## .Meetings.

# ISF/AOCS World Congress

### World Congress opens April 27

The ISF/AOCS World Congress opens Sunday, April 27, in New York's Hilton Hotel with the promise of being one of the decade's largest gatherings of fats and oils researchers.

- At least 1,200, and perhaps as many as 1,500, registrants will attend from Europe, Asia, Africa, North America and Latin America.
- Approximately 540 technical papers will be presented during 78 technical sessions. Talks will touch virtually every aspect of fats and oils, and lipids, from processing through nutritional effects and including lipids in art. The tentative program was published in the February JAOCS.
- More than 50 firms and organizations will participate in an exposition that will give registrants a chance to view the latest developments in industry, as well as receive information from various organizations involved in the fats and oils complex.
- A series of social events will facilitate informal communication, beginning with a welcoming mixer on Sunday evening, April 27, for technical program and spouses' program registrants. This will provide the opportunity to renew past friendships as well as begin new ones.

Among recipients of various awards to be presented during the meeting will be Dr. J.F. Mead of the University of California, Los Angeles, and Dr. R.G. Ackman of Nova Scotia Technical College, Canada. Dr. Mead will receive the AOCS Award in Lipid Chemistry, accompanied by a \$2,500 honorarium from Applied Science Laboratories, and present his acceptance lecture at a plenary breakfast Monday. Dr. Ackman will present the ISF's Kaufmann Memorial Lecture at a plenary session Tuesday after receiving that award. Other AOCS award recipients will be recognized at a plenary continental breakfast on Wednesday.

Dr. Stephen S. Chang, technical program chairman, estimates that close to half of the technical papers will be presented by speakers from outside the United States. This will be the second joint meeting of the ISF and AOCS; the first was ten years ago in Chicago.

The gala social event will be the Wednesday evening banquet in the grand ballroom of the New York Hilton. Music will be by the 16-piece Justin Stewart orchestra under the direction of Joey Scott with vocalist Maureen Tomson. Entertainment will be by "The Astonishing Neal," a specialist in mind reading, ESP and hypnosis, and the SRO, a three-member vocal group best known for sparkling



S.R.O.



The Astonishing Neal

Continued

medleys of popular songs.

Spouses of technical program registrants can sign up for a special package of programs that includes all conference social events, as well as a choice of three tours, special excursions to nearby museums and lots of time for shopping, sightseeing or theater-going. The New York Hilton is located in mid-town Manhattan, close to Fifth Avenue's main shopping area, diverse museums and the Broadway theater district.

Registration fee for the meeting is \$115 paid in advance or \$120 at the conference for members of AOCS and ISF. Nonmember registration fee is \$150 in advance, \$155 at the door. Registration fee for the guest/spouses' program is \$95 in advance, \$100 at the door. For retired AOCS members, the technical program registration fee is \$40 in advance, \$45 at the door. These registrations include tickets to all conference social events.

One-day registrations will be available at the conference; students may pay a \$20 registration fee and attend technical sessions throughout the meeting. No social event tickets are included with one-day or student registrations.

Registration forms were published in the January and February JAOCS or may be obtained from the AOCS, 508 S. Sixth St., Champaign, IL 61820.

#### Tentative committee schedule

The following is a listing of the tentative AOCS committee meetings scheduled during the ISF/AOCS World Congress. The final schedule, with room designations, will be published in the program distributed at the meeting.

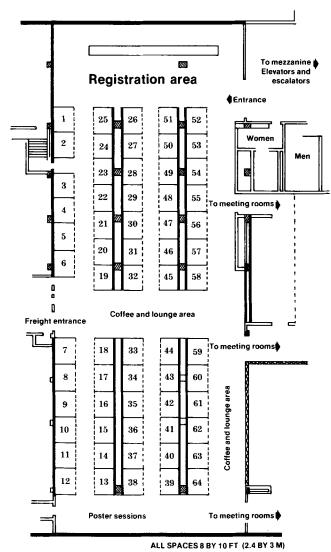


Persons are encouraged to attend any committee meetings that are of interest to them.

