Abstract

Buddleja globosa Hope (matico) is a medicinal shrub native to Chile whose leaves have been traditionally used for wound and ulcer healing, pathologies associated to oxidative stress. Matico leaves display a high content of polyphenols, compounds with recognized antioxidant capacity, which may contribute to its therapeutic properties. Several factors, however, can modify the polyphenol content of matico leaf extracts, including plant material, production techniques, provenances, leaf age, harvest time, irrigation, and desiccation procedures. Thus, standardized leaf extracts prepared with plants from different provenances and harvest conditions were compared in terms of polyphenol content and their protecting antioxidant effects on rat liver microsomal lipids and thiol groups. All factors tested, but irrigation, changed both polyphenol content and antioxidant properties of matico extracts; water stress only affected their antioxidant properties without changing their polyphenol content. Correlation between polyphenol content and lipid peroxidation inhibition was only significant in the provenance study.

Keywords

Buddleja globosa Hope, lipid peroxidation, thiol group oxidation, rat liver microsomes, polyphenol content, harvest time, provenances, irrigation.