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"Gheorghe Asachi" Technical University of Iasi, Romania

LC-MS/MS ANALYSIS OF PHENOLIC COMPOUNDS, ANTIFUNGAL AND ALLELOPATHIC POTENTIAL OF *Salvia ceratophylla* L. COLLECTED FROM TÜRKIYE

Melih Yılar*, Yusuf Bayar

Department of Plant Protection, Faculty of Agriculture, Kırsehir Ahi Evran University, 40100, Kırşehir, Türkiye

Abstract

The present study was aimed to determine phenolic compounds and some biological activities of naturally distributed *Salvia ceratophylla* L. plant in Kırşehir province, Türkiye. A total 17 phenolic compounds were detected from the plant material by LC-MS/MS method. Of these, 11 compounds were calculated, 7 of them remained below the detectable limit. The highest amount of the identified phenolic compounds was determined for ferulic acid (878.859 ± 20.209 mg/kg DW), followed by rosmarinic acid (615.261 ± 26.210 mg/kg DW), caffeic acid (29.907 ± 2.781 mg/kg DW) and *p*-coumaric acid (29.376 ± 3.273 mg/kg DW). The methanol extract of this plant exhibited varying levels of allelopathic effects on seed germination and seedling growth of test plants, i.e., *Triticum aestivum* L., *Rumex crispus* L. and *Taraxacum officinale* F.H. Wigg. The extracts inhibited mycelium growth rates of important plant pathogens, i.e., *R. solani*, *M. fructigena*, *V. dahlia* and *A. solani* ranging from 11.11% to 58.78% compared to control. The result revealed that *S. ceratophylla* plant contains phenolic compounds exhibiting antifungal and allelopathic activities.

Key words: allelopathic activity, antifungal, LC-MS/MS, *Salvia ceratophylla* L.

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* Author to whom all correspondence should be addressed: e-mail: melih.yilar@ahievran.edu.tr