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摘要: 本文研究了阳离子交换树脂D401对待测元素Cu, Zn, Pb, Cd, Ni 的预浓集及洗脱性能, 并与改进的流动注射(FI)相接合, 建立了一套新型、高效的FI-阳离子交换-ICP-AES分析体系。从而极大地提高了分析的速度和灵敏度, 分析速度可达每小时20个样品。Cu、Zn、Pb、Cd、Ni 各元素的检测限分别为0.25ng/ml、0.17ng/ml、0.94ng/ml、0.75ng/ml和0.60ng/ml。利用此体系做水样加标试验获得较好回收率(96%~107%), 实际分析标准物大米粉(GBW08502)结果与标准值接近。

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[Determination of Trace Cu, Zn, Pb, Cd and Ni with On-line Flow Injection Ion Exchange Preconcentration ICP - AES](#)

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Abstract: A flow injection system was presented for the determination of ion types of Cu, Zn, Pb, Cd and Ni by ion exchange (resin D401) preconcentration and Inductively Coupled Plasma- Atomic Emission Spectrometry; the working parameters were discussed and optimized. The precision and detection limits of this system were obtained. The detection limits are the following: 0.25 $\mu$ g/L for Cu, 0.17 $\mu$ g/L for Zn, 0.94 $\mu$ g/L for Pb, 0.75 $\mu$ g/L for Cd, 0.60 $\mu$ g/L for Ni. The relative standard deviation is 0.69% , 0.97% , 0.96% , 0.56%

Key words:

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