

1908: MANAGING FOOD HAZARDS IN RETAIL FOOD OPERATIONS

TABLE OF CONTENTS

SECTION 1

The Raw Food Contamination Problem	1-1
Self-control (Due Diligence)	1-2
Hazard Analysis.....	1-3
Critical Control Points.....	1-4
Retail Food AMC-HACCP Policies, Procedures, and Standards Manual	1-5
Implementing a Food Safety Management System	1-6
HACCP Summary	1-8
HACCP Is the Foundation for Quality	1-9
Foodborne Illness	1-10
Factors that Contribute to Outbreaks of Foodborne Disease	1-11
Chemical Hazards.....	1-13
Adverse Reactions to Food.....	1-14
Physical (Hard Foreign Object) Hazards	1-16
Physical Hazards from Animals and Other Sources	1-17

SECTION 2

Food Microorganisms	2-1
The Biological Hazard.....	2-2
Food Spoilers, Process Microorganisms, and Pathogens.....	2-3
Spoilage Microorganisms	2-4
Types of Foodborne Illness	2-5
Growth of Foodborne Disease Bacteria.....	2-6
Destruction of Bacteria.....	2-7
<i>Salmonella</i> spp. HACCP	2-8
<i>Salmonella</i> spp. Control	2-9
<i>Campylobacter jejuni</i> Characteristics	2-10
<i>Campylobacter jejuni</i> HACCP	2-12
<i>Escherichia coli</i> Characteristics	2-13
<i>Escherichia coli</i> HACCP.....	2-15
<i>Listeria monocytogenes</i> Characteristics.....	2-16
<i>Listeria monocytogenes</i> HACCP	2-18
Hepatitis A HACCP.....	2-19
Noroviruses (Norwalk-like viruses) HACCP	2-20
<i>Staphylococcus aureus</i> HACCP	2-22
<i>Staphylococcus aureus</i> Control	2-23
Spores	2-24
<i>Clostridium perfringens</i> HACCP	2-25
<i>Clostridium perfringens</i> Control.....	2-26
<i>Bacillus cereus</i> Characteristics	2-27
<i>Bacillus cereus</i> HACCP	2-30
<i>Clostridium botulinum</i> Characteristics	2-31
<i>Clostridium botulinum</i> HACCP.....	2-36

SECTION 3

Personal Hygiene.....	3-1
Cross-contamination.....	3-2
The Body as a Source of Pathogens.....	3-3
Contamination of the Hands and Hand Washing.....	3-4
Cleaning and Sanitizing.....	3-5
The Four-step Surface Sanitizing Process	3-6
Sanitizing Solution	3-7
Warewashing HACCP.....	3-8

Construction HACCP.....	3-9
Wooden Equipment	3-11
Air Gaps and Backflow Prevention	3-12
Mobile Foodservice Units.....	3-13

SECTION 4

Recipe Engineering.....	4-1
Recipe Flow Chart and HACCP Recipe	4-2
Meat Purchasing HACCP	4-6
Inspecting Purveyors to Assure Quality.....	4-7
Quality Control in Receiving, Inspecting, and Storing Ingredients	4-8
Meat Quality Attributes	4-9
Poultry, Fish, and Seafood.....	4-10
Spoilage of Meat, Poultry, and Fish.....	4-11
Dairy Products	4-12
Eggs	4-13
Leafy and Flower Vegetables	4-14
Tubers, Vine and Root Vegetables	4-15
Fruits and Soft-Skinned Vegetables.....	4-16
Grocery / Dry Storage Items - Salad Oil, Canned Foods, Herbs, Spices	4-17

SECTION 5

Receiving	5-1
Storage HACCP.....	5-2
Contamination of Fruits and Vegetables.....	5-3
Temperature Measurement of Food.....	5-4
Thawing	5-5
The Seven Quality Assurance Recipe Processes.....	5-6
Food Preparation Methods.....	5-9
Food Cooling	5-10
Cooling HACCP	5-11
Buffets, Banquets.....	5-12
Carry-Out Foods	5-13
Dispensing Milk and Cream	5-14
Dispensing Condiments	5-15
Display, Transport, and Leftovers.....	5-16
Critical Temperatures.....	5-17
Leftovers HACCP.....	5-18
Emergency Procedures.....	5-19
HACCP Summary.....	5-20