Advertising	Monday	2:00-4:00
Aflatoxin	Monday	2:00-3:00
AOCS Foundation	Tuesday	2:00-4:00
Atomic Absorption		
Spectroscopy	Monday	5:00-6:00
Awards Administrative	Wednesday	3:00-4:00
Biochemical Methods	Sunday	4:00-5:00
Bleaching Methods	Monday	5:00-6:00
Bond Award	Monday	4:00-5:00
Cellulose Yield	Monday	3:00-4:00
Chromatography	Tuesday	5:00-6:00
Commercial Fats and		
Oils Analysis	Monday	4:00-5:00
Commercial Fatty Acids	Wednesday	3:00-4:00
Detergents Eight-O		
Short Course (1980)	Monday	5:00-6:00
Dibasic Acids	Monday	4:00-5:00
Education	Tuesday	3:00-4:00
Energy Conservation	Monday	5:00-6:00
Environmental	Sunday	4:00-5:00
Examination Board	Sunday	2:00-5:00
Fat and Oil By-product		
Analysis	Wednesday	4:00-5:00
Fatty Nitrogen	Sunday	2:00-3:00
Fiber Determination	Wednesday	10:00-11:00
Finance	Wednesday	3:00-4:00
Flavor Nomenclature	Monday	3:00-5:00
Governing Board	Sunday	8:00-12:00
Governing Board	Thursday	10:00-3:00
Honored Student Award	Tuesday	4:00-5:00 3:00-4:00
Hydrogenated Oils	Sunday	3:00-4:00
Instrumental Melting Point Dtm.	Wednesday	4:00-5:00
International Relations	Tuesday	5:00-6:00
JAOCS Soaps, Detergents	Tuesday	3.00 0.00
and Cosmetics Advisory		
Committee	Tuesday	12:00-2:00
Lipids Advisory Board	Monday	3:00-5:00
Local Sections	Monday	4:00-5:00
Meetings Logistics	Wednesday	10:00-12:00
Membership	Sunday	2:00-3:00
Monograph	Monday	5:00-6:00
Mycotoxin	Wednesday	4:00-6:00
National Program Planning	Tuesday	4:00-6:00
NMR	Sunday	2:00-4:00
Polyethylene in Fats	Tuesday	5:00-6:00
Public Relations	Wednesday	4:00-5:00
Publications	Tuesday	7:00-9:00
Seed and Meal Analysis	Wednesday	11:00-noon
Smalley	Tuesday	2:00-4:00
Technical Safety		
and Engineering	Sunday	4:00-5:00
Technical Session		
Chairmen (Breakfast)	Monday	8:00-9:00
Uniform Methods	Wednesday	2:00-4:00
Vegetable Oil Distillate	m '	4 00 = 00
Analysis	Tuesday	4:00-5:00
World Soya Conference	Woderer	1 00 5 00
(1980)	Wednesday	1:00-5:00

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### **Exhibits floor plan**



### **Exhibitors**

Exhibitor	Booth
American Jojoba Industries	39
American Soybean Association	7
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Artisan Industries Inc.	8
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Bull & Roberts Inc.	53
Calbiochem-Behring Corp.	48–49
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Cambrian Engineering Group	43
Costruzioni Meccaniche Bernardini S.p.A.	56–57
Croll-Reynolds Co.	30
CVC Products Inc.	47
Desarrollo Industrial Ings., S.A.	17
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The Duriron Co., Inc.	54
Eastman Chemical Products Co.	42
Elliott Automation Co., Inc.	59

EMI Corporation	1–2
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G. Mazzoni S.p.A.	45-46
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Newport Instruments Ltd.	55
North Dakota Sunflower Council	35
Northern Instrument Corp.	10
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C.A. Picard Inc.	21
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The Praxis Corporation	13
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Tintometer USA	3–4
Unichema International	61
Waters Associates Inc.	23–24
Wurster & Sanger 12	
Zone Devices Co.	40

AMERICAN JOJOBA INDUSTRIES (Booth 39). Jojoba oil is a unique liquid wax ester from nature. Samples of Golden Jojoba Oil and PUR-OBA, a new, purified and clarified form of jojoba oil will be available. Jojoba seed, meal and technical information will also be on display. Address: 2813 Hangar Way, Bakersfield, CA 93308.

