be the protein rich but insoluble fraction. This first pilot trial produced interesting results and needs now to be optimised.



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