

## **SCREENING OF OLIVE POMACE POLYPHENOLS FROM INDIVIDUAL AND MIXED OLIVE VARIETIES**

Santos J., Nunes M. A., Oliveira M.B.P.P.

LAQV@REQUIMTE, Department of Chemical Sciences, Faculty of Pharmacy, University of Porto, R. Jorge Viterbo Ferreira 228, 4050-313 Porto (Portugal) - [jmsantos@ff.up.pt](mailto:jmsantos@ff.up.pt)

Over the last years, olive oil production increased worldwide. Along with this growth, a high rate of residues, namely olive pomace, have been produced. Olive pomace is a natural source of bioactive compounds with major applications for human health and well-being. However, it also has a phytotoxic effect, being an environmental burden. A current sustainable development strategy in Europe agrees, on the context of circular economy, on the recovery of agro by-products and closing the loop between the food production and consumption. Therefore, there is a growing awareness on characterization and identification of natural compounds, as polyphenols, in agro by-products.

This work aimed to compare the phenolic profile of 5 olive pomace samples, 4 from monovarietal pomace and of one composed by a mix of different varieties, all from Portuguese olive oil producers. The freeze-dried olive pomace was submitted to a methanolic ultrasound assisted extraction. The total phenolic content was assessed by Folin-Ciocalteu procedure and the phenolic profile by an HPLC-DAD-FL method. The identification of the compounds was made by comparison with standards, when available. The olive pomace phenolic profile was also analysed in an HPLC-DAD-MS<sup>n</sup> system to tentatively identify the unknown compounds.

The pomace with mixed olive varieties showed the highest phenolic content, followed by samples from monovarietal pomaces. The phenolic profile of all samples showed a high content of hidroxytyrosol, tyrosol and verbascoside. Most of the other compounds found in their profile were derivatives of those compounds and also oleuropein derivatives.