AMERICAN SOYBEAN ASSOCIATION (Booth 7). Soy oil is the No.<1 edible oil in the United States and the most available oil in the world. It is also one of the least known, according to recent surveys. The exhibit will feature market and nutritional information aimed at increasing the knowledge of soy oil. Address: PO Box 27300, St. Louis, MO 63141.

ANDERSON INTERNATIONAL CORP. (Booth 5). Anderson International will feature its complete line of expeller (R) presses for mechanical extraction of vegetable oilseeds. The expeller prepresses more than 150 metric tons/day with a residual oil content between 15 and 20%. Full press models process up to 35 metric tons/day with 3.5 to 6.0% residual oil. Capable of processing oilseeds ranging from copra to sunflower seed. Address: 19699 Progress Drive, Strongsville, OH 44136.

ARTISAN INDUSTRIES, INC. (Booth 8). Process engineering and fabrication of equipment for fractionation, stripping, solvent recovery, liquid-liquid extraction, continuous filtering, washing and/or thickening, also vacuum ejectors,

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pumps and condensers will be featured. Address: 73 Pond St., Waltham, MA 02154.

BAKER PERKINS, INC. (Booth 44). The Podbielniak® contactor used for degumming, refining and washing edible oils and acidulating soapstock will be exhibited as a functioning model constructed of plastic as well as a slide presentation describing principles of operation. Address: 1000 Hess St., Saginaw, MI 48601.

BINACCHI & CO. S.N.C. (Booth 36 & 37). The Binacchi Company (established 1969) manufactures manual, semi-automatic plants designed to produce toilet, laundry and synthetic soap. The display illustrates equipment for fats treatment, saponification, (kettle or continuous), vacuum spray drying, plodders, cutters, stampers—everything required by a soap maker from laboratory scale to 6 tons per hour. Address: 2/A Via Gramsci, Gazzada Schianno, Varese, Italy.

BULL & ROBERTS, INC. (Booth 53). Will feature the Aqualert 240 Oil Contamination monitor used by oil processors and refiners throughout the world to protect boilers and prevent pollution. Energy saved through monitored condensate recovery can pay for the Aqualert 240 in months. Address: 785 Central Avenue, Murray Hill, NJ 07974.

CALBIOCHEM-BEHRING (Booths 48 & 49), Calbiochem-

Behring Corp. will display a full line of research biochemicals highlighting their selection of lipids and lipid-like materials from natural sources, synthetic phospholipids and detergents. Address: 10933 N. Torrey Pines Rd., La Jolla, CA 92037.

CAMBRIAN PROCESSING LIMITED (Booth 43). Offers proprietary equipment, plant engineering and process development services to the oilseed and edible oil industreis. Campro will display a model of their horizontal deodorization system, featuring thin film mass transfer. Product samples from Campro's proprietary physical refining process will be available for inspection. Senior Campro staff members will be available to discuss the operation of current plant installations, system costs and Campro technology. Address: 2465 Cawthra Road, Unit 112, Mississauga, Ontario L5A 3P2 Canada.

COSTRUZIONI MECCANICHE BERNARDINI S.p.A. (Booths 56 & 57). Photographs, posters and models of CMB plants will be on display. Address: 2 Via della Petronella, 00040 Pomezia (Rome), Italy.

CROLL-REYNOLDS CO. (Booth 30). Croll-Reynolds will exhibit multistage high vacuum ejector systems, liquid ring vacuum pumps and combination ejector/liquid ring pump vacuum systems for edible oil processing. Of key interest is

Continued on page 316A.

### On a major deodorizer investment, Cal Zehnder makes a major difference.

A major investment requires careful planning. That's why Votator product resources go far beyond equipment alone. That's where Cal Zehnder comes in.

