

IN THIS ISSUE: New guidelines, labelling, fridges, food waste, school news + more

Guidance on Shelf Life with respect to *Clostridium botulinum*

Primary responsibility for food safety rests with the Food Business Operator (FBO). This is reinforced by following procedures based on HACCP principles, the application of good hygienic practice and setting appropriate shelf life. CFA now offers help to FBOs with one particularly dangerous microorganism as it publishes *Guidelines for Setting Shelf Life of Chilled Foods in Relation to Non-proteolytic Clostridium botulinum*.



Non-proteolytic *Clostridium botulinum* spore germination (IFR).

The new guidance is designed to ensure that enough information is provided by FBOs and laboratories to arrive at valid decisions regarding the shelf life of their chilled food in relation to non-proteolytic *Clostridium botulinum*. It is intended to also support FBOs when challenged by Competent Authorities.

The Guidelines summarise:

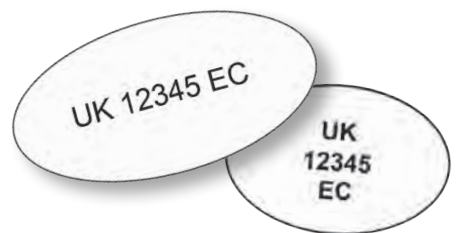
- How Food Business Operators should establish shelf life in relation to non-proteolytic *Clostridium botulinum*;
- What needs to be considered and what actions need to be taken to determine whether challenge testing is appropriate before contacting a laboratory;
- Global best laboratory practice in the design of challenge testing with non-proteolytic *Clostridium botulinum* in order to give valid scientific data; and
- How to use these data to establish safe shelf life with respect to non-proteolytic *Clostridium botulinum*

The Guidelines were developed with Quadram Institute Bioscience, Leatherhead Food Research, Meat & Livestock Australia and the BRC. They are a free download from www.chilledfood.org

Comments to ACMSF on potential impacts of biocides regulation on food hygiene

Following CFA lobbying, the Advisory Committee on the Microbiological Safety of Food (ACMSF) this summer requested information from industry on the implications of changes to the regulation of biocides used to assure food hygiene. CFA co-ordinated the Food & Biocide Industry Group's response (www.chilledfood.org/FBIG). It is imperative that access to effective biocides to assure food hygiene are not restricted by inappropriate regulation. ACMSF will be reviewing the submissions and determining priorities for action.

Post-Brexit: EU Law



CFA has responded to FSA consultations on its approach to proposed retention of EU food law, and changes to health and identification marks on meat and animal products. This would particularly impact if the UK were to leave the EU without a deal.

Although EU-based provisions would all initially be rolled over through the EU (Withdrawal) Act, some changes would be required. For example, it would no longer be correct to use the term 'EU' or 'EC' in origin labelling for food items from the UK. Food labels would need to carry a specific UK address; an EU address alone would not be valid for the UK market. Likewise, a UK address alone would not be valid for the EU market. Labels with both a UK and EU address would validate the label for both markets.

Given that our members, and the UK food industry as a whole, have a highly developed and long-established integrated food supply and distribution chain with Ireland in particular, the challenges are significant. Members estimate it would take 12-18 months for changes to local legislation to work through in any one business, with many members of staff being involved.

Without full assurance to trading partners that current UK standards will not be eroded or compromised in any way there will likely be no trade, irrespective of whether or not deals are done. Government must factor in that it will likely have to carry out risk communication not only with EU27 but also all countries with which the UK trades, to satisfy them that there is no substantive change in the standards demanded by UK legislative requirements.

Chilled Education UPDATE Fantastic Food!



Long-time CEd collaborator Sam Holyman is Second in Science at Aylesford School in Warwickshire. Together with Food and Nutrition teacher Tabitha Hulme she's aiming to bridge the gap between food technology and science teaching. Her recent workshop delivered a key CFA message – that Food Science is not just about cooking. Sam used CEd resources during the day and writes about the event:

The 'Fantastic Food Technicians' Conference' followed on from four years of very successful series of CPD events supported by Breckland Scientific. More than 20 technicians, scientists and teachers from around the Midlands joined this hand-on workshop aimed at forging links between GCSE Food and Nutrition and GCSE Science.

Delegates considered sustainability of food production, including trying insect protein, as well as how perception can influence the taste of food. This was done by experimenting with different coloured jelly with the same flavour. We also considered microbes; the good, such as those used to make food stuffs, and the bad, such as pathogens. We played the MicroTrumps game, delegates left with Nanobug temporary tattoos and we experimented with the Glo-Germ Hand Wash Training Kit, modelling pathogen transfer with UV gel.

All the activities were designed and used in the classroom by Tabitha and myself with the delivery supported by Lynne Purshouse from Breckland Scientific. And the feedback was overwhelmingly positive.

I love being involved in the Technicians' Conferences; it's a melting pot of ideas and I learn so much. For example, I learned of a lower risk way to observe thermal decomposition while making cinder toffee, as well as better understanding the cross-over between science and food teaching. Tabitha and I are working together to have a more holistic approach to teaching investigative skills across the subjects to help each other in the classroom.



Making cinder toffee to investigate thermal decomposition.

Sam is also a regular science blogger for The Oxford University Press. Her blogs offer guidance and practical ideas for science teachers, often with a food element and referring to CEd themes.



New CEdBanners On Message

The Big Bang Fair also saw the debut of CEd's three new pull-up banners. They were also used by Dr Caroline Millman (Sheffield Hallam University) and Food Bug Club at the Food Teachers Centre's Food Science Face to Face in June 2018. She also shared 100 CEd packs with Food Technology teachers. The attention-grabbing titles, and the message conveyed, were such a hit with teachers that CEd has re-formatted the science version as a free, downloadable poster.



