

Where retort pouches rule

Always a unique place to experience plastics packaging, Japan did not disappoint during a recent packaging exhibition.

Joanne Hunter reports from Tokyo

Packaging needs to be as good as it gets to satisfy Japanese consumers. They are used to receiving a world-class service and the quality of a pack tells them that the contents are safe, genuine and in perfect condition.

Technology has to work hard because sensitive taste buds know when foods are absolutely fresh, and recent national disasters that devastated supply chains have created a relatively new market for extended shelf-life systems in Japan.

All of which gives plastics the advantage and the recent Tokyo Pack trade show was awash with technical films, functional materials and environment-responsive technologies waiting to go into packs that deliver what brands and customers expect.

Retort pouches recorded all-time peak sales this year in Japan and latest developments were plentiful in the halls, though not all were developed locally. Ecolean unveiled the latest Air Aseptic 12.5cl version of a microwavable pouch comprising 40 per cent calcium carbonate that the Swedish company recently launched in Pakistan for a dairy-based convenience product for tea-making.

Pakistan is “one of our biggest aseptic markets” and half a billion packs have been supplied to two customers there this year, says spokesperson Hanna Jeppsson. Elsewhere, China’s major dairies Mengu and Bright Foods are big customers for pouches in sizes of 20cl and under, while in Russia more than 30 machines are producing family-size packs of milk and dairy-based foods.

Japan and South East Asia are seen as the next growth areas for Ecolean. With markets established in South America, in Colombia and Argentina, the US office signed its first customer contract on 30 September. *Plastics in Packaging* also heard that a French dairy farmers’ cooperative chose an Ecolean one-litre pouch for UHT milk, launched in September to help small businesses stand up to bigger competitors.

The next generation of pouches by Kuraray-owned Plantic promises to have an even lower environmental impact. The producer of biodegradable material made 85 per cent from renewables is working on a thinner food-tray lidding film, of 50-micron or less, which is expected to bring results in “one or two years”. After that, what next? “The future is in pouches,” Plantic’s researcher Yuki Morino told *Plastics in Packaging*.



The Ben Lid for the drinks-to-go market by Nippon Closures is designed to reopen and be lockable for improved safety

A combination inkjet and water-based white colour gravure lithography suitable for retort pouches was exhibited by Fuji Tokushu Shigyo. Winner of a 2016 Good Packaging design award, the Fujimo system marks a “first in a digitally printed package”, says Hiroshi Umemoto, head of the company’s product sales division. The gravure white colour has better opaqueness than conventional digital printing, he explained. The first com-



From left to right: 1: Cellulose nanofiller technology for the production of lighter, more flexible and stronger plastics is being developed by paper packaging business Oji Holdings Corporation. 2: Digi Gravure printed lids from Nippon. 3: A tearable film by DNP makes it easier to pull the pack apart. 4: The DNP virtual reality experience can be used as a research tool to analyse consumer shopping behaviour. 5: The Ecolean Air Aseptic 12.5cl launched in Pakistan for a dairy-based convenience product



mercial user was Hagoromo Foods for a cat-food brand. It is recommended mainly for new products and short runs.

A near-invisible product coding known as digital watermarking made an entrance with DNP, license holder for the Asia region. The

technology from Digimarc applies coding across the entire pack. Datalogic's Magellan 9800 retail scanner developed for the Japanese market will be launched next summer so supermarkets can offer a speedier checkout service. Shoppers can scan the code with a smartphone for allergy information, and to obtain vouchers.

DNP also exhibited a moisture absorbent foil pouch with a deoxidising sealing layer, designed for medical products such as a blood-testing kit; a pharma packaging film to extend shelf-life by protecting, and not absorbing, the medicinal properties; an oxygen-absorbing plastics container suitable for foods such as tuna in oil and pasta sauce; and a tearable film to make it easier to open pouch packs.

An easy-peel PP film from DIC Corporation aimed at retort applications for individual portion packs is due to be customer-ready in 2017, marketing executive Saki Urakami explained. The business, of which Sun Chemical is a subsidiary, also launched a film with the look and feel of paper and promoted a Paslim VM series laminating adhesive. This comes with an oxygen-barrier function that in a vapour metallised aluminium film can replace one of the functional layers or increase the oxygen barrier.

