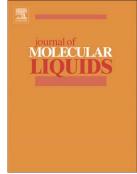
Accepted Manuscript

Switchable solvent based green liquid phase microextraction method for cobalt in Tobacco and Food Samples prior to Flame Atomic Absorption Spectrometric determination

Zainab Manzoor Memon, Erkan Yilmaz, Mustafa Soylak

PII:	S0167-7322(16)32967-1
DOI:	doi:10.1016/j.molliq.2016.12.098
Reference:	MOLLIQ 6781
To opposition	Inum al of Molecular Liquida
To appear in:	Journal of Molecular Liquids
Received date:	30 September 2016
Revised date:	5 December 2016
Accepted date:	28 December 2016



Please cite this article as: Zainab Manzoor Memon, Erkan Yilmaz, Mustafa Soylak, Switchable solvent based green liquid phase microextraction method for cobalt in Tobacco and Food Samples prior to Flame Atomic Absorption Spectrometric determination, *Journal of Molecular Liquids* (2016), doi:10.1016/j.molliq.2016.12.098

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Switchable solvent based green liquid phase microextraction method for cobalt in Tobacco and Food Samples prior to Flame Atomic Absorption Spectrometric determination

Zainab Manzoor Memon^{a,b}, Erkan Yilmaz^a, Mustafa Soylak^{a*} ^a Erciyes University, Fen Fakultesi Kimya Bolumu, 38039, Kayseri-Turkey ^b Institute of Biochemistry, University of Sindh, Jamshoro, Pakistan,

Abstract

A novel green switchable solvent hyphenated liquid phase microextraction (SS-LPME), preconcentration and extraction methodology has been proposed for the assessment of biologically and nutritionally important element Co(II) from tobacco and food samples by FAAS. A switchable solvent by using N,N dimethyl-n-octylamine bicarbonate was synthesized in presence of CO₂ to convert from deprotonated to protonated form and each was examined separately for the extraction of Co(II). The quantitative recoveries were achieved. Complex formation between Co(II) and 1-nitroso-2-naphthol under the pH 4.0 was extracted by converting the selected switchable solvent to nonpolar N,N dimethyl-n-octylamine phase. Accuracy and validity was verified through certified reference material (IC-INCT-OBTL-5) and also by addition recovery check. The limit of detection and limit of quantification were 3.2 μ g L ⁻¹ and 10.6 μ g L ⁻¹, respectively. Consequently, the method was effectively carried out for the analysis of cobalt level from tobacco and food samples.

Download English Version:

https://daneshyari.com/en/article/5409171

Download Persian Version:

https://daneshyari.com/article/5409171

Daneshyari.com