



The consumption of cocktails is on the rise, and drinks companies are keen to capitalise on the increase in demand. Ready-to-drink (RTD) cocktails or pre-mixed bases to which soda water or another mixer is added make mixing and serving cocktails easier, but also present challenges.

When different liquids are mixed, their chemistry changes and, in part due to the lower alcohol content by volume (ABV), the stability and shelf-life of the product are reduced. Non-alcoholic cocktails present additional microbiological challenges, due to the absence of alcohol and its antimicrobial properties

### Extending of cocktail shelf-life is not simple

As the shelf-life is extended, the sensory differences between the premixed product and a freshly made cocktail also increase. The challenge is to balance the two to create a commercially viable product with a realistic shelf-life that still tastes good.

Preservatives such as sorbic acid can extend shelf life but preservatives or antimicrobial agents are seen as unfavourable options. Pasteurisation can work well, but the best equipment is expensive to install. Heat tunnels can be set up but time control can be a challenge and, if the product remains too hot for too long, it can seriously compromise its quality. Freezing is another option, but consideration must be given to the speed of freezing, as well as the packaging.

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## Producing shelf-stable cocktails

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# Consumers' perspective

Understanding what influences consumer choice increasingly relies on the right combination of consumer and sensory approaches. It is essential for companies who want to develop products that succeed in a competitive marketplace. With growing demand for this we have invested in a new dedicated consumer test centre in Leamington Spa.

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Supporting innovation and insights, it gives great flexibility for quantitative and qualitative consumer research on food and drink products - from concept development and prototype assessment to final product evaluation. The state-of-the-art facilities include multiple studios, viewing facilities, a commercial kitchen and audio visual equipment.

As one of very few UK food and drink specialists to have Market Research Society (MRS) Partner Company status, we provide the standards of excellence laid out in the MRS Code of Conduct and the MRS Quality Commitment.

Steven Walker, Director General

## More on cocktails

The practicalities of mixing and stabilising cocktails and filling the packaging with the product are, sadly, sometimes only considered right at the end of the product development process. To ensure that your product is safe, stable and of high quality it is essential to think about these issues when starting the NPD process. Contact us to do just that!

See our video interview on the topic by searching [cocktails](#) at [campdenbri.co.uk](#)

## Switch channel



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**YouTube** - videos for insight into the science and technology of food and drink production  
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<https://twitter.com/campdenbri>



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## Web

New EU Regulation to speed up approval of novel foods

Blog by Alison Sharper

[www.campdenbri.co.uk/blogs/campdenbri-blogs.php](http://www.campdenbri.co.uk/blogs/campdenbri-blogs.php)

Safeguarding dry ingredients

Blog by Joy Gaze and Mariane Hodgkinson

[www.campdenbri.co.uk/blogs/campdenbri-blogs.php](http://www.campdenbri.co.uk/blogs/campdenbri-blogs.php)

Hygiene implications of BRC7

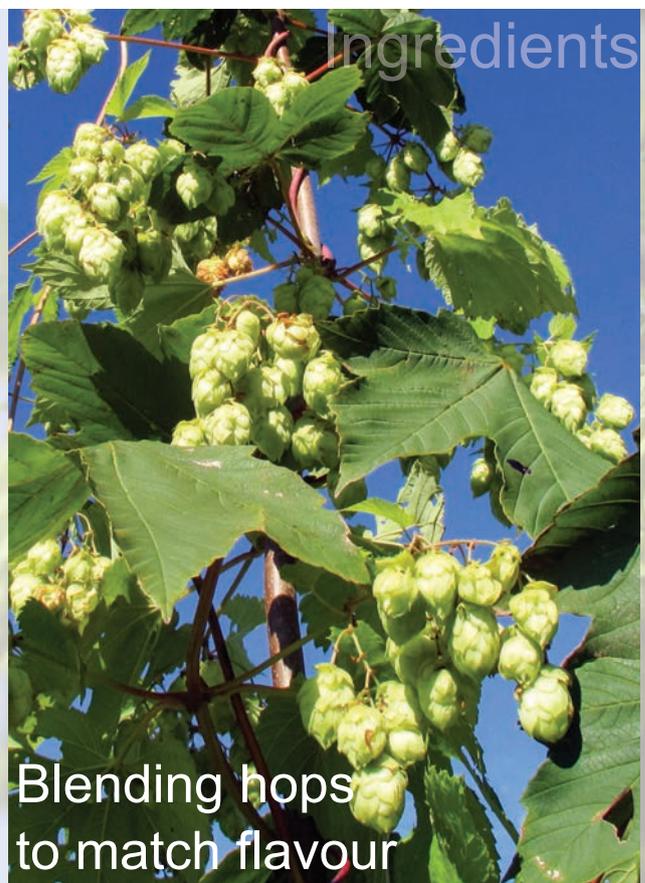
Podcast by Richard Leathers and Emma De-Alwis

