

Electronic Supplementary Information for

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Colorimetric, electroanalytical and theoretical evaluation of the antioxidant activity of
some essential oils and their major constituents

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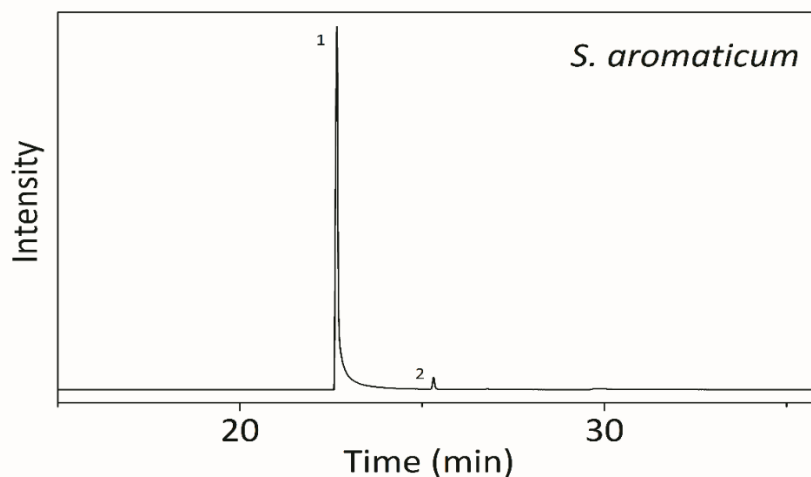


Figure S1. Gas chromatogram from the GC-MS of the *S. aromaticum* essential oil. Identification of peaks: ¹ Eugenol, and ² (E) β -ocimene.

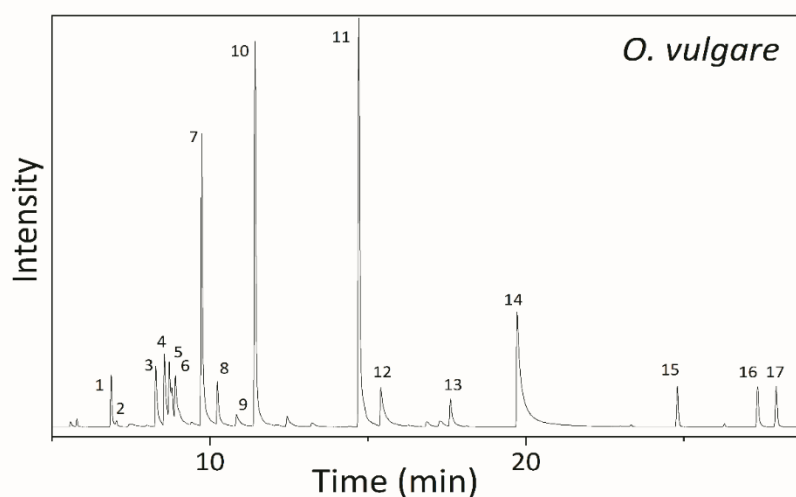


Figure S2. Gas chromatogram from the CG-MS of the *O. vulgare* essential oil. Identification of peaks: ¹ Sabinene, ² β -Pinene, ³ α -Terpinene, ⁴ *p*-Cimene, ⁵ Limonene, ⁶ (E) β -Ocimene, ⁷ γ -Terpinene, ⁸ *Cis*-Sabinene hydrate, ⁹ Terpinolene, ¹⁰ *trans*-Sabinene hydrate, ¹¹ Linalyl formate, ¹² Terpinen-4-ol, ¹³ α -Terpineol, ¹⁴ Linalyl acetate, ¹⁵ Carvacrol, ¹⁶ γ -Cadinene, ¹⁷ Bicyclogermacrene.

