

# No standardized international methods —yet

A prime question most AOCS members would have about any fats and oils standards would concern whether the analytical methods used are valid.

The Codex Committee on Fats and Oils uses methods of the International Union for Pure and Applied Chemistry (IUPAC). The Fats and Oils panel selected IUPAC after considering methods of various groups. For the past few Codex Fats and Oils meetings, Dr. K.A. Williams of England has been IUPAC's representative. Dr. William H. Tallent, alternate head of the U.S. fats and oils delegation, says Dr. Williams has exhibited broad knowledge and perceptive analytical ability during meetings. Dr. Williams is a member of AOCS.

IUPAC methods, Dr. Tallent emphasizes, are often developed by collaborative study. That point is seconded by Dr. William Horwitz, Deputy Associate Director for Science in FDA's Bureau of Foods. Dr. Horwitz is U.S. representative to the Codex Committee on Methods and Sampling.

Not all Codex methods have been validated by collaborative study. Lowrie Beacham, a former FDA official deeply involved in Codex work, says that when Codex was getting organized, there was a tendency to adopt traditional methods, "often tradition that never had been subjected to collaborative study." When some of those methods were tested, Dr. Horwitz says, they "fell flat on their face."

Each Codex commodity committee could choose which methods it would follow, Dr. Horwitz says. Choices were based on the international standing of the methods as well as their background and stature.

As time has passed, Beacham and Horwitz both say, Codex groups have learned that collaborative verification is a must. Still, at a 1976 seminar in Washington, Dr. Horwitz could say, "Unfortunately, we have discovered that some of the methods from sources used to provide methods for Codex purposes do not work because they are often established by committee action. Committee action is very useful for arriving at a compromise or consensus, but it provides no assurance that the final documents reflect a workable laboratory method."

Generally speaking, most Codex methods now go through two screenings: once through the nine-step process within the individual commodity committee; a second time through the nine-step process within the Committee on Methods and Sampling. Dr. Horwitz notes that some persons have questioned whether methods should have to go through the procedure twice, with an implication that the Methods and Sampling Committee is not needed. That committee, however, is the only one of Codex's 25 subsidiary bodies whose secretariat is held by an Eastern-bloc nation (Hungary).

To be acceptable by the U.S., most Codex methods must also pass the scrutiny of the FDA and USDA. "The policy of the Food and Drug Administration with regard to endorsement of Codex methods of analysis is that they will be endorsed when they have been approved by the AOAC," Dr. Horwitz told the Codex seminar last year.

One problem is that IUPAC, AOAC, and AOCS methods for fats and oils, while they may be quite similar, may also have crucial small differences. These may be in the size of

the sample to be used, the designated temperature to be used, or the length of a process, differences that keep the methods from being interchangeable, Dr. Horwitz says.

There have been areas of considerable agreement between groups. IUPAC and AOAC methods on mycotoxins are compatible. Some AOAC and AOCS methods are identical.

Unresolved at this point is how Codex development of methods will dovetail with other international efforts to establish food standards.

The International Organization for Standardization (ISO) has its Technical Committee No. 34 (TC 34) working on standards for agricultural food products. Dr. Horwitz says ISO will be a major factor in any global standards because it is among the most widespread of the international groups. ISO, with headquarters in Geneva, has affiliated national organizations in more than 60 nations. Dr. Horwitz heads up an AOAC effort, in cooperation with the American National Standards Institute, to stimulate American participation in ISO's TC 34. Former AOCS President William Link is a coordinator, working specifically with fats and oils foodstuffs.

The formal ties between the various groups are relatively few. More common are informal lines of communication where one person is a member of two or more groups. Thus, IUPAC's Dr. Williams, the adviser to the Codex Committee on Fats and Oils, also signed the register for the 1975 Fats and Oils meeting as a representative of ISO. AOCS Vice-President David Firestone, also an FDA Bureau of Foods official, is one of the three AOCS representatives to the National Research Council, the U.S. Agency affiliated with IUPAC. The other AOCS representatives are Dr. Norris Embree and Dr. Link. Dr. Firestone is also the AOAC Referee on fats and oils.

Beacham says this type of linkage between groups can promote coordination in establishing methods to efficiently utilize scarce scientific talent.

"All international organizations are beginning to realize the futility of trying to develop independent methods," Dr. Horwitz says. He notes an increasing interest in cooperation.

Codex statutes require the organization to promote "coordination of all food standards work undertaken by international governmental and nongovernmental organizations."

At the 1975 Codex Fats and Oils Committee meeting, there were representatives not only of IUPAC, AOCS, AOAC, and ISO, but also of the International Federation of Margarine Associations, the Association of the Margarine Industry of the EEC (Common Market) countries; International Association of Seed Crushers, International Olive Oil Council, and the International Pectin Producers Association.

Meanwhile, the letters fly back and forth, the various groups hold their meetings, and, perhaps slowly, individuals who are members of various groups help shape parallel methods.

Beacham's likening of Codex progress to that of a glacier may also apply to efforts to standardize methods at an international level. The momentum toward uniform methods may be making undetected progress. ●