[www.campdenbri.co.uk/podcasts.php](http://www.campdenbri.co.uk/podcasts.php)

Detecting contaminants

Video on detecting acrylamide and mycotoxins, as well as vitamins and other components

[www.campdenbri.co.uk/videos.php](http://www.campdenbri.co.uk/videos.php)



## Blending hops to match flavour

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Ongoing research is looking to find a way to predict the sensory attributes of hops in the final beer product. It will create techniques to accurately match the sensory profile of an aroma hop which may be in short supply with a blend of alternative hops. Many beer brands utilise a small number of specific hops in their recipes, and so a change in hop variety is likely to be noticed by the consumer unless done very carefully. This is particularly pertinent given the severe hop shortages currently being faced by the industry.

So far 14 hop varieties have been assessed analytically and by our beer sensory panel as hop teas. Key findings include:

- 22 fixed sensory attributes can be used to differentiate all 14 hop varieties tested
- For most varieties hop teas are a poor predictor of the sensory attributes in the final product
- Different hop varieties grown in the same country have many sensory attributes in common
- Certain aroma notes in all of the varieties tested are reduced in the final beer, especially green/herbal notes
- The aroma characteristics of some hop varieties, even those grown in different countries, are almost identical

The sensory differences between hop teas and beer are partly explained by the important flavour contributions in the latter from malt and yeast. Also, during the brewing process, many of the important sensory components in hops are transformed to other compounds or are lost due to, for example, their volatility. Please contact us to discuss.

## Date for your diary

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Campden BRI Day will be held on Wednesday 8 June 2016. You can see last year's exhibitions, listen to the lecture podcast and register for this free event by visiting [campdenbri.co.uk](http://campdenbri.co.uk) and searching for [Campden BRI Day](#). Please put the date in your diary.

## Award from Dubai Municipality

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We were delighted to receive an award from the Dubai Municipality recognising the value of the Campden BRI workshops and other support for the Dubai International Food Safety Conference - the biggest food safety conference in the Middle East region. It was presented by Khalid Mohammed Sharif (Executive Director, Food Safety Department) and Amina Ahmed Mohammed (Director, Dubai Accreditation Department) of the Dubai Municipality.

## Innovative and collaborative research

Contact [information@campdenbri.co.uk](mailto:information@campdenbri.co.uk) to find out more

We are renowned for collaborating with other companies and research partners to deliver innovative and practical solutions to food industry challenges. The following examples, all funded through the government sponsored Innovate UK, demonstrate why.

### Innovative baking

INNOVBAKE is a low-energy two-step process with an accelerated conventional baking stage followed by a vacuum post-baking step. By introducing the vacuum post-baking step in which the bread is allowed to cool in a reduced pressure environment, the latent heat recovered from the residual moisture in the bread can be used to complete the baking process in the core of the bread product. This allows the first baking step to be reduced by, potentially, 20-25% (4-5 minutes) with a commensurate reduction in energy consumption and CO<sub>2</sub> emissions. The reduction in specific energy content per baking product, as well as the potential more efficient use of baking equipment will reduce product cost.

The principal challenges addressed in the project were to demonstrate that the complex biological and chemical processes that occur during the baking process were fully completed in this accelerated process and that the food quality was not affected, and to confirm that the new process had significant energy and life cycle benefits when compared with conventional baking processes. This

work was undertaken with C-Tech Innovation, Park Cakes, Frank Roberts, Jacksons Bakery and Greggs.

### Bakery products for non-coeliac gluten-sensitive consumers

The study aims to produce a much more palatable alternative to gluten-free (GF) bread for gluten-sensitive people than is currently available. Gluten sensitivity is distinct from coeliac disease and is estimated to affect 6-10% of the population; it represents a significant market opportunity both at home and overseas. It is speculated that wheat bread can be made more suitable for those sensitive to gluten by the removal of certain proteins from wheat using novel approaches. This is because certain wheat proteins are more important in creating the texture of bread, while others are believed to be linked to gluten sensitivity. This work is being developed through a joint programme involving Warburtons, DSM and Aberdeen





## Improving fibre-enriched bread

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University's Rowett Institute, who will be working with gluten sensitive volunteers to establish whether treatments are beneficial and desirable to them.

