



**AOAC Official Methods Board  
March 7, 2017**

**2017 Mid-Year Meeting  
Voting Panel & ERP e-Ballot**

**AOAC INTERNATIONAL  
2275 Research Blvd, Suite 300  
Rockville, MD 20850 1.301.924.7077**





## MEMORANDUM

**DATE:** March 2, 2017

**TO:** Members of the Official Methods Board

**FROM:** Deborah McKenzie, Sr. Director, AOAC Research Institute

**SUBJECT:** **AOAC Research Institute**  
**AOAC Official Methods of Analysis<sup>SM</sup> (OMA) Expert Review Panel for Fertilizers-Metals**

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### BACKGROUND

The AOAC Expert Review Panel for Fertilizers - Metals will convene on Wednesday, March 15, 2017 from 1:00pm to 4:00pm during the AOAC INTERNATIONAL Mid-Year Meeting.

The purpose of the meeting will be to review the following:

- 1) **OMAMAN-28:** Simultaneous Determination of Arsenic, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Selenium, and Zinc in Fertilizers by Microwave Acid Digestion and Inductively Coupled Plasma-Optical Emission Spectrometry Detection: Single Laboratory Validation
- 2) **Discuss First to Final Action requirements and Feedback mechanisms.**

### RECOMMENDATION

Currently, there are 15 members on the ERP for Fertilizers – Metals that were vetted by the Official Methods Board to evaluate candidate methods for Fertilizers – Metals as per the Expert Review Panel (ERP) Policies and Procedures. The current roster is as follows:

Last Name	First Name	Mar-17
1) Bartos	James	Okay to attend
2) Clifford	Robert	No Response
3) Gopala	Anil	No Response
4) Hall (Chair)	William	Okay to attend
5) Kariuki	Solomon	No Response
6) Liu	Kai	No Response
7) Oppermann	Uwe	No Response
8) Parisi	Salvatore	Cannot attend
9) Phillips	Heidi	Okay to attend
10) Provance-Bowley	Mary	Resigned
11) Reba	Rick	Okay to attend
12) Shelite	Kristopher	Resigned
13) Tan	Rechel	Cannot attend
14) Tsourides	Dion	Okay to attend
15) Wegner	Keith	Cannot attend



We are currently proposing the termination of membership for seven (7) ERP members as follows:

**Termination of Membership:**

- Robert Clifford - Shimadzu
- Anil Gopala - PerkinElmer
- Solomon Kariuki – University of Kentucky
- Kai Liu – Eurofins Scientific
- Uwe Oppermann - Shimadzu
- Mary Provance-Bowley - Harsco Metals & Minerals
- Kristopher Shelite – Compass Minerals

We are also proposing the addition of the eight (8) new members to the ERP as follows:

**New Candidates for ERP Membership:**

- Timothy Fau – PotashCorp Aurora
- Timothy Jestness – PotashCorp Aurora
- Patricia Lucas – Florida Department of Agriculture and Consumer Services
- William Martin – Compass Minerals
- Scott Roalofs – Colorado Department of Agriculture
- Scott Sabel – Simplot
- Jack Schmansky - The Scotts Miracle-Gro Company
- Frank Sikora – University of Kentucky

They are recommended by the ERP Chair, Bill Hall and their CV’s are attached for your quick reference.

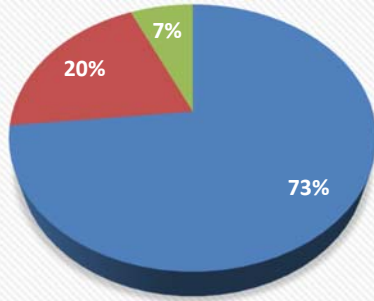
The revised ERP roster would still maintain a diverse balance of major and specific perspectives.

**PROPOSED ROSTER FOR ERP - METALS**

Name	Organization	Perspectives	Region	Status
1. Hall, William (Chair)	Mosaic	Industry – Product Manufact.	USA	Current
2. Bartos, James	Office-Indiana State Chemist	Government - State	USA	Current
3. Fau, Timothy	PotashCorp Aurora	Industry - Product Manufact.	USA	NEW
4. Jestness, Timothy	PotashCorp Aurora	Industry – Product Manufact.	USA	NEW
5. Lucas, Patricia	FL Dept. of Ag.	Government – State	USA	NEW
6. William Martin	Compass Minerals	Industry – Product Manufact.	USA	NEW
7. Parisi, Salvatore	Industry Consultant	Industry – Independent	Italy	Current
8. Phillips, Heidi	Self Employed	Industry – Independent	USA	Current
9. Reba, Rick	Nestle	Industry – Food	USA	Current
10. Roalofs, Scott	Colorado Dept. of Agriculture	Government – State	USA	NEW
11. Sabel, Scott	Simplot	Industry – Product Manufact.	USA	NEW
12. Schmansky, Jack	The Scotts Miracle-Gro Co.	Industry – Product Manufact.	USA	NEW
13. Sikora, Frank	University of Kentucky	Academia – Research	USA	NEW
14. Tan, Rechel	Abu Dhabi Fertilizer	Industry – Product Manufact.	UAE	Current
15. Tsourides, Dion	Spectro A. I.	Industry – Technology Provider	USA	Current
16. Wegner, Keith	Colorado Dept. of Agriculture	Government – State	USA	Current

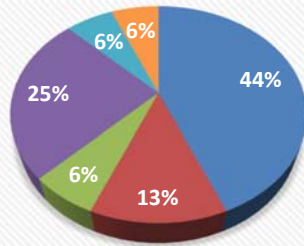
REVISED EXPERT REVIEW PANEL PERSPECTIVES

### Broad Perspectives



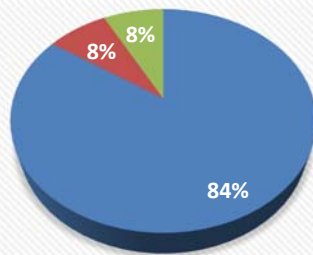
■ Industry ■ Government ■ Academia ■

### Specific Perspectives



■ Product Manufacturer ■ Independent ■ Food  
■ State Government ■ Technology Provider ■ Research

### Region



■ USA ■ Italy ■ UAE ■

## **TIMOTHY ALAN FAU**

PotashCorp Aurora  
1530 NC Hwy 306 S  
Aurora, NC 27806  
Phone: 252-322-8159  
E-Mail: tafau@potashcorp.com

### **SKILLS**

Analytical Chemistry, GMP, Research & Development, HAACP, ISO/FSSC 22000  
Gas Chromatography, GC-MS, HPLC, LC-MS, ICP, ICP-MS, NMR, UV/Vis, X-ray  
Fluorescence

### **PROFESSIONAL EXPERIENCE**

- Laboratory Supervisor, PotashCorp Aurora, Aurora, NC (2009 – Present)
- Senior Chemist, ConAgra Foods, Charlotte, NC (1989 – 2009)

### **EDUCATION**

- MBA, William Woods University, 2003
- BS, Missouri State University, 1990 (Environmental Chemistry)

## **TIMOTHY A. JESTNESS**

PotashCorp Aurora  
1530 NC Hwy 306 S  
Aurora, NC 27806  
252-322-8291  
tajestness@potashcorp.com

### **SKILLS**

Process Control, Process Engineering, Process Optimization, Engineering, Factory, Root Cause Analysis, Lean Manufacturing, Chemical Engineering, Manufacturing, Capital Projects, Predictive Maintenance, Continuous Improvement, Cement, Process Safety, Aspen Plus, Quality Management, Kaizen, Maintenance Management, Plant Maintenance, Reliability, SPC, TPM, Commissioning, Process Improvement, Mineral Processing, Metallurgy, Raw Materials, Manufacturing Operations, 5S, Plant Management, Preventive Maintenance, Process Simulation, Project Engineering, Manufacturing..., ISO, HAZOP, Mining, Materials

### **RECENT PROFESSIONAL EXPERIENCE**

- Phosphate Technical Services Manager, PotashCorp Aurora, Aurora, NC (2013 – Present)
- Superintendent – Phosphoric Acid/STF, PotashCorp Aurora, Aurora, NC (2011 – 2013)
- Superintendent – Product Distribution, PotashCorp Aurora, Aurora, NC (2011 – 2011)
- Product Superintendent - STF, PotashCorp Aurora, Aurora, NC (2010 – 2011)
- Senior Engineer, PotashCorp Aurora, Aurora, NC (2008 – 2010)
- Production Manager, Lafarge Cement, Seattle, WA (2005 – 2008)
- Mill Manager, Lafarge Gypsum, Palatka, FL (2001 – 2005)

### **EDUCATION**

- BS Chemical Engineering - Iowa State University, 1990  
Chemistry and Biology

### **PROFESSIONAL ORGANIZATIONS**

Association of American Plant Food Control Officials, Inc. (AAPFCO)

## **STATEMENT OF EXPERTISE**

### **William Martin**

I am writing for your consideration regarding an appointment to the AOAC Expert Review Panel. I am confident that my extensive background in analytical chemistry and method development will provide a diverse expertise that would be well suited for the review panel. My specialties range between spectroscopic analysis, nanotechnology, biological sample preparation, and single molecule detection. This broad range of skills will provide a unique point of view to the review panel.

I recently received my Ph.D. in analytical chemistry from the University of Kentucky in the Richards Lab, where I worked to develop cutting edge analytical methods. This includes spectroscopic studies between various pharmaceuticals and the active sites on live cells. The methods developed allowed the study of the flow of nutrients (including potassium, calcium, and other metals) across plasma membrane (PM) of mammalian cells, vesicle fusion for the purposes of drug delivery, and nicotinic receptor stoichiometric.

During my tenure as a graduate student I participated in a four month fellowship in the Vosch Lab at the University of Copenhagen. We worked to develop new single molecule confirmation methods via the simultaneous acquisition of six separate spectroscopic signals on an individual fluorophore. This work, when used in conjunction with various nanofabrication methods, allowed me to perform accurate and reproducible characterizations for spectroscopically enhanced biomarkers.

During my graduate research fellowship I worked at the Center for Nanophase Materials Sciences at Oak Ridge National Laboratory to develop nanofabrication methods for single particle analysis. These new procedures were simplified and allowed reproducible fabrication of nanostructures that were cost effective. These structures were then used to analyze calcium flux across the PM of cancer cells, biomarker enhancement, and measurement of single ligand turnover in live cells.

My current position as Sr. Researcher at Compass Minerals is heavily involved with the method development for macro and micro nutrients in fertilizers. This type of work is closely correlated to very important safety interests outlined by the AOAC. While my industry experience is somewhat limited, I believe my expertise in such a diverse array of analytical methods would make me a great addition to the AOAC Expert Review Panel. I appreciate your consideration and look forward to making a contribution.



# W. ELLIOTT MARTIN

8271 N Tullis Ave APT 2211 Kansas City, MO 64158  
Phone: (620) 562-8706 Email: martinw@compassminerals.com

## EDUCATION

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**Doctor of Philosophy**, Chemistry University of Kentucky, Lexington, KY December 2016

Advisor: Christopher I. Richards, Ph.D.

Dissertation topic: Characterization and Application of Hybrid Nanostructures for Enhanced Biological Imaging using Fluorescence Microscopy Techniques

**Bachelor of Science**, Chemistry Lindenwood University, St. Charles, MO May 2012

Advisor: Ricardo Delgado, Ph.D.

Undergraduate research: Blind Studies of Organic Fuels for Application in Forensic Arson Using GC/MS

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## PROFESSIONAL EXPERIENCE

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**Sr. Researcher** Compass Minerals, Overland Park, KS 2017-Present

- Develop and implement methods for macro and micronutrients in fertilizers using instruments such ICP-MS, FTIR, UV-VIS, IC, and CHNOS Elemental Analysis
- Develop new macro and micro nutrient blends in fertilizers
- Developing additives for salts to reduce caking, and spalling
- Regular maintenance, training, and repairs for laboratory instrumentation
- Provide technical support

**Research Assistantship** University of Kentucky, Lexington, KY 2014-2016

- Fabricated plasmonic devices and performed single molecule photophysical studies to determine the effect of metal structures on single molecule fluorescence
- Worked regularly in the Center for Nanophase Materials Sciences (CNMS) at Oak Ridge National Laboratory (3+ years) to fabricate novel nanostructures for fluorescence imaging such as zero-mode waveguides, gold nanobowties, and nanoporous silicon nitride membranes
- Wrote several successful user proposals for group access to CNMS facilities and supplies
- Summer research fellowship in the Vosch lab at the University of Copenhagen, Denmark. Performed simultaneous single molecule fluorescence intensities, lifetimes, spectra, blinking dynamics, and photon antibunching statistics
- Developed an integrated microfluidic and nanopore imaging device to monitor single ligand-receptor interactions on the plasma membrane of live cells
- Built several custom microscopy setups for applications including confocal, TIRF, FLIM, FCS, smFRET and alternating laser excitation (ALEX) - Used these techniques to study DNA and protein systems inside of hybrid zero-mode waveguides
- Built a custom microscope with the capability to perform high throughput TIRF (prism-based) and FCS measurements
- Coordinated and designed application specific confocal/widefield microscopy set ups based collaborator needs, and led training/certification sessions for new users

- Facilitated certification and training of students, faculty, and external customers at the University of Kentucky Confocal Microscopy Center for imaging biological species

**Teaching Assistantship**      University of Kentucky, Lexington, KY      2012-2014  
    Lindenwood University, St. Charles, MO      2011-2012

- Stockroom Employee: Prepped supplies for general, analytical, and organic chemistry laboratory sections. Organization and material upkeep for all supplies.
- General Chemistry Teaching Assistant (3 sections/semester): Pre-lab lectures followed by laboratory activities (~24 students). Regular office hours were held for Q/A's regarding homework assignments, lab reports, exam preparation, and future lab work.

## SKILLS

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- Expert in the assembly, alignment, and use of custom wide-field and confocal microscopy setups including free-space beam alignment, fiber coupling, total internal reflection fluorescence (TIRF), fluorescence correlation spectroscopy (FCS), ALEX, resonant scanning based systems, and super-resolution techniques
- Expert user of nanofabrication techniques including: E-beam lithography (EBL), focused ion beam (FIB), photolithography, dual chamber E-beam evaporation, sputter deposition, reactive ion etcher (RIE), atomic layer deposition (ALD), optical profilometry, and scanning electron microscopes (SEM)
- Thorough knowledge of substrate construction and sample preparation methods including polydimethylsiloxane (PDMS) based microfluidic systems, various linker chemistries for fluorescent labeling of substrates, as well as, molecular adsorption onto surfaces using polyvinyl alcohol films
- Strong technical background with acquisition/analysis softwares including: Micro-Manager (NIH), ImageJ (NIH), OriginPro, Symphotime64 (Picoquant), Metamorph (Olympus), IQ (Andor), Solis (Andor), and the Microsoft Office Suite

## PUBLICATIONS

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1. **W. Elliott Martin**; Ning Ge; Bernadeta R. Srijanto; Emily Furnish; C. Patrick Collier; Christine Trinkle; Christopher I. Richards. "Real Time Sensing of Single Receptor-Ligand Interactions with Nanoaperture Integrated Microfluidic Devices" ACS Nano. Submitted for Review
2. **W. Elliott Martin**; Bernadeta R. Srijanto; C. Patrick Collier; Tom Vosch; Christopher I. Richards, A Comparison of Single-Molecule Emission in Aluminum and Gold Zero-Mode Waveguides. The Journal of Physical Chemistry A 2016, ASAP
3. Das, S. K.; Luk, C. M.; **Martin, W. E.**; Tang, L.; Kim, D. Y.; Lau, S. P.; Richards, C. I., Size and Dopant Dependent Single Particle Fluorescence Properties of Graphene Quantum Dots. The Journal of Physical Chemistry C 2015, 119, 17988-17994.
4. Moonschi, F. H.; Effinger, A. K.; Zhang, X.; **Martin, W. E.**; Fox, A. M.; Heidary, D. K.; DeRouchey, J. E.; Richards, C. I., Cell-derived vesicles for single-molecule imaging of membrane proteins. Angew Chem Int Ed Engl 2015, 54 (2), 481-4.

## PRESENTATIONS

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1. (Oral Presentation) Fluorescence Characterization Studies for Single Molecules Isolated in Hybrid Zero-mode Waveguides. **W. Elliott Martin**; Christopher I. Richards, 16<sup>th</sup> Annual Tech Connect World Innovation Conference and Expo, Washington, DC, May

- 22-25, 2016, Section- Real Space Imaging and Mapping (Microscopy-Optical, Electron, Scanning Probe).
2. Characterization/Application Based Fluorescence Studies in Hybrid Zero-Mode Waveguides for Improved Biological Imaging. **W. Elliott Martin**; Christopher I. Richards, 42<sup>nd</sup> Annual NAFF Symposium, Lexington, KY, April 29, 2016, Section-Protein Signaling and Design.
  3. Selective Labeling of Photo-cleavable Molecules using Plasmonic Structures. **W. Elliott Martin**; Christopher I. Richards, 1<sup>st</sup> Annual Oak Ridge National Laboratory Nanobio Workshop, Oak Ridge, TN, May 22-25, 2013.

## REFERENCES

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Christopher I. Richards, Ph.D.; University of Kentucky, Department of Chemistry; 209 Chemistry/Physics Building; Lexington, KY 40506; 859-218-0971; chris.richards@uky.edu; Ph.D. Professor/Advisor

C. Patrick Collier, Ph.D; Oak Ridge National Laboratory, Center for Nanophase Materials Sciences; 1 Bethel Valley Road, Bldg. 8610; Oak Ridge, TN 37831; 865-576-3638; colliercp@ornl.gov; Staff Researcher/Collaborator

Tom Vosch, Ph.D.; University of Copenhagen; Nano-Science Center/Department of Chemistry; Universitetsparken 5, 2100 Copenhagen, Denmark; +45 35 32 03 13; tom@chem.ku.dk; Professor/Collaborator

## **SCOTT ROALOFS**

Biochemistry Laboratory  
Colorado Dept. of Agriculture  
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Denver, CO 80211  
Phone: 303 867-9250  
E-Mail: scott.roalofs@ag.state.co.us

### **PROFESSIONAL EXPERIENCE**

- **Fertilizer Program Chemist, Colorado Department of Agriculture, Denver, CO (Dec. 2011-present)**
  - Perform trace metals analyses including, but not limited to trace metals in animal feeds, trace metals and metallic content in fertilizer, and analysis of toxic metals such as arsenic in foods.
  - Proficient in operating within the ISO/IEC 17025 Quality Control System.
  - Develop new testing methods and procedures for new equipment or technologies through method development, testing and validation. Position devises improvements, updates, or modifications to existing methods and procedures through method validation, verification studies, report generation, creates Standard Operating Procedures (SOP's) for such methods.
  - Specialties: Analysis techniques include using wet chemical methodologies and analytical instrumentation.
    - Instrumental techniques include:
      - Perkin-Elmer Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)
      - Perkin-Elmer Atomic Absorption, Emission (AA) and Mercury Hydride System (MHS) spectroscopy
      - LECO Combustion Spectrometry (Nitrogen, Sulfur, Carbon) analysis
      - CEM Microwave Digestion techniques
  - Performs routine and emergency maintenance, repair and calibration of instruments.
  
- **Senior Chemist, Colorado Department of Transportation, Muscle Shoals, AL. (Dec. 2006-Mar 2012)**
  - Served as lead scientist for CDOT chemical testing, performs chemical and physical assays using wet chemical techniques, a Perkin Elmer Flame Atomic Absorption Spectrometer (FASS) and a Bruker S4 Pioneer Wavelength Dispersive X-ray Fluorescence Spectrometer (WDXRF).
  - Responsible for supervising technicians, managing a budget, ensuring laboratory testing is performed in compliance with AASHTO/ASTM regulations, approving test results, validating methods and reagents, developing procedures and protocols, and evaluating, selecting, acquiring, installing and maintaining laboratory equipment.
  - Followed chain-of-custody protocols, receives, maintains and serves as principal custodian of samples that may be relevant to criminal investigation.
  - Devised scientific investigations and studies to validate new highway technologies, equipment and procedures; writes reports, grant applications and related documents.
  - Kept up to date on contemporary research as they relate transportation issues; makes presentations regarding laboratory investigations, research and validation studies.
  - Wrote manuscripts for publication and participates in multidisciplinary teams and task forces.

