

SafeBites
Food Handler

Food Safety Best Practices: Scratch Cooking

Cyndie Story, PhD, RD, CC, SNS
Jeannie Sneed, PhD, RD, CP-FS

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2



SafeBites
Food Handler

Goals for Today

- Identify food safety risks associated with scratch cooking
- Learn how to control food safety risks while maintaining food quality
- List specific food handling practices that could mitigate foodborne illness

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2



SafeBites
Food Handler

Foodservice Goals

To serve **nutritious** and **safe** food within an established **budget** that **customers will enjoy**.



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2



SafeBites
Food Handler

Foodservice Trends

Customer Satisfaction
Scratch Cooking
Food Safety
Nutrition
Farm-to-Fork
Budget
Cost Containment

Wendy's Out

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2



SafeBites
Food Handler

Does scratch cooking increase food safety risks?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

Foodborne Illness Risk Factors

1. Food from unsafe sources
2. Inadequate cooking
3. Improper holding temperatures
4. Contaminated equipment
5. Poor personal hygiene

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

1. Food from Unsafe Sources

- Approved sources
- No foods from private homes
- Original containers



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

2. Inadequate Cooking

- Take food temperatures
- Use calibrated thermometers
- Record/document end-point cooking temperatures

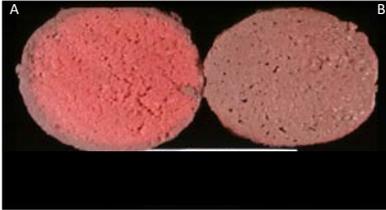


WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites Food Handler

Which patty is safe to eat?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites Food Handler

Ground Beef Cooked Color & Safety

A Food Safety Issue

Development of a well-done, internal cooked appearance at end-point temperatures **LOWER** than those needed to kill pathogenic bacteria.



#9 #12
55°C (131°F)

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites Food Handler

Persistent Pink “Hard to Cook” Color

A Quality Issue

- A pink/red color remaining after a **SAFE** endpoint temperature is reached
- Costly problem to meat producers and food service due to consumer rejection



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites Food Handler

Causes of Persistent Pink Colors

- Under cooking
- Patties immersed in meat juice
- Reduced hemochrome pigments
- CO, CO₂, NO₂ contamination
- Oxides of nitrogen
- Vitamin E and reducing agents
- Myoglobin amount & **redox form**
- **Elevated muscle pH**

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites
Food Handler

Cooking Raw Ground Beef in Steamer

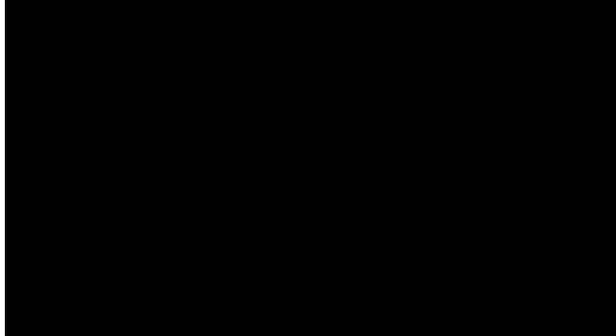


WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

Cooking Raw Ground Beef in Steamer



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

Safe, but Is It Quality?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler

SafeBites
Food Handler

3. Holding Temperatures

- Holding at safe temperatures

Is this the correct thermometer for your hotbox?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2

FoodHandler 17

SafeBites from FoodHandler

4. Contaminated Equipment

- Cross Contamination
 - Equipment
 - Thermometers
- Cleaning and Sanitizing



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites from FoodHandler

5. Personal Hygiene



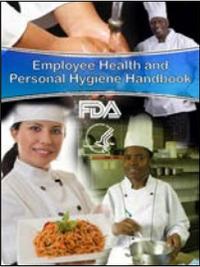
- Employee Health
 - Reporting illness, symptoms, exposures
 - Exclusion
 - Restriction

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**

SafeBites from FoodHandler

Intervention Strategies

- Implement employee health policies



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler** 20

SafeBites from FoodHandler

Intervention Strategies, cont.

- Handwashing and proper glove use



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler** 21

SafeBites Food Handler

Intervention Strategies, cont.

Should she be wearing a watch?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**²²

SafeBites Food Handler

Intervention Strategies, cont.

- Preventing cross contamination



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**²³

SafeBites Food Handler

Flow of Food

```

    graph LR
      Receive --> Store --> Prepare --> Cook
      Cook --> Cool
      Cool --> Reheat --> Hot Hold --> Serve
  
```



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**²⁴

SafeBites Food Handler

Intervention Strategies, cont.

- Time/Temperature Relationships
 - Cook food properly
 - Hold food at correct temperature
 - Cool food properly
 - Reheat to correct temperature



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**²⁵

SafeBites Food Handler

Cooling Study: Methods

- Four different food products were tested:
 - Chili con Carne with Beans (USDA #D-20)
 - Steamed Rice (USDA #B-03)
 - Beef Taco Meat (USDA #D-13)
 - Tomato Sauce (Meatless) (USDA #G-07)



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler** 26

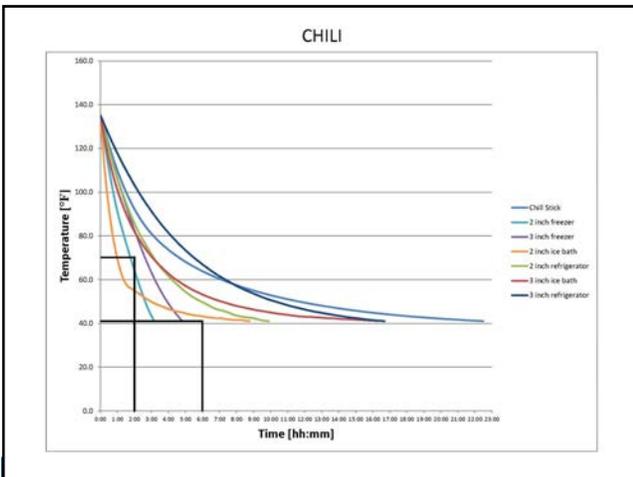
SafeBites Food Handler

Cooling Study: Methods

- Cooling Treatments
 - Walk-in cooler (uncovered)
 - Walk-in cooler (uncovered) with an ice bath
 - Walk-in cooler (uncovered) with the use of a chill stick (chili and tomato sauce only)
 - Walk-in freezer (uncovered – rice excluded)



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler** 27



SafeBites Food Handler

Cooling Study Conclusions

- Passive use of chill stick usage not effective.
- Freezer effective for products at 2" depths.
- Freezer not effective for products at 3" depths.
- Ice bath was effective for rice at 2" depths.
- Ice bath not effective for products at 3" depths.
- No refrigerator treatments were effective at 2" and 3" depths for any food product.
- Demonstrates need for rapid cooling methods in school foodservice operations.
- Blast chillers are another cooling method, however, they are expensive.

WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler** 29

SafeBites from FoodHandler Intervention Strategies, cont.

- Thawed, previously frozen soups– Should I be worried? Why?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**³⁰

SafeBites from FoodHandler Intervention Strategies, cont.

- Storing foods safely
- Using FIFO



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**³¹

SafeBites from FoodHandler Intervention Strategies, cont.

- Reheating foods safely



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**³²

SafeBites from FoodHandler Intervention Strategies, cont.

- Safe handling of fresh produce
 - What three produce items must be held and served at 41°F or below?



WWW.FOODHANDLER.COM | 800.338.4433 EXT.2 **FoodHandler**³³