### In-pack ohmic food processing

Ohmic heating techniques could enable enhanced food quality and safety. The principal objectives of this ongoing project are to confirm the effectiveness of pasteurising/sterilising food products in-pack using this technique, and to confirm that the concept would be capable of scale-up to an industrial context. This work is being done in collaboration with C-Tech Innovation and Noon Products.

### Cold plasma for microbial decontamination of fresh produce

Prepared produce decontamination is necessary to remove soil, foreign bodies and bacteria (potentially pathogenic) from the food surface, but is notoriously difficult to achieve. Moreover, the different decontamination techniques used so far are applied on the product before it is packed, meaning that recontamination can occur from further handling prior to packing. This project, being led by Sainsbury's, is using a novel pulsed plasma system to inject plasma species into the food packaging at the point of sealing, thus providing a final decontamination hurdle directly in the pack without further recontamination risk.

Bakery process and ingredient development have been identified as routes to improve the quality of fibre enhanced bread, thereby impacting positively on the national diet. In the UK, over 70% of adults are not consuming the recommended 18g non starch polysaccharide (NSP) per day. This indicates the need to develop enriched fibre products that are appealing to the consumer. The aim of this study was to investigate the effect of different processes and additional ingredients on improving fibre enriched bread quality. Wheat and oat bran bread were compared over a number of variables to determine which, if any, improved bread quality.

Bread volume in both wheat and oat bran bread was significantly affected by the mixer type used. Particle size modification and pre-treatment had a greater effect on wheat bran bread volume than on oat bran bread. With wheat bran bread, fine particle size and hot pre-soaking had a negative effect on specific bread volume; however, coarse particle size with cold pre-soaking resulted in a similar volume to coarse bran untreated.

Further investigation is required to optimise high fibre bread.



## Food safety guide published

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*Food safety plans: principles and basic system requirements* (Guideline 76) - focuses on establishing, implementing and maintaining a food safety plan, and the key elements to consider. The principles and practices of food safety management are reflected, along with examples illustrating how the components of safety management, such as prerequisite programmes, HACCP and traceability, are integrated in a food safety plan.

## Training events

A full list of scheduled courses is available on our website [www.campdenbri.co.uk/training.php](http://www.campdenbri.co.uk/training.php) or request a booklet from [training@campdenbri.co.uk](mailto:training@campdenbri.co.uk) +44(0)1386 842104

### March 2016

- 1 Innovation in soft and alcoholic drinks *seminar*
- 1 Practical skills - bread
- 1-2 Threat Assessment Critical Control Point (TACCP) - intermediate level
- 3 Root cause analysis
- 4 Accelerated shelf life testing - challenges and innovation *seminar*
- 7-11 HACCP - advanced (level 4)
- 8-10 Food processing hygiene management (course in 2 modules)
- 8 Threat Assessment Critical Control Point (TACCP) - foundation level
- 8 Practical skills - cake
- 9-10 Internal auditing - principles and practices
- 11 Safe pasteurisation and cooking *seminar*
- 14-15 HACCP - intermediate (level 3)
- 15 Practical skills - biscuit
- 15 Sensory evaluation - discrimination testing
- 17 Training workshop - sharing best practice
- 22 Practical skills - pastry

## Seminars

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### Innovation in soft and alcoholic drinks

[www.campdenbri.co.uk/drinks-innovation-seminar.php](http://www.campdenbri.co.uk/drinks-innovation-seminar.php)

1 March at Excel, Docklands, London

The latest information on current issues in the development of soft and low alcohol drinks.

### Accelerating shelf-life evaluation

[www.campdenbri.co.uk/accelerated-shelf-life-seminar.php](http://www.campdenbri.co.uk/accelerated-shelf-life-seminar.php)

4 March at Campden BRI, Chipping Campden

Focuses on innovative approaches to accelerated shelf-life testing of foods and drinks, covering the chemical, microbiological and physical aspects of these important but complex methods.

### Pasteurisation and cooking seminar

[www.campdenbri.co.uk/safe-pasteurisation-seminar.php](http://www.campdenbri.co.uk/safe-pasteurisation-seminar.php)

11 March at Campden BRI, Chipping Campden

Pasteurisation on a commercial scale - this seminar will focus on this important food preparation and preservation area, looking at key aspects.

