

Antioxidant effects of extra virgin olive oil enriched by myrtle phenolic extracts on iron-mediated lipid peroxidation under intestinal conditions model

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Description

Chelating and free radicals scavenging activities of extra virgin olive oil (EVOO) enriched by *Myrtus communis* phenolic compounds (McPCs), α -tocopherol and Butylated hydroxytoluene (BHT) were evaluated using chemical assays, 2,2-diphenyl-1-picrylhydrazyl (DPPH) and Oxygen radical absorbance capacity (ORAC), and biological model as 2,2'-azobis (2-aminopropane) dihydrochloride (AAPH) or Fe^{+3} /Ascorbic acid (Fe^{+3} /AsA) system mediated peroxidation of L- α -phosphatidylcholine aqueous dispersions stabilized by bile salts (BS) under simulated intestinal conditions (pH 7.4). McPC-EEVOO increased significantly the neutralization of DPPH radical and AAPH-derived radicals in ORAC assay more than α -tocopherol and BHT. The phospholipid stability increased by a factor of 33.6%, 34.8%, 19.3% and 10.7% for myrtle microwave assisted extraction (MAE) and conventional extraction (CE) extracts, α ...