He's our specialist in the deodorizing field. With thirty years in the business and first-hand knowledge of just about every application there is.

### Planning can't start too early.

When you start thinking about a deodorizing facility, contact Cal—whether it's new, expansion or replacement of your present plant.

He has the information you need on equipment efficiencies and future pricing and can be helpful in determining installation time and costs.

Once you've contracted for a



Votator Semi-Continuous Deodorizer, Cal and his team will work with you to get the equipment installed. And stay with it to make sure it's running smoothly.

### Votator deodorizers save time and money.

The Votator Semi-Continuous Deodorizer lets you change feed stocks in many cases with no loss in production time and negligible intermixing. And our heat recovery design shaves up to 40% off your deodorizing heating bill. It all adds up to big flexibility and big savings.

Call (502) 491-4310. That's the way to get Cal involved early. Or write him at Chemetron Process Equipment, P.O. Box 35600, Louisville, KY 40232. It'll pay to start today.

### CHEMETRON

Process Equipment
Chemetron Corporation. A member company
of Allegheny Ludlum Industries. Inc.

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Croll-Reynolds' combination ejector/liquid ring systems designed to reduce steam consumption 50-75% compared to conventional multistage ejector systems. Address: 751 Central Avenue, Westfield, NJ 07091.

CVC PRODUCTS, INC. (Booth 47). CVC Products will be displaying the Lab-5 Centrifugal Molecular Distillation system designed for the distillation of heat sensitive high molecular weight products. Literature, photographs and diagrams will be available on the larger pilot plant and production scale models. Information on CVC mass spectrometers, gas analyzers, vacuum components and fluids also will be at the booth. Address: 525 Lee Rd., Rochester, NY 14603.

DESARROLLO INDUSTRIAL INGS. SA (Booth 17). We will exhibit catalogs, illustrations for continuous solvent extraction, bleaching, deodorizing, physical refining plants, as well as dewaxing safflower, sunflower, sesame oils, continuous winterizing cottonseed oil, semicontinuous for soya oil, semicontinuous hydrogenation of oils, glycerine evaporation and distillation. Address: 515 Av. Casma, Mexico DF 14, Mexico.

DICKEY-john CORP. (Booth 25). GAC III family of NIR analyzers for rapid measurements of oil, protein, moisture, fibers or other constituents in meal, millfeed, expeller cake, spent flakes and similar products. Address: PO Box 10, Auburn, IL 62615.

THE DURIRON COMPANY, INC. (Booth 54). Filtration equipment for vegetable and oil industry will be featured. Address: 425 N. Findlay St., Dayton, OH 45401.

EASTMAN CHEMICAL PRODUCTS, INC. (Booth 42). The following points will be demonstrated at Eastman Chemical Products' booth: (1) palm oil is more easily bleached when protected with Tenox antioxidant TBHQ; (2) tenox TBHQ is an inexpensive alternate to hydrogenation for stability against oxidation. Exhibit also lists Eastman antioxidants and monoglycerides for use with oils. Address: 1133 Avenue of the Americas, New York, NY 10036.

ELLIOTT AUTOMATION COMPANY, INC. (Booth 59). An Oil Refinery Loss Monitor and a Digital Control System similar to recent customer installations will be on display. This is the very latest in oil refinery digital (microcomputer) control. The system includes a continuous caustic dilution and a dry weight basis caustic treatment system, as well as digital baume control and Crude flow control. All of these are integrated into an Elliott Loss Monitoring System for production control and reduction of oil refinery losses. Fully automated refineries complete with on-line quality control and computer-optimized loss control is now feasible. Elliott invites any and all inquiries. Address: PO Box 31227, Cincinnati, OH 45231.

EMI CORPORATION (Booths 1 & 2). Slides and literature describing EMI Physical Refining Systems, award winning edible protein processing systems; plant pictures and process flow sheets for solvent extraction of oilseeds, fats

and oils refining, fatty acid production processes and complete plants as offered by EMI. EMI catalogs will be available. Address: 3166 Des Plaines Ave., Des Plaines, IL 60018.

