

عنوان مقاله:

Research Article: Improvement of *Thalassiosira weissflogii* as a high valuable nutritional feed

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خلاصه مقاله:

Recently, the rising demand for high-quality seafood has created a fresh look at the sustained and adequate aquafeed as a necessity. Considering the potential of microalgae cells, many companies are looking for practical methods to enhance the nutritional content of these microorganisms as valuable aquafeed. In this attempt, *Thalassiosira weissflogii* isolated from the Caspian Sea and identified with morphology and molecular characteristics. In order to improve lipid content, this strain was cultivated in normal and nitrogen deficiency F/2 medium for 18 and 30 days. The growth indices, total lipid, fatty acids profiles were measured in both cases. Growth of *T. weissflogii* during nitrogen deficiency conditions was associated with a sharp decline in cell growth and significant rise in lipid production such as polyunsaturated fatty acids (PUFAs). Although the eicosapentaenoic acid (EPA) level was reduced by half under nitrogen deficiency condition (8.8 to 3.23 % TFA), the amount of docosahexaenoic acid (DHA) escalated during this situation (3.5 to 12.63 % TFA). Results showed that the concept of N-deficiency conditions along with prolonged .culturing could improve PUFA n-3 content to provide highly valuable feed for shellfish and shrimp industries

کلمات کلیدی:

Aquafeed, *Thalassiosira weissflogii*, nitrogen deficiency, EPA, DHA

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