

Four Corners



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Czechoslovakia Jan Pokorny

Meeting of food chemists

The 7th Symposium on Food Analysis and Technology was held in Zvíkovské Podhradí, May 25-27, 1977. In the fat and oil session, particular attention was paid to phospholipids. Rauch and Šicho reported on the metabolism of synthetic phospholipids. Their radioisotope studies have shown that phosphatidic acids were resorbed by rat and incorporated into phosphatidyl choline and phosphatidyl ethanolamine while no radioactivity was found in the phosphatidic acid fraction of rat. Phospholipids added to cocoa powder were analyzed by extracting the material with perchloric acid and converting phosphoric acid into the yellow vanadomolybdophosphoric acid (Winterová and Miková). Phospholipids present in vegetable oils decrease the activity of nickel catalyst and increase the selectivity of hydrogenation, especially in the first stage (Zajič et al.). Distilled monoglycerides and their mixture with phospholipids improve the storability of bread and other bakery products. It is then possible to use lower amounts of fats, thus decreasing the energy content of the food (Lučný et al.).

The subject of the second part was lipid autoxidation. The stability against autoxidation of hydrogenated sunflowerseed oil cannot be substantially improved by addition of tocopherols or tocopherol acetate. When mixed with flour or cake mixes, the stability of oil is considerably reduced (Svobodová et al.). Edible oils are unstable when added to dry adapted milk, therefore, it is recommended to use only very stable oils or oils stabilized with ascorbyl palmitate and tocopherols (Kopecký et al.). Copper present in milk passes, at least partially, into butter on churning and may thus decrease the stability against autoxidation, in various degrees, unless deactivated by milk proteins (Forman et al.).

Šimůnek et al. reviewed the protein composition of rapeseed, mainly from the standpoint of protein isolation. The nutrition value and technological properties are improved by removal of thioglycosinolates.

16th Annual Meeting of Czechoslovak Oil Chemists

The meeting was held in Holany on June 15-16, 1977. The meeting was dedicated to the memory of Prof. V. Veselý, the first president of the Oil Chemists' Section of the Czechoslovak Chemical Society, on the occasion of the 100th anniversary of his birth. Mr. Malenický, the second president, introduced the program with a memorial lecture and a biographical sketch.

During the session on oilseeds, J. List reported experience with growing and processing zero erucic rapeseed in Czechoslovakia. Marek et al. discussed the effect of climate and locality on the oil content and fatty acid composition of soybeans grown experimentally in Czechoslovakia. Zajič et al. described laboratory experiments on direct extraction of rapeseed.

The technological session was opened with a paper by J. Čmolič on the optimalization methods of valuation of fatty acids by means of flow sheet diagrams. The stabilities against interesterification and discoloration of distilled

monoglycerides on storage at higher temperatures were studied by Marés and Schwarz. K. Havelka showed a new method of measuring the corrosion of cooling devices in the fat industry. If the temperature of test liquid is different on each side of the tested plate, the corrosion proceeds much faster.

The analytical session was introduced by a review paper (J. Pokorný) on problems connected with the use of modern instrumental analytical methods in the field of fats and oils. The quality evaluation of animal fats for feed mixes was discussed by I. Ingr. Acrolein produced by pyrolysis of monoglycerides during their distillation and spray drying was determined spectrophotometrically with tryptophan (L. Tocháček). Its content in distilled products was very variable. Various chromatographic methods for the determination of BHT were compared by Z. Svoboda. A modified determination of trans fatty acids was presented by V. Koman.

The consumption pattern of fats, oils, and fatty foods and its development were evaluated by E. Davidková from the standpoint of nutrition requirements. The consumption of animal fats, especially those present in meat, is very high; the consumption of vegetable oils is slowly increasing.

J. Kaláč discussed the effect of some contaminants (heavy metals) and additives (tocopherols and their acetates) on the stability of vegetable oils against autoxidation. Fats used for the production of crackers were successfully stabilized with tertiary BHT (D. Šrámková). B. Sova, director of The Fat Research Institute, explained the main projects of fat and oil research.

6th International Symposium on Household Chemical Products

The symposium was held in Brno, Moravia, on June 28-29, 1977. The meeting was opened by a speech presented by Dr. Souček, technical director of the Czechoslovak Fat and Oil Industry. The program consisted of the session on detergents and the session on cosmetic products.

Several analytical papers were presented in the detergent session. Bartha et al. (Hungary) reported on a rapid determination of sodium chloride in detergents with use of an ion selective electrode. Wasow et al. (German Democratic Republic) constructed a new stalagmometric apparatus for the determination of surface tension of detergent solutions, and another apparatus for the measurement of wetting power of surfactants. Various methods for the analysis of alkanolamides were tested and evaluated by Zeman and Winterová (Czechoslovakia): determination of alkanolamides by titration with perchloric acid in anhydrous medium, determination of ester and amide groups by infrared spectrometry, molecular distribution by GLC of methyl esters, and the possibilities of a direct GLC. A rapid evaluation of the effect of washing powders on cotton fabric after multiple washing was possible with use of the apparatus "Lauder-o-meter" and "linitest" (Bolinski and Janas, Poland).

