

论文

人尿中几种雄激素及蛋白同化激素的HPLC测定

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摘要:

对HPLC分离及定量测定人尿中雄激素及蛋白同化激素的方法进行了初步研究。确定了六种甾体激素的分离条件及内标定量方法。固定相为C<sub>8</sub>键合硅胶,甲醇—乙腈—水(4:5:6)恒溶剂洗脱,程序流速。紫外检测器波长254 nm。检测限可至1 ng以下。本法采用Sep-Pak C<sub>18</sub>小柱进行尿样净化,回收率高而且稳定。操作简便快速。对尿样中甾体葡萄糖醛酸甙结合物的酶促水解条件也进行了初步探索。

关键词: 雄激素 蛋白同化激素 HPLC

DETERMINATION OF SOME ANDROGENS AND ANABOLIC STEROIDS IN HUMAN URINE BY HPLC

HG Bi and TH Zhou

Abstract:

A simple method for determining androgens and anabolic steroids in human urine by HPLC has been developed. The compounds studied are nandrolone, methandienone, testosterone, methyltestosterone, testosterone propionate and nandrolone phenylpropionate. The stationary phase used is Cs bonded silica. Isocratic elution was done with CH<sub>3</sub>OH—CH<sub>3</sub>CN—H<sub>2</sub>O (4:5:6) and programmed flow Detection limit can be less than 1 ng at the wavelength of 254 nm. The standard curves for each steroid have been set using internal standard (progesterone) and peak height ratio. Linear relationship exists between the ratio and concentration for each steroid. High and stable recovery has been achieved using Sep-Pak C<sub>18</sub> cartridges for urine sample clean-up. The operation of the method is simple. The enzymatic hydrolyzation of conjugated steroids in human urine has also been investigated.

Keywords: Anabolic steroids HPLC Androgens

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