- **Summer Research Assistant, Southern California Bioinformatics Summer Institute, UC Santa Cruz, Santa Cruz, CA. (Jun. 2006-Aug 2006)**
  - Research performed under Dr. Steven Smith, City of Hope Medical Center.
  - Molecular modeling of experimental DNA molecules designed for cancer detection. Models were built using PC Spartan, and Insight II.
- **Adjunct Faculty Instructor of Microbiology, Pueblo Community College, Pueblo CO. (Jan.2006-May 2006)**
  - Lecture class topics that included Microbiology, Immunology and Genetics.
  - Microbiology laboratory instruction included the use of aseptic technique, microbial identification and the observation and classification of bacteria and their vectors.

### **EDUCATION**

- M.S. Colorado State University - Pueblo, 2006  
Applied Natural Science, Molecular Genetics
- B.S. Colorado State University - Pueblo, 2004  
Chemistry and Biology

### **PROFESSIONAL ORGANIZATIONS**

Association of American Plant Food Control Officials, Inc. (AAPFCO)

## **FRANK SIKORA**

Soil Test Coordinator, Regulatory Services  
Associate Adjunct Professor

University of Kentucky  
Soil Testing Lab  
103 Regulatory Services Bldg.  
Lexington, KY 40546-0275  
Phone: 859-257-2785  
[fsikora@uky.edu](mailto:fsikora@uky.edu)

**AREAS OF INTEREST:** Soil-Plant relationships, Analytical chemistry in soil analysis, Chemical Equilibria

### **PROFESSIONAL EXPERIENCE**

- 1998-present. Soil Testing Coordinator and Adjunct Associate Professor, University of Kentucky
- 1996-1998. Team Leader for Constructed Wetlands Research Team, Biotechnology, TVA Environmental Research Center, Muscle Shoals, AL.
- 1987-1995. Research Chemist, Biotechnology, TVA Environmental Research Center, Muscle Shoals, AL
- 1991-1998. Associate Adjunct Professor, Department of Agronomy and Soils, Auburn University, Auburn, AL.
- 1986-1987. Postdoctoral Associate, Dept. of Agronomy, Cornell

### **EDUCATION**

- B.S. West Virginia University, 1980
- M.S. University of Tennessee, 1982
- Ph.D. University of Illinois, 1986

As Coordinator of the Soil Testing Laboratories, the goal is to help the citizens of Kentucky maintain productive and economical plant growth operations by offering tests on soils, water, greenhouse media, and animal waste with subsequent fertilizer and lime recommendations.

Chemical tests are offered on media utilized for plant growth operations such as soil, greenhouse media, and animal waste. Nutrient needs and fertilizer responses are determined by research conducted within the UK College of Agriculture on crops and soils in Kentucky.

Routine soil testing includes pH, buffer pH, P, K, Ca, Mg, Zn and non-routine tests which include boron, organic matter, and triazine residue in soil, pH and nutrients in greenhouse media used for various horticultural crops, pH and nutrients in water used for irrigation and nutrient solution purposes, nutrients in animal waste used for land application, and potential acidity in mine spoil.

## **PATRICIA LUCAS**

Bureau of Agricultural Environmental Laboratories  
Florida Department of Agriculture and Consumer Services  
3125 Conner Blvd, Bldg 7  
Tallahassee, FL 32599  
850-617-7830  
[Patricia.Lucas@FreshFromFlorida.com](mailto:Patricia.Lucas@FreshFromFlorida.com)

Patricia Lucas is a Laboratory Supervisor for the State of Florida regulatory laboratories serving as the Bureau Chief for the Bureau of Agricultural Environmental Laboratories of the Florida Department of Agriculture and Consumer Services. She has been supervisor for more than five years and has expertise or can draw on expertise of her staff. The Bureau conducts analysis of commercial feed, seed, fertilizer, agricultural liming materials, and pesticide formulations in Florida to ensure compliance with labeling. Analysis of fertilizers includes testing for urea and trace metals. Lucas is one of Florida's Control Officials for AAFCO, AAPCO, and is active in AAPFCO. She is also a member of the Florida Fertilizer & Agrichemical Association.

## **SCOTT SABEL**

Simplot  
1150 W Hwy 30  
Pocatello, ID 83204  
208-241-7901  
[scott.sabel@simplot.com](mailto:scott.sabel@simplot.com)

Scott Sabel is the Laboratory Superintendent and Manager at J. R. Simplot Company which is a fertilizer mixing company. Scott has been a manager for over 10 years testing trace metals routinely and has expertise in spectroscopy, inorganic and analytical chemistry.

## **JACK SCHMANSKY**

The Scotts Miracle-Gro Company

14111 Scottslawn Road

Marysville, OH 43040

937-644-0011

[jack.schmansky@scotts.com](mailto:jack.schmansky@scotts.com)

**Summary:** Jack Schmansky holds a Bachelor of Science degree in Molecular Genetics and has 14 years of experience at The Scotts Company. His current position is the Elementals Lead Senior Scientist for Analytical Research Laboratory at The Scotts Miracle-Gro Company. Has a great knowledge and experience in testing urea fertilizers and HPLC analysis.

**Skills:** Analytical Chemistry, Biochemistry, Microbiology, Molecular Biology, Ion Chromatography, GC, HPLC, GLP

### **PROFESSIONAL EXPERIENCE**

- 2008 - present. Senior Scientist, The Scotts Miracle-Gro Company
- 2005 - 2008. Scientist, The Scotts Miracle-Gro Company
- 2001 - 2005. Senior Specialist, The Scotts Miracle-Gro Company
- 1997 - 2001. Quality Control Specialist, The Scotts Miracle-Gro Company

### **EDUCATION**

- B.S. The Ohio State University, 1980

### **ORGANIZATIONS**

- American Chemical Society
- Association of American Plant and Food Control Officials (AAPFCO)





**AOAC Official Methods of Analysis<sup>SM</sup> (OMA)  
AOAC Expert Review Panel for Solids in Syrups**

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## MEMORANDUM

**DATE:** February 28, 2017

**TO:** Members of the Official Methods Board

**FROM:** La’Kia Phillips, Conformity Assessment Coordinator

**SUBJECT:** **AOAC Research Institute**  
**AOAC Official Methods of Analysis<sup>SM</sup> (OMA) Expert Review Panel for Solids in Syrups**

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## BACKGROUND

The AOAC Expert Review Panel for Solids in Syrup is slated to meet on Thursday, March 16, 2017 from 1:00pm to 5:00pm during the 2017 AOAC INTERNATIONAL Mid-Year Meeting being held at the [Gaithersburg Marriott Washingtonian Center](#), located at 9751 Washingtonian Boulevard, Gaithersburg, MD 20878.

The AOAC Expert Review Panel for Solids in Syrups will meet to discuss the proposed modification to AOAC Official Method 932.14: Solids in Syrups. The AOAC Research Institute announces a notification of a proposed change in status of an AOAC First Action Official Method 932.14: Solids in Syrups [Final Action] as submitted by Cott Beverages. The open public comment period for the proposed modification of AOAC Official Method 932.14 will be posted for a minimum of 30 days. The comment period closed on December 30, 2016. Comments will be compiled, reviewed, and intended to obtain input on the proposed modification. The documents may be revised if necessary, based on comments received. Any interested party may submit comments. As of today, February 6, 2017, we have not to date received any comments regarding this method for modification.

## RECOMMENDATION

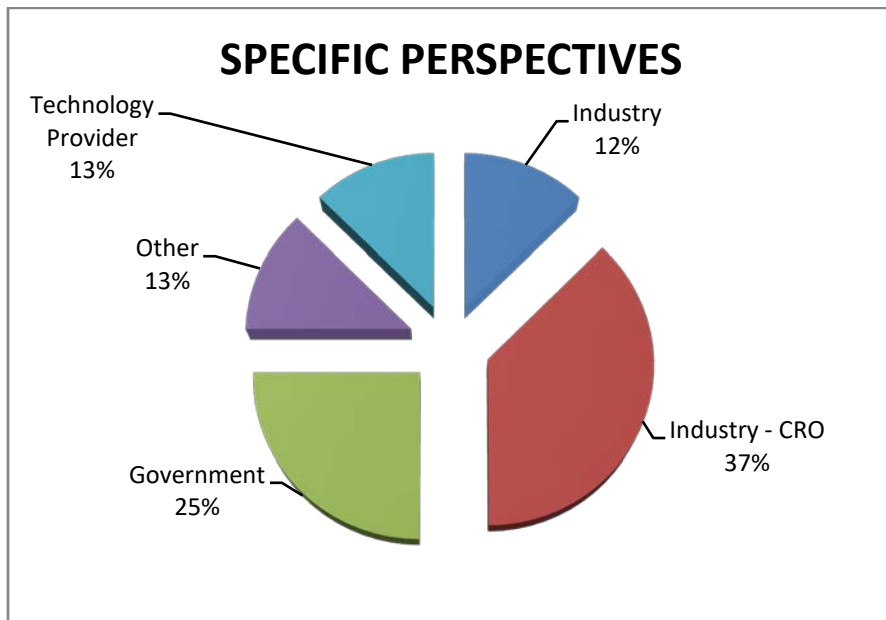
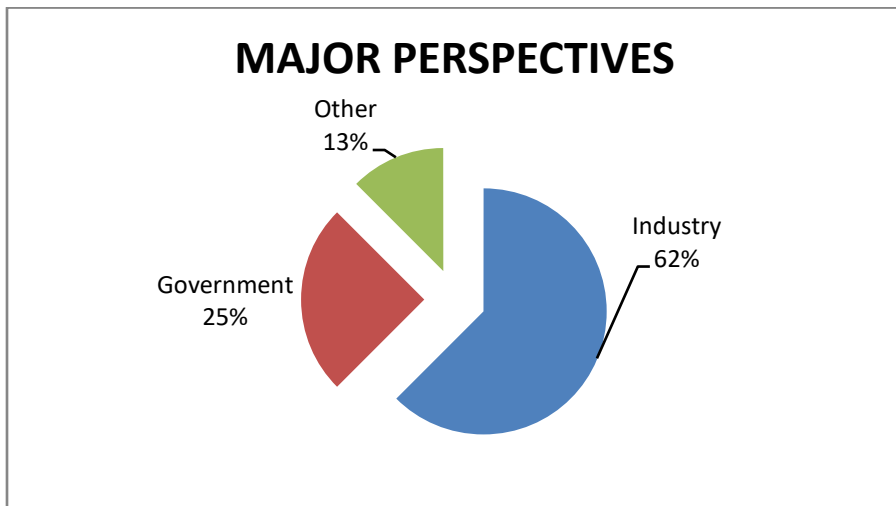
The following candidates are highly recommended and/or have demonstrated expertise via their submission to the AOAC Call for Experts. All proposed candidates will be required to attend the mandatory AOAC Expert Review Panel Orientation webinar that will be held during the month of February, 2017. Incoming Expert Review Panel Chairs will also be trained on the AOAC Expert Review Panel process.

The following eight (8) candidates are being submitted for consideration by the Official Methods Board to evaluate candidate methods for Solids in Syrups as per the Expert Review Panel (ERP) Policies and Procedures. Sneha Bhandari, Jo Marie Cook, Mohamed Hamad, George Joseph, Dana Krueger, Eleftheria Katechaki, Tom Phillips, and Prem Virmani.



**CURRENT EXPERT REVIEW PANEL ROSTER & PERSPECTIVES**

<b>Name</b>	<b>Organization</b>	<b>Perspectives</b>	<b>Status</b>
SNEH BHANDARI	Silliker Laboratories	CRO	New
Jo Marie Cook	Florida Department of Agriculture	Domestic State government	New
MOHAMED HAMAD	MICROBAC	CRO	New
GEORGE JOSEPH	AsureQuality	Technology Provider	New
DANA KRUEGER	Krueger Food Laboratories	CRO	New
Eleftheria Katechaki	Agricultural Cooperatives' of Union	Other	New
Tom Phillips	MD Dept of Agriculture	Domestic State government	New
PREM VIRMANI	Cott Beverages (Retired)	Industry	New





**Summaries of Expertise**  
**AOAC Expert Review Panel for Solids in Syrups**

**SNEH BHANDARI**

I am involved in nutritional analysis in food over last 25 years from various perspective. Reviewed solids in syrup method 932.14, 988.06 and extensively and reviewed the study slv of of 932.14 using digital density meter.

**JO MARIE COOK**

*Expertise to be discussed by the AOAC Official Methods Board.*

**MOHAMED HAMAD**

PHD in chemistry and director of food chemistry and Nutrition

**GEORGE JOSEPH**

Over 25 years of experience in analytical chemistry laboratory.

**DANA KRUEGER**

I have been involved with analysis of sugar based food products (juices, sweeteners and syrups) for over 30 years. I am familiar with most of the widely used test methods in this field. I gave an oral presentation last year on the subject of methods of solids analysis (focused on fruit juices) at the TCJP meeting in association with last year's AOAC annual meeting.

**ELEFThERIA KATECHAKI**

PhD in Chemistry

Thesis title: "Effect of thermally dried starter cultures on ripening of hard-type cheeses"

Expertise in the fields of food microbiology, immobilized cells technology, fermentation, exploitation of whey for the production of starter cultures, sensory evaluation

Researcher in the programmes: "Exploitation of whey for the production of novel foods and products of added-value employing biotechnological methods" , "Integrated management of entomological and microbiological risks during processing, storage and transport of currants by using non-chemical, environmentally compatible methods: sustainability in practice" , "Obesity and metabolic syndrome: Nutritional intervention with currants in Non-alcoholic fatty liver disease / Non-alcoholic steatohepatitis (NAFLD / NASH). Investigation of molecular mechanisms of action" , Expertise in the fields of food chemistry and technology, food biotechnology, nutrition, food microbiology, immobilized cells technology, fermentation, exploitation agro industrial wastes, sensory evaluation, chromatography analysis, moisture analysis, acidity analysis, protein analysis.

**TOM PHILLIPS**

*Expertise to be discussed by the AOAC Official Methods Board.*

**PREM VIRMANI**

Spent 47 years working for major soft drink companies in various capacities. Created and helped created countless soft drinks, did or guided analysis including brix measurements using hydrometers, pycnometers, refractometers and DMA (densitometers).

# Sneh Bhandari

## Current Position

Chemistry Research & Development Director,  
Silliker Laboratories, 3600 Eagle Nest Drive, Crete, IL 60417.

## Experience

Since May, 1997                      Silliker Laboratories                      Crete, IL

### Chemistry Research Director

- Direct & Manage the chemistry research and serves as a resource to the Silliker clients to resolve their analytical issues.
- Working with corporate to plan budget, growth and development of the department.
- Write proposals to justify research studies. Create research reports to summarize the findings and discuss those in relation to the objective and existing knowledge.
- Design research studies, experiments and protocols. Work with in guidelines of ISO 17025.
- Work with National & International Agencies to lead efforts in improving method of food, dietary supplement analysis
- Fellow of AOAC. Expert review panel and strategic committee member for AOAC SPIFAN program.
- Chair AOCS Analytical Division.
- Member Chromatography Division, AOCS
- Help clients about regulatory guide lines (FDA, USDA) including nutritional labeling.
- Wrote a chapter on food hazards resulting from environmental, industrial and agricultural contaminants.
- Made various presentations at professional and scientific meetings including AOAC, IFT, AOCS etc.
- Managed special projects like stability testing, method validation including studies to fill in the gaps cited in FDA form 483 and other audits.
- Helped clients to study oil authenticity and also oil adulteration.
- Served on various AOAC Expert Review Panels and Stakeholder Panels.
- AOAC Technical Committee member for Additives (2004-2007).
- Was involved in EPR for vitamin E analysis in dietary supplements (AOAC task force; FDA/NIH ).
- Develop and write SOPs, Policies and the method protocols to be used in routine functions of the lab.
- Validated HPLC/GC methods to analyze various nutritionally important food analytes, i.e., tocopherols, tocotrienols, vit K, nutraceuticals, capsaicin, cholesterol & phytosterols. sugars, sugar alcohols etc.

1995–1997                      Silliker Laboratories                      Chicago Heights, IL

### Research Manager

- Managed Research Department.
- Developed and validated various new HPLC methods for analysis including B-lactam antibiotics in milk, vitamin K analysis using post-column, derivatization, iodine by ion-chromatography with PAD, amino acids analysis, hydroxy-citric acid, benzocaine, resorcinol, carotenoids, ginginosides, aspartamae and its degradatory products.
- Participated in AOAC collaborative study on ethoxyquin.

1990–1995                      Silliker Laboratories                      Chicago Heights, IL

### Method Development Specialist

- Managed and supervised instrumental and vitamin dept.

- Developed/validated various new HPLC methods for vitamins, preservatives, organic acids etc.
- Participated in AOAC collaborative study on vitamin D analysis by HPLC.

1987–1990 Dept of Food Science & HN, Gainesville, FL

#### **Postdoctoral Research Associate**

- Studied metabolism and bioavailability of folate vitamers in humans using stable isotopes analyzed using mass-spec.
  - Synthesized various stable isotopes of folates and purified using HPLC & characterized by photo diode array.
  - Studied Polyglutamyl conjugase from human intestinal brush border vesicles and from porcine pancreatic juice using a HPLC assay.
  - Devised various methods of folate extraction from biological tissues assessed using HPLC methods.
- 1986–1987 Dept of Pharmacology, LSUMC, Shreveport, LA

#### **Postdoctoral Research Fellow**

- Studied mechanism of folate transport in rat kidney. Characterized folate receptor in renal brush border vesicles.
- Studied effect of ethanol on folate metabolism and bioavailability of folate vitamers in rat using radioactive isotopes.

1976–1986 Biochemistry Dept., MS University, Baroda, India

#### **Reader and Lecturer**

- Taught Biochemistry, Human Physiology and Clinical Chemistry, Human Nutrition and Food Chemistry to post-graduate students.
- Studied effects of nutritional factors on intestinal enzymes and lipids.

1982–1983 Dept. of Pediatrics, AHSC, Tucson, AZ

#### **UNESCO Postdoctoral Research Fellow**

- In vitro studies on sugar transport using everted gut sac technique and its correlation with activities of digestive enzymes.
- Studies on thyroid hormone receptors in isolated intestinal epithelial crypt and villi cells.

1977–1980 Biochemistry Dept., MS University, Baroda, India

#### **Principal Investigator**

- Studies on intestinal phosphoinositide metabolism.

1972–1976 Biochemistry Dept., MS University, Baroda, India

#### **Research Fellow**

- Studies on intestinal enzymes and biochemistry in relation to nutrition.

1972–1972 Biochemistry Dept., MS University, Baroda, India

#### **Research Fellow**

Studies on soybean hemagglutinins and trypsin inhibitors and effect of food processing on the same.

#### **Education**

1972–1977 Biochemistry Dept., MS University, Baroda, India

- Ph.D. in Nutritional Biochemistry

1970–1972 Biochemistry Dept., MS University, Baroda, India

- M.S. in Biochemistry. Specialization: Human Nutrition.

1967–1970 Jodhpur University, India

- Bachelor of Science.

Major subjects: Chemistry, Botany, Zoology and Physics.

#### **C.N.S.**

1994 Certification Board for Nutr. Sp., American College of Nutrition

- Certified Nutrition Specialist (C.N.S.)

