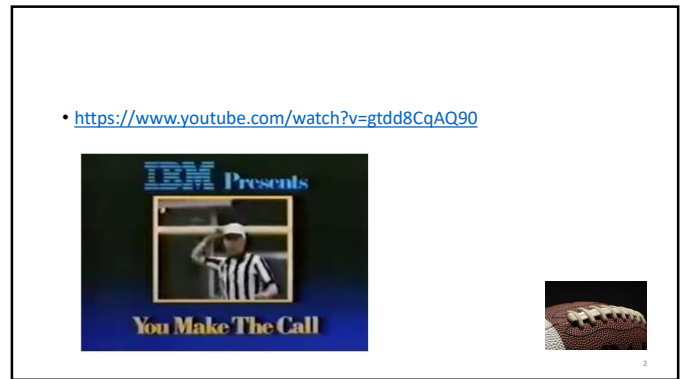
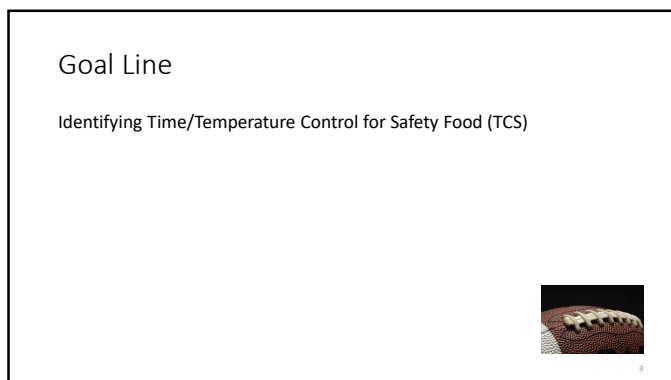




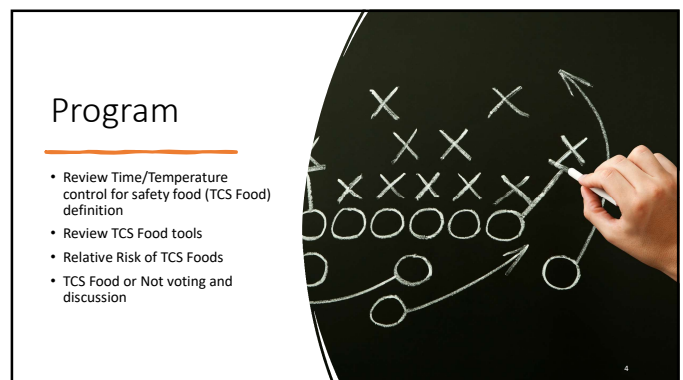
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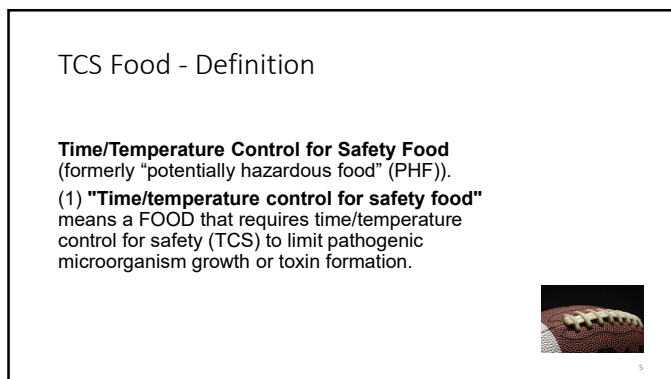
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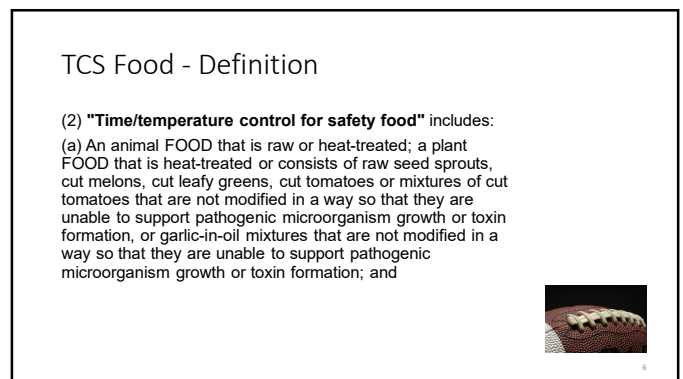
3



