

Coronavirus and the food industry

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To help our members and clients, virologist Martin D'Agostino has answered some of your key coronavirus questions in relation to food and drink.

What is the risk of transferring the virus from person-to-foods?

The risk of contracting the illness from food is negligible. It is not considered to remain infectious on food surfaces for long periods of time and it would have to somehow be inhaled from the foods themselves to cause infection.

Are there any recommendations on cleaning areas such as factories?

Continuing with normal routine cleaning regimes should be sufficient unless there is a particular problem with employees showing symptoms and large areas becoming contaminated, since these types of viruses are easily killed by routine cleaning procedures.

Should companies be concerned about the risk of contaminated ingredients or packaging from affected countries?

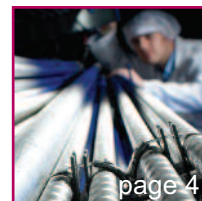
Currently, both the CDC and EFSA are saying the risk of infection from materials such as ingredients and packaging are extremely low and that currently there is no evidence that food is a likely source or route of transmission. ■

Visit our recent video where Martin answers more coronavirus questions: search 'Coronavirus' at campdenbri.co.uk.



Open for
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Controlling *Listeria*...

In ready-to-eat foods

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Do you make ready-to-eat foods? If so, your input is vital. We're running a survey as part of research that will deliver new guidelines and a scoring system to help the industry demonstrate effective control of *Listeria* in its products - essential not just because of the health risk, but also because it is a requirement under EU legislation.

Look up 'Listeria' at campdenbri.co.uk to find out more or go straight to the survey at www.campdenbri.co.uk/listeriasurvey

Lessons learned

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Unlike other known pathogens, *Listeria monocytogenes* is unusual in that it can grow when kept under chilled conditions. This increases the organism's threat to consumers and can create additional hurdles for food manufacturers trying to control it.

In a new video, our microbiology ambassador Roy Betts details the factors that contributed to outbreaks of *Listeria monocytogenes* in recent years. Watch it to make sure your food business doesn't fall victim to this pathogen. ■

Find it on our Videos page at campdenbri.co.uk

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For other sites, see
www.campdenbri.co.uk/campdenbri/contact.php

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New members

We are delighted to welcome the following new members:

- Broadland Drinks Limited - producer of wines and cider
- Buy South Africa Ltd - producer of biltong and dried meat products
- Chelsea Digital Ventures - start-up nutrition business
- Dumfries and Galloway Council - local authority
- Fever-Tree Limited - a supplier of drinks and mixers
- Lehmann Food Ingredients Ltd - importer of ingredients
- Subway - a chain of sandwich restaurants
- The Burger Manufacturing Co Ltd - producer of frozen beef burgers
- The Happy Pear - producers of pesto, hummus and confectionary
- Three Oceans Fish Company Ltd - producer of breaded and battered frozen fish and supplier of whole fish
- Zero Proof International - marketer and seller of non-alcoholic cocktails

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

Open for business - stay in touch

During these challenging times, we would like to reassure our members and clients that we remain open for business and that our consultancy services, laboratories, pilot plant and other facilities are all operational - so that we can continue to support you.

We will continue to follow all relevant official guidance and have put in place measures to protect our staff and deliver the services you need. Specifically:

- Our laboratories operate at two different UK sites and, within those sites, have discrete and duplicated operational areas to provide resilience - with flexible working practices to maintain services
- We are avoiding non-essential meetings and travel, and use remote meetings where possible; the only visitors allowed on our sites are those that are business critical (including deliveries and collections)
- Many staff can work remotely with relevant connectivity to our systems and processes
- We update staff regularly on the precautions and measures they should take to protect themselves and reduce the transmission to others - including self-isolation and remote working
- Some staff could still visit customers with business-critical needs, subject to all the necessary precautions, restrictions and risk assessments
- Our courses and seminars are being rescheduled for later in the year - with dates to be advised via our website shortly

If you have specific enquiries relating to ongoing or prospective work, please contact our Enquiry Handling Team, who will be able to respond directly or put you in touch with the relevant colleagues in our operational units: support@campdenbri.co.uk +44(0)1386 842291

For our latest news

Search 'news' at campdenbri.co.uk



Ambassador's Q&A: Derek Orford

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Having appointed four of our senior staff into ambassadorial roles, we're firing questions to them each month to reveal what they'll be getting up to in their new role. Last month we heard from Roy Betts, our microbiology ambassador. This month it's Derek's turn.

With 36 years in the brewing industry, and 29 of those as a master brewer, it's safe to say that Derek understands the sector better than most. As our brewing ambassador, here's what he had to say about his new role.

What will your new role allow you to do?

I'll be able to meet more brewers and other industry players more regularly so that we really understand how their needs are changing and ensure we have the know-how and the right resources in place to meet them. I'll also have more time to support industry bodies and provide support through consulting for specific clients.

What are you looking forward to working on?

I love assisting with new product development and I'm expecting our 'kombucha club' to make great strides in making kombucha production more reliable and reproducible. Internally, I'm really looking forward to helping develop the skills of our younger team members to enable them to grow in the world of brewing.

