

化学

## 液体闪烁法测定硅胶相中Pu的 $\alpha$ 活度

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**摘要** 采用液体闪烁法测定硅胶相中负载的Pu, 研究样品制备条件和测量参数等对分析结果的影响。在闪烁瓶中加入少于1 g负载Pu的干硅胶和10 mL闪烁液, 搅拌5 min, 用液体闪烁计数器测量300~800道窗口范围内的计数, 可得到Pu的 $\alpha$ 活度。实验研究了HNO<sub>3</sub>、Fe、Zr、Nd等杂质对液闪测量的影响, 并对液闪测量谱图进行了初步解析。

**关键词** [Pu](#); [硅胶](#); [液体闪烁法](#)

**分类号** [TL941](#)

## Determination of $\alpha$ -Activity of Pu Adsorbed in Silica Gel With Liquid Scintillation Counting Analyzer

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**Abstract** The liquid scintillation counting analyzer is used to determine the  $\alpha$ -activity of Pu adsorbed in silica gel. The influences of preparation conditions and measuring parameters were studied. In order to determine the  $\alpha$ -activity of Pu in silica phase, less than 1 g of silica gel was added in to a 20 mL scintillation vial with 10 mL of cocktail. After 5 min of stirring, samples were measured by liquid scintillation analyzer. The activity of Pu in the vial equals to the total counts in energy window of 300-800 channel. The influences of HNO<sub>3</sub>, Fe, Zr, Nd on Pu analysis were studied. The formation of spectrogram was also preliminarily analyzed.

**Key words** [Pu](#) \_ [silica gel](#) \_ [liquid scintillation counting method](#)

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