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在线自发电源激发的流动注射电致化学发光测定异烟肼

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摘要 采用了一种与流动注射体系组合的在线自发电池作为电致化学发光的激发源（ 简称FI－GCECL）。实验发现在碱性介质中，Al/Ag双金属对可以提供稳定的电位输出并可激发鲁米诺在铂电极表面的电致化学发光。此自发电池具有使用寿命长、电 位可由碱性介质组成调节、可组合到流动注射体系中等特点，利用这种组合体系， 检测了三家厂生产的片剂中的异烟肼含量，将结果与药典标准方法进行了比较，证 明了这种电致发光分析的可行性。

关键词 电致发光 流动注射分析 异烟肼 鲁米诺

分类号 0657

On-line Galvanic Cell Generated Electrochemiluminescnet Flow Injection Analysis Method and Its Application to Isoniazid Determination

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Abstract An Al/Ag galvanic cell was investigated and integrated in flow injection electrochemiluminescence analysis system (FI-GCECL). The proposed method was applied to the determination of isoniazid content in isoniazid tablets. A galvanic cell was made from pure Ag and Al, and it supplied a stable potential output in a flow of sodium hydroxide solution. The potential variation in about 1300 to 560 mV range could be obtained by varying the concentration of sodium hydroxide or by employing different alkaline solution in the flow. When the potential output of the described cell was 1168 mV while the sodium hydroxide concentration was 5.0*10~(-4) mol·L~(-1) and luminol concentration was 5.0(10-6 mol·L1, the presence of isoniazid could greatly enhance the electrochemiluminescence of luminol in the vicinity of platinum anode surface. Isoniazid contents in three kinds of isoniazid tablets were determined and the analysis results agreed well with those from official method. This analysis application proved to be a practical use for the present method.

Key words ELECTROLUMINESCENCE FLOW INJECTION ANALYSIS ISONIAZIDUM LUMINOL

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