

论文

治疗血吸虫病药物葡萄糖酸锑(III)铵的初步研究

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摘要:

1. 葡萄糖酸锑铵可由三氯化锑及葡萄糖酸的浓溶液,与浓氨水作用而得.亦可用亚锑酸乙酯及葡萄糖酸铵制备.在操作以上以前法较简便.成品的含锑量可因锑化剂用量的多寡而不同.2. 葡萄糖酸锑铵极易溶于水,水溶液加热或遇酸、鹼时均不稳定.水溶液与碘作用时,锑的氧化(由三价至五价)速度较慢,不能直接滴定,这一点和酒石酸锑钾(吐酒石)不同,后者可以直接用碘滴定,不必经过破坏.

关键词:

A PRELIMINARY STUDY ON AMMONIUM ANTIMONYL(III)-GLUCONATE, A POTENTIAL DRUG FOR THE TREATMENT OF SCHISTOSOMIASIS

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Abstract:

Methods of synthesis and the properties of ammonium antimonylgluconate are reported. Addition of a solution of antimony trichloride in conc. aqueous gluconic acid to conc. ammonium hydroxide gave the said drug. It can also be prepared by the interaction of antimony triethoxide and ammonium gluconate. The antimony content of the product can be varied over wide limits (up to, say, 50% Sb), being dictated by the choice of the relative amounts of starting materials. Ammonium antimonylgluconate is readily soluble in water, practically insoluble in alcohol. Its aqueous solution is unstable towards heat, acids and bases. Direct titration of the untreated sample with iodine has been found unsuccessful, since the rate of oxidation of trivalent antimony to its pentavalent state is slow enough to give rise to shifting end points, presumably due to some protective action on the part of the gluconic acid residue. This behavior is to be contrasted with that of potassium antimonyltartrate (tartar emetic), where oxidation of antimony with iodine occurs instantaneously.

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