A new design of ring-pull bottle cap from group member Nippon Closures has a depression that allows the finger to access the ring and pull, making it easier to open. Expected on-shelf in 2017, it comes in standard red, green and gold, with other colours available, sizes 26mm and 32mm. Still under development is the Ben Lid for the drinks-to-go market designed to reopen and be lockable.

Also on display was hot-fill PET bottle technology involving a bottom vacuum panel that allows the bottom to rise during the process so as to absorb negative pressure caused by volume reduction of the contents. It makes way for new bottle designs without side panels, says Toyo Seikan. Oxyblock bottles that combine oxygen barrier and oxygen scavenging properties, the Sibard PET bottle offering a high barrier against oxygen, moisture and carbon dioxide (with a high degree of transparency), and Oxydec oxygen scavenging film suitable for rice, baked goods and confectionery, were also promoted.



From left to right: 1: Hagoromo Foods' cat-food pouch was the first commercial user of an "industry-first" combination inkjet and water-based white colour gravure printing system by Fuji Tokushu Shigyo. 2: Near-invisible Digimarc digital watermarking licensed by DNP for the Asia region with the Datalogic Magellan 9800i scanner will offer a super-speedy checkout service to the Japanese market. 3: Hinged cap for granular foods by Nippon Closures. 4: A new ring-pull bottle cap by Nippon Closures has a depression that allows the finger to access the ring more easily. 5: Plant-based PET used for a refill

Good packaging

The Japan Good Packaging awards scheme credits designs that perform a service to the consumer and the environment. A pack might be easier to use, more resource efficient or have technically advanced barrier properties. Japan is focused on building a circular economy and pours expertise and ingenuity into refill systems and some of the best commercialised examples were picked as winners this year.

■ A refill-exchanging system from MFV for cosmetics brand Shiseido is claimed to reduce resin use by 73 per cent. This winner of an Accessible Design award features a polyhedron-shaped outer container, metallised to suggest the 'deeply brightening' effect of the face cream.



■ Stability was a priority in a decoratively-shaped shampoo bottle by Tokyu Agency and Yoshino Kogyosho for Kracie Home Products that was awarded in the Toiletries category.



Products that was awarded in the Toiletries category.

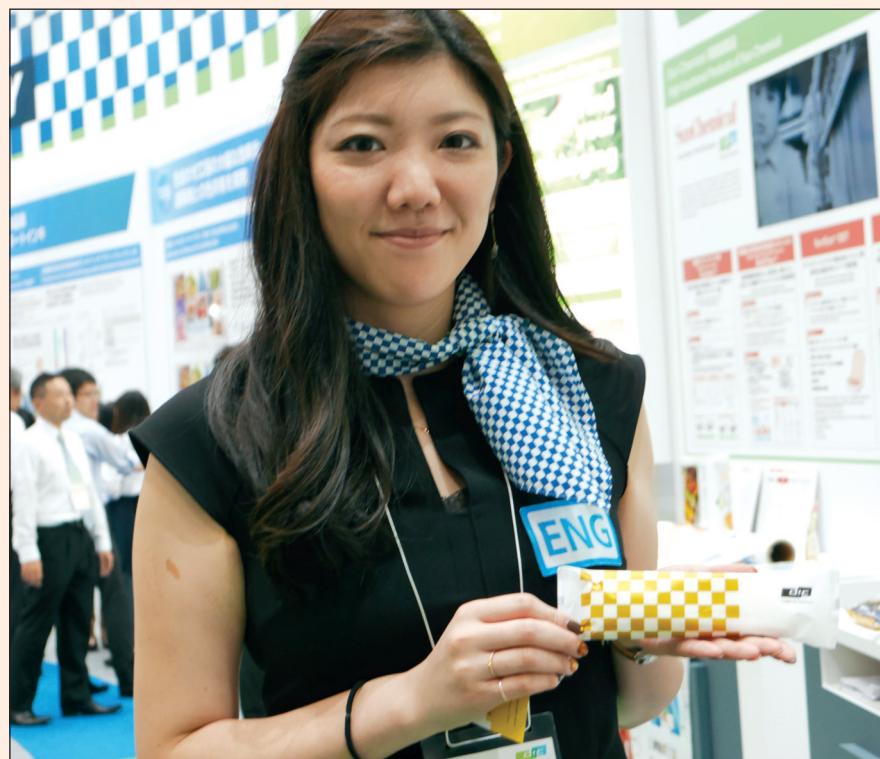
■ Kao's light-weight bottle (right) for a foam hand-wash can be crushed almost flat for disposal with little effort was recognised for its ease of use in an Accessibility award.



