IFST Response: Draft guidance for consultation: Less than thoroughly cooked beef burgers

6-4-22

On behalf of the Institute of Food Science and Technology, I am pleased to submit comments regarding the less than thoroughly cooked burgers consultation. IFST is the UK leading professional body for those involved in all aspects of food science and technology.  We are an independent membership body, supporting food professionals through knowledge sharing and professional recognition.  Our membership comprises individuals from a wide range of backgrounds, from students to experts, working across a wide range of disciplines within the sector.

We are very pleased that this guidance is being updated and providing more specific guidance in order to reduce risk.

Please see below for specific comments relating to the consultation questions.  I hope that these prove useful.  For reference, the text in blue is the original text from the draft guidance, and our comments and suggested amendments follow below each point in black.  We have tried to incorporate these into the questions posed in the consultation request.

**Q1. Is the guidance clear and easy to follow? If not, what additional information is required?**

Pg 3. This guidance covers two methods of serving LTTC beef burgers, namely the sear and shave method and the source control method. This guidance also covers the sous vide method of cooking beef burgers which can produce burgers which appear pink in the middle despite being thoroughly cooked.

Comments: It is unclear why this references 2 rather than 3 methods?

It would be better to group shave/sous-vide together in the first  sentence (because they are cooking “methods”) and then “This guidance also covers source control ……..” (because that is a risk mitigation strategy, rather than a “method”)

Pg 5. The methods of producing less than thoroughly cooked (LTTC) beef burgers, or beef burgers that appear to be less than thoroughly cooked, which are covered in this guidance can give similar levels of reductions in bacteria

Comments:  The use of the word ‘can’ is unclear – the methods will (or should) give the required level of reduction in bacteria; it may be better to say the methods… *if followed correctly*… *will* give similar levels of reductions in bacteria?

**Q2. Does the guidance contain sufficient information to aid compliance with the law? If not, what additional information is required?**

General comments

IFST main concerns relate to the overall wording of the guidance concerning which parts of the law the guidance is aiming to aid compliance with. This is of most concern for the source control method where IFST do not think that the information relating to this method is sufficient to aid compliance with the law.

Pg 2, the guidance states that: There is no legal requirement to cook meat for a specific time or to a specific temperature and businesses can serve LTTC beef burgers if they can demonstrate that they have controlled the risks to acceptable levels.

Comments:  It would be useful to specify which aspects of the law the guidance aims to aid compliance with, and check the wording of the guidance is appropriate and helps the food business operator to comply with these aspects. It would be helpful to mention that the FSA expects sizeable food businesses to have a HACCP plan, and whichever mitigation strategy is employed it should be included in this plan and verified as to its effectiveness. This should include advice on how to comply, monitor the process and verify it has worked.

The steps listed from Pg 11 (Purchase, Delivery to caterer, Storage, Preparation, Cooking, Service) are described as ‘Best Practice’, however without these steps it is unclear how a food business operator can provide a safe LLTC burger to the consumer using this method.

Overall, IFST believe that the guidance for the source control method does not sufficiently reflect the difficulty for an FBO risk-assessing and controlling the multiple steps required throughout the supply chain to ensure a safe end product.

Specific points

Pg 5, the guidance states: Sous-vide method - burgers are vacuum packed and cooked in a water bath for a longer period and at a lower temperature than conventional cooking. A time/ temperature combination equivalent to 70°C for two minutes is achieved. This can result in beef burgers remaining pink in the middle while achieving a six-log reduction in bacteria.

Comments:  While it is covered in more detail further into the guidance, it would be useful to specify in the summary above that the sous-vide method should be validated to ensure that the time/temperature combination will achieve a process equivalent to 70°C for 2 minutes throughout the core of the burger.

Pg 6, the guidance states: Sear and shave - the outer surfaces of a piece of meat are cooked to a high enough temperature to achieve at least a six-log reduction in bacteria. The outer surfaces are then shaved off and the remaining meat is used to make burgers which are lightly cooked. This method of cooking can achieve a six-log reduction in bacteria while the beef burgers remain pink in the middle.

Comments:

The guidance should make it clear that the piece of meat to be used has to be entire and whole, not mechanically tenderised or reconstituted in anyway

It would be clearer to state … and the remaining meat can be minced and used to make burgers…

Pg 6, the guidance states: Source control method – beef, minced beef or beef burgers are bought from suppliers with strict controls in place, which research has shown can reduce bacteria by two-logs. The beef burgers are then lightly cooked to achieve at least a four-log reduction in bacteria. The infographic (Figure 1) gives an overview of the controls to be taken at each stage of the food chain when using this method. You can also download the Source control method infographic as a PDF.

Comments:  The guidance is clear and the requirement to use an approved supplier and a list is given.  However, although  it might be possible in a fully integrated supply chain from farm to table, this methodology is inherently more variable with reliance on multiple prerequisites across the supply chain, and without critical control points that are manageable by the end supplier / caterer to ensure safety of consumers.  To this end we suggest that this methodology is technically possible but impractical for the food business operator to confidently apply without this fully integrated supply chain from farm to table, especially with the low infectious dose for O157 and other strains.

**Q3. Is our assessment of the impact of the updates sufficient?**

**A3.** *IFST are not able to comment on the assessment of the impact.*

**Q4. Do you favour retaining the term ‘less than thoroughly cooked’ and the acronym LTTC or would you prefer that we used a different term such as ‘pink’ or ‘rare’ or lightly cooked, or something else?**

Comments:  As long as the guidance is clear, the term less than thoroughly cooked accurately describes the issue at hand. We would prefer the use of this term to the other proposals, as these can be confused with cooking methods for whole cuts of meat which would be safe to consume.

**Other comments:**

Page 4:

“When meat is minced to produce burgers, harmful bacteria from the surface of the raw meat may be spread throughout the burger. Unless the burger is cooked right through, bacteria can remain on the inside. “

We would recommend to change this slightly to say “these bacteria may survive on the inside”.  The process is pasteurisation not sterilisation, so some bacteria will in any case remain, just not the vegetative pathogens

Pages 2, 5, 9:

Cooking to a time/temperature combination of 70°C for two minutes will result in a six-log reduction in bacteria and this is generally considered to reduce the risk of food poisoning to an acceptable level.

We would recommend to change this to say “time/temperature combination of 70°C for two minutes, or equivalent (and then signpost to where the equivalents are)”

General:

We would recommend to include the guidance or information on time/temperature equivalents for 70C for 2 minutes leading to the six-log reduction in bacteria as we understand that there are different time/temperature combinations in the literature.

Best regards

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**Scientific Policy Director**