The A.O.C.S. and the Food Industry: *The Changing Outlet*

PRODUCERS OF EDIBLE FATS are faced with increasingly complex problems of production and distribution. These problems are brought about by changes in the food habits of the American people. For better or for worse, one must be impressed by the continued acceptance of prepared or semi-prepared foods as replacements of the basic ingredients of yesteryear. Indeed, the trend from household cookery may, in time, threaten the existence of what was formerly known as the home-cooked meal. The cries of anguish from our esteemed trenchermen friends may soon be drowned by exclamations of delight emanating from manufacturers of ready-to-eat food products when tomorrow's meal planner serves up the counted calories (according to the manufacturer's carefully worded label) to her unknowing and advertising agency-conditioned family.

Home economists with their cooking schools and advertisers of home recipe cookery seem to be fighting a losing battle as it is increasingly apparent that the new Mrs. America simply does not want to spend her time with household drudgery, formerly known in polite circles as culinary chores. The march definitely is away from the kitchen and to the super-market freezer cases. A check recently made in a single, large supermarket showed the following food products in stock:

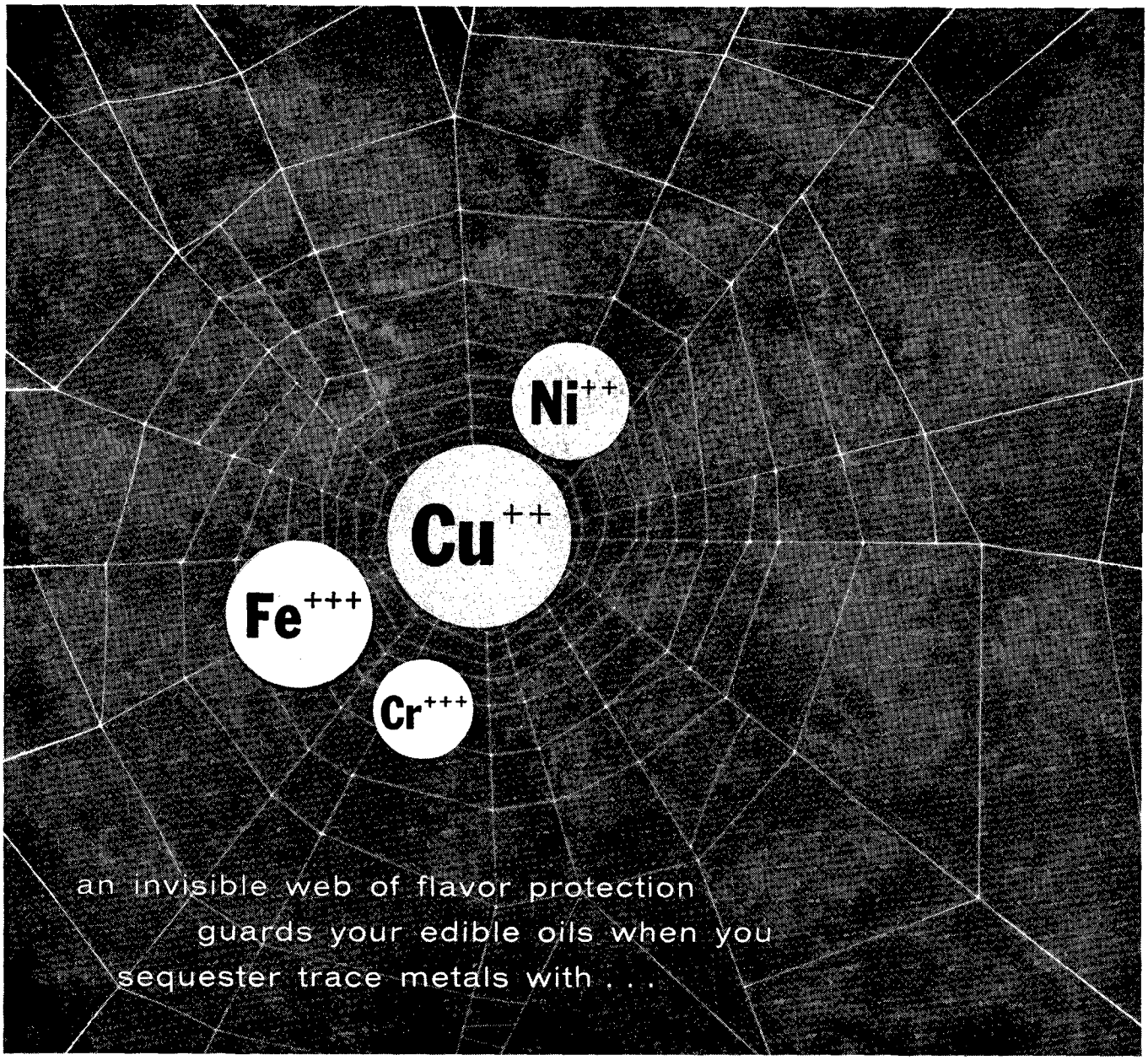
	Brands		Brands
Yellow layercake mix	4	Small cake and icing combination mix	2
Chocolate layercake mix	4	Frosting mix, 9 flavors	4
White layercake mix	4	Pie crust mix	3
Marble layercake mix	2	Corn muffin mix	2
Caramel or burnt sugar layercake mix	2	Blueberry muffin mix	2
Orange layercake mix	1	Frozen fruit pies, 4 flavors	2
Chocolate malted layercake mix	1	Frozen cakes, 3 flavors	1
Chocolate brownies	3	Frozen chicken pies	3
Chocolate pudding cake	1	Frozen meat pies	3
Date-filled cookie mix	1	Frozen fish sticks	3
Peanut cookie mix	1	Combination sea-food dinner	1
Coffee cake mix	2	Fried shrimp	2
Hot roll mix	3	Fried oysters	1
Baking powder biscuit (refrigerated)	3	Frozen fried chicken	1
Biscuit mix	2	Frozen French fried potatoes	3
Cinnamon rolls (refrigerated)	1	Combination dinners, 4 varieties	2
Pound cake mix	1	Frozen fried onions	1
Cup cake mix	2	Frozen fried noodles	1
		Assorted frozen cooked foods	many varieties

