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Isolation, Structure Elucidation, and Biological Evaluation of Acetylated Flavonoid Glycosides from Centaurium spicatum

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Abstract : Four Acetylated flavonol glycosides were isolated from Centaurium spicatum (L.) Fritsch (Gentianaceae). Structure elucidation, especially the localization of the acetyl groups, and complete 1H and 13C NMR assignments of these biologically active compounds were carried out using one- and two-dimensional NMR methods, including CNMR, DEPT-135 and DEPT-90 and gradient-assisted experiments such as DQF-COSY, TOCSY, HSQC and HMBC experiments. The antioxidant activities of the new acetylated flavonoid glycosides using DPPH• assay were determined. The compounds tested showed a good DPPH• activity compared with control, but their activity was lower than that of their corresponding aglycone, quercetin.

Keywords : Centaurium spicatum, flavonoids, biological activity, isolation, glycosides
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