

HPLC-QTOF-MS²-based rapid screening of secondary metabolites from *Marrubium vulgare* leaves

Authors

Ibrahim M Abu-Reidah, Nadia Amessis-Ouchemoukh, Rosa Quirantes-Piné, Khodir Madani, Antonio Segura-Carretero

Publication date

2016/11/1

Publisher

MDPI AG

Description

The leaves of horehound (*Marrubium vulgare*), were investigated for their phytochemical composition by using high-performance liquid chromatography coupled to mass spectrometry (HPLC-MS²), this besides evaluating the antioxidant activity of methanol and acetone extracts. Total contents of phenols, flavonoids, and tannins have also been determined. The antioxidant potential was evaluated by DPPH•, activity against H₂O₂, antioxidant capacity, and iron-reducing power. The HPLC-MS² analysis of the methanol extract revealed the presence of about 30 compounds of various families, of which 15 compounds have been tentatively identified for the first time. Flavonoids and phenylethanoid derivatives were the major compounds. Methanol extract was shown to contain more flavonoids and tannins. The ability of the methanol extract to scavenge H₂O₂ was found considerable (~ 60%). The best whole ...