#### **Honors**

- ◆ Chair AOCS Analytical Division, 2012
- ◆ Vice Chair AOCS Analytical Division, 2012
- ◆ Fellow of AOAC International, 2011
- ◆ Member of the AOAC Official Methods Board since 2010
- ◆ AOAC Additives Technical Committee Member
- ◆ Involved in AOCS in Chromatography Technical Committee (member fatty acid analysis group)
- ◆ AOAC Horwitz Advisor
- ◆ AOAC/FDA/NIH Expert Review Panel member – Coenzyme Q (2005)
- ◆ Serving as a Single Lab Validation Expert for Vitamin E Analysis in Dietary Supplements for AOAC/FDA/NIH Task force.
- ◆ Sweetener Technical Committee member ISBT.
- ◆ Past - AOAC Associate Referee for Vitamin E .
- ◆ Listed in Strathmore's Who's Who Directory (1995-96).
- ◆ UNESCO Postdoctoral Fellowship (1982).

#### **AOAC**

##### **Collaborative Studies Participated**

- ◆ Vitamin D in infant formula by a HPLC method AOAC 995.05 (1995).
- ◆ Ehoxyquin in feeds by a HPLC method (996.13).
- ◆ Participated in USDA led folate analysis in foods using triple enzyme method.

#### **Theses**

- ◆ Ph.D. Nutritional Studies on rat intestinal Phytase
- ◆ M.Sc. Effects of diet on Cholesterol Metabolism.

**Publication**

◆ Original Research Papers Published : 20

◆ Book Chapter : 1 (In: Handbook of Food Safety, 2003, Wiley)

◆ Presentations at Scientific meetings : 60



# JOANNE MARIE COOK (Jo Marie)

## WORK ADDRESS

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3125 Conner Blvd, Bldg. 3  
Tallahassee, FL 32399-1650  
(850) 617-7505

## EDUCATION

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Bachelor of Science in Chemistry 'With Honor' 1970, Michigan State University, Lansing MI

Information Science (34 qrt.hrs.) 1987 - 90, University of North Florida and St. Johns River Community College

Certified Public Manager, 1997, Florida State University

## WORK EXPERIENCE

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2005 - present                      *Bureau Chief*  
Florida Department of Agriculture & Consumer Services (FDACS)  
Chemical Residue Laboratories

Oversees the operations of the FDACS Bureau of Chemical Residue Laboratories including 27 residue chemists, 5 technicians, 7 field inspectors and 2 office staff. The laboratories conduct chemical residue testing of foods for pesticides, antibiotics and other targeted and non-targeted screens for toxins in foods including major federal grant programs:

Provides oversight and direction for the Department's Florida Pesticide Residue Regulatory Program as well as three major grant programs: sample collections and analysis of pesticide residues for the Pesticide Data Program; aseptic sample collections for the Food Inspection of retail grocery stores and screening for toxic and poisonous compounds for the Food Emergency Response Program. Managed Florida's BP Oil Spill laboratory program including analysis for polycyclic aromatic hydrocarbons (PAHs) and dioctyl sulfosuccinate dispersant in seafood.

The Chemical Residue Laboratories are accredited by American Association for Laboratory Accreditation (A2LA) to the ISO/IEC 17025 standard, General Requirements for the Competence of Testing and Calibration Laboratories, for the specific tests listed in certificate 2534.03:

- CR PDP Screen: Multiresidue screening of Pesticide Data Program (PDP) samples
- CR Screen 100: Multiresidue pesticides in State Program fruits and vegetables
- CR Method 403: Preparation and LC/MS/MS analysis of chloramphenicol and florphenicol in honey
- Flexible scope\*: Analysis of pesticide residues in foods using gas chromatography with MS/MS or MS<sup>n</sup> acquisition modes
- Flexible scope\*: Analysis of pesticide residues in foods using liquid chromatography with MS/MS or MS<sup>n</sup> acquisition modes or LC high resolution mass spectrometry with MS/MS or MS<sup>n</sup> acquisition modes

\*There are circumstances in which this laboratory must perform testing activities not covered on their fixed scope of accreditation, such as for additional matrices (flexibility concerning sample type) or additional parameters (flexibility concerning analytes)

2000 - 2005                      *Environmental Manager*  
Florida Department of Agriculture & Consumer Services  
Chemical Residue Laboratories

Manage the Tallahassee Chemical Residue Laboratory. Oversee day to

day technical activities to support complex trace level chemical analyses including collection and receipt of food samples; detailed organic extractions; sophisticated chromatographic instrumental analysis and computerized data reporting. Supervise and support a staff of highly trained chemists. Serve as Florida Technical Program Manager for the Pesticide Data Program (PDP) which is a national risk evaluation program conducted through Cooperative Agreements between the United States Department of Agriculture (USDA) and several selected states. Develop capabilities and provide analytical support for the Food Emergency Response Network (FERN) including analysis of highly toxic chemicals which may be used as terrorist agents. Promote new analytical capabilities in support of food safety including the analysis of antibiotics. Prepare the laboratory for ISO 17025 accreditation.

1994 – 2000

*Chemist Administrator*, Supervisor of the Gas Chromatography Section. Florida Department of Agriculture and Consumer Services, Chemical Residue Laboratory, Tallahassee, FL

Certified Public Manager. Supervise gas chromatographic (GC) analyses of trace level pesticides for the State of Florida Pesticide Residue Monitoring Program and the USDA Pesticide Data Program. Continuously improve the effectiveness of a regulatory laboratory using multiple GC selective detectors including implementation of retention time locking and validation of the new halogen specific detector (XSD). Develop methods to identify unknowns using atomic emission detection and database searching in cooperation with outside vendor. Generate data of internationally recognized quality, designed to be used by the EPA for dietary exposure determinations. Provide 24 hour analysis for the regulatory enforcement of federal pesticide residue tolerances. Develop Access and Excel applications for data handling and reporting.

1990 - 1994

*Chemist III*, Supervisor of the Gas Chromatography Section Florida Department of Health, Bureau of Laboratories Jacksonville, FL

Supervise gas chromatographic analyses of EPA priority pollutants in water including volatile organics by purge-and-trap FID, pesticides, herbicides, fumigants and other toxins by ECD and NPD. Purchase and maintain equipment. Validate new methods. Institute MS WORD, Lotus123 and DBASE documentation for procedures, inventory, results and QC.

As Chemical Safety Officer implement OSHA, DOT and EPA regulations for the handling, transportation and disposal of hazardous chemicals including the safety inspection and training of 5 state branch laboratories.

1973 - 1985

*Research Chemist*, Corporate R&D, The Coca-Cola Company, Atlanta, GA

Represented Analytical Services on an interdisciplinary technical team assigned to develop or improve a variety of products and packages. Analytical techniques including GC, LC, HPLC, IR, NMR, NIR, AA, Gas Permeation, Color Analysis, SAS programming and wet chemistry techniques were used to study flavors, gums, emulsifiers, weighting agents, unknown contaminants, impurities, product residues, plastic, metal, and glass packaging. Projects were planned, implemented, and reported inside and outside the company.

## **PROFESSIONAL MEMBERSHIPS AND COMMITTEES**

### AOAC International

Member, AOAC Official Methods Board, 2010 - 2016  
Co-Chair of the Chemical Contaminants and Residues in Food Community,  
2007 - 2012  
2007 Method Committee Member of the Year  
Secretary, Methods for Residues and Related Topics Committee, 2004 – 2007  
Methods for Residues and Related Topics Committee member, 2001 – 2007

### Southeast USA Regional Section of AOAC International

2008 Doug Hite Honorarium  
President, 2003-2004  
President elect, 2002-2003  
Secretary, 2001-2002  
Executive Committee Member, 1999 - present

Association of Public Health Laboratories, 2008 – present

Association of Food and Drug Officials, 2005 - 2009

Florida Association of Certified Public Managers, 1997 - present

American Chemical Society, 1972 - present

North American Chemical Residue Workshop, formally the Florida Pesticide Residue Workshop  
Program Chair, Organizing Committee, Web Master, Moderator, Presenter – 1994 - present

Association of Public Health Laboratories

Committee member, FDA Cooperative Agreement to Implement an Integrated Food Safety  
System. – Sampling and Data Handling groups. 2012 - present

American Chemical Society, Member since 1977

U. S Food and Drug Administration Partnership for Food Protection Laboratory Task Group –  
2008 – present

USDA Pesticide Data Program, Florida Cooperative Agreement Laboratory  
Section Supervisor, Laboratory Manager, Bureau Chief – 1994 – present.

U.S. Food and Drug Administration Food Emergency Response Network Cooperative Agreement,  
Principle Investigator – 2005 - present

## **INTERLABORATORY STUDY PARTICIPATION**

Mastovska, K., Sorenson W. R., Hajslova J., Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Seafood using Gas Chromatography-Mass Spectrometry: A Collaborative Study, Journal of AOAC International, Volume 98, Number 2, March 1, 2015, pp. 477-505(29)

Schneider, Marilyn J.; Andersen, Wendy C. Determination of Triphenylmethane Dyes and Their Metabolites in Salmon, Catfish, and Shrimp by LC-MS/MS Using AOAC First Action Method 2012.25: Collaborative Study, Journal of AOAC International, Volume 98, Number 3, May-June 2015, pp. 658-670(13)

Lehotay, S. J., et. al., Determination of Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate: Collaborative Study, Journal of AOAC International, Volume 90, Number 2, March 2007, pp. 485-520(36)

## **PUBLICATIONS:**

Aldeek, F., Canzani, D., Standland, M., Crosswhite, M., Hammack, W., Gerard, G. and Cook, J.M., 2016

Identification of Penicillin G Metabolites under Various Environmental Conditions Using UHPLC-MS-MS, J. Ag and Food Chem, DOI: 10.1021/acs.jafc.5b06150, 2/24/2016

GOODSamples. 2015. GOODSamples: Guidance On Obtaining Defensible Samples. Sampling and Sample Handling Working Group, F., AAFCO, AFDO, APHL and Industry.  
<http://www.aaeco.org/Portals/0/SiteContent/Publications/GOODSamples.pdf>

Aldeek, F., Canzani, D., Standland, M., Crosswhite, M., Hammack, W., Gerard, G. and Cook, J.M., 2016

Identification of Penicillin G Metabolites under Various Environmental Conditions Using UHPLC-MS-MS, J. Ag and Food Chem, DOI: 10.1021/acs.jafc.5b06150, 2/24/2016

Aldeek, F., Rosana, M., Hamilton, Z., Crosswhite, M., Burrows, C., Singh, S., Gerard, G., Hammack, W. and Cook, J.M., 2015, LC-MS/MS Method for Determination and Quantitation of Penicillin G and its Metabolites in Citrus Fruits Affected by Huanglongbing, J Agric. Food Chem, DOI: 10.1021/acs.jafc.5b02030 • Publication Date (Web): 14 Jun 2015

Lehotay, S.J., Cook, J.M., 2015

Sampling and Sample Processing in Pesticide Residue Analysis, . *Agric. Food Chem.*, **2015**, 63 (18), pp 4393–4394, DOI: 10.1021/jf5059599

Rogers, K., Cook, J.M., Krueger, D., Beckmann, K., 2013

Modification of AOAC Official Method 998.12 to Add filtration and/or Centrifugation: Inerlaboratory Comparison Exercise, J. of AOAC Int, V96, #3,

Brown, A.N., Cook, J.M., Hammack, W.T., Stepp, J.S., Pelt, J.V., Gerard, G, 2011

Analysis of Pesticides Residues in Fresh Produce using Buffered Acetonitrile Extraction and Aminopropyl Clean-up with GC QqQ/MS, LC QqQ/MS, GC ITD/MS and GC/XSD, J of AOAC Int., V94, #3,

Cook, Becket, Reliford, Hammack, Engel, 1999

Multiresidue Analysis of Pesticides in Fresh Fruits and Vegetables Using Procedures Developed by the Florida Department of Agriculture and Consumer Services  
J. AOAC, Vol 82, #6, 1999, pp 1419-1435

Cook, Engel, Wylie, Quimby, 1999

Multiresidue Screening of Pesticides in Foods Using Retention Time Locking, GC-AED, Database Search, and GC/MS Identification  
J. AOAC Int, Vol 82, #2, 1999, pp 313-326

Cook, J.M., Karilitz, R.L. and Dalsis, D.E., 1985

Measurement of Oxygen, Nitrogen and Carbon Dioxide in Beverage Headspace. J. of Chromatographic Science, (23), Feb. '85, pp.57-63

Radford, T., Cook, J.M. and Dalsis, D.E. 1985

Characterization of Aminosaccharins in Commercial Sodium Saccharin Produced by the Maumee Process.  
Fd. Chem. Toxic. Vol. 23, No. 4/5, pp. 419-428

Chang, S.S. and Cook, J.M. 1983.

Studies of Stevioside and Reboudioside A in Carbonated Beverages. J. of Agr. and Fd. Chem., (31), 409-412

**PRESENTATIONS (selected examples):**

European Pesticide Residue Workshop

2016: "Theory and Practical Aspects of Laboratory Sampling"

American Chemical Society joint meeting with IUPAC

2014: "Guidance to Improve Sampling Quality and Accuracy"

Florida Department of Agriculture – internal presentations

2013: Ag Café, "Ensuring the Safety of Florida's Gulf Seafood"

2011: "Ethics in Our Laboratory"

North American Chemical Residue Workshop

2015: "Theory of Sampling Guide to Quality Sample Processing"

2014: "Science without Borders"

2012: "Third Party Standards, Challenges and Possibilities"

2012: "Florida's State Report"

2012: "Florida's Response to the Oil Spill"

2011: "Florida's Annual Report"

2011: "Sampling & Accreditation"

AOAC International:

2012: "Path to Final Action – What to Expect from an OMB Review"

2012: "Update on the Chemical Contaminants and Residues Community"

2009: "Our Residues in Food Community"

2008: "Reaching Out to the Chemical Contaminants and Residues in Food Community"

Association of Public Health Officials:

2014: The Pesticide Data Program, An Overview

## Mohamed Hamad, Ph.D.

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900 Calypso Breeze Dr, Lexington, KY 40515, Phone: (859) 420 5924  
E-mail: [m\\_o\\_hamad@hotmail.com](mailto:m_o_hamad@hotmail.com)

### **Objective:**

*To work in a highly challenging environment where I can apply my experience, knowledge, and technical skills towards the advance and excellence of the organization*

### **Consultant Activity:**

Clinical Data, RTP, NC.  
Law pharma, Lexington, KY  
Nahlan, Lexington KY  
Mobley LLC, Lexington, KY  
SABIC, Jubail, Saudi Arabia  
ARAMCO, Dhahran, Saudi Arabia

### **Professional Experience:**

**Nov 2014 – present Director, Food Chemistry, Microbac Laboratories Inc.  
Pittsburgh Division, 100 Marshal Drive, Warrendale PA 15086**

- Method development on drugs and supplements using LC-MS-MS, LC-QTOF-MS, GC-MS-MS, ICP-MS
- Supervise chemists and lab manger
- Prepare manuscript, patents and reports
- Developing and performing analytical process assays and studies including analysing samples and interpreting results. Work with clients to understand project needs and work with internal groups to help manage all aspects of the project.
- Prepare manuscript, patents and reports
- analyse, interpret and prepare results for internal and external presentations.
- Supervise all the work and review all reports for ensure scientific integrity and to comply with **17025 A2LA accreditation**
- Supervise team members in obtaining team goals, and mentoring them to broaden their professional outlook.

**Dec. 2010 – Nov 2014 Chief Analytical Chemist / Associate Director, USEF Lab.  
University of Kentucky-Cold Stream, Lexington, KY**

- Method development on drugs and supplements using LC-MS-MS, LC-QTOF-MS, GC-MS-MS, ICP-MS
- Supervise chemists and lab manger
- Prepare manuscript, patents and reports

- Developing and performing analytical process assays and studies including analysing samples and interpreting results. Work with clients to understand project needs and work with internal groups to help manage all aspects of the project.
- Prepare manuscript, patents and reports
- analyse, interpret and prepare results for internal and external presentations.
- Supervise all the work and review all reports for ensure scientific integrity and to comply with **17025 A2LA accreditation**
- Supervise team members in obtaining team goals, and mentoring them to broaden their professional outlook.

**March 2008 – Aug. 2010 Food Science, University of Kentucky, Lexington/  
Chief Chemist, Nahlan Pharma, Lexington, KY**

Professor (V. Scholar-Process Analytical chemist / Chief Scientific

- Perform high throughput chemical identities analyses on complex matrices using high resolution LC-MS methodologies, electro-spray ionization, time of flight mass spectrometry (ESI-TOF-MS), and MALDI-MS
- Developing and performing analytical process assays and studies including analysing samples and interpreting results. Work with clients to understand project needs and work with internal groups to help manage all aspects of the project.
- Develop sample preparation and LC-MS analytical methods
- Process development and optimization
- Prepare manuscript, patents and reports
- analyse, interpret and prepare results for internal and external presentations.
- Perform business development trips to various external customers
- Supervise team members in obtaining team goals, and mentoring them to broaden their professional outlook.

**May 2007 – Dec. 2007 Cogenics, RTP, Morrisville, NC**

Senior Research Scientist- Mass Spectroscopy Expert

- Method development, operation, trouble shooting and maintenance on LC-MS, TOF-LC-MS, TOF-MALDI-MS, GC-MS. LC-MS-MS
- Providing leadership, focus and coordination of activities, goals and resources for Analytical projects. Sole responsibility for the design, execution, analysis, and reporting of LC-MS studies. Work effectively with others to achieve business goals and objectives. Lead internal Mass spectroscopy team and contributes to external teams.
- Develop and validate quantitative LC-MS/MS methods in a variety of matrices using state of the art separation and sample preparation techniques.
- Present research findings and project information within and outside the company.
- Developing protocol for Identifications of hundreds of chemical identities present in one sample by TOF-MS techniques, and then confirmed by MS-MS techniques.
- Manage departmental resources and actively set high goals to go beyond what is required.
- Perform QA and QC protocols for the MS instruments.
- Perform chemical analysis to support on-going studies

- Produce high quality analytical results and reports.
- Identify and resolve analytical problems using innovative solutions..
- Maintain appropriate, accurate records according to departmental SOPs using GLPs.

**Aug 2001–June 2006 University of Kentucky, Chemistry/College of Pharmacy, Lexington, KY**

Research Associate/ Postdoctoral Research Scholar

- chemical identities analyses in complex matrices using high resolution LC-MS methodologies, electro-spray ionization, time of flight mass spectrometry (ESI-TOF-MS), and MALDI-MS, and NMR
- Preparation, isolation, an identification of organic compounds and organo-metallic compounds using GC-MS, IR, UV, HPLC, LC-MS, and NMR spectroscopy.
- Process development and optimization
- Prepare manuscript, patents and reports
- analyse, interpret and prepare results for internal and external presentations.

**Nov. 2000 – Aug. 2001 ARAMCO, Dhahran, Saudi Arabia**

Consultant- chemistry

Environmental committee

**Dec1998 – Aug. 2000 KFUPM, Centre of Refining & Petrochemicals, Dhahran, Saudi Arabia**

Research Scientist/ Assistant Professor-Analytical chemist

- Fluid Catalytic Cracking of Heavy Crude Oil: Spectroscopy group leader
- Analytical: Small molecule identification. GC-MS, LC-MS & NMR
- Process development and optimization
- Crude Oil Desulphurization
- Prepare manuscript, and reports
- Mass spectroscopy Supervisor: Operation, maintenance, trouble shooting, and training
- Hydrocarbon processes were developed, characterized and optimized through different reactors and reaction parameters using experimental design. The consultant for this project was Dr. T. Inui of Japan. Thus, full analysis of catalysts, reactants, products was carried using LC-MS, HPLC, GC-MS, GC, XRF, Thermal Methods, NMR, EPR, MS, and online GCs and HPLCs connected to different reactors. Extensive Kinetic and Mechanistic studies were carried to understand and optimized these processes.

