

## 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](https://doi.org/10.1016/j.molliq.2016.12.098)  
Reference: MOLLIQ 6781

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](https://doi.org/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.

**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 <sup>a,b</sup>, Erkan Yilmaz <sup>a</sup>, Mustafa Soylak <sup>a\*</sup>

<sup>a</sup> *Erciyes University, Fen Fakultesi Kimya Bolumu, 38039, Kayseri-Turkey*

<sup>b</sup> *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 CO<sub>2</sub> 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 µg L<sup>-1</sup> and 10.6 µg L<sup>-1</sup>, 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](https://daneshyari.com)