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二辛基硫醚在贵金属元素分析上的应用——Ⅱ.地质样品中痕量金的中子活化分析

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摘要 <正> 前言 为了研究金矿成矿规律,开展区域地质勘探,需要分析各种岩石样品中的金含量,而一般岩石中金含量甚微,为亚ppm至亚ppb量级,所以迫切要求建立高灵敏的分析方法和相应的地质标样,堆中子活化分析是测定金的最灵敏方法之一。 由于金固有的地质和物理化学性质,痕量金在地质材料中的分布往往不均匀,

关键词 二辛基硫醚 贵金属元素 放化中子活化分析 地质样品

分类号

THE APPLICATION OF DIOCTYL SULPHIDE IN THE ANALYSIS OF NOBLE METAL ELEMENTS——Ⅱ.DETERMINATION OF TRACE GOLD IN GEOLOGICAL SAMPLE BY NAA

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Abstract A method for determining trace gold in geological sample by using dioctylsulphide pre-extraction-NAA has been developed. 5 grams of sample are weighedand decomposed by means of mixed acid (HF-HNO_3-HClO_4). The residue is dis-solved in aqua regia. Gold is extracted by dioctyl sulphide-chloform solution.Aliquot of organic extract is transferred quantitively to filter paper and heated todryness under infra-red lamp. After pile neutron activation, the samples are all ow-ed to cool for 24 hours and ~(198)Au is counted by means of Ge (Li) γ-spectro-metry. The content of gold in the sample is dctermined by the comparator method.The chemical yield of ~(198)Au through the complete procedure is 92%. The precisionof the mcthod is ±10%.

Key words Dioctyl sulphide Noble elements Radiochemical neutron activation analysis Geological samples

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通讯作者