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Let's inspire, inform & enthuse

As I write this, gazing at a depressingly and relentlessly overcast sky, it's hard to believe that this is our summer double issue. But far be it from me to moan about such trivial matters when the food and drink industry is buzzing with positivity right now.

Yes, we all know there's a desperate skills shortage which, unless addressed, will have a devastating effect on both food and drink manufacture. But rather than sitting back and bemoaning the lack of suitably qualified recruits, manufacturers, trade associations and government bodies have joined forces to address the issue. And such an admirable and impressive show of force is already reaping huge rewards.

In the last few weeks alone, the food sector's first Registered Science Technicians have been presented with their certificates by the IFST, students have been behind the scenes at a number of big-name food manufacturing sites and Sheffield Hallam University has been named as the chosen provider for the UK's first food engineering degree.

Furthermore, on p36 the Chilled Foods Association talks of its desire to 'inspire, inform and enthuse children in food-related subjects early in their school life', and explains how it's doing so.

Keep up the good work, guys – and I wish you all a very happy summer holiday.

Michelle

Michelle Maynard, Editor

Food&Drink TECHNOLOGY

Follow @Bell_Publishing on Twitter or LinkedIn for regular snapshots from all of our magazines.

Editorial Director:
Sarah McRitchie
sarah@bellpublishing.com

Editor: Michelle Maynard
michelle@bellpublishing.com

Art Editor: Sue Burke
prepress@bellpublishing.com

Group Ad Manager:
Victoria Deakins
victoria@bellpublishing.com

Ad Manager:
Gina Ritrovato
gina@bellpublishing.com

Accounts: Yee Yau
accounts@bellpublishing.com

Publisher: Neil McRitchie
neil@bellpublishing.com

Sales Agent:
Germany, Switzerland, Austria
Susannah Ashmore-Kopp
Tel: +49 (0) 6101 5058 49
Mobile: +49 (0) 1622 7922 52
susannah.kopp@bellpublishing.com

Editorial & Sales Office:
The Maltings, 57 Bath Street,
Gravesend, Kent DA11 0DF, UK
Tel: +44 1474 532 202
Fax: +44 1474 532 203

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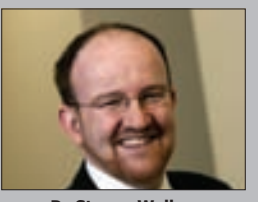
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Cornelius Group growth recognised



David Brown

The growth of chemical distribution company Cornelius has been showcased in the inaugural *Sunday Times HSBC International Track 200*.

The report ranks Britain's private companies with the fastest growing international sales, measured over the latest two years of available accounts. Cornelius Group's international sales grew 26 per cent a year from £5.3 million (€6.6m) in 2010 to £8.5 million (€10.7m) in 2012.

Founded back in 1935, Cornelius distributes industrial chemicals to a broad range of industries, including the food industry, and has offices in France, Poland, China and India.

"The Cornelius business model and how we service the expectations of our customers and suppliers seems to be a real differentiator in our target export markets," explains managing director David Brown (pictured). "We intend to continue broadening our global coverage while continuing to grow and diversify in our domestic markets of the UK and Ireland."

BSDA appoints new director general

The British Soft Drinks Association (BSDA) has appointed Gavin Partington as its new director general.

Gavin joins BSDA from the Wine and Spirit Trade Association, where he was communications director and interim chief executive.

"I am delighted to be joining the BSDA team and I look forward to supporting its members and the soft drinks industry," he says. "The association has an enviable reputation and I hope to build on its success in ensuring the industry's voice is heard."

Before a career in corporate communications, Gavin was political editor of GMTV. He will take up his new role in the autumn.

Report reveals increase in number of food 'incidents'

The Food Standards Agency (FSA) says it saw an increase in the number of food incidents it investigated last year, including reports of contaminated or illegal food entering the food chain, with some potentially harmful to the public.

According to the *Annual Report of Incidents 2011* published this week, 1,714 food incidents were investigated by the FSA last year, compared to 1,505 in 2010. This is a further increase on the 1,208 incidents reported in 2009.

DSM announces multi-million spray drying investment

DSM has revealed that it is to invest around £16 million (€20m) in a new spray drying facility at its Delft food ingredients manufacturing site.



The investment comes on top of the firm's recent announcement that it is to plough £79 million (€100m) into R&D facilities in the Netherlands, a substantial part of which will be injected into the Delft site.

With the inclusion of the spray drying facilities at the Delft manufacturing site, DSM says it hopes to 'further optimise its production processes and minimise dependency on third parties in delivering the best quality yeast extracts for the savoury food industry'.

The investment is expected to create around 25 new jobs at the site and should be operational by mid-2013.

"We want to generate value through innovation to our customers in the food, beverage and crop industries worldwide," explains Hans-Christian Ambjerg, president of DSM Food Specialities. "Delft remains a very important location for DSM Food Specialities' biotechnological research as a cornerstone of our global innovation network. This investment will help us to bring innovations to market more quickly."

Vitiva opens doors to innovation centre

Growing demand for the development of joint product applications has led to Vitiva opening a new innovation centre in Slovenia. The ingredients firm says the move will also mean the expansion of its R&D team and capabilities, lab applications and customer services.

The innovation centre includes pilot facilities for meat, bakery, ice cream, dairy, beverage, confectionery and other food applications, as well as an equipped kitchen for joint tasting sessions with customers.

"The new centre is a big step for Vitiva in providing a complete solution for customer care service," says CEO Ohad Cohen. "Our customers are the focus of our vision, and our target is to offer them innovative solutions from concept to final product stage. It offers a unique opportunity for customers to independently test our solutions and jointly develop food applications."

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Making a meal of health claims

An airline meal that satisfies all 222 Article 13.1 newly approved health claims has been created by experts at Leatherhead Food Research.

CEO Dr Paul Berryman challenged his team of scientific, regulatory and marketing experts to devise a meal that could make all 222 claims.

"The meal is specially designed for long haul flights and is packed with minerals, vitamins and everything else that EFSA currently thinks is healthy," says Paul. "It even includes charcoal tablets to reduce excessive flatulence and sugar-free chewing gum to chew after the meal to freshen breath and neutralise plaque acids."

Named Leatherhead Airline Meal Formula 222, the



CEO Dr Paul Berryman

meal consists of:

Fresh and Smoked Salmon Terrine (with ALA and DHA for brain and heart function); Mixed Leaf Side Salad with Extra Virgin Olive Oil Dressing (for cholesterol claims): High Fibre Multigrain Bread Roll (for 17 claims around fibre, folate and arabinoxylan); Chicken Casserole with Lentils & Vegetables (for iron absorption, vitamins and minerals); Live Yogurt Blancmange (for cholesterol, gut health and blood glucose control); Cranberry, Raspberry & Elderflower Sports Drink (for energy, vitamins and electrolytes); Pure Spring Water (to offset dehydration).

The pack also includes mixed berry meal replacement shakes, while jet lag sufferers can sip on a melatonin-containing hot chocolate drink.

Sauces and spreads market grows – but consumption falls

The value of the UK sauces and spreads market grew by 4.7 per cent to just over £1 billion (€1.2bn) last year, according to a new report by market analyst Key Note.



However, the firm says that rising commodity prices are the primary reason behind the growth, as consumption has declined.

"Brands in the sauces and spreads industry are some of the most established in the UK, including Heinz Tomato Ketchup, HP Brown Sauce and Marmite," says a Key Note spokesman. "But although these goods are still popular, consumers have had to cut back on their consumption due to the economic crisis. As a result, volume sales have fallen.

"Pressure from supermarkets' own goods, which now offer consumers similar quality to that of brands but at a lower price, is forcing manufacturers to engage in promotional activity and driving down value sales."

Rising commodity prices are also taking their toll on the industry, with manufacturers reluctant to pass on rising costs to consumers, to whom value for money is more important than brand loyalty.

"Still, dynamism remains in the sauces and spreads industry," adds the spokesman. "Innovation is dominated by the introduction of the easy-squeeze format that is mess-free and more convenient than traditional bottles and jars.

"Certain foreign spreads are doing well, too, especially Ferrero's Nutella. Honey is also gaining in popularity, due to the health benefits associated with the product."

FSA welcomes EFSA poultry inspection opinion

The European Food Safety Authority's (EFSA) recent scientific opinion on poultry meat inspection, which suggested that traditional inspection might not be enough to fully address the most relevant biological hazards to public health, has been welcomed by the UK Food Standards Agency (FSA).

In 2010, the European Commission asked EFSA to carry out risk assessments on the relevant hazards of poultry meat inspection to public health, animal health and welfare, and to advise on alternative approaches.

The EFSA opinion says that traditional poultry meat inspection does not enable the detection of the most important hazards to public health (campylobacter, salmonella and ESBL/AmpC gene-carrying bacteria), and recommends improvements to the current system.

"We have argued for some time that the current system of official meat controls does not address the most relevant meat-borne pathogens of today, which are microbiological and can't be detected by the naked eye," says an FSA spokesman. "In 2009, the Agency began a review of meat inspection aimed at improving public health protection while delivering a more risk-based, effective and proportionate system for official controls on meat.

"Overall, the FSA welcomes EFSA's work to improve public health and to provide the scientific basis for the modernisation of poultry meat inspection."

EFSA's views, and those of European member states, stakeholders and international trade partners, will be considered by the Commission before changes to the current regulations are proposed.

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Environmental award for frozen food firm Ardo



The award-winning Ardo team

Slashing its carbon footprint and recycling wastewater have helped earn Ardo UK a prestigious business award.

The frozen fruit and vegetable firm won the Business Commitment to the Environment category in the Kent Excellence in Business Awards. The judges said that Ardo UK had 'set a benchmark for other manufacturers' and had 'made the environment a key element of its strategy'.

They commended the company for cutting its carbon footprint by 45 per cent since 2007 and installing a treatment plant that returned water used during the manufacturing process back to the mains as potable water. The water treatment plant itself is partly powered by waste heat from the cold store.

"We are delighted to have won this award and will continue to invest time and money into ensuring that we are as environmentally efficient as possible," says Ardo UK managing director Stephen Waugh.

Red alert



LycoRed says production of its all-natural red colour has doubled in the past month, reflecting a drive to meet growing market demand among food and drink manufacturers.

"Although dairy foods and beverages are the main applications for the powerful natural trend, the category is expected to grow into bakery, confectionery and cosmetics," says Morris Zelkha, president and CEO of LycoRed. "We are ramping up production levels on a daily basis, and fielding a flood of inquiries from food and beverage wholesalers and manufacturers."

Vitafoods Asia set for September return

Vitafoods Asia is set to return to the AsiaWorld-Expo in Hong Kong in September.

Organisers say this year's show is set to be twice the size of last year's, offering visitors an opportunity to source more products and suppliers, and discover the latest innovations on the market.

"The nutraceutical market is currently enjoying a particularly strong presence in Asia, due to growing affluence and rising educational levels," says Chris Lee, portfolio director of Vitafoods.

"In fact, in a survey we recently commissioned, 40 per cent of professionals forecast that Asia will have the greatest share of the market within the next 10 years.



"More than half of the 2011 show visitors said they had found suppliers they would not otherwise have considered using if they had not attended the event, so this year's edition with more exhibitors and educational features is a must-attend for anyone in the industry looking to source new ingredients and raw materials which provide health benefits."

For more information on the show (5-7 September), visit www.vitafoodsasia.com.

Recycling 'second nature' to 40% of UK adults

More than half (58%) of UK adults say they would be more likely to recycle their used food and drink cartons knowing that they would be recycled into other materials for use in the UK.

The Tetra Pak research into consumer attitudes to recycling also found that recycling is now 'second nature' to 40 per cent of UK adults, with more than a quarter (29 per cent) having a set routine that they follow for recycling.



Tetra Pak says its committed to increasing the global recycling rate of its beverage cartons from 20 per cent in 2010 to 40 per cent by 2020.

"Consumers rightly take an interest in how their used packaging is dealt with and want to see their beverage cartons recycled in the UK," says Rupert Maitland-Titterton, environment and communications director at Tetra Pak UK. "They see a variety of benefits in UK-based recycling as do we at Tetra Pak. We are constantly seeking to innovate to improve the environmental footprint of our cartons."

Back to the future



Industry stalwart Richard Ratcliffe gets misty-eyed at the prospect of a prawn cocktail and Party Seven...

I stopped at roadside restaurant Little Chef for breakfast recently and found my sleepy waitress (it was an early start!) plugging the Olympic Breakfast, telling me that it was very popular this year. Well it would be, wouldn't it? After all, the London Olympic Games and Queen's Diamond Jubilee have been a marketing man's dream.

All the signage outside declared that Little Chef was supporting 'Great British Food', with Union flags to both the left and right of the door.

Despite the waitress's soft sell, I decided on the 'early starter' as per usual. But as I looked again at the menu. I realised there was something missing. And then it hit me – the photographs of the meals had been removed. Sacrilege. This is as much a part of the Little Chef ethos as the tubby smiling chef on the logo.

No mouthwatering picture of enticing eggs and glossy baked beans. And the print colour is now a drab pale green. What a loss to the nation's army of early starters.

I keep thinking about the myriad marketing campaigns generated not just by the Jubilee (now a somewhat distant memory) but also the London Olympics.

Campden BRI recently had a display of all the food and drink products featuring the Union Jack.

They were piled into a huge supermarket trolley, and included all the big brands, such as Kipling cakes and Cadbury's Dairy Milk, through to crisps and tea – the latter mainly from smaller producers.

The headline on the poster next to the trolley proclaimed: 'Consumers are mainly informed of the eating experience by the colour and design of the packaging' (or, I reckon, the menu, when it comes to Little Chef.)

More recently I found a Marks & Spencer tin of digestive biscuits in the shape of the London Olympics logo – but all in red, white and blue. I wonder whether the Union flag actually increased sales of the products concerned.



Blast from the past: Party Seven, prawn cocktail and Berni Inns

As I banged on about this at home, my wife pointed out that even our bumper pack of Andrex toilet tissue had a Union Jack on the side.

Listening to Fiona Dawson, president of Mars Chocolate UK, give a speech recently, she reflected on the past 60 years of industry progress (1960s Investment in R&D, 1970s Nutrition and Health etc.) But I wondered whether product development really had morphed into healthy eating by the 1970s (I'd have thought it was nearer the 1990s but doubtless Ms Dawson's researchers can justify her assertion.)

What I do remember about the products of the 1970s, though, is that they all seem to have sunk without trace. And I was reminded of the fact when pop singer Cheryl Baker, of Bucks Fizz fame, spoke recently about the band's Eurovision journey: Party Sevens (seven-pint cans of gassy beer), Energen rolls and Harveys Duo Can (a single can that had curry in one end and rice in the other.)

I remember, too, parties (at which you pitched up with your Party Seven) and scoffed pineapple and cheese on sticks.

