

Fatty acid profile of *Chlorella vulgaris* commercial cultured in different concentration of fertilizer and salinity

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Chlorella vulgaris could be consumed as a complete supplementary food in the diet. *Chlorella* sp. is high in fatty content, especially Essential Fatty Acid (EFA). *Chlorella vulgaris* was cultured in different culture media, and then FAME were extracted from the sample following Ostrowski and Divakaran method to the study the fatty acid profile. The result showed the polyunsaturated fatty acid reached to the highest percentage on the seventh day of the cultivation. The cell growth as well as the dry weight reached the peak during the same day. By looking at the PUFA content in different medium, the modified Bold Basal medium has the highest PUFA content among all. The result also showed that the ratio of omega-3: omega-6 is about 2:10. This showed that *Chlorella vulgaris* could be taken as a balance food.

Keywords: *Chlorella vulgaris*, Essential Fatty Acid (EFA), bold basal medium, omega-3, omega-6