

论文
防治血吸虫病药物的研究XXIX.生物样品中酒石酸的新比色测定法

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摘要:
用过碘酸使酒石酸氧化断裂为乙醛酸,然后与对硝基苯肼缩合.生成的乙醛酸对硝基苯肼经提取纯化后,用氢氧化钠显色,建立了生物样品中酒石酸的新比色测定法.应用光电比色计时,检出限度可达5微克.光密度读数的平均相对偏差为4±3%.生物样品测定的回收率兔尿为106±15%,狗血浆为74±6%.大量锑的存在对测定可无干扰,因此本法适用于酒石酸锑钾分子中酒石酸部分的代谢研究.

关键词:
STUDIES ON ANTIBILHARZIAL DRUGS XXIX. A NEW COLORIMETRIC METHOD FOR THE DETERMINATION OF TARTARIC ACID IN BIOLOGICAL MATERIALS
ZENG YAN-LIN

Abstract:
Oxidative cleavage of tartaric acid by means of periodic acid gave glyoxylic acid quantitatively, the latter was then condensed with *p*-nitrophenylhydrazine. The *p*-nitro-phenylhydrazone thus formed was purified by some extraction procedures and determined colorimetrically after treatment with sodium hydroxide. Quantities as small as 5 μg could be estimated by means of an electrophotometer. The average relative mean deviation was 4±3%. Recoveries were 106±15% for urine and 74±6% for serum. The absorption spectrum of glyoxylic acid *p*-nitrophenylhydrazone after treatment with sodium hydroxide was determined. As the spectrum did not change even in the presence of antimony in quantities as much as 20 times the molar concentration of tartaric acid, this method would be suitable especially for the studies on the metabolism of the tartaric acid portion of potassium antimony tartrate.

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