Eating out revolved around the schooners of sherry in a Berni Inn where the meal began with a prawn cocktail, followed by a steak (or maybe chicken kiev) and was finished off with Black Forest gateau, washed down with a bottle of Blue Nun.

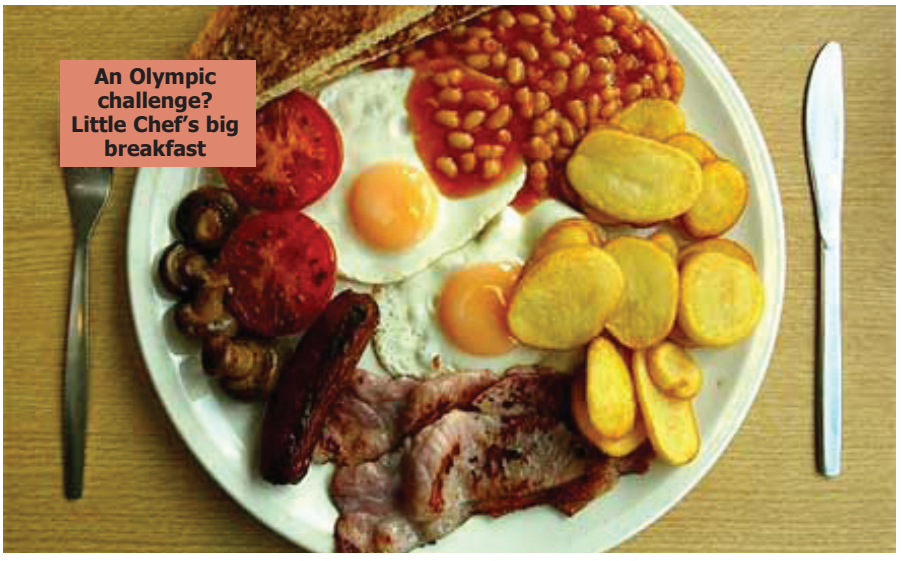
Talking of all things 1970s, someone mentioned Corona to me the other day. That, of course, was a range of soft drinks delivered to your door by a man with a yellow lorry – and absolutely nothing to do with South American beer.

What nobody has done yet, though, is go back to 1948 – the last time London hosted the Olympic Games – and launch a range of austerity products to drive the nostalgia wagon further and faster.

The one thing that links all of this patriotic fervour and history – whether it's 1948, 1968 or 2012 – is the need for food science and technology to be applied to product development and sustainability.

To drive all this we need a supply of trained people to make it happen. Sounds obvious, doesn't it? But the industry is desperately short of qualified people. However, the Institute of Food Science and Technology (IFST) is doing its bit with the launch of its Registered Science Technician (RSciTech) qualification.

It's hoped this will raise the profile of the importance of qualifications in the field and tackle the skills shortage issue. Then they can develop another raft of products for the generation of 2060 to wax lyrical about. ■



An Olympic challenge? Little Chef's big breakfast

'Greenest ever' refillable bottle

Plastics packaging firm Petainer has developed what it's calling its 'greenest ever' refillable bottle.

The new bottle is manufactured using more than 25 per cent post-consumer 'one-way' recycled PET plastic but has the same performance characteristics as a refillable bottle made entirely from virgin material, according to Petainer.



"This is a very exciting development," says the firm's group chief executive Nigel Pritchard. "Refillable bottles are already the beverage packing system with one of the lowest environmental footprints. This massive advance in the use of recycled material makes refillable bottles even more 'eco-nomic'.

"They are 'eco-friendly' because they use up to 90 per cent less virgin material per filling. This performance is improved even further by the introduction of post-consumer recyclate, which means that the bottles now require less energy and other resources to manufacture.

"They are also economic in the traditional sense because the environmental benefits translate into lower costs."

Petainer is now working with bottled water companies, carbonated drinks producers and brewers across Europe to put the refillable bottles to good use.

Working towards wheat for the world

Plans to help increase potential wheat yields in the UK to 20 tonnes per hectare within the next 20 years have been launched by Rothamsted Research scientists and the Biotechnology and Biological Sciences Research Council (BBSRC).



The 20:20 Wheat programme aims to 'provide the knowledge base and tools to tackle food security challenges for a growing population'.

Wheat provides a fifth of human calories, but since 1980 the rate of increase in wheat yields has declined. The average farm yield of wheat in the UK is currently around nine tonnes per hectare and the world average is about three tonnes per hectare.

Professor Martin Parry, head of the 20:20 Wheat programme at Rothamsted Research, says: "Wheat is the world's number one staple crop and has not benefited from the attention afforded to corn and soybeans in recent years."

He goes on to say that Rothamsted Research has the established collaborations and vision to deliver this programme, as it has 'world-renowned expertise in photosynthesis, plant architecture, nutrient utilisation, wheat bioinformatics and wheat pathogenomics'.

But the programme is not just about UK wheat yield.

It's hoped that this ambitious target will also help focus efforts to create multiple technologies that could benefit the world.

Getting stable wheat yield increases in Africa, for example, by two tonnes per hectare could also have a significant impact on global food security.

"The purpose of setting ourselves a grand challenge like 20:20 Wheat is much more complex than the achievement of the final objective," says Professor Maurice Moloney, director of Rothamsted Research. "It also serves as a focal point for effort and a unifying theme for collaborative ventures, which could not be achieved by an individual or a single team."

Tate & Lyle opens doors to Chicago innovation centre

Tate & Lyle has officially opened its new US Commercial and Food Innovation Centre in Chicago.

The 110,000sq ft facility is designed to facilitate customer collaboration through the development of new food and beverage products that satisfy consumer demand for health, convenience, value and taste, and to significantly accelerate their delivery to market, says the ingredients firm.



"The new centre will act as the cornerstone for Tate & Lyle's network of research, food application and technical support laboratories, and will serve as the global HQ of its Innovation and Commercial Development unit," explains Olivier Rigaud, president of the speciality food ingredients division.

"The facility includes advanced food science research and processing laboratories, applications and technical services laboratories, a culinary demonstration kitchen, a full suite of consumer insight and sensory testing facilities, pilot plant and prototype manufacturing facilities, and extensive global communications capabilities."

'A **shrew** in your **food** is far more **socially acceptable** than a **rat**'



Tony Hines MBE, head of food security and crisis management at Leatherhead Food Research, talks rain, rodents and Roman snails

Back in March I wrote an article for *Food and Drink Technology* where I mentioned that Leatherhead was on the banks of the River Mole and that, in times of drought, more water ran underground than over ground. I also said the agricultural sector was very concerned about water shortages. Funny, really, when you consider how much rain we've had since. But I want it to stop now (as do we all, I'm sure) as we need heat to help grow what we got into the ground – and dry weather to help get it out of the ground.

We appear to have had several months now of contingency planning, business continuity, flood prevention, wrecked agricultural shows and festivals, and waterlogged car parks at Silverstone.

I'm involved locally with both the Olympic torch relay and parking for the Olympic cycling races. However, the best laid plans are being revisited to ensure that whatever the weather the show will go on. I've not seen a contingency plan that details how to move the Gulf Stream, but now know it seems to have the capacity to write-off an entire summer...

Part of the North Downs area where I live features in my Odd Box this month.

The Downs are home to a protected species of snail known as the Roman. Massive things – sometimes four inches in length – they have become, like carp in our rivers and ponds, prey to 'food harvesters' despite their protection as a species.



Published recall notices are now relatively rare

More worrying, though, and on an international scale, the very words H5N1 and Bird Flu have appeared alongside culls in both China and Mexico recently. I've also read of an unknown variety of foot and mouth that has destroyed vaccinated livestock in Russia; concerns that the Schmallenberg virus that found its way to the UK last winter may not self-destroy over the summer months; and details of anthrax in Indonesian cattle – all of which highlights the vulnerability of our food supply chain.



Anyone for beef shrew?

Closer to home, a drink product recall published by the print media attracted the attention of the national television news.

Published recall notices for consumer protection, due diligence and brand protection are now relatively rare. My collection used to grow by at least a product recall notice a week. Now it seems that they have gone from 'routine' to 'news'. Perhaps a positive when we need to get an urgent notification to consumers?

Sadly, in my role as a trustee of the Anaphylaxis Campaign, I was aghast to read of a lady of 22 with a nut allergy who spent eight days in hospital after suffering an anaphylactic shock, having eaten a nut-free labelled cake that was in fact 55 per cent peanuts. This clearly demonstrates that our non-mainstream food supply chain still has a lot to learn about simple labelling and legislation.

My top ten tips on crisis and incident management have just been published to celebrate 20 years of crisis management training and consultancy (you'll find it on the Leatherhead website.)

My last odd box entry this month relates to another town near Leatherhead in the UK, where a retail store was recently fined £24,000 (€30,000) for repackaging and resealing biscuits that had been gnawed by mice, and were contaminated with urine and droppings. Words fail me.

And finally, I sat and listened avidly to a presentation on foreign body identification last week and learned that if a rodent is identified as a baby vole or shrew it's more 'acceptable' than it being a mouse and far more socially acceptable that a rat. Strange.

Roman snails have fallen prey to 'food harvesters'



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'20-mile trek is an Olympic challenge'



Joy Thomas, technical business development manager at Cornelius Group, explores the range of sports nutrition products on offer to aid her charity efforts

With the Olympics now underway in London, many of us are getting bitten by the sporting bug – me included.

Although I'm really not 'sporty', I recently signed up for a 20-mile trek in the countryside for charity. With a few weeks to go, panic set in. I have new walking boots and have done some practising, but I still need all the help I can get. That's when I started wondering if there were any supplements that might help.

I scoured some local stores and was amazed at the huge range of products available. A few years ago sports supplements were only really available to elite athletes and serious bodybuilders. Today, though, things have changed and the sports industry has supplements and nutritional health products widely available for the general consumer.

In fact, according to Euromonitor, the global sports nutrition industry was worth some £2.2 billion (€2.8bn) in 2004, rising to almost £3 billion (€3.8bn) in 2009. By comparison, the UK industry was worth £70.2 million (€89m) in 2004, rising to £91 million (€115m) by 2009.

In the UK, 29 per cent of sales are from health food shops and 26 per cent from pharmacies. Around six per cent of sales are from grocery retailers and products such as Maxinutrition can now be found in mainstream outlets, including Tesco and Asda.

Non-store retailing has an important role to play, too, accounting for 24 per cent of sales, with six per cent of sales placed via the internet.

Product format has also changed to appeal more to the masses. Historically, there were huge tubs of powders purchased mainly by bodybuilding enthusiasts, but today's products are much more appealing and come in a range of formats, from tablets and capsules to ready-to-drink beverages and nutrition bars.

But where should I start? Creatine is a well-known sports supplement and one of the few ingredients to have an approved health claim: 'Consumption of creatine increases the physical performance during short-term, high-intensity, repeated exercise bouts'.

Creatine recharges depleted energy sources like a rechargeable battery, so that may be just what I need. AlzChem manufactures the only European creatine, Creapure. This is now promoted not only for athletics, but also for everyday use.

Most people are familiar with protein products such as whey protein isolate and their popularity in sports nutrition products.

They are a source of high quality protein and a rich source of branched chain amino acids (BCAA), isoleucine, leucine and valine, necessary for building muscle and lean body mass, and improving body composition and enhancing athletic performance.

Often whey protein isolate is not very easy to reconstitute with water as it becomes lumpy and takes a lot of mixing.

Davisco's product BiPRO is soluble and easy to mix with water, so overcomes this problem. It is an easy to digest whey protein that is quickly absorbed into the body to start rebuilding lean muscle tissue and is also gluten free.

I already take probiotics and, along with a large percentage of the population, understand that they have health benefits such as general wellbeing and are good for the immune system. However, recent studies also demonstrate that Ganeden BC30 probiotic increases protein and amino acid absorption. Therefore, it will work well with my whey protein product.

The composition of Ganeden BC30 differentiates itself from other probiotics with its ability to survive manufacturing processes, shelf life, stomach acids and intestinal bile. This allows it to be added to a variety of foods ranging from frozen yogurt and baked goods to hot cereals and nutrition bars.

I am sure in the next few years we shall see sports supplements becoming even more widely available in everyday stores. There will be new advanced materials and synergistic blends available as ready to drink beverages, nutrition bars, chewing gum and other formats for convenience.

So my recipe to help me train is as follows: 3g of creatine, 22g of whey protein isolate, 1 billion cfu of Ganeden BC30 probiotic, plenty of water and plenty of walking.

This will not make me into an Olympian, but it will help give me the optimum nutrition in order to improve recovery, strength and energy levels, and achieve my goals.

I'll let you know how I get on. ■



'We shall see sports supplements becoming even more widely available'



A thirst for new ideas

International label consultant Mike Fairley looks at the latest technologies and opportunities for the beverage industry

Walk around any supermarket today and the range and variety of non-alcoholic beverages is greater than it's ever been. Bottled water alone comes in a mind-boggling number of flavours, varieties and versions, as do carbonated beverages and soft drinks of all kinds.

Glass bottles, plastic bottles, cans, cartons are all used – and as for the range and variety of labels used... well, it's become a real challenge for the brand manager and the label producer to select the optimum solution.

The whole issue of standing out on the supermarket shelf has also become more complex in recent years.

Once it was just the branded drink products on display. Today, though, supermarket own label products are equally prominent. Indeed, the likes of Tesco, Royal Ahold and Walmart and are now in the top 15 of the world's leading FMCG brands, so there is intense competition to catch a shopper's eye.

That competition looks set to increase with Tesco unveiling plans to develop a raft of new brands and 'to be a creator of highly valued brands'. Sainsbury's, too, has announced its biggest ever revamp and own label development programme, and the relaunch of its Taste the Difference packaging.

Such intense shelf competition has rapidly changed the world of bottle decoration, creating new ways to brand products – from patch labels, wrap-around labels and 360° top to bottom labelling, to front, back and neck labels, and new developments in self-adhesive labels.

The range of materials used for beverage labels has also changed considerably, too. No longer just paper, bottle decoration solutions now include plastic films, metallic and metallised papers and films, synthetic materials or direct printing onto the bottle.

Print technologies for beverage labels have also evolved, with litho, UV flexo, gravure, hot or cold metallic foiling and even digital printing now being used.

Printing may be sheet-fed, web-fed, printed and finished in-line or off-line, and all complemented by the latest computer-to-plate, computer-to-film, digital design and graphics, prepress, 3D visualising, pallet planning solutions and software. Much depends on the label run length, the print quality and the range of finishing options.



Adventurous

For the more adventurous brand marketer, the possibilities being developed and used now include colour change inks to indicate whether drinks are chilled to the correct drinking temperature, the use of iPhone apps to link QR codes or snaptags on the labels to websites, the use of UV-cured varnishes that create raised images to simulate, say, water droplets on the bottle, or to provide a pleasing tactile image on drinks bottles held in the hand.

