

## Accepted Manuscript

A simple method for the determination of organochlorine pollutants and the enantiomers in oil seeds based on matrix solid-phase dispersion

Jing Zhan, Jindong Li, Donghui Liu, Chang Liu, Genggeng Yang, Zhiqiang Zhou, Peng Wang

PII: S0308-8146(15)01088-2

DOI: <http://dx.doi.org/10.1016/j.foodchem.2015.07.067>

Reference: FOCH 17863

To appear in: *Food Chemistry*

Received Date: 7 February 2015

Revised Date: 22 June 2015

Accepted Date: 16 July 2015

Please cite this article as: Zhan, J., Li, J., Liu, D., Liu, C., Yang, G., Zhou, Z., Wang, P., A simple method for the determination of organochlorine pollutants and the enantiomers in oil seeds based on matrix solid-phase dispersion, *Food Chemistry* (2015), doi: <http://dx.doi.org/10.1016/j.foodchem.2015.07.067>

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 **A simple method for the determination of organochlorine**  
2 **pollutants and the enantiomers in oil seeds based on matrix**  
3 **solid-phase dispersion**

4 Jing Zhan, Jindong Li, Donghui Liu, Chang Liu, Genggeng Yang, Zhiqiang Zhou,  
5 Peng Wang\*

6 Department of Applied Chemistry, College of Science, China Agricultural University,  
7 Beijing 100193

8 \*Corresponding author. Tel.:+86 010 62732937; fax: +86 010 62732937.

9 Email address: [wangpeng@cau.edu.cn](mailto:wangpeng@cau.edu.cn) (P. Wang)

10

11 **Abstract**

12 A simple, rapid and effective method was developed based on matrix solid-phase  
13 dispersion (MSPD) for the determination of organochlorine pollutants including  
14 sixteen organochlorine pesticides (OCPs) and seven polychlorinated biphenyls (PCBs)  
15 in oil seeds (peanuts and soybeans). Among the organochlorine pollutants selected,  
16  $\alpha$ -HCH, heptachlor, o,p'-DDT, o,p'-DDD, trans-chlordane and cis-chlordane were  
17 chiral and their enantiomers were determined by GC-ECD with a chiral column. The  
18 MSPD procedure was optimized focusing on the type and amount of dispersion  
19 sorbent, co-column sorbent and eluting solvent. Under the optimized condition, good  
20 recoveries were obtained in the range of 68.9%-103.3% with relative standard

Download English Version:

<https://daneshyari.com/en/article/7589881>

Download Persian Version:

<https://daneshyari.com/article/7589881>

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