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FERMENTATION DYNAMIC ON BROWN SEAWEED *SARGASSUM* sp

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ABSTRACT

Brown algae *Sargassum* can be found in abundance at Sabah waters and there is no data shows that it been used for any economy purposes. *Sargassum* is used to produces a single cell detritus or known as seaweed silage. Seaweed silage was used as an alternative fish diet instead of unicellular algae to feed rotifers. *Sargassum* sp was decomposed using probiotic bacteria and it was done in three different phases where in phase 1 using *Lactobasillus* sp, in phase 2 using *Lactobasillus casei* and in phase 3 using the combination of *Lactobasillus casei* and *Vibrio* sp. Cellulase enzyme and yeast was used as a fermentation starter. Seaweed without inoculation was used as control. Chemical analysis was done to compare the nutritional value in fermented and control sample. Result showed higher yield in lipid (0.37 mg/g) and protein (15.59 mg/g) concentration in phase 2. Besides that fermented sample for phase 2 shows lower concentration in phenolic (0.12 mg/g). However content of fatty acid is lower (215.61 mg/g) then control sample. Further, experiment was performed to evaluate its suitability as feeding for rotifers. Result showed that, rotifer which feed with 10.0g of fermented sample twice a day shows better growth rate.

