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BIOACTIVE COMPOUNDS IN OLIVE OIL: EVALUATION OF HYDROXYTYROSOL AND TYROSOL

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Abstract

In order to preserve the positive image of EVOO due to its health properties, as well as to quantify biophenols according to the health claim (EU Reg 432/2012) it is necessary to have an analytical protocol to evaluate the amount of hydroxytyrosol and its derivatives having a demonstrated effect of protection of blood lipids from oxidative stress as well as to check by this protocol if EVOOs satisfy the EU requirement for including the specific health claim on the oil label. Hydroxytyrosol and tyrosol are present in olive oil free and bound. The present work apply acid hydrolysis of olive oil total phenols with posterior analysis by HPLC-DAD. Total phenols is determined by acid hydrolysis-HPLC and by the VIS spectroscopy Folin Ciocalteu method (after and without the hydrolysis of the polar phenolic extract). The results showed that the FC assay do not significantly differ from those obtained following the acid hydrolysis-HPLC (expressed as sum of HTyr and Tyr).

Keywords

Phenolic alcohols, total phenols, HPLC-DAD, spectroscopy, virgin olive oil.

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