**March 1993-Feb 1994 KFUPM, LASER LAB, Dhahran, Saudi Arabia**

Scientist-II

Spectroscopic investigation of probes in polymers and other constrained media using fluorescence, and LC-MS

**Feb 1989-Feb 1992 KFUPM, Research Institute, Dhahran, Saudi Arabia.**

Chemist



Extraction and Analysis of organic pollutants from oil spill using HPLC and LC-MS. IR, UV and GC-MS.

### Academic Qualification:

2001-2003	<b>Post-Doctoral Fellowship</b> , Pharmaceutical Sciences/ Chemistry, University of Kentucky, Lexington, KY
1998	<b>Ph.D. in Chemistry</b> , Chemistry Department, KFUPM, Dhahran, S.A. (Dissertation Advisor: Dr. Jimmy Hwang)
1992	<b>M.S. in Chemistry</b> , Chemistry Department, KFUPM, Dhahran, SA
1986	<b>B.S. in Chemistry &amp; Zoology</b> , University of Khartoum, Sudan

### Instructional Activity

Spectroscopy  
Analytical Chemistry  
Pharmaceutics  
Medicinal Chemistry

### Honours and Awards

2006	AAPS Exceptional Graduate Student Research Award: Drug, Design & Discovery Award.
2001-2002	National Science Foundation, Postdoctoral Fellowship
2002-2003	National Institutes of Health, Postdoctoral Fellowship

### Professional Organizations

Member – American Chemical Society  
Member - American Association of Pharmaceutical Scientists (AAPS)  
Member - Society for Neuroscience Local Chapter

### PATENTS:

1. Peter A. Crooks, Peter; **Hamad, Mohamed**; Stinchcomb, Peter. Novel oral bioavailable prodrugs. PCT Int. Appl. (2005), 27 pp. WO 2005009377
2. Peter A. Crooks, Peter; **Hamad, Mohamed**; Stinchcomb, Audra. Opiate agonist and antagonist duplex prodrugs for transdermal delivery. UK Disclosure No. 1183,

Docket No. 50229-337, filed as a US Provisional Patent Application, No. 60, XXX, XXX, July 23<sup>rd</sup>, 2003.

3. Stinchcomb, Audra; Crook, Peter; **Hamad, Mohamed**. Enhancing transdermal delivery of opiate antagonists and agonists using codrugs linked to bupropion and hydroxybupropion. UK Disclosure No. 1426, July 25<sup>th</sup>, 2006.

## PUBLICATIONS:

4. Kiptoo, Paul K.; Paudel, Kalpana S.; Hammell, Dana C.; **Hamad, Mohamed O.**; Crooks, Peter A. Stinchcomb, Audra L. In vivo evaluation of transdermal codrug of 6- $\beta$ -naltrexol linked to hydroxybupropion in hairless guinea pigs. Eur. J. Pharm. Sc. 2008 April, 33(4-5), 371379
5. **Hamad, Mohamed O.**; Kiptoo, Paul K.; Stinchcomb, Audra L.; Crooks, Peter A. Synthesis and hydrolytic behavior of two novel tripartate codrugs of naltrexone and 6- $\beta$ -naltrexol with hydroxybupropion as potential alcohol abuse and smoking cessation agents. Bioorganic & Medicinal Chemistry, 2006, 14(20), 7051-7061.
6. Kiptoo, Paul K.; **Hamad, Mohamed O.**; Crooks, Peter A.; Stinchcomb, Audra L. Enhancement of transdermal delivery of 6- $\beta$ -naltrexol via a codrug linked to hydroxybupropion. Journal of Controlled Release, 2006, 13(2), 137-145.
7. Valiveti, Satyanarayana; Paudel, Kalpana S.; Hammell, Dana C.; **Hamad, Mohamed O.**; Chen, Jianhong; Crooks, Peter A.; Stinchcomb, Audra L. In vitro/in vivo correlation of transdermal naltrexone prodrugs in hairless guinea pigs. Pharmaceutical Research, 2005, 22(6), 981-989.
8. Paudel Kalpana S; Nalluri Buchi N; Hammell Dana C; Valiveti Satyanarayana; Kiptoo Paul; **Hamad Mohamed O**; Crooks Peter A; Stinchcomb Audra L Transdermal delivery of naltrexone and its active metabolite 6- $\beta$ -naltrexol in human skin in vitro and guinea pigs in vivo. Journal of Pharmaceutical Sciences, 2005, 94(9), 1965-1975.
9. Vaddi, Haranath K.; **Hamad, Mohamed O.**; Chen, Jianhong; Banks, Stan L.; Crooks, Peter A.; Stinchcomb, Audra L. Human skin permeation of branched chain 3-O-alkyl-ester and carbonate prodrugs of naltrexone. Pharmaceutical Research, 2005, 22(5), 758-765.
10. Hammell, D.C.; Stolarczyk, E.I.; Klausner, M.; **Hamad, M.O.**; Crooks, P.A.; Stinchcomb, A.L. Bioconversion of naltrexone and its 3-O-alkyl-ester prodrugs in a human skin equivalent. Journal of pharmaceutical sciences, 2005, 94(4), 828-836.
11. Satyanarayana Valiveti , Audra L. Stinchcomb, Dana C. Hammell, Kalpana S. Paudel, , **Mohamed Hamad**, Peter A. Crooks, , Audra L. Stinchcomb. In vivo evaluation of 3-O-alkyl-ester transdermal prodrugs of naltrexone in hairless guinea pigs. Journal of Controlled Release, 2005, 102(2):509-520.
12. Pillai, Omathanu; **Hamad, Mohamed**; Crooks, peter; Stinchcomb, Audra. Physicochemical evaluation, in vitro human skin diffusion and concurrent

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22. Paul K. Kiptoo, Paul; **Hamad, Mohamed**; Crooks, Peter; Stinchcomb, Audra. Enhancement of transdermal delivery of 6-b-naltrexol via a codrug linked to hydroxybupropion. The 2005 AAPS Annual Meeting, Nashville, TN, Nov. 06-11, 2005.

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24. Paul Kiptoo, Paul; Buchi Nalluri, Nalluri, **Hamad, Mohamed**; Crooks, Peter; Stinchcomb, Audra. Transdermal permeation of bupropion and hydroxybupropion across human skin in vitro. The 2004 AAPS Annual Meeting, Baltimore, Maryland, Nov. 05-11, 2004.
25. Vaddi, Haranath; **Hamad, Mohamed**; Chen, Jiahong; Crooks, Peter; Stinchcomb, Audra. In vitro human skin permeation of branched chain 3-O-alkyl ester prodrugs of naltrexone. The 2004 AAPS Annual Meeting, Baltimore, Maryland, Nov. 05-11, 2004.
26. Nalluri, Buchi; Paudel, Kaplana; Hammell, Dana; valiverti, Satya; Kiptoo, Paul; **Hamad, Mohamed**; Crooks, Peter; Stinchcomb, Audra. Transdermal delivery of naltrexone and its active metabolite 6- $\beta$ -naltrexol in human skin in vitro and guinea pigs in vivo. The 2004 AAPS Annual Meeting, Baltimore, Maryland, Nov. 05-11, 2004.
27. Valiverti, Satya; Hammell, Dana; Paudel, Kaplana; **Hamad, Mohamed**; Crooks, Peter; Stinchcomb, Audra. Transdermal delivery of 3-O-hexyl ester prodrugs of naltrexone in hairless guinea pigs in vivo. The 2004 AAPS Annual Meeting, Baltimore, Maryland, Nov. 05-11, 2004.
28. **Hamad, Mohamed**; J Chen, Jiahong; Vaddi, Haranath; Hammell, Dana; Stinchcomb, Audra; Crooks, Peter. Carbamate prodrugs of naltrexone for transdermal delivery. The 2004 AAPS Annual Meeting, Baltimore, Maryland, Nov. 05-11, 2004
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30. **Hamad, Mohamed**; Hammell, Dana; Stinchcomb, Audra; Crooks, Peter. A novel "gemini" prodrugs of naltrexone for transdermal delivery. The 2003 AAPS Annual Meeting, Salt Lake City, Utah, Oct. 26-30, 2003.
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# RESUME

## Profile

AsureQuality is a New Zealand government owned enterprise provides world class food safety and biosecurity services to the food and primary production sectors worldwide. As the Chemistry Technical Manager at AsureQuality Auckland laboratory, I am responsible for overall technical matters. The Auckland laboratory is the prime laboratory of AsureQuality and is currently offering wide range of analytical services to its customers including but not limited to vitamin analyses.

## Personal details

Name : George Joseph  
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Telephone DDI : +64 9 626 8237  
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Email : george.joseph@asurequality.com

## Career objective

To obtain a challenging management, administrative or technical role as deemed suitable to my skills, experience and background, to help a successful organization to expand further and to help myself grow further professionally.

## Academic qualifications

- M Sc: Cochin University of Science and Technology, India (1989)
- PhD: Cochin University of Science and Technology, India (1995)

## Personal attributes

- Excellent communication, interpersonal and problem solving skills
- Strong customer focus with orientation capability to convert queries into sales
- Well developed time management skills with the ability to perform multi-tasks
- Flexible, innovative, quick learner and committed to continuous self-improvement

## Awards / Affiliations / Training

- Excellence Award, AsureQuality 2016
- Excellence Award, AsureQuality 2011
- Excellence Award, AsureQuality 2005
- Member AOAC International
- Advisor, Proficiency Testing Australia
- Signatory Chemistry IANZ, LAS, Medsafe, TGA, Instrumentation
- Research Fellow, Department of Atomic Energy, Govt. India, 1989 to 1994
- Training, Solid Phase Extraction (Varian)
- Leadership training by Andre Vaan Heerden (AsureQuality)
- Presentation Skills Training by Kevin Simms (AsureQuality)
- Management Training on People Skills (Grafton Consulting Group, NZ)
- Health and Safety in Employment Training (BWA Group, NZ)
- HPLC Training Course (Waikato Polytechnic, Hamilton)

## **Professional Experience**

- February 2012 to current: Technical Manager, AsureQuality
- June 2009 to February 2012: Scientist / Senior Scientist, AsureQuality
- June 2006 to June 2009: Team Leader, GMP Chemistry, AsureQuality
- November 2005 to June 2006 : Scientific Analyst, Chemistry, AsureQuality
- September 2004 to October 2005: Analyst, Chemistry, AsureQuality
- February 2001 to September 2004: Team Leader, SGS New Zealand Ltd
- September 2000 to February 2001: Analyst, SGS New Zealand Ltd
- October 1994 to June 1999: Lecturer, University of Calicut, Kerala, India
- February 1989 to August 1994: Department of Atomic Energy (DAE) Research Fellow, Cochin University of Science and Technology, Cochin, Kerala, India

## **Analytical Skills and experience**

- Analysis of wide range of raw materials and finished products by Pharmacopoeia Methods
- Developed and validated Folic Acid, Biotin and Vitamin B12 methods by Biacore system for AsureQuality
- Developed and validated methods for many finished products as per various protocols following ICH guidelines.
- Analysis of food samples for nutritional panel information as per NZFSA regulations (Energy, Moisture, Ash, Protein, Fat, Saturated fat, Carbohydrate, Sugar - total, reducing, invert, sucrose and Sodium)
- Free fatty acids, Acid value, Peroxide value, Iodine value, TBA value etc
- Mercury, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Sodium, Nickel, Lead, Tin, Zinc, Arsenic etc. by AAS
- Acidity, Brix, Salt, Sulphurdioxide, Phosphorus, Water activity, Viscosity, Colour, Turbidity, Conductivity, pH etc.
- Total Dietary fibre, Insoluble dietary fibre, Soluble dietary fibre, Inulin, Resistant Maltodextrins (RMD) etc.
- Benzoic acid, Sorbic acid, Methyl & Propyl paraben, Caffeine, Theophylline, EGCG etc. by HPLC  
Organic acids – Lactic acid, Citric acid, Formic acid, Propionic acid, Malic acid etc. by HPLC
- Wine testing – Alcohol content, Sulphurdioxide, Sugar, Acidity, Heat stability
- Ethanol, Methanol, Propanol, Glycerol, Ethylene glycol, Acetone, Toluene sulphonamides etc. by GC
- Fatty acid profile by GC - Omega 3 (EPA, DHA, ALA) Omega 6, Saturated, Monounsaturated and Polyunsaturated etc.
- Antioxidants – GC
- Vitamins – Vitamin B group, C, A, D, E, K etc by HPLC or GC
- Amino acid separation by ion-exchange chromatography / GC / HPLC

- Protein – separation by electrophoresis, electrofocussing etc
- Enzyme - purification and kinetic studies
- Vanillin assay by GC or HPLC
- Wax esters by GC
- Sugar profile by GC
- Pesticide residue screening of fruits, vegetables, environmental samples and health foods by HPLC and GCMS
- Assay of veterinary preparations for Cypermethrin, Amitraz, Deltamethrin, Permethrin, Diflubenzuron, Ivermectin, Abamectin etc. by HPLC
- Phenols and Acetic Herbicides by GC – ECD
- Volatile organic compounds by Purge & Trap GCMS
- Semi-volatile organic compounds by GCMS
- Organic volatile impurities of pharmaceutical preparations by BP / USP methods by GC / HPLC
- Solid Phase Extraction (SPE), Liquid phase extraction and Gel Permeation Chromatography techniques for the sample preparation in pesticide residue analysis.
- Analysis of wool samples for permethrin and other pesticide residues by HPLC / GC
- HPLC / GC method development, validation and trouble shooting.

### **Instrumentation**

- High Performance Liquid Chromatography (HPLC)
- Liquid Chromatography and Mass Spectrometry (LCMS)
- Gas Chromatography (GC)
- Gas Chromatography Mass Spectrometry (GC-MS)
- Surface Plasmon Response, Biosensor systems (Biacore)
- UV-Visible, IR Spectrophotometry



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**President**  
**Krueger Food Laboratories, Inc.**  
**President**  
**Krueger Enterprises, Inc. (dba Geochron Laboratories)**  
**21 Alpha Road, Suite D**  
**Chelmsford, MA 01824**

**Education:**

1979-80                      University of Pittsburgh  
Pittsburgh, PA  
Graduate program in Chemistry: organic synthesis

1975-9                        Massachusetts Institute of Technology  
Cambridge, MA  
Bachelor of Science, Chemistry

**Continuing Education:**

Quality Assurance for Analytical Laboratories  
AOAC Short Course, Washington, DC (1984)

Accreditation vs. Registration  
AOAC Int./AALA Short Course, Washington, DC (1993)

**Work Experience:**

1984  
to  
Present                      Krueger Food Laboratories, Inc.  
Chelmsford, MA  
President and Founder: Direction of an  
analytical laboratory specializing in food  
analysis.

1982-4  
and  
1999  
to  
Present                      Krueger Enterprises, Inc.  
Chelmsford, MA  
President (1999 to Present): Direction of an  
analytical laboratory specializing in isotope analysis.  
Research Director (1982-4): Development of new analytical  
procedures and commercial services in the area of  
isotope analysis, particularly in the detection of  
adulterated foodstuffs.

1980-2                        KOR Incorporated  
Cambridge, MA  
Chemist: Synthesis of isotopically labelled  
compounds and specialty chemicals

## Memberships:

American Chemical Society

AOAC International

(Fellow 1997, Peer Verified Methods Advisory Committee 1994-2000, Horwitz Advisor, 2004-present, Commodity Foods Committee 1997-2006, General Referee for Flavors 1988-2000, 2006-present, Associate Referee for Vinegar 1986-1992, Associate Referee for 14C in Flavors 1988-93, Associate Referee for 13C/12C in Fruit Juices 1995-2000, Northeast Regional Section Executive Committee 1996-8, Northeast Regional Section President 1998-99, Sam-E Expert Review Panel)

Association of the Industry of Juices and Nectars of Fruits and vegetables (AIJN)  
(Code of Practice Expert Group)

Institute of Food Technologists

(Professional Member, Certified Food Technologist)

Technical Committee for Juice and Juice Products (TCJJP)

(Executive Board, term 1992 to 1995, ByLaws Committee Chairman, 1993-5, Executive Board Chairman, 2005-7)

International Federation of Fruit Juice Producers (IFU)

(Commission Methods of Analysis and Statistical Working Group)

American Oil Chemists Society

American Society of Brewing Chemists

Grocery Manufacturer's Association

(Food Industry Analytical Chemists Committee)

United States Pharmacopeia (USP)

(Expert Committee on Food Ingredient, 2015-2020 term)

## Publications:

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Krueger, R.-G., and Krueger, D. A., Detection and Estimation of Corn Syrup in Barley Malt Syrup Using Carbon SIRA, abstract 101st International Meeting of the Association of Official Analytical Chemists (1987)

Krueger, D. A., Detection of Adulterated Orange Juice, in Ready to Serve Citrus Juices and Juice Added Beverages: 1988 Food Industry Short Course Proceedings, R. F. Matthews, ed., (1988) IFAS and IFT Florida Section

Krueger, D. A., Applications of Stable Isotope Ratio Analysis to Problems of Fruit Juice Adulteration, in Adulteration of Fruit Juice Beverages, S. Nagy, J. Attaway and M. Rhodes, eds., (1988) Marcel Dekker

Krueger, D. A., Detection of Synthetic Flavoring Materials Using Hydrogen Stable Isotope Ratios, abstract 102nd International Meeting of the Association of Official Analytical Chemists (1988)

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Krueger, D. and R.-G. Krueger, Sample Preparation Bias in Carbon Stable Isotope Ratio Analysis of Fruit Juices and Sweeteners, abstract 105th International Meeting of the Association of Official Analytical Chemists (1991)

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Krueger, D. A., Detection of Beet Sugar in Maple Syrup by Hydrogen Stable Isotope Ratio Mass Spectrometry, abstract 112th International Meeting of the Association of Official Analytical Chemists (1998)

Krueger, D. A., Identification of the Marker Disaccharides Indicating Hydrolyzed Inulin Syrup Addition to Fruit Juices, abstract 112th International Meeting of the Association of Official Analytical Chemists (1998)

Krueger, D. A., New Developments in Stable Isotope Ratio Analysis of Fruit Products and Syrups, in *Food Authenticity Workshop*, Nicolas Sennequier, Ed. (1998) ENI Laboratories, Montreal, September 13, 1998

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Krueger, D. A., Detection of Adulterated Agave Syrup, abstract 124th International Meeting of the Association of Official Analytical Chemists (2010)

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Krueger, D. A., Composition of Sweet Cherry Juice, abstract 128th International Meeting of the Association of Official Analytical Chemists (2014)

Krueger, D. A., Authentication of Pure Coconut Water, abstract PittCon 2015 (2015)

Krueger, D. A., Recent Problems of Economic Adulteration of Fruit Juices in the American Market, abstract 129th International Meeting of the Association of Official Analytical Chemists (2015)

## Europass Curriculum Vitae



### Personal information

**First name(s) / Surname(s)** **Eleftheria Katechaki**  
**Address(es)** 94 Kanakari Str., 26221, Patras, Greece  
**Telephone(s)** 00302610990171 **Mobile:** 00306947321427  
**E-mail** elkatehaki@hotmail.com  
**Nationality** Hellenic  
**Date of birth** 08/12/1980  
**Gender** Female

