

•测试与分析•

极谱法连续测定锌锰电池中铅和镉

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摘要: 在 2.4 mol/L 盐酸底液中, 采用极谱法连续测定锌锰电池中的铅和镉, 铅和镉的导数波峰电位分别在-0.47 V 和-0.67 V 附近处 (vs.SCE), 一次导数波的波形良好。用铁粉还原消除铁(III)和铜的干扰, 电池中的共存元素均不干扰测定。本方法具有操作简便、快速、重现性好等特点。

关键词: 极谱法; 锌锰电池; 铅; 镉

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Simultaneous determination of lead and cadmium in Zn/MnO₂ battery by polarography

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Abstract: Polarography was used for simultaneous determination of the cadmium and lead content in Zn/MnO₂ battery. In a medium of 2.4 mol/L hydrochloric acid solution, the first derivative waves were well resolved with the peak potential (vs.SCE) -0.47 V for lead(II) and -0.67V (vs.SCE) for cadmium(II), respectively. The interference of iron(III) and copper in the sample matrix was eliminated by using iron powder. The other elements in the sample did not affect the determination. The method had the advantage of easy, rapid operation and good reproducibility.

Key words: polarography; Zn/MnO₂ battery; lead; cadmium