For the more expensive and luxury end of the drinks market there may also be pressure to introduce anti-counterfeiting, brand protection and track-and-trace measures, for which there are now an increasing range of cost-effective solutions – particularly if they are designed in from the beginning and not added as an afterthought.

Add several low-cost brand protection solutions together in the right way and they can provide a highly secure, cost-effective deterrent, much like a more expensive hologram.

Over-riding all these innovations and developments are issues of cost, time-to-market, quality, performance and, increasingly, environmental issues.

Choices, choices

So how does the product or marketing manager begin to narrow down the choice of beverage label or bottle decoration?

To a large degree, it will be determined by the choice of bottle and the nature of the beverage, as well as whether the bottle is to be reused or recycled. Carbonated beverages, particularly in the larger size bottles, may benefit from a filmic label that expands with the bottle rather than perhaps having the label tearing as the carbonation expands the bottle during transit or in-store display.

Patch labels on the front or back of beverage bottles can easily use a paper label. They may be printed in sheet form or reel form. Much will depend on how the label is to be applied – from cut-to-size labels in a hopper, or from a reel and cut to size at the point of application. However, if the bottle is to be recycled, the label may need to be removed first. A removable label stock will then be required.

If a wrap-around body label is needed on a plastic bottle that is to be recycled, it will benefit from a plastic compatible label and adhesive that is recycled with the bottle.

A top to bottom, 360° label on a shaped, slim neck or contoured bottle, will need to be a shrink sleeve label. Capable of shrinking up to 30 per cent or more under hot air or steam after application to the bottle, shrink sleeve labels are not the cheapest, but can be the most eye-catching on supermarket shelves. Used on glass bottles, shrink sleeve labels can often enable light-weighting of the glass bottle, so mitigating some of the bottle cost, and be easily removed for recycling.

When looking at premium drinks, limited edition product launches and high added-value options, self-adhesive labels printed on sophisticated in-line printing and finishing presses can offer up to six or eight colours, embossing, metallic-look hot or cold foiling, over-varnishing or over-laminating, on paper, film, clear or metallic substrates for high impact. On plastic bottles, self-adhesive labels and adhesives today can be compatible with the bottle materials to offer total recyclability.

> ‘Intense shelf competition has rapidly changed the world of bottle decoration’

In summary, there is perhaps no one best solution for the labelling of beverage bottles. Wet glue applied patch paper labels are still one of the most cost-effective solutions for lower-priced beverages such as water, juice and still drinks. Filmic wrap-around, cut-and-stack or self-adhesive labels have become the label of choice for many plastic bottles, particularly carbonated beverages. Clear film, with a clear adhesive, enables coloured beverages to show through and become part of the label design.

Shrink sleeve labels have gained considerable ground in recent years by enabling lightweighting of glass bottles and offering high shelf visibility. Like self-adhesive labels, they are not the cheapest form of labels, but offer high added value.

Self-adhesive labels have significant benefits in offering a whole range of added-value features, and have a relatively low application cost – thus offering a total applied label cost which may be little more than that of other forms of labelling.

Self-adhesive film thicknesses are getting ever-thinner and this will increase the popularity of such labels. Companies such as Avery Dennison are at the forefront of such changes.

What’s more, the impact that digital electrophotographic and UV inkjet printing of self-adhesive labels in up to seven colours is now making on bottle labelling, means self-adhesive labels are likely to attain even greater prominence in the future.

Run lengths with digital printing are now regularly up to 40,000 or more labels, offer instant running changes for many versions and variations of label, language changes and personalisation or regional variations.

Certainly, digital printing technology is well suited to fast turnaround requirements, short deadlines, short run lengths, inventory minimisation and waste reduction, with brand managers cutting not just production costs but also inventory costs and waste.

What of the future? Well, it seems certain that beverage labels will become even more interactive. Datamatrix codes, Quick Response (QR) codes and Snaptags are all enabling more and more information to be included in and on labels to make them interactive with websites through mobile phones, to provide additional product information and create socially active communities.

More beverages are being drunk by the younger, sports and health-conscious community straight from the bottle, so bottles and labels will become more tactile.

Personalisation is also readily available with the latest digital printing processes for labels. Beverage labels can be personalised for clubs and associations, for events and activities, for store promotions, for groups, and often at a premium price.

The challenge is to get designers, brand managers, label stock suppliers, label printers, bottling and filling plants to all understand each other’s needs and to appreciate the wide range of solutions and marketing opportunities that labels have to offer.

The possibilities are immense. ■



The range of materials used for beverage labels has changed considerably

A paradigm of innovation


Steve Osborn

Steve Osborn, business innovation manager at Leatherhead Food Research, looks at the sweet successes of confectioners through the years

In the late 18th century and throughout the 19th century, a Quaker family from York, the Tukes, were known for their pioneering work in mental health care reform, and other philanthropic endeavours. They were also tea and coffee importers, with their range including cocoa.

Their efforts in mental health care have undoubtedly left a long term legacy, but in food and drink terms they must be considered alongside Pete Best, ('the fifth Beatle'), and sport's 'nearly' men such as Raymond Poulidor (Tour de France's 'eternal second' to the dominant Jacques Aquentil) and, dare I suggest, Tim Henman.

It was in 1862, 150 years ago, that the Tukes sold their struggling import business to Henry Isaac Rowntree, with Joseph joining his brother a few years later. The rest is history, or so it seems.

What followed is built on innovation, creativity, circumstance and a great deal of luck, but the value of that progress cannot be underestimated. In 2010, the global confectionery market was worth an estimated £91 billion (€115bn), an increase of more than 16 per cent since 2006.

Chocolate innovation

The development that benefited the fledgling chocolate industry was a collaborative innovation approach in which Daniel Peter sought the expertise of Henri Nestlé, who had been successful in condensing milk, without curdling or scorching, for the development of his infant formula.

More than 100 years before the phrase 'open innovation' was in use, Daniel Peter (previously a candle maker) applied his own knowledge of heating and setting candle wax to invent a chocolate-making process. The problem he then needed to overcome was the excessive water in the product that led to undesirable mould growth and rancidity, which was outside his own expertise, but could be solved by a constituent technology of the infant formula industry.

This innovation was driven by need and solved a specific issue, contributing heavily to its success. It also set the tone for arguably one of the most creative, innovative and, in turn, successful sectors of the industry.

The stability of the new chocolate allowed development of shelf-stable products and, combined with the melting characteristic of cocoa butter, a luxurious melt in the mouth sensory experience. This underpinned the value of the innovation – the product tasted great. All in all, it was a virtuous circle and the dream of any innovator. It was a truly 'new' thing, solved a problem and delivered a desirable product.

The sensory impact and acceptability of the product to the consumer must never be underestimated. After all, you can have the greatest innovation known to man, and even the marketing budget to go with it, but if no one likes it, it is doomed to fail.

Marketing is an area where confectionery is also a leader in its field. Many of us will remember the drum-playing gorilla not only identifying the brand, but the product itself, without any mention of either. Thankfully the 'crottes de lapin' or 'rabbit droppings' found a much happier proposition in its new identity as Smarties. The product, however, is what the consumer wants.

The developments that followed are far too many to mention – bubbles, panned, nuts, filled, coated etc. And with chocolate contributing almost 60 per cent of the total annual sales, the need for innovation is essential to maintain market advantage in such a lucrative arena.

Sugar innovation

The chocolate side of the category has by no means dominated its sugar cousins in innovative developments. The properties of sugar have lent themselves to a multitude of great products and innovations over the years. It acts obviously as a sweetener but also preserves the product. It provides structure and, in particular in the case of confectionery, crystallises.

It is readily soluble in water so syrups can be made and the sugar seeded in a controlled manner dictating the size and shape of the reforming crystal. This crystallisation can then be controlled through the use of 'doctors' such as glucose syrup. These doctors are at the heart of why boiled confections work – they actually inhibit the recrystallisation of the sugar, resulting in a smooth, soluble product that can carry colour and flavour.

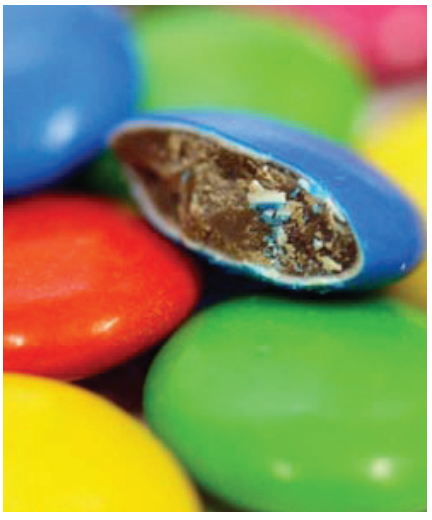
The monosaccharide glucose is, along with fructose, a product of the inversion (breakdown) of the disaccharide sucrose.


Many of us will remember the drum-playing gorilla

If not controlled it can cause problems with the shelf life of boiled confectionery products by causing them to become very hygroscopic and making the product sticky. Control of the acidity is fundamental in controlling inversion.

However, the innovative spirits within the early days of confectionery not only sought to overcome the challenges they were faced with, but also positively embraced them and identified the opportunity for new products.

Once crystallisation was controlled it could be eliminated (clear high boils) or 'grained' through seeding or pulling to develop a glossy satin finish such as in seaside rock. Grained products could be made which could be hard like a Kendal mint cake, or if a combination of graining and inversion were used, a softer fondant could be made and used to fill a chocolate or be coated in chocolate.



One of the most eloquent innovations must still be the use of an enzyme (invertase) to facilitate the inversion for the centre of After Eight mints – the centre itself being a grained fondant deposited in a solid form, allowing it to be coated in chocolate and packed. During post-manufacture storage, the inversion process essentially liquefies the sucrose-based centre into its minty syrup filling.



The inversion process liquefies the sucrose-based centre of an After Eight mint

The inclusion of milk-based products utilises the role of sugar in flavour formation – through the Maillard browning reaction – to develop a range of caramel-based products from a liquid soft centre to a butter candy, with not much difference in processing apart from the cooking time and temperature. Allow a butter candy to grain and your product is fudge; control that crystallisation and you will develop a range of textures. It's no surprise that great confectioners blur the edges between scientist and chef.

It is not possible to list all the products or even the range of invention and innovation that has arisen from the confectionery industry. However, it is clear to see that the confectionery industry sets an exemplary standard when it comes to innovation.

Opportunities to collaborate outside the industry have been taken and successfully capitalised on.

It is too easy to dismiss the power of marketing and big investment, but it is nothing without a strong product that the consumer wants. Always listen to your consumer and take an objective view on the product's form, as getting distracted by 'tradition' and personal sentiments can lead to missed opportunities.

When innovating in your product categories, consider the impact the confectionery industry has had, and draw parallels to the opportunities that may exist. Don't be afraid to approach external partners to explore the issues you may have and what potential exists with a different and maybe more 'open innovation' approach.

To quote Ben Franklin: 'Out of adversity comes opportunity' – an ethic that confectioners have certainly embraced. ■



Curd's the word



Fuerst Day Lawson has launched a new range of curds for use in yogurt preparations, ice cream ripples or as an inclusion in bakery fillings.

FDL says it has 'premiumised' and increased the curd range to fit with current restaurant trends by launching flavours such as Blood Orange, Blackcurrant, Lime, Lemon and Passionfruit.

"Our curds perform especially well in high fat and acidic conditions, and work with a simple lemon drizzle cake or as an inclusion sauce in bakery, a fruit preparation for a luxury yogurt or as a topping for cheesecake," says a spokesman.

Tea time for Döhler

Döhler says the launch of its tea concepts has been prompted by 'untapped market potential in the ready to drink tea segment'.

Together with Plantextrakt, Döhler has developed a new range incorporating freshly brewed and non-concentrated Strong Tea Infusions.

"Strong Tea Infusions taste like freshly brewed tea. And, apart from different tea infusions such as black tea, green tea, white tea, rooibos and mate, the portfolio also features strong infusions made of herbs, spices and fruits," says a spokesman. "Due to the intense, authentic taste, no additional flavours or extracts are required."

Making more of meat

Premium Ingredients has launched products that it says will help the meat industry to reduce costs.

Premitex XME-12013, a texturiser for fresh meat based on functional meat proteins (pork origin), vegetable fibres and corn starch, allows the partial substitution of meat in products such as burgers, sausages and meatballs, filling for cannelloni, lasagne and croquettes, as well as ready meals and minced meat, says the manufacturer.



Premigel XMC-11034, meanwhile, is designed for dry, fermented meat applications such as salami, dry and minced sausage, chorizo, pepperoni, Danish or Hungarian salami and semi-cooked salami.

Vitamin D3 more beneficial than D2?

New research funded by the Biotechnology and Biological Sciences Research Council (BBSRC) has shown that vitamin D3 supplements could provide more benefit than vitamin D2.

The findings could potentially lead to changes in the food industry when it comes to fortification.

Vitamin D is important for bone and muscle health, which is why some foods are fortified with the vitamin. Fortification is usually with vitamin D2, as this is not derived from animals. However, the new research, carried out by scientists from the University of Surrey, suggests that vitamin D3 is the more beneficial of the two types of vitamin D in raising the vitamin D levels in blood when given as a supplement.



The research showed that vitamin D3, the type of vitamin D found in eggs and oily fish, is more effectively converted by the body into the hormone responsible for health benefits in humans.

"We know that vitamin D is vital in helping to keep us fit and healthy, but what has not been clear is the difference between the two types," says Dr Laura Tripkovic, who led the study. "It used to be thought that both were equally beneficial, however our analysis highlights that our bodies may react differently to both types and that vitamin D3 could actually be better for us."

The researchers are now conducting a further study to see if the same results are found when using lower doses of vitamin D2 and vitamin D3 added to foods, rather than given as standalone supplements.

"This research is vital to help us ensure that as many people as possible are able to stay healthy and active as they get older," adds Professor Douglas Kell, BBSRC chief executive. "This is an example of how a greater understanding of the bioscience underpinning human health, could lead to an increase in healthspan to match our increase in lifespan."

Sensient bid to energise drinks market

Inspired by current market developments, Sensient Flavours has created a range of ingredients for energy drinks.

The compounds contain flavouring, sweetening and colouring solutions, as well as bioactive and functional ingredients.

"Adults in the 30-plus age group are just as attracted to energy drinks as younger consumers, but they expect different benefits," explains commercial director Michael Moeller. "They want ingredients that are as natural as possible, an authentic taste and a balanced nutritional profile. They also tend to prefer a gentle form of energy supply and want to avoid products which have the 'boost and crash' effect."

All variants in Sensient's new range of compounds are characterised by particular ingredient and flavour combinations.

"Sea buckthorn, feijoa and the exotic yangmei fruit, for example, combine both fruitiness and freshness," adds Moeller. "The yangmei option provides 15 per cent less sugar than standard energy drinks, making it an appealing alternative for consumers who are keeping an eye on calories. The compound range enables beverage manufacturers to pursue new positioning options."