4



5



6

TCS Food - Definition

- (2) **"Time/temperature control for safety food"** includes:
 (b) Except as specified in Subparagraph (3)(d) of this definition, a FOOD that because of the interaction of its A_w and PH values is designated as Product Assessment Required (PA) in Table A or B of this definition:



7

Table A. Interaction of pH and A_w for control of spores in FOOD heat-treated to destroy vegetative cells and subsequently PACKAGED

A_w values	pH: 4.6 or less	pH: > 4.6 - 5.6	pH: > 5.6
≤ 0.92	non-TCS FOOD*	non-TCS FOOD	non-TCS FOOD
> 0.92 - 0.95	non-TCS FOOD	non-TCS FOOD	PA**
> 0.95	non-TCS FOOD	PA	PA

* TCS FOOD means TIME/TEMPERATURE CONTROL FOR SAFETY FOOD
 ** PA means Product Assessment required



8

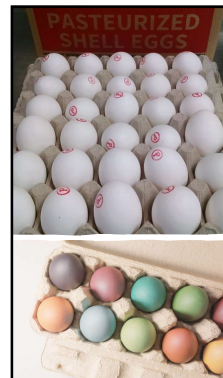
Table B. Interaction of pH and A_w for control of vegetative cells and spores in FOOD not heat-treated or heat-treated but not PACKAGED

A_w values	pH: < 4.2	pH: 4.2 - 4.6	pH: > 4.6 - 5.0	pH: > 5.0
< 0.88	non-TCS food*	non-TCS food	non-TCS food	non-TCS food
0.88 - 0.90	non-TCS food	non-TCS food	non-TCS food	PA**
> 0.90 - 0.92	non-TCS food	non-TCS food	PA	PA
> 0.92	non-TCS food	PA	PA	PA

* TCS FOOD means TIME/TEMPERATURE CONTROL FOR SAFETY FOOD
 ** PA means Product Assessment required



9



(3) **"Time/temperature control for safety food"** does not include:

- (a) An air-cooled hard-boiled egg with shell intact, or an EGG with shell intact that is not hard-boiled, but has been pasteurized to destroy all viable *salmonellae*;

10

(3) **"Time/temperature control for safety food"** does not include:

- (b) A FOOD in an unopened HERMETICALLY SEALED CONTAINER that is commercially processed to achieve and maintain commercial sterility under conditions of non-refrigerated storage and distribution;



11

(3) **"Time/temperature control for safety food"** does not include:

- (c) A FOOD that because of its PH or A_w value, or interaction of A_w and PH values, is designated as a non-TCS FOOD in Table A or B of this definition;



12

13

14

15

16

17

18

White Bread

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



19

Focaccia

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



20

BBQ Sauce (Made on-site)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



21

Salsa (Fresh, made on-site)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



22

Salsa (Cooked, made on-site)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



23

Boba (Tapioca pearls)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



24

Banana Cream Pie

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



25

Pumpkin Pie

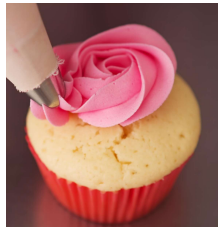
1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



26

Cream Cheese Frosting

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



27

Raw Meat and Poultry

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



28

Nut Milks

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info




29

Nut Cheese

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



30



Bacon (Cooked)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info


31



Batter (used w/ raw chicken)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info

32



Waffle Batter

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info

33



American Cheese Slices

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info


34



Hash Browns (Reconstituted)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info

35



Tea (in room temperature dispenser-unsweet)

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info

36

Butter

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



37

Cheddar Cheese

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



38

Brie

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



39

Garlic Cloves in Oil

1. Definitely TCS
2. Probably TCS
3. Probably Not TCS
4. Definitely Not TCS
5. Need More Info



40

Review the Game Film (Resources)



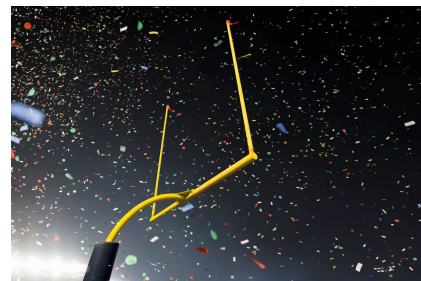
WATER ACTIVITY
<https://onlinelibrary.wiley.com/doi/pdf/10.1002/9781119764544.ch44>



pH
https://www.clemson.edu/extension/food/food2ma/food/documents/1014_1014_COMMON_FOODS.PDF

41

That's the Ball Game!



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