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论文

锑的比色测定法 (三)用亮绿(Brilliant green)试剂之比色法

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摘要:

关键词:

STUDIES ON THE COLORIMETRIC DETERMINATION OF ANTIMONY——Ⅲ. *BRILLIANT GREEN METHOD*

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Abstract:

The use of rhodamine B, methyl violet, crystal violet and malachite green as reagents for the colorimetric analysis of antimony has been reported in the litera- tures. The authors tested a number of other triphenylmethane dyes and found that brilliant green reacted with antimony forming a sensitive and stable colored complex, which can be used for both detection and colorimetric determination of antimony. The procedure of the colorimetric method in this paper is outlined as below: To 2 ml. of sample in a measuring cylinder add 2.5 ml of 10 N hydrochloric acid and 0.5 ml. of 1*N* $NaNO_2$, shake and allow to stand for 2 minutes. To this solution add 0.7 ml. of urea solution, shake for one minute and then transfer into a separatory funnel, wash the cylinder twice, each time with 10 ml. of water. Add 20 ml. of benzene and 0.5 ml. of brilliant green reagent, shake immediately and vigorously for a period of three minutes. After. standing for half a minute draw off the benzene layer and determine its transmittancy at 640 mμ. The sensitivity of qualitative test for antimony with brilliant green was found to be 0.001-0.006 mcg., and according to the above described colorimetric method, the concentration of antimony in the range of $2\times10^{-5}M$ -$8\times10^{-5}M$ per ml. showed the highest accuracy.

Keywords:

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