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Analytical results form the basis of major operational and commercial decisions. But how can you be sure of their accuracy? Fiona Cawkell and Christina Oscroft, of Campden BRI, have the answer

Microbiological tests have a vital role to play in the food and drink industry, protecting consumers' health by helping to ensure that products are safe to eat and drink. They also help manufacturers determine product shelf life and troubleshoot spoilage problems.

Major operational and commercial decisions are often made on the basis of analytical results and it's therefore vital that these results are accurate, reliable and interpreted correctly. But how can food manufacturers ensure their laboratories' test results can be trusted?

Here we look at two principle approaches microbiology laboratories use to ensure they are performing – namely, microbiological proficiency testing and laboratory accreditation.

Putting safety to the test

Getting inaccurate or erroneous laboratory results can have far-reaching implications for food manufacturers, retailers and official bodies. It can lead to incorrect decisions that, in turn, could have commercial and/or legal consequences. At the very least, it might jeopardise the commercial relationship between manufacturer and laboratory, and manufacturer and clients. At worst, it could trigger product recalls or a food safety incident.

Proficiency testing (PT) offers a highly effective way for laboratories to check how they are performing. In fact, laboratories participating in a robust proficiency testing scheme not only gain confidence in their equipment, methodologies and staff, but also get an assurance that they are delivering the quality of results demanded by customers.

PT provides laboratories with an independent and confidential assessment of their performance in relation to other laboratories, and is an important element of quality assurance systems.

The right results

Microbiological analyses have particular issues associated with them that make it difficult to know in isolation how accurate they are. Different methodologies can provide different results, which in turn can lead to different conclusions if there isn't a full understanding of what analysis was carried out and why.

There are a number of reasons why a microbiology laboratory might report incorrect results and why inaccuracies can enter analyses. These include:

- Use of inappropriate methods, methods outside their intended scope of application or methods that have not been fully validated
- Contamination/abuse through inappropriate storage and handling of samples
- Poor training of staff
- Use of poor aseptic technique and/or inappropriate bench practices when analysing samples
- Equipment failing to operate within the parameters needed
- Media/test kit failures
- Calculation and/or reporting errors
- Laboratory cross-contamination
- Failure to manage/resolve and appraise the impact of any deviations in relation to reliability of results.

These potential reasons cover what would be considered over and above the 'normal' uncertainties associated with microbiological results. However, the primary concern is that when these reasons are all added together, they result in an incorrect representation of what the true answer actually is.

For food manufacturers to be confident that the methods their laboratories are using are appropriate, that they are being carried out effectively and in the correct way, and that all equipment is being operated adequately, it is essential that laboratory performance is regularly assessed using samples with known levels of the target micro-organisms.

How PT works

In principle, all proficiency schemes typically work by providing participating laboratories with standard samples for the laboratory to analyse 'blind'.

The laboratory does the analysis and submits the results to the organiser, who then distributes the processed and anonymised results to all participants. Each laboratory can then see how its results compare with those of other laboratories – without compromising the confidentiality of those laboratories.

In microbiological analysis schemes, the providers know the level of the microorganisms (and the nature of the cocktail of mixtures) provided, but the test laboratories do not. Each participating laboratory analyses the sample(s) using its usual methods (which may differ from one laboratory to the next) and submits its results to the PT scheme provider.

PT results provide an effective insight into the sorts of results routinely obtained by the laboratory if the PT samples are treated in the same way as routine samples. This means that each stage of testing from sample receipt, through all stages of the testing process, to reporting of results, is undertaken by the same laboratory staff who would normally do those types of tests using the same procedures.

The PT provider compiles and statistically analyses the results, and will include them in a report that also contains the 'true' result and, for each laboratory, a score (known as the z-score) reflecting how close it was to the 'true' value.

The participating laboratories are not named. This means that individual laboratories can compare their result with the 'true' value and with the results obtained by other laboratories. They can also compare their score with other laboratories without confidentiality being breached, providing good, independent feedback of their performance for particular tests.

Choosing a provider

While the principles of microbiological proficiency testing are the same, it goes without saying that not all PT providers operate in exactly the same way.

Different schemes will have different features allowing laboratories to evaluate their performance in detecting, identifying and/or enumerating specific organisms or groups of organisms.

For example, Campden BRI offers a choice of frequency of test material from once to six times per year, and two choices of test material – depending on whether the laboratory is set up for handling pathogens, as well as the option to return results from different members of staff.

The first test material sample contains mixtures of non-pathogenic organisms, for enumerating total viable count (TVC), coliforms, enterobacteriaceae, lactic acid bacteria, yeasts and moulds, as well as pathogens that are usually quantitatively analysed.

The second test material sample might additionally contain salmonella, listeria, vibrio and campylobacter, and is designed for companies who have suitable laboratory facilities and experience with handling pathogens.

In addition, extra tests have been incorporated into the scheme. For example, some laboratories may want to assess their proficiency in testing for E.coli 0157 – this test is not available in some of the other PT schemes available. As well as non-toxigenic E.coli 0157, listeria enumeration, thermophilic spores and osmophilic yeasts and moulds have recently been added to Campden BRI's samples.

Demonstrating competence

Given the effectiveness of PT in helping laboratories demonstrate that accurate, reproducible results are reported, it is not surprising that laboratory accreditation schemes require laboratories to participate in an appropriate PT scheme (or where necessary a combination of PT schemes) that where possible cover all methods in the laboratory's scope of accreditation as a prerequisite for accreditation.



The need for laboratories to demonstrate competence through working in accordance with recognised international quality standards based on ISO/IEC 17025 and securing independent third party accreditation for the testing operations is now widely established within the food and drink industry. It's seen as a means of strengthening due diligence regimes and satisfying customer requirements for an assurance of the quality of work and validity of test results.

Regular appraisals of bench level techniques and supporting technical, management and administrative operations can help to establish and maintain standards of laboratory practice and the adoption of good laboratory practices.

Regular assessments can also help laboratories keep abreast of developments in methods and technology. The types of issues covered by an accreditation scheme are illustrated in the table below.

One such Independent Laboratory Accreditation Scheme is the Campden Laboratory Accreditation Scheme (CLAS).

CLAS was established to meet the need for a 'practical' assessment and accreditation scheme to support the reliability of results from laboratories undertaking microbiological, chemical, physical and sensory testing, and currently assesses and accredits over 200 laboratories every year

Accreditation to CLAS provides an annual, independent, unbiased, professional third party assessment of a laboratory's technical and management operations, no matter how large or small. It creates confidence in the standard and quality of work, the accuracy and reliability of results, and contributes towards an assurance of product safety and quality.

CLAS is recognised by all UK retailers requiring accreditation of supplier laboratories and it can also be used by companies to help support other quality management systems they may be involved in (eg British Retail Consortium Standard and ISO9000).

Accurate and reliable analysis of food and drink is a major activity for the industry – and a very important part of product development, quality assurance and food and drink safety. Testing is required for a wide variety of reasons, from testing suitability for purpose, through checking shelf life to assuring legal compliance.

It is vital food manufacturers work with laboratories that provide as accurate, reliable and effective results as possible.

Proficiency testing (PT) and laboratory accreditation are the two principle approaches for ensuring laboratories are consistently performing to the highest levels. This will ultimately protect consumers' health, trouble-shoot potential issues and enable manufacturers to make major operational and commercial decisions with accurate and reliable facts at their fingertips. ■

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- Probe can be cut to length to suit application
- 2 x switched + 4-20mA/0-10V outputs (Profibus via option module)

*subject to min. dielectric constant of 5

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Bubbleology floats into Eastern Europe

Bubbleology, the British brand that introduced Taiwanese drink bubble tea to the UK last year, has now launched in Eastern Europe as part of a global roll-out.

The first London Bubbleology outlet launched last April in Soho, and has now been followed by a launch in Poland, with further expansion planned for the Czech Republic, Switzerland, Austria, Germany, Kuwait and UAE.

Two more London stores are also launching this summer, with more outlets opening in UK cities by the beginning of 2013.

Founder Assad Khan first disco vered bubble tea at a small cafe in New York in 2005, where he was working as an investment banker for JP Morgan.

"We've had phenomenal response to the brand and the authentic taste of the product since we opened the first café in Soho," he says. "In the current climate, I'm thrilled that this British brand is defying the negative economic outlook, and not only expanding in the UK but also exporting itself abroad."



Bubbleology sells both milk and fruit teas.

Bapco closes fruit deal

Bapco Closures has launched its first closure in Australia – an 82mm twister created for fruit processing company SPC Ardmona.

The two-part injection moulded closure has been applied to Goulburn Valley and SPC fruit products, and has hit the shelves of supermarkets Coles and Woolworths.

"This is Bapco Closures' debut in Australia, but one we are confident will lead onto more successes in the future," says CEO Stephen Dawson. "SPC Ardmona was the first company in the world to pack fruit in transparent, resealable, plastic jars that could be refrigerated, so our closure with integrated fused foil laminate was a perfect fit for the company's product design and brand development."



Adds Trevor McKay, packaging manager of business development, innovation and technology at SPC Admona: "With the Bapco closure, the foil is welded not sealed to the container, preventing unnecessary leakage. Our leak rates have actually halved since the introduction of the Bap technology."

New size for Sunny Delight

Sunny Delight has unveiled a 200ml pack for both lunchboxes and 'on the go' consumption with, it says, a 'new and improved formula'. The product range now contains added vitamins A, B1, B6, with the latest addition to the range aimed at mums on a budget.

"Sunny Delight has had a complete redesign. It's back and it's better," says Marnie Millard, commercial director of Gerber Juice Company.

Mariani brings jerky joy to UK

After supplying the Australian, Asian and Middle Eastern markets for over 30 years, Mariani Foods has now launched its soft Beef Jerky in the UK.

"Our jerky is different to most of the available jerky in the UK," explains Adrian Plant, European sales director, Mariani Foods. "We wanted to introduce it to British consumers to help change the perception of the snack, which is both healthy and delicious."

The company says it has plans to extend its range in the UK over the next few months.

Mariani soft beef jerky is made from selected free roaming grass fed cattle, with the beef hand cut 'to ensure the right thickness and to enhance the authentic meaty flavour'.



Yeo Valley adds to cream range



British dairy Yeo Valley has added soured cream to its cream range, as well as unveiling new-look packaging for its compotes.

"Since spring, all of our products have had new packaging designed to illustrate the Yeo Valley taste, and our creams and compotes are the latest to undergo this refreshed look," says managing director Tim Mead. "Our aim has been not only to reflect our great-tasting dairy, but also to demonstrate our ethos as an independent, family farming business from the West Country, helping to support other family farms."

Every product now carries a 100% 'Yeoganic' message – Yeo Valley's own description reflecting, it says, its total organic status and ethical farming procedures.

Ahead of the pack



This year's PPMA will focus on automation, innovation, efficiency and technology

Hundreds of exhibitors from across the UK food and drink industry will be demonstrating their products at this year's PPMA Show at Birmingham's NEC from 25-27 September 2012.

Organisers say this year's show will be built around the cornerstones of automation, innovation, efficiency and technology in order to 'deliver the best insight into solutions that maximise the productivity, consistency and quality of products and services in the processing and packaging industry'.

As well as panel debates, the event will also be playing host to the Ones to Watch competition, created to acknowledge the best and brightest up and coming talent in the industry. Entry is open to anyone under the age of 35 who has worked in the industry for more than four years, with the overall winner being announced at the show during a special awards ceremony.

"The PPMA show represents a wonderful opportunity for visitors to discover the most up to date technology and solutions," says Graham Earl, the show's exhibition manager. "In addition, it provides insight into the latest educational trends and developments in the sector, whilst also offering unrivalled opportunities to do business and consolidate connections."

Visitor to last year's show Michael Silvery, design engineer at Calava Process Solutions, says: "I decided to attend the show in 2011 for research purposes as I had just joined Calava Process Solutions. The machinery displays on the stands were very impressive. It's always great to see the products in action – that's what I love about trade shows."

Adds Colin Griffiths, chairman of Golden Valley Pallet Wrap Specialists and an exhibitor at the 2011 show: "We've exhibited at various shows but I knew that if we improved our stand, we could do very well last year. On the first day alone we generated over 100 good leads."

Exhibitors at this year's show include:

AMS

Desktop label colour printer firm AMS will be showcasing its solutions from top global manufacturers. Although primarily specialising in mailing equipment, AMS has quickly expanded into the label and packaging market since it introduced its first desktop, short-run digital colour label printer in 2011, the latest of which will be launched at this year's show. **Stand H50**

CPA Engineered Solutions

CPA Engineered Solutions will be introducing three new energy-saving air solutions at the show. CPA is the European manufacturer of Enershield energy saving air barriers and UK importer and authorised distributor for Steril-Aire ultraviolet germicidal emitters and Big Ass Fans for air circulation. It's also the authorised distributor for the Sonic Air Systems range of airknife drying products. **Stand G31**

Endoline

End-of-line machinery firm Endoline will be launching a new generation of tray erector.

Designed and built to meet the growing demands from manufacturers for smaller, more compact machinery, the Endoline 511 Tray Erector has been engineered into a vertical format – resulting in a system built to a significantly smaller footprint than original tray erecting machines, says the firm.

"With an output speed of up to 30 trays per minute, it's ideally suited to retail-ready packaging applications and can be integrated into a completely automatic line with tray loader/shrink wrapper for a shelf ready transit pack, or used as a standalone unit for manual tray packing," says a spokesman. **Stand D30**

Flexicon

Flexicon Europe says it will be delivering 'the greatest insight into its comprehensive range of bulk handling equipment and systems' at the show. "Production directors and managers looking to improve in-house efficiencies in the handling and transference of powders, flakes and granules should make the Flexicon stand an essential scheduled stop," says a spokesman.

Flexicon will be showing off a number of bulk-bag delivery systems, including a combination bulk bag filler with pallet dispenser and powered roller conveyor high capacity, simultaneous filling of two bulk bags. There will also be an opportunity to see the latest pneumatic gain-in-weight fill-


Flexicon

ing system designed to automate delivery of free-flowing bulk solids from down-stream silos or processing lines to individual bulk bags. **Stand F27**

Lock Inspection Systems

Lock Inspection Systems will be highlighting upgrades to its range of Insight machines, including new hardware and operating software, and an easy data transfer facility to help food retailers and manufacturers meet the latest global food safety standards set out in BRC 6.

The firm will also be running free educational presentations for the duration of the show in order to help food manufacturers and retailers better understand the BRC 6 requirements relating to foreign body control and accountability. **Stand A53**


Multipond

Multipond

Multipond will be showcasing its range of customised multihead weighing solutions, including the new integrated lift weigher series, the LW 1000, which is already in operation at a number of manufacturers of ready meals in England, Canada and the US. The LW 1000 is a hybrid combination of 12-head multihead weigher and a mobile lift frame in a flexible unit that can be moved from position to position, or to other production lines.