### Work experience

<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>30/03/2016 - present</p> <p>Technical Expert</p> <p>Assessment of Eurostars applications</p> <p>EUREKA Secretariat AISBL, Rue Neerveld 107, 1200 Brussels, Belgium</p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>11/09/2015 - present</p> <p>Technical Expert</p> <p>Assessment of Phase 2 applications to Innovation Fund Denmark's Large Scale Projects</p> <p>Innovation Fund Denmark, Østergade 26 A, 4. Sal, DK – 1100 København K, <a href="http://innovationsfonden.dk">http://innovationsfonden.dk</a></p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p>	<p>21/10/2014 - present</p> <p>Chemist researcher</p> <p>Quality Assurance Manager, R&amp;D, Quality Control Manager in accredited laboratory Participation in national research programmes co-funded by European Union (postdoctoral fellow):</p> <ul style="list-style-type: none"> <li>• PAVET 2013 "Integrated management of entomological and microbiological risks during processing, storage and transport of currants by using non-chemical, environmentally compatible methods: sustainability in practice" (1442-BET-2013)</li> <li>• SYNERGASIA 2009 "Obesity and metabolic syndrome: Nutritional intervention with currants in Non-alcoholic fatty liver disease / Non-alcoholic steatohepatitis (NAFLD / NASH). Investigation of molecular mechanisms of action" (ΣYN2009-890)</li> </ul>
<p><b>Name and address of employer</b></p> <p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p>	<p>Agricultural Cooperatives' Union Aeghion SA, 201 Korinthou Str., 25100, Aeghion, <a href="http://www.pesunion.gr">www.pesunion.gr</a></p> <p>05/2014 - present</p> <p>Technical expert</p> <p>Research programme physical object monitoring and certification ("Bio-functional rice production with absorption of micro ingredients from herbal extracts")</p>
<p><b>Name and address of employer</b></p> <p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p>	<p>Greek General Secretariat for Research &amp; Technology, 14-18 Mesogeion Av., 11510, Athens, <a href="http://www.gsrt.gr">www.gsrt.gr</a></p> <p>22/03/2004 - 30/04/2016</p> <p>Freelance chemist</p> <p>Work experience in industry, research, process development, product validation, quality control, chemical analysis, evaluations, development of educational material, adult education</p>



Dates	01/07/2015 - 31/08/2015
Occupation or position held	Implementation and support of the necessary development processes of mixed university courses a) Chemistry II for the Department of Geology and b) General Chemistry for the Department of Biology in Open eClass platform
Main activities and responsibilities	Adjustment of theoretical and laboratory course material in accordance with a specific standard, educational material collection and organization, digitization, documentation in Open eClass platform, control and confirmation of accessibility
Name and address of employer	University of Patras
Dates	04/08/2014 - 31/07/2015
Occupation or position held	Researcher
Main activities and responsibilities	Study on the professional development of Hellenic Open University' graduates and the degree of convergence of the skills they have acquired to real labor market needs.
Name and address of employer	Hellenic Open University, 18 Parodos Aristotelous Str., 26335, Patras, <a href="http://www.eap.gr">www.eap.gr</a>
Dates	01/04/2014 - 31/05/2015
Occupation or position held	External partner of Computer Technology Institute and Press "Diophantus"
Main activities and responsibilities	Coordination and support of volunteer teachers that are members of the Network, for the implementation of individual activities and encouraging their participation and cooperation. Support and organization of local actions (seminars, workshops, etc)
Name and address of employer	Computer Technology Institute and Press "Diophantus", Panepistimioupoli Patron, 26500, Rion, Patras, <a href="http://www.cti.gr">www.cti.gr</a>
Dates	04/10/2004 - 07/02/2014
Occupation or position held	Professor
Main activities and responsibilities	Teaching of chemistry, food chemistry, microbiology, quality control, technology, environment, hygiene and safety at work, food hygiene, physics, cosmetology, aromatherapy, pharmaceutical technology, laboratory of pharmaceutical physics
Name and address of employer	IEK Patras (289 Akrotiriou Str., 26332, Patras), 2 <sup>nd</sup> IEK Patras (5 Gianitson Str., 26223, Patras), IEK Aigiou (Xiroolithion, 25100, Aigio), IEK OAED Patras (21 Panepistimiou Str., 26504, Rio), IEK AKMI (61 St. Andreou Str., 26221, Patras)
Type of business or sector	Public and private Institutes of Vocational Training
Dates	01/01/2005 - present
Occupation or position held	Seminar instructor
Main activities and responsibilities	Teaching of food hygiene and safety, pollution control, anti-pollution systems, hospital waste management, laboratory accreditation ISO17025/2005, official inspection in the field of food additives, official inspection in the field of wine and beer
Name and address of employer	Computer Practica (51 Ermou Str., 26221, Patras), KEK Achaïas-NELE (16 Aftokratoros Theodosiou Str., 26333, Patras), KEK GSEVEE (170 Panepistimiou Str., 26443, Patras), Social Multicenter of ADEDY (4 Dioskouron & Polignotou Str., 10555, Athens), National Centre for Public Administration and Government (211 Pireos Str., 17778, Tayros, Athens), KAELE (42 Mitropoleos Str., 10563, Athens), EFET (Hellenic Food Authority, 124 Kifisias Str., 11526, Athens)
Type of business or sector	Vocational Training Centres
Dates	01/12/2010 - present
Occupation or position held	External partner of Hellenic Organization for Standardization (ELOT)
Main activities and responsibilities	Development of Standard ELOT 1439 "Organization friendly to citizens with disabilities - Requirements and Recommendations"
Name and address of employer	ELOT SA, 50 Kifisou Av., 12133, Athens, <a href="http://www.elot.gr">www.elot.gr</a>
Type of business or sector	Legal entity governed by private law
Dates	01/01/2010 - present
Occupation or position held	Evaluator
Main activities and responsibilities	Evaluator for sustainability reporting enterprises in the competition «BRAVO» (open consultation on reporting and sustainable development)
Name and address of employer	QualityNet Foundation, Pentelis Avenue 138, ZIP:152 34 Chalandri, <a href="http://www.qualitynetfoundation.gr">www.qualitynetfoundation.gr</a>
Type of business or sector	Non Profit Private Legal Entity
Dates	04/04/2012 - present

Occupation or position held	Evaluator
Main activities and responsibilities	Evaluation of investment proposals in the programmes: <ul style="list-style-type: none"> <li>• "Aid for SMEs active in the sectors of Manufacturing, Tourism, Commerce - Services"</li> <li>• "National Contingency Reserve Programme"</li> </ul>
Name and address of employer	Authority for operational programme "Competitiveness and Entrepreneurship" (EFEPAE), 119 Sevastoupoleos Str., 11526, Athens, <a href="http://www.efepae.gr">www.efepae.gr</a>
Type of business or sector	Non Profit Private Legal Entity
Dates	23/04/2012 - 31/10/2013
Occupation or position held	External partner of Computer Technology Institute and Press "Diophantus"
Main activities and responsibilities	Developing and deploying conventional and digital media in education and lifelong learning, publishing printed and electronic educational materials, administrating and managing the Greek School Network, supporting the organization and operation of the electronic infrastructure of the Greek Ministry of Education, Lifelong Learning and Religious Affairs and all educational units.
Name and address of employer	Computer Technology Institute and Press "Diophantus", Panepistimioupoli Patron, 26500, Rion, Patras, <a href="http://www.cti.gr">www.cti.gr</a>
Type of business or sector	Legal entity governed by private law
Dates	15/5/2013 - 15/6/2013
Occupation or position held	Inspector
Main activities and responsibilities	Inspector of Food Health and Safety in CARREFOUR
Name and address of employer	Quality Cycle Company
Type of business or sector	Private company
Dates	02/11/2010 - 30/06/2012
Occupation or position held	Hourly paid professor in Secondary Education
Main activities and responsibilities	Teaching of chemistry and physical sciences
Name and address of employer	SDE (School of Second Chance) Patras, EPAL Kato Achaïas, Lykeio Halandritsas, 4 <sup>nd</sup> EPAL Patron
Type of business or sector	Secondary Education
Dates	14/07/2009 - 31/12/2010
Occupation or position held	Inspector and assesor
Main activities and responsibilities	Inspector and assessor of private Institutes of Vocational Training as a specialist in the field of Chemical Industry Professional
Name and address of employer	Organization of Vocational Education and Training (OEEK), 49-45 Konstantinoupoleos Str., 11855, Athens
Type of business or sector	Public Entity
Dates	13/10/2006 - 31/12/2009
Occupation or position held	Universitary assistant
Main activities and responsibilities	Supervision of undergraduate and postgraduate students
Name and address of employer	University of Patras, Department of Chemistry, 26504, Rio, <a href="http://www.upatras.gr">www.upatras.gr</a>
Type of business or sector	Academic Organisation
Dates	14/05/2007 - 29/06/2008
Occupation or position held	Examiner and examination marker in National Accreditation Examinations of Institutes of Vocational Training (IEK)
Main activities and responsibilities	Oral examination and examination marking of trainees from public Institutes of Vocational Training (IEK)
Name and address of employer	PEEP of Western Greece, 289 Akrotiriou Str., 26332, Patras
Type of business or sector	Public Certification Commission
Dates	19/04/2006 - 31/03/2008
Occupation or position held	Researcher, funded by Greek General Secretariat for Research & Technology (GSRT)
Main activities and responsibilities	Exploitation of whey for the production of novel foods and products of added-value employing biotechnological methods
Name and address of employer	University of Patras, Department of Chemistry, 26504, Rio, <a href="http://www.upatras.gr">www.upatras.gr</a>
Type of business or sector	Academic Organisation

## Education and training

Dates	2006 - 2010
Title of qualification awarded	PhD in Chemistry
Principal subjects/occupational skills covered	Thesis title: " <i>Effect of thermally dried starter cultures on ripening of hard-type cheeses</i> ", research in the fields of food microbiology, immobilized cells technology, fermentation, exploitation of whey for the production of starter cultures, ripening acceleration, sensory evaluation
Name and type of organisation providing education and training	University of Patras, Rio, Greece
Dates	2002 - 2004
Title of qualification awarded	Master of Science in Food Biotechnology
Principal subjects/occupational skills covered	Enterprise in Biotechnology, Recombinant DNA Technology, Process Biotechnology, Research Design and Statistics, Food Microbiology and Preservation, Food Biotechnology, Food Chemistry, Advanced exercises in Food Chemistry and Biotechnology Final year project in the production of yogurt with probiotic starter culture ( <i>Lactobacillus casei</i> )
Name and type of organisation providing education and training	University of Patras, Rio, Greece University of Ulster, Coleraine, UK University of Ioannina, Ioannina, Greece
Dates	1998 - 2002
Title of qualification awarded	Bachelor of Science in Chemistry
Principal subjects/occupational skills covered	General, Organic, Inorganic, Analytical, Physical Chemistry and Biochemistry Final year project in Biochemistry (isolation of envelope membranes and photosystem II from spinach, determination of chlorophyll, impact of UV-A radiation on photosystem II activity, isolation of alliinase from garlic, application of affinity chromatography)
Name and type of organisation providing education and training	University of Crete, Heraklion, Greece

## Personal skills and competences

Mother tongue(s) **Greek**

Other language(s)

Self-assessment

European level (\*)

### English

(Certificate of Proficiency in English, University of Michigan)

### French

(Certificat de Langue Française, Institut Française d' Athènes)

### Spanish

(DELE C1, Instituto Cervantes)

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

(\*) [Common European Framework of Reference for Languages](#)

Computer skills and competences

Windows, Word, Excel, Internet Explorer, Access, PowerPoint, Outlook (Certificate of ECDL Core), Origin, CS ChemDraw Pro, ISIS/Draw, MathType, ABBYY FineReader, blind typing

## SCHOLARSHIPS

- Scholarship awarded from Alexander S. Onassis Public Benefit Foundation for post-graduate studies (2003-2004)
- Scholarship awarded from Greek State Scholarship Foundation for post-graduate studies (2002-2003)
- Scholarship awarded from University of Patras for post-graduate research (2002-2003)

## AWARDS

Torchbearer in Vancouver 2010 Torch Relay as representative of sciences and arts

## MEMBERSHIPS

- Association of Greek Chemists
- EFET (Hellenic Food Authority) Register of Instructors
- EKEPIS (National Accreditation Centre of Vocational Training Structures and Accompanying Support Services) Register of Instructors
- EKDDA (National Centre for Public Administration and Local Government) Register of Instructors
- EYSEKT (Special Service for Coordination and Monitoring of European Social Fund Actions) Central Register of Evaluators
- IKY (Greek State Scholarship Foundation) Register of Evaluators
- EFEPAE (Authority for operational programme "Competitiveness and Entrepreneurship") Register of Evaluators
- GSRT (General Secretariat for Research and Technology) Register of Evaluators
- EOPPEP (National Organisation for the Certification of Qualifications & Vocational Guidance) Register of Evaluators and Inspectors
- Scholars' Association of the Alexander S. Onassis Public Benefit Foundation
- EUREKA high-level Technical Experts database
- Central European Initiative List of Experts in European and international affairs March 2015
- National Center for Educational Quality Enhancement (NCEQE) database of International Experts
- Interreg CENTRAL EUROPE MA database of Experts

## JOURNAL PEER REVIEWER

- International Journal of Food Engineering and Technology
- Science Journal of Chemistry
- Journal of Food: Microbiology, Safety & Hygiene
- Journal of Agriculture, Food Systems, and Community Development
- Journal of Higher Education Outreach and Engagement

Driving licence

CAT. B

## Additional information

## PUBLICATIONS

In international journals:

- Katechaki E., Panas P., Rapti K., Kandilogiannakis L. and Koutinas A.A. (2008). Production of hard-type cheese using free or immobilized freeze-dried kefir cells as a starter culture. *Journal of Agricultural and Food Chemistry*, 56, pp. 5316-5323.
- Koutinas A.A., Papapostolou H., Dimitrellou D., Kopsahelis N., Katechaki E., Bekatorou A. and Bosnea L. (2009). Whey valorisation: A complete and novel technology development for dairy industry starter culture production. *Bioresource Technology*, 100, pp. 3734-3739.
- Katechaki E., Panas P., Kourkoutas, Y., Koliopoulos, D., and Koutinas A.A. (2009). Thermally-dried free and immobilized kefir cells as starter culture in hard-type cheese production. *Bioresource Technology*, 100, pp. 3618-3624.
- Koutinas, A. A., Bekatorou, A., Papapostolou, H., Kopsahelis, N., Katechaki, E., Dimitrellou, D., Panas, P., Sideris, K., Kallis, M., Bosnea, L. A., Koliopoulos, D., Sotiropoulos, P., Panteli, A., Kourkoutas, Y., Kanellaki, M., and Soupioni, M. Scale-up of thermally dried kefir production as starter culture for hard-type cheese making: An economic evaluation. *Applied Biochemistry & Biotechnology*, Published online: 17 May 2009.

Katechaki, E., Solomonidis, T., Bekatorou, A. and Koutinas, A.A. (2010). Thermal drying of *Lactobacillus delbrueckii* subsp. *bulgaricus* and its efficient use as starter for whey fermentation and unsalted cheese making. *Applied Biochemistry & Biotechnology*, Published online: 03 February 2010.

Katechaki, E. (2015). Integrating women into new European labour market / Developing the policies of Agricultural Cooperatives' Union – Aeghion S.A. according to Sedex Members Ethical Trade Audit (WEP). *InGRID TNA Activity Report*, Centre d'études de l'emploi (CEE) <https://inclusivegrowth.be/downloads/tna-activity-reports/c13-03-report-elftheria-katechaki.pdf>

In international conferences:

Katechaki E., Bakoyianis V., Psarianos C. and Koutinas A.A. Dairy products with low cholesterol content: A review. *2<sup>nd</sup> International Congress on Bioprocesses in Food Industries*. 18-21 of June 2006, Patras, Congress Proceedings, pp. 107-108.

Katechaki E., Koutinas A.A. and Bekatorou A. Evaluation of dried starter cultures for unsalted hard type cheese production. *4<sup>th</sup> International Greek Biotechnology Forum*. 2-3 of February 2008, Athens.

Katechaki E. and Koutinas A.A. Use of whey as raw material for the production of starter cultures in hard type cheeses ripening. *2<sup>nd</sup> International Conference For Waste Valorisation*. 2-5 of June 2008, Patras, Congress Proceedings, pp. 325-326.

Koutinas A.A., Papapostolou D., Bekatorou A., Kopsahelis N., Katechaki E. and Bosnea L. Whey valorization: A complete and novel technology development for starter cultures production employed in dairy industry. *2<sup>nd</sup> International Conference For Waste Valorisation*. 2-5 of June 2008, Patras, Congress Proceedings, pp. 145.

Katechaki E. Have working conditions really improved for researchers? EURAXESS – *Voice of the Researchers Conference*. 21-22 of November 2013, Area 2, Brussels.

Panagopoulou E.A., Chiou A., Christea M., Katechaki E., Katharakis D., Alexandridou C. and Karathanos V.T. Simultaneous determination of water-soluble vitamins in Corinthian currants (*Vitis Vinifera* L., var. *Apyrena*) by reversed phase high pressure liquid chromatography (RP-HPLC). *29<sup>th</sup> EFFoST International Conference*. 10-12 of November 2015, Athens, Congress Proceedings.

#### PARTICIPATIONS IN CONFERENCES/TRAINING COURSES

- 05/10/2015 – 09/10/2015, “Integrating women into new European labour market / Developing the policies of Agricultural Cooperatives' Union – Aeghion S.A. according to Sedex Members Ethical Trade Audit (WEP)” study visit carried out in Centre d'études de l'emploi (CEE), Paris, France.
- 06/05/2014 – 18/07/2014, “Recent bioanalysis techniques in health, agriculture, environment and nutrition sector” (150 hours).
- 06/04/2015, “Sensory evaluation of foods”.
- 21/11/2013 - 22/11/2013, EURAXESS – *Voice of the Researchers Conference*.
- 12/06/2010 - 15/10/2013, “Adult Education” training courses (358 hours).
- 02/09/2013 - 06/09/2013, “Metodología del Corpus para la Reducción del Fracaso Escolar” training course carried out in Porto, Portugal, within the framework of Grundtvig programme.
- 10/04/2013 - 15/04/2013, “Introduction to Homeopathy” training course carried out in Istanbul, Turkey, within the framework of Grundtvig programme.
- 26/03/2013 - 27/03/2013, “Mentoring for Entrepreneurship”.
- 24/01/2011 - 29/01/2011, “Creating and developing a European network for inclusion: tools, instruments and methodologies” training course carried out in Potenza, Italy, within the framework of Grundtvig programme.
- 10/10/2009 - 08/06/2010, Special Education seminar (410 hours) carried out by the University of Thessaly.
- 01/10/2008 - 31/06/2009, Greek Sign Language training course (480 hours).
- 23/05/2009, Sign Language seminar.
- 08/03/2009 - 14/03/2009, “Training instructors on teaching tools” training course carried out in Madrid, Spain, at UPM Universidad Politecnica de Madrid, within the framework of LLP-LdV/VETRO/2007/EL/114 project.
- 17/12/2005 - 18/12/2005, “Fundamentals of HACCP”.
- 02/06/2008 - 05/06/2008, 2<sup>nd</sup> International Conference For Waste Valorisation.
- 02/03/2008 - 03/03/2008, 4<sup>th</sup> International Greek Biotechnology Forum.
- 18/06/2006 - 21/06/2006, 2<sup>nd</sup> International Congress on Bioprocesses in Food Industries.

- 17/12/2005 - 18/12/2005, Fundamentals of HACCP seminar carried out by the Royal Society for the Promotion of Health.
- 27/02/2004 - 28/02/2004, 1<sup>st</sup> Conference on Green Chemistry and Sustainable Development.