Problems of the quality control and development of detergents and other products of household chemistry were discussed by Judin (USSR). Cvetkov (Bulgaria) reported on

the antiredeposition activity of soap compared with synthetic detergents on cotton and mixed cotton-polyester textile materials. Combinations of fatty acid esters with alkyl-dimethylbenzylammonium chloride were suitable for the manufacture of preparations with a combined antimicrobial, antistatic, and softening activity (Kalinkova, Bulgaria). Nigrin (Czechoslovakia) explained the causes of blooms on the surface of toilet soap. Novák (Czechoslovakia) presented his results on surfactant preparations for automatic dishwashing and high-pressure washing of railway cars, buildings, and pavements. Complexes of boron with surface active agents proved advantageous as components for detergent products (Profic, Poland). Petrus and Paulovič (Czechoslovakia) introduced new interesting oxyalkylene derivatives for the detergent industry.

India K.S. Krishnan

Oil Technologists' Association of India

The Oil Technologists' Association of India and the ISF will sponsor a regional congress on "Utilization of Fats" in Delhi on Feb. 10-12, 1979. Topics will include: agronomy of oilseeds, utilization of minor and nontraditional oils, stability of fats, biosynthesis/metabolism/nutritional aspects of fats, quality specifications, standardization, and analytical techniques of fats, utilization of oil cakes, and processing of fats and fat products. Eminent personalities in fat science and technology in the United States, Canada, Japan, and in European countries, as well as prominent persons concerned with research, development, and technology of fats in developing countries in Southeast Asia, the Middle East, Africa, and Latin America are expected to participate.

In pursuance of the panel discussion held at the time of OTAI's 32nd annual convention, a deputation of the OTAI Executive Council met various authorities in the government of India and the Council of Scientific and Industrial Research, and a draft report was prepared on the proposed National Institute for Fats and Allied Products. Capital investment is estimated at 22 million rupees and annual recurring expenses at 2.5 million rupees. The draft report is under consideration at various levels.

OTAI's 33rd annual convention is to be held in Calcutta on Feb. 4-5, 1979. The symposium will cover topics on surface coatings.

OTAI Western Zone

A residential refresher course in "Perfumery and Essential Oils" was organized by the Western Zone from Sept. 18-24, 1977, at Hindustan Lever Training Center, Bombay. The course covered essential oils, artificial perfumes, isolates and synthetics, blending of perfumes, plant practices, analytical techniques, etc. The two important essential oils, viz, lemon grass and sandalwood, were specifically dealt with. The course was followed by an open forum and visits to factories. Twenty-three candidates working in different organizations participated.

This zone organized a seminar on "Fatty Acids—Production and Utilization" on Dec. 4, 1977, at the Taj Mahal Hotel, Bombay. The special features of design and fabrication of plants for fat splitting and for fatty acid distillation were highlighted. The seminar included sessions on raw materials, commercial plants, and panel discussions on the status and scope of oleochemicals.

OTAI Northern Zone

A workshop was co-sponsored with the Indian Vanaspati Producers Association by this zone on Oct. 18, 1977. Subjects discussed included the National Edible Oil Plan for 1977-78, consumer-oriented distribution policy, and quality for consumer protection.

OTAI Southern Zone

This zone held a seminar on "Surface Coatings in Small Scale Section" on Nov. 26-27, 1977, at the Regional Research Laboratory, Hyderabad.

OTAI Eastern Zone

Mr. K.S. Parasuram of M/s. Hindustan Lever Ltd., Calcutta, gave a lecture on Technical Efficiency in Detergent Factories. He emphasized achieving maximum technical efficiency by setting a realistic target based on theoretical considerations. Other lectures organized by this zone were on "Less Known Oils," by Prof. M.M. Chakrabarty; "Industrial Paint Applications," by Mr. N. Sen; "Shellac: Need for a Second Look," by Prof. N.R. Kamath; "Current Advances in Fatty Acids Technology," by Dr. Mario Bevnard; and on "Seed Protein Technology," by Dr. A. Rutkowski.

Obituary

OTAI lost one of its stalwarts with the death of Dr. J.G. Kane on Sept. 25, 1977 at the age of 72. Prof. Kane was a distinguished oil technologist with more than 100 research publications to his credit and two well-known textbooks on soaps. A vast number of oil technologists in India had the privilege of being taught by Prof. Kane, and one and all in this profession in India have greatly benefited by his able guidance.

Spain E. Vioque

Special course on fats

The Instituto de la Grasa y sus Derivados of Seville is the Center of Applied Research, officially in charge of imparting the knowledge necessary to attain the "Specialist on Fats" title.