"The motor driven height adjustment can be programmed for different filling heights for varying applications," explains a spokesman. "When a production run is finished, the unit can be moved off line and lowered to a comfortable height for ease of access to the product contact parts for cleaning. Alternatively, the unit can be wheeled to a wash down area if required." **Stand D56**

Open Date

Centrepiece of the Open Date stand will be the latest version of its Thermocode iQ thermal transfer printer, which now includes several added features as standard. Launched in 2010, the iQ has been under continuous development and, according to Gary Cowlard, CEO of Open Date, no other thermal transfer printer includes so many functions on a basic model. "There has been a great deal of interest in the iQ and now our own Editor software package has been added to provide even more features for the customer without extra cost," he says. **Stand A45**

Pack Leader

A full range of Pack Leader labelling machines will be on display at the show, from the Table top ELF50 and ELF20 side wrap and top wrap systems to the high speed PPRO 625 suitable for all front, back and side wrap applications for glass, plastic and complex-shaped bottles and tubs.

Köra-Packmat leaflet and booklet feeders will also be on show, including the entry level EasyFeeder and the high specification AdvancedFeeder. **Stand D31**

R A Rodriguez

R A Rodriguez says its IEF Werner linear motion programme provides 'the perfect basis for a variety of applications in the processing and packaging sectors'.

All elements are designed to be freely combined enabling single or multi-axis systems to be created simply and quickly, according to the firm. Also on show this year will be the Universal Robot robotic arm, alongside a new model. Both Universal Robot arms are ideal where traditional robots are considered to be too large, expensive,


R A Rodriguez

noisy or not sufficiently flexible. Both are entry level automation devices that provide six axes of movement and operate from a standard 240V supply. A unique graphical user interface guides the user through the set up process; it's true, plug & play productivity. **Stand D72**

Sick UK

Sick UK will be demonstrating how 'difficult shapes, flat or transparent objects that have previously defied reliable detection can now be seen clearly' thanks to its new sensing solutions.

The firm says its new MultiLine sensor ensures a stable and continuous detection signal from the leading to the trailing edge of a product, even when surfaces are glossy, flat or contoured.

"The twin light-beam technology consistently detects low profile, uneven or glossy product surfaces such as vacuum foil coffee packs, wrapped chocolate bars or soup sachets," explains a spokesman fort he firm. "The sensor's innovative design reduces the risk of machine downtime by eliminating false signals, leading to improved productivity."


Sick UK

Sick will also be showcasing its labelling technology solutions, including the slim WFS fork sensor for detecting label presence, the KT3 for compact and precise mark detection and the ML20 markless sensor which eliminates the need for a registration mark to be printed on packaging. **Stand A50**

Spiroflow

Spiroflow will be showcasing its tubular drag conveyors, tilting mobile flexible screw conveyor with adjustable height outlet, a bulk bag discharger and a bulk bag filler.

Spiroflow designs, manufactures, installs and commissions conveying, weighing, blending, bulk bag filling and discharge equipment and systems for dry bulk solids, ingredients and additives. **Stand G16**

Systech Illinois

Systech Illinois will be exhibiting its range of permeation analyser and headspace gas analysers for the packaging industry at this year's show. Systech says its oxygen permeation and water vapour permeation analysers are ideal for testing all packaging film, finished package and PET bottles.

"Our oxygen and carbon dioxide headspace analysers offer fast, easy to use, accurate gas analysis of gas flushed food packages and headspace analysis of any kind," explains a spokesman. "These analysers can be used effectively with packages of all sizes, with portable and waterproof versions available." **Stand F50**

Stute sustainability surge

German food company Stute Nahrungsmittelwerke has invested in three wind farms, a biogas system and several solar power installations that, together, cover more than 30 per cent of its own energy requirements.



The privately owned company will also be able to completely recycle PET material when it commissions Germany's first PET recycling line from Krones this August.

The SuperClean-PET-flake process is able to produce flakes at a high degree of purity which can be used for making new bottles.

"With this process, we plan to feed back into our bottle production operation both PET bottles and preforms," explains a spokesman for Stute. "This includes bottles that have already come into contact with product. The recycling process washes and decontaminates the rejected PET, thus guaranteeing its suitability for future food-grade applications."

Robots and Roses

Kraft has increased efficiency with the introduction of an automated robot distribution system for its Cadbury *Roses* and *Heroes* products.

The investment has also contributed to the Kraft Foods Sustainability Programme by reducing material usage by replacing cardboard boxes with reusable plastic tote bins, and cutting daily vehicle movements through the management of fixed cycling schedules.

The core brands are produced and packaged at the Bournville production facility, with the wrapped chocolates traditionally managed through the factory in cardboard boxes.

With ten types of chocolates in Roses and six in Heroes, there are defined process lines at various locations within the plant. The palletised, stacked boxes, identifiable by barcode, were previously transported across the factory to two packing plants on different floors. They would then be moved to an area adjacent to the appointed packing plant.

A series of unit designated in-feed hoppers were manually topped up from the pallets by operators, to feed the automated packing operation. A number of operators would then remove the boxes from the pallet stacks, open and tip the boxes into the designated hoppers, and the empty boxes would then be crushed and removed from the packing area.



Kraft commissioned CKF Systems to design an automated recirculating distribution system that met production requirements, eliminated cardboard waste and provided safeguards to the assortment integrity.

"The challenges required a bespoke solution with major design, mechanical, control and engineering complexities to contend with," says David Moreton, project manager, Kraft Foods UK.

Responsible for the complete turnkey project, CKF designed, installed and commissioned the system, located in three production areas over two floors.

It comprises an automated robotic system with high level delivery and return, and vision controlled distribution that automatically feeds the two packing plants.

The wrapped units are handled in open plastic tote bins allowing the high definition vision systems to identify product type using recognition technology.

Four ABB 4-axis IRB 660 robots, complete with bespoke vacuum tooling are arranged in a balanced cell format. Recipe driven, the cell format allows the flexibility to meet the demands of all the packing derivatives and recipes when both packing plants are on demand.

Each of the four cells has six pallet-feed conveyors to receive product and to discharge repalletised empty tote bins. The pallet management is also handled within the robot cells, the tooling being designed for handling both tote bins and pallets.



By means of an information screen, product is selected, confirmed by one of two HD vision camera stations and loaded into the appropriate robot cell in-feed. This arrangement also determines the stack height of individual pallets and the orientation of the tote bins on the pallet.

On demand from the packing plants, the robot depalletises the tote bins with a custom designed vacuum head and places them onto the delivery system to the packing plants.

Delivery is achieved through an extensive conveyor system routed through the factory over two floors. The system incorporates spiral elevators, reject stations, intelligent accumulation, automated tote bin tipping and manual feed operations for each plant.

Key to the success of the system is its product recognition facility, utilising a total of seven HD cameras. They are located at the entry to each packing plant distribution system, to define and distribute the correct unit to the correct hopper lane.

The returning empty tote bins from the packing plants are combined and a final vision system inspection ensures these are clean and suitable for re-palletising by the robot system. Contaminated tote bins are rejected for cleaning.

Firms use loaf in sticky situation

Stable Micro Systems and UK bakery brand Warburtons have announced the launch of testing equipment for the bakery industry.

Called the Warburtons Dough Stickiness System, the testing rig enables 'more realistic assessment of dough stickiness' as it minimises the dough's exposure to atmospheric variables by testing under controlled conditions, according to a spokesman for Stable Micro Systems, a manufacturer of texture analysis equipment.

"Sticky dough is problematic in bakeries as it causes progressive build-up of dough smears on equipment, necessitating extra cleaning and leading to waste and unplanned stoppages," adds the spokesman. "Previous test methods for quantifying dough stickiness normally required manipulation of the dough sample immediately prior to testing. This, and exposure to drier atmospheres common in QC labs, introduce rheological changes which reduce stickiness and therefore distort test results.



"As stickiness is most commonly evident when dough is subjected to shear, tests should ideally be performed immediately after mixing or processing. The research, development and engineering team at Warburtons has worked with Stable Micro Systems to develop a sample testing box into which dough samples can be placed quickly and with minimum exposure of the cut surface."

A retaining plate is put on top of the dough, applying slight compression to the sample. A narrow blade is then driven through a slot in the retaining plate, to a defined distance.

"This action provides bakers with an accurate assessment of the compression peak and compression area of the dough, indicators of its consistency," explains the spokesman.

Measuring success in the Middle East

Mass Measuring has supplied an automated mixer weighing package for a biscuit factory in the Middle East.

"Weighing mixers have many benefits, including the reduction of associated weighing equipment, minimised headroom requirements and the ability to feed materials sequentially with a mixing cycle in between additions," explains a spokesman for the firm.

Its solution included a 9,000kg weigher, with accuracy to 50g.

Flour and sugar hoppers, together with vacuum receiving hoppers, were supplied and the existing site flour and sugar vacuum distribution lines were modified to allow fully interlocked servicing of both the new and existing systems.

Control of these lines is routed through a new control panel, which allows users to select priority servicing in the case of multiple calls arising.

The system can store multiple individual recipes and all recipes are fully adaptable.

Star performer from Makro



Makro Labelling has now had its format handling changeparts concept, Magic Star, patented worldwide.

The design is a standard feature on all Makro Labelling machines, with changeparts capable of handling up to four different container formats on a single set of in feed/out feed starwheels.

"We're delighted to have received the formal worldwide patent," says Richard Portman, managing director of Makro Labelling . "When the firm was established two years ago, our design team wanted to create labelling machines which had cost-saving benefits. The cost savings are in the reduced number of change parts that the bottler needs, and by not having to change the Magic Star so often there is a saving on downtime."

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The drive to thrive



Emma Hanby

In tough economic times, NPD is vital. So, too, is an in-depth knowledge of key drivers for consumers. Emma Hanby and Sarah Chapman, of Campden BRI, explain

The global food and drink industry is extremely competitive with more emphasis being placed on new product innovation and product reformulation than ever before.

To succeed, food and drink manufacturers must develop products that combine functionality and quality with meeting consumer demands as innovatively as possible. This is key if manufacturers are to maintain and grow market share.

Consumers are more discerning than ever before and price is no longer a key driver for many consumers. Considerations such as convenience, shelf life, 'clean label' or 'natural' ingredients and health and wellbeing are just some of the factors that consumers may take into account when deciding what products to buy.

However, the product innovation process can be challenging. Many new products either fail to make it on to the market or last for only a few weeks, and as many as 86 per cent of all new product launches fail within the first year.

It is therefore vital that food and drink manufacturers have an in-depth understanding of the key drivers influencing consumers before embarking on new product innovation or product reformulation.

Key drivers

'Clean label' ingredients

There has been a surge of interest in 'clean labels' in recent years, as consumers increasingly insist on more 'natural' products, which they perceive to be better for their health and wellbeing.

This shift in consumer demand has resulted in food manufacturers looking to replace 'artificial additives' and E-numbers with ingredients that are more 'natural'.

Artificial colourings and synthetic flavourings have come in for a particularly bad press in the past few years – none more so than the 'Southampton Six' colours which, when used in certain products with sodium benzoate, have been associated with childhood behavioural issues.

The challenge for food manufacturers is that while there is a wide selection of naturally derived colours available, they tend to be less stable than the synthetic colours they replace.

In terms of flavourings, there has been an increase in the use of natural flavourings as the range available has widened. However, there are legislative restrictions in place on what can and cannot be claimed as 'natural'.

EU legislation, in force from January 2011, provides new conditions for the use of flavourings, food ingredients with flavouring properties and source materials, and states the conditions under which flavourings can be classed as 'natural'.

Satiety products

A trend that has emerged in recent years has been the launch of food and drink products claiming satiating qualities to help consumers feel fuller for longer, control their appetite and ultimately help them to manage their weight.

The popularity of food products that increase satiety are on the rise – for example, the Marks and Spencer '*Feel Fuller for Longer*' range – and this trend looks set to grow.

Development of 'satiety products' involves using protein-based products due to the fact that protein-rich foods are among the most satiating of food groups, when compared to those rich in carbohydrates or fats. Protein triggers the production of the PYY hormone that sends out 'full up' or satiety signals.

Satiety products may work particularly well with male consumers. Traditionally, male consumers have been a difficult target for manufacturers of diet products – however, it may be that they are more likely to buy a health product if it promises 'maximum satisfaction' or other satiety-related claims.

In fact, Euromonitor says high satiety soft drinks hold the key for male consumers. Satiety-inducing soft drinks derived from seaweed are popular in Asia. If manufacturers market satiety-inducing soft drinks in the same way as sports drinks and energy drinks – by highlighting the energy-boosting and performance-enhancing ingredients, combined with the promise of lasting satisfaction – they might capture the male health and fitness market.

The 'free-from' sector has seen a meteoric rise in sales



Convenience

Convenience has long been a driver in food and drink product innovation as consumers' lives become increasingly busy and working parents seek quick, inexpensive, nutritious meals that allow them to better manage their time.

Breakfast, in particular, has seen a big push on new product innovations combining convenience and health and nutrition for health-conscious consumers. Recent launches include breakfast biscuit bars, ready-to-eat porridge oats that you can eat hot or cold, single use cereal and milk cartons, and breakfast yogurt cartons combining granola or muesli.

The baby food category has not been immune to the drive for added convenience either, and the sector has experienced something of a revolution in recent years. Nutritious purées and ready-to-eat prepared meals are now available in portable, no-spill, easy to pour, resealable pouches for maximum convenience and ease of use.

According to Mintel, baby food sales have been buoyed in part by the mini baby boom between 2003-2008, as well as mothers' increasing reliance on and better ability to spend on baby food. Despite the economic uncertainty, parents continue to want the best for their children.

'Free from'

The 'free from' sector has seen a meteoric rise in sales in recent years as more consumers are diagnosed with or perceive themselves to be suffering from food intolerances or allergies, such as issues with gluten, dairy or nuts.

In the UK, Mintel reports that sales will soar from £303 million (€192m per year) to £519 million (€647m). And for the first time, the dairy-free market has overtaken the gluten-free sector – gluten- and wheat-free baked goods were worth £135 million (€168m) last year, compared with £143 million (€178m) for dairy- and lactose-free products.

Campden BRI has experienced a significant rise in enquiries from manufacturers of dairy products such as ice creams and cheeses looking to research and develop new lactose-free variants.

However, demand for gluten-free is set to continue. Globally, over the next five years, Datamonitor predicts that the market for gluten-free products will grow by £800 million (€996m) to be worth some £2.96 billion (€3.68bn).

Fortified foods

In the 1990s, iron-enriched breakfast cereals became the principal source of iron in young children's diets in the UK, replacing the meat that was the main source of iron in the 1950s. Foods enriched or fortified with vitamins and minerals can therefore make a significant contribution to nutrient intakes.

