

论文

生物碱类浸膏制剂分析方法的研究 II. 番木鳖制剂的薄层色层分离——催化极谱测定

陈执中;张叔良;戴仁赉

上海市卫生局药品检验所

摘要:

本文提出了应用氧化铝薄层,分离番木鳖制剂中土的宁和马钱子碱的简单方法。薄层分离后,土的宁斑点用作者等改良的斑点收集管收集,以乙醇洗脱后于McIlvaine缓冲液及0.1M碘化钾溶液的底液中测定其催化极谱电流。在浓度为 $3 \times 10^{-5}$ — $1.2 \times 10^{-4}$ M范围内其浓度与催化电流值成一直线关系,可直接测定其含量。方法较为迅速简便,灵敏度较高且较为准确。最大测定误差为±2%。可用于番木鳖浸膏、番木鳖流浸膏及番木鳖酊的测定。

关键词:

Studies on the Analysis of Alkaloidal Extract Preparations—II. Determination of Nux Vomica Preparations by Thin-layer Chromatography-catalytic Polarographic Method

CHEN ZHI-CHUNG CHANG SHU-LIANG TAI JEN-LAI

Abstract:

A thin-layer chromatographic method is proposed for separation of strychnine and brucine in the Nux Vomica preparations such as extract, liquid extract, and tincture of Nux Vomica. Good separation is obtained with alumina layer (particle size of 200 mesh, thickness 200μ) by using benzene-ethyl acetate (1:2) as solvent. After the chromatogram is developed, the spot of strychnine is collected with collecting tube and eluted with ethanol followed by catalytic polarographic determination in the base solution containing McIlvaine buffer and 0.1 M KI. The analytical method employed is based on the linear relationship of concentration of strychnine with catalytic polarographic current. The concentration of strychnine is in the range of  $3 \times 10^{-5}$ — $1.2 \times 10^{-4}$ M. The method has the advantage of being simpler and more rapid than the extraction procedure and gives results close to the pharmacopeiacal methods. It can be applied to simultaneous determination of strychnine and brucine in the Nux Vomica preparations.

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作者简介:

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