# Tommy D. "Tom" Phillips

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(443) 259-0523

[arathang01@hotmail.com](mailto:arathang01@hotmail.com)

**Education:** Eastern Kentucky University  
**Program:** M.S. (incomplete)  
Major: Analytical Chemistry 1993-1997

Pikeville College, Pikeville Kentucky  
**Degree Awarded:** B.S. 1979-1982  
Major: Biology  
Major: Chemistry  
Major: Mathematics

## Academic Activities and Awards

Presidential Scholar 1978-1982  
Kentucky Academy of Sciences 1979-1982  
Pikeville College Judicial Board 1980-1982

## Professional Memberships and Associations

American Chemical Society  
Association of Mass Spectrometry  
Association of Official Analytical Chemists  
Committee on Mine Water Quality  
Reviewer for Journal of Agricultural and Food Chemistry

## Professional Experience

State of Maryland, Department of Agriculture, Annapolis, MD

Chemist III, State Chemist Division

2002 -present

Administrative Responsibilities: Supervision and training of scientists and technicians on appropriate instrument use, chemical analyses, and evaluation. As a founding member of the QA/QC committee, responsibilities include preparation, implementation, and approval of Standard Operating Procedures (SOPs); implementation of standards relative to GMP, GLP, and ISO accreditations.

Analytical Responsibilities: Analyses include sample preparation, method determination, validation, and implementation. Lead investigator for routine pesticide analyses in foods, large animal feeds, soils, water. Other investigations include complex and non-routine formulation analyses of chlorinators, quaternary ammonium compounds, mixed formulation pesticides, aerosols, mycotoxins, and biological analyses of large animal feeds and feed ingredients. All investigations require data analyses and technical reports; proficient with SAS, SPSS, and Excel packages and experiment-specific VBA codes.

Instrument Responsibilities: Principal scientist responsible for the provision of technical evaluation, calibration, repair and all other phases of analytical instrument maintenance in all laboratories. Division instruments include GC, GC-MS, HPLC, ASE, CE, RT-PCR, Gel Electrophoresis, UV-Vis, and assorted detectors (e.g., photodiode array, fluorescence, Triple Quadrupole MS, FID, NPD, ECD, halogen specific).

**Analytical Chemical Services of Columbia, Inc., Columbia, MD**

**Assistant Chief Chemist**

**1997-2002**

Administrative Responsibilities: Training and supervision of all scientific staff (i.e., chemists, technicians); oversight of \$300k annual laboratory budget. Other responsibilities included establishment of QA/QC protocols and laboratory safety methods.

Analytical Responsibilities: Responsible for agricultural and environmental analyses which included product deformulation and product matching and non-routine analyses of food ingredients. Scientific evaluations included statistical evaluation of data, technical report writing, and method evaluation.

Instrument Responsibilities: Primary scientist responsible for all analytical instruments, including GC, GC-MS, HPLC, CE, RT-PCR, Gel Electrophoresis, UV-Vis, and assorted detectors (e.g., photodiode array, fluorescence, FID, NPD, ECD, halogen specific).

**Department of Public Health, Frankfort KY**

**Chemist III, Division of Laboratory Services**

**1989 –1997**

Administrative Responsibilities: Training and supervision of analytical science team as well as inspectors in the Food Safety and Cosmetic Divisions. Developed training protocols for inspectors relative to efficient and GLP/GMP sampling methods, entomological ecology, environmental contaminants and contaminant sources, which required staff cross-training. As QA Officer for Instrumentation, responsibilities included adherence to AIHA, OSHA, and EPA standards of operation and accreditation. As liaison between scientists and administrators, provided evaluation and recommendations regarding employee relations, departmental policies, and interagency relations.

Analytical Responsibilities: Principal scientist for routine analyses of environmental contaminants in food, water, soil, and air, as well as evaluation of fluoride in drinking water. Experimental methods included method determination, method validation, data analysis, and technical report writing.

Instrumental Responsibilities:

Primary scientist responsible for all analytical instruments, including GC, GC-MS, HPLC, UV-Vis, and assorted detectors (e.g., photodiode array, fluorescence, FID, NPD, ECD, halogen specific).

**Pharmacology and Toxicology Research Laboratories, Inc., Clays Ferry, KY**

**Analytical Chemist II**

**1986 –1989**

Provided chemical and biological analyses of drugs and their metabolites in serum; developed and implemented chemical analyses of pesticides and their metabolites in air, water, soil, plant, and animal tissues. Other responsibilities included experimental method development and in-house validation certifications. Administrative Responsibilities included enforcement of in-house regulations for radiological safety and decontamination of biohazards and/or radioactive materials.

Instrumental Responsibilities:

Primary scientist responsible for all analytical instruments, including GC, GC-MS, HPLC, UV-Vis, and assorted detectors (e.g., photodiode array, fluorescence, FID, NPD, ECD, halogen specific).



**University of Kentucky, College of Agriculture, Lexington, KY**

**Principal Laboratory Technician, Agronomy Department**

**1985 –1986**

Analytical responsibilities for routine analyses of soils for classification (e.g., particle size, CEC, mineralogy); and fulfillment of experiments required by doctoral candidates.

Undergraduate teaching requirements included laboratory preparation, preparation of handout materials, grading, and academic tutoring.

**References:** Available upon request.

**Prem Virmani**  
**601 Winterhavenway**  
**Columbus, GA 31094**  
**pvirmani@softdrinksolutions.com**  
**706.587.1012**

**April 2016 to Current: President, Soft Drink Solutions, LLC**

Consultation services for ideation and product formulation of soft drinks, water chemistry, and sweetener science (Nutritive and High Intensity Sweeteners)

Available for seminars on the subject matters listed above and all technical matters related to Soft drinks.

**August 1991 to April 2016**  
**Cott Beverages, Inc**  
**Sr.VP, Science & Research**

Senior Vice President of Global Science and Research for Cott Beverages, Inc, world's largest Customer Brand Soft Drink Company with revenue exceeding \$3 B from \$50 MM in 1991.

Over 25 years, built a state of the art Science & Research center in Columbus, GA.

Created a number of proprietary formulations to become the most successful soft drinks in the history of Cott Beverages.

Advised and aided in several company acquisitions including Royal Crown Cola International division and Cliff Star LLC

**Since fall of 2015**  
**Board of Trustee and Adjunct professor at Columbus State University,**  
**Columbus, GA**

Attend quarterly board meetings and teach undergraduate students on the subject of Food Science (related to Soft Drinks) in the Department of Chemistry

**1977 to 1991**  
**Royal Crown Cola Co**  
**Director of R& D**

Executed product development and directed regulatory affairs, quality control and packaging labs while leading a group of 17 scientists

Trained and taught water chemistry.

Extensive research on sweeteners (granulated sugar and High fructose corn syrup and High Intensity sweeteners)

**1969 to 1976**

**Chemist**

**Coca-Cola Export Corporation**

**Area Office of the Coca-Cola Company**

**New Delhi, India**

### **Major Affiliations**

- Member of (ISBT), International Society Of Beverage Technologists from 1978 to 2012
- Chaired sweetener committee of International Society of Beverage Technologists (ISBT) (1986 to 1988). Received award for the best Committee.
- Served on the board of ISBT (1989 to 1991)
- Member of Institute of Food Technologists
- Member of American Water works Association from 1990 to 2012
- Associated with Scientific and Regulatory Affairs of American Beverage Association (formerly National Soft Drink Association) from 1985 to 2012
- Member of ABA's Health and Wellness Committee till 2012.
- Played a role in finalizing Nutritional Labeling Education Act (NLEA) as a member of the ABA's technical committee during 1991-92.
- Member of International Technical Caramel Association (ITCA)

### **Education**

- Master of Science in Chemistry, Agra University, India (1965)
- Bachelor of Science in Physics, Chemistry and Mathematics, Agra University, India (1967)
- Master of Business Administration, Columbus State University, GA (1982)

### **Honors**

Awarded Thomas Y. Whitley Distinguished Alumnus Award, 2015 by the Alumni Association of Columbus State University, Columbus, Georgia





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## MEMORANDUM

**Date:** March 3, 2017

**To:** AOAC INTERNATIONAL Official Methods Board

**From:** Deborah McKenzie, Sr. Director, AOAC Standards Development

**Subject:** Representative Voting Members for SPSFAM

### **BACKGROUND:**

Organizational registrants as of March 1, 2017 is as follows:

*Table 1: Organizational Registrants*

Abbott Nutrition	MD Department of Agriculture
Agilent Technologies	Medical University of Lublin
Alkemist Labs	Merieux NutriSciences
American Beverage Association	Microbac Laboratories, Inc.
Archer Daniels Midland Company	Neogen Corporation
AsureQuality, New Zealand	Nestle
Audino & Associates, LLC	Ocean Spray Cranberries
Bia Diagnostics	PBM Nutritionals
Canadian Food Inspection Agency	Pepsico
Consultant	Phenomenex
Covance Laboratories	R-Biopharm
Curtis S. Phinney, CNS	Restek Corporation
DuPont Nutrition & Health	RIKILT
Eurofins	Roka Bioscience Inc.
First Source Laboratory Solutions LLP	Romer Labs, Inc.
Florida Dept. of Agriculture and Consumer Services	SCIEX
Fonterra Co-operative Group Ltd.	Shimadzu Scientific Instruments, Inc.
Food Allergy Research & Resource Program/UNL	Starbucks Coffee Company
Food Consulting Services	US FDA
FrieslandCampina	US NIST
GAAS Analytical	US Treasury (Retired)
GW Research Ltd.	US TTB

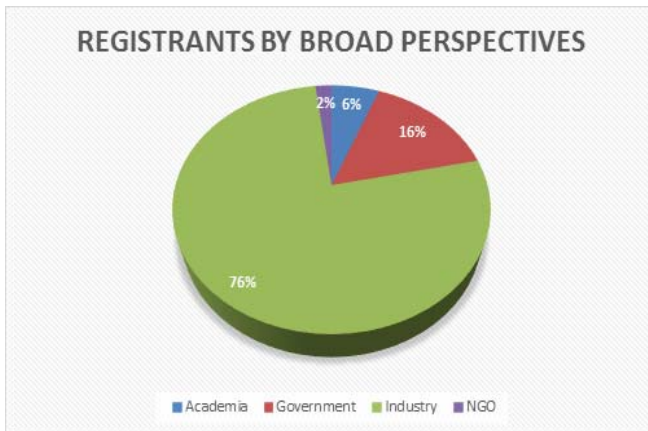
Health Canada	Valspar
McCormick & Company, Inc.	VUV Analytics, Inc
MD Department Of Agriculture	Waters Corporation
Mérieux NutriSciences	

There are several ways to analyze the perspectives of the registrants. There are three to four major categories, which are academia, government, industry, and nongovernmental organizations. Academia representatives are from educational and research organizations. Government representatives are from regulatory agencies including domestic, municipal, federal, and international.

1. Broad perspectives include a view of the registrants in terms of academia, government, industry and nongovernmental organizations.
2. Specific perspectives include further categorization of registrants by categories of industry, categories of government, and if necessary by types of academia.
3. Regional perspectives include categorization of registrants by regions of the world and/or regions of a particular region.

As needed, registrants will be further categorized as or if needed to clarify perspectives.

*Figure 1-Broad Perspectives of Organizational Registrants*



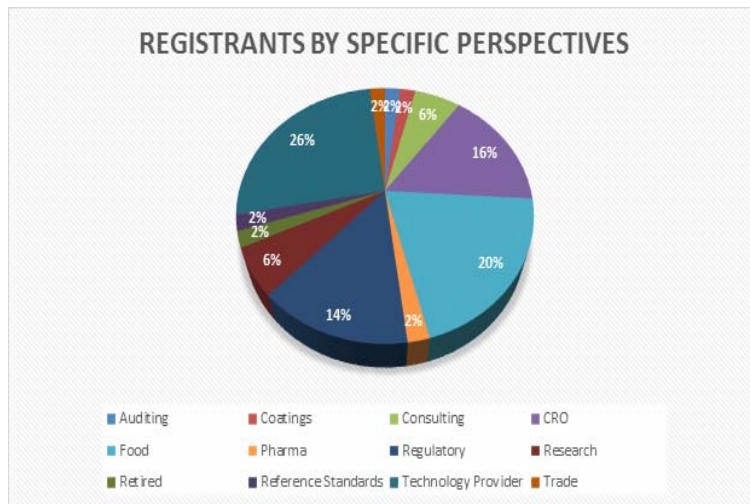
**A. Broad Perspectives (Figure 1)**

More than 70% of the organizational registrants are from the broad group of industry. Sixteen percent of the registrants are from government agencies. A smaller amount of the registrants is from academic organizations and nongovernmental organizations can be associated with either academia, government, or industry, but are not. To develop a list of representative voting members to demonstrate consensus for SPSFAM, the industry perspective is large enough to require further categorization.

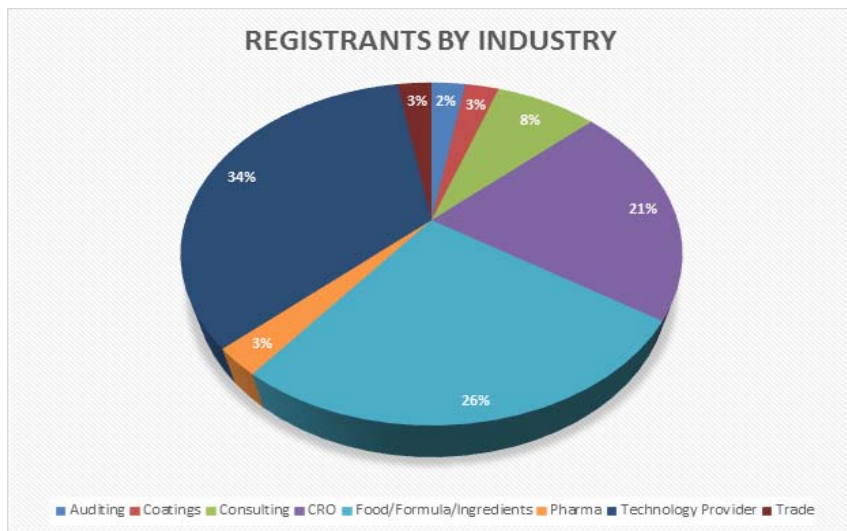
**B. Specific Perspectives (Figure 2)**

Registrants are categorized into specific perspectives. About one-fifth of the organizational registrants are manufacturers of food, beverages, or related ingredients. While there is a significant percentage of both CROs and regulatory agencies, more than 25% of registrants are included in the general category of “technology provider.” With more than three-quarters of the registrants representing industry, industry is categorized further in **Figure 3**.

Figure 2 - Specific Perspectives of Organizational Registrants



Registrants in the industry sector show that more than one-fourth of the industry participants are food companies. The other two perspectives represented in the industry sector are contract research organizations (CROs) and technology providers.



Contract research organizations (CROs) and technology providers. Consulting, Auditing, Coatings, and trade round out the industry sector. The trade organization is included here as it is an affiliation of industry.

Figure 3-Industry Registrants

Because food is a large portion of the industry sector, food is further categorized in Figure 4. Food organizational registrants are categorized into food & beverage, food & formula, and food & ingredients. Almost a third of food companies each are food & beverage and food & ingredients. The other 40% are food & formula companies.

Figure 4 - Food Registrants



Technology providers is another category of industry that could be further categorized between instrumentation companies and test kit companies. For this category, companies in this category are represented with just a little more than half as major instrumentation companies, whereas just under half of the companies develop test kits companies.

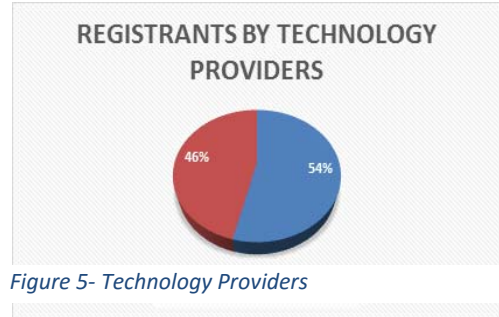


Figure 5- Technology Providers

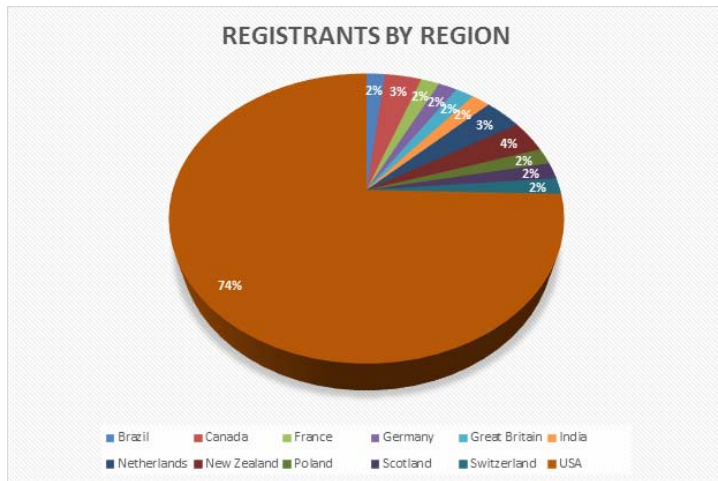


Figure 6 - Regional Registrants

**C. Regional Perspectives of Registrants (Figure 6)**

There are 12 countries represented by organizational registrants for SPSFAM. The US is the regional most represented by nearly three-quarters of the organizations. In addition to Canada, countries in Asia, Europe, Oceania, and South America comprise the other 26% of organizational registrants.

To look at the regional registrants a little closer, the European registrants, that make up 15% of the registrants, are further categorized according to country. In Figure 7, of the European registrants, one-fourth of the organizations are from the Netherlands.



Figure 7 - European Organizational Registrants

**D. Proposal for Representative Voting Members**

To develop the proposal for voting members that is representative of the registrants for the SPSFAM meeting. There is a maximum of 30 seats possible; however, with the number of registrants, 30 voting seats may be more than is needed to represent the stakeholder panel. There are 51 registered organizations of which 21-23 organizations would be appropriate to ensure that the perspectives are covered.



For 23 representatives and using the Broad Perspectives of Registrants as a based, 6% academia would allow for one (1) to two (2) institutions. Government is 16% of the registrants, and this would allow for four (4) agencies. As industry is 76% of the registrants, this would allow for 17-18 companies. With NGO being 2% percent of the registrants, this would allow for one (1) organization.

Adding the regional perspective, 74% of the registrants are from the US which would make 17 members of the representative of stakeholder registrants from the US. Also, 15% of the registrants are European. Therefore, to represent Europe among the stakeholders require three (3) to four (4) voting members. These numbers need to balance with the regional perspective for the same set of registrants. One voting member from India and New Zealand is representative of the other regions. Brazil may be represented by the US as the organization that is in Brazil is also in the US and the organization may opt to be represented by its US counterpart.

### **RECOMMENDATION:**

For the AOAC Official Methods Board to review and approved the recommended proposal in Table 2 for representative voting members for the SPSFAM meeting on Monday, March 13, 2017.