An association has recently been described between Vitamin D deficiency and multiple sclerosis (MS) in Scotland, and experts have been lobbying the government to fortify foods such as milk with vitamin D.



> 'As many as 86 per cent of all new product launches fail within the first year'

The Government's Scientific Advisory Committee on Nutrition is conducting a major review of the evidence on vitamin D, however with results not due until 2014, many food manufacturers are already pressing on with research and development into fortification.

Breakfast cereal manufacturer Kellogg's announced its intention late last year to add vitamin D to most of its cereals, particularly those targeted at children, by the end of 2012. This move could encourage other food manufacturers to follow suit.

Legislative drivers

Food manufacturers have to adhere to an increasing number of legislative requirements driven by both the government and directives from the EU. For example, the drive to reduce salt intake is high on the health agenda of many developed countries – the UK included.

In recent years, the UK's Food Standards Agency has set increasingly challenging targets to reduce the UK population's dietary sodium content, with an overall objective of reducing daily average salt intakes to 6g by 2012.

This has been easier for the manufacturers of some products, such as crisp makers who can reduce salt levels almost 'by stealth' without too much perceptible difference to consumers. However, when the salt has a functional purpose such as its preserving attributes in processed foods or its critical role in dough formation and yeast activity in bread, it is rather more difficult to achieve.

The government has also been working with the food industry to reduce levels of saturated fats in foods – including products such as biscuits, cakes, buns and chocolate – by introducing voluntary saturated fat reduction targets.

The key challenge for food manufacturers remains how to achieve fat reduction targets with no discernible difference in product quality, taste and appearance, not to mention that all-important factor, shelf life.

In conclusion, new product innovation and product reformulation are critical activities that all food manufacturers must undertake if they are to survive. ■

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Pesticide poser for spinach



Limian Zhao and Joan Stevens of Agilent Technologies talk toluene...

The Association of Analytical Communities (AOAC) quick, easy, cheap, effective, rugged and safe (QuEChERS) method is a widely used method for the analysis of pesticides in food.

The method involves initial extraction in a buffered aqueous/acetonitrile system, an extraction/partitioning step after the addition of salt, and a clean-up step using dispersive solid phase extraction (dispersive SPE). Depending on the food matrix to be analysed, other reagents may be added as necessary.

Graphitised carbon black (GCB) can be added to spinach extract – which is highly pigmented by chlorophyll – to remove pigments. Unfortunately, though, GCB also adsorbs pesticides with planar structure, such as carbendazim, chlorothalonil and coumaphos.

As a result, this kind of dispersive SPE kit is not recommended for the analysis of planar pesticides. However, the addition of toluene can greatly increase the extraction efficiency of those problematic pesticides.

Here we evaluate the performance of the Agilent Bond Elut AOAC Buffered Extraction kit and Agilent Bond Elut AOAC Dispersive SPE kits for pigmented fruit and vegetables, for extraction of volatile and semi-volatile pesticides.

In order to address the loss of planar pesticides caused by GCB in dispersive SPE, a modified method with addition of toluene was employed for planar pesticides. Analysis was performed by GC/MS. Eighteen GC-amenable pesticides (as listed in Table 1) were selected which represent multiple classes, including non-polar organochlorine pesticides (OCs), certain organophosphorous pesticides (OPs) and organonitrogen pesticides (ONs).

Table 1: Linear regression equations and correlation co-efficient for 1 mL dispersive SPE.

Pesticide	Dispersive SPE	Linear term	1 mL dispersive SPE RF Rel Std Dev (%)
Dichlorvos	Original	0.55e-001	9.1
σ-phenylphenol	Original	2.93e+000	7.9
Lindane	Original	8.34e-001	9.5
Diazinon	Original	1.03e+000	8.7
Chlorothalonil	Modified	7.67e-001	14.2
Chloropyrifos methyl	Original	1.26e+000	12.5
Dichlorobenzophenone	Modified	3.03e+000	9.8
Chloropyrifos	Original	6.46e-001	6.9
Folpet*	Modified	4.36e-002	10.2
γ-Chlordane	Original	1.73e-001	6.2
DDE	Original	2.98e+000	7.4
α-Chlordane	Original	1.37e-001	8.1
Dieldrin	Original	3.41e-001	5.1
Ethion	Original	1.07e+000	15.6
Endosulfan sulfate	Original	3.06e-001	4.6
Permethrin	Original	1.14e+000	6.4
Coumaphos	Modified	3.45e-001	6.4

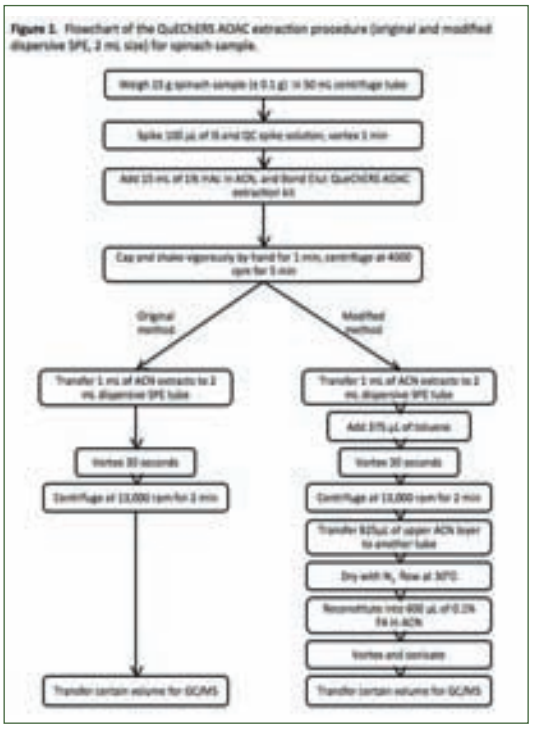
** Calibration curve range: 50-400 ng/g.*

Methods

Sample comminution, extraction and partitioning, and dispersive SPE clean-up were carried out, as described in Figure 1. The target pesticides in the spinach extracts were analysed by gas chromatography/mass spectrometry (GC/MS) operating in selective ion monitoring (SIM) mode.

The limit of quantification (LOQ) for most pesticides is 10ng/g; however, folpet has a LOQ of 50ng/g. Calibration curves, spiked in matrix blanks, were made at 10, 20, 50, 100, 250, and 400ng/g, by plotting the relative responses of analytes (peak area of analyte/peak area of IS) to the relative concentration of analytes (concentration of analyte/concentration of IS). TPP was used as internal standard at 100ng/g.

Samples were quantitated (n=6) against the matrix spiked calibration curve. Spiked levels for the recovery experiments were 10, 50, and 200ng/g.



Results

Table 1 shows the linear regression equation and correlation co-efficient for 1 mL dispersive SPE.

Table 2 shows the recovery and reproducibility (% RSD) data for 1 mL dispersive SPE.

In the 18 screened pesticides, four of them – chlorothalonil, dichlorobenzophenone, folpet, and coumaphos – were adversely affected by GCB in the dispersive SPE step. With toluene, recoveries of these pesticides increased from 50 per cent to 200 per cent, with better precision. However, the modified method reduced the recovery certain pesticides that had generated good results originally. Therefore, we recommend using the modified (with toluene) method for pesticides with planar structure, and the original method for non-planar pesticides.

The results represent 14 pesticides from original dispersive SPE, and four pesticides from the modified method. The 14 processed by the original method offer good recoveries (average of 88.8% and 86.3% for 1 and 8 mL, respectively) and precision (average of 5.4% and 4.8% RSD for 1 and 8 mL, respectively). Although the four pesticides processed by the modified method give lower recovery (average of 75.3% for 1 mL) but great precision (average of 6.1% RSD for 1 mL), the results were much better than those obtained by original methods (average recovery 41.7% and 14.9% RSD).

The method using QuEChERS AOAC buffered extraction kits and dispersive SPE kits for pigmented fruits and vegetables provides a fast and effective method for the purification of representative volatile to semi-volatile pesticides in spinach.

The modified dispersive SPE method with the addition of toluene provides a useful option to improve the loss of planar pesticides caused by GCB in dispersive SPE tubes.

Avoiding a toxic shock



In the ninth of a series of cut-out- and-keep fact sheets, the IFST looks at the hazards of chemical contamination

When the word 'contamination' is used in reference to food, for many of us, the first thoughts are likely to relate to microorganisms. We probably don't think of chemical hazards as sources of contamination, however they can be a major issue in the food and drink industry.

There are many different types of chemical hazards, typically categorised by the method by which they enter the food chain:

- inherent or 'natural' toxins
- natural or environmental contaminants
- process and storage-derived contaminants
- deliberately added contaminants
- pesticides and veterinary residues

Some of these types of hazards are relatively easy to control. The effects of naturally occurring toxins in raw ingredients can be largely minimised or eliminated all together through effective cooking and processing.

Pesticides and veterinary residues are also now relatively well controlled, as their widespread use has led to a great deal of rigorous analysis and regulations to ensure minimal risk throughout the food chain. However, the other ways in which chemical hazards can enter foods pose greater risks to consumers, as they are more difficult to predict or control.



Deliberately added chemicals are generally added to defraud or reap financial gain

Throughout their lifetime, all animals and plants will accumulate a range of chemicals from the environment they inhabit, and are considered natural or environmental contaminants. Some of these chemicals, if accumulated at high enough levels, may be of toxicological significance to us when consumed.

The best method to combat this risk is to control the levels of these unwanted substances through designated food production areas, but this is regarded as a long-term control method. But, asmany of these toxins cannot be processed out, short-term control measures are based on 'maximum permitted levels' and the removal of products that do not meet this standard.

The production of toxic chemicals through processing and storage is a recently discovered phenomenon, although, historically speaking, these chemicals have always been present. An area of recent concern for food manufacturers is the migration of chemicals from packaging and food contact materials.

The EU is currently harmonising its legislation on food contact materials to ensure food safety and to remove technical barriers to trade. EFSA provides scientific advice, based on a risk assessment, for risk managers on the safety of substances used or intended to be used to manufacture materials which come into contact with food.

The most difficult to predict or control are chemical hazards that are accidentally or deliberately introduced to food and drink products during the manufacturing process.

While the risk of accidental chemical contaminants is addressed through an effective HACCP plan, deliberately added chemicals are often almost impossible to predict. They are generally added to defraud or reap financial gain. For example, melamine, an industrial chemical found in plastics, is high in nitrogen and its addition to food makes the product appear to contain more protein than it actually does.

In 2006, melamine production in China was reported to be in 'serious surplus', prompting international bodies to impose regulations on acceptable human consumption levels. Two highly publicised cases of melamine contamination in exports from China in 2007 and 2008 led to a revision of EU safeguard measures regarding the products in question. With global food trade, any single product could contain a compilation of ingredients from several different countries.

As it is extremely difficult to predict deliberately added chemicals, traceability and surveillance are essential in minimising risk of chemical contaminants. Both the FSA and EFSA publish reports of surveillance exercises on their website. In addition, there are systems in place to inform the industry of specific incidents as they arise, one such being the Rapid Alert System for Food Safety and Feed (RASFF), a system in place to help EU Member States exchange information about measures taken in response to serious risks detected in relation to food or feed.

For food manufacturers, the most effective and efficient way of minimising the chances of most chemical safety issues is through the use of GMP and HACCP systems. While legislation cannot exist for every single chemical that may pose a risk, in many nations there are guidelines and general government-initiated surveillance programs for specific chemical hazards designed to supplement HACCP practices.

The Codex Alimentarius Commission has set maximum and guideline levels for common chemical hazards, as well as several other documents designed to assist food manufacturers, including a code of practice, which are available on their website. Many other documents surrounding guidance on potential chemical hazards in foods can be found on the FSA and the EFSA websites. ■

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Cold comfort

US rapper and music producer Will.i.am is a passionate advocate of better education. But he's not calling for voice classes in schools or degrees in rapping – he wants more children studying STEM subjects.

And he's making it happen in the US and the UK by donating millions to help fund a STEM school in his home city, as well as money to the UK-based Prince's Trust to support technology training.

This news is – excuse the pun – music to the ears of the Chilled Food Association (CFA). The money is impressive but the increased profile of science education is even more valuable. In schools we are seeing science as it relates to food being neglected to the detriment of the food industry.

CFA, along with the rest of the sector, has long recognised that young people are not getting enough food science teaching. As a result, the pool of students taking relevant degrees is small – statistics for 2010/11 show that of the 760,000-plus qualifying students, just 570 have a first degree in food and beverage studies.

CFA has recently estimated that there are some 1,750 degree-level technical roles in the UK chilled food manufacturing sector and that only half the number of graduates needed are coming through the system. The end results are obvious – a massive skills shortage and pages of unfilled vacancies.

Education is key. It's well documented that a large number of children don't know where their food comes from. Even more worryingly, young adults also seem to lack basic understanding – in a recent survey by LEAF (Linking Environment and Farming) a third of 16 to 24-year-olds did not know where eggs originate.



Kaarin Goodburn

Kaarin Goodburn, secretary general of the Chilled Foods Association, is on mission to both inspire and educate

So it's not surprising that not only are key life skills lacking in relation to food, but also that the food industry is all but invisible when children come to consider GCSE options and future career paths.

To address this, CFA is taking the chilled food industry back to the classroom with ChilledEducation.org. And after less than 12 months, lessons are being learned on both sides.

Claire Valentine, senior technical manager at Salads to Go and Soleco UK, recently spent a day with 300 nine to 11-year-olds and found no lack of interest.

"They simply need inspiration, whether that's an attention-grabbing experiment or an engaging teacher," she explains. "We need to capture young minds. Science needs to be studied from an early age. Once the building blocks are there, young people are equipped to make choices that will put them on the path to the food industry."

> "We need young people to be inspired, informed and enthused in food-related subjects early in their school life"



Will.i.am is a passionate advocate of better education

Careers in the food sector suffer from an image problem. The perception of poorly paid, often menial jobs with limited promotional opportunities is tough to overturn. But when talking at a careers fair, Claire found a way through – show them the money!

When she pointed out the vacancies and salaries, students were amazed and encouraged.

"The variety of posts also interested them," says Claire. "There's everything from NPD to marketing. And I explained that it's not just the food sector that needs good food scientists, as there are opportunities in agriculture too."

Claire would also like to see more government support for apprenticeship schemes.

For BTEC students, coming in at a lower level and working up is one way into the industry. "Not everyone wants to go to university, so we need to make entry to the profession available at every level," she says.

CFA is aiming to do just this by home-growing staff into technical managers from line staff, technical/QA/QC/production management progressing to general and technical management. But the classroom remains crucial – and we support calls to keep Design and Technology on the curriculum. But we also believe that the subject of food should be integrated more widely into the teaching of science.

We need young people to be inspired, informed and enthused in food-related subjects early in their school life. We are aiming for more science in food teaching and more food in science teaching.

