

Chemical Contaminants & Residues in Food Community

Update on the Sub-Group on Pesticides

Jon W. Wong
U.S. Food and Drug Administration

122nd AOAC Annual Meeting and Exposition
September 22, 2008

Chemical Contaminants & Residues in Food Community

BRINGING SCIENTISTS AND INDUSTRY TOGETHER
TO DEVELOP AND VALIDATE BETTER METHODOLOGIES

Outline

- **Role of the Pesticide Subgroup**
- **Needs and Issues of the Subgroup**
- **Collaborative Studies**

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Pesticide Subgroup

- 359 members in the Subgroup
- Members from Asia, Europe, North and South America
- Members from Industry, Academia and Government Laboratories
- Members interested in Pesticide Methods as well as other areas (Metals, Vet Drugs, etc.)

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Application to
join the Community
and Subgroup(s)

CHEMICAL CONTAMINANTS AND RESIDUES IN FOOD

Jo Marie Cook & Stephen Capar, Co-Chairs
Chemical Contaminants & Residues in Food
Send Mail To: cookj@doacs.state.fl.us
stephen.capar@fsa.hhs.gov
www.flworkshop.com

Join the Chemical Contaminants and Residues in Food Community!

Do you analyze foods for chemical residues or chemical contaminants?
Pesticides? Industrial Chemicals? Veterinary Drugs? Toxic Elements?

Do you need better, more accurate, repeatable and reliable methods?

Do you need this data?

To assure product quality?
To enforce government tolerances?
To establish regulatory guidelines?
To comply with export/import requirements?

The Chemical Contaminants and Residues in Food Community would like to reach this "community" of analytical chemists and those who use the data from these analyses.

We welcome responses from scientists throughout the world, whether they are working for a government agency, a private laboratory, academia, industry or trade organizations.

You do NOT need to be a member of any particular organization.

You will NOT be required to attend meetings or review volumes of data.

But we do need to understand your analytical needs in order to focus our efforts on the areas of greatest interest. (For that reason, all members are expected to actively participate in the work of the Community including, but not limited to, promptly responding to communications, attending and actively participating in meetings, reviewing meeting background material and agenda prior to meeting and accepting and following through on assignments. Persons who do not actively participate will be removed from the Community by the Chair.)

Fill out attached application and email to Jo Marie Cook (cookj@doacs.state.fl.us).

Name:	
Organization or Company:	
Address:	
Phone Number:	
E-mail Address:	
Methods needed or specific topics of interest (list with most important first):	

IF YOU WOULD LIKE TO JOIN THE COMMUNITY, PLEASE BE SURE TO FILL OUT THE INFORMATION BELOW!

Will you join the "community"?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Will you answer surveys?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Will you help prioritize methods?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Will you review methods?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

Please pass this on to all of your colleagues. We want to hear from as many stakeholders as possible.

Fill out attached application and email to Jo Marie Cook (cookj@doacs.state.fl.us).

2008-12-31, jmc/sgc

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How does the Subgroup Communicate?

- **Community Website**
(sponsored by FLAG Works)
- **E-mail**

**Purpose to stimulate communication
among subgroup members**

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www.flworkshop.com/community-1st.html

General Member Information

Meetings

Minutes, Reports, Archives

Information about Collaborations

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Initiatives from the Pesticide Subgroup

(1st Subgroup Meeting and from responses from subgroup members)

- Multiresidue Methods (lower LODs/LOQs, efficient and cost-effective, routine screening for all pesticide classes)
- Herbals, Spices, and Botanicals

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Others issues

- Harmonization between methods? Analytical results from different methods may cause problems
- Validation for QuEChERS modifications?
- AOAC Guidelines for Single Laboratory Validation for Pesticide Methods?

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Multiresidue Methods (GC and LC)

- FDA (i.e., Luke and modifications)
- QuEChERS (ACN extraction)
- Canadian PMR (Fillion et al., *J AOAC Int*, 78, 1252)
- Dutch method (GC and LC)
- BfR method (LC-MS only)
- Swedish method (EtOAc extraction)
- etc.

Are these methods equivalent or similar?

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Harmonization

- Many multiresidue procedures but are they equivalent?
- Proficiency or round robin testing to determine if participating procedures are equivalent (similar to USDA Pesticide Data Program)
- USDA Pesticide Data Program and European Union Committee for Standardization (CEN) have methodologies for uniformity.

**Does AOAC want to be involved in this type of testing?
“Standardization” of methods will be time consuming and laborious.**

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QuEChERS modifications and variations

- QuEChERS is an official AOAC and EU method (AOAC 2007.01, prEN 15662 2007-10-24) for low fat foods
- Should QuEChERS modifications be validated?

Samples > 1% fat (PSA+C18 sorbents)

Samples with pigments (GCB)

Samples > 1% fat + pigments (PSA+GCB+C18)

- QuEChERS using SPE columns instead of dSPE?

Do these QuEChERS modified procedures also need to be tested?

Single Laboratory Validation for Pesticide Methods

- **EPA 860.1340 Residue Analytical Method**
- **SANCO/2007/3131 Method Validation and Quality Control Procedures for Pesticide Analysis in Food and Feed**

<http://www.crl-pesticides.eu/docs/public/home.asp?LabID=100&Lang=EN>

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Call for Collaborative Studies

- **Toxaphene/Toxaphene Congener Method Validation using GC-NIMS (EPA/SAIC)**
- **Multiresidue Pesticide Method Validation (G.-F. Pang, Qinhuangdao Entry-Exit Inspection and Quarantine Bureau, P.R.C.)**

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Future Goals

- Subgroup to act as a forum to identify and promote new pesticide methods for the subgroup
- Subgroup to act as a contact source to solicit participants for AOAC collaboratives
- Subgroup to provide future issues regarding pesticide methods and analyses

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Acknowledgements

David Soderberg, EPA

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Steve Capar, FDA

AOAC Pesticide Community Members

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Thank you for your attention