

## 对乙酰基偶氮胍-铀(IV)的分光光度法测定矿石中微量铀

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**摘要** <正> 一、前言 微量铀的光度分析,多采用偶氮胍III、BrPADAP作为显色剂,具有灵敏度高,选择性好等优点。本实验用二乙三胺五乙酸(DTPA)作络合剂,将铀(VI)在铁(II)-DTPA-抗坏血酸体系还原成铀(IV),随之用对乙酰基偶氮胍显色。在1 M盐酸介质中,络合物至少可稳定4小时,且铀的允许量远高于偶氮胍III法。但钍、轻稀土和钷仍呈正干扰。

**关键词** [铀](#) [对乙酰基偶氮胍](#) [分光光度法](#)

分类号

## DETERMINATION OF TRACE AMOUNT OF URANIUM IN ORES BY SPECTROPHOTOMETRY WITH ARSENAZO-p-CH<sub>3</sub>CO

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**Abstract** Uranium is extracted from the ore, converted into uranyl chloride and purified from most of the cationic impurities by means of anionexchange resin in 4 N HCl. U (VI) is reduced to U (IV) by Fe (II)-DTPA-ascorbic acid and complexed with arsenazo-p-CH<sub>3</sub>CO as the color-forming reagent. The complex shows an absorption peak at 700 nm with a molar absorption coefficient of  $8.8 \times 10^4$ , and Beer's law is obeyed at 0-2 gU/ml. The interference of 37 ions is studied.

**Key words** [Uranium](#) [Arsenazo-p-CH<sub>3</sub>CO](#) [Spectrophotometry](#)

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