


Turkish Journal of Chemistry

Turkish Journal

of

Chemistry

 [Keywords](#)
 [Authors](#)



chem@tubitak.gov.tr

[Scientific Journals Home Page](#)

Column Preconcentration/Separation and Atomic Absorption Spectrometric Determinations of Some Heavy Metals in Table Salt Samples Using Amberlite XAD-1180

Mustafa SOYLAK, Aslihan Uzun KARATEPE

Erciyes University, Faculty of Art and Science, Department of Chemistry,
38039, Kayseri-TURKEY

e-mail: soylak@erciyes.edu.tr

Latif ELÇİ

Pamukkale University, Faculty of Art and Science, Department of Chemistry,
20020, Denizli-TURKEY

Mehmet DOĞAN

Hacettepe University, Faculty of Science, Department of Chemistry,
06532, Ankara-TURKEY

Abstract: A simple and sensitive solid phase extraction procedure on Amberlite XAD-1180 resin is presented for the determination of chromium, cobalt, manganese and nickel at trace levels by atomic absorption spectrometry. The analyte ions were quantitatively taken at pH 9 by using ammonia/ammonium acetate buffer without any chelating agent. The influences of some analytical parameters such as sample volume, eluent type and flow rates on the retention of Cr, Co, Mn and Ni ions were examined. No influences were observed from the matrix ions of table salt samples. The detection limits for Cr, Co, Mn and Ni were $0.27 \mu\text{g/g}$, $0.11 \mu\text{g/g}$, $0.13 \mu\text{g/g}$ and $0.086 \mu\text{g/g}$, respectively. The proposed separation-enrichment method was applied for the atomic absorption spectrometric determinations of analyte ions in table salt with satisfactory results (recoveries greater than 95%, relative standard deviations lower than 10%).

Key Words: Determination, Preconcentration, Table Salt Samples, AAS, Amberlite XAD-1180

Turk. J. Chem., **27**, (2003), 235-242.

Full text: [pdf](#)

Other articles published in the same issue: [Türk. J. Chem., vol.27,iss.2.](#)