One may conclude that completely new segments are being created in many old-line food industries. The quick and very complete success of the product "fish sticks" will undoubtedly revolutionize marketing ideas of the sea-food industry. Added to the fish stick success will be a multitude of frozen cooked sea-food products, thereby removing from the kitchen a most distasteful and troublesome cookery chore, *i.e.*, fish cookery. The same trend exists throughout the food industry, and it is impossible to escape the inevitable conclusion that consumption of fats by industrial users is increasing rapidly and that consumption of fats in the home is decreasing. What does this change mean to the technical people of the fats and oils industry?

THE INDUSTRIAL USER of fats is much more demanding with respect to technological requirements than is Mrs. Housewife. Each item produced by an industrial user represents a specific problem which often can be best solved by means of a specific shortening product rather than by use of an all-purpose shortening. The mix industry has long since learned that special treatment is required on the part of the shortening industry to permit formulation of the best possible prepared mix. It is not too unlikely to expect this industry to demand shortenings specialized for the specific type or variety of cake—a custom-built product to fit a specific flavor or brand, according to the dictates of the mix manufacturer. In like manner the manufacturers of frozen cooked foods and frozen fried food products can be expected to dictate in the direction of specialties designed to solve some troublesome problem, either of shelf-stability or production. Very often the design of production equipment will dictate changes in shortening or the oil-type required for a specific operation. Collectively these custom-built fats introduce many complexities of technological control and distribution never before encountered when the industry manufactured only a few products of relatively standard types.

The increasing trend towards specialization, of course, means increasing research on the part of those engaged in fats and oils research as well as of those engaged in direct research on the primary food product under investigation. This means that there will be high competitive pressures among research laboratories to achieve improvements. It will be relatively easy to bridge the gap between laboratory and direct application in the field when dealing with food processors rather than household consumers. The laboratory product of today will be in use within months, as contrasted to years of study before research accomplishments can be transferred to the field *via* the consumer route.

(Continued on page 40)



PFIZER CITRIC ACID

You can retard the development of off-flavors and off-colors in your hydrogenated oils easily and economically with Pfizer Citric Acid as your sequestering agent. It complexes metallic ions, so they can't oxidize unsaturated fatty acids. Find out—*in detail*—how Pfizer Citric can improve your product's stability and safeguard its sales appeal.

Write for Technical Bulletin 72.

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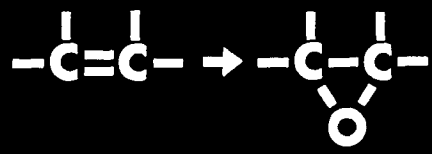

BECCO now makes available the first practical low-cost *in situ* Epoxidation process using ion-exchange resins

This broadly practical low-cost epoxidation method uses ion-exchange resins in expendable amounts as catalysts.

The new Becco Process* requires so little resin — 2% or less of the combined weight of hydrogen peroxide and acetic acid — that the resin can be discarded after one use.

