

Quantitative analysis of Cu, Zn, Pb, and Cd ions in solutions using commercially distributed ion-exchange paper by XRF

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We examined the capability of adsorption of the commercially distributed ion exchange filter that may trap ions effectively in order to check the availability for the XRF sample preparation. Those elements in diluted acid solution have been collected through the filter. After dried up, the micro gram amounts of those elements on the filter have been analyzed by XRF. Even one micro gram Zn and Cu could have been analyzed and the results seem to be remarkably improved compared with the other methods reported elsewhere. In contrast, results of less than one or near one micro gram amounts of Pb analyses showed rather good results. More than ten micro gram Pb could have been analyzed accurately and precisely. However, analytical quality of less 10 micro gram Cd was not good enough and this might have been caused by standard calibration or sample preparation or both. Now we are trying to improve the analytical method.