Working with its members, CFA has developed a set of free classroom resources designed by teachers for teachers. These resources have already been downloaded over 4,000 times and are being used alongside Glo-Germ hand wash training kits and tens of thousands of fridge thermometers, all donated by CFA.

Next month: The impact of Chilled Education and its future potential

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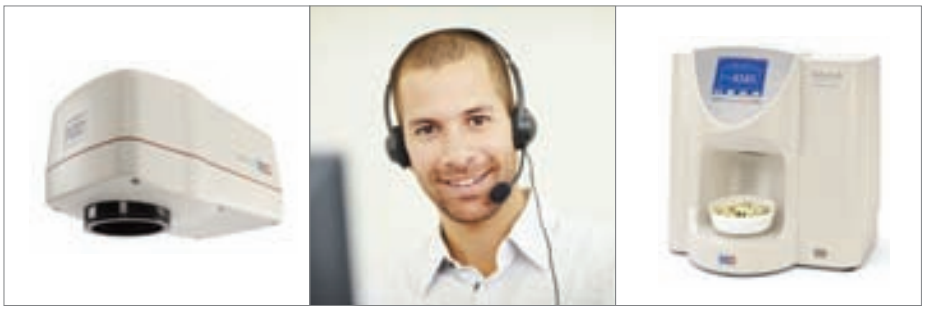
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The Measure of Quality

University **provider** for **food** engineering **degree** revealed

Sheffield Hallam University has been named as the successful university to partner the UK food and drink industry in the development of the country's first dedicated food and drink engineering degree.

The Food and Drink Federation (FDF), in partnership with the National Skills Academy for Food and Drink made the announcement after a rigorous selection process to run the unique course, that is being developed in response to the need for world-class engineers for the industry.

"We are delighted to be working with Sheffield Hallam to design a degree course that perfectly matches food and drink manufacturers' needs," says FDF director of human resources Angela Coleshill. "We listened closely to our member companies' expressions of the skills that they require to continue developing the highly regarded products that have put our UK industry at the forefront of innovation."



Adds Dr Martin Howarth, head of engineering and mathematics at Sheffield Hallam University: "Sheffield Hallam is delighted to have been selected as the university to develop this course and centre of excellence. The project builds on our strong track record of providing excellent engineering education in partnership with leading industrial employers."

Over the coming months, FDF and the National Skills Academy will be working with the university on the development of the course and the food industry has already committed to enhancing the course with work placements for successful students.

Crumbs! Students go behind the scenes at biscuit factory

UK students went behind the scenes at United Biscuits' McVitie's factory in Manchester – the home of the Jaffa Cake – as part of the See Inside Manufacturing scheme.

The government initiative to get young people interested in careers in manufacturing saw students tour the factory and see how brands such as Jaffa Cakes, Chocolate Digestives and Penguins are made. They were also able to meet different people in the factory to find out more about their jobs and the qualifications needed to do them.

"UB is one of many companies across the UK opening its doors to young people and getting them excited about careers in manufacturing," says Terry Jones, FDF director of communications.



Adds Lesley Flood, training coordinator at McVitie's Manchester: "We are trying to change students' views of manufacturing. We want them to see us as a great career opportunity with huge potential.

"Students can often be surprised to find out that you need a certain level of English and maths skills to be considered for a role at McVitie's. We have a wide range of entrance levels from unskilled to apprentices, graduates and technical experts. We help and encourage our employees to work their way up the career ladder."

Minister and students get inside information from CCE

The UK Minister of State for Business and Enterprise, Mark Prisk, recently joined students from Uxbridge College on a visit to the Coca-Cola Enterprises (CCE) site in Edmonton to witness the Government's See Inside Manufacturing programme in action.

The Minister and students saw inside CCE's state of the art manufacturing site and met its employees. The Minister also got to see how CCE uses its multi-award winning education centres to give students the opportunity to develop their knowledge and understanding of the world of work, and to make connections between what they learn in the classroom and real life business and



manufacturing practice.

CCE is one of several food and drink manufacturers opening its doors to pupils, teachers and careers advisers this month.

In partnership with the Food and Drink Federation (FDF), nearly 1,250 people will be visiting food and drink companies all across the UK to learn more about the sector.

"As an industry, we know that to realise our potential and to deliver our shared vision with the government of 20% growth by 2020, we will need to attract the best talent," says FDF director of communications Terry Jones. "Engaging with young people to bring to life a career in food and drink is a key priority for FDF, and the main driver behind our Taste Success – A Future in Food campaign.

"Programmes such as See Inside Manufacturing support this work by offering an invaluable opportunity for young people, teachers and careers advisers to learn more about food and drink manufacturing and what a great career choice it is."

Professional recognition for technicians

The food sector's first Registered Science Technicians were presented with their certificates at a recent IFST event.

It is well documented that the food chain, from farm through to retail sale, is struggling with an inability to attract sufficient numbers of skilled people at all levels to meet its needs.

The problem at a technician level is particularly critical, according to the IFST, which claims its professional register for those working in technician roles can make a significant difference.

"The chronic shortage of skills within all elements of the food chain are an increasing concern," explains Jon Poole, chief executive of IFST (*pictured*). "Those in technician-based roles, whether in food safety, quality control, new product development or supply chain management all play critical roles and need to be supported and recognised for their work."

According to recent Science Council research, there are believed to be an estimated 21,000 people working directly in food science roles but a further 117,000 people working in roles requiring some element of technology or science. Many of these can be classed as technicians.

"It is hoped that by offering proper professional recognition for this group of skilled people, it can provide more clarity over possible career paths as well as respect and recognition for those in these roles," adds Poole.

Commenting on the IFST event, Melanie Leech, Food & Drink Federation director general, says: "Attracting, retaining and developing talent within our industry is a central part of FDF's shared vision with government, to grow the food and drink sector by 20% by 2020. I am



delighted to be supporting IFST in the launch of the new RSciTech award, to provide professional recognition for those working in our industry in a wide range of essential technical roles, as an important way in which their skills can be recognised, supported and further developed."

To qualify for professional recognition, individuals will need to prove their experience at the appropriate level, register with a licensed body such as the IFST, sign up to its professional code of conduct and commit to continuing professional development (CPD).

Kids are smoothie operators

Pupils from Holyrood Secondary School in Scotland recently pitched their own range of smoothies to independent UK coffee roaster Matthew Algie, some of which will now feature in the manufacturer's summer 2013 Espresso Warehouse catalogue.

As part of a Business Management course, the pupils, aged 13-14, took part in the 'Will it Blend?' smoothie challenge, working closely with Matthew Algie to create a new range aimed at 12-18-year-olds.

The new creations took the pupils months of project work and involved market analysis, product development and testing.

"Working with Matthew Algie for the smoothie challenge has given pupils firsthand experience of starting a businesses and taking a product to market," says Ann Marie Gibbon, business management teacher at Holyrood Secondary School. "Pupils are thrilled that their smoothies will be available to buy."

Adds Moira Stalker, SFDF schools programme coordinator: "There are so many exciting job opportunities in food – in science, product development, engineering, marketing, nutrition and design. Projects like 'Will it Blend?' open young people's eyes to the opportunities that the modern Scottish food industry has to offer them."

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Bobby's and Bendi team up

One of the UK's leading supplier of snacks, confectionery and cakes, Bobby's Foods are feeding the nation with the help of Bendi articulated fork trucks. Bobby's Foods operates with 11 regional depots, and is now benefiting from the innovative Bendi truck. With just one truck in each depot, Bobby's Food's has been able to increase storage capacity in the warehouse, and it can also use the truck safely and efficiently outdoors when unloading vehicles and taking the product back indoors. The design, coupled with the maneuverability of the Bendi three-wheel articulated trucks means that Bobby's Foods really can have their cake and eat it too.

www.bendi.co.uk
Tel: (+44) 1527 527 411



Astell launches multimedia cooling system

Astell Scientific has introduced advnced cooling technology. The Cyclon Cooling system can cut sterilising and cooling times of large bottled loads such as culture media. This is a benefit in microbiology laboratories where large quantities of culture media need to be processed quickly. A reduction in cycle time means that more loads can be processed, improving efficiency and reducing costs. Shorter cycle times also mean reduced water and power consumption. Cyclon Cooling is available on all Astell units fitted with Air Ballast and Jacket Cooling.

www.astell.com
Tel: (+44) 208 309 2031



Inspiring detection launch

In addition to foreign body detection, convenience food manufacturers can now inspect for irregularities in the shape of processed food with Mettler-Toledo Safeline's new InspireX R40LF-800 System. Developed to automate the examination of loose foods such as hamburger patties, chicken nuggets and bakery products, the high-speed x-ray system offers exceptional detection of unwanted foreign bodies, such as bone, glass and metal, as well as quality checks for mass and shape defects. Unlike traditional bulk product x-ray systems, the InspireX R40LF-800 System is designed to inspect formed food products for quality parameters.

uk.mt.com
Tel: (+44)116 235 7070



Skanem scoops top labelling awards

The winners of the annual Finat awards were announced recently. Skanem won eight major prizes – and the big winner was Skanem Poznan with 2 Group and 4 Category Awards. The winning labels for 2012 – from Skanem Poznan: Category awards for 'Cinderella Hair and Body Wash' and 'Platinum Max Expert XD SW-30' and Category as well as Group Awards for both for Soplica Szlachetna Wódka 500ml' and 'Eveline Cosmetics - Anti Stress'. Skanem Skurup received Category Award for 'Bio Bact Tomat' and Skanem Durham for 'Comma Profile'. Skanem was also awarded several Highly Commended diplomas.

Web: www.skanem.com

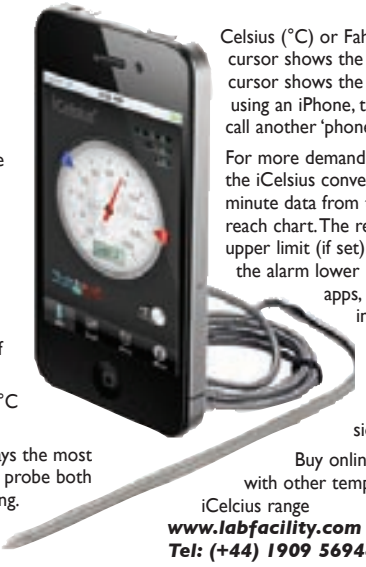
New BBQ cooking probe from Labfacility

The new iCelsius BBQ cooking probe is specifically designed to convert an iPhone, iPad and iPod Touch into a digital thermometer. Available as a free download from the APP STORE the new product offering works with the probe to simply read temperatures, create graphs, set-up alerts, store and email graphs.

The right angled, stainless steel food penetration probe has a diameter of 7mm with a pencil point sensing tip of 10cm length.

The temperature range is 0°C to 250°C with an accuracy of +/- 1°C at 60°C

The i-Celsius simply and quickly displays the most recent reading from the iCelsius BBQ probe both as a digital reading and analogue reading. The user can set the iCelsius to show the temperature to read in Celsius (°C) or Fahrenheit (°F). The Red cursor shows the alarm upper limit (a blue cursor shows the alarm lower limit). When using an iPhone, the alarm can be set-up to call another 'phone when triggered.



For more demanding cooking applications, the iCelsius conveniently shows the last minute data from the sensor on an easy to reach chart. The red line shows the alarm upper limit (if set). A blue line would show the alarm lower limit. As with many other apps, you can easily zoom in and out of the graph by simply pinching or dragging the frame. The APP is compatible with iOS4.2 and later versions.

Buy online at www.labfacility.com with other temperature probes from the iCelcius range

www.labfacility.com
Tel: (+44) 1909 569446



Rising to panini challenge

The demands on packaging performance can sometimes be high, especially in the food industry – and a new project for ovenable paninis to be served on commercial airlines was no exception. The paninis needed to be reheated inside the wrapper from a frozen state in a conventional oven. In addition, the airlines wanted the film to be printed with a full colour photographic image to enhance the visual appeal of the product. The panini manufacturer commissioned National Flexible for the project. Working with their technical team they were quickly able to specify a suitable film and had knowledge of specialist inks that would be ideally suited.

www.nationalflexible.co.uk
Tel: (+44) 1274 685566



New mini temperature monitor

Used by the British Army for monitoring the temperature of sensitive medical supplies in transport to some of the world's most inhospitable places is the SL151T miniature temperature data monitor tag from Signatrol is now available for civilian use. Housed in a robust, fully sealed plastic tab, the SL151T has been designed to log the precise data of food or pharmaceuticals in transit. The tag is manufactured to Food Grade ABS and can be located inside a packing case, on a pallet or attached directly to the product. Its tough outer frame means that as well as withstanding the rigours of life in the battle field, it can also be used in the harshest of food processing environments.

www.signatrol.com
Tel: (+44) 1684 299399



Moody Systems drinks to brewery success

Moody Systems has helped turn Jason Hill and Stephen Mitchell's brewery plans into reality by helping set up their five barrel brewery in Cumbria. Eden Brewery first started brewing with help from Moody Systems in March, and are now enjoying the benefits of the equipment provided. After discussing his plans with Kerry Piper, Sales Coordinator at Moody Systems, they were able to put together a five barrel brewery thanks to the excellent equipment on offer. "As soon as we got in touch with Moody Systems, we knew they had the right solution for us. They even arranged a visit to another brewery to see the equipment in action," says Jason.

Tel: (+44) 1777 712110
Email: kerry.piper@moodyplc.com

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Clean sweep for Vikan Squeegee

Condensation in food processing plants is now widely recognised as a major risk factor contributing to both product and cross contamination and frequently causing production lines to be temporarily shut down. Probably the only tool of its kind to remove condensation while production is in progress, Vikan's Condensation Squeegee attracted considerable attention at Anuga FoodTec. Operation of the squeegee is simple. Its special design ensures that condensation is removed by the flexible rubber-lipped head which is attached to a fixed telescopic handle. Condensation can then be collected into a bottle for analysis or drained direct to the floor via a hose. It's resistant to high temperatures, easy to clean and forms part of the comprehensive colour-coded range.

Tel: (+44) 1793 716760
www.vikan.co.uk



Top trio from Malvern Instruments

Armed with a Zetasizer Nano, a Mastersizer 2000 particle size analyser, and a Kinexus rheometer, Prof David Julian McClements and his team of researchers at the Department of Food Science, University of Massachusetts, have developed a recipe for success in the development of foods. This trio of characterisation tools from Malvern Instruments has enabled the UMass team to develop a variety of improved and novel colloidal delivery systems for food and pharma applications, including microemulsions, nanoemulsions, multilayered emulsions, solid lipid nanoparticles, and hydrogel particles. "We use all three Malvern systems in our studies. They work well and are easy to use," says Prof McClements.

Tel: (+44) 1684 892456
www.malvern.com



Show success for Labcell

Suppliers of quality control instrumentation, Labcell report a successful Food and Drink Expo. MD Tim Bonner says: "The show brought existing and new customers to our stand. It was pleasing to meet some of our clients from the last 20 years, and make the acquaintance of people we look forward to working with." On show was the Aqualab Duo water activity and moisture monitor, along with a range of portable, at line and laboratory instruments for water activity, salt concentration and sugar content. Of particular interest was the Pawkit water activity monitor, a battery powered device for butchers and producers of dried meats.