This is a major improvement over earlier ion-exchange processes using large amounts of resin, which had to be used repeatedly to make the process economical.

Conversion efficiency of Becco's new process is very high. Conventional equipment is employed.

Resin cost is low at about one cent per pound of epoxidized end-product when processing unsaturated fatty acid esters.

All the advantages of *in situ* resin catalysis are now available to manufacturers of resins, plasticizers and stabilizers, pharmaceuticals, insecticides, paints and varnishes, lubricants, organic chemicals and other products.

Becco also has available *a semi-fixed resin bed continuous flow epoxidation process.*

Full details of the expendable resin and continuous flow process, as well as recent advances in epoxidation and hydroxylation technology, are described in the new Becco Bulletin No. 69, which will be sent on request.

*Patent Pending

BECCO CHEMICAL DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

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People and Products

A specially designed liquid vitamin A palmitate for aqueous dispersion-type products has been developed by CHARLES PFIZER AND COMPANY INC., Brooklyn, N. Y.

❖

SIDNEY M. EDELSTEIN was presented a medal commemorating the 100th anniversary of Liebig's work in organic chemistry by the Division of History of Chemistry of the American Chemical Society in recognition of his service as division secretary.

❖

Secretary of Agriculture Ezra T. Benson has presented a department superior service award plaque to a group of scientists at the SOUTHERN UTILIZATION RESEARCH BRANCH, New Orleans, La., in recognition of their development of new methods of analysis for research on fats and oils. Members of the group are Dorothy C. Heinzelman, Ralph W. Planck, Frank G. Dollear, Frank C. Pack, and Robert T. O'Connor.

❖

FISHER SCIENTIFIC COMPANY, Pittsburgh, Pa., is offering laboratory clamps and holders with a permanent gripping surface of vinyl plastisol on the jaws.

❖

The 1955 medal award of the Society of Cosmetic Chemists will be presented to ERNEST GUENTHER, of Fritzsche Brothers Inc., at the society's meeting on December 15, 1955.

❖

GENERAL MILLS INC., Minneapolis, Minn., has given the trade name "Versamid" to its family of polyamide resins.

❖

An epoxidation process utilizing expendable amounts of resin catalysts has been revealed by BECCO CHEMICAL DIVISION, Food Machinery and Chemical Corporation, Buffalo, N. Y.

❖

Stuart and Briegleb atom models are available in 44-piece sets of nine different types from ARTHUR S. LAPINE AND COMPANY, Chicago, Ill.

❖

A new double burette clamp for making titrations is equipped with double grips to prevent sideslip, according to the CENTRAL SCIENTIFIC COMPANY, Chicago, Ill.

❖

Two new lubricant esters, diesters of azelaic acid, are available on a commercial basis from EMERY INDUSTRIES INC., Cincinnati, O.

❖

A refrigerator which will maintain temperatures in the range of absolute zero has been developed by ARTHUR D. LITTLE INC., Cambridge, Mass.

❖

FISHER SCIENTIFIC COMPANY, Pittsburgh, Pa., offers seven ultra-pure reagents for use in spectrophotometry.

❖

Henry Fleming Payne has returned from AMERICAN CYANAMID COMPANY, New York, N. Y., to become research professor in charge of instruction and research on organic coatings at the University of Florida, Gainesville, Fla.

❖

A fellowship to study the suitability of cottonseed meals for poultry and swine feeding has been established at the SOUTHERN REGIONAL RESEARCH LABORATORY, New Orleans, La., by the National Cottonseed Products Association.

❖

B. W. BEADLE has joined the staff of Southwest Research Institute, San Antonio, Tex., where he will serve as manager of biochemistry research.

Markley Writes on Vegetable Oils

The Society office in Chicago has received a copy of "Vegetable Oils: Some Observations on Recent Developments in El Salvador, Honduras, Venezuela, and Brazil," by Klare S. Markley, Institute of Inter-American Affairs, Rio de Janeiro, Brazil.

The 18-page illustrated booklet was issued by the Division of Agriculture and Natural Resources, Institute of Inter-American Affairs, Technical Cooperation Administration, Washington, D. C., as No. 4 in its Activity Series.

Bernard R. Schaafsma has been appointed assistant director of research in the research department and development department of COLGATE-PALMOLIVE COMPANY, Jersey City, N. J. Other promotions include W. W. Wellman, leader of the aerosol toilet articles group; Virgil Richter, head of the exploratory oral products group; and Gerald Jahoda, group leader for the information center.