**Influence of sequential extraction on the physicochemical properties of ulvan.**

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The extraction and purification methods applied on ulva species significantly influence the quality and quantitative yields of their constituent phycocolloids. Herein, ulvan from sea lettuce harvested along the coastal waters of Ghana, West Africa is extracted via a sequential extraction with further purification processes. The physicochemical variations in the resulting four fractions (fractions 1A, 1B, 2A and 2B) are analysed and presented. The extraction yields of these fractions ranged from ~15.25% to 19.01% with fraction 2A recording the highest. All fractions except 2A contained > 50% total sugars and >18% uronic acids. The molecular weights (Mw) for the fractions ranged between ~436kDa and 574kDa. The sulphate content as colorimetrically determined was highest in fraction 1B (~32.73%) and five-times less in fraction 2A. This significant variation in the physicochemical properties of the four fractions are attributed to the varying sequential extraction conditions.

The study thus elucidates that, warm extraction under reduced salt conditions yields higher quantities of ulvans of lower uronic acids, sugars and sulphate contents. Like wisely, the reversed conditions are confirmed to yield lesser amount ulvan but of higher uronic acids and sulphate composition. The result from both ambient and warm temperatures confirms that highly sulfated ulvans with higher uronic acid contents are extracted under increased salt concentrations. Thus, having these varied properties of ulvan could enable further modification for effective biological activities within the food and pharmaceutical industries.