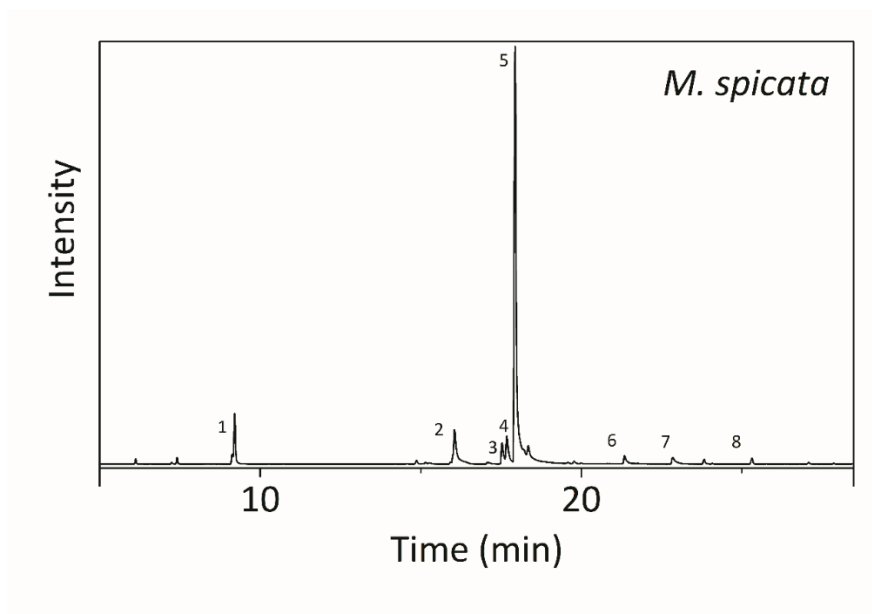


Figure S3. Gas chromatogram from the CG-MS of the *M. spicata* essential oil. Identification of peaks: ¹ Eucalyptol, ² Dihydrocarveol, ³ *trans*- Carveol, ⁴ Pulegone, ⁵ Carvone, ⁶ Heptylidene acetone, ⁷ Dihydrocarvyl Acetate, ⁸ *cis*-carveol.

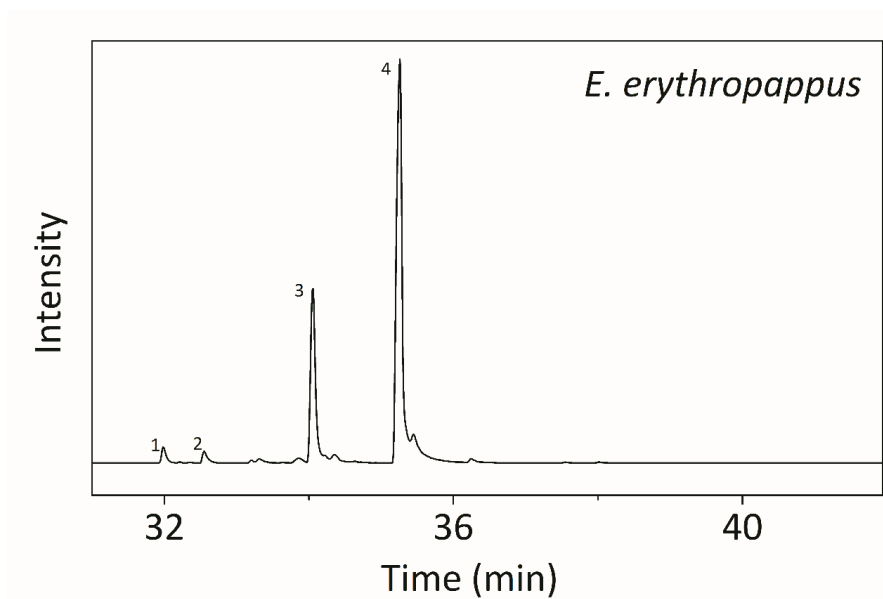


Figure S4. Gas chromatogram from the CG-MS of the *E. erythropappus* essential oil. Identification of peaks: ¹ Caryophyllene oxide, ² Spatulanol, ³ α -bisabolol B oxide, ⁴ α - bisabolol.