*Table 2: Proposed Representative Voting Members*

<b>Broad Perspective</b>	<b>Specific Perspective</b>	<b>Region</b>	<b>Organization (s)</b>
<b>1. Academia</b>	Research	Netherlands/US	RIKILT/Univ. of Nebraska
<b>2. Government</b>	Regulatory	US	US FDA / US TTB
<b>3. Government</b>	Regulatory – International	Canada	CFIA/Health Canada
<b>4. Government</b>	State Regulatory	US	FL Dept. Ag. / MD Dept. of Ag.
<b>5. Government</b>	Reference Standards	US	US NIST
<b>6. NGO</b>	Trade	US	American Beverage Association
<b>7. Industry</b>	Food & Beverage	US	PepsiCo
<b>8. Industry</b>	Food & Beverage	US	Ocean Spray/ Starbucks
<b>9. Industry</b>	Food/Formula/Beverage	US / Switzerland	Nestle
<b>10. Industry</b>	Food & Formula	US	Abbott / FrieslandCampina
<b>11. Industry</b>	Food & Ingredients	US	ADM / McCormick
<b>12. Industry</b>	Pharmaceutical Cannabis	Great Britain	GW Pharmaceuticals
<b>13. Industry</b>	Technology provider	US/Brazil	Agilent
<b>14. Industry</b>	Technology provider	US	SCIEX
<b>15. Industry</b>	Technology provider	US	Waters/Shimadzu
<b>16. Industry</b>	Technology provider	US	Phenomenex/VUV Analytics
<b>17. Industry</b>	Test Kit company	US	Neogen / Romer Labs
<b>18. Industry</b>	Test kit company	US	R-Biopharm
<b>19. Industry</b>	CRO	India	First Source Laboratory Solutions
<b>20. Industry</b>	CRO	New Zealand	AsureQuality
<b>21. Industry</b>	CRO	US	Merieux NutriSciences
<b>22. Industry</b>	CRO	US	Covance / Microbac Laboratories
<b>23. Industry</b>	CRO	US	Alkemist Labs / Eurofins





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## MEMORANDUM

**Date:** March 3, 2017

**To:** AOAC INTERNATIONAL Official Methods Board

**From:** Deborah McKenzie, Sr. Director, AOAC Standards Development

**Subject:** Representative Voting Members for ISPAM

### **BACKGROUND:**

Organizational registrants as of March 1, 2017 is as follows:

*Table 1: Organizational Registrants*

3M	German Research Center for Food Chemistry
Abbott Nutrition	Grain Millers Inc.
AFNOR	Health Canada
Agilent	Maxxam Analytics
Allergen Control Group, Inc. (ACG)	McCormick & Company, Inc.
AsureQuality, New Zealand	Merieux NutriSciences
Austrian Agency for Health and Food Safety (AGES),	Microbac Laboratories
Bia Diagnostics	MicroVal
BioAdvantage	MoniQA
BioAnalyt GmbH	Morinaga Institute of Biological Science, Inc.
Canadian Food Inspection Agency	Neogen
Canadian Grain Commission, Grain Research Laboratory	Nestle
Cargill	Nippon Ham Food
CFCO/GIG	Office of Dietary Supplements, NIH
Clear Labs	Pepsico/Quaker Oats
Clyde Don Cons. FoodPhysica	Q Laboratories
Consultant	R-Biopharm
Danone	R-Biopharm Rhone Ltd
DOTS Corp.	Rheonix
DTS FACTA	Richardson
DuPont	Roka Bioscience Inc.
Elution Technologies	Romer Labs

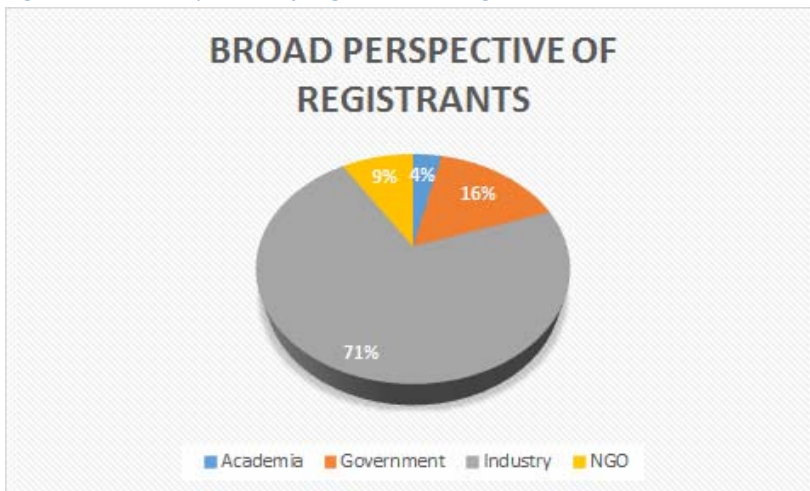
Eurofins	SCIEX
European Commission	The Hershey Company
FDA	TTB
FL Dept. of Agriculture & Consumer Services	U.S. Treasury (retired)
Food Allergy Research & Resource Program, University of Nebraska-Lincoln	Université Laval
Food Consulting Services	Waters Corporation
General Mills	AOAC Food Allergen Community

There are several ways to analyze the perspectives of the registrants. There are three to four major categories, which are academia, government, industry, and nongovernmental organizations. Academia representatives are from educational and research organizations. Government representatives are from regulatory agencies including domestic, municipal, federal, and international.

1. Broad perspectives include a view of the registrants in terms of academia, government, industry and nongovernmental organizations.
2. Specific perspectives include further categorization of registrants by categories of industry, categories of government, and if necessary by types of academia.
3. Regional perspectives include categorization of registrants by regions of the world and/or regions of a particular region.

As needed, registrants will be further categorized as or if needed to clarify perspectives.

Figure 1-Broad Perspectives of Organizational Registrants



**A. Broad Perspectives (Figure 1)**

Nearly 70% of the organizational registrants are from the broad group of industry. Sixteen (16) percent of the registrants are from government agencies. A smaller amount of the registrants is from academic organizations and nine percent of registrants are from global nongovernmental organizations can be

associated with either academia, government, or industry, but are not. To develop a list of representative voting members to demonstrate consensus for ISPAM, the industry perspective is large enough to require further categorization.

### SPECIFIC PERSPECTIVES OF REGISTRANTS

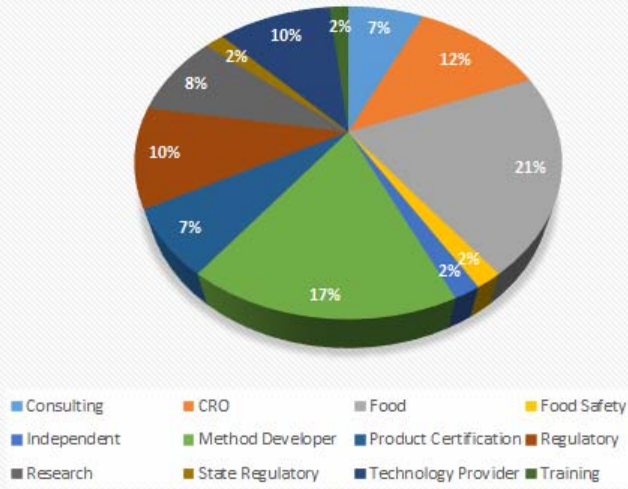


Figure 2 - Specific Perspectives of Organizational Registrants

### B. Specific Perspectives (Figure 2)

Registrants are categorized into specific perspectives. About one-fifth of the organizational registrants are food manufacturers. This is the largest sector represented. Method developers (test kit companies) and CROs make up almost one-third of the registrants with 17% and 12% of registrants respectively. Regulatory agencies both federal and state make up 12% of registrants. Technology providers are 10% percent

of the registrants, and research is 8% of registrants. Product certification organizations make up 7% each of registrants and consulting firms make up 11% of registrants and may require further categorization.

### REGISTRANTS BY REGION

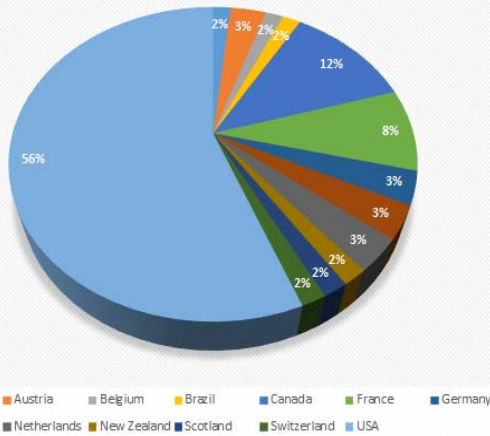


Figure 3 - Regional Registrants

### C. Regional Perspectives of Registrants (Figure 3)

There are 13 countries represented by organizational registrants for ISPAM. The US is the regional most represented by just a little more than half of the registered organizations, and Canada is represented by 12% of the registrants. The other 32% of the organizational registrants represent the countries in Asia, Europe, Oceania, and South America.

Europe has 23% of the registrants with most of the representatives coming from the France. The Oceania is represented by both Australia and New Zealand with 4% of registrants. Asia and South America round out the registrants at 2% each.

#### D. Proposal for Representative Voting Members

To develop the proposal for voting members that is representative of the registrants for the ISPAM meeting. There is a maximum of 30 seats possible; however, with the number of registrants, 30 voting seats may be more than is needed to represent the stakeholder panel. There are 58 registered organizations of which 27 organizations would be appropriate to ensure that the perspectives are covered.

For 27-29 representatives and using the Broad Perspectives of Registrants as a based, 4% academia would allow for one (1) institution. Government is 16% of the registrants, and this would allow for four (4) to five (5) agencies. As industry is 71% of the registrants, this would allow for 19 - 20 companies. With NGO being 9% percent of the registrants, this would allow for two (2) to three (3) organizations.

Adding the regional perspective, 56% of the registrants are from the US which would make 14-15 members representative of the stakeholder registrants from the US. Canadian registrants total 12%, which would allow for 3 representatives. Also, 23% of the registrants are European. Therefore, to represent Europe among the stakeholders allows seven (7) voting members. These numbers need to balance with the regional perspective for the same set of registrants. Two voting members from Oceania is representative of Oceania and one voting member for Asia. Brazil may be represented by the US as the organization that is in Brazil is also in the US and the organization may opt to be represented by its US counterpart.

#### **RECOMMENDATION:**

For the AOAC Official Methods Board to review and approved the recommended proposal in Table 2 for representative voting members for the ISPAM meeting on Tuesday, March 14, 2017.

*Table 2: Proposed Representative Voting Members*

Broad Perspective	Specific Perspective	Region	Organization (s)
1. Academia	Research	US	FARRP-Univ. of Nebraska
2. Government	Regulatory	Canada	Health Canada / CFIA
3. Government	Regulatory	Canada	Canadian Grain Commission
4. Government	Regulatory	US	US FDA
5. Government	Regulatory	Belgium	European Commission
6. Government	Regulatory	Austria	AGES
7. NGO	Product Certification	US / France	GFCO-GIG / AFNOR
8. NGO	Research	Austria	MoniQA
9. NGO	Research	Germany	German Center for Food Chemistry
10. NGO	Independent	France	AOAC Food Allergen Community
11. Industry	Food	US	General Mills
12. Industry	Food	US	PepsiCo/Quaker Oats
13. Industry	Food	Japan	Nippon Ham
14. Industry	Food	US	Nestle

<b>15. Industry</b>	Food	US	Grain Millers
<b>16. Industry</b>	Food	US	Abbott / Hershey
<b>17. Industry</b>	Method Developer	US	Elution / 3M
<b>18. Industry</b>	Method Developer	Germany	R-Biopharm/ Roka Biosciences
<b>19. Industry</b>	Method Developer	US	Neogen / Rheonix
<b>20. Industry</b>	Method Developer	US	Romer Labs/Morinaga
<b>21. Industry</b>	CRO	US/New Zealand	Eurofins / AsureQuality
<b>22. Industry</b>	CRO	US	Merieux NutriSciences/
<b>23. Industry</b>	CRO	US	Microbac Laboratories
<b>24. Industry</b>	CRO	France	Food Consulting Services
<b>25. Industry</b>	Product Certification	Canada	Allergen Control Group
<b>26. Industry</b>	Consulting	Netherlands	FoodPhysica (Clyde Don Consulting)
<b>27. Industry</b>	Biotechnology	France	BioAdvantage
<b>28. Industry</b>	Consulting	Australia	DTS Facta
<b>29. Industry</b>	Technology Provider	US	Agilent / SCIEX / Waters







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## MEMORANDUM

**Date:** March 3, 2017

**To:** AOAC INTERNATIONAL Official Methods Board

**From:** Deborah McKenzie, Sr. Director, AOAC Standards Development

**Subject:** Representative Voting Members for SPIFAN

### **BACKGROUND:**

Organizational registrants as of March 1, 2017 is as follows:

*Table 1: Organizational Registrants*

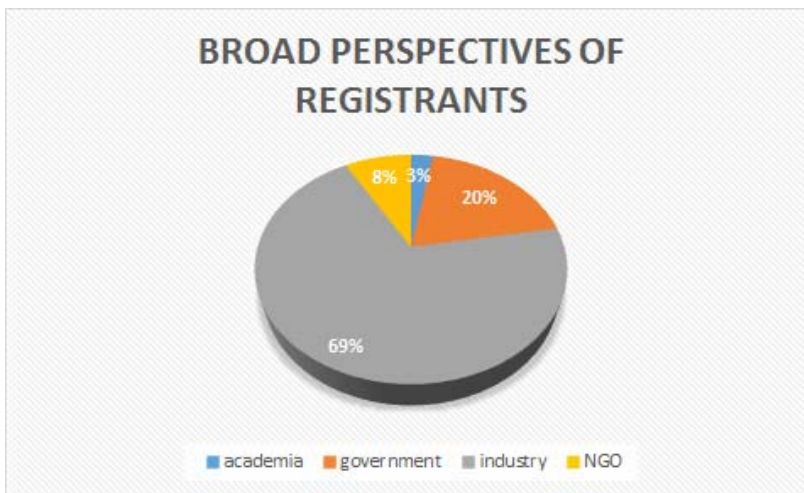
Abbott Nutrition	Infant Nutrition Council of America (INCA)
Agilent Technologies Brasil Ltda.	ISO
Agilent Technologies, Inc.	LATU - Chromatography and Mass Spectrometry Department-Method Development Depart
Archer Daniels Midland Company	Mérieux NutriSciences
AsureQuality, New Zealand	National Institute of Industrial Technology - Food Science Centre
Ausnutria Hyproca	National Institute of Nutrition and Seafood Research
BioAnalyt GmbH	Neogen Corporation
Covance Laboratories	Nestle Research Center
Danone	Office of Dietary Supplements, NIH
DuPont Nutrition & Health	Perrigo / PBM Nutritionals
Eurofins	R-Biopharm Rhone Ltd
First Source Laboratory Solutions LLP	Rheonix
Florida Department of Agriculture And Consumer Services	RIKILT
Fonterra Co-operative Group Ltd.	SGS Germany GmbH
Food Consulting Services	Shimadzu Scientific Instruments, Inc.
FrieslandCampina	US FDA
GAAS Analytical	US NIST
IDF	VUV Analytics, Inc
	Waters Corporation

There are several ways to analyze the perspectives of the registrants. There are three to four major categories, which are academia, government, industry, and nongovernmental organizations. Academia representatives are from educational and research organizations. Government representatives are from regulatory agencies including domestic, municipal, federal, and international.

1. Broad perspectives include a view of the registrants in terms of academia, government, industry and nongovernmental organizations.
2. Specific perspectives include further categorization of registrants by categories of industry, categories of government, and if necessary by types of academia.
3. Regional perspectives include categorization of registrants by regions of the world and/or regions of a particular region.

As needed, registrants will be further categorized as or if needed to clarify perspectives.

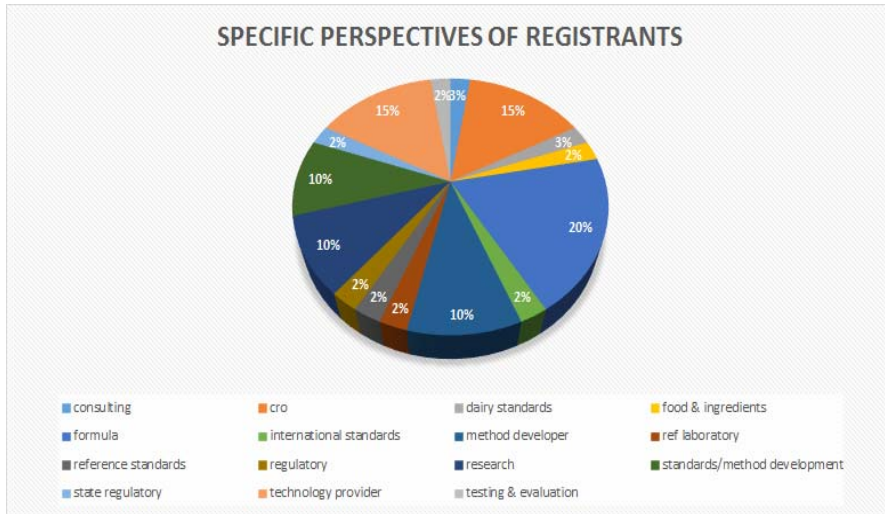
*Figure 1-Broad Perspectives of Organizational Registrants*



**A. Broad Perspectives (Figure 1)**

Nearly 70% of the organizational registrants are from the broad group of industry. Twenty (20) percent of the registrants are from government agencies. A smaller amount of the registrants is from academic organizations and eight percent of registrants are from global nongovernmental organizations can be associated

with either academia, government, or industry, but are not. To develop a list of representative voting members to demonstrate consensus for SPIFAN, the industry perspective is large enough to require further categorization.



**B. Specific Perspectives (Figure 2)**

Registrants are categorized into specific perspectives. About one-fifth of the organizational registrants are formula manufacturers. This is the largest sector represented. Technology providers and CROs make up almost one-third of the registrants with 15% each of the registrants. Both research and method developer categories make up a little more than one-fifth of the registrants, each with 10% percent of the registrants. While regulatory agencies are not as

Figure 2 - Specific Perspectives of Organizational Registrants

represented, international standards and method development nongovernment organizations are represented at 10 percent and research organizations, both government and academic, represent 10 percent.

**C. Regional Perspectives of Registrants (Figure 3)**

There are 13 countries represented by organizational registrants for SPIFAN. The US is the regional most represented by nearly half of the organizations. However, for the first time with this stakeholder panel, countries in Asia, Europe, Oceania, and South America comprise the other 51% of organizational registrants.

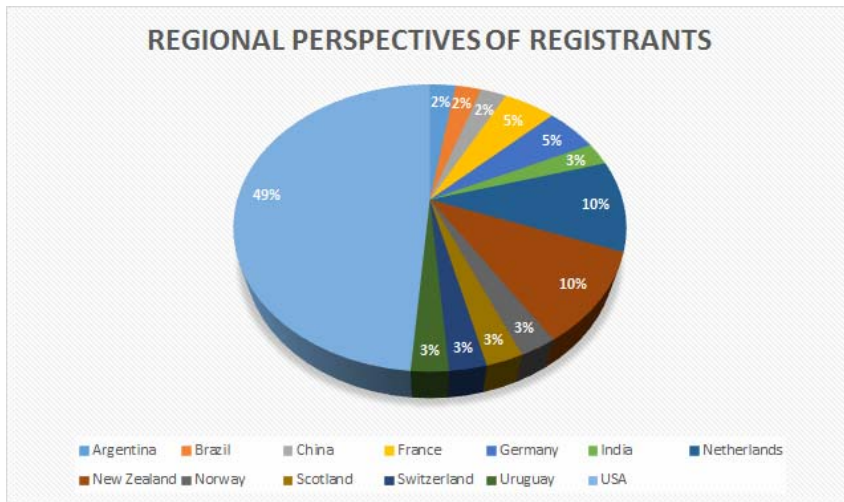


Figure 3 - Regional Registrants

Europe has 29% of the registrants with most of the representatives coming from the Netherlands. The other 22% of registrants are from countries in Oceania, South America, and Asia.

#### **D. Proposal for Representative Voting Members**

To develop the proposal for voting members that is representative of the registrants for the SPIFAN meeting. There is a maximum of 30 seats possible; however, with the number of registrants, 30 voting seats may be more than is needed to represent the stakeholder panel. There are 37 registered organizations of which 19-25 organizations would be appropriate to ensure that the perspectives are covered.

For 25 representatives and using the Broad Perspectives of Registrants as a based, 3% academia would allow for one (1) institution. Government is 20% of the registrants, and this would allow for five (5) agencies. As industry is 69% of the registrants, this would allow for 17 companies. With NGO being 8% percent of the registrants, this would allow for two (2) organizations.

