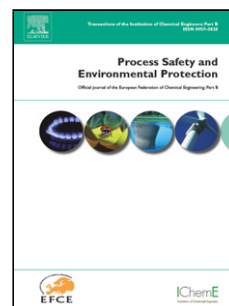


Accepted Manuscript

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PII: S0957-5820(18)30368-9
DOI: <https://doi.org/10.1016/j.psep.2018.06.027>
Reference: PSEP 1429

To appear in: *Process Safety and Environment Protection*

Received date: 24-1-2018
Revised date: 13-6-2018
Accepted date: 20-6-2018

Please cite this article as: Kamoun, Omama, Ayadi, Ines, Guerfali, Mohamed, Belghith, Hafedh, Gargouri, Ali, Trigui-Lahiani, Hèla, *Fusarium verticillioides* as a single-cell oil source for biodiesel production and dietary supplements. *Process Safety and Environment Protection* <https://doi.org/10.1016/j.psep.2018.06.027>

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***Fusarium verticillioides* as a single-cell oil source for biodiesel production and dietary supplements**

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Highlights:

- An oleaginous fungus was isolated for its potential lipid production.
- Lipid accumulation by the fungus was improved using different conditions.
- The fungus can grow on a variety of low cost carbon sources.
- The produced lipids can be used as a potential feedstock for biodiesel production.

Abstract

A newly isolated oleaginous fungus called E4-2 and identified as *Fusarium verticillioides* was selected as a potential source of lipid production using glucose as carbon source and a mixture of ammonium chloride and yeast extract as nitrogen sources. A maximum lipid accumulation of 1.88 g/L and a lipid cell content of 38% were obtained at optimal pH and temperature equal to 5 and 30°C, respectively. Moreover, the E4-2 strain can grow on a variety of low-cost agro-waste carbon sources. Interestingly, waste cooking oils (1.67 g/L) and soap stock of refined

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