

## **New Compliance Guidelines for Ready-to-Eat Products**

By Lynn Knipe, OSU

USDA FSIS has released two updated compliance guidelines for small and very small processors and these can be found at the websites shown below. One provides clarification on the destruction of Salmonella and other pathogens in ready-to-eat (RTE) meat products. The other updates the guidance material available related to chilling of RTE meat products. Establishments have an opportunity to make comments on these new guidance documents, however, the deadline for comments is August 15, 2017. I have highlighted what I consider to be the most important details of these documents, but there are more details in the guidance documents.

### **Salmonella Compliance Guidelines for Ready-to-Eat Meat Products -**

[www.fsis.usda.gov/wps/wcm/connect/bf3f01a1-a0b7-4902-a2df-a87c73d1b633/Salmonella-Compliance-Guideline-SVSP-RTE-Appendix-A.pdf?MOD=AJPERES](http://www.fsis.usda.gov/wps/wcm/connect/bf3f01a1-a0b7-4902-a2df-a87c73d1b633/Salmonella-Compliance-Guideline-SVSP-RTE-Appendix-A.pdf?MOD=AJPERES)

### **Lethality Requirements for Fully Cooked, Not Shelf Stable Products**

Roast, cooked or corned beef products – must achieve either a 6.5 log reduction of Salmonella (9 CFR 318.17) or an alternative lethality (validated process to achieve  $\geq 5$  log reduction of Salmonella) during cooking. Appendix A could be used as a guide to achieve a 6.5 log reduction of Salmonella. To support using the 5 log reduction option for Salmonella, establishments would need to provide letters of guarantee or certificates of analysis that demonstrate that raw materials used were either tested or treated (antimicrobial rinses) to achieve a Salmonella level of about 2 logs or less prior to the application of the 5 log reduction process.

Cooked, uncured meat patties – require meeting time/temperature combinations to achieve a 5 log reduction of Salmonella (9 CFR 318.23) during cooking

Cooked poultry products – must achieve a 7 log reduction of Salmonella (9 CFR 381.150(a)(1) during cooking

For other ready-to-eat (RTE) meat products – a 6.5 log or 5 log reduction of Salmonella is recommended during cooking. To support using the 5 log reduction option for Salmonella, establishments would need to provide letters of guarantee or certificates of analysis that demonstrate that raw materials used were either tested or treated (antimicrobial rinses) to achieve a Salmonella level of about 2 logs or less prior to the application of the 5 log reduction process.

For all cooked products that are either large in size or for any reason cook slowly, Staph growth needs to be addressed. FSIS has determined that it should take no more than 6 hours for the internal temperature of a meat product to go from 50 to 130F, otherwise *S. aureus* may grow to the point of being a hazard. University of Wisconsin also has a validated process which may support the safety of a slow heat process.

### **Lethality Requirements for Not Fully Cooked, Not Shelf Stable Products**

For shelf stable products, FSIS recommends that processors achieve a 5 log reduction of Salmonella throughout the entire process (e.g., fermentation, drying, etc.). It is also recommended that processors achieve a 5 log reduction in *L. monocytogenes* and *E. coli* O157:H7 during the total process. For other cooked products, it is not expected that processors support the lethality of *L. monocytogenes* and *E. coli* O157:H7 during the cooking processes, as Salmonella is considered by FSIS to be the pathogen of choice as an indicator of lethality.

This document discusses the importance of relative humidity when cooking products, and suggests that humidity should be a part of the cooking critical limits or incorporated into a prerequisite program at the cooking step, unless the process meets one of the criteria in the “Situations When Humidity is Not Needed” list on p. 18.

This document also discusses post-processing handling and sanitation (which are very important when making RTE products), hazards associated with ingredients that are added to products, and prerequisite programs to prevent hazards.

**Compliance Guideline for Cooling of Fully Cooked and Partially Heated-RTE Products and Revised Appendix B** - [www.fsis.usda.gov/wps/wcm/connect/9ac49aba-46bc-443c-856b-59a3f51b924f/Compliance-Guideline-Stabilization-Appendix-B.pdf?MOD=AJPERES](http://www.fsis.usda.gov/wps/wcm/connect/9ac49aba-46bc-443c-856b-59a3f51b924f/Compliance-Guideline-Stabilization-Appendix-B.pdf?MOD=AJPERES)

In reviewing the critical operating parameters, for cooling RTE products, FSIS recommends more temperatures be checked more frequently between the 130 and 80°F temperature range, than below 80°F, and I believe that this is particularly important if you are not using some type of chart or data recorder. In the event of a chilling deviation, the modelling programs all require at least 3 time and temperature data sets above 80°F, so I recommend that anytime you manually check a temperature, even if the product isn't exactly where you need to meet your HACCP critical limits, write every temperature and time down.

Related to another critical operating parameter, ingoing nitrite level, FSIS has accepted that 200 ppm nitrite would prevent *C. botulinum*, however, in the event of a cooling deviation, the inhibition of *C. perfringens* growth had to be proven, typically through modelling programs. New research shows that when nitrite is added with a cure accelerator, such as sodium erythorbate, that *C. perfringens* is also prevented.

Performance standards for chilling of RTE meat products continue to be set at a limit of 1 log growth of *C. perfringens* during the chilling process. With this new guidance, establishments may request a waiver to allow up to 2 log growth during chilling, however, establishments would need to provide additional data, such as results of verification testing or a validated intervention to reduce *C. perfringens* spores.

FSIS has also established new guidelines for limiting growth of *C. perfringens* to <2 logs, in uncured products, which includes 130-80°F in ≤ 2.5 hrs and 80-40°F in ≤ 6.5 hrs. The second option is chilling from 120-80°F in 2.5 hrs and 80-55°F in 5 hrs, followed by continuous chilling to 40°F.

This document provides a number of publications that can be used to support chilling times and temperatures different from the FSIS guidelines, as well as a few articles that they do not feel as acceptable for use in supporting chilling processes.

This document also discusses the use of modeling programs to support alternative cooling methods, and to determine the safety of products resulting from a cooling deviation. It is recommended that establishments use the Combase Perfringens Predictor Model ([www.combase.cc](http://www.combase.cc)) for either cured or uncured products, however, they only recommend the PMP models on uncured products. There is a third option, Smith-Schaffner Model, which I have had no experience with.

Please contact me know if you have any questions about these guidelines or if you would like a copy faxed to you ([knipe.1@osu.edu](mailto:knipe.1@osu.edu) or (614)292-4877). To make comments to FSIS on these new compliance guidelines, you can either mail your comments to: Docket Clerk, USDA, FSIS, Patriots Plaza 3, 1400 Independence Ave. SW, Mailstop 3782, Room 8-163B, Washington, DC 20250-3700 or on line at: [www.regulations.gov/](http://www.regulations.gov/).

