

论文

薄层层析在药物分析上的应用——II.在硅胶非粘合薄层上鉴别甾体化合物

姜德和;姚志成

南京药物研究所

摘要:

本文研究了利用自经精制的硅胶,取180- 250号筛孔间细粉,铺制硅胶非粘合薄层,对20种甾体化合物进行了鉴别和分离.薄层规格: 120×60×0.6毫米.滴样于距底沿20毫米的起线上,原点直径2-3毫米;原点相隔距离5毫米.展开剂: 醋酸乙酯-苯的不同比例混合液.展开长度为100毫米.展开时间仅需5分钟.借助侧吮显色法以3%磷钼酸水溶液和2,4-二硝基苯肼酸性水溶液显色,取得良好结果.硅胶非粘合薄层较之硅胶粘合薄层操作简便、展开迅速;较之氧化铝非粘合薄层载量大、分离力强.硅胶非粘合薄层能顺利地采用侧吮显色法.甚至对某些无色被测化合物,当它们尚无合宜检出斑点方法时,可利用硅胶在溶剂中的透明性,取被测化合物不溶的溶剂进行侧吮,可在透明薄层上显出不透明的被测化合物的位置,从而达到检出目的.

关键词:

APPLICATION OF THIN-LAYER CHROMATOGRAPHY USING SILICA GEL WITHOUT BINDER TO THE IDENTIFICATION OF STEROIDS

CHIANG TE-HO YAO TSI-CHENG

Abstract:

The thin-layer chromatography using silica gel without binder for rapid identification of steroids is described. The advantage of the present method over that using alumina thin-layer without binder is its precise resolving power, and in comparison with the thin-layer of silica gel with binder, it possesses the additional advantages of simplicity and speed. The spots on the thin-layer can easily be detected with the reagent by impregnating one side of the thin-layer perpendicular to the developing direction. The spots or zones can also be detected by impregnation with only a simple solvent in which the compounds to be identified are insoluble. The specifications and reagents used in the present investigation are as follows: Silica gel for chromatography: 18-250 mesh and below 250 mesh; grade I / II. Dimensions of thin-layer; 120×60×0.6mm. Solvents for development: benzene-Ethyl acetate (7:3, 5:5, 4:6, 1:9). Reagents for detection: (1) aqueous solution of 3% phosphomolybdic acid; (2) aqueous solution of 2,4-dinitrophenylhydrazine. A series of 20 steroid compounds are chromatographed on the thin layer of silica gel without binder.

Keywords:

收稿日期 1964-08-26 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

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