Students attending the University of Leeds Summer School.

Summer Schools

CFA has now sponsored more than 90 students to attend summer schools at universities in Leeds, Nottingham and Sheffield. This year's cohort have been enthused by the schools. In their feedback, students from Leeds said: "I enjoyed it all, but particularly enjoyed being in the food tech lab." "I would recommend this event to a friend." "Loved it!"

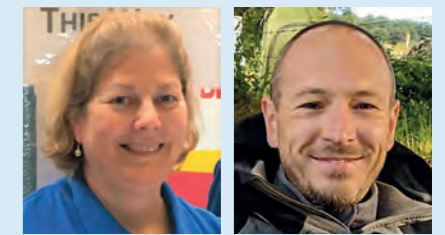


Gill Harrison, Ella Connolly, Sue Evans, Heather Cooper, Lottie Hood and Chris Roddis.



Greencore's Tanya Muzembe talks fridge temperatures.

News in Brief



More Insider Insights

The CEd website continues to be a source of careers information for students and teachers and its 'real life' case studies are amongst its most popular pages. Two more industry colleagues now share their experiences: Greencore's Heather Cooper and Dan Garland of Hain Daniels. Their career paths show the opportunities available in the dynamic world of chill.

Looking ahead

CEd will be returning to the Association for Science Education's Annual Conference when it opens at Birmingham University from 9-12 January 2019.

Nancy the Nanobug Creator in the News

Over the years CEd's popular Nanobugs temporary tattoos and their cartoon microorganisms have entertained and engaged thousands of students and teachers. The woman behind them, US-based Nancy Haberstick, was profiled in her local paper in September, giving CFA an international profile and offering an insight into her innovative approach. Inspired by her grandchildren's fascination with cartoon microbes, the retired nurse with a passion for science education has developed a library of fun but factual images that now appear on tee shirts, mugs and lots more.



Above: Looking at how apples brown and investigating which chemicals can be used to increase the shelf life by reducing the rate of the enzymic browning.



A giant microbe sparks Heather's Cooper's conversation with a young scientist.

Back with a (sixth!) Big Bang

While June temperatures soared, the CEd team was busy talking chilled food to 2,100 'excited and engaged' students and their teachers at the Big Bang Fair East Midlands. It was CEd's sixth time at the event which each year gets bigger and busier. Once again industry colleagues, including from Greencore, Hain Daniels and Samworth Brothers, demonstrated resources and shared their experiences of careers in chilled. Deena Brannan of Leesbrook Community School in Derby has been using CEd's temporary tattoos to encourage students to wash their hands properly. She places tattoos around the room, near the wash basins. Deena said that the tattoos "make it fun" and are excellent for getting students "seeing things in a different way." Temporary tattoos, free lesson plans and other inspirational resources, can be found at the Chilled Education website.



WRAP Brings Fridge Issue in from the Cold



Domestic fridge temperatures continue to be a source of concern for CFA, so it was happy to advise and support a recent WRAP 'Chill the Fridge Out' public awareness campaign.

The campaign showed consumers how to set the correct temperature in their fridges. WRAP used milk, which is the second most wasted food at home, to show the importance of keeping food at the right temperature to reduce waste.

And its messages – monitoring, setting and keeping fridges at 5°C and below – reflect CFA's work with schools through Chilled Education.



It also underlines CFA's ongoing lobbying of the fridge industry to ensure its appliances are designed to keep food at the correct temperature. CFA has long been in discussion with the industry and Government on this topic (CFA News No 48 Dec 2017)

Health & Safety Matters

The chilled food sector currently employs more than 70,000 people, and the protection of their health and safety is a CFA priority. It has been engaged on health and safety in the Health and Safety Executive's (HSE) Food and Drink Manufacturing Forum since its inception, and its Health & Safety Working Group is comprised of senior Health and Safety leads from CFA members.

It is also a signatory to the HSE's Common Strategy for Improving Health and Safety in the Food and Drink Manufacturing Industry. Information about CFA's commitment and action plan can now be found on the CFA website. The Health & Safety page features case studies from CFA member companies, offering invaluable insights into how health and safety challenges have been successfully addressed.

Food and Drink Manufacture Forum 17.10.17
CS Working Group: Progress on Planned Initiatives

On the Road to Less Waste



For more than 15 years, the chilled food industry, led by CFA, have been focusing on minimising food waste. So, the Association is delighted to be an Early Adopter signatory to the ground-breaking UK Food Waste Reduction Roadmap that aims to halve food waste by 2030, launched by WRAP and the IGD in September.

CFA joins other trade bodies to support organisations that have committed to ambitious milestones encompassing the entire supply chain from field to fork. The first milestone, September 2019, will see all major retailers and 50% of larger food businesses measuring, reporting and acting on food waste, with all 250 larger food companies doing the same by 2026.

The initiative is supported by 87 businesses, trade bodies and other organisations, as well as Defra and the Welsh and Scottish Governments. CFA Director Kaarin Goodburn explains: "As a signatory of **Courtauld 2025** and the **UK Plastics Pact**, we are happy to be part of this international initiative. It's ambitious, but our industry's many years of work on resource efficiency, including waste reduction, ideally places us to lend support and leadership, and to promote its widespread adoption."

Green light for Blue light project

CFA has secured funding for a £55k project to determine whether blue light treatment could be a suitable disinfection procedure to help reduce Listeria survival and persistence in chilled food production environments. The project, titled Blue light treatment of Listeria Under Environmental conditions (BLUE), will be carried out at Quadram Institute Bioscience, with funding from the National Biofilms Innovation Centre. The use of blue light could offer benefits ranging from reduced risk of cross contamination, enhanced consumer protection to reduced annual costs of deep cleans at production sites.

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