

A Natural Bioactive Olive by-products Extract

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The bioactive profile of a natural extract from olive oil by-products was investigated. The natural extract (NEO), from olive subproducts was obtained by a combination of clean technologies (WO 2007/013032 A2) and presents a polyphenol content of 22% and 17% of a potent antioxidant Hydroxytyrosol. The ORAC (oxygen radical absorbance capacity) and EPR (electron paramagnetic resonance) methods were performed in order to study the NEO ability to quench the peroxy and hydroxyl radicals. The NOE capacity in inhibition of LDL (low density lipoprotein) oxidation once initiated was also determined by monitoring the conjugated dienes formation in a Genesys 10 spectrophotometer. The capacity of the bioactive extract to inhibit the colon rectal or gastric human cancer cell lines to growth was also studied. The toxicity of NEO extract was tested in Caco-2 human cell model and the results showed that the toxicity was negligible in the concentrations range tested. The NEO extract was 4 to 5 folds more active than the synthetic hydroxytyrosol in all the experimental models.