

Newsletter

November 2013



Emerging technologies for product development

Emerging technologies such as high-pressure processing (HPP) are now well established for achieving products with 'fresh' like properties, but with a shelf life of weeks or months rather than days. Products processed in this way to increase shelf life include juices, dips, and dairy products.

More recently, technologies such as HPP and power ultrasound are being used to change the properties of foods, to give an improved or novel product. Examples with HPP include a decrease in oil uptake during frying, increased tenderisation of meat, and improved gel formation in cheese, resulting in an increased yield. Power ultrasound can be used for a variety of applications, including increasing yield in the extraction of caffeine, sugar or other components, the production of emulsions using less emulsifier, and decreasing viscosity. We have recently investigated viscosity changes in mushroom sauce, a gelatinised starch preparation and a fruit preparation.

Benefits of HPP and power ultrasound

To investigate the possible benefits of using HPP and power ultrasound for your product development and quality improvement needs, come and make use of our pilot scale HPP and power ultrasound equipment as well as our expertise in these areas.

Check out our newly updated new technologies web pages at www.campdenbri.co.uk/new-technologies.php for more examples of how we can help.

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Your partner
for new product
development





Packaging

Make sure your customers can heat your products

Selecting the correct packaging and providing good heating instructions on labels is as important to the quality and safety of heated products as is the effort spent creating the product. Instructions for the reheating or cooking of foods should be developed to ensure that all areas attain a safe heat process and prevent a reduction in the sensory quality caused by overheating of edges or certain components.

The trials we perform and the instrumentation we use in our work for clients depend on the nature of the product under investigation and the heating method (e.g. microwave or conventional oven). In all cases, the time-temperature history of the product is monitored, using either thermocouple or fibre-optic temperature measurement data logging techniques. The use of calibrated or performance assessed appliances is crucial. For example, two correctly rated microwave ovens can heat a particular food at different rates and give rise to different hot and cold spots, so it is important to use a wide range of microwave ovens for developing instructions. The selection of the appropriate package shape and material is also imperative to the safety of microwave heated products.

Ultimately, whether the product is designed for microwave or conventional heating, investing effort into getting the heating instructions correct is an essential part of delivering the quality of product you want the consumer to experience.

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Mini theatres

We will be running mini-theatres at

- Lab Innovations 2013, NEC Birmingham.
6-7 November 2013
- FiE, Messe, Frankfurt, Germany
19-20 November 2013 (Stand 9F59B)

Come along and hear our experts talk on a range of topics

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Brewing new products

From raw materials processing to packaging, we can define the process to achieve the market aim. The combination of pilot plants, laboratory support and sensory evaluation makes us a 'one-stop-shop' for developing new beers, and much more. Our pilot maltings and brewery are designed for maximum process flexibility. We have successfully produced a range of alcoholic and non-alcoholic beverages, including novel fermented "health products".

Our world-class laboratory facilities and expertise support the development process by characterisation of the products and comparing them with potential competitors in the market-place. Sometimes the most efficient methods involve small-scale developments in the laboratory, brewing in the pilot plant on the one hectolitre scale, or trying a variety of different fermentative microorganisms to identify the most appropriate option.

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EU-China seminar

Dr. András Sebők, General Manager of Campden BRI Hungary, was one of a limited number of scientists to have been invited to participate in an EU-China seminar to develop joint research and innovation in the areas of Food, Agriculture and Biotechnologies. The seminar, which took place last month in Beijing, discussed opportunities for cooperation in food science, including waste, sustainable agriculture (with a focus on integrated pest management and biological control and animal husbandry), and biotechnologies. The meeting was attended by a select group of experts from research and industry, policy makers and other stakeholders from Europe and China, including representatives from the Chinese Academy of Agricultural Sciences.

New this month

Change in food labelling legislation

podcast by Ruth Price, Principal Food Law Adviser
www.campdenbri.co.uk/blogs/campdenbri-blogs.php

Allergen action levels

podcast by Helen Arrowsmith and Anton Alldrick
www.campdenbri.co.uk/podcasts.php

7 things you need to know about thermal processing

white paper by Martin George
www.campdenbri.co.uk/news/white-papers.php or send
 an email to auto@campdenbri.co.uk with the subject line:
 send thermal



Preparing for the unpredictable

A major part of ensuring a safe and reliable food supply chain is a defence against outside, often malicious, threats. Different from HACCP, which controls elements within the food production process, *Threat Assessment Critical Control Point (TACCP)* deals with unpredictable outside threats to the food supply chain, with the aim of reducing the probability of their occurrence. In view of the importance of TACCP in ensuring the safety of food and drink products we are running a new course on 5 December and will also be publishing guidance in 2014.

