Guidelines for Submitting a Hazard Analysis Critical Control Point (HACCP) Plan

Per the Code of Maryland Regulations (COMAR) 10.15.03, a HACCP plan is required for all high or moderate priority facilities. Low priority food facilities which serve only hand dipped ice cream or commercially packaged potentially hazardous foods do not require a HACCP plan. The following information is intended to assist you in providing the necessary information for both priority assessment and HACCP plan development. To access COMAR 10.15.03 online, go to this link: http://www.dsd.state.md.us/comar/comar.aspx

HACCP Defined

As the Food and Drug Administration (FDA) defines it: "HACCP is a management system in which food safety is addressed through the analysis and control of biological, chemical and physical hazards…"

The 7 steps of developing and maintaining a HACCP plan involve:

1. Assessing or analyzing hazards: ex. raw meats are cooked and served; undercooking can mean unsafe food.
2. Establishing Critical Control Points: ex. hamburger must be thoroughly cooked.
3. Establishing critical limits for each Critical Control Point: ex. hamburger will be cooked to no less than +155˚F for 15 seconds.
4. Establishing Critical Control Point monitoring requirements: ex. hamburger patties will be checked using a metal stem thermometer inserted into the middle to see if a temperature of at least +155˚F is for 15 seconds is achieved.
5. Establishing corrective actions when critical limits are not met: ex. if temperature is not +155˚F for 15 seconds in center of burger, the employee continues to cook until it reaches that temperature.
6. Establishing record keeping procedures (i.e. use of temperature log for record keeping).
7. Establishing procedures for verifying that the HACCP system is working (i.e. calibration of equipment and review of records and logs).

HACCP Plan Submission

A HACCP plan submission to this Department must include:

- Identification of Critical Control Points (CCP). CCPs generally include cooking, cooling, reheating, cold holding, and hot-holding, but other steps may be included if needed for a specific food.
- Critical limits for each CCP. (see chart in Table A below)
- Monitoring procedures for each CCP.
- The corrective action that will be taken if there is a loss of control at a CCP due to such factors as employee error, equipment malfunction, or power failure
- Verification procedures.
- A list of equipment used to support the proposed food service systems and maintain control at each CCP.
- Written procedures for employee training on HACCP procedures. (see sample in box on next page)

NOTE: The majority of HACCP plans focus on controlling the risk from disease-causing organisms. Foods that can be contaminated and will allow the presence or growth of these organisms are "potentially hazardous foods" and require time and temperature controls.

Table A. Critical Limits for Critical Control Points per COMAR 10.15.03

FOOD / MENU ITEM	CRITICAL CONTROL POINT	CRITICAL LIMIT
Poultry	Cook	Minimum +165ºF for 15 seconds.
Stuffed Meats	Cook	Minimum +165ºF for 15 seconds.
Eggs for Delayed Service, Hamburger and Other Ground Meats (Other Than Poultry)	Cook	Minimum +155ºF for 15 seconds.
Beef, Seafood, Pork, Pasta, Rice, Dairy, Eggs for Immediate Service	Cook	+145ºF
Commercially Precooked Foods, Food of Plant Origin	Cook	Cook to a minimum +135°F for Hot Holding only, no temperature or critical limit required for foods served immediately.
Hot Held Foods	Hot Hold	Minimum +135°F
All Hot Foods Going From Hot to Cold	Cooling	Cool from +135 ºF to +70 ºF in two hours or less and from +70ºF to +41ºF in 4 hours or less.
Any Food (Raw or Commercially Pre-cooked)	Reheat (after cooling step at the facility)	Minimum +165ºF within 2 hours – use approved cooking equipment.
Cold Food	Cold Hold	+41ºF

WRITTEN PROCEDURES FOR EMPLOYEE HACCP TRAINING (*SAMPLE)*

All employees will be trained to use the approved HACCP plan prior to beginning employment and periodically after that. Training will include identification of the processes that are critical control points, how these processes will be monitored, and what corrective actions must be taken when critical controls are violated. The approved HACCP plan must be available in the food preparation area at all times.

Food temperature logs will be used to monitor product temperatures during the preparation process. These completed logs will be maintained in the food preparation area, and held for review by management, as part of the HACCP monitoring system.

Training in basic sanitation will include hand washing procedures and methods for cleaning and sanitizing utensils, equipment, and food preparation surfaces. All employees will be trained to use and calibrate a metal stem thermometer, and will be required to check and re-calibrate thermometers weekly.

The name of the facility, address, preparer and date, information about your facility and the foods prepared and served need to be included in the HACCP plan to allow determination of your HACCP priority designation and to document your standard operating procedures. The information required is indicated in sections A. and B. below:

A. Priority Assessment Information

1. Menu or foods – Provide a copy of the menu or a written description of the foods to be prepared and served.
2. Food service system – Specify the food preparation and service systems you will use, i.e. cook-serve, cook-chill-reheat-hot hold-serve, cold hold-serve.
3. Population served – Specify whether you serve food in a health care facility, as defined in COMAR 10.15.03.02B (38).