Tel: (+44) 1420 568150
www.labcell.com



Super scoop from Measom Freer

Measom Freer has launched a range of scoops in standard food safety colours, with antibacterial additive also available. The scoops are manufactured in durable food grade HDPE, with natural available from stock, and yellow, brown, red, white, blue and green available to order. There are four sizes – micro, mini, small and large, suitable for a variety of bulk handling and dosage applications including food processing, wet & dry ingredients, confectionery, catering and baking. The firms's other products such as measures, jars and boxes can be colour matched and treated with antibacterial additives to help prevent cross contamination.

Tel: (+44)116 2881588
www.measomfreer.co.uk



Royal honour for ETI

Electronic Temperature Instruments (ETI) has been honoured with the prestigious Queen's Award for Enterprise for International Trade. The company was set up by Peter Webb and his wife, Miriam, in 1983 and is the UK's leader in the manufacture and design of electronic thermometers and temperature probes. ETI currently sells over one million thermometers every year, making it the UK's largest digital thermometer manufacturer and exporter. Over the past five years, ETI's worldwide export sales have increased by over 90%. "Receiving a Queen's Award for Enterprise is a great honour for the company and I am very proud," says Peter.

Tel: (+44) 1903 202151
www.etiltd.com



Super Seal Touch from Enercon

Enercon Industries, the world's leading developer and manufacturer of advanced induction cap sealing systems, has introduced its first touch screen operated model, the Super Seal Touch. Designed for use in a range of packaging applications, from food and beverage, to agrochemical and household, it can be used as a standalone line-side unit or be fully integrated into a continuous filling and capping line. The Super Seal Touch provides a wide and flexible window of operation to compensate for variations in line conditions, such as fluctuating line speeds or changes in cap, liner and container tolerances. This ensures that perfect cap seals can be produced consistently at line speeds of up to 25m/min, with the added advantage that setup, programming, monitoring and diagnostics are even faster and simpler

Tel: (+44) 1296 330 542
www.enerconind.co.uk



Breakthrough blade

The first six months in the UK market have been a great success for Japanese outdoor power tool giant, Maruyama since it launched at Saltex 2011. The launch and distribution of Maruyama in the UK has been handled by Leicestershire-based importer DMMP. The Maruyama range includes trimmers and brush cutters, multicutter systems, edgers, blowers, hedge trimmers and accessories but it's the landscape blade that has caused the largest stir. "We have presented the landscape-maintainers of the nation with a blade that doesn't throw up grass, stones or debris," says DMMP Commercial Director Colin Hood. "Golf clubs, leisure facilities, hotels or indeed anywhere that needs to maintain grass near parked cars, solar panels or glass windows have really appreciated the landscape blade's unique neatness of operation."

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www.dmmp.co.uk



BUCHI innovation sets new standard in productivity

How do you cope with an ever-increasing sample demand and less manpower? BUCHI's innovation, the KjelMaster system, K-375/K-377, together with the Digest Automat K-438, sets a new standard in productivity for protein determination according to the official Kjeldahl method. It allows up to 80 samples to be processed in an eight-hour shift.

The Digest Automat K-438 with automatic lift for raising and lowering batches of digested samples offers you full walk away convenience during digestion. The rack can be placed directly in the KjelSampler K-377 for automated distillation and titration. The KjelSampler features two independent rack trays so that a second batch of 20 samples can be loaded while the first batch is being processed.

This semi-continuous workflow allows the highest possible sample throughput using just one integrated digestion/distillation/titration system. A new and innovative smart distillation mode facilitates routine measurements and increases the result accuracy.

Data traceability for GLP compliance is guaranteed by multiple access levels of authorisation and thorough documentation in conjunction with the KjelLink PC software. KjelLink facilitates not only data integrity and exchange with LIMS, but also displays the status of operation on an external PC, thus taking on-site supervision to a minimum level.

Tel: (+41) 71 394 63 63
www.buchi.com

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Riggs Autopack

Riggs Autopack will be exhibiting a selection of Model 1000 depositors, filling machines, transfer pumps and conveyor filling lines at PPMA. Visitors to the company's stand will have the opportunity to view a twin head automatic depositor with scroll conveyor for filling jars and bottles, a single head automatic depositor with 3-metre indexing conveyor for ready meal production, a semi-automatic bulk depositor for filling catering sized bags, pergal bags and bags-in-boxes, and a semi-automatic jar filling machine with food grade transfer pump designed for small scale food producers.

Stand D2
Tel: (+44) 1282 440040
www.autopack.co.uk

Gainsborough Engineering

Gainsborough Engineering's range of Vertical Form Fill & Seal machines is based on a modular concept where frame size is determined by bag size. The components are then selected by the user, enabling maximum flexibility in the choice of machine requirements to match specific needs. Further flexibility within the range enables the user to specify the type of drive, pneumatics and electronics through to the type of feed interface, ie auger feed, multihead weigher, in-line vibratory tray feeds, robotics etc. Block bottom attachments, valve applicators, gas flushing, carry handles, tear strips and printers are also on offer.

Stand G30
Tel: (+44) 01427 617677
www.gains-eng.co.uk

SICK

SICK brings you yet more new innovative products. This year, difficult object detection is a focus with the new MultiLine Sensor incorporating twin light-beams to detect uneven or glossy product surfaces such as sachets and foil packs, and the MultiPac single unit sensor, ideal for detecting PET-foil six packs or shrink-wrapped bottles or pallets. SICK's expert Commercial Goods team will also be demonstrating solutions for packaging quality control and advanced labelling technology sensors. SICK's leading machine safety technology will be enhanced with the introduction of the S300 mini Safety Laser Scanner. ***Stand A50***

Tel: (+44) 1727 831121
www.sick.co.uk

All-Fill International

All-Fill International is exhibiting the 'no-tools changeover' Series 100 in-line filler for dust-free compressive bottom-up filling with a conveyor, in stainless steel or plastic, providing a recess-free wipe-clean stainless steel surface. Also on display is the Series 10 Gravimetric filler, capable of filling up to 50kg. In addition, All-Fill is able to offer turnkey packaging line solutions, including filling, check-weighing, capping, labelling, sealing and end-of-line equipment for a variety of industries.

Stand F56

Tel: (+44) 1274 685566
Web: www.nationalflexible.co.uk



Coveyor Systems Ltd

Conveyor Systems Limited (CSL) will exhibit details of a comprehensive range of conveyors, including a new compact column design 6m space saving reversible spiral elevator/de-elevator. Available as single or twin lane reversible spirals, the new spiral design makes the unit lighter in weight and with a narrow supporting column, this improves visibility and enlarges the core radius to increase flexibility in handling larger products. Spiral elevators can easily be linked to CSL's flexible conveying system on which a wide range of products can be transported around curves, up inclines and straight sections. With only one motor driving long sections of conveyors, systems are simple to integrate and energy efficient.

CSL will also exhibit a range of powered roller conveyors in mild and stainless steel with particular interest focusing on the compact high speed pneumatically operated 3-way switch sorter which provides a new dimension in integrated system design. Handling various sized products from as little as 200mm square at high speed, these lineshaft driven switch modules will provide maximum versatility with bi-directional (left/right) 45 degree sortation with minimum product spacing.

An extensive range of stainless steel and plastic modular conveyors for clean areas and lightweight products will be displayed alongside heavy duty gravity and powered expandable conveyors for end-of-line handling applications.

Stand H41

Tel: 01283 552255
www.conveyorsystemsltd.com

Farleygreene

Farleygreene will be showcasing the most up-to-date additions to their 'Sievmaster' range. They will have a feast of new designs, and their showcase will give you an up-close introduction to the quality engineering and design Farleygreene has become renowned for. All machinery can be fully customised and designed to suit any demanding requirement around your business' needs, so don't hesitate to ask one of their representatives what Farleygreene can do for your company.
at www.farleygreene.com

Stand G23

Tel: (+44) 1252 322 233.
www.farelygreene.com

Kemtile

Kemtile has been a supplier and installer of hygienic seamless and ceramic flooring to the food, drink, beverage and packaging industries since 1979. It has a range of products to suit every application and can be your single source company for your next new floor. The stand will feature ceramic and seamless flooring in action together a display showing colour options for Ucrete floors as well as Wiedemann stainless steel channels and drains. It also has a range of hygienic wall finishes – Protectorseal which provides a seamless hygienic wall finish.

Stand E20

Tel: (+44) 01925 763045
Web: www.kemtile.co.uk



AutoCoding

AutoCoding Systems will be demonstrating its range of packaging line automation solutions at this year's show. Incorrectly coded or packaging goods can result in not only financial losses, but product and packaging waste. The AutoCoding system is already providing benefits to factories by reducing downtime across packaging lines and eliminating the risk of human error. The AutoCoding solution combines a number of proactive systems to maximise the opportunity to get things right first time by managing the deployment of coding data and the checking of packaging issued to the line before its use.

Stand C16
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www.autocodingsystems.com

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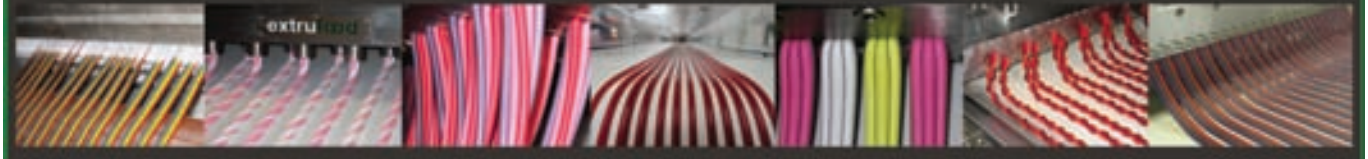
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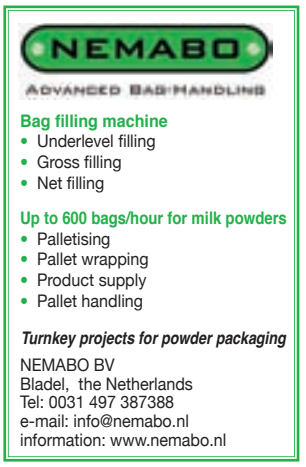
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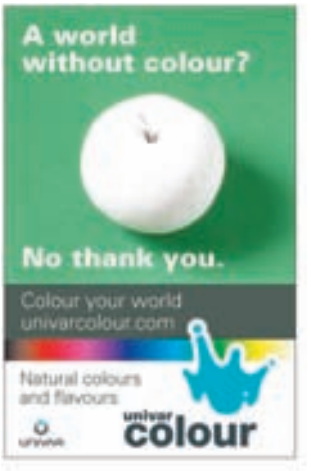


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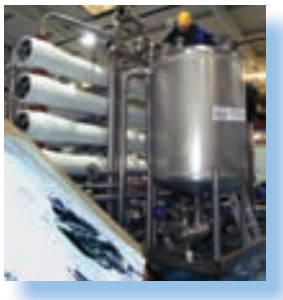
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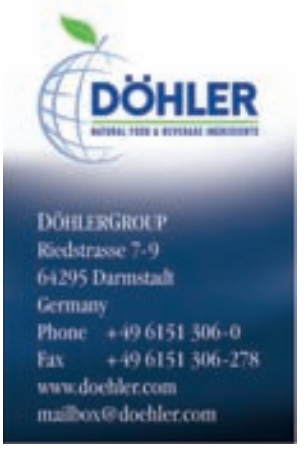
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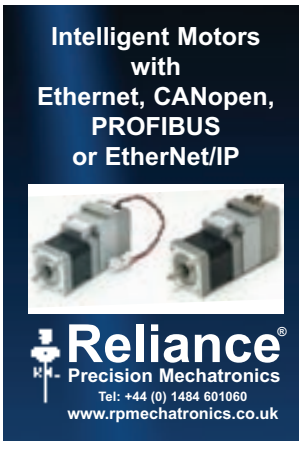
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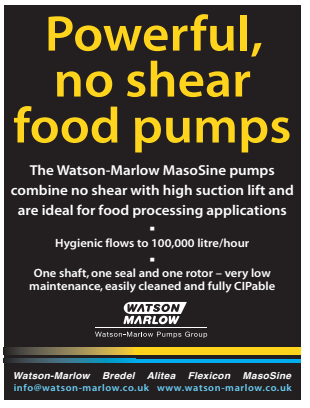
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Web: www.eurosense/elsevier.com

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John Stevenson MP

'It would **help enormously** if **Carlisle** were **closer** to **London**'

Cumbria MP John Stevenson, chair of the All-Party Parliamentary Food and Drink Manufacturing Group, on Gorbachev, good fortune and geography...

Describe yourself in three words
Amiable, independent and optimistic.

What's your biggest professional achievement to date?
Getting elected in 2010.

How did you get to where you are today?
In many respects through hard work and good fortune.

What are your industry pet hates?
People who talk too much and don't arrive on time for meetings.

Give us a positive prediction for the industry over the next 12 months
Continued growth in exports.

What do you consider to be the most important attributes for a leader?
A clear sense of direction and an ability to delegate.

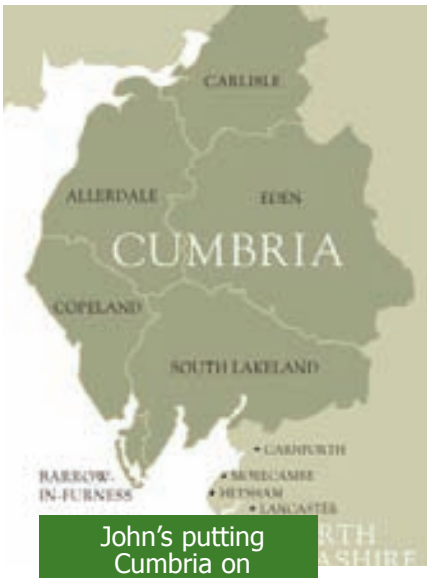

Admiration: Gorbachev and Mandela

Who do you most admire?
Nelson Mandela and Gorbachev – one transformed a country in a very positive way and the other changed Europe and beyond.

Which people/organisations or companies are the ones to watch right now?
The secret here is we don't know which companies or which individuals will be the stars of the next 10 years.

Which word or words do you most overuse?
I go on about 'good leadership' and 'good management' all the time.

If you weren't an MP, what else might you be doing?
I would have liked to have been a lecturer in constitutional politics.



John's putting Cumbria on the map

Tell us something about yourself that few people know
I spent 18 months travelling the world after qualifying as a lawyer.

Any vices?
I love my food.

What single thing would most improve the quality of your life?
It would help enormously if Carlisle was closer to London!

How do you relax?
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- Quality improvement of your product

More information

A comparison of these guar substitutes is available!
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