What does the future hold for the industry?

Every brewer I talk to is not only trying to make great beer but is also focused on doing so sustainably. I think this continued attention to the long term means that beer and brewing will continue to be relevant to new consumers. I'm sure this theme will be reflected in the majority of brewing meetings and conferences this year, including our own Fermented and Alcoholic Drinks Member Interest Group meeting. ■

Derek is our primary contact for brewers, both large and small. To discuss all things brewing, get in touch.

Improving product quality with thermal process optimisation

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What is thermal processing?

Thermal processing is an important method of food preservation, controlling the presence of microbial spoilage organisms in foodstuffs to ensure that products are safe. There is an ever-growing range of food products preserved by thermal technologies ranging from sterilisation (such as canning) to milder pasteurisation heat treatments (such as cook-chill and cook-freeze).

Finding the right balance

When undertaking validation work on behalf of manufacturers, our focus is on ensuring the process subjects the product to a minimum level of heat. A specific time/temperature combination is targeted to ensure a minimum level of lethality is achieved. However, it's all too easy to get it wrong, without considering the impact on products' nutritional and sensory attributes.

Process optimisation (i.e. a reduction in over-processing) sounds simple: it's just a case of not processing a product for too long, right? Wrong. In reality, a lot more thought and (more importantly) data analysis is required.

When our experts validate thermal processes during trials, they often find data that shows some degree of over-processing - that is additional heating of the product which is not necessary for food safety. To us, this common occurrence highlights that some food manufacturers are missing out on the benefits of optimising their thermal processes.

Why optimise?

Minimising the amount of heat delivered to the product by reducing temperature and/or process time can have some real advantages, including:

- improved product quality and sensory perception. For example, preservation of colour, textures and specific flavours



- retained nutritional attributes of a product. Vitamins such as A, B1 and C can be broken down with heat
- higher throughput: shorter cook times lead to overall efficiencies in production
- greater energy saving with a process that requires less heating

How can thermal processing be optimised for quality?

Thermal processes are primarily applied to ensure product safety. The time and temperature of the treatment can be tailored to optimise quality without compromising safety. This can be achieved by analysing thermal validation results to understand when, during a cook, the minimum thermal target is reached.

Maximising the efficiency of the heat transfer is also crucial. Several factors affect the rate of heat transfer, including heating method, packaging type and product composition. Adjusting any of these factors to improve the rate of heat transfer can aid quality retention - and sometimes a small adjustment can have a large impact.

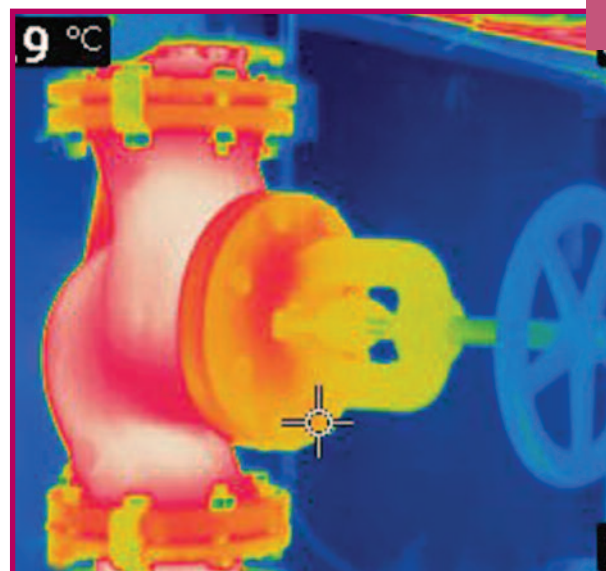
Rapid advances are also being made in process technologies and with equipment used for thermal processing to aid heat transfer. We trialled one of these as part of a member-funded project that investigates new technologies. We found continuous microwave processing to be an effective method of preserving the vibrant green colour of pea and ham soup. Find out more about this study by reading our blog: search 'CMP benefits' at campdenbri.co.uk.

Other rapid processes include thermal technologies such as microwave, radio frequency and ohmic heating.

When should I optimise my thermal process?

Quality optimisation work can be a simple add-on to a thermal process validation project. If you're looking to improve existing processes, or to explore the potential of new products and process equipment, we can help you optimise your existing processes using calculations, modelling or with on-site trial work. ■

Get in touch to find out more.



Experts on video

Thermal process validation - for safety and quality

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Many food and drink products are exposed to heat to reduce or eliminate the presence of microorganisms, but if the thermal processes are not applied properly, products may pose a significant danger to public health. Therefore, we must validate thermal processes to ensure they lead to products that are safe to consume.

Our thermal processing specialist David Whittaker has produced two whiteboard presentations to help you understand how thermal processes are validated and how you can optimise yours.

In his first video, David gives a rundown on the methods we use to build the evidence that allows us to determine whether a thermal process will deliver a safely processed product. This includes the variables we consider that help create the 'worst-case scenario' when performing the practical tests that validate a process.

