Effects of Solvent Extraction and Drying Methods of Malaysian Seaweed, *Sargassum polycystum* on Fucoxanthin Content

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Abstract. This study aims to evaluate the effects of solvents extraction and drying methods on selected fucoxanthin content in *Sargassum polycystum* that was collected from Blue Lagoon, Port Dickson Malaysia. Two different drying methods were used in this study, i.e sun-drying and air-drying. Acetone, methanol and ethanol were used solvents to extract the fucoxanthin from *S. polycystum.* The results showed that both drying methods and solvents extraction had a statistically significant effect ($p < 0.05$) on fucoxanthin content in *S. polycystum.* Among three solvents extraction with two drying methods investigated, acetone extract from air-dried sample gave the highest fucoxanthin content (0.282 ± 0.08 mg/g DW) followed by ethanolic extract from air-dried sample (0.198 ± 0.13 mg/g DW). Sun-drying sample extracted with methanol yielded the lowest amount of fucoxanthin (0.028 ± 0.02 mg/g DW). Concisely, the best drying method to extract fucoxanthin from *S. polycystum* is air-drying method with acetone as the solvent extract.

Keywords: Sargassum polycystum, solvent extraction, drying method, fucoxanthin