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Fucoxanthin Extractions of Brown Seaweeds and Analysis of Their Lipid Fraction in Methanol

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Abstract In this present study, fucoxanthin has been successfully extracted and purified from two species of Malaysian brown seaweeds, namely *Sargassum binderi* and *S. duplicatum*. The purity of the fucoxanthin obtained was > 99% as indicated by HPLC analysis. Both fucoxanthin

content, and analysis of lipid fraction of the seaweeds in methanol showed that both samples contained a considerable amount of fucoxanthin and total lipids. The amount of fucoxanthin and total lipid farcation in methanol of *S. duplicatum* (1.01 +/- 0.10 and 21.3 +/- 0.10 mg/g dry-weight, respectively) was significantly higher than those of *S. binderi* (0.73 +/- 0.39 and 16.6 +/- 4.10, respectively). Both types of seaweeds also contained a considerable amount of unsaturated fatty acids. However, in terms of docosahexanoic acid, eicosapentanoic acid, arachidonic acid, linoleic acid and alpha-linolenic acid contents, *S. duplicatum* was found to be higher (0.76, 2.55, 13.64, 5.81 and 5.35 %, respectively) than *S. binderi* (0.70, 1.82, 9.13, 6.37 and 4.39%, respectively). For saturated fatty acids, palmitic (C16:0) was found to be the major fatty acid in both samples studied.

Keywords

Author Keywords: [Sargassum binderi](#); [S. duplicatum](#); [fucoxanthin](#); [fatty acids](#); [total lipid](#)

Keywords Plus: [FATTY-ACID-COMPOSITION](#); [EDIBLE SEAWEED](#); [FISH-OIL](#); [UNDARIA-PINNATIFIDA](#); [ALGAL CAROTENOIDS](#); [CELLS](#); [RATS](#); [ANTIOXIDANT](#) ; [SUPPRESSES](#); [PHAEOPHYTA](#)

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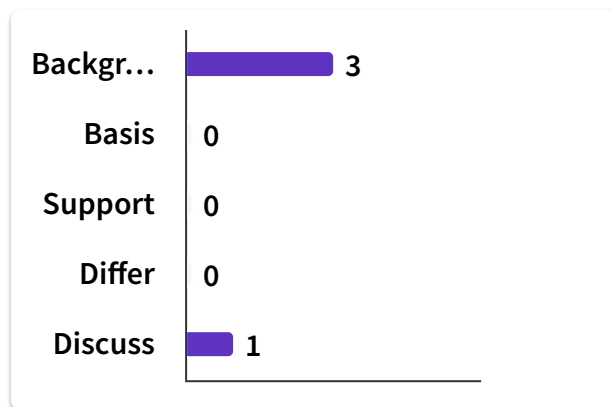
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