Johns-Manville called "the most serious defect" in FDA's proposal the "failure . . . to provide a definition of the term 'asbestos-form particle.'" The firm explained:

> "This term, without proper definition, is too vague and ambiguous to assist industry in the application and the FDA in the enforcement of the proposal. . . . We presume that the FDA is referring to a type of asbestos 'fiber' rather than a particle which resembles the form of an asbestos 'fiber.' It is our intention . . . to propose a definition of the term 'asbestos-form particle,' or in the alternative to provide a new term which is self-defining."

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FDA PROBES HAZARDS FROM CHLORINATED PARAFFINS, SEWAGE SLUDGE

The Food and Drug Administration has turned its attention to determining if chlorinated paraffins or the use of sewage sludge may be contaminating the food supply.

Dr. C. F. Jelinek, Director of the Division of Chemical Technology in FDA's Bureau of Foods, reported on new FDA concerns from industrial contaminants in a paper presented in Washington at the 89th annual meeting Oct. 9-12 of the Association of Official Analytical Chemists.

He said chlorinated paraffins, produced at a rate of 60 to 70 million pounds a year, are promoted for many of the same uses as polychlorinated biphenyls, which have been cut back to closed system uses, in paints, adhesives, and variety of industrial products. He said the volume of the chlorinated paraffins is running as high as PCBs during their peak sales years, and may present similar problems because they possess many of the same properties, including stability in an aquatic environment.

Jelinek said FDA has just begun work on developing methods for detecting the chlorinated paraffins. He made no mention of the toxicity of the substances, but presumably work on this problem is also being conducted at the agency.

In another new area of work, the FDA-er hinted at some of the problems uncovered from attempts by Chicago officials to use sewage sludges as fertilizers for food crops, particularly corn and soy beans.

Noting that the Chicago officials and the University of Illinois, where the work is being conducted, are cooperating with FDA, he pointed out that analyses for metals showed soy beans containing levels of cadmium that caused FDA some concern. He also expressed some worry over microbiological hazards from use of the sludge.

He said he has been assured by Chicago officials that a decrease in cadmium can be effected by the sewage plants.

However, Jelinek said, FDA plans to work closely with the Environmental Protection Agency on problems stemming from uses of industrial chemicals that may contaminate the food supply.

The two examples of new problem areas were given, he told the AOAC, to point up the need for developing a more systematic method for determining hazards.

Chief objectives of the present FDA program, Jelinek said, are to (1) develop sufficient information to establish guidelines for recognized industrial food contaminants; and (2) search for likely industrial contaminants and evaluate their hazards, if found in food.

[redacted]

Among the criteria used by FDA to search for probable problem areas, he said, are production volume, likely by-products, end-use patterns, means of disposal, stability, solubility, and toxicity.

Jelinek disclosed that the FDA has begun [redacted] in fish and [redacted] coatings. He also revealed that FDA is paying close attention to contamination from phthalates, particularly in fish, and said FDA is hoping to get a better picture from a modest survey of fish products.

Several papers on phthalate methodology were included among the nearly 250 presented to AOAC.

FDA reported results from methods used to detect di-2-ethyl hexyl, diisooctyl, diisodecyl, and several other lower molecular weight phthalates in fatty foods while a Department of Interior researcher identified (from channel catfish and fathead minnows) the following four metabolic products from di-2-ethylhexyl phthalate:

(1) 2-ethyl-hexyl phthalate, (2) a monoester glucuronide, (3) phthalic acid, and (4) its glucurohide conjugate.

A method reported from Canada's Health Protection Branch raised new concerns over hazards from asbestos fibers, which were detected by the Canadians in beer, sherry, port, vermouth, soft drinks and city drinking water at levels generally ranging from 1 to 11 million per liter.

Stomach and other cancers have been detected at high rates in asbestos workers; and scientists have recently been concerned about asbestos contamination of lungs from high air levels.

FDA recently proposed prohibitions on talc in an attempt to prevent contamination from asbestos-form particles from talc used to coat rice (See FOOD CHEMICAL NEWS, Aug. 14, Page 23).

A publication issued by Michael Jacobson's Center for Science in the Public Interest also has warned about uses of asbestos for filtering beer and wines (See FOOD CHEMICAL NEWS, Sept. 18, Page 12; and preceding story).

In the report to the AOAC, the Canadians also reported on work done with chrysotile fibers fed and injected into stomachs of rats. Fibers were isolated from the blood, spleen, liver, kidney, omentum, muscle, lung and brain after two to four days. Highest levels of orally administered fibers were found in the omentum while intravenously injected fibers resulted in highest levels in the liver and lung.

In his AOAC Presidential address, L. L. Ramsey, Associate Director of FDA's Office of Compliance in the Bureau of Foods, asked for help from the scientists in restoring consumer confidence in the nation's food supply.

