

# GOODSAMPLES

## Sampling for Cost-Effective and Defensible Decisions Workshop

*Monday, January 12, 2015, from 8am–5pm at the Wyndham  
San Antonio Riverwalk in San Antonio, Texas*

*Feed industry, feed regulators, feed laboratories, and FDA: Join us in San Antonio, Texas, to be introduced to the next generation of feed sampling*

**T**he times are a changing! Sampling of feed materials not only addresses label guarantees for protein, fat, and fiber, but also involves issues of feed safety such as accidental or intentional adulteration, and inclusion of medications and micronutrients. As sampling considerations become more complex, it is uncertain if current accepted sampling methods for proximate guarantees can be extrapolated to micronutrients, medications, contaminants, and environmental/aseptic testing. An understanding of sampling error is critical to testing any feed or feed ingredient where the consequences of an incorrect decision can lead to product misbranding, adulteration, and/or safety issues.

New sampling protocols may need to be developed, evaluated, and implemented for feed safety testing in support of FSMA regulations. To do so, a framework is being developed by a working group consisting of AAFCO, AFDO, APHL, FDA, and industry members to develop guidance on sampling and sample handling. This framework will address many of the potential sources of error in the analytical measurement process. Of the possible errors, the error in collection of the primary sample may be the largest source of error and is generally underestimated, or worse, overlooked. When the sampling error is unknown, then it is also unknown if the laboratory result is representative of the true concentration. If it is not representative, the laboratory result may lead to an incorrect decision. Such errors can be very costly if they result in incoming ingredients or outgoing products being judged to be outside of label specifications or worse—missing a serious contaminant issue.

*“ An understanding of sampling error is critical to testing any feed or feed ingredient where the consequences of an incorrect decision can lead to product misbranding, adulteration, and/or safety issues. ”*

### **Register Here:**

<http://www.aafco.org/Meetings/MidyearMeetings/2015.aspx>

**Cost is \$95 for members and \$295 for nonmembers for the day of instruction and includes lunch and two breaks.**

### **Who Should Attend?**

#### **Industry**

Plant managers, feed mill managers, plant QA/QC managers, regulatory compliance staff, laboratory managers, staff writing facility food safety plans, and all involved in FSMA requirements.

#### **Regulatory**

State sampling coordinators, feed program managers, regulatory control managers, laboratory managers, laboratory & program QA/QC managers, anyone using laboratory data.

#### **FDA**

HQ or district personnel implementing FSMA regulations, state work plan coordinators, or anyone involved in collecting samples or using laboratory data to make decisions.

*We are seeking trade show vendors for this event. Please e-mail [aafco@aafco.org](mailto:aafco@aafco.org) if you are interested.*

## Instructor

### **Charles Ramsey**

Charles Ramsey is the founder and president of EnviroStat Inc., a company that provides training in sampling and laboratory subsampling for defensible decisions to federal and state agencies as well as private companies. He has a BA in chemistry from the University of Denver and an MS in environmental science from the Colorado School of Mines. He is the technical consultant for the FDA Cooperative Agreement Sampling and Sample Handling Workgroup.

## Draft Agenda 8am–5pm

Introduction: *Why do I care? I already know how to sample...*

- The importance of representative sampling in the field and in the laboratory
- The risk of making a wrong decision
- Changing the sampling paradigm
- Measurement and calculation of sampling error

The key elements of sampling quality criteria (SQC): *or A problem well stated is a problem half solved.*

- What are the sampling quality criteria?
- What is...
  - The question
  - The decision unit
  - The confidence
- How sampling quality criteria affect the sampling protocol
  - Maintaining analyte integrity
  - Minimum mass
  - Number of increments

Quality control for primary sample collection and laboratory processing: *QC for sampling, are you serious? I already do enough QC in the laboratory... But do you?*

- The role of quality control in sampling
- Types of quality control in sampling and laboratory sample preparation
- How to implement quality control in sampling
- How to interpret quality control results

Bulk material sampling: *Who cares, I'm just gonna probe it.*

- Properties of materials
- Difference between attribute and bulk material sampling
- Packaging of material (bottles, bags, totes, trucks, railcars)

Sampling theory: *There's science behind all this stuff?*

- The science behind sampling of bulk materials
- Heterogeneity (distributional and compositional)
- Consequences of heterogeneity
- Controlling and minimizing the effect of heterogeneity

Sampling tools and equipment: *I've got a probe...somewhere...and a bag; what else is there?*

- Error resulting from incorrect tool choice
- Error resulting from incorrect tool usage

Conclusion: *Why we care, why we must plan, understand the science, the materials sampled, and the tools.*

- Bringing it all together
- Cost-effective sampling
- Defensible sampling
- Latest results of ongoing sampling studies