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Safafar, Hamed; Jacobsen, Charlotte; Møller, Per

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Lipid profiling of some phototropic microalgae grown in waste water

Hamed Safafar, Charlotte Jacobsen, Per Møller

Hamed Safafar, Division of Industrial Food Research, Technical University of Denmark, hasaf@food.dtu.dk

Charlotte Jacobsen, Division of Industrial Food Research, Technical University of Denmark, chja@food.dtu.dk

Per Møller, Ecolipids, Jyderup, Denmark, pm@ecolipids.dk

Microalgae can be a new source of lipids for the aquaculture industry. Moreover, their potential as natural sources of antioxidants has gained recent attention. About 40 species of microalgae are used in aquaculture worldwide. A full characterization of lipid components is critical for selecting the most suitable microalgae and downstream processing for food and feed production. The present study is part of a big project funded by GUDP (green development and demonstration program of ministry of agriculture and fisheries of Denmark) which aims at developing new processing technologies, so that microalgae-biomass can be used as an alternative valuable resource in fish feed. In this work, 10 fresh water and marine microalgae from *Chlorella*, *Scenedesmus*, *Haematococcus*, *Nannochloropsis*, *Nannochloropsis* and *Dunaliella* species grown in waste water in Kalundborg micro algal facility were harvested by membrane microfiltration and analyzed for fatty acid (GC), triacylglycerol (HPLC), sterol (GC) and tocopherol (HPLC) composition and also for amounts of phospholipids. Lipid composition in micro algae varied strongly between species.