

论文  
气相色谱-质谱和化学计量学解析法分析药对麻黄-桂枝挥发油成分

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摘要:

利用气相色谱-质谱对药对麻黄-桂枝及单味药麻黄和桂枝的挥发油成分进行检测, 通过化学计量学解析法对产生的二维色谱-质谱数据进行解析, 得到各组分的纯色谱和质谱, 根据其保留时间和质谱, 在质谱库中进行相似检索, 实现对组分的定性, 再用总体积分法进行定量。麻黄-桂枝、麻黄和桂枝挥发油分别定性了97, 72和68个色谱峰, 占总含量的89.76%, 90.08%和91.62%。药对挥发油成分的数目大致为麻黄和桂枝挥发油成分的加和, 但相对含量有变化。

关键词: 药对麻黄-桂枝 挥发油 气相色谱-质谱 化学计量学解析法

Analysis of essential oil in *Herba Ephedrae-Ramulus Cinnamomi* by GC-MS and chemometric resolution method

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Abstract:

Gas chromatography/mass spectrometry, chemometric resolution method (CRM) and overall volume integration method were used to analyze the essential components of herbal pair *Herba Ephedrae-Ramulus Cinnamomi* (HP HE-RC) and compare it with that of single herbs HE and RC. 72, 68, and 97 essential components in essential oil of HE, RC, and HP HE-RC were determined, accounting for 90.08%, 91.62%, and 89.76% of total contents of essential oil of HE, RC, and HP HE-RC, respectively. The numbers of essential components of HP HE-RC are almost the summation of that of two single herbs, but some relative contents of them are changed. Some new components, such as 1,6-dimethylhepta-1,3,5-triene, tetracyclo [4.2.1.1(2,5).0(9,10)] deca-3,7-diene, globulol, (*E,E*)-6,10,14-trimethyl-5,9,13-pentadecatrien-2-one, etc. have been found in HP HE-RC because of chemical reactions and physical changes during the course of decoction.

Keywords: essential oil GC-MS chemometric resolution method herbal pair *Herba Ephedrae-Ramulus Cinnamomi*

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