

عنوان مقاله:

Preconcentration of cobalt by modified clinoptilolite with N,N'-1,2-cyclohexylene bis(salicylidene amine) and its determination by flame atomic absorption spectrometry

محل انتشار:

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خلاصه مقاله:

A simple, highly sensitive, accurate and selective method for the determination of trace amounts of Co^{2+} from aqueous media is proposed. The procedure is based on the adsorption of Co^{2+} on clinoptilolite zeolite modified by N,N'-1,2-cyclohexylene bis(salicylidene amine) at pH 6. The retained cobalt on the column was eluted with 5 ml 1 M HNO_3 in ethanol and measured by flame atomic absorption spectrometry. The influence of aqueous phase pH, type of eluent, flow rates of sample solution and eluent, volume of eluent and the presence of other cations were investigated. A preconcentration factor of 140 can be achieved by passing 700 ml of sample through the column. The proposed method was applied to the determination of cobalt in water samples.

کلمات کلیدی:

Clinoptilolite, Flame atomic absorption spectrometry, Cobalt preconcentration, Solid phase extraction

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