

## Characterization of Bio-prospecting Compounds of Brown Seaweed (*Sargassum honeri*) Extracts using Supercritical Carbon Dioxide and Subcritical Water

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Seaweeds are potential renewable resource in the marine environment. It has unexplored bioactive compounds, which could be potentially as functional food for human health. In this study, seaweed (*Sargassum honeri*) was extracted using an environmental friendly solvent, supercritical carbon dioxide (SC-CO<sub>2</sub>). The SC-CO<sub>2</sub> will be carried out at constant temperature 45 and pressures ranging from 20MPa. It will be produced by the subcritical water hydrolysis (SWH) with the reaction temperatures for hydrolysis will be maintained from 180 to 260 . The SWH will be done with condition 16-220 bar for the reaction pressure and 1:25 (w/v) for the ratio of material to water. High pressure pump will be applied to flow water from tank to reactor for getting initial pressure 1 bar. Analysis of hydrolysate water will be determined by antioxidant properties (TFC, TPC, DPPH and ABTS), total sugar, reducing sugar. The 1% formic acid and 1% sodium bicarbonate which will used as catalyst will suspended in 150ml of distilled water.