EXTRAKTIONSTECHNIK GmbH (Booth 33). Survey of the activities comprising the supply of complete plants and/or unit equipment for the processing of all vegetable oil-bearing materials as well as all vegetable oils and fats. The exhibit will feature the firm's latest improvements, including direct extraction of all seeds with high initial oil content, new design of the "Carrousel" extractor capacities in excess of 3000 t/day and heat/waste material recovery systems. Address: Postfach 760147, 2 Hamburg 76, West Germany.

FRENCH OIL MILL MACHINERY CO., INC. (Booth 60). Brochures and descriptive literature will be available on all equipment manufactured by French for oilseed processing. Visitors should find the working scale model of the French Stationary Basket Extractor to be quite interesting. Address: PO Box 920, Piqua, OH 45356.

GRINDSTEDVAERKET (Booth 6). Emulsifiers, stabilizers and flavors for food. Emulsifier products include: DIMO-DAN—distilled monoglycerides: LACTODAN, CETODAN, PANODAN—organic acid esters of monoglycerides; ARTODAN—lactylates; PROMODAN—propylene glycol esters of fatty acids; TRIODAN—polyglycerol esters of fatty acids for margarine, shortening, baked goods, desserts, ice cream and other foodstuffs. Address: 38 Edwin Rahrs Vej, Brabrand DK-8200, Denmark.

HEWLETT PACKARD CO. (Booth 62). 5880A—A High Performance Gas Chromatograph featuring new flexible fused silica capillary columns. 1084B—A High Performance Liquid Chromatograph featuring automatic sampling and rapid scanning variable wavelength UV detector. 3388A—State-of-the-Art integrator featuring simultaneous processing of two input signals with full integrator and BASIC programming capabilities. Address: W120 Century Road, Paramus, NJ 07652.

H.L.S./EISENBERG & Co. (Booth 41). Address: 4 East 39th Street, New York, NY 10016.

INDUSTRIAL FILTER & PUMP MFG. Co. (Booth 52). Display illustrations of all our Pressure Filters featuring the Type 122 Catalyst & Bleach and "OMD" Winterizer Model. Included will be our Type 112 & 152 Bleach, Type 114 "Hydra-Shoc" Miscella, Type 123 Deodorizer & Tank Loading, Type 116 Post Bleach, and Type 142 Conventional Winterizer including automation of all systems. Address: 5900 W. Ogden Avenue, Cicero, IL 60650.

KRUPP INTERNATIONAL, INC. (Booth 9). Krupp designs complete oil mill installations to customers' requirements for turnkey construction and also can provide individual machines or equipment, including seed preparation equipment, fluted breaker rolls, flaking mill; mechanical oil extraction equipment, prepress and final presses; solvent extraction equipment, Rotocel systems; and oil refining

systems, including neutralizing and bleaching, deodorizing and hydrogenation. Address: Krupp International Inc., 550 Mamoroneck Ave., Harrison, NY 10528.

LABORATORY DATA CONTROL (Booth 14 & 15). Laboratory Data Control, Div. of Milton Roy Company, will exhibit High Performance Liquid Chromatography modules and systems. Several applications of HPLC to lipid chemistry will be featured. New products of LDC to be displayed include the Refracto-Monitor III, Refractive Index Detector and micro-processor-based HPLC controller called the CCM<sup>TM</sup>-Chromatograph Control Module. Address: PO Box 10235, Riviera Beach, FL 33404.

G. MAZZONI S.p.A. (Booth 45 & 46). Pictures and technical literature which illustrates and describes the complete line of continuous Mazzoni Processes for Manufacturing Soaps, Detergents, Fatty Acids and Glycerine. Address: PO Box 421, 21052 Busto Arsizio, Italy.

METTLER INSTRUMENT CORPORATION (Booth 18). Laboratory instruments will be featured. Address: PO Box 71, Hightstown, NJ 08520.

NEUMUNZ, INC. (Booth 58) Will feature bulletins and flowsheets on vegetable oil and food processing plants, including continuous bleaching, deodorizing, as well as hardening and winterizing equipment. A special combination Fryma grinding and homogenizing mill for use in manufacture of mayonnaise, salad dressing, ketchup and similar products will be displayed; the unit also may be used in the pharmaceutical and cosmetic industry. Address: 117 Fort Lee Rd., Leonia, NJ 07605.

NEWPORT INSTRUMENTS, LTD. (Booth 55). Newport Instruments are exhibiting their MK.IIIA Newport Analyser. This instrument is in use worldwide as a quality control tool in the petroleum, polymer and food industries. The exhibit will demonstrate its use as a rapid accurate replacement for solvent extraction techniques in measuring oil in seeds. Address: Blakelands North, Milton Keynes, Bucks MK14 5AW, England.

NORTH DAKOTA SUNFLOWER COUNCIL (Booth 35). An introduction to the world of sunflower oil—its availability, advantages, nutritional value and its exciting potential. Fact sheets concerning availability and the technical characteristics of sunflower oil will be distributed. Stop in to visit about any sunflower questions you may have. Address: Capitol Building—1st Floor, Bismarck, ND 58505.

NORTHERN INSTRUMENTS CORPORATION (Booth 10). A portable electronic instrument will be displayed, the tood oil-sensor oil quality analyzer, which uses the dielectric property of oils to report the level to which a frying fat has degraded at any point in its useful life. The instrument is designed for use by nontechnical personnel in the field; the test takes only a few minutes. Address: 6680 N. Highway 49, Lino Lakes, MN 55014.

NU-CHEK-PREP, INC. (Booth 34). Nu-Chek-Prep, Inc.—home of lipid organics, fatty acids and esters, triglycerides, diglycerides, monoglycerides, acid chlorides, fatty nitriles, fatty alcohols, fatty acetates, cholesteryl and cholestanyl

Canadian Canola Oil Quality-Tailored from seed to salad WINNIPEG,

esters, wax esters, fatty acid anhydrides, alkyl-methanesulfonates, soaps and standard reference mixtures (GLC & TLC). Address: PO Box 172, Elysian, MN 56028.

C.A. PICARD, INC. (Booth 21). Manufacturer of a complete line of repair parts for all makes and models of screw presses, dehullers and delinters. Address: 305 Hill Brady Rd., Battle Creek, MI 49015.

POS PILOT PLANT CORPORATION (Booth 29). POS Pilot Plant Corporation provides pilot scale equipment and supporting technical services to the food and feed industries on a fee-for-use basis. POS has capabilities in dry milling and separating, oilseed extraction and wet processing including extrusion. A slide tour showing our capabilities is available at the booth. Address: University of Saskatchewan Campus. Saskatoon, Sask, S7N 2R4, Canada.

THE PRAXIS CORPORATION (Booth 13). The Praxis model SFC-900 Analyzer is made specifically for the edible oil industry. Solid fat content determinations may be done routinely by nonskilled personnel. As many as 20 samples at a time may be run with the elimination of water baths, thermometers, reagents, special glassware and tedious sample preparation and calculations. Address: 8327 Potranco Rd., San Antonio, TX 78251.

RAPESEED ASSOCIATION OF CANADA (Booth 64). The Rapeseed Association of Canada display is a thematic interpretation of the productivity of the canola seed. The intent is to introduce canola as a special Canadian redesign of rapeseed and to display the quality vegetable oil, the high protein meal and the seed of recent varieties. Address: 301-433 Main St., Winnipeg, Manitoba, Canada R3B 1B3.

L.A. SALOMON & BRO., INC. (Booth 26). Activated carbon, activated clay and bentonite will be featured. Literature regarding use of these products will be available. The exhibit will include demonstration of use of bentonite compounds in wastewater treatment and as a liner for ponds and lagoons and tank farms. Address: PO Box 828, Port Washington, NY 11050.

SIMON-ROSEDOWNS, LTD. (Booths 19, 31 & 32). Simon-Rosedowns display will feature the capability to design and manufacture equipment to cover every stage in the extraction of vegetable oil and its subsequent processing into refined oils for edible and technical purposes. Models, diagrams and photographs will illustrate this service to the world's vegetable oil industry. Address: Cannon Street, Hull HU2 OAD, England.

TECATOR, INC. (Booths 50 & 51). A new fat analysis apparatus based on the Soxlet method will be shown. Also on display will be an automated protein analyzer based on the Kjeldahl process. Address: PO Box 405, Herndon, VA 22070.

TECHNICON INDUSTRIAL SYSTEMS (Booth 22). Will feature the Technicon Infranalyzer Model 400 infrared reflectance analyzer for analysis of protein, moisture, oil and fiber in oilseeds and meal. The unit permits precise analysis in 12 to 20 seconds for use in ingredient blending quality control on incoming commodities, and other applications. Address: 511 Benedict Ave., Tarrytown, NY 10591.

THIOKOL/VENTRON DIVISION (Booth 63). The industrial application of sodium borohydride in controlling products color, odor and stability will be exhibited. Borohydride can replace or supplement hydrogenation, distillation, carbon, clay and oxidative bleaching in the manufacture of natural products, alcohols, esters, amines and similar materials. Address: 150 Andover St., Danvers, MA 01923.

TINTOMETER USA (Booths 3 & 4). Lovibond color measuring and grading systems, including FAC scale, Gardner scale, Model E Tintometer and the AOCS/Tintometer scale for edible oils. A Lovibond Automatic Tintometer will be set up and working in the display. Address: PO Box 17, Bloomingdale, NJ 07403.

UNICHEMA INTERNATIONAL (Booth 61). Unichema International will be exhibiting its range of PRICAT supported nickel catalysts. Individual grades are available for the hydrogenation of edible oils and fats, where high activity and selectivity are prime requirements and also for the hydrogenation of fatty acids where high resistance to fatty acids and catalyst poisons are demanded. All grades exhibit excellent filtration characteristics without the use of filter aids. Address: PO Box 1280, D-4240 Emmerich, West Germany.

WATERS ASSOCIATES, INC. (Booths 23 & 24). Waters Associates will be exhibiting High Performance Liquid Chromatography (HPLC) instruments, columns, chemicals and supplies. Address: 34 Maple St., Milford, MA 01757.

WURSTER & SANGER (Booth 12). Wurster & Sanger will exhibit recently completed projects in the edible oil, fatty acids and glycerine industries. Samples of products produced by Wurster & Sanger systems will be displayed. Address: 222 W. Adams St., Chicago, IL 60606.

ZONE DEVICES COMPANY (Booth 40). Our company will be showing a number of products primarily involved in the sampling of bulk liquids. The best known is the Stainless Steel Liquid Zone Sampler which is approved by AOCS, under Method C1-47 for samples of oils and fats. Also on display will be the brass liquid Zone Sampler for volatile liquids. The new Stainless Steel Sample Mixing Pail will be displayed along with the Zone Thermometer, a new concept in taking temperatures. Various other types of liquid sampling equipment will be exhibited. Address: PO Box 714, Mill Valley, CA 94941.

#### **Book exhibits**

The following books will be on display at the AOCS Book Exhibit in the ISF/AOCS World Congress exposition hall. Information on ordering books will be available, but copies will not be available for purchase at the meeting.

Academic Press, Inc., 111 5th Avenue, New York, NY 10003.

Charalambous, George and George E. Inglett, editors, Flavor of Foods and Beverages: Chemistry and Technology, 1978, 422 pps., \$30.00.

Proceedings of conference sponsored by the Agricultural and Food Chemistry Division of The American Chemical Society.

Rylander, Paul N., Catalytic Hydrogenation in Organic Syntheses, 1979, 325 pps., \$34.00.

