

Accepted Manuscript

Carbon nanotubes-reinforced hollow fiber solid-phase microextraction coupled with high performance liquid chromatography for the determination of carbamate pesticides in apples

Xin-Yue Song, Yan-Ping Shi, Juan Chen

PII: S0308-8146(13)00148-9

DOI: <http://dx.doi.org/10.1016/j.foodchem.2013.01.112>

Reference: FOCH 13662

To appear in: *Food Chemistry*

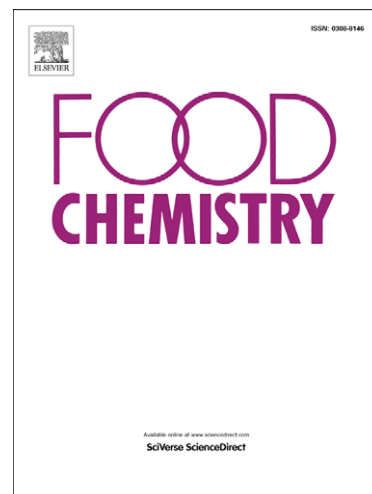
Received Date: 10 September 2012

Revised Date: 27 December 2012

Accepted Date: 27 January 2013

Please cite this article as: Song, X-Y., Shi, Y-P., Chen, J., Carbon nanotubes-reinforced hollow fiber solid-phase microextraction coupled with high performance liquid chromatography for the determination of carbamate pesticides in apples, *Food Chemistry* (2013), doi: <http://dx.doi.org/10.1016/j.foodchem.2013.01.112>

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.



1 **Carbon nanotubes-reinforced hollow fiber solid-phase**
2 **microextraction coupled with high performance liquid**
3 **chromatography for the determination of carbamate pesticides in**
4 **apples**

5
6 **Xin-Yue Song^{a, b} · Yan-Ping Shi^a · Juan Chen^{a*}**

7 ^aKey Laboratory of Chemistry of Northwestern Plant Resources and Key Laboratory
8 for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics,
9 Chinese Academy of Sciences, Lanzhou 730000, People's Republic of China

10 ^bGraduate University of Chinese Academy of Sciences, Beijing 100039, P. R. China

11
12 **Abstract**

13 An effective and sensitive method to determinate five carbamate pesticides in
14 apples was developed by using carbon nanotubes-reinforced hollow fiber solid-phase
15 microextraction (CNTs-HF-SPME) combined with high performance liquid
16 chromatography-photodiode array detection (HPLC-DAD). The CNTs were dispersed
17 in water via adding surfactant, and then were held in the pores of HF supported by
18 capillary forces and sonification. The SPME device, which was wetted with 1-octanol,
19 was placed in a stirred apple samples to extract target analytes. After extraction,
20 analytes were desorbed and analyzed using HPLC-DAD. Under the optimized

*Correspondence: Dr. Juan Chen, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, P. R. China; E-mail: chenjuan@licp.cas.cn (J. Chen); Tel.: 86-931-4968208; fax: 86-931-4968094.

Download English Version:

<https://daneshyari.com/en/article/7601778>

Download Persian Version:

<https://daneshyari.com/article/7601778>

[Daneshyari.com](https://daneshyari.com)