

论文

石蒜碱的纸层分离和分光光度测定

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摘要:

用95%酒精回流提取石蒜总生物碱,经用正丁醇:乙醇:氢氧化铵:水(90:10:1:97v/v)混合液的上层溶液为推进剂,进行上行纸层分离后,石蒜碱可以很好地与石蒜中其他生物碱分开。纸上的石蒜碱在荧光灯下呈蓝绿色斑点,斑点经酒精洗脱后,可在紫外分光光度计波长288毫微米处测其含量。本法的回收率为93.7±1.1%,样品分析时的平均百分偏差约为±5%。

关键词:

PAPER CHROMATOGRAPHIC SEPARATION AND SPECTROPHOTOMETRIC DETERMINATION OF LYCORINE

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Abstract:

A method for the paper chromatographic separation and subsequent spectrophotometric determination of lycorine in plant drugs is described. 4g of the powdered sample is extracted with 95% ethanol in a Soxhlet apparatus. The ethanolic extract is concentrated and then dissolved with hot 70% ethanol to a volume of 10ml. Exactly 0.1ml of the clear solution is taken for paper chromatography on a sheet of Whatman No. 1 paper with n-C₄H₉OH-C₂H₅OH-NH₄OH-H₂O (90:10:1:97 v/v), by which lycorine can be separated from other alkaloids in the sample. Lycorine is viewed under u.v. light as a greenish-blue fluorescent spot, which is cut from the paper and macerated for 4 to 8 hours with exactly 5 ml of ethanol. The optical density of the ethanolic solution is determined at 288 mμ in a spectrophotometer, ethanol being used as a blank. The amount of lycorine is calculated from a standard graph. The percent recovery of pure lycorine is 93.7±1.1% by this method, and this should be taken into account in calculating the lycorine content of the sample. The average deviation of the method is±5%.

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