The Determination of Chemical Elements in Food. Applications for Atomic and Mass Spectrometry

Description:
State of the art tools and applications for food safety and food science research

Atomic spectroscopy and mass spectrometry are important tools for identifying and quantifying trace elements in food products. Elements that may be potentially beneficial or potentially toxic. The Determination of Chemical Elements in Food: Applications for Atomic and Mass Spectrometry teaches the reader how to use these advanced technologies for food analysis. With chapters written by internationally renowned scientists, it provides a detailed overview of progress in the field and the latest innovations in instrumentation and techniques, covering:

Fundamentals and method development, selected applications, and speciation analysis
Applications of atomic absorption spectrometry, inductively coupled plasma atomic emission spectrometry, and inductively coupled plasma mass spectrometry
Applications to foods of animal origin and applications to foods of vegetable origin
Foreseeable developments of instrumental spectrometric techniques that can be exploited to better protect consumers' health, with a full account of the most promising trends in spectrometric instrumentation and ancillary apparatuses
Applicable laws and regulations at the national and international levels

This is a core reference for scientists in food laboratories in the public and private sectors and academia, as well as members of regulatory bodies that deal with food safety.

Contents:
Preface.
Contributors.

SECTION 1: FUNDAMENTALS AND METHOD DEVELOPMENT.

1. Improvement in Pretreatment and Analysis with Spectrometric Methods: A Typical Application to Routine Analysis. (K. Boutakhrit, F. Bolle, J.M. Degroodt, and L. Goeyens)

2. Solubilization: Trends of Development in Analytical Atomic Spectrometry for Elemental Food Analysis. (Henryk Matusiewicz)


4. High–Resolution Continuum Source AAs and its Application to Food Analysis. (Bernhard Welz, Daniel L. G. Borges, and Uwe Heitmann)


7. Demonstration of Measurement Capabilities by Means of Interlaboratory Comparison Schemes for Trace Element Analysis in Food. (Yetunde Aregbe, Piotr Robouch, and Thomas Prohaska)

SECTION 2: SELECTED APPLICATIONS.
8. Applications of Inductively Coupled Plasma Mass Spectrometry to Trace Element research and Control. (Francesco Cubadda)


10. Trace Elements in the Total Diet Typical of Northern Italy. (M. Bettinelli, S. Spezia, A. Gatti, A. Ronchi, C. Minoia, C. Roggi, and G. Turconi)

11. Car Catalytic Converters and the Contamination of Food by Platinum–Group Elements. (Chiara Frazzoli, Roberta Cammarone, and Sergio Caroli)

12. Arsenic and Other Potentially Toxic Trace Elements in Rice. (Chiara Frazzoli, Marilena D'Amato, Sergio Caroli, and Gyula Zaray)

13. Total Analysis and Distribution of Trace Elements in Human, Cow, and Formula Milk. (Rafael R. de la Flor St. Remy, Maria Luisa Fernandez Sanchez, and Alfredo Sanz–Medel)

14. Use of Spectrochemical Methods for the Determination of Metals in Fish and Other Seafood in Louisiana. (Joseph Sneddon)

15. Essential and Potentially Toxic Chemical Elements in Beverages. (Patricia Smichowksi and Daniel A. Batistoni)

SECTION 3: SPECIATION ANALYSIS.

16. Species–Specific Determination of Metal(loid)–containing Food Additive sand Contaminants by Chromatography with ICP–MS Detection. (A. Polatajko, B. Bouyssiere, and J. Szpunar)

17. Elemental Speciation in Human Milk and Substitute Food for Newborns. (bernahrd Michalke, Maria Luisa Fernandez Sanchez, and Alfredo Sanz–Medel)

18. Measurement of Total Arsenic and Arsenic Species in Seafood By Q ICP–MS. (William A. Maher, Jason Kiry, and Frank Krikowa)

19. Sample Preparation Prior to As– and Se–Speciation. (Mihaly Dernovics and Peter Fodor)


21. Application of ICP–MS for the Evaluation of Se Species in Food Related Products and in Dietary Supplements. (Katarzyna Wrobel, Kaximierz Wrobel, and Joseph A. Caruso)

22. Determination of Hg Species in Seafood. (Petra Krystek and Rob Ritsema)

Author Index.

Subject Index.

Ordering:

Order Online - [http://www.researchandmarkets.com/reports/2175755/](http://www.researchandmarkets.com/reports/2175755/)

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit 
http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct.

Product Name: The Determination of Chemical Elements in Food. Applications for Atomic and Mass Spectrometry
Web Address: http://www.researchandmarkets.com/reports/2175755/
Office Code: SCLIW8G8

Product Format
Please select the product format and quantity you require:

**Quantity**

Hard Copy (Hard Back):
USD 214 + USD 29 Shipping/Handling

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in **BLOCK CAPITALS**

<table>
<thead>
<tr>
<th>Title:</th>
<th>Mr</th>
<th>Mrs</th>
<th>Dr</th>
<th>Miss</th>
<th>Ms</th>
<th>Prof</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td>[Enter name]</td>
<td>Last Name:</td>
<td>[Enter name]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Email Address: *

Job Title:

Organisation:

Address:

City:

Postal / Zip Code:

Country:

Phone Number:

Fax Number:

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ____________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World