

论文

玄参的脂溶性化学成分

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摘要:

目的: 研究中药玄参(Scrophularia ningpoensis Hemsl.)脂溶性部位的化学成分。方法: 利用溶剂提取和硅胶等色谱方法对玄参乙醚可溶部位进行分离纯化, 通过化学和光谱方法鉴定结构。结果: 共分得10个化合物, 分别鉴定为3-O-乙酰基-2-O-阿魏酰基-α-L-鼠李糖(I), 3-O-乙酰基-2-O-对羟基肉桂酰基-α-L-鼠李糖(II), 肉桂酸(III), 4-羟基-3-甲氧基苯甲酸(IV), 对甲氧基肉桂酸(V), 4-羟基-3-甲氧基肉桂酸(VI), 5-羟甲基糠醛(VII), 熊果酸(VIII), β-谷甾醇(IX), β-谷甾醇葡萄糖苷(X)。结论: 化合物I, II为新化合物。化合物IV, V, VII, VIII为首次从该植物中分得。玄参脂溶性部位含有较多的酚性化合物。

关键词: 玄参 3-O-乙酰基-2-O-阿魏酰基-α-L-鼠李糖 3-O-乙酰基-2-O-对羟基肉桂酰基-α-L-鼠李糖

LIPOSOLUBLE CONSTITUENTS FROM THE ROOTS OF SCROPHULARIA NINGPOENSIS

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Abstract:

AIM: To investigate the liposoluble constituents of the roots of Scrophularia ningpoensis Hemsl. METHODS: The constituents were obtained by solvent extraction and chromatography on silica gel etc.. Their structures were elucidated by chemical and spectroscopic methods (IR, EIMS, <sup>1</sup>HNMR, <sup>13</sup>CNMR, <sup>1</sup>H-<sup>1</sup>H COSY, HMQC, HMBC). RESULTS: Ten compounds were isolated. Among them, compound I and II are new and identified as 3-O-acetyl-2-O-(3-methoxy-4-hydroxycinnamoyl)-α-L-rhamnose and 3-O-acetyl-2-O-(p-hydroxycinnamoyl)-α-L-rhamnose, respectively. The others were identified as known compounds: cinnamic acid (III), 4-hydroxy-3-methoxybenzoic acid (IV), p-methoxycinnamic acid (V), 4-hydroxy-3-methoxycinnamic acid (VI), 5-hydroxymethyl furfural (VII), ursolic acid (VIII), β-sitosterol(IX), β-sitosteryl glucoside (X). CONCLUSION: Compounds IV, V, VII and VIII were isolated from this plant for the first time. Most obtained constituents in ether soluble part of S. ningpoensis were phenolic derivatives.

Keywords: Scrophularia ningpoensis 3-O-acetyl-2-O-(3-methoxy-4-hydroxycinnamoyl)-α-L-rhamnose 3-O-acetyl-2-O-(p-hydroxycinnamoyl)-α-L-rhamnose scrophulariaceae

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