

1.9.2025

AFDO ADVANCED INSPECTOR BOOT CAMP

SPEAKER RESOURCES and Q&A

Conducting Environmental Assessments During Foodborne Illness Investigations

Integrated Food Safety Centers of Excellence

<https://www.cdc.gov/food-safety-centers-of-excellence/about/index.html>

Environmental Health Specialist Network

<https://www.cdc.gov/restaurant-food-safety/php/practices/research-partners.html>

<https://www.cdc.gov/restaurant-food-safety/php/investigations/registration.html>

<https://www.cdc.gov/restaurant-food-safety/php/training/eats.html>

Food and Drug Administration

[Employee Health Policy Tool \(fda.gov\)](#)

Rapid Response Team Manual

<https://www.fda.gov/media/123908/download>

Association of Food and Drug Officials

<https://www.afdo.org/resources/goodsamples-brochure/>

Council to Improve Foodborne Outbreak Response

<https://cifor.us/downloads/clearinghouse/CIFOR-Guidelines-Complete-third-Ed.-FINAL.pdf>

International Association for Food Protection Procedures to Investigate Foodborne Illness – 6th Edition

<https://www.foodprotection.org/publications/other-publications/>

Q & A from Conducting Environmental Assessments During Foodborne Illness Investigations:

Should one immediately get a sample of the food. If so how?

- It really depends on how the investigation is going and is a decision made by the lab, epi, and EH outbreak team. In my opinion, if you have a good food signal and can secure the food to hold for testing as the investigation develops that is a best practice.

TCS or Not

JOB AID: Time and Temperature Control for Safety Foods

<https://www.fda.gov/media/101004/download>

A Review of Recipes for Kansas Fairs and Exhibitions

<https://www.rrc.k-state.edu/doc/judging/FrostingsFillingsData.pdf>

Cheese Science Toolkit

<https://www.cheesescience.org/ph.html>

Bad Bug Book

[https://www.fda.gov/files/food/published/Bad-Bug-Book-2nd-Edition-\(PDF\).pdf](https://www.fda.gov/files/food/published/Bad-Bug-Book-2nd-Edition-(PDF).pdf)

Water Activity Values of Select Food Ingredients and Products

<https://onlinelibrary.wiley.com/doi/pdf/10.1002/9780470376454.app5>

pH Values of Common Foods and Ingredients

https://www.clemson.edu/extension/food/food2market/documents/ph_of_common_foods.pdf

Q & A from TCS or Not:

Would you say that a product assessment goes hand in hand with a variance because that challenge study or process authority has to validate the pH and water activity?

Product assessment for TCS determination is different than holding time for TCS food such as tomato sauce used by chain pizza places that hold it at room temperature for a given period, is this TPHC? or still require a variance because it is a TCS Food product that has scientific evidence to proof Food Code requirements to hold at 41 ° F

- A Product Assessment could determine non-TCS or that the product is TCS but can be held longer than 7 days, held using TPHC for more than 4 hours, etc.

I have had several Operators have butter out at room temperature. What is your direction on this. I have referred them to go by the manufacturer's directions.

- Time as the Public Health Control is probably the best option unless the manufacturer will provide information on pH, water activity, or even a Product Assessment.

For a baked blueberry muffin, would it be "possibly TCS" because of the cooked blueberry falling under the cooked plant food definition?

- Blueberries are typically pH 3.2-3.6, so they wouldn't be TCS. The muffin itself would be low risk and not typically handled as TCS.

Do we want to consider salsa within the 7 DAY RULE?

- A lot of variables but would likely be TCS subject to Date Marking.

Blended room temperature water with dry chiles be non TCS? vs dried chiles boiled in hot water then blended to make a salsa be TCS?

- The chiles would likely be heat treated during processing so would start from standpoint of considering as TCS once rehydrated.

How different would a sweet potato pie be from a pumpkin pie?

- They would be very similar.

Are other inspectors carrying pH strips and determining acidity of house made sauces on site? I usually just say that we should assume that it's TCS unless they've had it reviewed by a process authority.

- Many inspectors have access to pH strips and/or pH meters. These can be good screening tools to help guide decisions. If a strip comes back at 3.8 for example, there is a lot of margin. For example, BBQ sauce or sushi rice.

In a mobile food setting, should Boba always be on ice? Assuming they will be operating over 4 hours.

- If we determine if it is TCS, temperatures or time would need to be employed for safety. If they want to go to 6 hours, they could follow the TPHC section that allows for foods that are maintained at 70°F or less.

Does cut melon refer to only melons like cantaloupe, honeydew, watermelon or also melon family including cucumbers, squash, pumpkin, etc?

- It is commonly not applied to cucumbers, squash, pumpkin, etc. The Conference for Food Protection has a committee considering this as part of its work.

What do you think about labels on manufactured goods that have the statement "Refrigerate After Opening"? Especially if it is a food we generally consider to NOT be TCS like pickles?

- This is an ongoing concern. You do have to understand the kind of food to make the right determination, which can vary even though the same refrigeration statement is used on different types of food. Here is FDA's guidance.
<https://www.fda.gov/media/134845/download>

Is Raw bacon TCS?

- Raw bacon would most likely meet the definition of TCS but would be a lower risk TCS.

I have a vendor that does plant-based foods and thinks it's ok not to have it on heat or ice if it needs to be.

- Always a challenge with operators that are challenging the science. Can TPHC apply and have things still be safe? Why does he feel that doesn't need to be hot or cold held...may be a good reason for his justification that you can work with them on within the confines of the code.

If raw nut milk made in-house, what would the length of time for shelf stability be? Would you ensure refrigeration because we don't have a Process Authority confirmation to this effect?

- If not heat treated it wouldn't technically be TCS but refrigeration would likely be needed to keep molds from growing. The Food Code wouldn't specify a maximum hold time. A

recommendation would be to see if Extension or University food programs would be able to evaluate the product.

What about crepe batter, will it be TCS

- I would look at the product the same way as we talked about the waffle batter. It has milk eggs typically so it would be TCS...but low risk due to the next step in making the product.

What is the difference between contamination and identifying as tcs?

- TCS means that time and temperature control is required to prevent pathogen growth or toxin formation vs preventing contamination. For example, orange juice could be contaminated with E. coli but orange juice isn't TCS.

Was the tea TCS?

- Very slow growth for the pathogens of concern. The pH of the product would NOT move it into the non-TCS part of Table B. Per food code we would be looking at the cleaning of the vessel every 24 hrs.

Is there a pdf or printable list for TCS foods?

- Unfortunately, there is not a specific list because there are so many foods and variations. Lots of background information is available at <https://www.fda.gov/files/food/published/Evaluation-and-Definition-of-Potentially-Hazardous-Foods.pdf>

You skipped the tea. Can you review that? I heard that is a TCS with special allowance to leave at room temp all day?

- Probably TCS...yes. But the pathogens of concern are VERY slow growing so 24 hour cleaning for the vessel would address any concerns, as per the Food Code.

Wondering if cooked pork belly that establishments call "bacon" should still be treated as TCS

- Pork belly and bacon come from the same cut but are processed differently. Pork belly would tend to be higher water activity and would likely be TCS.

So cooked bacon isn't TCS what about pork belly, does the fat content change anything?

- Pork belly and bacon come from the same cut but are processed differently. Pork belly would tend to be higher water activity and would likely be TCS.

Could staph toxin be a consideration for batters stored overnight

- It's possible, but unlikely unless bare hand contact with the batter.