AVI Publishing Co., Inc., 250 Post Road East, Westport, CT 06880.

Arbuckle, Wendell S., *Ice Cream*, 3rd Edition, 1977, 410 pps., U.S. & Canada: \$25.50; elsewhere: \$28.00.

This volume covers the manufacture of ice cream from the raw materials, including energy and nutrient values, composition and properties to formulas, industry standards and product identity.

deMan John M., Ph.D., Principles of Food Chemistry, 1976, 425 pps., U.S. & Canada: \$19.00 soft cover, \$32.00 cloth cover; elsewhere: \$21.00 soft cover, \$35.00 cloth cover.

This is an undergraduate text designed for technical programs. It presents the chemistry of foods and food components without duplicating the material normally covered in biochemistry.

Harper, W. James, Ph.D., and Carl W. Hall, Ph.D., *Dairy Technology & Engineering*, 1976, 627 pps., U.S. & Canada: \$23.50 soft cover; elsewhere: \$26.00.

This book attempts to interrelate the disciplines of engineering, chemistry and microbiology to selected aspects of dairy food technology and engineering. It should interest all food technologists and engineers and all who handle dairy products.

Inglett, George E., Ph.D., editor, Corn: Culture, Processing, Products, 1970, 369 pps., U.S. & Canada: \$29.50; elsewhere: \$32.50.

This book gives laymen, farmers, industrialists, scientists and students a broad concept of the agricultural, marketing, commercial, scientific and consumer value of corn. Twenty-one experts collaborated with the editor in compiling a comprehensive treatment about this versatile grain.

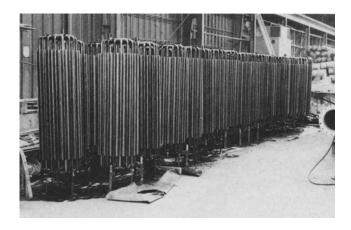
Matz, Samuel A., Ph.D., Bakery Technology & Engineering, 2nd Edition, 1972, 598 pps., U.S. & Canada: \$41.50; elsewhere: \$45.50.

A comprehensive book of interest to bakery engineers, cereal chemists, food technologists and suppliers to the baking industry.

Matz, Samuel A., Snack Food Technology, 1976, 349 pps., U.S. & Canada: \$36.00; elsewhere: \$39.50.

This book is a technological guide providing detailed coverage of the

# Tank heaters for viscous fluids



Finned tube tank heaters offer substantial advantages over simple bare pipe coils for heavy fuel oil, asphalt, sulfur, molasses, palm oil, caustic, lube oil additives, and other viscous liquids.

Both vertical and horizontal construction are available.

Standard construction means low cost and quick delivery.

Armstrong Engineering Associates, Inc.

Box 566-J West Chester, Pennsylvania 19380 Chemtec, B.V.
Box 3-J, Willowyard Rd.
Beith, Ayrshire
Scotland

Chemtec Pte. Ltd. 9-J Gul Ave. Jurong Town

Singapore 22

ingredients, processes, products and equipment of nearly every type of snack food.

Milner, Max, Ph.D., Nevin S. Scrimshaw, M.D., and Daniel I.C. Wang, Ph.D., editors, *Protein Resources & Technology*, 1978, 656 pps., U.S. & Canada: \$48.00; elsewhere: \$53.00.

This definitive work on protein resources, problems and technology needs is the result of a joint effort by the National Science Foundation, MIT, and 220 leading scientists.

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McCutcheon Division, MC Publishing Co., 175 Rock Road, Glen Rock, NJ 07452.

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Published for purchasers and users of surfactant materials. The surfactant materials are described by trade name, identity, manufacturer, concentration, type, HLB Index and application, from a total of 350 surfactant manufacturers.

Detergents and Emulsifiers/North American Edition, 1979, 301 pps., \$25.00.

Published since 1947 for purchasers and users of surfactant materials. Over 4,000 surfactant materials are described by trade name, identity, manufacturer, concentration, type, HLB Index and application, from a total of 350 surfactant manufacturers.

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