

B123 Phenolic and terpenic compounds from *Sideritis stricta* Boiss. & Heldr. apud Bentham*F.P. Sahin*^a, *D. Tasdemir*^b, *N. Ezer*^a and *I. Çaliş*^b^a Hacettepe University, Faculty of Pharmacy, Department of Pharmaceutical Botany, 06100, Ankara, Turkey. ^b Hacettepe University, Faculty of Pharmacy, Department of Pharmacognosy, 06100, Ankara, Turkey.

The genus *Sideritis* L. (Lamiaceae) is represented by more than 150 species which are distributed especially in the Mediterranean region (1). In Turkish flora, 46 *Sideritis* species are known (2) and some of them are used in traditional medicine and as herbal tea (3). In this study, we have investigated the acetone extract of an endemic species, *Sideritis stricta* Boiss. & Heldr. apud Bentham, on which no previous phytochemical study has been reported. By employing a combination of chromatographic methods (VLC, MPLC, Si gel CC, Sephadex LH-20 and Polyamide CC) a phenylethanoid glycoside, verbascoside, two flavonoids with acetylated sugars, isoscutellarein 7-O-[6^{'''}-O-acetyl-β-D-allopyranosyl-(1→2)]-β-D-glucopyranoside and isoscutellarein 7-O-[6^{'''}-O-acetyl-β-D-allopyranosyl-(1→2)]-6^{'''}-O-acetyl-β-D-glucopyranoside and five kaurene type diterpenes, sideridiol, isosidol, sidol, isolinearol and linearol were isolated. The structures of the compounds were elucidated by 1D- and 2D- NMR techniques (¹H, ¹³C, DEPT-135, DQF-COSY, HMBC, HSQC, HSQC-TOCSY, HSQC-NOESY) and HRMS. Isoscutellarein 7-O-[6^{'''}-O-acetyl-β-D-allopyranosyl-(1→2)]-6^{'''}-O-acetyl-β-D-glucopyranoside is being reported from the genus *Sideritis* for the first time.

References: 1. Obon de Castro, C., Rivera Nunez, D. (1994) A Taxonomic Revision of the Section *Sideritis* (Genus *Sideritis*) (Labiatae), Berlin-Stuttgart. 2. Aytac, Z., Aksoy, A. (2000), *Flora Mediterranea*, 10, p. 181-4. 3. Baytop, T. (1999) *Therapy with Medicinal Plants in Turkey (Past and Present)*, Nobel Tip Kitabevleri, Istanbul p.193, p.375.

B124 Flavonoids and caffeetannins from *Mentha piperita* leaves and *Thymus serpyllum* herb*I. Fecka* and *W. Cisowski*

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Caffeetannins called also labiataetannins having caffeoyl group in their molecules, are represented by rosmarinic acid and other caffeoyl or dihydrocaffeoyl derivatives. Rosmarinic acid, consisting of two phenylpropanoid units, is widely distributed in the family Lamiaceae. Caffeic acid trimers and tetramers of related structures and glycosides of flavanones and flavones have also been found in some Lamiaceae plants (1-3). *Mentha piperita* L. and *Thymus serpyllum* L. are popular medicinal herbs in Europe which have been used as spasmolytic, carminative, and cholagogue drugs and as spices in a variety of food preparations since ancient times. The volatile oil yield of both taxa is 0.5-4% (2). Other constituents like polyphenols have been less characterised. Subsequent separation of the aqueous acetone extracts from the dried aerial parts of both analysed species on octadecyl, Sephadex LH20 and silica gel columns led to the isolation of 5 flavonoid glycosides and 2 caffeetannins: eriodictyol 7-O-rutinoside (eriocitrin), luteolin 7-O-rutinoside, hesperidin, diosmin, luteolin 7-O-glucuronide, rosmarinic acid and salvianolic acid K. Structures of identified compounds were elucidated by chemical methods (mainly co-chromatography, hydrolytic degradation, melting point) and spectroscopic techniques (UV, MS, 1D and 2D NMR)(3). Using RP-HPLC we revealed that the peppermint tea gives polyphenols in a high amount. Eriocitrin has been recognised as a main constituent in concentration 3.0-15.3%. The second compound is luteolin 7-O-rutinoside in 0.7-3.3%. Hesperidin and diosmin, which are 4[']-O-methylated derivatives of previous flavanone and flavone glycosides, occur in a small amount about 0.1-0.6%. The concentration of rosmarinic acid ranged from 0.1-0.85%. In contrary, serpyllum herb supplies caffeetannins about 1.8-4.3% and luteolin 7-O-glucuronide as a predominant flavonoid in concentration 0.6-1.1%. Based on the qualitative and quantitative