

# PRESS RELEASE

## **Validation and optimisation of thermal processing systems: new guideline from Campden BRI**

Thermal processing is at the centre of food preservation, ensuring that foods are safe from microbiological contamination and remain high in nutritional and sensory attributes. Whatever the thermal process, the need for food manufacturers to prove the safety of their food product through a programme of thermal process validation is a common requirement.

*Validation and optimisation of thermal processing systems: cookers, pasteurisers and sous vide systems* ([Guideline 74](#)) (see [www.campdenbri.co.uk/publications/pubDetails.php?pubsID=4647](http://www.campdenbri.co.uk/publications/pubDetails.php?pubsID=4647)) explains the general requirements and design of thermal processes (cooking, pasteurisation and sous vide processing) and the associated procedures and methods for their validation. It also covers some of the considerations on optimisation of the processes to achieve good quality products.

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). There are also rapid advances being made in process technologies and equipment used for thermal processing, with processes such as continuous flow heating and cooling systems, hot-fill processes and novel thermal technologies (eg micro-wave, radio frequency and ohmic heating) becoming common in food manufacturing. All need validating and optimising – this guidance addresses these situations.

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Campden BRI ([www.campdenbri.co.uk](http://www.campdenbri.co.uk)) provides technical, legislative and scientific support and research to the food and drinks industry worldwide – with a comprehensive “farm to fork” range of

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services covering agri-food production, analysis and testing, processing and manufacturing, safety, training and technical information services. Members and clients benefit from industry-leading facilities for analysis, product and process development, and sensory and consumer studies, which include a specialist brewing and wine division.

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## Notes to editors

1. Trade press review copies of this document are available from Ms Kristina Booker, Campden BRI, Chipping Campden, Glos. GL55 6LD. Tel: +44(0)1386 842048 Fax: +44(0)1386 842100 e-mail: [pubs@campdenbri.co.uk](mailto:pubs@campdenbri.co.uk)
2. [Campden BRI](#) specialises in the practical application of technical excellence to support the food and allied industries through analysis and testing, operational support, research and innovation, and knowledge management. It is the world's largest membership-based food research organisation, with nearly 400 staff based at its three sites: Chipping Campden (Headquarters), Nutfield (Surrey - brewing division), and Budapest (Hungary).
3. Its activities include assuring the safety of food and drinks, [food processing and manufacturing](#) support, [food analysis and testing](#), [training](#) and [publishing](#). Each year it hosts hundreds of business visits and trains around 6,000 people from food and drink companies worldwide. Further information on its activities can be found at [www.campden.co.uk](http://www.campden.co.uk)
4. Expertise at Campden BRI includes:
  - a. [manufacturing technologies](#) - food processing (heating, chilling, freezing), aseptic technology, [microwave heating](#), [malting and brewing](#), [milling](#), [baking](#) and extrusion technology, and process control and instrumentation, [packaging technology](#)
  - b. safety assurance - including [hygiene and sanitation](#), [microbiology](#) and preservation, processing technologies, analysis and testing (microbiological, chemical), and quality and safety management,
  - c. [product development](#) and quality, [consumer studies](#), market insights, [sensory science](#), [authenticity testing](#), shelf-life evaluation, labelling and [legislation](#)
  - d. [agri-food production](#), ingredients, raw materials, raw material technology,
  - e. underpinning science - [cereal science](#), [microbiology](#), [chemistry and biochemistry](#), molecular biology
5. Facilities at Campden BRI include:
  - a. 3,000 sq m of laboratories for food and drink microbiology, hygiene, chemistry, biochemistry, molecular biology, brewing and cereal science, and packaging technology
  - b. 3,500 sq m food process hall and [pilot plant](#) including malting and brewing, retorting, chilling, milling, baking, hygiene and packaging

c. 800 sq m of dedicated training and conference facilities