

生命科学

风车草的化学成分

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摘要:

以体积分数为85%的乙醇回流提取风车草 (Clinopodium chinensis O.Kuntze var.grandiflorum (Maxim.) Hara.) 茎叶, 得提取物, 再经大孔吸附树脂吸附、硅胶和ODS柱色谱法分离各化学成分, 并经理化性质和波谱数据分析鉴定它们的化学结构. 共分离得到10个化合物, 分别鉴定为醉鱼草苷IVb(1), 醉鱼草苷IV(2), 风轮菜皂苷(XI)(3), 香峰草苷(4), 3β,16β,23,28-四羟基齐墩果烷-11,13(18)-二烯-3- [β-D-吡喃葡萄糖-(1→2)] [β-D-吡喃葡萄糖-(1→3)] 基-β-D-吡喃夫糖苷(5), 槲皮素-3-O-β-D-葡萄糖-(1→6)-O-β-D-葡萄糖苷(6), 风轮菜皂苷V(7), 风轮菜皂苷III(8), 风轮菜皂苷Vb(9), 风轮菜皂苷IIIb(10). 除化合物1,2,4,5外, 其余化合物均为首次从该植物中分离得到.

关键词: 风车草; 化学成分; 分离; 鉴定

Chemical Constituents of Clinopodium chinensis O.Kuntze var. grandiflorum (Maxim.) Hara.

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Abstract:

The leaves of Clinopodium chinensis O.Kuntze var.grandiflorum (Maxim.) Hara.were extracted with 85% volume fraction ethanol under refluxing conditions, the extracts were separated by column chromatography with adsorption resin, silica gel and ODS respectively to obtain the chemical constituents, whose structures were elucidated by spectral analysis, physical and chemical evidence. Ten compounds were isolated and identified as buddlejasaponin [Vb([STHZ]1[STBZ]), buddlejasaponin [V([STHZ]2[STBZ]), Clinoposaponin XI([STHZ]3[STBZ]), didymin([STHZ]4[STBZ]), 3β,16β,23,28-trihydroxyoleana-11,13(18)-dien-3-yl- [β-D-glucopyranosyl-(1→2)] [β-D-glucopyranosyl-(1→3)] -β-D-fucopyranoside(5), quercetin-3-O-β-D-glucopyranosyl-(1→6)-O-β-D-glucopyranoside([STHZ]6[STBZ]), Clinoposaponin V(7), Clinoposaponin III(8), Clinoposaponin Vb(9) and Clinoposaponin IIIb(10). Except compounds 1, 2, 4 and 5, all the other compounds were isolated from Clinopodium chinensis O.Kuntze var.grandiflorum (Maxim.) Hara. for the first time.

Keywords: Clinopodium chinensis O.Kuntze var.grandiflorum (Maxim.) Hara.; chemical constituents; isolation ; identification

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