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**OP-APR11-C23****Solid-state fermentation of winery and olive mill wastes for lignocellulolytic enzymes and antioxidant compounds production**

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Solid-state fermentation (SSF) is a process that can use agroindustry solid residues as substrate for microbial growth. During SSF, value-added products and fermented biomass are generated contributing for the reutilization of otherwise pollutant agroindustry wastes. By SSF, fungi can hydrolyze anti-nutritional factors of plant-based residues, as the lignocellulosic matrix, and produce enzymes, phenolic compounds and other bioactive compounds, making this a high interest bioprocess for the aquafeed industry. The present study optimized (simplex centroid design) the mixture of winery and olive mill wastes to produce lignocellulolytic enzymes and to extract phenolic compounds through SSF by *Aspergillus niger*. The substrate mixture that maximized the production of lignocellulolytic enzymes, antioxidant and phenolic compounds was 0.44 g exhausted olive pomace/gds; 0.3 g exhausted grape marc/gds; 0.15 g vine-shoot trimmings and 0.1 g crude olive pomace/gds. The crude extract will be applied as additive in meagre (*Argyrosomus regius*) diets, to improve the feed utilization efficiency of low-fish meal-based diets, contributing to the sustainability of aquafeeds.

**Acknowledgments**

Funded by Programa Operacional Mar2020, Portugal 2020 under the project InovFeed (ref. MAR-02.01.01-FEAMP-0111) and BioTec-Norte operation (NORTE-01-0145-FEDER-000004) funded by ERDF under the scope of Norte2020-Programa Operacional Regional do Norte.

<https://doi.org/10.1016/j.jbiotec.2019.05.074>

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