

Comparison of untapped agroindustrial olive resources with olive leaves

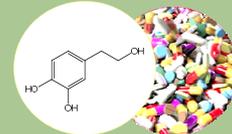
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INTRODUCTION



Besides olive oil, olive leaves and fruits extracts are currently applied as ingredients of nutraceuticals and dietary supplements due to their cardiovascular health promoting properties, among other effects. These extracts contain phenolic compounds, like hydroxytyrosol and their derivatives as key active compounds, but the hydroxytyrosol cluster varies in composition depending on the source.

Today, the olive oil industry generates a huge amount of byproducts/wastes. The characterization of these bioresources for the production of bioactive components is an important step toward sustainable development and also it is a new way to find new potential sources of hydroxytyrosol derivatives.

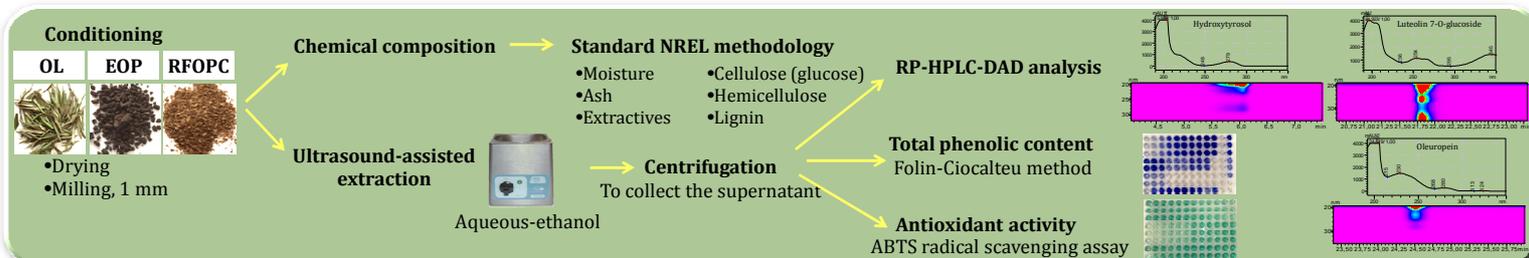


Objective



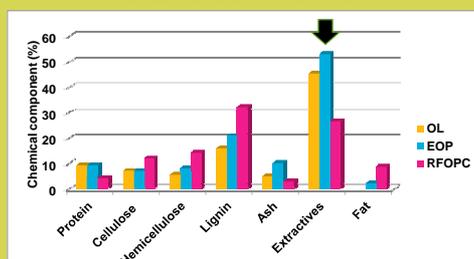
Olive leaves (OL), exhausted olive pomace (EOP) and a residual fraction from the cleaning of olive pits (RFOPC) have been compared as antioxidant sources using colorimetric assays and high-performance-liquid chromatography analyses.

EXPERIMENTAL

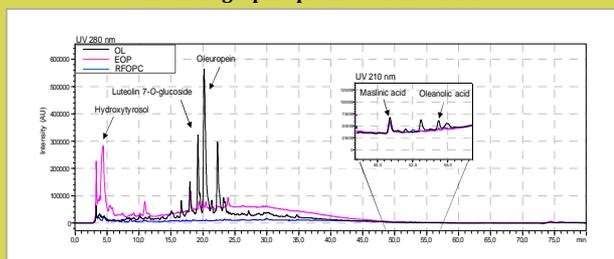


RESULTS AND DISCUSSION

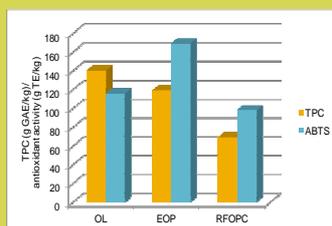
Chemical characterization



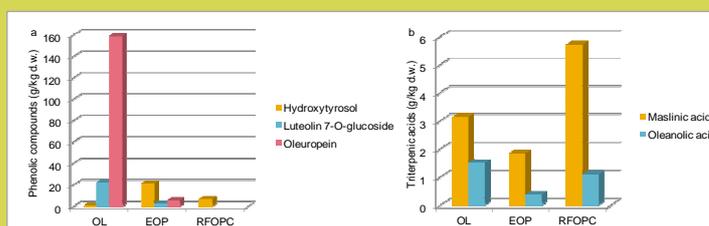
Chromatographic profiles of the extracts



Total phenolic content and antioxidant activity of the extracts



Content of selected bioactive compounds in the extracts



CONCLUSIONS

- Besides to OL, the wastes derived from olive pomace, EOP and RFOPC, are promising sources of added-value phenolic compounds with antioxidant activity.
- Among them, EOP contained the highest amount of hydroxytyrosol, which is also considered one of the most powerful antioxidants.
- Nonetheless, the extracts also presented triterpenic acids and other phenolic compounds whose characterization is worth of merit since they can contribute to the functional properties of the extracts.
- Therefore, multifunctional extracts with antioxidants and triterpenic bioactives can be obtained with multiple possibilities in different sectors.

ACKNOWLEDGEMENTS

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