



AOAC INTERNATIONAL

FOOD AUTHENTICITY METHODS (FAM) PROGRAM

2020 Prospectus

Background

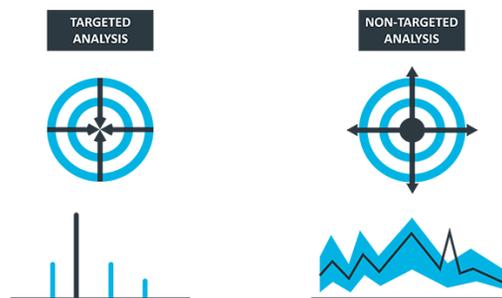
The Food Authenticity Methods Program (FAM) is unlike any other launched by AOAC INTERNATIONAL. Its aim is to develop the tools to analytically define a commodity as “authentic” by first establishing a metrics-based framework *i.e.* Standard Method Performance Requirements (SMPRs®) for not only the suspected adulterant – known or unknown - but also for the commodity as well; and then, foster the development of methods to meet the established consensus standards. Such an approach will provide method developers with the means to precisely validate their methods, provide confidence to testing labs who employ these methods and provide reassurance to industry that the methods used by the laboratory are suitable.

Food Authenticity is a term often used to give assurances to food manufacturers that raw ingredients are accurately documented; and, to reassure consumers that the products they purchase are safe and accurately represent the quality for which they’ve paid.

Food fraud, often referred to as **Economically Motivated Adulteration (EMA)**, encompasses a wide range of deliberate acts designed to misrepresent the authenticity and value of a food product; it includes the fraudulent addition of nonauthentic substances, or the removal or replacement of authentic substances without the purchaser’s knowledge for the economic gain of the seller. Food adulteration is a moving target. These deceptive practices are continuous and deviously inventive to avoid detection, and present added challenges for those involved in testing for and prevention of EMA.

Program Overview

AOAC INTERNATIONAL launched the FAM Program at the March 2019 Midyear Meeting. The objective was to gather industry stakeholders, method experts, and regulators to develop method performance standards to evaluate validated analytical methods to support authenticity claims and to detect all recognized and previously unrecognized fraudulent adulterants in a wide range of food commodities.



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FAM’s foundational approach involved targeted and non-targeted analyses. Whereas targeted testing (TT) is the determination of known molecules (the adulterant) and requires their prior identification as an economically motivated adulterant, non-targeted testing (NTT) serves to answer the generic question, “is something [in the food] that doesn’t belong?” with a binary “yes” or “no” answer. Each approach offers great value to combating fraud and when integrated into a unified program, the combination of targeted and non-targeted methods provides an umbrella of protection for the producer and consumer alike; NTT provides a screening capability and ensures that very little evades detection; TT provides identity and confirmation and makes the finding legally defensible.

In 2019, two AOAC working groups (TTWG and NTTWG) developed 6 SMPRs (3 each) for methods needed to assess the authenticity of olive oil, honey and bovine milk, based on the most recognized adulterants in these commodities. A Call for Methods will be posted on www.aoac.org to solicit candidate methods for evaluation by AOAC Expert Review Panels.

2020 & Beyond

- Expert Review Panels for NTT and TT methods for olive oil, honey, and bovine milk will convene to evaluate new methods,
- Develop SMPRs for genomic i.e. DNA-based, methods to support authenticity claims for commodities such as spices, dietary supplements and botanicals, meat, fish, seafood, and grains;
- Reference and testing materials to be used in the development of SMPRs; and, the development and approval of a reference method for select adulterants and matrices;
- Develop a decision tree to combine the screening of non-targeted with targeted confirmatory methods for specific adulterants;
- Develop an emergency response guidance document for AOAC INTERNATIONAL method development and review, in the context of a major international food fraud incident, requiring mobilization of resources including those of AOAC INTERNATIONAL;
- Continued SMPR development with the existing framework for TT and NTT methods for additional adulterants and/or new matrices based on stakeholder-identified needs and priorities.

Program Benefits

- Create much-needed reference methods that do not currently exist
- Generate reliable data for effective compliance-driven quality control of food materials and products
- Develop standards to support a suite of validated analytical methods and technologies
- Support the development of standards leading to Codex Type II methods for dispute resolution in international trade

For Method developers

- Influence the development of consensus standards, which will be used by AOAC Expert Review Panels to evaluate your candidate methods for possible adoption as AOAC *Official Methods of Analysis*.
- AOAC *Official Methods of Analysis* are the benchmark for trade resolutions, instill consumer confidence, and contribute to consumer safety.

For Food manufacturers or food distributors:

- Ensure that 2020 program priorities meet your needs through AOAC INTERNATIONAL's unique standard development and core programs
- Encourage the development of *Official Methods* which provide the highest level of analytical confidence for authenticity claims and detect fraudulent adulteration in priority commodities
- Protect producers and consumers alike, maintain the reputation of products and ultimately improve the quality and safety of the food supply

Seeking Additional Support

The FAM Advisory Panel, comprised of funding organizations, meets quarterly to review progress of the program and rank overall priorities. Organizations may join the Advisory Panel with an annual contribution of \$10,000.

2020 Advisory Panel (as of March 2020)		
Abbott Nutrition	The Coca-Cola Company	Mars
Bio-Rad	Eurofins Scientific	SGS
Tentamus Group		

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