ISO unit adds nine items to work program

The ISO (International Organization for Standardization) subcommittee dealing with animal and vegetable fats and oils has scheduled its next meeting for spring 1979 in London.

During its meeting last September in Bulgaria, the panel (ISO/TC 34/SC11) agreed to add nine new items to its program for establishing international standards.

The new items are:

- determination of water content by the Karl Fischer method;
- determination of moisture and volatile matter in lauric oils;
- bleaching test for palm oil, tallow, and soybean oil;
- determination of heavy metals by atomic absorption spectrophotometry;
- determination of fat stability at ambient temperature (resistance to rancidity);
- determination of tocopherols;
- determination of erucic acid (isomerically true erucic acid);
- determination of residual solvents;
- determination of the quantity of solid fat by dilatation and NMR.

During the September meeting, the panel approved resolutions endorsing several methods for publication as draft international standards. Those included: preparation of contract samples for analysis; determination of moisture and volatile matter; determination of insoluble impurities; preparation of total water insoluble fatty acids; determination of water (entrainment distillation method); and sampling of animal and vegetable fats and oils.

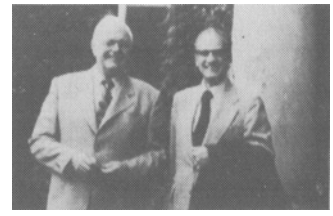
The last-named method for sampling generated discussion as the proposal was to be reworded by a British representative based on comments at the meeting. The French representative said the revision should be submitted to the subcommittee members for comments before being sent to ISO for publication as a draft international standard. Other representatives favored sending the revision directly to ISO, and this action was approved.

Two other methods were approved subject to revision and circulation among subcommittee members for comment. These involved determination of titre (conditioned solidification point of fatty acids) and determination of refractive index.

Six testing methods are to be submitted to the subcommittee secretariat for consideration at the 1979 meeting in London. These are: determination of relative density, determination of ash, determination of saponifiable matter, determination of p-anisidine value, determination of monoglycerides and free glycerol, and determination of polymerized and oxidized fatty acids.

ISO, with national memberships from more than 60 nations, is among the most widespread of the international standards groups. Former AOCS President Bill Link serves as coordinator for fats and oils foodstuffs as part of an effort by the Association of Official Analytical Chemists and the American National Standards Institute to increase U.S. participation in ISO activities. ●

IUPAC to publish new edition of methods



AOCS Vice President David Firestone, right, with Prof. A Rutkowski at the IUPAC Warsaw meeting

David Firestone, vice president of the AOCS, attended the 1977 meeting of the Commission on Oils and Fats of the International Union of Pure and Applied Chemistry (IUPAC) held during August 1977 in Warsaw.

Dr. Firestone reports that the IUPAC group reviewed 12 agenda items, dealing with development, collaborative testing, and publication of analytical methods for oil and fat products.

Subjects included determination of total oxidized acids, tocopherols, organochlorine pesticides, PUFA (lipoxidase methods), oil content of oilseeds by wide line NMR spectroscopy, heated fats, emulsifiers, total fat in margarine, plastic monomers in fats and oils and unsaponifiables.

A sixth edition of "Standard Methods of the Oils and Fats Commission of the IUPAC" is expected to be available early this year. In a survey of methods for analysis of oleochemicals, 26 nations responded to help put together a list of methods from 22 national and international organizations. Topics covered include glycerol, partial glycerides, alkali soaps, fatty acids, fatty alcohols, epoxidized fatty alcohols, phosphatides, sulfated and sulfonated oils and fatty amines.

The commission recommended that continued collaborative studies be conducted on methods for total oxidized fatty acids, organohalogen pesticides in oils, oil contents of oilseeds by NMR, heated fat, polyunsaturated fat by the lipoxidase method, and unsaponifiables. The group decided that the commission should study methods for analysis of plastic components (polyethylene) in fats in cooperation with ISO.

Dr. Firestone is conducting a collaborative study of IUPAC methods for preparation of fatty acid methyl esters (II.D.19) and GLC of fatty acid methyl esters (II.D.25), with collaborative results having been received from 17 laboratories. The methods are applicable to butterfats as well as other animal and vegetable fats, but only a few laboratories analyzed the butterfat samples. Additional laboratories have been asked to do butterfat analyses.

Next meeting of the commission will be Aug. 28-Sept. 2, 1978, in Louvain la Neuve, Belgium.

IUPAC consists of 43 member nations represented by national adhering organizations (for the United States, The National Academy of Science). IUPAC is concerned with chemical issues of international importance, seeking to promote cooperation and advancement of chemistry among member nations. It has played a major role in the organization, standardization, development, and advancement of chemistry and chemical technology. ●