PRECONCENTRATION-SEPARATION OF Cu(II) AND Pb(II) ON CELLULOSE ACETATE MEMBRANE FILTER

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A method for separation-preconcentration of Cu(II) and Pb(II) ions by membrane filtration has been described. The analytes were adsorbed on acetate membrane filter as their PAN complexes. The levels of analytes in the final solutions were determined by flame atomic absorption spectrometry. The analytical parameters including pH, eluent type, sample volume, amount of PAN, etc. were examined in order to gain quantitative recoveries of analyte ions. The effects of foreign ions on the recoveries of studied metal ions were also investigated. The detection limits by 3 sigma were found to be 1.2 and 3.5 µg/l for Cu(II) and Pb(II), respectively. The preconcentration factor was 60 for Cu(II) and 20 for Pb(II). The optimized method was successfully applied to crops, water and environmental samples with good results.

References