TACCP is now recognised as an essential means of ensuring that food remains safe and unadulterated. But threat assessment is not easy, and a detailed understanding of the issues involved is essential in keeping up-to-date with the future of food safety.

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Incorporating the consumer perspective into product development

Ultimately, the success or failure of a product will depend on what the consumer thinks of it, so it is essential to gather consumer information when embarking on product development. There are many ways of doing this, as Peter Burgess, Head of Consumer and Sensory Science, explains:

"Information can be obtained by asking people individually or in group discussions what they think, and by observing what they actually do in practice. These explicit questioning/observational techniques can be complemented by more implicit measures, gained through methods such as conjoint analysis and eye-tracking technologies. The latter can be used to investigate what is likely to secure consumers' attention at point of purchase or when choosing between competing products."

We have recently used qualitative discussion groups involving enabling and projective techniques to understand in depth consumers' awareness, understanding and acceptance of health and nutrition-related information on product labels. Similar groups were also very valuable in eliciting how elements of product packaging in general were associated with a product's sensory properties and functions."

How do we change behaviour?

Individual opinions can be obtained through carefully designed surveys and tasting sessions, and also through the use of Projective Mapping - in which consumers group and separate a number of products, based on their views of the products' similarities and differences. We are also using more advanced analytical techniques, such as survival analysis, to model product features such as extending shelf life."

Ultimately, it is what people do in practice that counts. As well as directly observing behaviour, we have recently assessed different intervention techniques to see if behaviour can be changed - specifically to encourage uptake of sustainable options."

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Welcome to new members

Campden BRI is delighted to welcome the following new members who joined recently:

British Retail Consortium (BRC) - retail trade association

Brunei Wafirah UK Ltd - specialist in the supply of Halal products

Drink Paq Ltd - soft drinks manufacturer

Kortec Inc - designer and supplier of multi-layer injection moulding machines

Linden Foods Ltd - slaughtering, deboning and retail packing of beef/lamb

Michton Ltd - gift chocolate and sugar decorations manufacturer

Sandhutton Growers Ltd T/A Herbs Unlimited - grower of fresh cut herbs and salads

Truffle Hunter - sourcer and importer of truffles and truffle products

Xylem Water Services Ltd - manufacturer of hygienic pumps

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Please notify the Membership Department of any name or address changes to allow us to keep our records up to date.



DRINK PAQ becomes 100th new member for 2013

Drink Paq, a contract-packer based in North Wales with expertise in ambient beverage development, manufacturing and packaging innovation, has become Campden BRI's 100th new member of 2013. It specialises in healthy based, environmentally friendly, ambient, long shelf-life drinks. These include juices for toddlers, milkshakes for children's lunchboxes, meal replacements for weight control, high protein energy drinks for sports recovery, fruit smoothies for teens and young adults, naturally hydrating coconut waters for during and after exercise, and anti-oxidant juices.

Senior Technical Manager, Tim Bate, commented:
"As part of our business transformation strategy, Drink Paq felt it was the right time to join Campden BRI to access their professional services and technical expertise, and take the opportunity to network with like-minded member companies."

Members



This page highlights the latest news and information for our members.

Visit Member Zone to access privileged member information and services: www.campdenbri.co.uk/memberzone.php

Keep up to date with research

More R&D Reports have recently been published, giving extensive details of the results of member subscription-funded research.

Manipulation of bulk texture in food products (RD349)

Saving energy by reducing the baking time for white sandwich bread: Part 1 - Technical feasibility (RD350)

Consumers' familiarity with and perception of nutrition and health claims (RD351)

Development of reduced fat cakes (RD352)

Development of reduced fat biscuits (RD353)

Raw ingredient functionality in bakery products: a review (RD354)

Assessing wine packaging using the Napping technique (RD355)

A review of approaches to reduce sugar in food and drink products (RD356)

Members can receive free electronic copies of these documents by sending an e-mail to auto@campdenbri.co.uk with the subject line: **send RDxxx** where xxx is the number of the report. By sending an e-mail with the command **send index** you will receive a full list of the reports and other publications available.

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