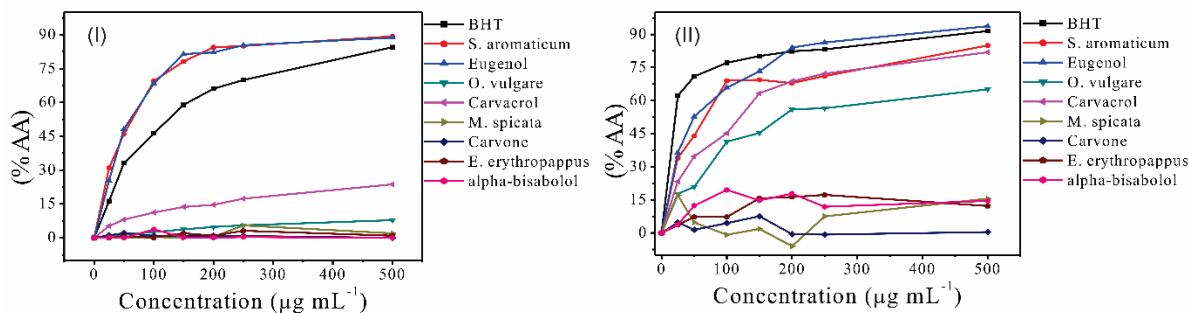


Figure S5. (I) Stabilization of DPPH radicals and (II) β-Carotene bleaching assay, % antioxidant activity (%AA). Exponential behavior of BHT, *S. aromaticum*, eugenol, carvacrol and *O. vulgare*.

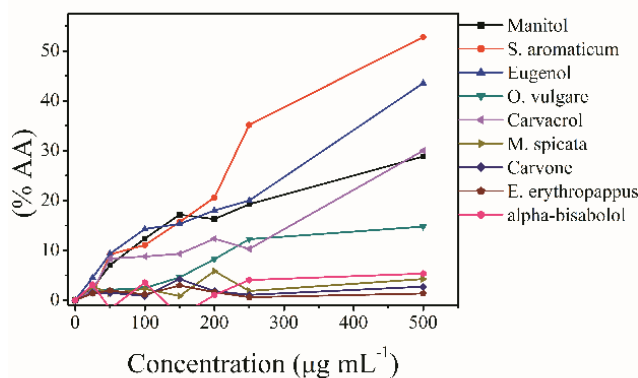


Figure S6. Behavior of essential oils and synthetic standards in deoxyribose degradation assay.

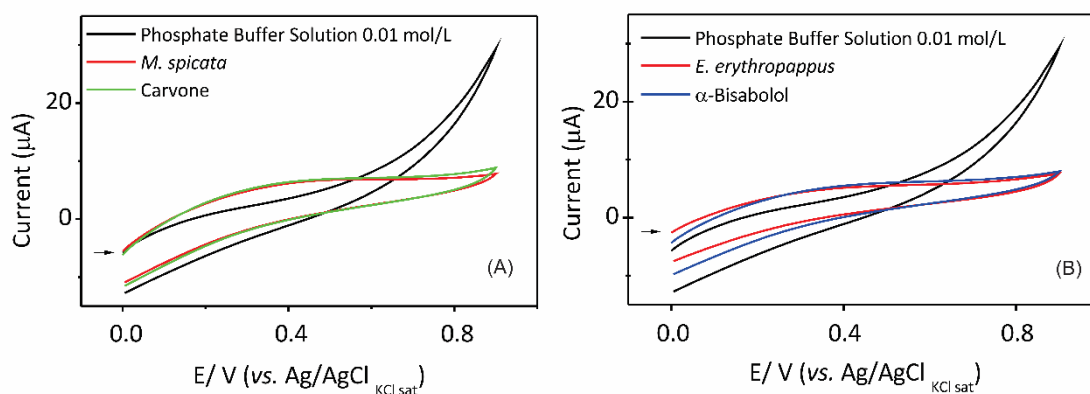


Figure 7S. Cyclic voltammograms obtained for (A) *M. spicata* and carvone, and (B) *E. erythropappus* and α-bisabolol, at the 500 µg L⁻¹ concentration, in 0.01 mol L⁻¹ phosphate buffer (pH 7.4).