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APPLICATION NOTE

E181VDN-004

Isolation of Naphthoquinone Derivatives from *Onosma paniculata*

Abstract

Keywords

- Naphthoquinones
- Shikonines
- *Onosma paniculata*
- α -Methylbutyrylshikonin
- β -Hydroxyisovalerylshikonin
- Acetylshikonin
- Dimethylacrylshikonin
- Isovalerylshikonin

Compound information

Classification	Compound name
Naphtoquinones, Shikonines	α -Methylbutyrylshikonin
	β -Hydroxyisovalerylshikonin
	Acetylshikonin
	Dimethylacrylshikonin
	Isovalerylshikonin

Chromatographic conditions

Column	VDSpher [®] 100 C18-E
Particle Size, Length × inner diameter	10 μ m, 250 × 25 mm
Order number	N2553E181VDN
Separation mode descriptions	preparative, reversed phase
Mobile Phase	A: Water B: Acetonitrile
Elution conditions	Gradient 0-45 min: 70% to 100% B 45-60 min: 100% B
Flow rate	
Injection	
Column temperature	
Pressure	
HPLC system	Pump: Varian Prep Star (model SD-1) Detector: Dynamax absorbance detector (model UV-1)
Sample and sample preparation	Dried roots of <i>Onosma paniculata</i> were extracted using Soxleth extraction with petroleum ether. For preparative HPLC fractionation, 400 mg of the dried extract were dissolved in MeOH

Chromatograms

Preparative HPLC separation of the petroleum ether extract derived from *Onosma paniculata* resulted in seven fractions; from which fraction 2 contained β -Hydroxyisovalerylshikonin, fraction 4 contained Acetylshikonin, fraction 6 contained Dimethylacrylshikonin and fraction 7 contained a mixture of α -Methylbutyrylshikonin and Isovalerylshikonin.

Origin

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References

“Naphthoquinones from *Onosma paniculata* Induce Cell-Cycle Arrest and Apoptosis in Melanoma Cells”

N. Kretschmer, B. Rinner, A. J. A. Deutsch, B. Lohberger, H. Knausz, O. Kunert, M. Blunder, H.

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