Suppliers Solve Processing Problems

Exhibitors at the IFT17 food expo offered inventive options for addressing food and beverage processing needs.

This year’s IFT17 food expo showcased numerous companies and organizations offering solutions to food processing needs and challenges. From small-scale unit operations to commercial-scale equipment lines, exhibitors highlighted both traditional and novel food processing operations for food product developers and engineers. This column provides brief descriptions of some of the processing-related exhibits that were presented at the IFT17 food expo.

Miniature-Scale Equipment
Small-scale equipment provides the opportunity for researchers and engineers to develop and optimize custom processing solutions before scaling up into commercial operation. Pilot-scale equipment trials are often critical to commercial success. They also can be instrumental in educating students about food processing. Pilot-scale processing trials not only increase R&D efficiency but also reduce cost and save time to market.

MicroThermics (microthermics.com) is a world leader in small-scale custom pasteurizers and aseptic fillers. The company’s UHT/HTST/aseptic processors were highlighted at this year’s food expo. Armfield (explore-armfield.com) also manufactures small-scale equipment including HTST/UHT/aseptic systems, spray-dryers and chillers, extractors and crystallizers, oil processors, ultrafiltration devices, and more.

Drying Technology
Drying is a common unit operation in food processing. One of the newer drying technologies, which was exhibited by EnWave Corp. (enwave.net), was radiant energy vacuum dehydration that uses a combination of microwave energy and pressure to dry foods. GW Dryers (gwdryers.com) takes advantage of the superior heat conduction properties of water to gently and quickly dry foods using a technology that was formerly known as refractance window drying. PowderPure (powderpure.com) uses a patented drying process involving infrared drying to dry fruit and vegetable powders. CPM Wolverine Proctor (wolverineproctor.com) is a leading manufacturer of thermal processing drying equipment for a wide range of food products and ingredients. Freeze-Dry Foods (freeze-dry.com) offers toll drying for a broad assortment of foods.

Revtech (revtech-process-systems.com) provides unique solutions for heat treatment of dry ingredients. From steam pasteurization of herbs to stabilization of cereal products to enzyme inactivation in beans to toasting and roasting of nuts, Revtech is a leader in transporting and heating foods using electrical impedance technology.

Radio Frequency Co. (radiofrequency.com) is a leading manufacturer of advanced industrial radiofrequency processing systems for the rapid heating, drying, de-infestation and pasteurization of foods. Radiofrequency processing of foods was the subject of Food Technology’s Processing column in August 2016.

Mixers, Extruders, and More
Mixing is another critical unit operation in food processing. Several companies

Armfield designs and manufactures miniature-scale equipment for the food and beverage industries.
exhibited in this category. **Munson Machinery** (munsonmachinery.com) provides low-to-high-shear solutions for blending and/or homogenizing dry solids, slurries, and pastes. **B&P Process Equipment** (bplittleford.com) has developed mixing equipment since the early 1900s and offers a wide variety of mixing equipment to the food industry.

Extrusion technology was the subject of the July 2017 Processing column, and several extrusion manufacturers exhibited at the food expo. **Buhler Group** (buhlergroup.com) presented extrusion and drying capabilities. **C.W. Brabender** (cwbrabender.com), **Clextral** (clextral.com), and **Wenger Manufacturing** (wenger.com) exhibited their extrusion food processing solutions.

Members of the **Glatt Air Techniques** (glatt.com) team presented their expertise in processing methods for continuous and batch fluid bed processing technologies. **ST Equipment & Technology** (steqtech.com) showcased its specialized processing equipment for processing fine particle materials.

**Innovative Food Processors** (ifpinc.biz/ifp) exhibited expertise in particle engineering technologies; the company also offers contract manufacturing for powder agglomeration and microencapsulation needs.

**Goodnature Products** (goodnature.com) is a world leader in equipment for processing cold-press juices, a fast-growing beverage category.

**Dixie Canner Co.** (dixiecanner.com) is a trusted name in canning. The company exhibited seamers, retorts, food processing, and specialty canning equipment for the food and beverage industry.

Consultation with processing experts in companies, universities, and/or government agencies can be instrumental for guiding product developers toward appropriate food processing solutions. Two process consulting firms that exhibited at this year’s expo are **Advanced Process Solutions** (aps-inc.com) and **Blentech** (blentech.com). Advanced Process Solutions provides customers with the latest technological developments in valves, controls, actuation, measurement, and instrumentation. And Blentech is an application-driven company providing a wide range of solutions for bringing innovative processing products to market.

Universities and government agencies are also good sources of information for companies interested in novel food processing solutions. A few university centers and programs exhibited at the food expo. Some of them include Cornell Institute for Food Systems, Ohio State University, and the
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Whistler Center for Carbohydrate Research at Purdue University.

Acknowledging Processing Achievers

In addition to food processing solutions being presented at the IFT food expo, three of IFT’s annual Achievement Awards had a food processing emphasis. The Food Technology Industrial Achievement Award, Research and Development Award, and Calvert L. Willey Distinguished Service Award were all given to individuals who made outstanding contributions to nonthermal processing of foods. Modern nonthermal food processing advances have resulted in significant innovative solutions to process high quality, safe, and healthy foods.

The Food Technology Industrial Achievement Award was presented to Christopher Doona for his research with the U.S. Army Natick Soldier Research, Development, and Engineering Center in novel chlorine dioxide technologies that helped control the spread of Ebola. The Research and Development Award and Calvert L. Willey Distinguished Service Award were given to Gustavo V. Barbosa-Cánovas and V. M. Balasubramaniam, respectively, for their outstanding contributions to the field of nonthermal food processing.

In summary, this year’s IFT food expo and awards reflected a multitude of food processing solutions, providing a broad array of options to researchers and engineers interested in developing new foods and/or improving food quality, health, and safety, while enhancing sustainability in processing.

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