This year's course extended from Nov. 7, 1977, to Feb. 24, 1978. The aspirants held the Ph.D. degree or an Engineer or Licenciado title.

The program was divided in five groups: (a) "General Characteristics of Fats," Prof. A. Vazquez; (b) "Analysis of Fats," Prof. J. Gracian; (c) "Olive Oil Extraction," Prof. J.M. Martinez; (d) "Seed Oil Extraction and Olive Cake Extraction," Prof. F. Ramos; and (e) "Edible and Industrial Oil Transformations," Prof. F. Ramos.

Association for Research of the Spanish Industry of Detergents, Surface Active Agents, and Related Compounds (AID)

The AID, for which information was given in an earlier report (1976), has established its main objectives. They were: (a) The study of the chemistry and physical chemistry of the tensioactive products and their applications; (b) relationship between the tensioactive products and the environment; (c) possible raw materials for tensioactive detergents and related products; (d) elaboration of Spanish standards for analysis and assays; (e) short courses in order to train new technicians; (f) contribution to the continuity of the International Congress of Surface Activity, and, in general, support to any realization whose aim is the progress of science, technology, applications, and legislation of tensioactives, detergents, and related products.

Research programs also will be carried out in connection with any industry of the AID, information and documentation service, analyses, and technical reports, and so on.

The AID will hold its plenary assembly in March 1978 to establish the research programs which, in cooperation with some universities (the Instituto de Tecnologia Quimica y Textil, Barcelona; the Instituto de la Grasa y sus Derivados, Seville) and some other research centers, will form the first step of the activities of the AID.

The financial support to the several activities of the AID will be shared between the implicated industries and the Spanish government.

Nearly all the Spanish industries related with tensioactives and detergents are enrolled in the association; more than 90% of total production of detergents belongs to firms included in the AID. Among these, some are Spanish branches of multinational companies such as: BASF Española, Bayer Hispania Comercial, Ciba-Geigy, Colgate-Palmolive, Dosli-Shell, Dragoco, Givandan Ibérica, Haarman and Reimer, Henkel Iberica, Lever Iberica, Marchon Española, Naarden Iberica, Procter and Gamble Española, Sandoz, etc.

The AID ensures the continuity of the Comité Español de la Detergencia (CED), formed in 1975 within the Assembly of members of the Instituto de la Grasa y sus Derivados. This committee works with the Comité Internacional des Derives Tensioactifs (CID) in the terminology, analysis, assays, and ecology commissions. Among the most active Spanish investigators in the CID are Drs. Lascaray and Miró, who have held respectively the presidency of the Comisión Internationale de Terminologie and of the CID. The CED organized the 5th International Congress of Surface Activity (1968) in Barcelona with remarkable success.

New center for research on table olives

During September a new center was devoted to the applied research in the field of table olives. The center is a part of the Instituto de la Grasa y sus Derivados of the High Council of Scientific Research of Spain in Seville.

The main part of the new building is formed by the experimental plant for pickling, fermentation, and canning of the different types of commercial table olives. The remaining forms the laboratories and auxiliary services.

Some 20 people comprise the staff and auxiliary services in this center.

Technical Commission of the National Institute of Rationalization and Standardization (IRANOR) Subcommission of Fat Industries

The meeting took place in Seville (Instituto de la Grasa y sus Derivados) under the chairmanship of Professor J. Gracian, head of the analytical department of the institute.

The following standards were studied: "Survey of Sulfur Olive Oil in Blends with Olive Oil (Vizern test)," "Refined Grapeseed Oil for Industrial Uses," "Chlorides Determinations in Soaps," "Purification Method of Virgin Olive Oil by Chromatography on Alumina for the Ultraviolet Absorbance Determination," "Determination of Isolated *trans* Double Bonds by Infrared Spectrophotometry," "Separation and Determination of Impurities in Oilseeds," "Sampling of Oilseeds," "Tocopherol Determination in Edible Oils," "Determination of Waxes in Sunflower Oils," "Determination of Organo Chloride Insecticides Residues in Fats," "Sensorial Analysis: Terminology and Definitions for a Vocabulary of Edible Oils," "Sensorial Analysis: Classification with the Help of Scale for Virgin Olive Oil," "Sensorial Analysis: Classification with the Help of a Scale for Refined Oils."

Little to head NORCAL in '78

Peter Little of PVO International in Richmond, CA, has assumed his post as chairman of the AOCS Northern California (NORCAL) Section for 1978. Chairman-elect is Frank McKenna of Best Foods Division, CPC International, in San Francisco, CA.

Other officers for 1978 include Charles Rogers, SRI, Inc., Menlo Park, CA, treasurer; Penny Wells, Cutter Laboratories Inc., Berkeley, CA, secretary; Robert Delmont, PVO International, Richmond, CA, arrangements; and Stan Loft, Sullivan Systems, Inc., Tiburon, CA, past chairman.

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