

5-Cl-PADAB显色树脂相分光光度法测定微量Co(II)

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摘要: 研究了在pH 7.60的KH₂PO₄-NaOH介质中,Co(II)与4-(5-氯-2-吡啶偶氮)-1,3-二氨基苯(简称5-Cl-PADAB)生成有色配合物,酸化后与强酸性阳离子交换树脂交换吸附,进行树脂相分光光度法测定微量Co(II)的实验条件。最大吸收波长为550nm,表观摩尔吸光系数为 $4.7 \times 10^5 \text{ L} \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$,Co(II)含量在0~0.20mg·L⁻¹范围内符合比耳定律。此法用于天然水和维生素B₁₂中的Co(II)含量测定,结果满意。

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Determination of Trace Co (II) with 5-Cl-PADAB by Resin-Phase Spectrophotometry

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Abstract: In the medium of pH 7.60 KH₂PO₄-NaOH, Co (II) with 5-Cl-PADAB formed a colored complex. After acidifying, the complex could be absorbed on the strong acid cation exchange resin quantitatively. The maximum absorption wavelength is at 550nm, with the apparent molar absorption coefficient of $4.7 \times 10^5 \text{ L} \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$. The Beers law is obeyed for the concentration of Co (II) in the range of 0-0.2mg·L⁻¹. The proposed method has been applied to the determination of trace Co (II) in natural water and

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