Unlike many others seeking to restore confidence, Ramsey did not blame the press for the food industry's and the government's current pains, but, instead, shifted responsibility to the scientist to make sure that "his results have been carefully interpreted for the layman, and that the limitations of his work, the relevance for man in animal feeding studies, for example, are carefully delineated." He continued:

> "He must convey not just a mere statement of facts cloaked in heavy scientific terminology, but a good understanding to the scientific writer. The ethical professional writer does not willfully distort a story, but obviously he is under real pressure to write so interestingly, yes, even so sensationally, that the reader will read his articles.
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> "If his articles go unread and consumers do not become knowledgeable, not only the writer has failed but the scientist, also. The scientist in reply to questions of extremists designed to fan the flames of emotionalism should respond with factual information, not with highly speculative, unsupported opinions. Of course, he must offer an opinion from time to time, but it should be made clear to the consuming public that it is an opinion, and if his opinion differs from that of the majority of his scientific associates the consumer is entitled to know this as well. In any event, the scientist should make it very clear how he got from the experimental data to his opinion."

Compared with other risks, Ramsey pointed out, any risk to the consumer from his food "would appear to pale into significance," and he encouraged AOAC scientists to take a positive role in educating the public.

Harvey W. Wiley Award-winner, Dr. C. L. Ogg, who recently retired from long service with the Department of Agriculture's Eastern Regional Research Laboratory, encouraged the new Intersociety Relations Committee to help reduce duplication of effort in developing standard methods shared now by AOAC and the American Society for Testing Materials, American Oil Chemists Society and the American Association of Cereal Chemists.

"There is no good reason why two societies should develop a standard method for the same determination frequently using many of the same collaborators," Ogg declared, adding: "There is also no good reason why two or more societies should not have joint committees studying subjects of common interest as has been happening more often in recent years. Agreement has been reached which permits any one of the Associations to adopt another society's method providing that Association clearly acknowledges in its publication of the method the society which originated the method."

In an effort to improve AOAC's collaborative work, Ogg suggested use of an initial survey approach in which a questionnaire would be distributed to get information from collaborators on their experience or ideas about a procedure to be tested, giving the collaborators an input at the beginning of the study.

Ogg said this would help eliminate the biases an Associate Referee may have about a method, a bias which might prevent an alternative procedure from getting an adequate or fair trial if he is selecting the method for final study based on his data alone.

Among methods reported on food additives, Canadians presented data on study of a procedure for determination of brominated sesame oil in commercial orange drinks. Other reports were made on determinations for:

(1) Sorbitol in raisins and dietetic foods and another for sorbitol in bakery products; (2) Freon food freezant in foods; (3) Polycyclic aromatic hydrocarbons in foods; (4) Turmeric in pickles, salad dressing and baked foods; (5) Beta-asarone in flavors and beverages; (6) Propionates in saltine crackers; and (7) Dehydroacetic acid in strawberries, bananas, and zucchine squash.

Reports on metals included:

(1) Mercury data from FDA's surveys on fish and Total Diet Studies; (2) Lead and cadmium concentrations in fruits and vegetables in Missouri counties where heavy smelting and mining of lead is done; (3) Validation of a method for determination of cadmium in foods; (4) Development of a method for lead, sensitive to .1 p.p.m. for lead in evaporated milk; and (5) A method for arsenic in fish.

In the area of dairy products, more work was suggested on the Foss Milko-Tester method for measuring fat in milk and a study from South Dakota reported that use of the automated Technicon Auto-analyzer with an optical somatic cell counting procedure (OSCC) indicated it is accurate, and quicker and has better precision for counting somatic cells than the direct microscopic somatic cell counting method (DMSCC).

In oil and fats, EPA reported no tetradioxin was found in samples of beef fat containing ronnel and its metabolite 2,4,5-Trichlorophenol at levels of 46 and 2.8 p.p.m., respectively, either before or after cooking, and in later studies in which levels of 2,000 p.p.m. of 2,4,5-TCP were used.

An enzymatic method was presented intended to modify earlier work to help meet FDA's requirements for declaration of the polyunsaturated fatty acid content of fatty foods (See story, page 6). Additional work was again suggested.

Work on residues from animal drugs included:

- Canadian results from a new procedure for determination of diethylstilbestrol residues various tissues of beef, chicken and lamb, sensitive to levels of 2 to 10 p.p.b.

- Work at Rutgers University indicating that intramammary infusion of oxytetracycline sulted in residues occurring in milk from an accepted use program as long as 5.5 days, hich is beyond the 4-day withdrawal permitted.

- An Upjohn method showing reliability down to 25 p.p.b. for melengestrol acetate in ovine tissues.

- A Salsbury Laboratories method to determine total arsenic in animal tissues.

A new method for arsenic residues in red meat and poultry also was recommended by USDA for AOAC approval. USDA also presented a rapid method for determining moisture and fat in meat and a separate method for determining both in the same sample.

Mycotoxins included work on determination of penicillic acid in corn, a new screen and pre-screen for detecting aflatoxin in corn, aflatoxin M_1 in milk and milk powders, aflatoxin B_1 in ammoniated cottonseed products, ochratoxins A and B in barley, patulin in apple juice, and sterigmatocystin in grains, among others.

Continuing work [redacted] PCBs and development of methods for polychlorinated terphenyls, which were reported as potential contaminants of animal products.

Pesticide work included a report on a Rohm and Haas method for determining ethylene thiourea residues in food crops, for residues of methylcarbamates and their 2,4-dinitrophenyl ether derivatives in plant materials, and carbofuran from soils.