

The Oil Chemist and Food Technology

THE food industry is a highly organized one, and many of its activities are closely dependent on and coordinated with agricultural development and with the chemical, biological, and engineering industries. Its products are subject to regulation by the federal government, by the several states, and by county and city governments.



C. N. Frey

Food technology has been defined by the Institute of Food Technologists as the application of science and engineering to the production, processing, packaging, distribution, preparation, and utilization of foods. Knowledge of food technology enables its possessor to solve technical problems in one or more of these fields by the application of one or more of the physical-biological sciences or branches of engineering.

Food technology may involve problems in the development of products, processes, or equipment, the selection of raw materials, the fundamental changes of composition or physical condition prior to, during, and subsequent to industrial processing, or the nutritional value and health factors involved in connection with the use of foods. The industrial food technologist is also concerned with government, state, and city regulations pertaining to the health, quality, and stability of foods, and the manner in which the foods his firm markets conform to government standards.

The director of research, or chief food technologist, of a large manufacturing or food processing company has the responsibility of guiding his organization along the lines indicated above, of integrating the activities of the company designed to produce effective improvement in the quality of the organization's products, of developing greater economy in production, and of maintaining standards in respect to quality and nutritive properties. He is usually responsible for the proper labelling of products in respect to chemical composition, nutritive properties, et cetera. In addition, he cooperates with and seeks the advice of suppliers of raw materials, chemicals, equipment, and packaging materials and integrates their contributions with those of the operations of his company.

To carry on the activities outlined above, the director of research of a large corporation will require the services of a number of specialists capable of carrying on original investigations in a number of fields and of personnel competent to supervise and control production or to direct quality control covering specific products or processes. In connection with smaller organizations where personnel is limited, one man may be compelled to cover a number of processes and products. Regardless of the number of personnel in the research and control activities of the company, the director of research will seek information, technical advice, and assistance from his suppliers in those areas where his own research is inadequate.

FATS and oils constitute a large percentage by weight of the manufactured products of certain food industries. This is especially true of the baking industry. Specifications for shortenings to be used in specific products made in the bakery are developed by the technologists in the baking industry. The problem of meeting these requirements is the responsibility of the oil chemists. The margarine manufacturer has specifications for the products he purchases that differ from those of the bread manufacturer. It is desirable for the oil chemist to be informed concerning the technological problems and the requirements of the industries he serves. Food technologists and oil chemists should cooperate fully and effectively in order to promote the development of better products for the consumer. Oil chemists generally develop a wide knowledge of food technology or seek the assistance of the technologists who are versed in the processing and products of the food industries they serve.

Progress in food manufacturing has been rapid, and this progress has been made possible by the development of the basic industries that serve the food industry. In view of the broad nutritional problems faced by the food industry and the desire for stability and for better flavor in food products, the food industry is in need of serious cooperation.

Food standards and labelling requirements make it necessary to have adequate information regarding the products entering into the manufactured article. Consequently any chemical or technical developments in the shortening industry are of direct and immediate concern to the food technologist in the food industry.

The desire for better flavor and eating quality, better nutrition, and greater stability in baked products, margarine and breakfast foods has stimulated research on antioxidants, emulsifiers, and chemically altered fats. In this area progress has depended on the imagination and skill of the chemist and the technologist who have found the field of physical chemistry, biochemistry, and catalysis a fruitful source of ideas and experimental techniques.

Recently the toxicity of oxidized oils in human nutrition, the nutritional requirements of the body for unsaturated fatty acids, and the effect on nutritive values of the emulsifiers used in fats to promote the quality of baked products have been investigated rather intensively by biochemists and technologists.

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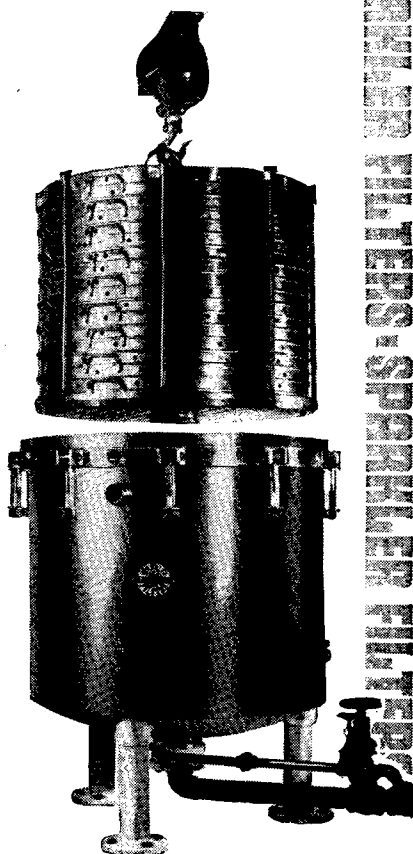
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Work in these fields is of great interest to the research directors of large and diversified food industries. The oil chemists and the food technologists serving specialized industries will also find it advisable to follow research in areas related to their activities. Important scientific discoveries and technological advances are continually being integrated and reduced to practice in modern industry. Collaboration and effective team-work between technologists and chemists in various related areas will stimulate advances which will be reflected in an ever-improving food supply for the American people.

CHARLES N. FREY, *President*
Institute of Food Technologists

Glycerine Cooperative Samples for Analysis (1952-53)

THE response and results of the first series sent out early this year were excellent. It is proposed to send a new series this year. In order to scatter the load so reports may be made more promptly, single samples will be sent. It is hoped to send the first sample about November 1 and to follow with at least 2 additional samples at monthly intervals.

One month will be allowed for reporting. The schedule will allow final tabulation of results for distribution to the participants and for presentation to the Spring Meeting of the A.O.C.S. For the CP Glycerine sample glycerol will be determined by Methods Ea 4-38 Acetin, Ea 6-52 Sodium Periodate, and Ea 7-50 Specific Gravity, and Moisture by Ea 8-50. For the crude samples, glycerine will be determined by Ea 4-38 and Ea 6-52. In addition, total and organic residue by Ea 3-38, ash, etc., by Ea 2-38, will be determined.

Over 40 U. S. and Canadian laboratories cooperated last year. In addition, 12 samples were sent to England and Holland. It is hoped that all of those that cooperated last year will analyze the series this year. There should be many more that are interested. There will be no charge for the series again this year.

Will those who wish to participate this year, please send their name and address for shipping the samples to:

W. D. Pohle, chairman, Glycerine Committee
Research Department, Swift and Company
Union Stock Yards
Chicago 9, Illinois

This should be done at once. The list should be complete, if possible, by October 15, 1952.

A.O.C.S. SPECIAL GLYCERINE COMMITTEE.

Morris H. Palmer Dies

MORRIS H. Palmer, 39, died from injuries received in an automobile accident July 21, 1952, in San Francisco, Calif. Mr. Palmer, at the time of his death, was director of manufacturing and research for the Durkee Famous Foods Division of The Glidden Company and was in California on business.

A native of Ohio and a graduate of Leland Sanford University in Chemistry and Business Administration, Mr. Palmer was first employed after graduation by the Procter and Gamble Company, Cincinnati. Subsequently he was associated with the Durkee Company at Elmhurst, Long Island, holding the position of plant superintendent for seven years until his promotion to the home office of the parent company in Cleveland.

Mr. Palmer had been a member of The American Oil Chemists' Society since 1945 and was well known throughout the vegetable oil industry.

C. M. KETCHAM

A.O.C.S. CALENDAR

1952—Cincinnati, Netherland Plaza hotel, Oct. 20-22.

1953—New Orleans, Roosevelt hotel, May 4-6.

Chicago, Sherman hotel, Nov. 2-4.