**The insecticidal and AChE inhibitory activities of *Diplotaxis tenuifolia* essential oils plant extracts and their determination of chemical content of extracts**

***Ali Rıza TÜFEKÇİ[C:\Users\Abdullah\AppData\Local\Microsoft\Windows\INetCache\Content.Word\ORCID-iD_icon-16x16.gif](https://orcid.org/0000-xxxx-xxxx-xxxx)***

***Faculty of Science, Department of Chemistry, Cankiri Karatekin University, Cankiri, Turkey***

|  |
| --- |
| **Abstract**  The flower and leaf parts of *Diplotaxis tenuifolia* plant collected from Çankırı province were separated. Essential oils were obtained from these parts separately by using the method of steam distillation with Neo-clavenger apparatus. The remaining aqueous fractions were subjected to liquid-liquid extraction with ethylacetate and n-butanol solvents. From there, extracts were obtained for each solvent. Firstly, for this purpose, contact and fumigant activity tests of essential oils and extracts were conducted on *Sitophilus granarius* and *Rhyzopertha dominica* species. In contact activity studies with *S. granarius* and *R. dominica*, larvae of 3., 4. and 5. stages were used. Finally, the effects of essential oils and extracts, which are thought to be associated with insecticidal activities, on acetylcholine esterase enzyme were evaluated. In addition, component analyzes of volatile components and extracts were determined by GC-MS and LC/MS devices. |
| Keywords: Diplotaxis tenuifolia, Essential Oil, Insecticidal activity, Enzyme activity, Chemical analysis |