■ A 'clean, easy and stress-free' pouch-exchange type refill system that skips the capping process after filling is designed to keep the contents fresh until the last drop is pumped out.



■ A pouch-refill system by Kao makes it easier to dispense a highly viscous shampoo by adding top and bottom gussets that assist a steady flow.



DIC Corporation's marketing executive Saki Urakami holds a pack made from film developed to look and feel like paper

- A steam-venting microwavable pack can remain intact during cooking, effectively improving the moisture-content of the food, claims the developer Toppan Printing. Key features are steam ports in the large flange and a specially-selected sealant for the container lid. The first retail user was Shanghai Family Mart, a winner in the food category.
- A light-weight (15g) PET bottle suitable for freezing and chilling flavoured waters won a beverage category



award for Suntory. The bottom shape and contents have been modified to resist pressure increase during freezing.

■ A technical award went to oxygen-absorbing OxyVanish developed by Mitsubishi Gas



Chemical for use in bottles, films and blister packs for pharmaceuticals and nutraceuticals. Another winner was a heat-resistant bottle made from 100 per cent recycled PET resin that enables a 'complete circulating-type recycling system' - from plastics bottles to plastics bottles again. In a coffee application, Ajinomoto General Foods claims to be cutting annual use of oil-based material by 2,000 tonnes.

A thriving sector is unit-dose pouches. Taisei Lamick, a specialist in laminated film materials and machinery, presented the Dangan Orios with a 'safe-squeeze' design, produced on Dangan 2 machinery. When folded and squeezed, a tiny tube-like feature gives a clean and controllable flow. A twin-pack version can dispense mustard and ketchup at the same time. Due to enter the fast foods market next year, cosmetics is a potential future target.

Chinese developer of anti-counterfeit technology and special-effects packaging, Shanghai

Techsun Group, of China, supplies multifunction RFID labels and QR codes to customers including pharma giant Bayer. Senior sales manager Elisa Geng showed genuine pride in the fine applications of hologram-printed laminate films.

The future for the production of lighter, more flexible and stronger plastics is cellulose nanofiller (CNF) technology believes Japanese developer Oji Holdings Corporation, ranked among the world's largest paper products businesses. In the cosmetics market it could also be used for adjusting the level of adhesiveness in

creams and lotions. Initial entry points will be high-value markets such as car bodies and solar panels, says Koh Peng Ye Wilson, of Oji's overseas planning department.

The 'Be Active' theme of Toyo Seikan's booth was just one sign that sports-mania has arrived early for the host nation of the 2019 Rugby World and 2020 Olympics and Paralympics. Outside the exhibition centre, the city is clearly revving up for the Games with posters up in many public spaces.

True to form, Japan is ahead of the game.

From left to right: 1: An easily detachable refill container by U Co aims to avoid oxygen ingress to keep contents fresh. 2: A light-weight 'Cheer-Soft' pouch by Hosokawa Yuko has no heat-sealed edges at the corners so is better for handling and the sides offer additional space for graphics. 3: Anti-counterfeit technology firm Shanghai Techsun Group, of China, supplies multifunction RFID labels and QR codes to customers including pharma giant Bayer, and special-effects packaging. 4: Hinged caps from Nippon Closures.

5: Oxydec oxygen scavenging film from Toyo Seikan absorbs residual oxygen inside the pack to prevent deterioration of products such as rice, baked goods and confectionery. 6: For Kururay Plantic, the future is in pouches, says Plantic researcher Yuki Morino. 7: On display was hot-fill PET bottle technology involving a bottom vacuum panel that allows the bottom to rise during the process so as to absorb negative pressure caused by volume reduction of the contents. This makes way for new bottle designs without side panels says Toyo Seikan. 8: A clear pouch suitable for all kinds of products has benefits for consumers and retailers says Futuba Chemical P



NEWS, INTELLIGENCE AND ANALYSIS FOR FILLERS

Follow the link below for the information you need – when you need it. Explore The Filling Business website, then sign-up online to search the database and archive, view extended news stories, and benefit from discounts on books, conferences and reports.

The Filling Business is a complete source of information for everyone who works in the filling industry and for those who provide products and services to fillers; And, because it is available online, you can access it 24 hours a day no matter where you are.

For details, visit www.thefillingbusiness.com

the
filling
business