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Cyclic Triterpenoid Saponins from Campanula lactiflora

of

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Abstract: Two cyclic natural compounds, 3β -O-[α-L-rhamnopyranosyl- (1 \to 2)-β-D-glucopyranosyl]- 13α , 14α -epoxy- 8α , 12β , 15-trihydroxy-(17E,21E)-17,21-campanuldien-6'(30)-olide, called lactifloroside A, 1, and 3β -O-[β-D-glucopyranosyl-(1 \to 2)-β-D-glucopyranosyl]- 13α , 14α -epoxy- 8α , 12β -dihydroxy-(17E,21E)-17,21-campanuldien-6'(30)-olide, called lactifloroside B, 2, were isolated for the first time from Campanula lactiflora and their structures deduced by high field 1D and 2D 400 MHz NMR, FT-IR, HPLC, GC-MS, (+/-) LC-MS/MS and (+) FAB-MS spectra. The aglycones of the 2 saponins were named 13α , 14α -epoxy- 3β , 8α , 12β , 15-tetrahydroxy-(17E,21E)- 17,21-campanuldien-30-oic acid and 13α , 14α -epoxy- 3β , 8α , 12β -trihydroxy-(17E,21E)-17,21-campanuldien-30-oic acid, and designated as campanuloic acid and 15-deoxycampanuloic acid, respectively.



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