His second video details how we interpret and use the results from a validation study to optimise a thermal process. Our work at Campden BRI has found that optimisation better preserves a product's nutritional and sensory attributes - which is very important for quality and consumer acceptance. ■

To watch the videos, search 'talking head' at campdenbri.co.uk. Contact us to find out how we can validate and optimise your thermal processes.

Member zone

to access privileged member information and services

How do we find out what the food industry needs?

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Understanding what you need from science and technology shapes the support we provide - including services, research and innovation - and helps us to promote your needs to the government and funding bodies. Every three years we consult extensively with our members to understand their scientific and technical needs.

Our previous scientific and technical needs document brought us up to 2020, so it's now time to begin the process again. We will consult the industry through surveys, social media and our member interest groups (MIGs) later this year. ■

Campden BRI day - see you online

As you will have anticipated, the annual face-to-face gathering that is Campden BRI Day will not be happening in its traditional format this year - but we do plan to deliver it online as the 'Campden BRI Experience' through the first week of June.

The 'Experience' will be very different but every bit as valuable as the face-to-face event has been in the past - with videos, lectures, podcasts, quizzes and on-line networking tools.

We are working on the details. Register on the website, search 'Campden day', and we'll make sure you are kept posted as we develop the programme.



Skills and knowledge

Learning-focused newsfeeds

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While many of you are working from home during this challenging time, and unable to attend training courses, our newsfeeds will become centered around helping you with your continuing professional development. They will deliver free blogs, white papers, videos and other learning materials straight to your inbox, keeping you up to date with developments in the food industry and expanding your knowledge to other areas you may be interested in. ■

Get in touch to let us know of any topics you would like covered.

For our latest news search 'news' at campdenbri.co.uk

Can you reduce sugar with extruded flour?

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Extrusion is a pre-processing technique that can be used to optimise the nutritional value and techno-functionality of an ingredient. For example, extruded wheat flour adopts water-binding properties and so could potentially be used to reduce or replace sugar - the ingredient that (among other roles) is often used for this purpose in baked goods.

As part of our research into pre-processing for improved nutrition, we replaced 10% of a cake's plain flour with extruded flour and reduced the sugar content by 20%. ■

Did the cake still look the same and taste as good? Read our new R&D report to find out, search 'R&D461' at campdenbri.co.uk.

Proficiency testing for hops

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We've teamed up with measurement and testing company LGC PT to launch a new proficiency testing scheme that will help those who analyse hops ensure their methods are accurate.

The scheme will allow participants to anonymously compare their analytical results with other participants to identify which of their methods performed well (which can then be used to demonstrate the validity of their data to prospective clients) or highlight which tests need improving.



This new scheme will form part of the very successful Brewing Analytes Proficiency Scheme which has been running for over 25 years and is accredited by UKAS. ■

Get in touch for further information, to register interest in the hop analysis scheme or to discuss additional sample types and analyses.

Recent blogs

Search 'Blogs' at campdenbri.co.uk.

Intelligent dough mixing using AI

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Getting dough mixes right is critical for operational success but difficult to achieve. This is because of the unpredictable reactions between biology (yeast), chemistry (enzyme reactions, oxidation/reduction) and physics (water movement) that take place during bread processing. It's almost impossible for a human to factor in all these variables, which paves the way for artificial intelligence (AI).

Our process innovation lead Mike Adams investigates the potential challenges of implementing AI in the baking world in a new blog. ■



Food premises hygiene

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Good hygiene starts with design - for food premises and equipment. The flow of raw materials, ingredients, packaging, people and utilities through a food area can markedly reduce or increase the risks of product contamination.

In a new blog, food safety management hygiene specialist Nigel Blitz discusses some of the factors that influence hygiene in food premises. From the benefit of an auditor's fresh pair of eyes to how people unintentionally act as vectors for microbial contamination, read the blog that explains what you must consider when assessing the hygiene of your food premises. ■

News

Head of membership and training wins award

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We'd like to congratulate our head of membership and training Bertrand Emond who received a special award at the recent BRCGS Food Safety Europe 2020 conference. He was presented with the award by the CEO of BRCGS Mark Proctor as recognition for his commitment and contribution to food safety and BRCGS. Great work, Bertie!



Bertrand also directed our Safety and Quality Culture Excellence seminar that brought together experts from across the industry. Emma Samuel, a PhD student at Cardiff Metropolitan University, was also in attendance. We were delighted that Emma captured what the speakers had to say about managing safety and quality culture from their own company perspectives, later assembling her notes as a comprehensive review. ■

We've now published this as a white paper that you can find by searching 'Talking safety and quality culture excellence' at campdenbri.co.uk.



Skills and knowledge

Experts on video Quality and safety of cereals

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Ensuring the quality and safety of cereals is of great importance to the relevant supply chains, as many cereal quality parameters have a direct influence on functionality, processing behaviour and end-product characteristics.

In a new talking head video, cereals and ingredients characterisation manager Clothilde Baker discusses how her re-selected member-funded research project will focus on developing test methods to assess the physical characteristics of grains and related ingredients, including their functionality. Ultimately, this will help cereal stakeholders optimise their cereals end-product quality. ■

To watch the video, search 'talking head' at campdenbri.co.uk