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Determination of Cadmium in Water Samples by Liquid Electrode Plasma Atomic Emission Spectrometry after Solid Phase Extraction Using a Mini Cartridge Packed with Chelate Resin Immobilizing Carboxymethylated Pentaethylenehexamine

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Solid phase extraction using a mini cartridge packed with 22 mg of chelate resin immobilizing carboxymethylated pentaethylenehexamine was successfully utilized for separation/preconcentration of cadmium in water samples prior to liquid electrode plasma atomic emission spectrometric (LEP-AES) determination. The combined method with the extraction and LEP-AES was applicable to the determination of cadmium in the certified reference materials (EU-L-1 wastewater and ES-L-1 groundwater); the detection limit was 0.20 µg in 200 mL of sample solution (500-fold preconcentration).

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