



碘量法测定铜精矿中铜含量的空白试验探讨

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Discussion on blank test in the determination of copper in copper concentrates by iodometric method

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摘要 通过干扰物质电极电位与E(12/I-)相比较, 将碘量法测铜含量标定空白误差的来源分为三个类型, 分析了不同干扰类型对测试结果的影响, 通过标定空白计算得出不同干扰类型对测试结果造成偏离的原因不仅与样品空白、标定空白有关, 还与标定硫代硫酸钠标准滴定溶液所消耗的标液体积及样品滴定所消耗的标液体积有关。从标定空白误差的来源和标定空白计算两个角度探讨GB/T 3884.1-2000碘量法空白试验的局限性, 仅扣除样品空白而不扣除标定空白不能有效消除干扰元素对测试结果的影响, 而且测试结果既可能正偏也可能负偏。

关键词: 碘量法 铜 铜精矿 空白试验

Abstract: By the comparison between electrode potential of interference substance and E(12/I-), the error source of calibration blank test in the determination of copper content by iodometric method could be classified into three types. The influence of various interference types on determination results was analyzed. By calculation of calibration blank, it was found that the deviation of determination results caused by different interfering types was not only related to the sample blank and calibration blank, but also related to the consumed volume of standard solution for calibrating sodium thiosulfate standard titration solution and titrating sample solution. The limitation of blank test in GB/T 3884.1-2000 iodometric method was discussed from two aspects including error sources and calculation of calibration blank. The influence of interference elements on determination results could not be effectively eliminated by only sample blank correction without calibration blank correction. The deviation of determination results may be positive or negative.

Keywords: iodometric method, copper, copper concentrate, blank test

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