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Determination of copper and cadmium by atomic absorption spectrometry with electrochemical and sorption preconcentration

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Abstract

A method is proposed for the determination of copper and cadmium by atomic absorption spectrometry in a propane-butane-air flame with electrochemical and sorption preconcentration. Electrochemical preconcentration was performed on metal (tantalum, titanium, molybdenum, and platinum), glassy-carbon, and spectrographic graphite electrodes. Sorption preconcentration was performed on filter paper with immobilized dithizone, 8-hydroxyquinoline, and rubeanic acid. It is demonstrated that copper and cadmium can be determined in water within the concentration range 1-10 $\mu\text{g/L}$.