## Member zone

[www.campdenbri.co.uk/memberzone.php](http://www.campdenbri.co.uk/memberzone.php)

to access privileged member information and services

## Changes in international regulation: blogs

### US Food Safety Modernization Act (FSMA)

The FSMA is described as the biggest change in US food law in decades. It sets out a new approach to food safety, moving from a reactive to a proactive regime, laying down broad terms, and leaving the US FDA to fill in the contours via seven pieces of regulation. Read Steve Spice's blog at [www.campdenbri.co.uk/blogs/food-safety-modernization.php](http://www.campdenbri.co.uk/blogs/food-safety-modernization.php)

### New EU novel foods regulation

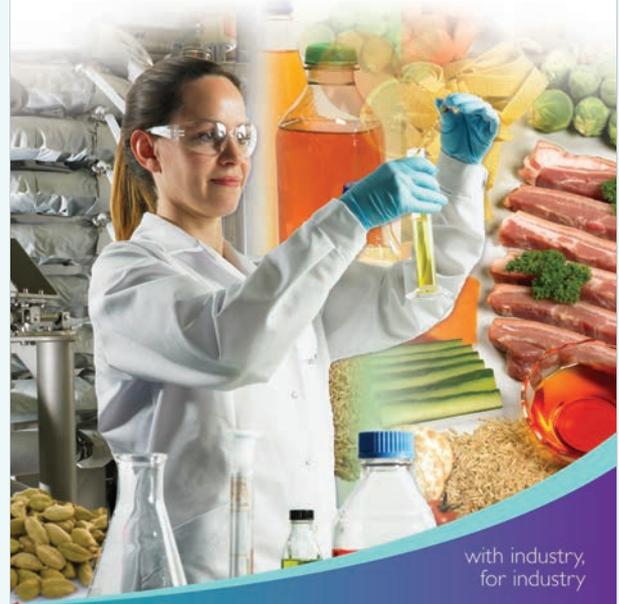
A new EU Novel Foods Regulation will allow companies to get novel foods and ingredients onto the market more quickly. It is expected to reduce the length of the authorisation procedure to approximately eighteen months from the current average of three and a half years. Alison Sharper explains more at [www.campdenbri.co.uk/blogs/eu-regulation-novel-foods.php](http://www.campdenbri.co.uk/blogs/eu-regulation-novel-foods.php)

## Membership - key benefits

[www.campdenbri.co.uk/memberzone.php](http://www.campdenbri.co.uk/memberzone.php)

- Easy access to experts
- Member service accounts
- Networking
- Discount on most services, including training, publications and contract work
- Influence over and access to confidential member-funded research
- Keeping up to date
- Visits and venues
- Use of "members of" logo

## Research programme 2016



## Research programme 2016

Our 2016 Research Programme has been published. This lists all member and publically-funded research and development projects currently being undertaken under the drivers/themes of:

- Safety
- Quality and value
- Nutrition, health and well-being
- Resilience and efficiency
- Environmental sustainability
- Skills and knowledge

Each project has a concise description, together with information on timescale, funding source, collaborators and project manager contact details. Project managers will be pleased to provide members with further information about projects, so give them a call.

To receive an electronic copy of this document, send an e-mail to [auto@campdenbri.co.uk](mailto:auto@campdenbri.co.uk) with the subject line: **send RP2016** or visit the research pages of our website: [www.campdenbri.co.uk/research/strategic.php](http://www.campdenbri.co.uk/research/strategic.php)



## Welcome to new members

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

Botanical Food Company Pty Ltd - manufacturer of herb and spice products

Dean's of Huntly Ltd - manufacturer of shortbread oatcakes and biscuits

Godiva - chocolatier

Lewis Pie & Pasty Co. - manufacturer of frozen pies, pasties, slices and sausage rolls

Magna Specialist Confectioners Ltd - manufacturer of chocolate products

Mumtaz Foods PLC - manufacturer of Indian ready meals, finger line products and dairy products

Mutti Spa - producer of tomato based products in cans, glass and pouches

Openfield Agriculture - grain co-operative group

SG Hodge T/A Hygiene Resources - food factory hygiene services

Thai Union Group Public Company Limited - seafood manufacturer

The Traditional Welsh Sausage Company Ltd - sausage, burger, bacon and gammon manufacturer

Wyke Farms Ltd - producer of Cheddar cheese and bulk food ingredients

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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.

## Agronomy skills

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The appointment of Nick Jessop as Primary Production Section Manager will further strengthen our activities in this area. Nick brings a wealth of experience from the crop protection and agricultural sectors, most recently working as Global Development Scientist - Seed Treatments at Arysta LifeSciences in Evesham. Nick and his team will be working to develop and expand our services to clients in primary production activities across a range of crops.

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