

Analysis of the Volatile Components of Five Turkish *Rhododendron* Species by Headspace Solid-Phase Microextraction and GC-MS (HS-SPME-GC-MS)

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Volatile constituents of various solvent extracts (*n*-hexane, CH₂Cl₂, H₂O) of 15 different organs (leaves, flowers, fruits) of five *Rhododendron* species (Ericaceae) growing in Turkey were trapped with headspace solid-phase microextraction (HS-SPME) technique and analyzed by GC-MS. A total of 200 compounds were detected and identified from organic extracts, while the water extracts contained only traces of few volatiles. The CH₂Cl₂ extract of the *R. luteum* flowers was found to exhibit the most diverse composition: 34 compounds were identified, with benzyl alcohol (16.6%), limonene (14.6%) and *p*-cymene (8.4%) being the major compounds. The CH₂Cl₂-solubles of *R. x sochadzeae* leaves contained only phenyl ethyl alcohol. This study indicated appreciable intra-specific variations in volatile compositions within the genus. Different anatomical parts also showed altered volatile profiles. This is the first application of HS-SPME-GC-MS on the volatiles of *Rhododendron* species.

Key words: *Rhododendron*, Headspace Solid-Phase Microextraction, HS-SPME-GC-MS