药学学报 1989, 24(9) 684-689 DOI: ISSN: CN:

论文

PLS—紫外分光光度法同时测定复方阿斯匹林片中三组分含量

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摘要:

本文研究了复方阿斯匹林片中阿斯匹林、非那西丁和咖啡因含量同时测定的紫外分光光度法的最佳实验条件,并简述偏最小二乘法(PLS)在多组分同时测定中的基本原理和应用。三组分模拟试样回收率平均值的置信区间分别为100.1±0.23%,100.0±0.25%和100.1±0.33%(置信度95%)。PLS法是一种理想的多组分测定方法,计算速度较快,结果更准确可靠,尤其适用于成批试样的分析,为微机控制的紫外可见分光光度计提供了一种新方法。

关键词: 偏最小二乘法(PLS) 紫外分光光度法 复方阿斯匹林片 阿斯匹林 非那西丁 咖啡因

DETERMINATION OF THREE COMPONENTS IN ASPIRIN COMPOUND TABLETS BY USE OF UV-PLS METHOD

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Abstract:

The optimum experimental condition for simultaneous UVspectrophotometric determination of the contents of aspirin, phenacetin and caffeine in aspirin compound tablets (APC) and the basic principle and application of partial least squares method(PLS) in simultaneous multicomponent determination have been studied. Confidence intervals of the three components are 100.1±0.23%(aspirin), 100.0±0.25% (phenacetin) and 100.1±0.33% (caffeine) (confidence 95%). No information has ever been available in the literature for the application of PLS in pharmaceutical analysis. Compared with other traditional computing methods, PLS is a more perfect multicomponent determination method. It is especially applicable to analyzing samples in batches. It is faster and produces more accurate and reliable results. PLS provides a new method for in-line UV-visible spectrophotometric automation.

Keywords: UV-spectrophotometry Aspirin compound tablets (APC) Aspirin Phenacetin Caffeine Partial least squares method (PLS)

收稿日期 1988-04-06 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献:

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