Adding the regional perspective, 49% of the registrants are from the US which would make 12 members representative of the stakeholder registrants from the US. Also, 29% of the registrants are European. Therefore, to represent Europe among the stakeholders require seven (7) voting members. These numbers need to balance with the regional perspective for the same set of registrants. Two voting member from New Zealand is representative of Oceania and one voting member of the other regions. Brazil may be represented by the US as the organization that is in Brazil is also in the US and the organization may opt to be represented by its US counterpart. China may also be represented by the organization's counterpart in Switzerland or in the US.

#### **RECOMMENDATION:**

For the AOAC Official Methods Board to review and approved the recommended proposal in Table 2 for representative voting members for the SPIFAN meeting on Wednesday, March 15, 2017.

*Table 2: Proposed Representative Voting Members*

<b>Broad Perspective</b>	<b>Specific Perspective</b>	<b>Region</b>	<b>Organization (s)</b>
<b>1. Academia</b>	Research	Netherlands	RIKILT
<b>2. Government</b>	Regulatory	US	US FDA
<b>3. Government</b>	Research	Uruguay	LATU
<b>4. Government</b>	State Regulatory	US	FL Dept. Ag.
<b>5. Government</b>	Reference Standards	US	US NIST
<b>6. Government</b>	Laboratory	Argentina	INTI
<b>7. NGO</b>	Standards	Netherlands	ISO
<b>8. NGO</b>	IDF	New Zealand	IDF
<b>9. Industry</b>	Formula	US	Abbott Nutrition
<b>10. Industry</b>	Formula	US	Mead Johnson
<b>11. Industry</b>	Formula	Switzerland/China	Nestle
<b>12. Industry</b>	Formula	US	FrieslandCampina
<b>13. Industry</b>	Formula	New Zealand	Fonterra
<b>14. Industry</b>	Formula	US	Perrigo-PBM Nutritionals
<b>15. Industry</b>	Formula	France	Danone

<b>16. Industry</b>	Technology provider	US/Brazil	Agilent
<b>17. Industry</b>	Technology provider	US	SCIEX
<b>18. Industry</b>	Technology provider	US	Waters/Shimadzu
<b>19. Industry</b>	Technology provider	US	Phenomenex/VUV Analytics
<b>20. Industry</b>	Test Kit company	Scotland	R-Biopharm Rhone
<b>21. Industry</b>	CRO	India	First Source Laboratory Solutions
<b>22. Industry</b>	CRO	New Zealand	AsureQuality
<b>23. Industry</b>	CRO	US	Merieux NutriSciences
<b>24. Industry</b>	CRO	US	Eurofins
<b>25. Industry</b>	Testing & Evaluation	Germany	SGS Germany





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## MEMORANDUM

**Date:** March 3, 2017

**To:** AOAC INTERNATIONAL Official Methods Board

**From:** Deborah McKenzie, Sr. Director, AOAC Standards Development

**Subject:** Representative Voting Members for SPADA

### **BACKGROUND:**

Organizational registrants as of March 1, 2017 is as follows:

*Table 1: Organizational Registrants*

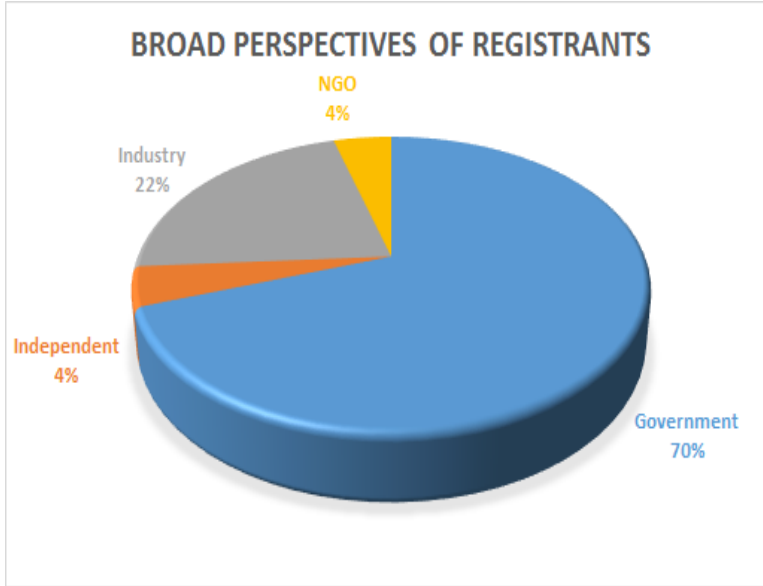
ATCC	Medical Countermeasure Systems - Diagnostics
CBR Defense Concepts and Experimentation Branch, Naval Surface Warfare Center	Neogen Corporation
DoD - DBPAO (Formerly Critical Reagents Program)	NIH/NIAID
DHS	NIST
DHS/OHA	Northrop Grumman Electronic Systems
DuPont Nutrition & Health	PNNL
FDA - CFSAN (Retired)	R-Biopharm Rhone Ltd
FDA Division Of Microbiology	US Army Edgewood Chemical Biological Center
HADECO, LLC	US ARMY MEDCOM USAMRIID
JPdM BDS	US FDA
Lawrence Livermore National Lab (Retired)	USAMRIID
MD Department of Agriculture	

There are several ways to analyze the perspectives of the registrants. There are three to four major categories, which are academia, government, industry, and nongovernmental organizations. Academia representatives are from educational and research organizations. Government representatives are from regulatory agencies including domestic, municipal, federal, and international.

1. Broad perspectives include a view of the registrants in terms of academia, government, industry and nongovernmental organizations.
2. Specific perspectives include further categorization of registrants by categories of industry, categories of government, and if necessary by types of academia.
3. Regional perspectives include categorization of registrants by regions of the world and/or regions of a particular region.

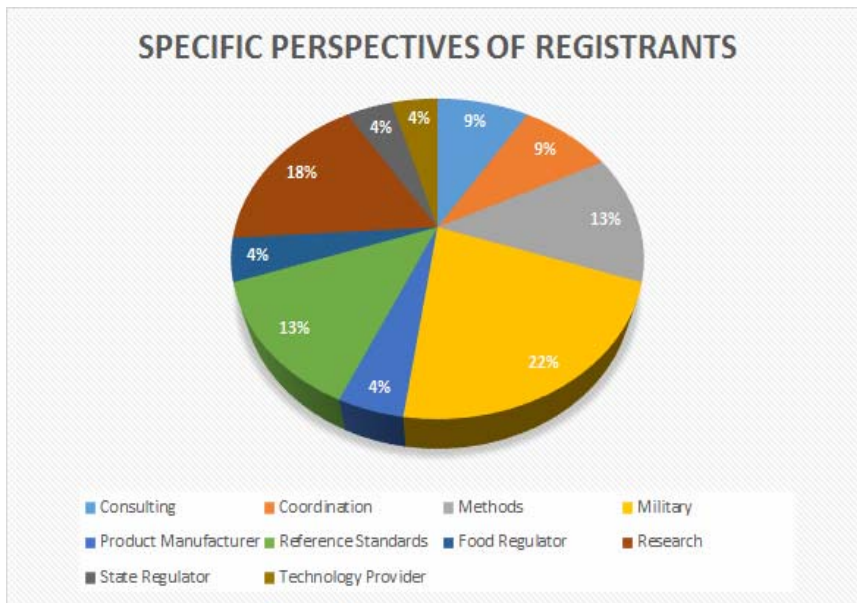
As needed, registrants will be further categorized as or if needed to clarify perspectives.

Figure 1-Broad Perspectives of Organizational Registrants



**A. Broad Perspectives (Figure 1)**

Government registrants are the largest sector with 70% of the organizational registrants. Industry registrants are at 22%. There are no academic institutional registrants for this meeting; however, both independent registrants and nongovernmental organizational registrants are both four percent each. To develop a list of representative voting members to demonstrate consensus for SPADA, the government perspective is large enough to require further categorization.



**B. Specific Perspectives (Figure 2)**

Registrants are categorized into specific perspectives. Just more than one-fifth of the organizational registrants are military organizations. Eighteen percent represents the research category, including within the military and the national laboratories. Both reference standards and method developers organizations represent 13% of the registrants. Government coordination agencies and consulting registrants are represented at nine percent each. The additional 16% is represented

by food regulators, product manufacturers, state regulators and method technology providers.

**C. Regional Perspectives of Registrants**

All registrants are from within the United States.



#### D. Proposal for Representative Voting Members

To develop the proposal for voting members that is representative of the registrants for the SPADA meeting. There is a maximum of 25 seats possible; however, with the number of registrants, 25 voting seats may be more than is needed to represent the stakeholder panel. There are 23 registered organizations of which 12-13 organizations would be appropriate to ensure that the perspectives are covered.

For 13 representatives and using the Broad Perspectives of Registrants as a base, government is 70% of the registrants, and this would allow for nine (9) agencies. As industry is 22% of the registrants, this would allow for three (3) companies. With NGO being 4% percent of the registrants, this would allow for at least one organization.

Region is not as much of an issue as it is all domestic with the heaviest concentration in the Washington, DC area (Washington, DC., Maryland, and Virginia).

#### **RECOMMENDATION:**

For the AOAC Official Methods Board to review and approved the recommended proposal in Table 2 for representative voting members for the SPADA meeting on Wednesday, March 15, 2017.

*Table 2: Proposed Representative Voting Members*

Broad Perspective	Specific Perspective	Region	Organization (s)
1. Government	Military	US	JPdM BDS
2. Government	Military	US	US ARMY MEDCOM USAMRIID
3. Government	Military	US	DoD - DBPAO (Formerly Critical Reagents Program)
4. Government	Research	US	Lawrence Livermore National Lab (Retired)
5. Government	Research	US	Pacific Northwest National Laboratory (PNNL)
6. Government	Reference Standards	US	US NIST / Critical Reagents Program
7. Government	Coordination	US	US DHS OHA
8. Government	Food Regulator	US	US FDA
9. Government	Methods	US	Medical Countermeasure Systems - Diagnostics
10. Industry	Consulting	US	HADECO
11. Industry	Product Manufacturer	US	Northrop Grumman Electronic Systems
12. Industry	Method Developer	US	Neogen
13. NGO	Reference Standard	US	ATCC





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## MEMORANDUM

**Date:** March 3, 2017

**To:** AOAC INTERNATIONAL Official Methods Board

**From:** Deborah McKenzie, Sr. Director, AOAC Standards Development

**Subject:** Representative Voting Members for SPDS

### **BACKGROUND:**

Organizational registrants as of March 1, 2017 is as follows:

*Table 1: Organizational Registrants*

Abbott Nutrition	Medical University Of Lublin
Agilent Technologies Brasil Ltda.	Merieux NutriSciences
Agilent Technologies, Inc.	MIDI, Inc
Alkemist Labs	Nestle USA, Inc
Analytical Laboratories in Anaheim, Inc.	NIH ODS
Archer Daniels Midland Company	NIST
AsureQuality, New Zealand	NSF International
Canadian Food Inspection Agency	Pharmanex
Council for Responsible Nutrition	Pharmavite LLC
Covance Laboratories	Phenomenex
Curtis S. Phinney, CNS	R-Biopharm Rhone Ltd
DOTS Corp.	Schwabe North America
Eurofins	Shimadzu Scientific Instruments, Inc.
Food Consulting Services	Sunshineville Health Products, Inc
FrieslandCampina	US FDA
GAAS Analytical	USDA
GNC/Nutra Manufacturing	USP
Kappa Biosciences	VUV Analytics, Inc
MD Department Of Agriculture	Waters Corporation

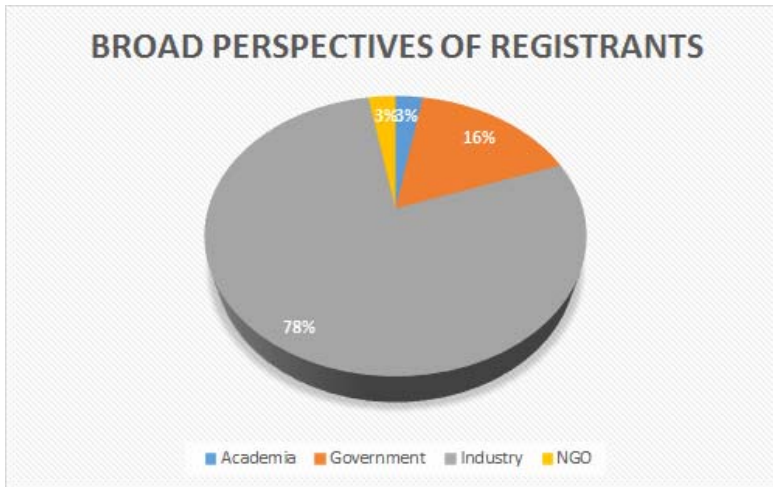
There are several ways to analyze the perspectives of the registrants. There are three to four major categories, which are academia, government, industry, and nongovernmental organizations. Academia

representatives are from educational and research organizations. Government representatives are from regulatory agencies including domestic, municipal, federal, and international.

1. Broad perspectives include a view of the registrants in terms of academia, government, industry and nongovernmental organizations.
2. Specific perspectives include further categorization of registrants by categories of industry, categories of government, and if necessary by types of academia.
3. Regional perspectives include categorization of registrants by regions of the world and/or regions of a particular region.

As needed, registrants will be further categorized as or if needed to clarify perspectives.

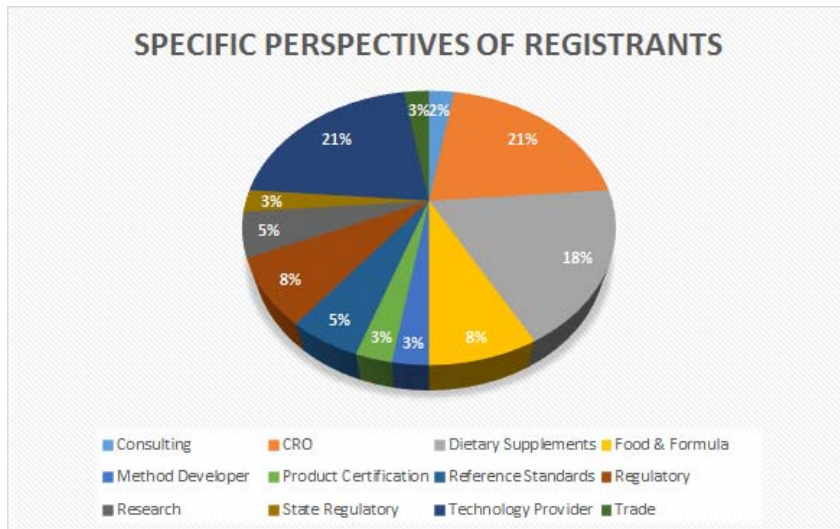
Figure 1-Broad Perspectives of Organizational Registrants



**A. Broad Perspectives (Figure 1)**

Nearly 80% of the organizational registrants are from the broad group of industry. Sixteen (16) percent of the registrants are from government agencies. A smaller amount of the registrants is from academic organizations three percent. Three percent of registrants are from nongovernmental organizations can be associated with either academia, government, or industry, but are not. To develop a

list of representative voting members to demonstrate consensus for SPDS, the industry perspective is large enough to require further categorization.

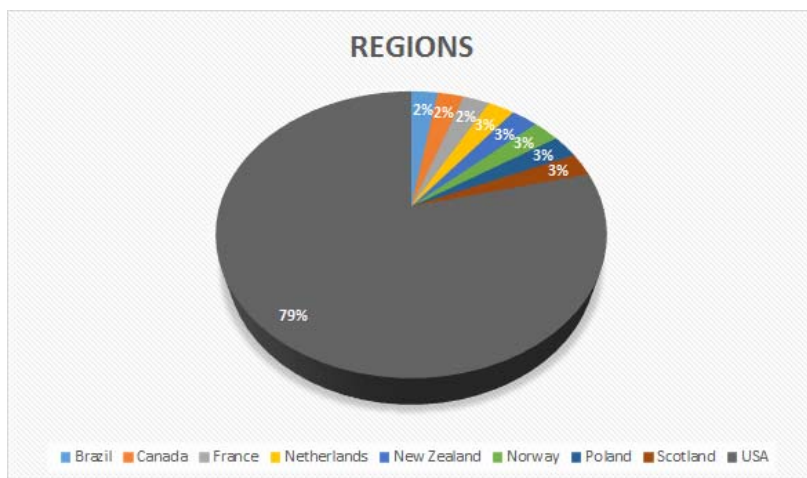


**B. Specific Perspectives (Figure 2)**

Registrants are categorized into specific perspectives. About one-fifth of the organizational registrants are contract research organizations (CROs). The same percent is also represented by technology providers. Dietary supplement companies represent 18% of registrants. Both regulatory agencies and food companies represent eleven and eight percent respectively. Whereas research organizations and reference standards organizations make up five

Figure 2 - Specific Perspectives of Organizational Registrants

percent each of registrants. The additional 11% is represented by trade organizations, consulting firms, product certification organizations, and method developers.



### C. Regional Perspectives of Registrants (Figure 3)

There are 9 countries represented by organizational registrants for SPDS. US registrants make up almost 80% of the registrants. Two percent of registrants are from Canada. Fourteen percent of registrants are European organizations. Three percent of registrants are from Oceania, and two percent of the registrants are from South America.

Figure 3 - Regional Registrants

### D. Proposal for Representative Voting Members

To develop the proposal for voting members that is representative of the registrants for the SPDS meeting. There is a maximum of 30 seats possible; however, with the number of registrants, 30 voting seats may be more than is needed to represent the stakeholder panel. There are 38 registered organizations of which 19-21 organizations would be appropriate to ensure that the perspectives are covered.

For 21 representatives and using the Broad Perspectives of Registrants as a based, 3% academia would allow for one (1) institution. Government is 16% of the registrants, and this would allow for three (3) to four (4) agencies. As industry is 78% of the registrants, this would allow for 16-17 companies. With NGO being 3% percent of the registrants, this would allow for at least one organization.

Adding the regional perspective, 79% of the registrants are from the US which would make 16-17 members representative of the stakeholder registrants from the US. Canadian registrants total 2%, which would allow for 1 representative. Also, 14% of the registrants are European. Therefore, three (3) voting members will represent Europe stakeholders. These numbers need to balance with the regional perspective for the same set of registrants. One voting member from Oceania is representative of this region. Brazil may be represented by the US as the organization that is in Brazil is also in the US and the organization may opt to be represented by its US counterpart.

### RECOMMENDATION:

For the AOAC Official Methods Board to review and approved the recommended proposal in Table 2 for representative voting members for the SPDS meeting on Friday, March 17, 2017.

Table 2: Proposed Representative Voting Members

Broad Perspective	Specific Perspective	Region	Organization (s)
1. Academia	Research	Poland	University of Lublin
2. Government	Research	US	US National Institutes of Health
3. Government	Regulatory	US	US FDA / USDA
4. Government	Reference Standards	US	US NIST
5. NGO	Trade / Reference Standards	US	Council for Responsible Nutrition/ US Pharmacopeia
6. Industry	Dietary Supplements	Norway	Kappa Biosciences
7. Industry	Dietary Supplements	US	Pharmavite
8. Industry	Dietary Supplements	US	GNC/Nutra Manufacturing
9. Industry	Dietary Supplements	US	ADM / Schwabe North America
10. Industry	Dietary Supplements	US	Sunshineville Health Products
11. Industry	CRO / Product Certification	US	NSF International
12. Industry	CRO	New Zealand	AsureQuality
13. Industry	CRO	US	Alkemist Labs / GAAS Analytical
14. Industry	CRO	US	Covance / Eurofins
15. Industry	Technology Provider	US/Brazil	Agilent
16. Industry	Technology Provider	US	Phenomenex
17. Industry	Technology Provider	US	Waters
18. Industry	Technology Provider	US	Shimadzu /VUV Analytics
19. Industry	Food	Netherlands	FrieslandCampina
20. Industry	Food	US	Nestle
21. Industry	Method Developer	US	MIDI

Please find the location to complete the e-Ballot at:

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