B. General Food Handling Information and Procedures for High or Moderate Priority Facilities

1. Describe how you will ensure that all foods are obtained from approved sources.
2. Specify how cross-contamination from raw to cooked or ready-to-eat foods will be prevented.
3. Indicate how frozen potentially hazardous food will be thawed.
4. Indicate how potentially hazardous food will be cooled, i.e. ice baths, shallow pans, rapid chill.
5. List the foods or categories of foods that will be prepared more than 12 hours in advance of service.
6. Specify whether any prepared foods are distributed off-premises.
7. Specify whether any refrigerated foods are received which require storage temperatures below 41°F.
8. Indicate whether reduced oxygen packaging of food, as defined in COMAR 10.15.03.02B (63), will be conducted onsite.
9. Include specific information for any processes or procedures which incorporate:
   - "Time-only" control (see COMAR 10.15.03.08),
   - "Pooling" of eggs (see COMAR 10.15.03.09D), and/or
   - Serving raw or undercooked animal foods (see COMAR 10.15.03.10 C, D & F).

HACCP Plan Formats

The organization of the above required information can be done in different ways; the following formats are just two ways of presenting this information. The two formats below allow the HACCP plan creator to organize the core information of the HACCP (foods, critical control points, critical limits, monitoring and corrective actions) with tables. All other required information not included in these tables should be included in other pages of the HACCP plan.

1. HACCP Plan Format – Chart Method (*Example Only)*

Food Item: Chicken Noodle Soup
Flow diagram or descriptive narrative of the food preparation steps:
Cook chicken (CCP 1) _> Prepare soup > Cook (CCP 1) > Hot Hold (CCP 2) > Cool (CCP 3) > Reheat (CCP 4) > Hot Hold (CCP 2) > Discard

HACCP CHART

Critical Control Points (CCP)	Monitoring Procedures	Corrective Action
CCP 1 Cook chicken to a minimum of 165° F. Heat soup to a minimum of 165° F.	Check internal temperature.	Continue to cook until food reaches 165° F.
CCP 2 Hot Hold soup at a minimum of 135° F.	Check internal temperature of the soup every 2 hours.	Rapidly reheat soup to 165° F if found out of temperature for less than 2 hours. Discard if greater than 2 hours.
CCP 3 Cool soup from 135° F to 70° F within 2 hours, and from 70° F to 41° F within an additional 4 hours.	Check internal temperature of soup at 1.5 and six hours.	If soup has not reached 70° F in the first 1.5 hours, separate into smaller containers and place in freezer. If soup has not cooled to 41° F within 6 hours, discard.
CCP 4 Reheat cooled soup as needed to 165° F. (Hot hold for service using CCP 2 above. Any soup remaining on steam table at end of day will be discarded.)	Check internal temperature.	Continue to reheat until food reaches 165° F.

Verification: Monitor temperature logs, and/or observe temperature monitoring and calibration practices.

Equipment utilized at each Critical Control Point listed in above chart:
CCP 1: Oven, Range
CCP 2: Soup wells on steam table
CCP 3: Walk-in refrigerator, freezer
CCP 4: Oven, Range
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Food Item:

Flow diagram or descriptive narrative of the food preparation steps:

HACCP CHART

Critical Control Points (CCP)	Monitoring Procedures	Corrective Action

Verification:

Equipment utilized at each Critical Control Point listed in above chart:

CCP 1:

CCP 2:

CCP 3:

HACCP Plan - Example #2 (Process Approach)

Source- 2005 FDA Model Food Code, Annex 4, Section 4(C)

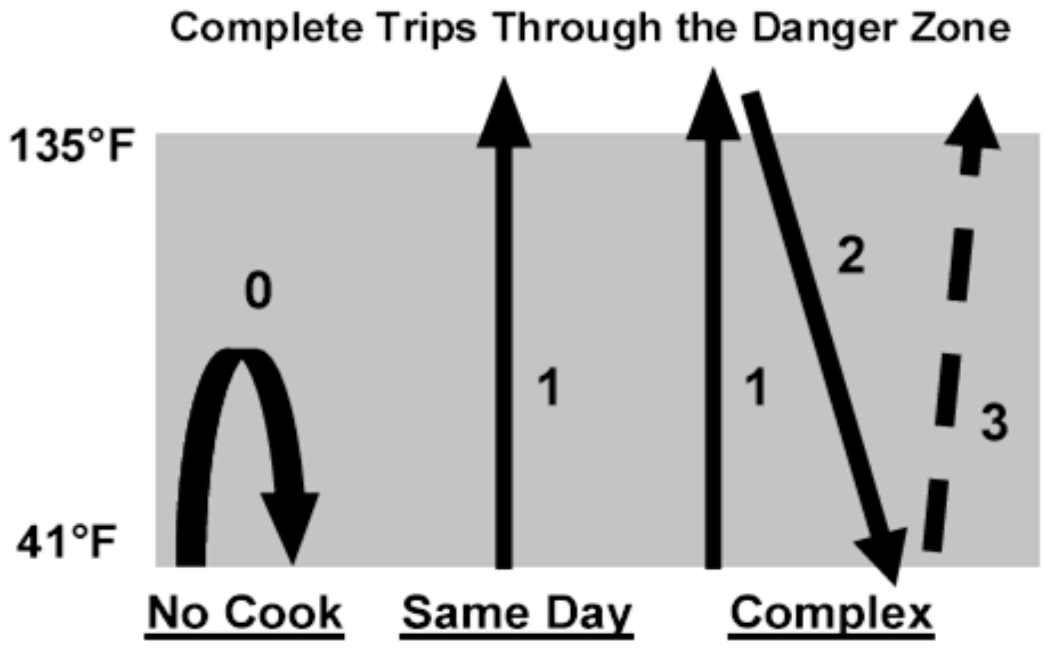
Most food items produced in a retail food service establishment can be categorized into one of three preparation processes based on the number of times the food passes through the temperature danger zone between 41°F and 135°F:

- **Process 1: Food Preparation with No Cook Step,** sample flow: **Receive –> Store –> Prepare –> Hold –> Serve** (other food flows are included in this process, but there is *no cook step* to destroy pathogens)

- **Process 2: Preparation for Same Day Service,** sample flow: **Receive –> Store –> Prepare – > Cook – > Hold –> Serve** (other food flows are included in this process, but there is *only one trip* through the temperature danger zone)

- **Process 3: Complex Food Preparation,** sample flow: **Receive –> Store –> Prepare –> Cook –> Cool – > Reheat –> Hot Hold –> Serve** (other food flows are included in this process, but there are always *two or more complete trips* through the temperature danger zone)

A summary of the three food preparation processes in terms of number of times through the temperature danger zone can be depicted in a Danger Zone diagram. Although foods produced using process 1 may *enter* the danger zone, they do not pass all the way through it. Foods that go through the danger zone only once are classified as Same Day Service, while foods that go through more than once are classified as Complex food preparation.



HACCP –PROCESS METHOD (example)

Process #1, Food Preparation with no Cook Step
Menu Items: Tuna and Chicken Salads, Cold Meat Sandwiches, Ice Cream and Pie, and Milkshakes

CCP Procedures	Equipment Used	Monitoring	Corrective Action
Cool in to or below 41°F within 4 hours, keep in **cold storage** at 41°F until service.	walk-in refrigerator	Check internal product temperature at 2 and 4 hours.	Use ice bath if food has not cooled to 41°F within 2 hours. Discard product that does not reach 41°F within 4 hours.
Cold hold at 41°F for Service.	sandwich prep unit	Check internal product temperature every 2 hours.	Discard product that is found out of temperature for more than 2 hours, (or if time out of temperature cannot be determined).

Process #2, Food Preparation for Same Day Service (Refrigerated storage per Process #1)
Menu Items: Baked Chicken, Roast Beef, Fish Filets, Cooked Vegetables

CCP Procedures	Equipment Used	Monitoring	Corrective Action
Cook (to: Chicken 165°F Ground Beef 155°F Whole muscle meat, fish 145°F	(oven, stovetop, grill, or fryer)	Cooks take random internal final cook temperatures	Continue cooking until final required cook temperature is achieved
Hot hold at 135°F or higher. (Any food left at the end of the day will be discarded.)	steam table	Check product internal temperature every 2 hours.	Bring food temperature rapidly up to 165°F, if food is out of temperature <2 hours. Discard if >2 hours

Process #3, Complex Food Preparation (Cold store per Process #1, cook and hot hold per Process #2)
Menu Items: Soups, Lasagna, Meatballs

CCP Procedures	Equipment Used	Monitoring	Corrective Action
Place un-served product in shallow pans with product thickness of no more than 2". **Cool** from 135°F to 70°F within 2 hours, and from 70°F to 41°F within an additional 4 hours.	walk-in refrigerator	Check internal temperature of food at 1.5 and 6 hours.	If product has not reached 70°F in the first 1.5 hours, separate into smaller containers and place in freezer. If food has not reached 41°F within 6 hours, discard.
Reheat food to 165°F within 2 hours.	convection oven or microwave	Check internal food temperature.	Continue to reheat until 165°F is reached.

Verification: Manager review of temperature monitoring practices and calibration logs.

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Process #1, Food Preparation with no Cook Step

Menu Items:

CCP Procedures	Equipment Used	Monitoring	Corrective Action

Process #2, Food Preparation for Same Day Service

Menu Items:

CCP Procedures	Equipment Used	Monitoring	Corrective Action

Process #3, Complex Food Preparation

Menu Items:

CCP Procedures	Equipment Used	Monitoring	Corrective Action

Verification: