

Food and Water

Collection, Packaging, and Laboratory Testing Guidelines

Training 2006
Updated April 2007



LEARNING OBJECTIVES:

- **Effectively Communicate the Response of Food and Water Testing to Appropriate Public Health Professionals**
- **Describe and Properly Use the Contents of a Food & Water Collection Kit**
- **Collect Food and Water Samples Using Aseptic & Appropriate Techniques**
- **Provide Appropriate Documentation for Food and Water Samples**
- **Properly Package & Transport Food & Water Samples to the State's Division of Laboratory Services (DLS)**
- **Display General Knowledge of Food & Water Testing Methodology**



OUTLINE of TRAINING

- FOOD COLLECTION PROCESS:

- GENERAL INFORMATION
- COLLECTION KIT
- FOOD KIT USAGE
- PACKAGING & SHIPPING
- LABORATORY TESTING



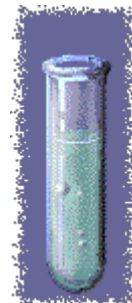
- WATER COLLECTION PROCESS:

- GENERAL INFORMATION
- COLLECTION KIT
- WATER KIT USAGE
- PACKAGING & SHIPPING
- LABORATORY TESTING



- SPECIAL CONSIDERATIONS:

- CHEMICAL
- FORENSIC TESTING
- BIOLOGICAL AGENT



THE NEED FOR TRAINING & INFORMATION: **FREQUENT PROBLEMS**

- **COMMUNICATION**
- **SUBMISSION**
 - NO ADVANCE NOTICE (Food)
 - APPROVAL?? (Food)
- **VAGUE TEST REQUEST**
- **QUANTITY**
 - INADEQUATE
 - INCORRECT
- **INFREQUENT SAMPLING**
 - where is my food kit
 - recall how to properly collect, package, & ship



KPHL – FOOD MICROBIOLOGY

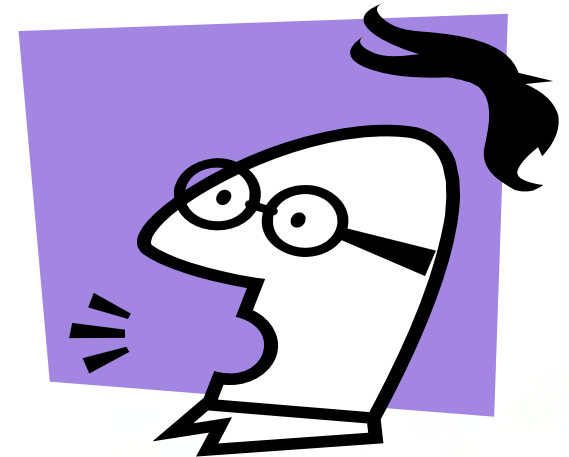


KY Public Health **Laboratory**

FOOD COLLECTION, PACKAGING, & LABORATORY TESTING GUIDELINES

FOOD COLLECTION – WHY?

- **ROUTINE SURVEILLANCE**
(manufacturing, retail, facility)
- **CONSUMER COMPLAINT:**
ILLNESS or INJURY
- **VISIBLE CONTAMINATION:**
 - Object (foreign or known)
 - Unusual substance
 - Unusual appearance
 - Animal droppings, tracks, signs, etc.
- **UNUSUAL TASTE**
- **ODOR**



FOOD COLLECTION KIT

- **LOCATE YOUR KIT**
- **CHECK THE CONTENTS PERIODICALLY**
- **REPLACE EXPIRED ITEMS**
- **ORDER KIT & ITEMS**
(some items may be easily replaced at the LHD such as alcohol pads, sterile tongue depressors, sterile specimen cups, etc.)



FOOD COLLECTION KIT

Order kits on-line:

<http://chfs.ky.gov/dph/info/lab>..... (Kit contains Collection items, Information, & Forms)



Kits may also be ordered by calling the lab at 502-564-4446.

FOOD COLLECTION KIT CONTENTS

Food Collection Kit Basics:

- FORMS
- INFORMATION
- COLLECTION SUPPLIES
and ACCESSORIES
- COLLECTION
CONTAINERS



THIS FOOD COLLECTION KIT **CONTENT** SHEET:

THIS FOOD SAMPLE COLLECTION KIT CONTAINS THE FOLLOWING:

I. FORMS:

LAB

- (1) "SUGGESTED PROTOCOL FOR USE OF FOOD COLLECTION KIT" LAB 502h (REV 3-2006)
- (4) "SAMPLE COLLECTION DATA AND ANALYSIS REPORT" LAB 504 (REV 5-00)

FOOD SAFETY

- (2) "RETAIL FOOD ESTABLISHMENT REPORT" DFS 208 (REV 05/05)
- (2) "NOTICE AND ORDER OF QUARANTINE / VOLUNTARY DESTRUCTION" DFS 222
- (2) "QUARANTINED" TAG DFS 223
- (1) "RECORD OF COMPLAINT AND INVESTIGATION" DFS 216 (food manufacturing)

EPIDEMIOLOGY (contact epidemiologists for suspected outbreak & investigation)

Electronic Foodborne Outbreak Reporting System (eFORS) - web-based Form 52.13
Epidemiologist Investigation - <http://www.cdc.gov/foodborneoutbreaks/toolkit.htm>

II. COLLECTION CONTAINERS:

- "WHIRL-PAK" STERILE PLASTIC BAGS (5)
- "SAMPLE BAG" – POLYETHYLENE LINED (5)
- 4 oz - STERILE SCREW CAPPED SPECIMEN CUP
- 8 oz - H INGED SAMPLING VIAL – POLYPROPYLENE
- 4 oz - GLASS BOTTLE (LIQUIDS for CHEMICAL ANALYSIS) –fill to top / no air bubbles
- ALUMINUM FOIL SHEET (use to wrap FISH for CHEMICAL ANALYSIS)

III. SAMPLE COLLECTION SUPPLIES/ ACCESSORIES:

- STERILE PLASTIC TABLESPOON
- STERILE PLASTIC SCOOP
- STERILE TONGUE DEPRESSORS (6)
- STERILE SAMPLING KNIFE
- ALCOHOL PADS (10)
- MARKER
- PAPER BAGS – NON-STERILE
- "OFFICIAL" SAMPLE SEALING TAPE (REQUIRES - SAMPLE#, DATE , SIGNATURE, AGENCY)- DFS 224

**ITEMIZED LIST
CATEGORIZED INTO
3 SECTIONS (I. II. III.)**

SECTION I. FORM – LABORATORY

LAB FORM 504 (Rev. 4-4-05)

Lab form 504
Revised By ISF 4/4/05

Sample Collection Data and Analysis Report
Cabinet For Health And Family Services, Department for Public Health
Division of Laboratory Services
100 Sower Blvd., North Loading Dock, P.O. Box 2020
Frankfort, Kentucky 40602-2020
Phone: 502/564-4446 Fax: 502/564-7019
Stephanie K. Mayfield, MD, FCAP: Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted. Back copy may be retained by the submitter.

Sample No.: _____ Date Collected: _____ Cost of Sample: _____

Collector/ Health Dept.: _____ (Name and Title) Sample Procured From: _____ (Signature)

Reason for Collection: _____ Establishment Number: _____

Amount in Lot before Sampling: _____

Description of Sample (Code No. if any), & Method of Collection: _____

Mail Report To: _____ Address: _____ Zip: _____

Manufacturer/ Health Dept.: _____ Address: _____ Zip: _____

Other (Name): _____ Address: _____ Zip: _____

Remarks: _____

Requested Laboratory Analysis:

<input type="checkbox"/> Standard Plate Count	<input type="checkbox"/> Bacteriological	<input type="checkbox"/> Chemical	<input type="checkbox"/> Other
<input type="checkbox"/> Coliform count	<input type="checkbox"/> Listeria monocytogenes	<input type="checkbox"/> Pesticide Residue	<input type="checkbox"/> Rodent Contamination
<input type="checkbox"/> Sterility	<input type="checkbox"/> Staphylococcus	<input type="checkbox"/> Thiamine	<input type="checkbox"/> Insect Contamination
<input type="checkbox"/> E. coli	<input type="checkbox"/> Salmonella	<input type="checkbox"/> Iron	<input type="checkbox"/> Preservatives (List)
<input type="checkbox"/> E. coli O157: H7	<input type="checkbox"/> Mold & Yeast	<input type="checkbox"/> Excessive Water	<input type="checkbox"/> Other (Describe)
	<input type="checkbox"/> Antibiotics	<input type="checkbox"/> Food Additives (List)	

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)

Lab Received: _____ Date _____ Initials _____ Lab Number _____ From: _____ Signature of Submitter _____

State Seal Attached? ☐ Yes ☐ No Sample Received: ☐ Refrigerated ☐ Frozen ☐ Other

Report of Laboratory Analysis: _____

Comments: _____

Date Started _____ Date Completed _____ Date Reported _____ Signature of Analyst: _____ Laboratory Services

☐ No further Regulatory Action is indicated on this sample
☐ Analysis indicates sample is in violation of the following law and/or regulations based thereon. (Check appropriate one):
☐ KRS 217.801 Lead Based Paint Law; ☐ KRS 217.005 to 217.215 KY Food, Drug, & Cosmetic Act; ☐ 217.650 to 217.710 KY Hazardous Substances

Labeling Act: ☐ KRS 217C KY Milk and Milk Products Act; ☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation.

Sample Considered: ☐ Adulterated ☐ Misbranded ☐ Other

Further Regulatory Action: ☐ Resample ☐ Reinspect ☐ Official Action ☐ Other

Signature _____ Title _____ Agency _____ Date _____

**LAB TEST
REQUEST FORM**

LAB FORM 504

Thoroughly Complete:

- Sample ID
- Date of Collection
- Collector
- Procured from
- Sample Description
- Requested Lab Analysis
(Bacteriological, Chemical, Other)
- Signature of Submitter

Lab form 504
Revised By ISF 4/4/05

Sample Collection Data and Analysis Report
Cabinet For Health And Family Services, Department for Public Health
Division of Laboratory Services
100 Sower Blvd., North Loading Dock, P.O. Box 2020
Frankfort, Kentucky 40602-2020
Phone: 502/564-4446 Fax: 502/564-7019
Stephanie K. Mayfield, MD, FCAP: Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted. Back copy may be retained by the submitter.

Sample No.: _____ Date Collected: _____ Cost of Sample: _____

Collector/ Health Dept.: _____ (Name and Title) Sample Procured From: _____ (Signature)

Reason for Collection: _____ Establishment Number: _____

Amount in Lot before Sampling: _____

Description of Sample (Code No. if any), & Method of Collection: _____

Mail Report To: _____ Address: _____ Zip: _____

Manufacturer/ Health Dept.: _____ Address: _____ Zip: _____

Other (Name): _____ Address: _____ Zip: _____

Remarks: _____

Requested Laboratory Analysis: ☐ Bacteriological ☐ Chemical ☐ Other

☐ Standard Plate Count ☐ Listeria monocytogenes ☐ Pesticide Residue ☐ Rodent Contamination

☐ Coliform count ☐ Staphylococcus ☐ Thiamine ☐ Insect Contamination

☐ Sterility ☐ Salmonella ☐ Iron ☐ Preservatives (List)

☐ E. coli ☐ Mold & Yeast ☐ Excessive Water ☐ Other (Describe)

☐ E. coli O157: H7 ☐ Antibiotics ☐ Food Additives (List)

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)

Lab Received: _____ Date _____ Initials _____ Lab Number _____ From: _____ Signature of Submitter _____

State Seal Attached? ☐ Yes ☐ No Sample Received: ☐ Refrigerated ☐ Frozen ☐ Other

Report of Laboratory Analysis: _____

Comments: _____

Date Started _____ Date Completed _____ Date Reported _____ Signature of Analyst: _____ Laboratory Services

☐ No further Regulatory Action is indicated on this sample

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Labeling Act: ☐ KRS 217C KY Milk and Milk Products Act; ☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation.

Sample Considered: ☐ Adulterated ☐ Misbranded ☐ Other

Further Regulatory Action: ☐ Resample ☐ Reinspect ☐ Official Action ☐ Other

Signature _____ Title _____ Agency _____ Date _____



LAB FORM 504 (Analysis Section)

Lab form 504
Revised By ISF 4/4/05

Sample Collection Data and Analysis Report
Cabinet For Health And Family Services, Department for Public Health
Division of Laboratory Services
100 Sower Blvd., North Loading Dock, P.O. Box 2020
Frankfort, Kentucky 40602-2020
Phone: 502/564-4446 Fax: 502/564-7019
Stephanie K. Mayfield, MD, FCAP: Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted. Back copy may be retained by the submitter.

Sample No.: _____ Date Collected: _____ Cost of Sample: _____

Collector/ Health Dept.: _____ (Name and Title) Sample Procured From: _____ (Signature)

Reason for Collection: _____ Establishment Number: _____

Amount in Lot before Sampling: _____

Description of Sample (Code No. if any), & Method of Collection: _____

Mail Report To: _____ Address: _____ Zip: _____

Manufacturer/ Health Dept.: _____ Address: _____ Zip: _____

Other (Name): _____ Address: _____ Zip: _____

Remarks: _____

Requested Laboratory Analysis:

<input type="checkbox"/> Standard Plate Count	<input type="checkbox"/> Bacteriological	<input type="checkbox"/> Chemical	<input type="checkbox"/> Other
<input type="checkbox"/> Coliform count	<input type="checkbox"/> Listeria monocytogenes	<input type="checkbox"/> Pesticide Residue	<input type="checkbox"/> Rodent Contamination
<input type="checkbox"/> Sterility	<input type="checkbox"/> Staphylococcus	<input type="checkbox"/> Thiameine	<input type="checkbox"/> Insect Contamination
<input type="checkbox"/> E. coli	<input type="checkbox"/> Salmonella	<input type="checkbox"/> Iron	<input type="checkbox"/> Preservatives (List)
<input type="checkbox"/> E. coli O157: H7	<input type="checkbox"/> Mold & Yeast	<input type="checkbox"/> Excessive Water	<input type="checkbox"/> Other (Describe)
	<input type="checkbox"/> Antibiotics	<input type="checkbox"/> Food Additives (List)	

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)

Lab Received: _____ Date _____ Initials _____ Lab Number _____ From: _____ Signature of Submitter _____

State Seal Attached? ☐ Yes ☐ No Sample Received: ☐ Refrigerated ☐ Frozen ☐ Other

Report of Laboratory Analysis: _____

Comments: _____

Date Started _____ Date Completed _____ Date Reported _____ Signature of Analyst: _____ Laboratory Services

☐ No further Regulatory Action is indicated on this sample
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☐ KRS 217.801 Lead Based Paint Law; ☐ KRS 217.005 to 217.215 KY Food, Drug, & Cosmetic Act; ☐ 217.650 to 217.710 KY Hazardous Substances

Labeling Act: ☐ KRS 217C KY Milk and Milk Products Act; ☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation.

Sample Considered: ☐ Adulterated ☐ Misbranded ☐ Other

Further Regulatory Action: ☐ Resample ☐ Reinspect ☐ Official Action ☐ Other

Signature _____ Title _____ Agency _____ Date _____

Consult First

Food Safety Branch
before sending food for testing
(502) 564-7181

Bacteriological analysis must
be determined based upon
Clinical findings:

- Clinical Symptoms
- Onset of Illness
- Duration of Illness
- Patient Testing (culture)

Epidemiology: (502) 564-3261

Chemical analysis; narrow down
Suspect Chemical with thorough
investigation & Interview

LAB 504 FORM - ☐ BACTERIOLOGICAL SECTION ANALYSIS - REMINDERS

Bacteriological Request cannot be a “**shot-gun**” (test for all) approach (Do not check all of the bacteria boxes)

NOTE: KPHL is not a diagnostic lab - confirms & supports diagnostic and clinical testing)

NOR

a physician's script of “**culture the sample and see what grows**”
(Do not check all of the bacteria boxes)

THEREFORE:

Consult your **Regional Epidemiologist / Epi Nurse or State Epidemiologist (502-564-3261)** to narrow down to **1 or 2 suspect bacterial pathogens**

Specific food “pathogens” (cause disease or illness) must be requested based upon thorough investigation, interviewing, clinical findings, and epidemiology of illness
(aids in determining the test request of **1 or 2 suspect bacteriological pathogens**)



SECTION I. FORMS - FOOD SAFETY

BRANCH DFS – 216 (4-95 - Complaint

DFS-216(4-95)

CABINET FOR HUMAN RESOURCES
KENTUCKY DEPARTMENT FOR HEALTH SERVICES
Frankfort, KY 40621-0001

RECORD OF COMPLAINT AND INVESTIGATION

Est./Permit No.	Health Authority	Sanitarian Code	Action Code	County
	<input type="checkbox"/> Telephone <input type="checkbox"/> Letter <input type="checkbox"/> Visit	DATE OF COMPLAINT (Month/Day/Year)		
SOURCE OF COMPLAINT	<input type="checkbox"/> Consumer <input type="checkbox"/> Other Governmental Agency <input type="checkbox"/> Trade/Industry			
COMPLAINT IDENTIFICATION	Name and Address (Include ZIP Code)		Telephone Number: ()	
COMPLAINT OR INJURY	Description of Complaint/Injury			
PRODUCT AND LABELING	Product Name		Name and Location of Store Where Purchased	Date Purchased
	Package Code	Product Used (If Yes, Enter Date) No <input type="checkbox"/> Yes <input type="checkbox"/>		Amount Remaining
MANUFACTURER/DISTRIBUTOR OF PRODUCT	Name and Address (Include ZIP Code)			
INJURY OR ILLNESS RESULTED NO _____ YES _____ [If YES, complete items (a) through (c)]	a. Type Symptoms - List by number first to last ____ Nausea ____ Prostration ____ Vomiting ____ Paralysis ____ Diarrhea ____ Other, ____ Fever (____ °F) (explain)		b. Attending Physician ____ No ____ Yes (If yes, give name/address/phone #)	
	c. Hospitalization Required ____ No ____ Yes (If yes, give name/address/phone #)			


How long after consuming the product did these symptoms occur? _____ minutes/hours
List in detail all other products (food, drink, medicine) consumed during the 36 hour period before onset of illness:

Was medical aid obtained concerning this illness? ____ Yes ____ No; Date and time medical aid was obtained: _____
What was the attending physician's diagnosis? _____

Other agency responsible: ____ Yes ____ No; Referred to other agency ____ Yes ____ No
Name and Address of Agency _____

Complaint investigation and action taken: _____

Investigator (Name and Title) _____ Date _____



DFS-216(4-95)

CABINET FOR HUMAN RESOURCES
KENTUCKY DEPARTMENT FOR HEALTH SERVICES
Frankfort, KY 40621-0001

RECORD OF COMPLAINT AND INVESTIGATION

Est./Permit No.	Health Authority	Sanitarian Code	Action Code	County
5678911	Anywhere	0-1000	03	Anywhere
	<input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Letter <input type="checkbox"/> Visit	DATE OF COMPLAINT (Month/Day/Year) 2-27-06		
SOURCE OF COMPLAINT	<input checked="" type="checkbox"/> Consumer <input type="checkbox"/> Other Governmental Agency <input type="checkbox"/> Trade/Industry			
COMPLAINT IDENTIFICATION	Name and Address (Include ZIP Code) Larry Perry 24 South Perry street Merry, KY 41234		Telephone Number: (653) 247-9753	
COMPLAINT OR INJURY	Description of Complaint/Injury mold found in Smiths Yogurt			
PRODUCT AND LABELING	Product Name Good Yogurt		Name and Location of Store Where Purchased FOOD KING Grocery	Date Purchased 2-26-06
	Package Code Aug 15-07 109/E	Product Used (If Yes, Enter Date) No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>		Amount Remaining 8 oz
MANUFACTURER/DISTRIBUTOR OF PRODUCT	Name and Address (Include ZIP Code) Good Yogurt 100 Creekway St Louis, MO 61812			
INJURY OR ILLNESS RESULTED (NO) <input checked="" type="checkbox"/> YES _____ [If YES, complete items (a) through (c)]	a. Type Symptoms - List by number first to last ____ Nausea ____ Prostration ____ Vomiting ____ Paralysis ____ Diarrhea ____ Other, ____ Fever (____ °F) (explain)		b. Attending Physician ____ No ____ Yes (If yes, give name/address/phone #)	
	c. Hospitalization Required ____ No ____ Yes (If yes, give name/address/phone #)			


How long after consuming the product did these symptoms occur? _____ minutes/hours
List in detail all other products (food, drink, medicine) consumed during the 36 hour period before onset of illness:

Was medical aid obtained concerning this illness? ____ Yes ____ No; Date and time medical aid was obtained: _____
What was the attending physician's diagnosis? _____

Other agency responsible: ☒ Yes ____ No; Referred to other agency ☒ Yes ____ No
Name and Address of Agency FDA

Complaint investigation and action taken: Contacted KY Food Safety Branch for follow up on 2/27/06. They recommended samples be collected and sent to the State Lab in Frankfort. An original sample and a control sample was collected and sent to the State Lab.

Investigator (Name and Title) Mike Stangle Health ENVIRONMENTAL Date 2-27-06



I. FORMS - FOOD SAFETY BRANCH

DFS – 222 (5-94) – Quarantine/Destruction

DFS-222 (5-94)

COMMONWEALTH OF KENTUCKY
CABINET FOR HUMAN RESOURCES
DEPARTMENT FOR HEALTH SERVICES

Q-1 /
Action Code + Total Quantity
Q-2 /
Action Code + Total Quantity
Q-4 /
Action Code + Total Quantity
San. Code

**NOTICE AND ORDER OF
QUARANTINE / VOLUNTARY DESTRUCTION**

Date _____ Permit No. _____

THE FOLLOWING ☐ FOOD, ☐ DRUG, ☐ DEVICE, ☐ COSMETIC,
☐ LEAD BASED PAINT, ☐ UNSTABLE REFUSE BINS, ☐ HAZARDOUS SUBSTANCE,
OR ☐ _____ IS SUSPECTED OF BEING:
☐ ADULTERATED, ☐ MISBRANDED, OR ☐ IN NON-COMPLIANCE

PURSUANT TO THE PROVISIONS OF: ☐ KRS 217.005 to 217.215 KY Food, Drug and Cosmetic Act; ☐ KRS 217C KY Milk and Milk Products Act;
☐ KRS 217.650 to 217.710 KY Hazardous Substances Labeling Act; ☐ KRS 217.801 Lead Based Paint Law;
☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation

IN POSSESSION _____ LOCATED AT _____
☐ AND IS BEING QUARANTINED; ☐ VOLUNTARILY DESTROYED; OR ☐ _____
ON THIS _____ DAY OF _____ 19____ AT _____ A.M. ☐ P.M.

ARTICLE / LD	QUANTITY	ACTION	ARTICLE / LD	QUANTITY	ACTION

ESTIMATED REPORTED VALUE \$ _____ TOTAL QUANTITY _____ LBS.
ALL PERSONS ARE WARNED NOT TO REMOVE OR DISPOSE OF THE ABOVE DESCRIBED ARTICLES BY SALE OR OTHERWISE UNTIL PERMIS-
SION FOR REMOVAL OR DISPOSAL IS GIVEN BY A DULY AUTHORIZED AGENT OF THE CABINET FOR HUMAN RESOURCES OR BY A COURT
OF COMPETENT JURISDICTION.
THE REMOVAL OR DISPOSAL OF A DETAINED OR QUARANTINED ARTICLE IS A MISDEMEANOR AND PUNISHABLE BY A FINE OR IMPRISON-
MENT OR BOTH PURSUANT TO THE APPROPRIATE KENTUCKY REVISED STATUTES CITED ABOVE.

ACKNOWLEDGMENT OF:
Q1 ☐ NOTICE AND ORDER OF QUARANTINE BY OWNER OR PERSON IN POSSESSION, OR AGENT THEREOF, IF AVAILABLE.
Q2 ☐ VOLUNTARY DESTRUCTION BY THE OWNER OF THE ARTICLE(S) IDENTIFIED ABOVE. I (WE) AGREE TO THE VOLUN-
TARY DESTRUCTION OF THE LISTED MATERIAL AND HEREBY RELEASE THE KENTUCKY CABINET FOR HUMAN
RESOURCES AND THEIR MEMBERS AND AGENTS FROM ANY AND ALL RESPONSIBILITY.
Date and Method of Destruction: _____
Q4 ☐ DIVERSION: THE ABOVE ARTICLE(S) ARE RELEASED FOR DIVERSION ONLY FOR _____
_____, AS AGREED AND CERTIFIED BY MY SIGNATURE HERE BELOW.
☐ THE ABOVE ARTICLE(S) ARE HEREBY RELEASED FOR SALE OR USE.

Signature: _____ Date: _____ Signature _____
Inspector's Signature _____ Street Address _____
Health Department _____ City or Town _____

DFS-222 (5-94)

COMMONWEALTH OF KENTUCKY
CABINET FOR HUMAN RESOURCES
DEPARTMENT FOR HEALTH SERVICES

Q-1 /
Action Code + Total Quantity
Q-2 /
Action Code + Total Quantity
Q-4 /
Action Code + Total Quantity
San. Code G1-000

**NOTICE AND ORDER OF
QUARANTINE / VOLUNTARY DESTRUCTION**

Date 3-31-06 Permit No. 56789

THE FOLLOWING ☒ FOOD, ☐ DRUG, ☐ DEVICE, ☐ COSMETIC,
☐ LEAD BASED PAINT, ☐ UNSTABLE REFUSE BINS, ☐ HAZARDOUS SUBSTANCE,
OR ☐ _____ IS SUSPECTED OF BEING:
☒ ADULTERATED, ☐ MISBRANDED, OR ☐ IN NON-COMPLIANCE

PURSUANT TO THE PROVISIONS OF: ☐ KRS 217.005 to 217.215 KY Food, Drug and Cosmetic Act; ☐ KRS 217C KY Milk and Milk Products Act;
☐ KRS 217.650 to 217.710 KY Hazardous Substances Labeling Act; ☐ KRS 217.801 Lead Based Paint Law;
☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation

IN POSSESSION Joe's Restaurant LOCATED AT 1101 2nd Street, Anywhere, KY
☒ AND IS BEING QUARANTINED; ☐ VOLUNTARILY DESTROYED; OR ☐ _____
ON THIS 31 DAY OF March 2006 AT 10:00 ☒ A.M. ☐ P.M.

ARTICLE / LD	QUANTITY	ACTION	ARTICLE / LD	QUANTITY	ACTION
Raw Chicken legs	10 lb	Q1			

ESTIMATED REPORTED VALUE \$ 10.00 TOTAL QUANTITY 10 LBS.
ALL PERSONS ARE WARNED NOT TO REMOVE OR DISPOSE OF THE ABOVE DESCRIBED ARTICLES BY SALE OR OTHERWISE UNTIL PERMIS-
SION FOR REMOVAL OR DISPOSAL IS GIVEN BY A DULY AUTHORIZED AGENT OF THE CABINET FOR HUMAN RESOURCES OR BY A COURT
OF COMPETENT JURISDICTION.
THE REMOVAL OR DISPOSAL OF A DETAINED OR QUARANTINED ARTICLE IS A MISDEMEANOR AND PUNISHABLE BY A FINE OR IMPRISON-
MENT OR BOTH PURSUANT TO THE APPROPRIATE KENTUCKY REVISED STATUTES CITED ABOVE.

ACKNOWLEDGMENT OF:
Q1 ☒ NOTICE AND ORDER OF QUARANTINE BY OWNER OR PERSON IN POSSESSION, OR AGENT THEREOF, IF AVAILABLE.
Q2 ☐ VOLUNTARY DESTRUCTION BY THE OWNER OF THE ARTICLE(S) IDENTIFIED ABOVE. I (WE) AGREE TO THE VOLUN-
TARY DESTRUCTION OF THE LISTED MATERIAL AND HEREBY RELEASE THE KENTUCKY CABINET FOR HUMAN
RESOURCES AND THEIR MEMBERS AND AGENTS FROM ANY AND ALL RESPONSIBILITY.
Date and Method of Destruction: _____
Q4 ☐ DIVERSION: THE ABOVE ARTICLE(S) ARE RELEASED FOR DIVERSION ONLY FOR _____
_____, AS AGREED AND CERTIFIED BY MY SIGNATURE HERE BELOW.
☐ THE ABOVE ARTICLE(S) ARE HEREBY RELEASED FOR SALE OR USE.

Signature: _____ Date: _____ Signature Joe Sme
Inspector's Signature _____ Street Address 1101 2nd Street
Anywhere, KY
Health Department _____ City or Town _____

I. FORMS - **FOOD SAFETY BRANCH**

DFS – 223 (Rev. 10-90) – Quarantine Tags

QUARANTINED

☐ Kentucky Department for Health Services

DFS 223 (Rev. 10-90)

**FRONT
VIEW**

QUARANTINED

PURSUANT TO KRS-217.115

**DO NOT REMOVE OR DISPOSE
WITHOUT PERMISSION**

BY ORDER OF THE DEPARTMENT FOR HEALTH SERVICES

AUTHORIZED AGENT _____

DATE _____

**BACK
VIEW**

I. FORMS - FOOD SAFETY BRANCH

DFS - 208 (REV. 05/05) - Retail

DFS-208 (REV. 05/05)

Permit No. 56789 Sanitarian Code G1--

☐ Certified Manager ☐ Certified Handler

Owner Joe SMO Establishment Name Joe's Restaurant

Address 1101 2nd Street, Anywhere, KY Zip 40000 Phone 502-123-4567

Purpose ☐ Regular ☐ Follow-up ☐ Complaint ☐ Survey ☐ Other

Item	FS1	R2
FOOD		
*01 SOURCE, CONDITION, NO SPOILAGE	5	5
*02 Container, properly labeled	1	1
FOOD PROTECTION		
*03 POTENTIALLY HAZARDOUS FOOD - SAFE TEMP.	5	5
*04 FACILITIES TO MAINTAIN PRODUCT TEMP.	4	4
*05 Thermometers provided and conspicuous	1	1
*06 Potentially hazardous food properly thawed	2	2
*07 POT. HAZARDOUS FOOD NOT RE-SERVED	4	4
*08 Food Protection - storage, prep, display, service, temp.	2	2
*09 Handling of food (ice) minimized	2	2
*10 In use food (ice) dispensing utensils properly stored	1	1
PERSONNEL		
*11 PERSONNEL WITH INFECTIONS RESTRICTED	5	5
*12 HANDS WASHED AND CLEAN, HYGIENIC PRACTICES	5	5
*13 Clean clothes, hair restraints	1	1
FOOD EQUIPMENT & UTENSILS		
*14 Food (ice) contact surfaces designed, constructed, maintained, installed, located	2	2
*15 Non-food contact surfaces designed, constructed, maintained, installed, located	1	1
*16 Dishwashing facilities, designed, constructed, maintained, installed, located, operated	2	2
*17 Accurate therm. clean, test kits, gauge cook	1	1
*18 Pre-flushed, scraped, soaked	1	1
*19 Wash, rinse water clean, proper temperature	2	2
*20 SANITIZATION RINSE CLEAN, TEMP., CONCE., EXP. TIME, EQUIP. UTENSILS, SANITIZED	4	4
*21 Wiping cloths clean, use restricted	1	1
*22 Food-contact surfaces of equipment and utensils clean, free of abrasives, detergents	2	2
*23 Non-food contact surfaces of equipment/utensils clean	1	1
*24 Storage, handling of clean equipment/utensils	1	1
*25 Single-service articles, storage, dispensing	1	1
*26 No re-use of single-service articles	2	2
WATER		
*27 WATER SOURCE, SAFE, HOT & COLD UNDER PRESSURE	5	5

* CRITICAL ITEMS REQUIRING CORRECTION WITHIN DAYS

REMARKS:

Based on an inspection this day, the items circled above identify the violations found in the operation of your establishment, in accordance with the Kentucky Food, Drug and Cosmetic Act and applicable regulations pursuant thereto: the violations must be corrected ☐ by the next routine inspection, or within days (Circle) 1 Food Service and/or 2 Retail Food, or 3 Bed/Breakfast. Failure to comply with any time limits for corrections may result in suspension of your permit. An opportunity for an appeal from any notice or inspection findings, will be provided if you file a written request for a conference with the department within the period of time established by the applicable regulation.

Received By: Name Joe SMO Title Restaurant Owner

Inspected By: Anywhere, KY HEALTH DEPARTMENT

☐ DEPARTMENT FOR PUBLIC HEALTH

Survey:

1. Yes or No Is smoking allowed anywhere inside the establishment?
2. Yes or No Are there smoking and nonsmoking sections physically separated?
3. Approximately what percentage of seats are dedicated to NONsmokers? %
4. Yes or No Are there cigarette vending machines in the establishment?

Kentucky UNBRIDLED SPIRIT

DFS-208 (REV. 05/05)

Permit No. 56789 Sanitarian Code G1--

☐ Certified Manager ☐ Certified Handler

Owner Joe SMO Establishment Name Joe's Restaurant

Address 1101 2nd Street, Anywhere, KY Zip 40000 Phone 502-123-4567

Purpose ☐ Regular ☐ Follow-up ☐ Complaint ☐ Survey ☐ Other

Item	FS1	R2
FOOD		
*01 SOURCE, CONDITION, NO SPOILAGE	5	5
*02 Container, properly labeled	1	1
FOOD PROTECTION		
*03 POTENTIALLY HAZARDOUS FOOD - SAFE TEMP.	5	5
*04 FACILITIES TO MAINTAIN PRODUCT TEMP.	4	4
*05 Thermometers provided and conspicuous	1	1
*06 Potentially hazardous food properly thawed	2	2
*07 POT. HAZARDOUS FOOD NOT RE-SERVED	4	4
*08 Food Protection - storage, prep, display, service, temp.	2	2
*09 Handling of food (ice) minimized	2	2
*10 In use food (ice) dispensing utensils properly stored	1	1
PERSONNEL		
*11 PERSONNEL WITH INFECTIONS RESTRICTED	5	5
*12 HANDS WASHED AND CLEAN, HYGIENIC PRACTICES	5	5
*13 Clean clothes, hair restraints	1	1
FOOD EQUIPMENT & UTENSILS		
*14 Food (ice) contact surfaces designed, constructed, maintained, installed, located	2	2
*15 Non-food contact surfaces designed, constructed, maintained, installed, located	1	1
*16 Dishwashing facilities, designed, constructed, maintained, installed, located, operated	2	2
*17 Accurate therm. clean, test kits, gauge cook	1	1
*18 Pre-flushed, scraped, soaked	1	1
*19 Wash, rinse water clean, proper temperature	2	2
*20 SANITIZATION RINSE CLEAN, TEMP., CONCE., EXP. TIME, EQUIP. UTENSILS, SANITIZED	4	4
*21 Wiping cloths clean, use restricted	1	1
*22 Food-contact surfaces of equipment and utensils clean, free of abrasives, detergents	2	2
*23 Non-food contact surfaces of equipment/utensils clean	1	1
*24 Storage, handling of clean equipment/utensils	1	1
*25 Single-service articles, storage, dispensing	1	1
*26 No re-use of single-service articles	2	2
WATER		
*27 WATER SOURCE, SAFE, HOT & COLD UNDER PRESSURE	5	5

* CRITICAL ITEMS REQUIRING CORRECTION WITHIN DAYS

REMARKS:

Complaint: 3 customers consumed chicken legs 3-30-06. Consumers complained of Nausea, stomach cramps, and slight diarrhea.

Reviewed Complaint with operator. Operator stated there were no other complaints and the chicken legs were properly stored and prepared. 12 meals of chicken legs were served on 3-30-06.

Quarantined over 10 lbs box of chicken legs. Will contact Food Safety Branch for guidance on Food sample collection and submission. Epidemiology will be notified of consumer illness and possible follow-up of clinical samples with interview and investigation.

Based on an inspection this day, the items circled above identify the violations found in the operation of your establishment, in accordance with the Kentucky Food, Drug and Cosmetic Act and applicable regulations pursuant thereto: the violations must be corrected ☐ by the next routine inspection, or within days (Circle) 1 Food Service and/or 2 Retail Food, or 3 Bed/Breakfast. Failure to comply with any time limits for corrections may result in suspension of your permit. An opportunity for an appeal from any notice or inspection findings, will be provided if you file a written request for a conference with the department within the period of time established by the applicable regulation.

Received By: Name Joe SMO Title Restaurant Owner

Inspected By: Anywhere, KY HEALTH DEPARTMENT

☐ DEPARTMENT FOR PUBLIC HEALTH

Survey:

1. Yes or No Is smoking allowed anywhere inside the establishment?
2. Yes or No Are there smoking and nonsmoking sections physically separated?
3. Approximately what percentage of seats are dedicated to NONsmokers? %
4. Yes or No Are there cigarette vending machines in the establishment?

Kentucky UNBRIDLED SPIRIT

I. FORMS - FOOD SAFETY BRANCH

Record of Complaint and Investigation

DFS-216(4-95)

CABINET FOR HUMAN RESOURCES
KENTUCKY DEPARTMENT FOR HEALTH SERVICES
Frankfort, KY 40621-0001

RECORD OF COMPLAINT AND INVESTIGATION

Est./Permit No.	Health Authority	Sanitarian Code	Action Code	County
FORM OF COMPLAINT	<input type="checkbox"/> Telephone <input type="checkbox"/> Letter <input type="checkbox"/> Visit		DATE OF COMPLAINT (Month/Day/Year)	
SOURCE OF COMPLAINT	<input type="checkbox"/> Consumer <input type="checkbox"/> Other Governmental Agency <input type="checkbox"/> Trade/Industry			
COMPLAINT IDENTIFICATION	Name and Address (Include ZIP Code)		Telephone Number: ()	
COMPLAINT OR INJURY	Description of Complaint/Injury			
PRODUCT AND LABELING	Product Name		Name and Location of Store Where Purchased	
	Package Code		Date Purchased	
MANUFACTURER/DISTRIBUTOR OF PRODUCT	Product Used (If Yes, Enter Date)		Amount Remaining	
	Name and Address (Include ZIP Code)			
INJURY OR ILLNESS RESULTED	a. Type Symptoms - List by number first to last		b. Attending Physician	
	NO _____ YES _____ (If YES, complete items (a) through (c)) _____ Nausea _____ Prostration _____ Vomiting _____ Paralysis _____ Diarrhea _____ Other, _____ _____ Fever (_____ °F) (explain)		c. Hospitalization Required _____ No _____ Yes (If yes, give name/ address/phone #)	

How long after consuming the product did these symptoms occur? _____ minutes/hours.

List in detail all other products (food, drink, medicine) consumed during the 36 hour period before onset of illness:

Was medical aid obtained concerning this illness? _____ Yes _____ No; Date and time medical aid was obtained: _____

What was the attending physician's diagnosis? _____

Other agency responsible: _____ Yes _____ No; Referred to other agency _____ Yes _____ No

Name and Address of Agency _____

Complaint investigation and action taken: _____

Investigator (Name and Title) _____ Date _____

Record of Complaint & Investigation:

- Food complaints and illnesses resulting from commercial food products.
- Complete the form in detail
- FAX Form (502-564-0398) and/or call Food Safety Branch (502-564-7181) immediately to determine if samples should be collected and submitted to the State Laboratory.
- Distribute a copy of this form to the following: Food Safety Branch, LHD, and one copy for EMIS entry.
- Make a copy to the complainant only upon request

FOOD SAFETY BRANCH

OFFICIAL FOOD COLLECTION SEAL

Each food sample must have a completed Official State Seal attached.



The image shows a rectangular official food collection seal form. On the left, it reads "CABINET FOR HUMAN RESOURCES" and "DEPARTMENT FOR HEALTH SERVICES". Below this is a line for "BRANCH" or "OR COLLECTION AGENCY", followed by "Sample Procured From (Name & Address)". In the center is the Seal of the Commonwealth of Kentucky. On the right, there are fields for "Sample No.", "Date", and "Collector's Signature". The form number "DFS-224 (9-87)" is printed in the top right corner.

**Call the Food Safety Branch (FSB) to order additional seals & FSB Forms
502-564-7181**

OFFICIAL FOOD COLLECTION SEAL

**Each Sample
Must Have
A Seal**



CABINET FOR HUMAN RESOURCES DEPARTMENT FOR HEALTH SERVICES		Sample No. _____	DFS-224 (9-87)
_____ OR COLLECTION AGENCY Sample Procured From (Name & Address)		Date _____	
		Collector's Signature _____	

I. FORMS- CDC –Epidemiology - 52.13 (EFORS) (Regional or State Epidemiology or LHD)


Foodborne illness:

transmitted to humans
In which 2 or more
people experience the
same illness symptoms
after eating a common
food

FORMS:

RDDR or

<http://www.cdc.gov/foodborneoutbreaks/toolkit.htm>

 Electronic Foodborne Outbreak Reporting System		Investigation of a Foodborne Outbreak This form is used to report foodborne disease outbreak investigations to CDC. It is also used to report <i>Salmonella</i> Enteritidis and <i>E. coli</i> O157:H7 outbreak investigations involving any mode of transmission. A foodborne outbreak is defined as the occurrence of two or more cases of a similar illness resulting from the ingestion of a common food in the United States. This form has 6 parts. Part 1 asks for the minimum or basic information needed and must be completed for the investigation to be counted in the CDC annual summary. Part 2 asks for additional information for any foodborne outbreak, while Parts 3 – 6 ask for information concerning specific vehicles or etiologies. Please complete as much of all parts as possible.	CDC Use Only _____ State Use Only _____	
Part 1: Basic Information				
1. Report Type A. <input type="checkbox"/> Please check if this a final report B. <input type="checkbox"/> Please check if data does not support a FOODBORNE outbreak	3. Dates Please enter as many dates as possible Date first case became ill _____ Month Day Year Date last case became ill _____ Month Day Year Date first known exposure _____ Month Day Year Date last known exposure _____ Month Day Year	4. Location of Exposure Reporting state _____ If multiple states involved: <input type="checkbox"/> Exposure occurred in multiple states <input type="checkbox"/> Exposure occurred in single state, but cases resided in multiple states Other states: _____ Reporting county _____ If multiple counties involved: <input type="checkbox"/> Exposure occurred in multiple counties <input type="checkbox"/> Exposure occurred in one county, but cases resided in multiple counties Other counties: _____		
2. Number of Cases Lab-confirmed cases _____ (A) Including _____ secondary cases Probable cases _____ (B) Including _____ secondary cases Estimated total ill _____ (If greater than sum A + B)	5. Approximate Percentage of Cases in Each Age Group <1 year _____ % 20-49 yrs _____ % 1-4 yrs _____ % ≥50 yrs _____ % 5-19 yrs _____ % Unknown _____ %	6. Sex (Estimated percent of the total cases) Male _____ % Female _____ %	7. Investigation Methods (Check all that apply) <input type="checkbox"/> Interviews of only cases <input type="checkbox"/> Case-control study <input type="checkbox"/> Food preparation review <input type="checkbox"/> Cohort study <input type="checkbox"/> Investigation at factory or production plant <input type="checkbox"/> Investigation at original source (farm, marine estuary, etc.) <input type="checkbox"/> Food product traceback <input type="checkbox"/> Environment / food sample cultures	
8. Implicated Food(s): (Please provide known information)				
Name of Food	Main Ingredient(s)	Contaminated Ingredient(s)	Reason(s) Suspected (See codes just below)	Method of Preparation (See attached codes)
e.g., Lasagna	e.g., Pasta, sauce, eggs, beef	e.g., Eggs	e.g., 4	e.g., M1
1)				
2)				
3)				
<input type="checkbox"/> Food vehicle undetermined				
Reason Suspected (List above all that apply) 1 - Statistical evidence from epidemiological investigation 4 - Other data (e.g., same phage type found on farm that supplied eggs) 2 - Laboratory evidence (e.g., identification of agent in food) 5 - Specific evidence lacking but prior experience makes it likely source 3 - Compelling supportive information				

THIS FOOD COLLECTION KIT **CONTAINS** THE FOLLOWING – FOCUSING ON SECTION II

THIS FOOD SAMPLE COLLECTION KIT CONTAINS THE FOLLOWING: Lab 502i (Rev 3/2006)

I. FORMS:

- "SUGGESTED PROTOCOL FOR USE OF FOOD COLLECTION KIT" LAB 502h (REV 3-2006)
- (4) "SAMPLE COLLECTION DATA AND ANALYSIS REPORT" LAB 504 (REV 5-00)
- (2) "RETAIL FOOD ESTABLISHMENT REPORT" DFS 208 (REV 05/05)
- (2) "NOTICE AND ORDER OF QUARANTINE / VOLUNTARY DESTRUCTION" DFS 222 (REV 5-94)
- (2) "QUARANTINED" TAG DFS 222 (REV 10-90)
- (1) "RECORD OF COMPLAINT AND INVESTIGATION" DFS 216 (4-95) (food manufacturing)
- (10) "FOODBORNE DISEASE QUESTIONNAIRE" EPID-212
- (2) "ATTACK TABLE" EPID

II. COLLECTION CONTAINERS:

- "WHIRL-PAK" STERILE PLASTIC BAGS (5)
- "SAMPLE BAG" – POLYETHYLENE LINED (5)
- 4 oz - STERILE SCREW CAPPED SPECIMEN CUP
- 8 oz - H INGED SAMPLING VIAL – POLYPROPYLENE
- 4 oz - GLASS BOTTLE (LIQUIDS for CHEMICAL ANALYSIS)
- ALUMINUM FOIL SHEET (FISH for CHEMICAL ANALYSIS)

III. SAMPLE COLLECTION SUPPLIES/ ACCESSORIES:

- STERILE PLASTIC TABLESPOON
- STERILE PLASTIC SCOOP
- STERILE TONGUE DEPRESSORS (6)
- STERILE SAMPLING KNIFE
- ALCOHOL PADS (10)
- MARKER
- PAPER BAGS – NON-STERILE
- "OFFICIAL" SAMPLE SEALING TAPE (REQUIRES - SAMPLE#, DATE , SIGNATURE, AGENCY)

**ITEMIZED LIST
CATEGORIZED INTO
3 SECTIONS**

SECTION II - FOOD COLLECTION KIT CONTENTS

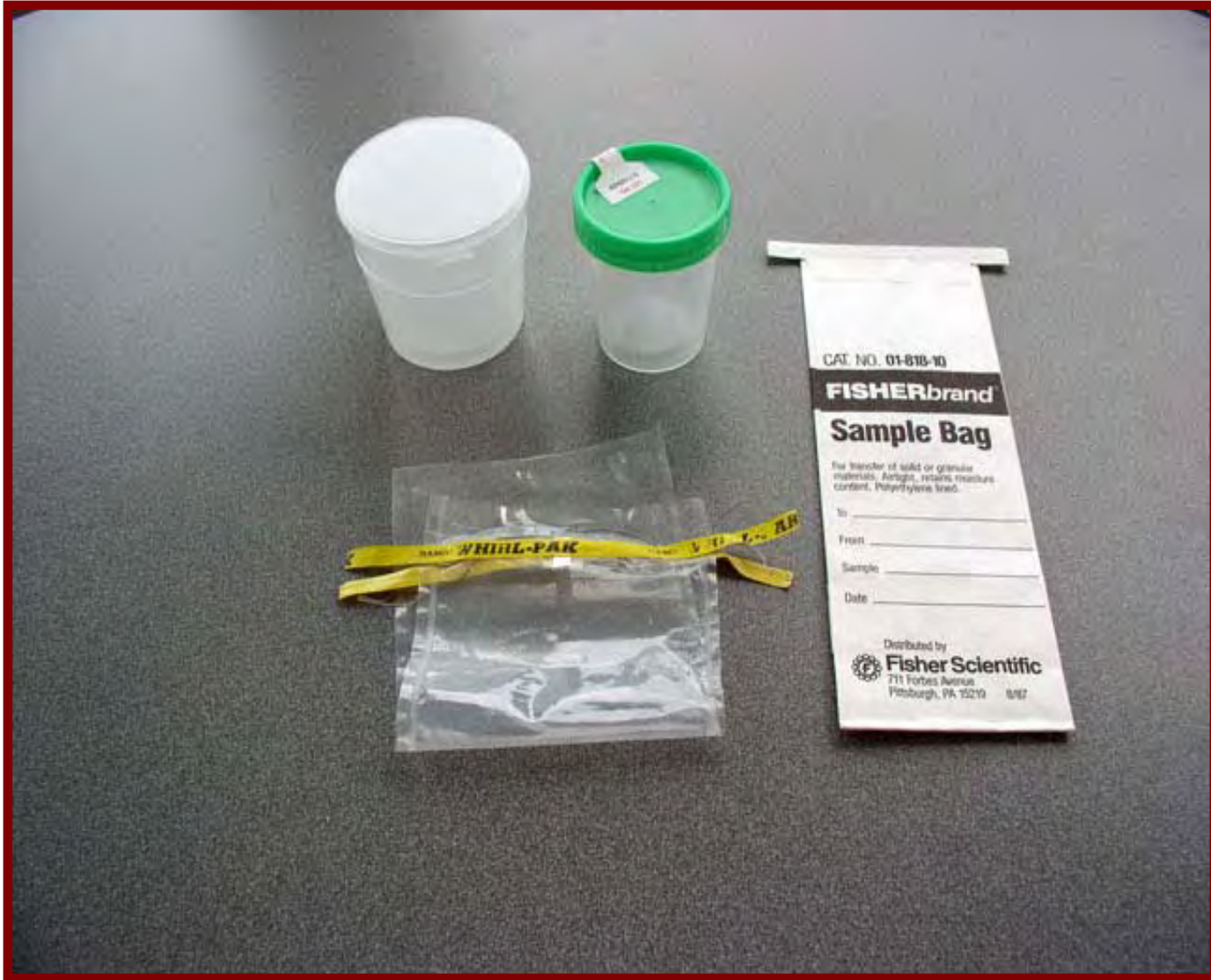
II. COLLECTION CONTAINERS:

- **“WHIRL-PAK” STERILE PLASTIC BAGS**
- **“SAMPLE BAG” – POLYETHYLENE LINED**
- **4 oz - SCREW CAP SPECIMEN CUP**
- **8 oz - HINGED SAMPLING VIAL (POLYPROPYLENE)**
- **ALUMINUM FOIL SHEET (FISH for CHEMICAL ANALYSIS)**
- **4 oz - *GLASS BOTTLE (BEVERAGE - CHEMICAL ANALYSIS)**



* Bottles in the new food kits are washed with soap & water and then rinsed in acetone. The lids are TEFLON, not plastic (therefore, don't require foil between lid and jar mouth). These conditions make them appropriate for chemical analysis and will not interfere with sensitive analytical instruments.

FOOD COLLECTION KIT CONTAINERS



FOCUSING ON SECTION III OF THE FOOD COLLECTION KIT:

THIS FOOD SAMPLE COLLECTION KIT CONTAINS THE FOLLOWING:

Lab 502i (Rev 3/2006)

I. FORMS:

- "SUGGESTED PROTOCOL FOR USE OF FOOD COLLECTION KIT" LAB 502h (REV 3-2006)
- (4) "SAMPLE COLLECTION DATA AND ANALYSIS REPORT" LAB 504 (REV 5-00)
- (2) "RETAIL FOOD ESTABLISHMENT REPORT" DFS 208 (REV 05/05)
- (2) "NOTICE AND ORDER OF QUARANTINE / VOLUNTARY DESTRUCTION" DFS 222 (REV 5-94)
- (2) "QUARANTINED" TAG DFS 222 (REV 10-90)
- (1) "RECORD OF COMPLAINT AND INVESTIGATION" DFS 216 (4-95) (food manufacturing)
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- (2) "ATTACK TABLE" EPID

II. COLLECTION CONTAINERS:

- "WHIRL-PAK" STERILE PLASTIC BAGS (5)
- "SAMPLE BAG" – POLYETHYLENE LINED (5)
- 4 oz - STERILE SCREW CAPPED SPECIMEN CUP
- 8 oz - H INGED SAMPLING VIAL – POLYPROPYLENE
- 4 oz - GLASS BOTTLE (LIQUIDS for CHEMICAL ANALYSIS)
- ALUMINUM FOIL SHEET (FISH for CHEMICAL ANALYSIS)

III. SAMPLE COLLECTION SUPPLIES/ ACCESSORIES:

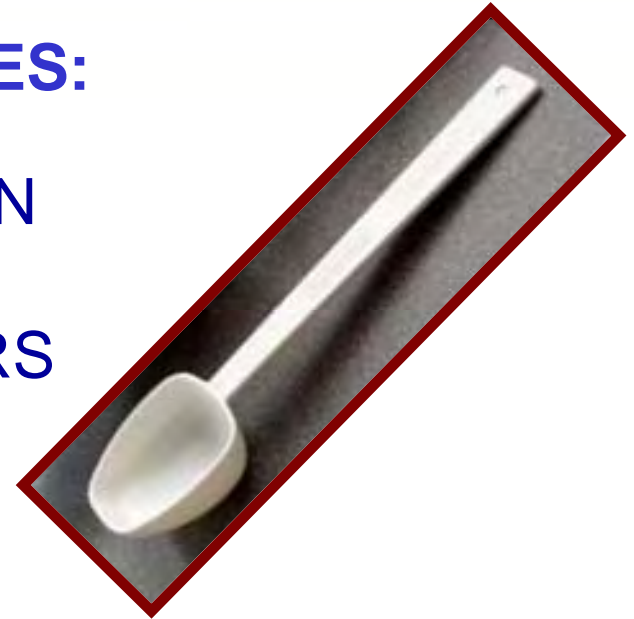
- STERILE PLASTIC TABLESPOON
- STERILE PLASTIC SCOOP
- STERILE TONGUE DEPRESSORS (6)
- STERILE SAMPLING KNIFE
- ALCOHOL PADS (10)
- MARKER
- PAPER BAGS – NON-STERILE
- "OFFICIAL" SAMPLE SEALING TAPE (REQUIRES - SAMPLE#, DATE , SIGNATURE, AGENCY)

**ITEMIZED LIST
CATEGORIZED INTO
3 SECTIONS**

FOOD COLLECTION KIT SUPPLIES

III. SAMPLE COLLECTION SUPPLIES:

- STERILE PLASTIC TABLESPOON
- STERILE PLASTIC SCOOP (4oz)
- STERILE TONGUE DEPRESSORS
- STERILE SAMPLING KNIFE
- ALCOHOL PADS
- PAPER BAGS NON - STERILE
- ALUMINUM FOIL – (wrap fish for chemical analysis) or (liquid drinks - place between lid & mouth if the lid is plastic- for chemical analysis – no air or bubbles)
- MARKER
- “OFFICIAL” SAMPLE SEALING TAPE
(REQUIRES - SAMPLE#, DATE , SIGNATURE, AGENCY)



FOOD COLLECTION KIT SUPPLIES



Collecting Food Samples

WASH HANDS BEFORE YOU COLLECT SAMPLES



“Aseptic” food collection is promoted by the use of gloves

Samples must be collected in aseptic manner to avoid contamination by hands or other non-sterile surfaces.

Collection of Food Samples

WHEN COLLECTING FOOD SAMPLES CONSIDER THE FOLLOWING 1ST:

- Whenever possible, Collect & send the **ENTIRE** leftover, unconsumed portion of the suspected contaminated food product.
- Samples should represent the entire lot of material or suspect food under evaluation



Collection of Food Samples - Quantity

If, the entire leftover, unconsumed portion of the suspected contaminated food product cannot be collected, use the following guide:

Liquids & Semi-solids

Collect at least
100 grams (4 oz)



Dry Food

Collect 200-400 Grams



Meat

Collect at least 100 grams
(Use sterile knife to cut
meat. Sterile tongue
depressors are useful for
ground meat)



Collection of Food Samples -Quantity

*Why is **QUANTITY** Important?*

Because.....



25 gram sample of Cottage Cheese



25 gram instant
mashed potato flakes



25 gram deli ham

*!!! 25 grams is the **Minimum** for most analysis for just 1 food pathogen
!!! Some require 50 grams or more.*

Collecting Food Samples Using a Whirl-Pak®



FOOD SAMPLING

A food sample should be taken in the center & sides of a bulk food container.

If a food product is composed of several parts or components, sample the components separately in a way as to eliminate any potential of cross-contamination.



CONTROL SAMPLES

If applicable, a “CONTROL Sample should be collected:

unopened / uncompromised package of the same food product out of the same manufacturing lot

or

“like coded” sample collected at random from available units of a product



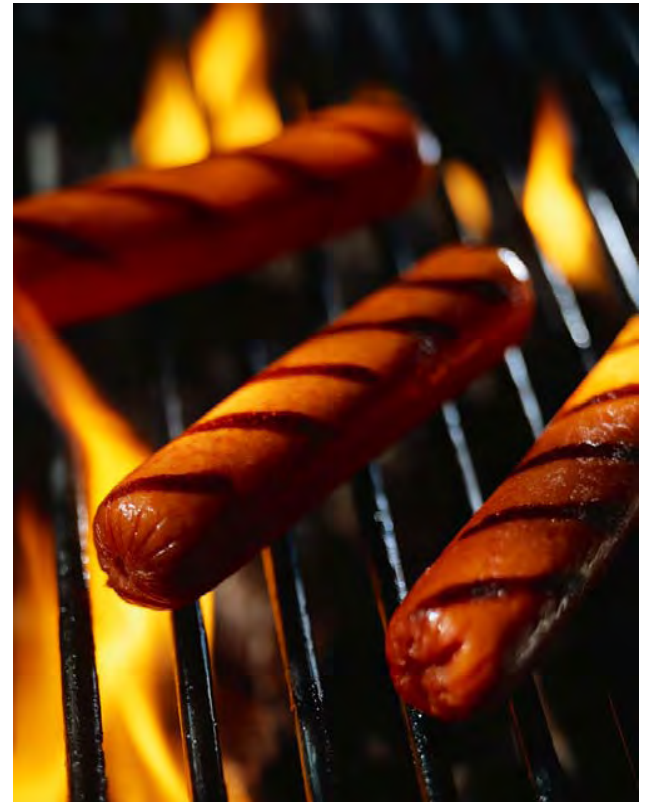
Control Food Samples- Prepared Foods

Control food samples of “PREPARED” foods

should be verified with the food establishment that the food was prepared the same way as the suspect food sample,

But

not part of the outbreak or complaint



Timely Food Collection Is Important!!!

Delays in food collection coupled with “stressed” food conditions makes food pathogen survival & recovery for testing – difficult!!



STRESSED FOOD CONDITIONS:

- **Bacteria in food may have been dried, frozen, chilled, heated to high temperatures, chilled again, heated again, and so on..... and so on.....**
- **Some processed foods contain preservatives that prolong shelf life, but can inhibit bacterial growth**
- **Numerous other competing bacteria may be contained in the food that may grow and multiply, hindering the recovery and survival of bacterial food pathogens.**

FOOD SAMPLE NOTIFICATION for LABORATORY TESTING

Why is it important to NOTIFY the Lab PRIOR to submission of food samples:



- Food pathogen testing is time consuming and involved; the lab needs time to plan & prepare
- Each food pathogen has a unique protocol of media (specific nutrients & pH) and incubation temperature. Media is made on demand because commercial media is expensive & has short expirations. Making media is time consuming!



Food Samples - Packaging

Maintain the original conditions under which the food was held

- Food products canned or in a dry condition, no particular precautions are necessary
- Food products under refrigeration or frozen, should be transported in such a way as to arrive in the laboratory in an unchanged condition
- Thawed samples of frozen products must be kept refrigerated;
DO NOT REFREEZE
- Food Samples collected at a high temperature, refrigerate before packing for transporting



Protect Food Samples During TRANSPORT & SHIPPING



Proper packaging helps maintain correct temperature & pH critical to bacterial survival



Sample must be kept cold during transport



Food Samples - SHIPPING

Ship/Transport samples to the laboratory as rapidly as possible.



Ideally, food samples should arrive at the State Lab by the next day after collection.

If mailed, send by overnight delivery service.

But.....Don't send samples over weekends or Holidays unless advised to do so.



Food Samples - Quality

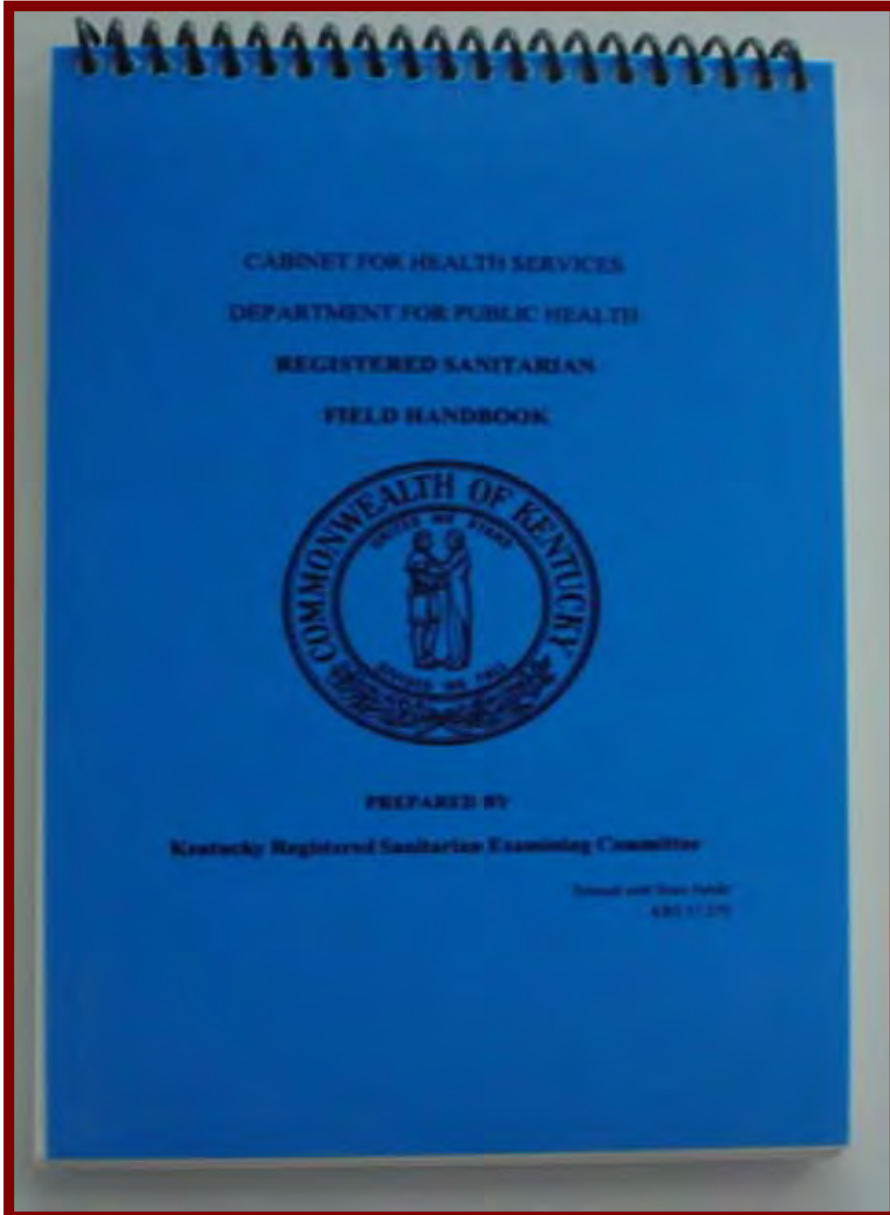
Valid, Reliable, and Significant Laboratory testing results and their interpretation depends upon the following:

Proper

- ◆Collection
- ◆Holding conditions –proper packaging
- ◆Timeliness of shipping & delivery



Registered Sanitarian Handbook



Your Field Handbook

**a good source of information
on food collection issues**

Field Handbook on line:

www.chfs.ky.gov/dph/sanitaricians.htm

**Prepared by the Kentucky
Registered Sanitarian
Examining Committee of
the Department for Public
Health.**

FOOD MICROBIOLOGY - PATHOGENS

KPHL offers analysis for a number of food pathogens

Most commonly tested food pathogens:

Staphylococcus aureus

Salmonella species

Listeria species

Bacillus cereus

E. coli O157:H7

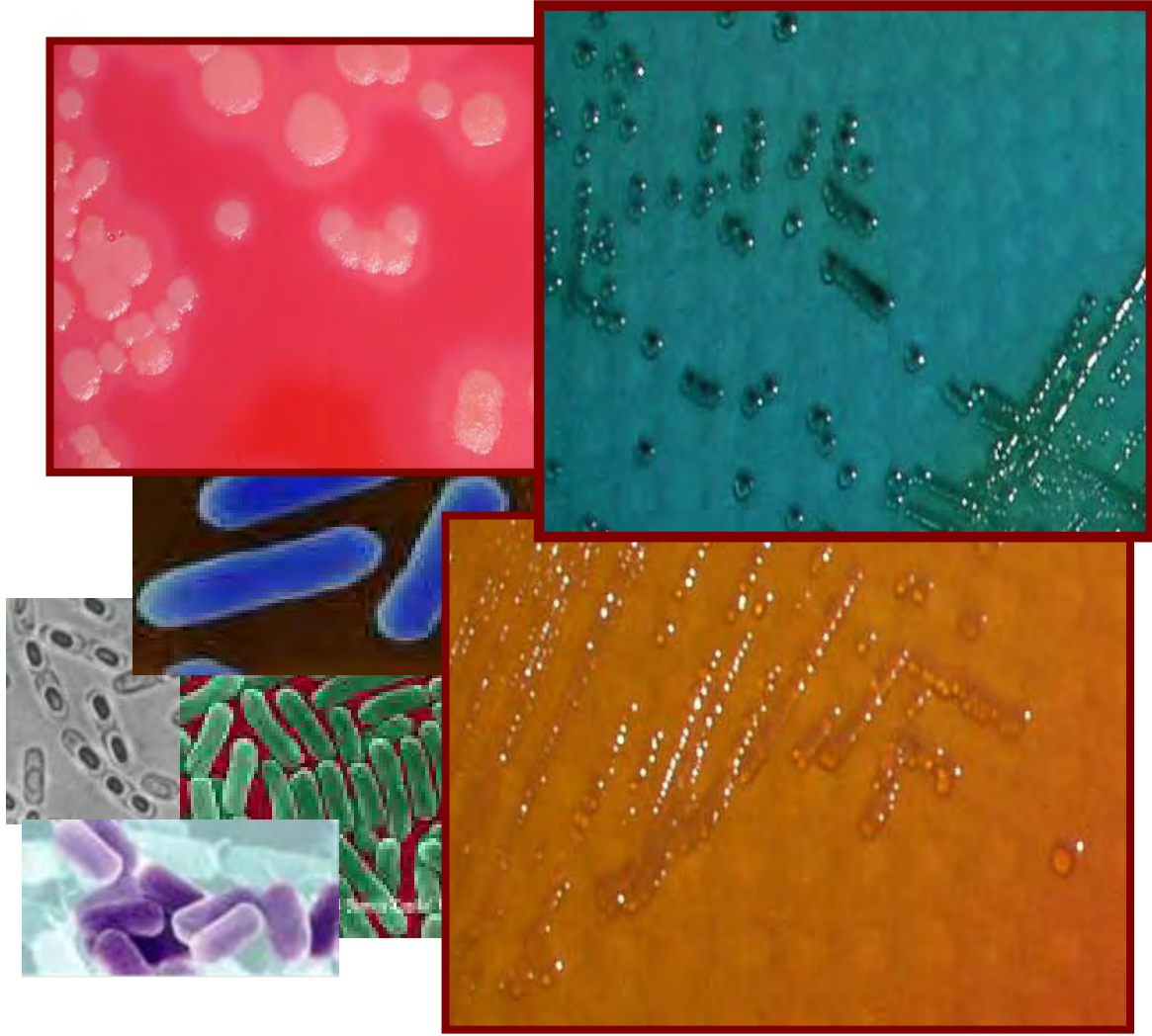
Campylobacter

Analysis for other organisms in food must be decided on a case by case basis. Call the KPHL Food Microbiology lab immediately for consultation at 502-564-4446



Food Pathogens - Overview

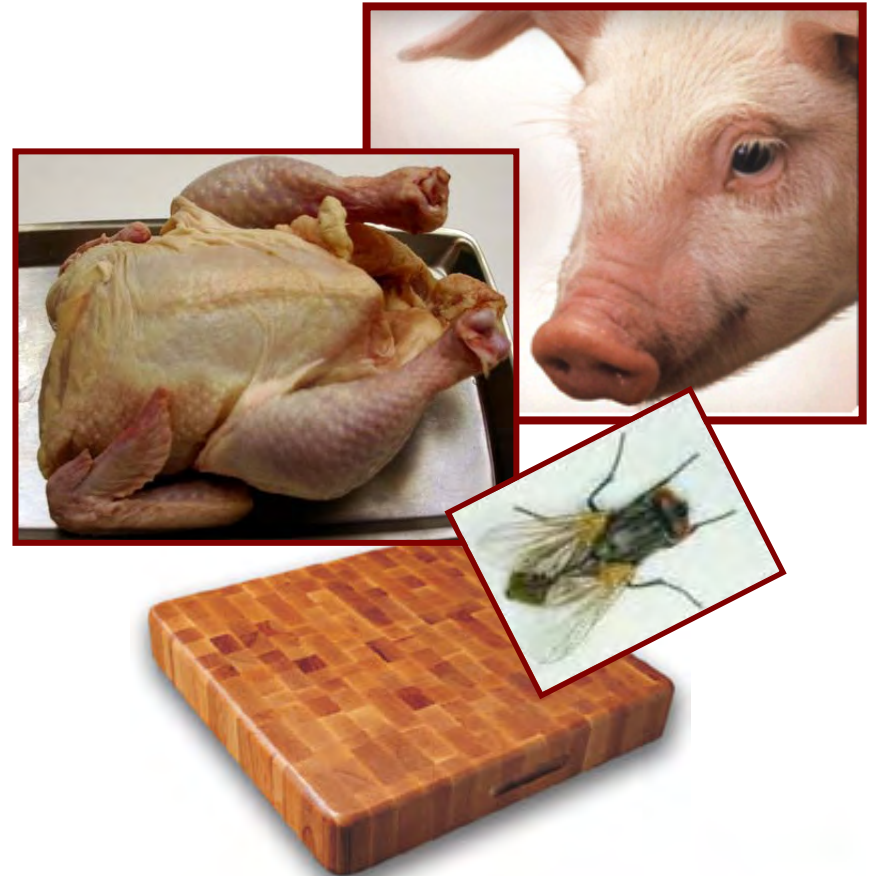
- **Salmonella**
- **E.coli & E.coli O157:H7**
- **Listeria**
- **Campylobacter**
- **Staph aureus**
- **Bacillus cereus**



Salmonella species

- It is estimated that 2 – 4 million cases of Salmonellosis occur in the U. S. annually.
- Widespread occurrence in animals, especially in poultry and swine.
- Environmental sources:

water, soil, insects, factory surfaces, kitchen surfaces, animal feces, raw meats, raw poultry, and raw sea foods, to name only a few.



USFDA CFSAN Bad Bug Book

Salmonella species

- **Foods implicated have been** raw meats, poultry, eggs, milk and dairy products, fish, shrimp, frog legs, yeast, coconut, sauces and salad dressings, cake mixes, cream-filled desserts and toppings, dried gelatin, peanut butter, cocoa, and chocolate.
- **Salmonella has also been isolated from both the inside and outside of eggs.**

USFDA CFSAN [Bad Bug Book](#)



Salmonella species

- **Confirmation of Salmonella is by biochemical and serological methods.**
- **The presence or absence of Salmonella species is reported.**



Salmonella growing on HE agar

E. coli & E. coli O157:H7

- E. coli is a normal inhabitant of animal & human Intestines; suppressing harmful bacteria and synthesizing vitamins.
- E.coli is the dominant species found in feces
- Some E. coli strains cause human illness such as E.coli O157:H7
- E.coli O157:H7 produces large quantities of 1 or more potent toxins that causes severe damage to the intestine lining and hemorrhagic colitis



SUSPECT *E.coli*:

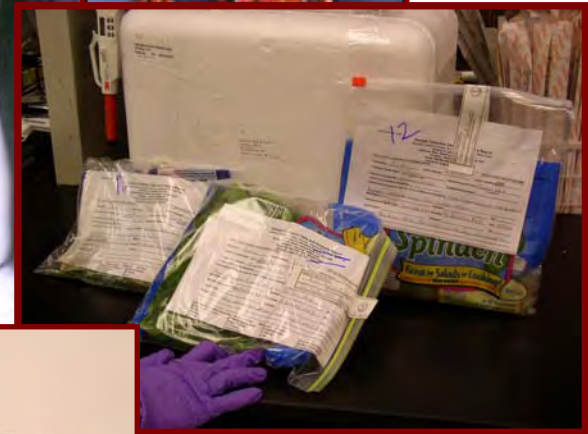
improper hand washing - food prep/process
sewage contamination
contaminated fertilizer
livestock in close proximity to crops/produce

USFDA CFSAN [Bad Bug Book](#)

E. coli O157:H7

“SUSPECT” *E.coli* O157:H7 Foods:

- Meats; Undercooked or raw hamburger (majority of nearly all documented outbreaks)
- Raw milk
- Produce contaminated with sewage
- *Our State lab isolated E. coli O157:H7 from unpasteurized apple cider during routine surveillance testing of the product for the Food Safety Branch.*



E. coli O157:H7

E. coli O157:H7 growing on Sorbitol MacConkey agar



Presence or Absence of *E. coli* O157:H7 is reported.

Listeria species

- Listeria is very widespread in the environment.
- Listeria is quite hardy and resists the damaging effects of freezing, drying and heat.
- Listeria has the ability to grow at temperatures as low as 3° C permitting multiplication in refrigerated foods. Therefore, package & ship foods suspected to contain Listeria at refrigerated temperatures



Listeria species

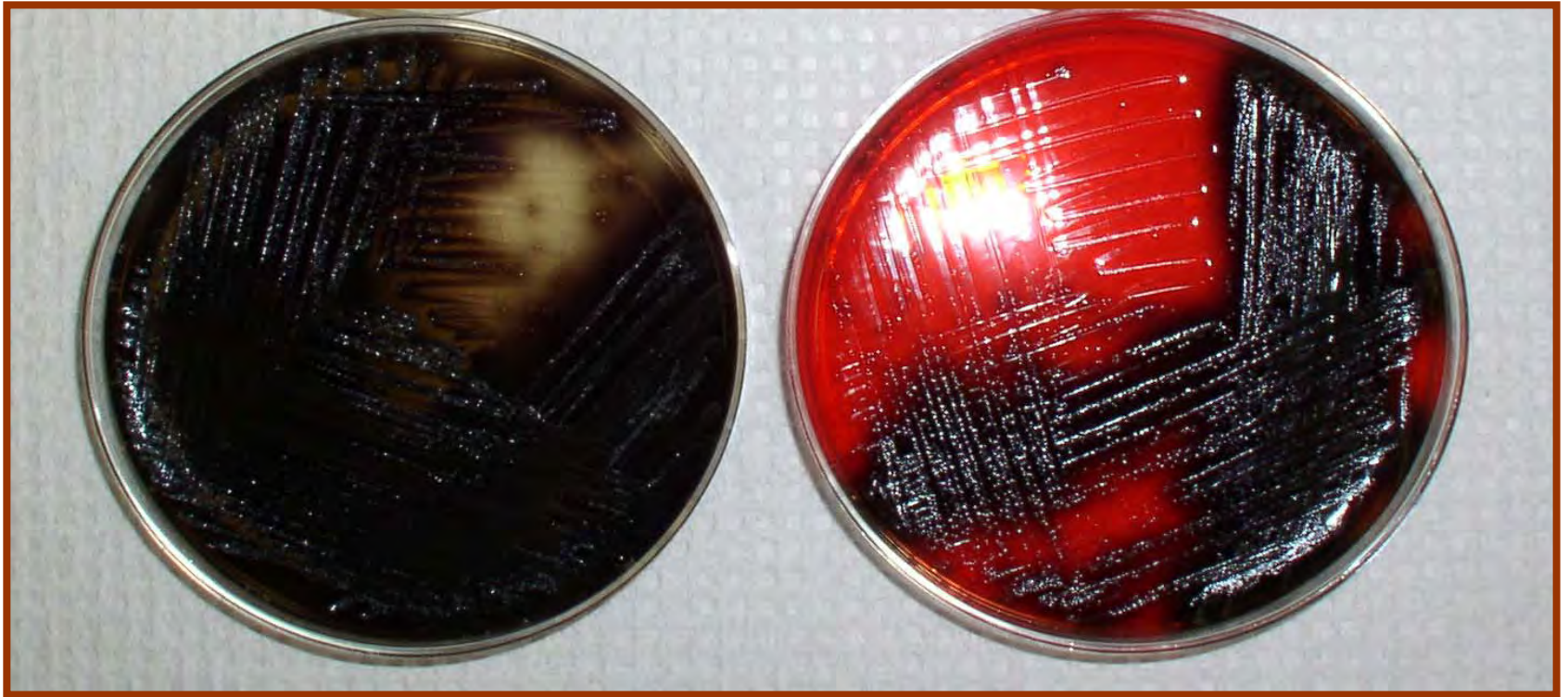
SUSPECT *LISTERIA*:

- milk, cheese, ice cream, uncooked vegetables, fermented raw-meat sausages, raw and cooked poultry, raw meats (all types), and raw and smoked fish.
- An episode associated with consumption of coleslaw was linked with cabbage from a farm using sewage fertilizer.



USFDA CFSAN [Bad Bug Book](#)

Listeria species



Hydrolysis of esculin causes a black halo around colonies of *L. monocytogenes* on Oxford and Palcam agars.

Presence or Absence of *Listeria* is reported.

Campylobacter species

Campylobacter is thought to be the leading bacterial cause of sporadic (non-clustered) cases of diarrheal disease in the U. S.

Outbreaks have been associated with un-treated water, raw clams, and with raw milk.



Campylobacter species

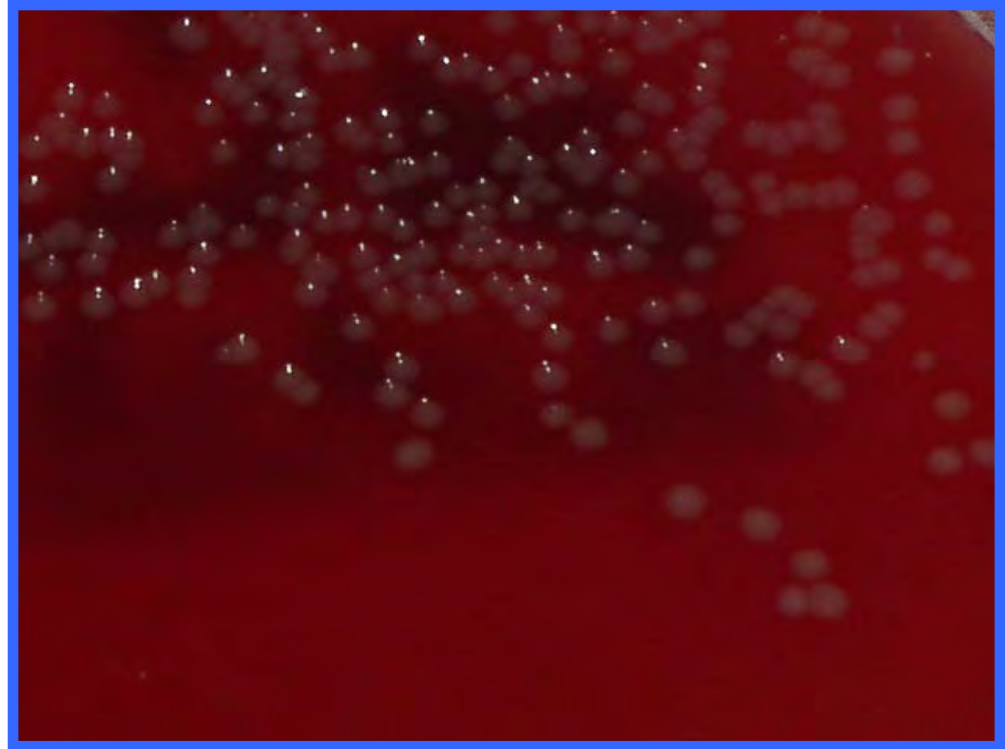
- **Campylobacter jejuni** is thought to be the leading cause of bacterial diarrheal illness in the U.S., but other species of **Campylobacter** can cause illness in humans.
- **C. jejuni** frequently contaminates raw chicken, inadequately cooked chicken & re-contaminated chicken. Surveys show that 20 to 100% of retail chickens are contaminated.
- Raw milk has been a source of infections.
- Note: **Listeria** is often carried by healthy cattle and by flies.



USFDA CFSAN [Bad Bug Book](#)

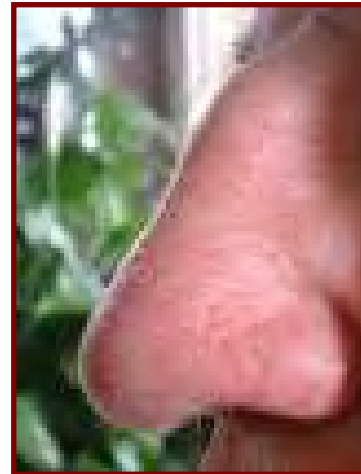
Campylobacter species

- Typical colonies of *Campylobacter jejuni* on Campy Blood Agar.
- The presence or absence of *Campylobacter* species is reported.



Staphylococcus aureus

- Staphylococci exist in air, dust, sewage, water, milk and food or on food equipment, environmental surfaces, humans and animals.
- Staphylococci are present in the nasal passages and throats and on the hair and skin of 50% or more of healthy individuals.
- Most often the source of food contamination in food poisoning outbreaks with *S. aureus* are food handlers or food processors.



Compendium of Methods for the Microbiological Examination of Food
3rd Edition, 1992
USFDA CFSAN Bad Bug Book

Staphylococcus aureus

Typical contaminated foods / conditions:

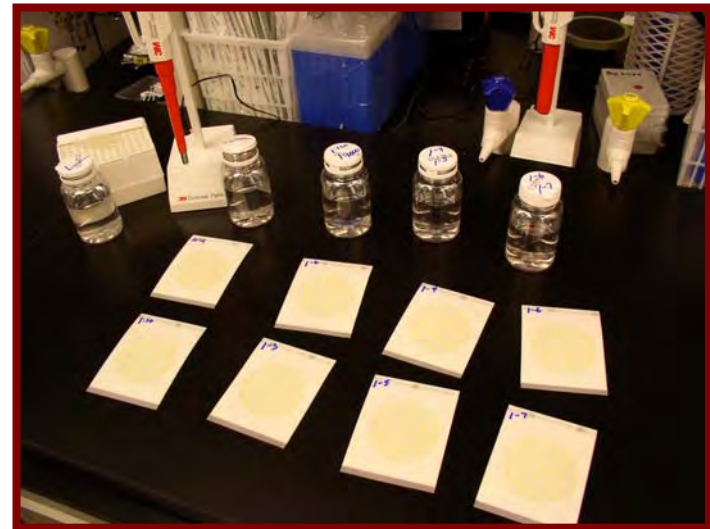
- Meat & meat products, milk & dairy products, egg products, salads (egg, tuna, chicken, potato, and macaroni), sandwich fillings, and bakery products such as cream-filled pastries, cream pies, and chocolate éclairs.
- Foods requiring considerable handling during preparation & are kept at slightly elevated temperatures after preparation
- Foods - un-refrigerated or improperly refrigerated for prolonged periods of time, allowing the organisms time to reproduce and to make toxin.
- Compendium of Methods for the Microbiological Examination of Food 3rd Edition, 1992
USFDA CFSAN Bad Bug Book



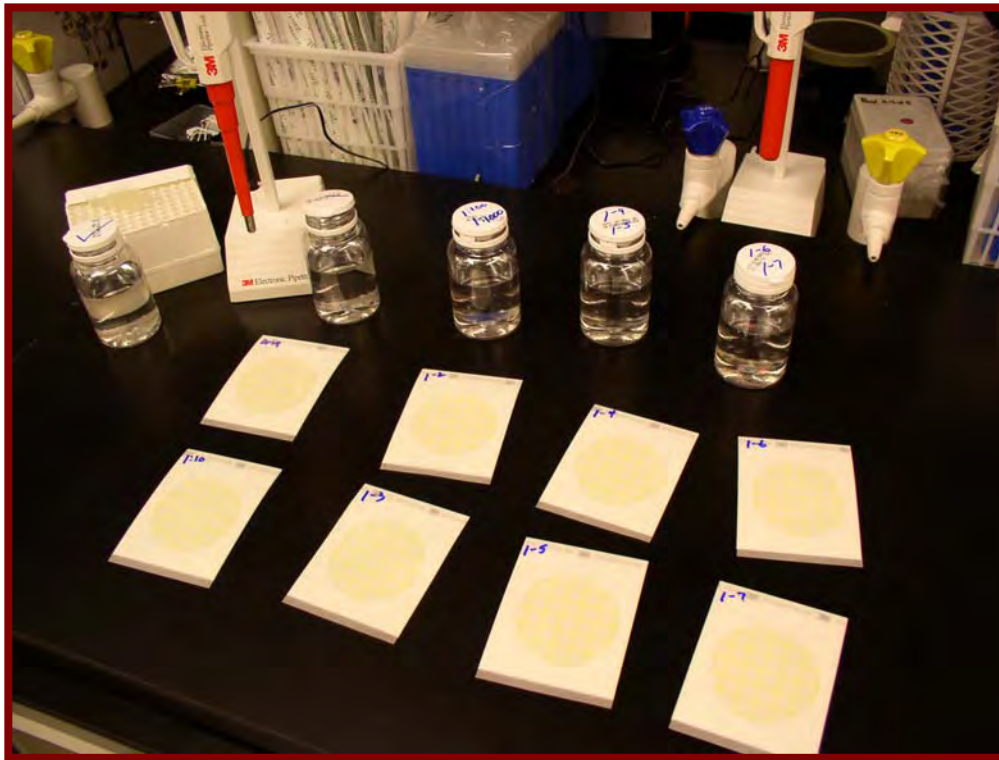
Staphylococcus aureus

- Staphylococcal food poisoning usually does not occur unless *S. aureus* bacteria are present in the food in large numbers.
- **INFECTIVE DOSE** - a toxin dose of less than 1.0 microgram in contaminated food will produce symptoms of staphylococcal intoxication. This toxin level is reached when *S. aureus* populations exceed 100,000 per gram.
- Therefore, testing for *S. aureus* includes enumeration of colony forming units per gram of food.

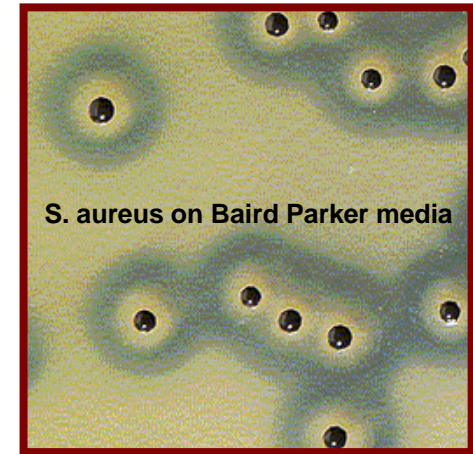
USFDA CFSAN [Bad Bug Book](#)



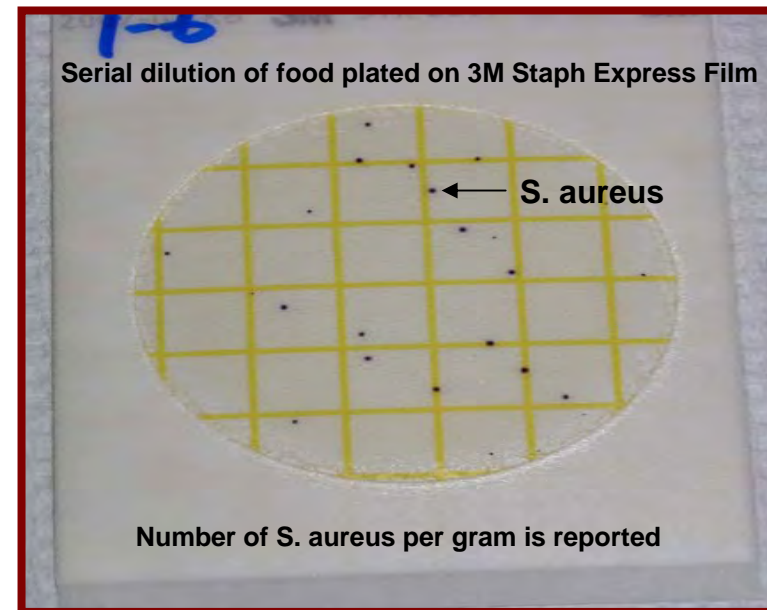
Staphylococcus aureus



Serial dilutions are made starting with a 1:10 dilution of the food. Dilutions are plated either to Baird Parker media or 3M Staph Express films. The number of *S. aureus* per gram is reported.



S. aureus on Baird Parker media



Bacillus cereus

- **Bacillus cereus** is widely distributed in Nature and can be isolated from a variety of foods.
- However, unless it is able to multiply, its presence is not significant to human health.
- The presence of large numbers of *B. cereus* ($>10^6$ organisms per gram) in food is indicative of active growth and proliferation of the organism consistent with a potential hazard to health.

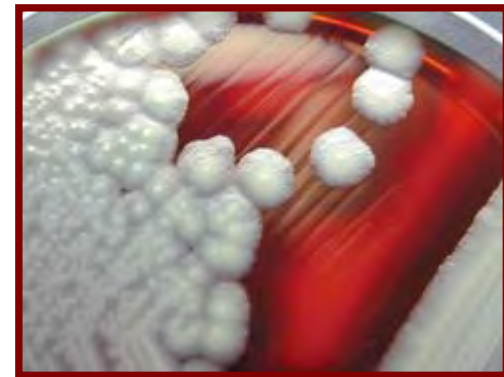
AIR



SOIL



DUST



Bacillus cereus

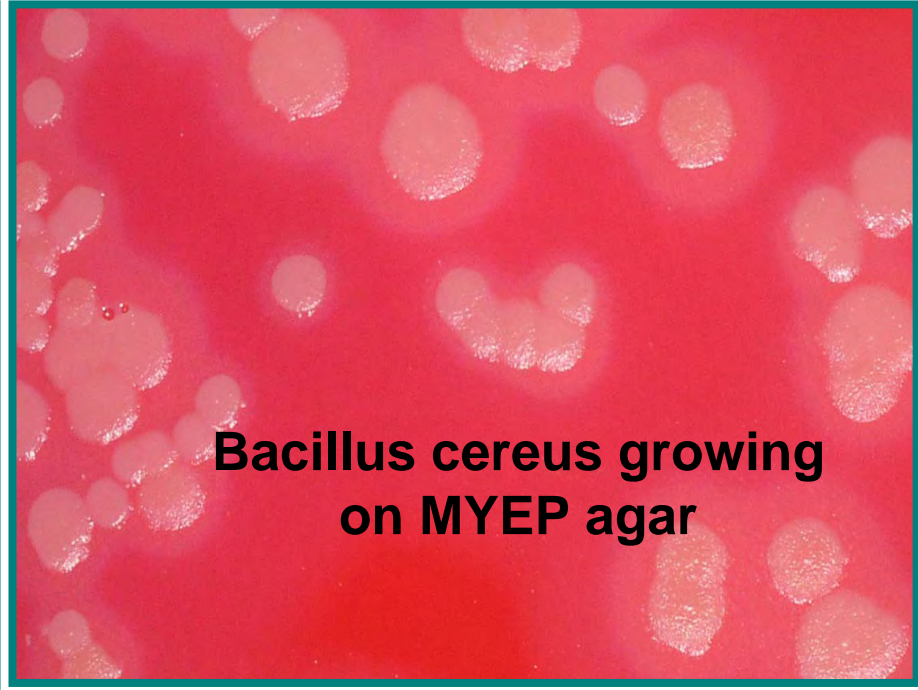
- **B. cereus can cause 2 distinct illness syndromes; nausea & vomiting (emetic) diarrhea & abdominal pain (diarrheal)**
- **95% of all emetic syndrome cases are related to fried or cooked rice.**
- **Meat based dishes, soups, vegetables, puddings & sauces contaminated with B. cereus has caused Diarrheal syndrome**
- **In almost all cases, the implicated food has been held for too long at unsatisfactory storage temperatures.**



USFDA CFSAN Bad Bug Book

Bacillus cereus

B. cereus is tested quantitatively for the number of colony forming units per gram of food.



Bacillus cereus growing on MYEP agar

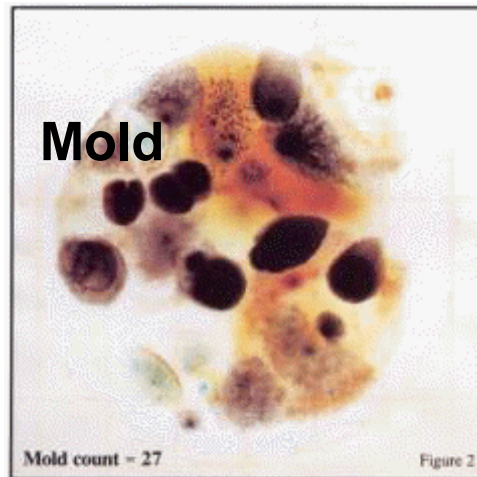
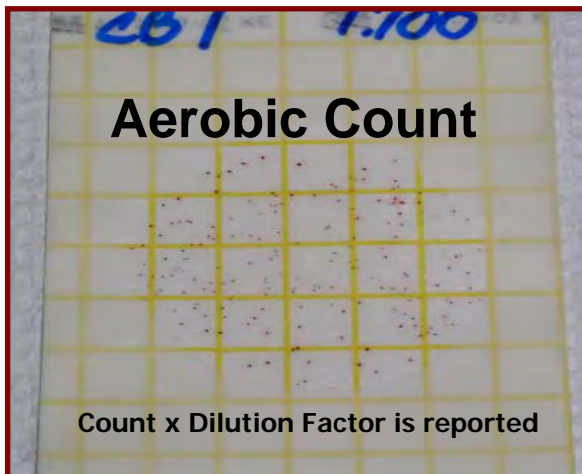
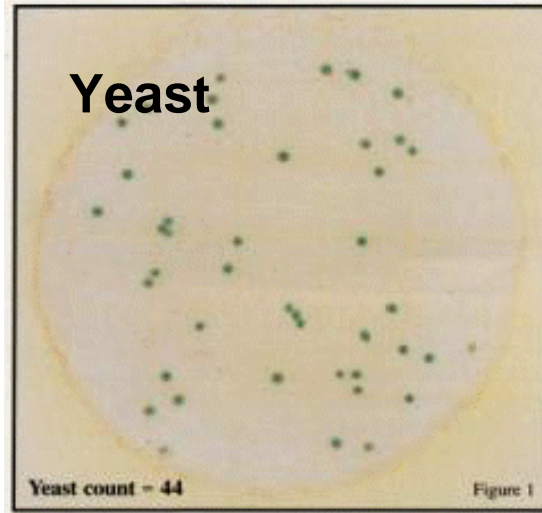
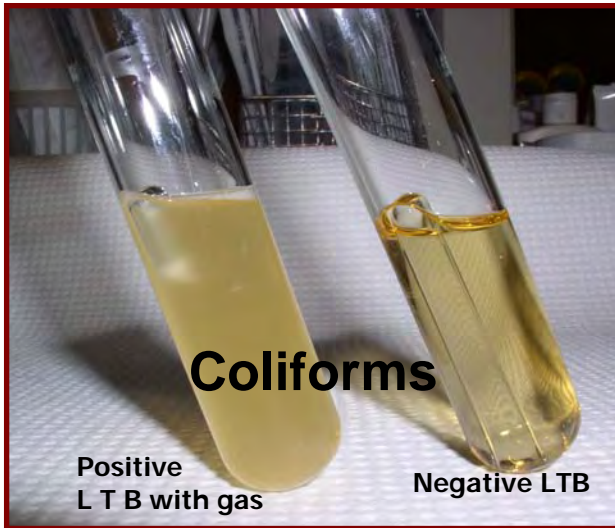
Dilutions are made starting with a 1:10 dilution of the food.

Dilutions are plated to MYEP agar.

The **number of B. cereus **per gram** is reported.**

Miscellaneous Food Testing

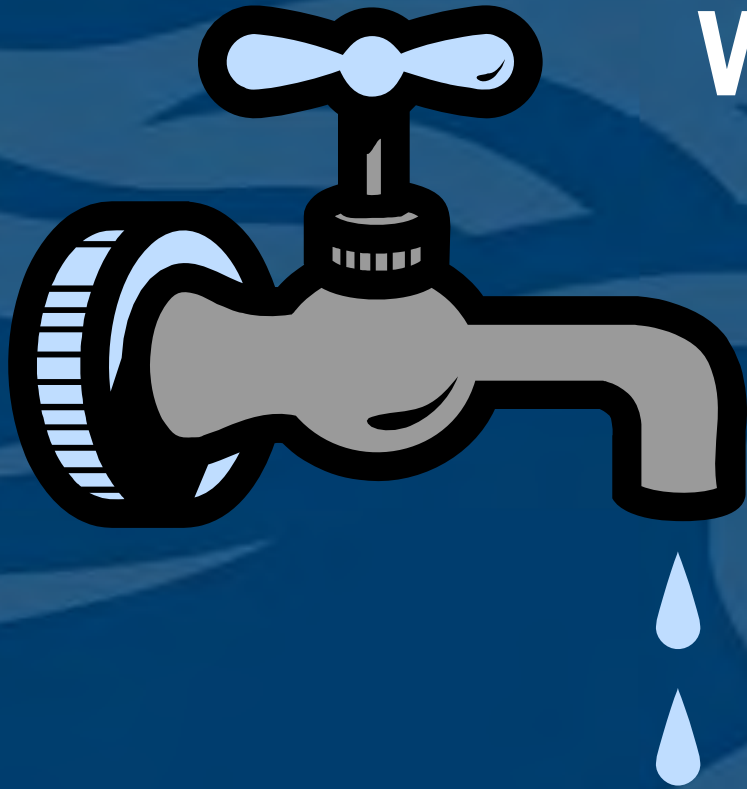
Indicator: “Cleanliness” of Food



Honey & Sorghum production



Coliform counts, Aerobic counts, Mold & Yeast counts give an indication of the general cleanliness of food.



Water Microbiology

Collection, Packaging,
&
Laboratory Perspective

2006

Kentucky
UNBRIDLED SPIRIT™



The Water lab at the KY Public Health
Laboratory in Frankfort operates under
EPA certification

Water Microbiology



KY Public Health Laboratory

KPHL – EPA Certified

The KY Public Health Laboratory (KPHL) in Frankfort, KY is certified under **EPA** for testing Drinking Water & Dairy Water samples.

KPHL - EPA certification does not extend to any other laboratory

EPA certification requires: annual 10 sample proficiency test with no errors
Intense on-site evaluation (analysts, methods, quality control, etc.)



Note:

There is only 1 State Laboratory in KY
– it is in Frankfort, KY



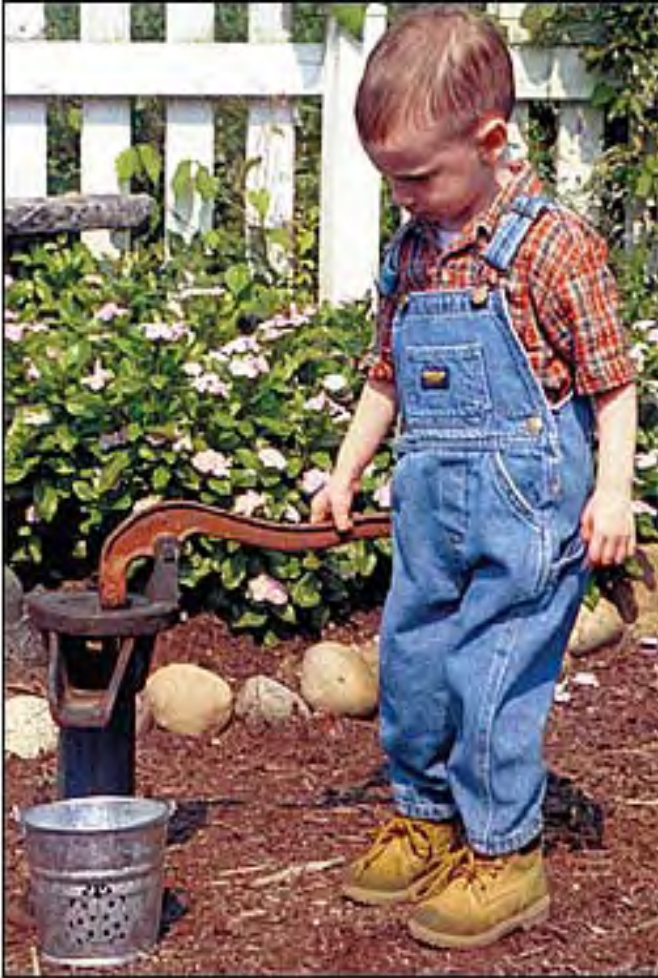
**KY Public Health
Laboratory**

Other water testing labs exist. They may not be EPA certified and their submission requirements, forms, collection kits, rejection criteria, analysis details, and results reporting may be different .

KENTUCKY PUBLIC HEALTH LAB WATER TESTING

KPHL TESTS THE FOLLOWING:

- PRIVATE DRINKING WATER
- RECREATIONAL WATER



KPHL - TESTS PRIVATE DRINKING WATER



At KPHL we test Drinking Water samples from private sources

WELLS

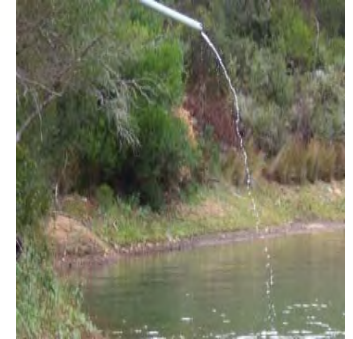
CISTERNS

SPRINGS

(WHEN USED AS **DRINKING** WATER)

Private Drinking Water Sources

We do NOT test samples from open springs or other outdoor unprotected bodies of wateror ponds..... or puddles



The reason.....Testing these kinds of samples with our Drinking Water method would not be meaningful, because this water would be expected to have bacteria, including Coliforms and possibly *E. coli*.



PRIVATE DRINKING WATER

WHO COLLECTS:

Must be a Registered
Environmental Sanitarian
or authorized collector

WHAT IS BEING DETERMINED:

Sanitary Quality
&
Suitability for General Use

TESTING:

Total Coliforms (fecal & nonfecal Coliforms)
plus E. coli



The Analysis of The Drinking Water



Coliforms and **E. coli** are indicator organisms used to assess the safety of drinking water supplies.

The **presence** of **Coliforms** in water does not necessarily indicate fecal contamination, but indicates the possibility of **fecal contamination**.

The **presence** of **E. coli** in a water sample indicates the probability of **fecal contamination**.

WATER SAMPLE - COLLECTION KIT

Water Collection Kit Contents:

- **Instruction sheet**
- **Sterile plastic sample bottle with 100 mL fill line etched onto it.
(Do not substitute)**
- **Plastic Ziploc seal bag**
- **Lab 507 Form**
- **Styrofoam mailer**
- **mailing label**



WATER SAMPLE - COLLECTION KIT

Water Collection Kit Contents:

Instruction sheet

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR PUBLIC HEALTH
DIVISION OF LABORATORY SERVICES
100 SOWER BLVD; STE 204
FRANKFORT, KY 40601
(502) 564-4446

Procedure for Collection of Water Sample for bacteriological examination:

1. Water must be collected in sterile vials provided by Laboratory Services. Plastic vials intended for the collection of water samples contain a dechlorinating agent, sodium thiosulfate. The purpose of sodium thiosulfate is to neutralize residual chlorine the moment the sample is taken. The thiosulfate prevents continuation of the bactericidal action of the chlorine during the time the sample is in transit to the laboratory. The bacteriological examination will then indicate more closely the true quality of the water at the time the sample was collected.
2. When sampling from a tap, the following steps should be taken:
 - a. Select a tap or hose bibb which has been in use and does not leak. Do not sample from a drinking fountain or gate valve. Remove all attachments from sample tap prior to sampling.
 - b. Flush tap for 2-5 minutes before collecting sample. Do not flush tap if source of contamination is suspected to be within the lines of the sampling site.
 - c. Identify sample source on sample form and plastic vial.
 - d. Fill plastic vial to 100 ml fill line.
 - e. Re-cap the plastic vial securely.
 - f. Check plastic vial for leaks by shaking and inverting plastic vial several times. Place vial in plastic bag.
 - g. Place plastic vial and completed water sample form in the Styrofoam mailer.
 - h. Remove backing from mailing label and seal Styrofoam mailer along the short axis.
 - j. Pool and health club spa samples require three sample plastic vials each. These can be sent along with the complete form in an appropriate size box to lessen the cost of postage. Beach samples require only one vial.
 - k. Samples must arrive in the laboratory within 30 hours of collection. Samples requiring chain of custody precautions are to be iced and taken to the nearest certified laboratory within 6 hours of collection.
3. A complete and accurate laboratory form must accompany each sample submitted for examination. Indicate if sample is other than drinking water (pool, beach, etc.)

WATER SAMPLE - COLLECTION KIT

Water Collection Kit Contents:

**ZIPLOC PLASTIC
BAG**

**MAILING
LABEL**

**PLASTIC SAMPLING
BOTTLE (etched 100 ml fill line)**

**STYROFOAM
BOX**



WATER SAMPLE - COLLECTION KIT

Water Collection Kit Contents:

Lab 507 Form

LAB 507
REV. 7-98

Kentucky Public Health Laboratory
100 Sower Blvd., North Loading Dock,
PO Box 2020
Frankfort, Kentucky 40602-2020
Phone: 502/ 564-4446 Fax: 502/ 564-7019
(Please complete a separate form for each sample. Yellow copy may be retained by the submitter.)

**Water Bacteriology
Analysis Report**

Authorized Collector: _____
San.No: _____ Collection Date: _____ Collection Time: _____
Occupant or Owner: _____
Request Identifying No: _____ Site No.: _____
Sample No.: _____ Sample Seq. No: _____
County: _____
Submitter (Use LHN Site#): _____

Please Indicate if Sample is Other Than a Drinking Water Sample:
Dairy Water ☐ Swimming Pool or Beach ☐ Other _____

Check if sample from a Semi-Public ☐ or Public ☐ drinking water source

Chlorine Residual: Total _____ ppm / Free _____ ppm. pH of Sample _____ Temp: _____
(Semi-Public and Public water samples must be accompanied by a completed Natural Resources Form #DEP4008)

☐ Check here if accompanied by Chain-of-custody form

Collector's Remarks: _____

Laboratory Findings: _____

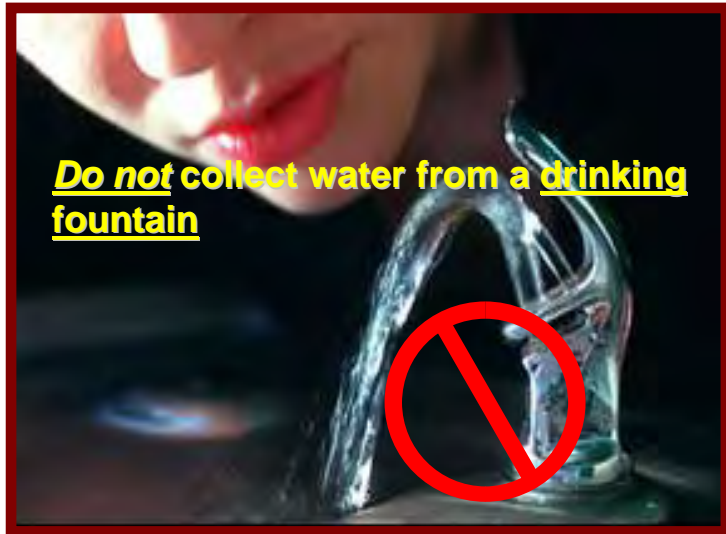
Date & Time Received	Laboratory Number	Date & Time Reported	Technologist
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Drinking Water – Collection Don'ts

Do not collect water from semi-public or public water supplies



Do not collect water from a drinking fountain



Do not collect water from a “frost-free” hose bib or gate valve



Do not collect water from a swinging or swivel faucet



Drinking Water – Preparation for Sample Collection

WASH HANDS

BEFORE



COLLECTING

SAMPLES

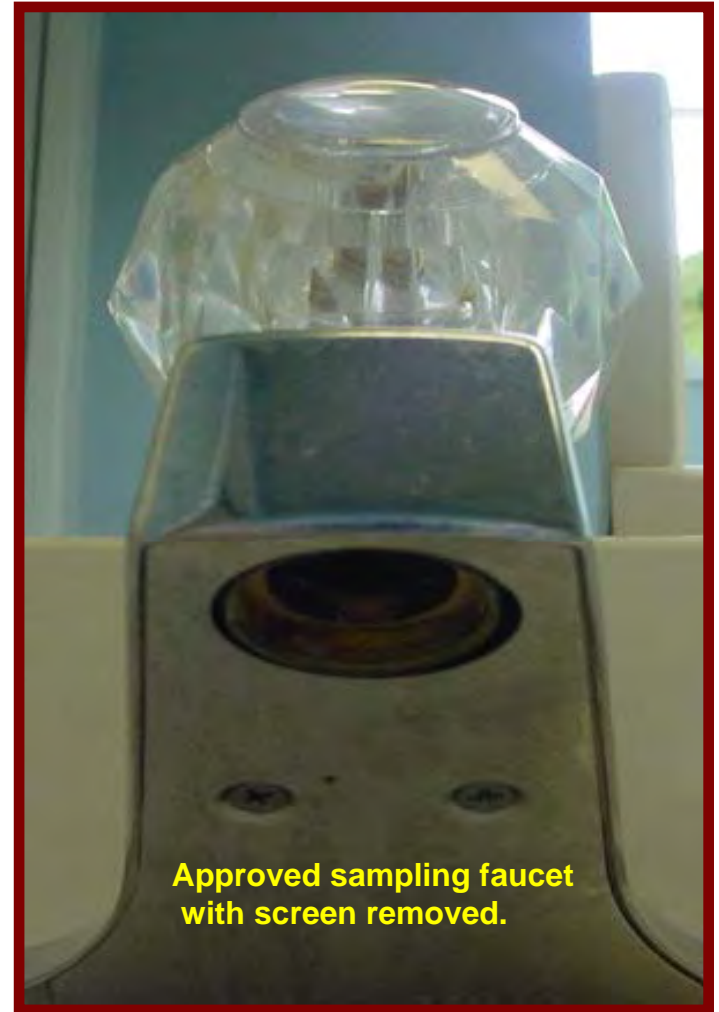
Note:

Samples submitted to the state Water Lab for analysis must be collected by an “authorized” collector

Drinking Water – Faucet Hardware

Remove screens, aerators, filters, hoses, or other faucet hardware from the end of the tap.
(can harbor bacteria)

TIP: Ask the homeowner to remove the hardware themselves.....as damage may occur if the hardware is deteriorated or hard to remove.



Drinking Water - Sample Collection

- Open the cold water tap and flush for 2-5 minutes to clear the service line.
- Do not flush tap if source of contamination is suspected to be within the lines of the sampling site.
- Adjust the water flow to about the width of a pencil and at a steady rate of flow.
- Don't change the rate of flow once you have started sampling, because this could dislodge bacteria or debris inside the line



Drinking Water - Sample Collection



- *Remove the bottle cap Carefully
Do not touch the inside of the cap
or the bottle.*
- *Hold the bottle in one hand and
the cap in the other.*
- *Position the bottle under the
water flow.*
- *Fill the bottle to the marked
100 mL fill line.*
- *Place the cap back on the bottle
and close securely.*

NOTE:

The “white powder” in the sample bottle is the chemical sodium thiosulfate, which neutralizes residual chlorine that may be in the water.

Drinking Water - Sample Collection



Sample bottles must be filled to the 100 mL fill line.

Drinking Water - Sample collection



If slightly over filled, the sample volume must be adjusted in the lab with a sterile pipette after mixing.

If the sample bottle is over filled all the way to the top, the sample cannot be properly mixed, and removing a portion may cause results to be inaccurate.

WATER SAMPLE SUBMISSION

Samples submitted to the State Water lab for analysis must be collected by an authorized collector & kept under his/her control until released to a delivery service such as the U. S. Mail..... U P S..... FedEx..... or other.



WATER COLLECTION ISSUES

- More than 90% of unsatisfactory water samples are rejected due to **TIMING** issues.
- Samples received **>48 HOURS** from collection **cannot be tested**.
- Samples received **30-48 hours** from collection will be tested, but a **QUALIFYING** statement will be added to results stating that results may not be valid.
- If mailing samples through the regular mail from your area does not get them here in one day, please try Priority Mail or an overnight delivery service.



Drinking Water Analysis



1. Colilert media is added to 100 mL of sample



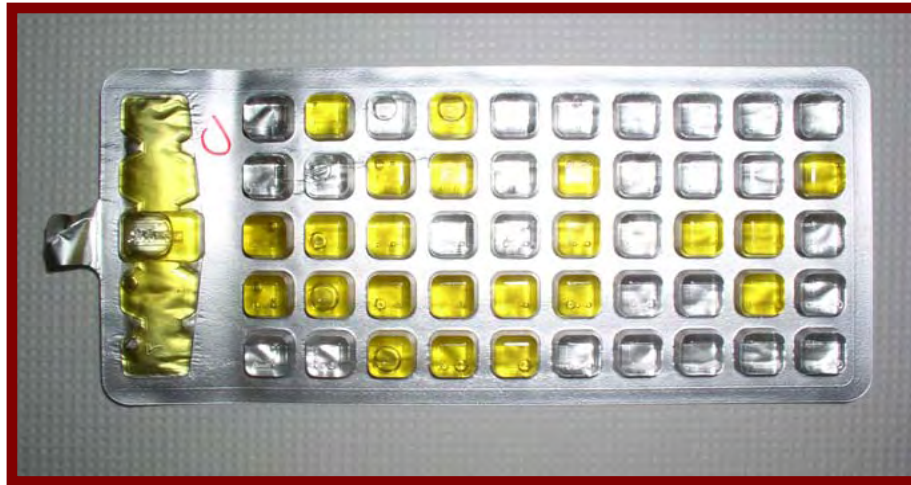
2. Sample poured into Quantitray



3. Culture incubated at 35° C 24 hours

Results are reported after 24 hours incubation

Drinking Water Analysis



**Yellow color indicates
PRESENCE (growth)
of Coliforms**

**Sample is Total Coliform
positive**



**Fluorescence indicates
PRESENCE (growth)
of E. coli**

**Sample is E. coli
positive**

Most Probable Number

IDEXX®
51-Well Quanti-Tray®
MPN Table

No. of wells giving positive reaction	MPN per 100 ml sample	95% Confidence Limits	
		Lower	Upper
0	<1	0	3.7
1	1	0.3	5.6
2	2	0.6	7.3
3	3.1	1.1	9
4	4.2	1.7	10.7
5	5.3	2.3	12.3
6	6.4	3	13.9
7	7.5	3.7	15.5
8	8.7	4.5	17.1
9	9.9	5.3	18.8
10	11.1	6.1	20.5
11	12.4	7	22.1
12	13.7	7.9	23.9
13	15	8.8	25.7
14	16.4	9.8	27.5
15	17.8	10.8	29.4
16	19.2	11.9	31.3
17	20.7	13	33.3
18	22.2	14.1	35.2
19	23.8	15.3	37.3
20	25.4	16.5	39.5
21	27.1	17.7	41.6
22	28.8	19	43.9
23	30.6	20.4	46.3
24	32.4	21.8	48.7
25	34.4	23.3	51.2
26	36.4	24.7	53.9
27	38.4	26.4	56.6
28	40.6	28	59.5
29	42.9	29.7	62.5
30	45.3	31.5	65.5
31	47.8	33.4	69
32	50.4	35.4	72.5
33	53.1	37.5	76.2
34	56	39.7	80.1
35	59.1	42	84.4
36	62.4	44.6	88.8
37	65.9	47.2	93.7
38	69.7	50	99
39	73.8	53.1	104.8
40	78.2	56.4	111.2
41	83.1	59.9	118.3
42	88.5	63.9	126.2
43	94.5	68.2	135.4
44	101.3	73.1	146
45	109.1	78.6	158.7
46	118.4	85	174.5
47	129.8	92.7	195
48	144.5	102.3	224.1
49	165.2	115.2	272.2
50	200.5	135.8	387.6
51	> 200.5	146.1	infinite

IDEXX Sales and Technical Support
1-800-321-0207 or (207) 856-0496

09-63234-00

MPN Table

0 + wells = <1 MPN/100 mL

20 + wells = 25.4 MPN/100 mL

36 + wells = 62.4 MPN/100 mL



Recreational Water

KPHL TESTS WATER FROM:

Public Swimming Beaches

Public Swimming Pools



**BEACH CLOSED
FOR SWIMMING
BY HEALTH DEPT.
ORDER**



Recreational Water

KPHL TESTS WATER FROM:

WHIRL POOLS

&

THERAPEUTIC POOLS

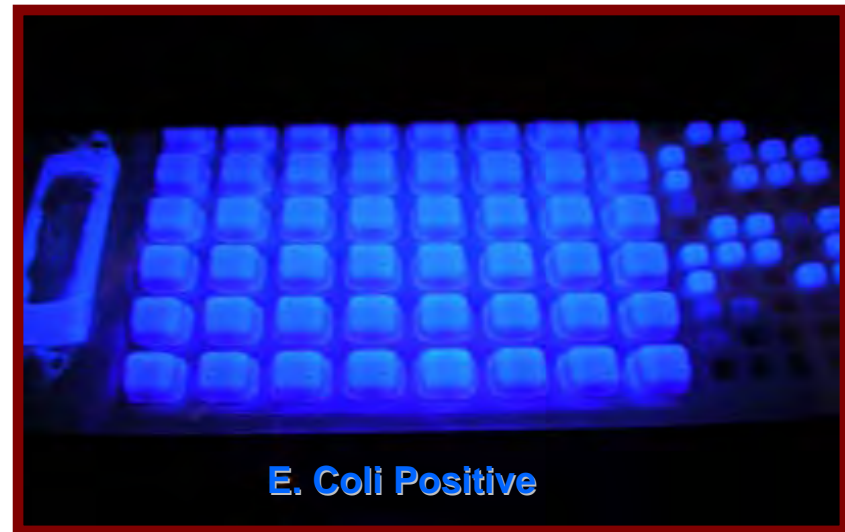
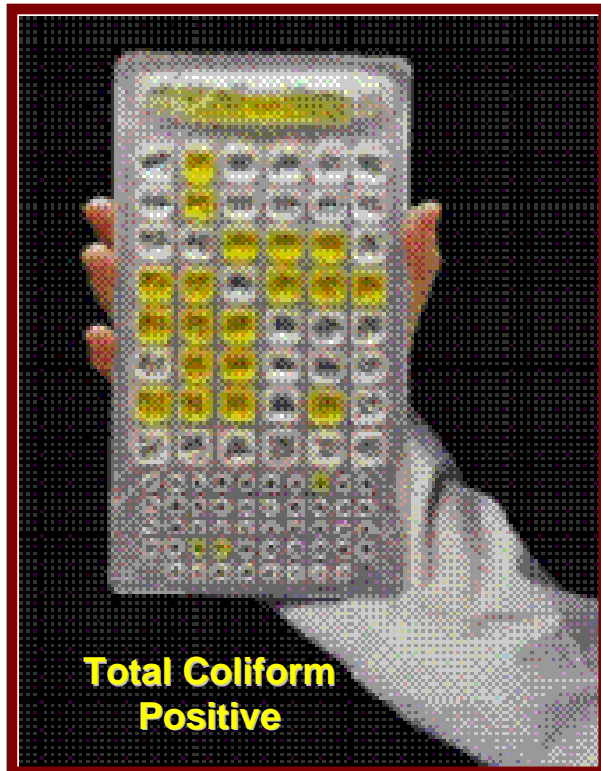
&

PUBLIC SPAS



Recreational Water Analysis

Swimming Beach and Swimming Pool

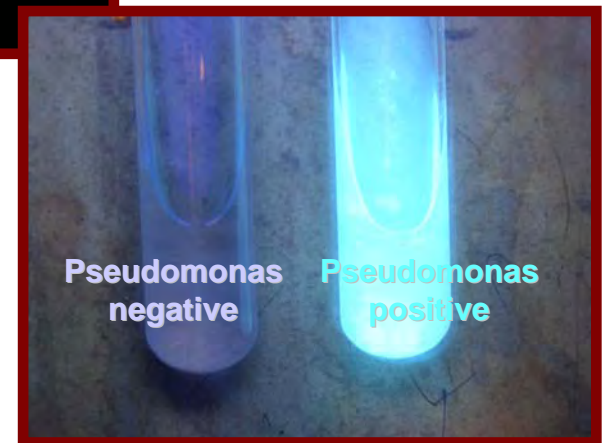
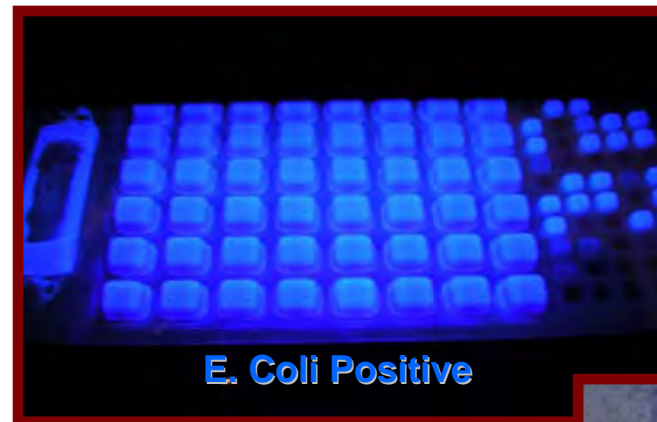
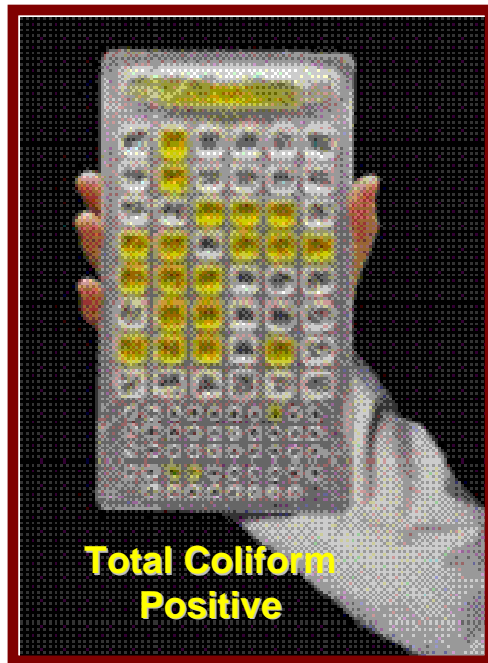


Most Probable Number of Total Coliforms and E. coli are reported.

Recreational Water Analysis

Therapeutic Pool samples

Hospital Pools, Whirl Pools, or public spas



**Most Probable Number of Total Coliforms,
E. coli and Pseudomonas
are reported.**

Recreational Water



Public Swimming Beaches

****Public Swimming Pools**

1 bottle = 1 set of results

Total Coliforms – E. coli



****Therapeutic Pools, Whirlpools**

2 bottles = 1 set of results

Total Coliforms - E. coli - Pseudomonas

**** NOTE:** These instructions differ from the handbook, because the testing protocol was changed in late 2006. Indicator organisms now being tested for require less sample. If more is sent than required.....no problem 😊.

Sample Submission –Form 507

LAB 507
REV. 7-98

Kentucky Public Health Laboratory
100 Sower Blvd., North Loading Dock,
PO Box 2020

Frankfort, Kentucky 40602-2020

Phone: 502/ 564-4446 Fax: 502/ 564-7019

(Please complete a separate form for each sample. Yellow copy may
be retained by the submitter.)

Water Bacteriology Analysis Report

Authorized Collector: Reis Cup
San.No: G1234 Collection Date: 4-01-06 Collection Time: 11:03am
Occupant or Owner: Holly Berry
Request Identifying No: _____ Site No.: _____
Sample No.: 1 Sample Seq. No: 1
County: Bush
Submitter (Use LHN Site#): E-123123

Please Indicate if Sample is Other Than a Drinking Water Sample:

Dairy Water ☐ Swimming Pool or Beach ☐ Other _____

Check if sample from a Semi-Public ☐ or Public ☐ drinking water source

Chlorine Residual: Total _____ ppm/Free _____ ppm. pH of Sample _____ Temp: _____
(Semi-Public and Public water samples *must* be accompanied by a completed
Natural Resources Form #DEP4008)

☐ Check here if accompanied by Chain-of-custody form

Collector's Remarks: 111 vine street
Grapevine, KY 41234

Laboratory Findings:

Date & Time Received

Laboratory Number

Date & Time Reported

Technologist

Authorized collector

Sanitarian number (San.No.)

Collection Date

Collection Time

Owner / Occupant

County

Submitter

LHN site# for environmental office

Indicate if other than a
drinking water sample.

Samples - Rejection

Rejection of Water Samples

- ◆ Sample received > 48 hours from time of collection
- ◆ No authorized collector given
- ◆ No date of collection given
- ◆ Insufficient quantity (less than 100 mL)
- ◆ Sample bottle broken or leaking
- ◆ Test not available

DELIVERY

Collect and mail drinking water samples on Monday, Tuesday, and Wednesday



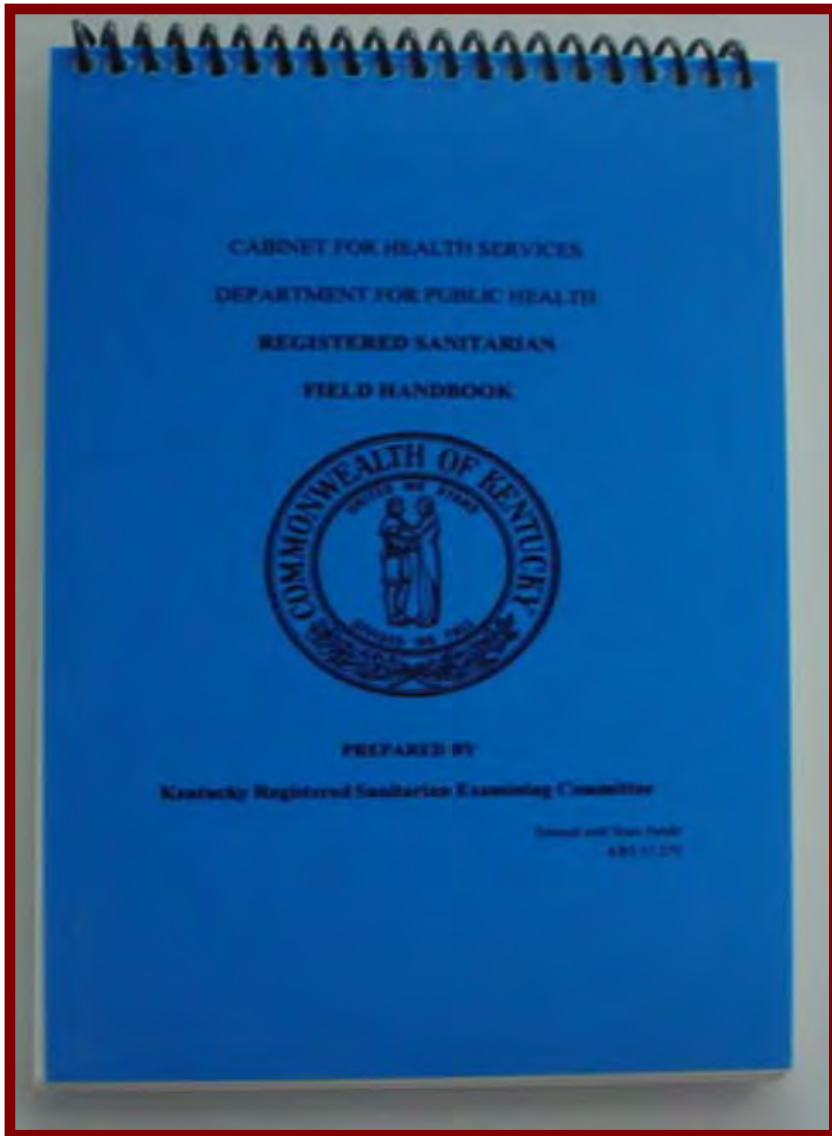
Monday and Tuesday for Whirlpool / Spa water samples

Use the best means of delivery to ensure water samples are received in under 30 hours from the time of collection for accurate and valid results.

If mailing samples through the regular mail from your area does not guarantee arrival to the state Water Lab in one day, try Priority Mail or an overnight delivery service.



REGISTERED SANITARIAN HANDBOOK



The Field Handbook for Registered Sanitarians contains collection information for Drinking Water samples and Recreational Water samples.

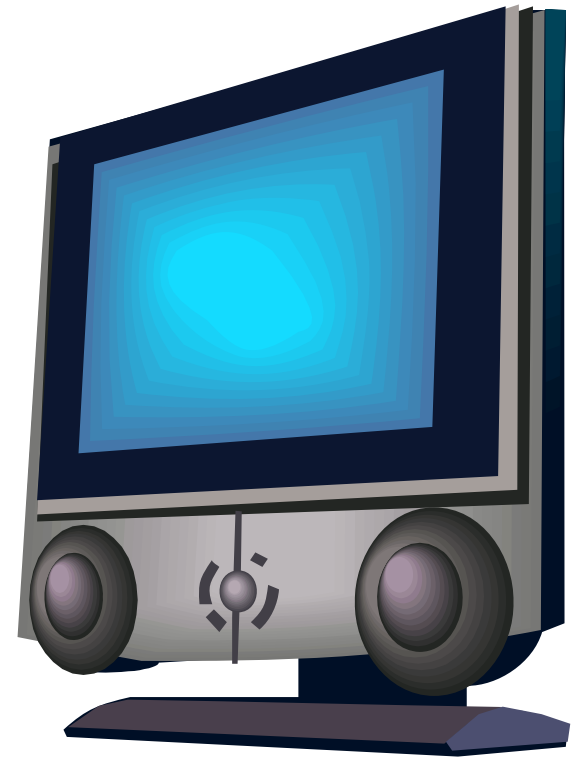
<http://www.chfs.ky.gov/dph/sanitarians.htm>

Reporting

Results are sent electronically

Local Health Network (LHN)

It is very important that the
submitter number
for your office be stated on the
request form



Water Testing Results - Turn Around Time

Water Testing Reports go out overnight & are transmitted the next morning over the LHN to the SUBMITTER location provided on Lab Form 507

- Drinking Water, Public Beach, and Public Pool results should be accessible within 48 hours from receipt in the laboratory
- Results on Therapeutic Pools and Spas tested for Pseudomonas (in addition to Total Coliforms & E.coli) may take longer to receive:
 - **NEGATIVE Results** - accessible on the morning after test completion (48 hours)
 - **Presumptive POSITIVE & Confirmed POSITIVE** results may require 4 days

Problems

**If there are problems
retrieving results,
contact:**

Custom Data Processing
(502) 695-1999



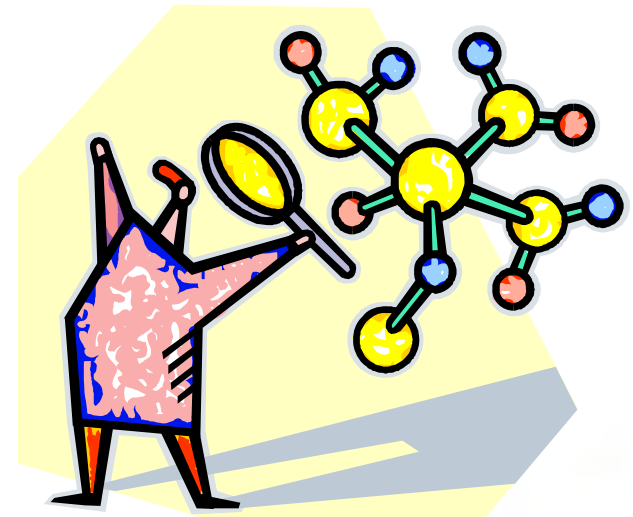
Waterborne Pathogen Testing

- The Kentucky Public Health Laboratory offers a wide variety of services in the interest of public health, but KPHL cannot do everything.
- Waterborne Pathogen testing will be considered on a “case by case” basis.
- In some instances, it will be more appropriate for this sort of testing to be done at reference laboratories or commercial laboratories.



CHEMICAL ANALYSIS of FOOD & WATER

- **Perform a thorough investigation & interview with workers, managers, shippers, consumers, etc. to narrow down and be as specific as possible when requesting a chemical analysis.**
 - There is no one “fits all” chemical screen or test.
 - Chemistry equipment and analysis is sensitive, expensive and time consuming
- **Back track from the consumer or complainant to the source. Ask questions to possible exposures and activities that involve cleaning, construction, and spraying of chemicals**
- **Be specific in requesting Herbicide VS Pesticide screening based upon investigation and interviews**



CHEMICAL ANALYSIS of FOOD & WATER

AVOID Wrapping Food in PLASTIC!

PLASTIC INTERFERES with the sensitive analytical chemistry instruments.



Exception:

leave the plastic wrap on suspect samples that are already enclosed in plastic, such as lettuce.

Alternative:

Aluminum foil or paper can be used as a wrap (make sure there is no leakage) and then if necessary, it can be placed in a baggie.



CHEMICAL ANALYSIS of FOOD & WATER

Collection Containers

- Collection containers (bottles, jars, etc.) cannot be plastic
- Use the glass container in the food kit - approved for chemical analysis
- Do **NOT** use the 100ml bottles in the water collection kit for chemical analysis. They are “plastic” & contain a “dechlorinating” agent



CHEMICAL ANALYSIS of FOOD & WATER

ALTERNATE FOOD COLLECTION CONTAINERS

If containers must be used that are not from the food kit:

- CANNOT BE PLASTIC
- Must be Washed with Soap and Water and Rinsed with Acetone (removes organics)
- A piece of Foil must also be placed between the lid and container if the lid is lined or coated with plastic. Make sure the food or beverage does not come in contact with the lid. Secure the lid tightly so no leakage occurs.



NOTE: Inspect lids in food kits for lids with plastic coating and lining. Older Food kits before March 2006 may contain glass bottles with plastic coated/lined lids.

CHEMICAL ANALYSIS of FOOD & WATER

- **LIQUIDS: COMPLETELY FILL Container (TO THE TOP)**
Seal and confirm NO AIR bubble is present so
volatiles (possible suspect chemical) will not escape



**POSSIBLE
SUSPECT CHEMICAL**

- **DRINKING WATER** takes a minimum of 1 liter;
(chemistry will supply containers upon request)

CHEMICAL ANALYSIS of FOOD & WATER

- One 504 Form per sample
&
control (blank)
- One State Seal per sample
&
control (blank)

Lab form 504
Revised By ISF 4-4-05

Sample Collection Data and Analysis Report
Cabinet For Health And Family Services - Department for Public Health
Division of Laboratory Services
100 Sewer Blvd., North Landing Dock, P.O. Box 2020
Frankfort, Kentucky 40602-2020
Phone: 502/564-4444 Fax: 502/564-7019
Stephanie K. Mayfield, MD, FACP, Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted. All data must be reported by the submitter.

Sample No.: _____ Date Collected: _____ Cost of Sample: _____
Collector/ Health Dept.: _____ (Name and Title) Sample Procured From: _____ (Signature)
Reason for Collection: _____ Establishment Number: _____
Amount in Lot before Sampling: _____
Description of Sample (Code No. if any), & Method of Collection: _____

Mail Report To: _____ Address: _____ Zip: _____
Manufacturer/ Health Dept.: _____ Address: _____ Zip: _____
Other (Name): _____ Address: _____ Zip: _____

Remarks: _____

Requested Laboratory Analysis: ☐ Bacteriological ☐ Chemical ☐ Other
☐ Standard Plate Count ☐ Listeria monocytogenes ☐ Pesticide Residue
☐ Coliform count ☐ Staphylococcus ☐ Thioglycolate
☐ Identify ☐ Salmonella ☐ Iron
☐ E. coli ☐ Mold & Yeast ☐ Excessive Water ☐ Rodent Contamination
☐ E. coli O157:H7 ☐ Antibiotics ☐ Food Additives (List) ☐ Insect Contamination
☐ Preservatives (List) ☐ Other (Describe)

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)
Lab Received: _____ Date _____ Initials _____ Lab Number _____ From: _____ Signature of Submitter _____
State Seal Attached? ☐ Yes ☐ No Sample Received ☐ Refrigerated ☐ Frozen ☐ Other _____
Report of Laboratory Analysis: _____
Comments: _____

Date Started _____ Date Completed _____ Date Reported _____ Signature of Analyst _____ Laboratory Services _____

No further Regulatory Action is indicated on this sample.
Analysis indicates sample is in violation of the following law and/or regulation based thereon. (Check appropriate one):
KRS 217.801 Lead Based Paint Law; KRS 217.005 to 217.215 KY Food, Drug, & Cosmetic Act; 217.600 to 217.715 KY Hazardous Substances
Labeling Act; KRS 217.010 KY 100 and 1000 Pesticide Act; KRS 192.100 to 192.190 Regulatory Use and Control of Radiation.
Sample Contained: ☐ Adulterated ☐ Misbranded ☐ Other _____
Further Regulatory Action: ☐ Reanalyze ☐ Reinspect ☐ Official Action ☐ Other _____

Signature _____ Title _____ Agency _____ Date _____

CABINET FOR HUMAN RESOURCES
DEPARTMENT FOR HEALTH SERVICES

BRANCH _____
OR COLLECTION AGENCY _____
Sample Procured From (Name & Address) _____



Sample No. _____
Date _____
Collector's Signature _____

DF5-224 (9-87)

LAB FORM 504

Lab form 504
Revised By ISF 4/4/05

Sample Collection Data and Analysis Report

Cabinet For Health And Family Services , Department for Public Health

Division of Laboratory Services

100 Sower Blvd., North Loading Dock, P.O. Box 2020

Frankfort, Kentucky 40602-2020

Phone: 502/564-4446 Fax: 502/564-7019

Stephanie K. Mayfield, MD, FCAP: Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted.

Back copy may be retained by the submitter.

Sample No.: 06 (2-10-2k6) Date Collected: 2/8/06 Cost of Sample: _____

Collector/ Health Dept.: Joe Smith #8911 R.S. Sample Procured From: Betty Jones
(Name and Title) (Signature)

Reason for Collection: Suspect Pesticide(s) Establishment Number: _____

Amount in Lot before Sampling: 1/2 Gallon 2% Milk

Description of Sample (Code No. if any), & Method of Collection: 2% milk in original container, Dairyrite Lot #4534

expiration date 3/10/06

Mail Report To: Mark Reed Address: Food Branch Zip: 40601

Manufacturer/ Health Dept.: _____ Address: Frankfort, KY Zip: _____

Other (Name): Joe Smith, XYZ County Dept. Address: Anywhere, KY Zip: 12345

Remarks: Mother and Daughter drank milk, approximately 0.5hr later complained of pains and feeling dizzy.

No hospital visited, and mother thought she tasted pesticide/chemical taste in her mouth. Has not sprayed insecticide in home since summer of 2005.

Requested Laboratory Analysis: ☐ Bacteriological ☒ Chemical ☐ Other
☐ Standard Plate Count ☐ Listeria monocytogenes ☒ Pesticide Residue ☐ Rodent Contamination
☐ Coliform count ☐ Staphylococcus ☐ Thiamine ☐ Insect Contamination
☐ Sterility ☐ Salmonella ☐ Iron ☐ Preservatives (List)
☐ E. coli ☐ Mold & Yeast ☐ Excessive Water ☐ Other (Describe)
☐ E. coli O157: H7 ☐ Antibiotics ☐ Food Additives (List)

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)

Lab Received: 2/10/06 IF 1234(a)S From: Hand Delivered
Date Initials Lab Number Signature of Submitter

State Seal Attached? ☒ Yes ☐ No Sample Received: ☒ Refrigerated ☐ Frozen ☐ Other

Report of Laboratory Analysis: No Organophosphate(s)(OP's) Residue(s) detected by Gas Chromatography (GC) Flame Photometric Detector (FPD) ISF 2/13/06

No Pesticide(s) Residue(s) detected by Gas Chromatography(GC) Electron Capture Detector(ECD) ISF 2/14/06

No odor detected ISF 2/13/06

No Residue(s) detected by Mass Spec ISF 2/14/06

Comments: _____

Date Started 2/13/06 Date Completed 2/14/06 Date Reported 2/14/06 Signature of Analyst: [Signature]
Laboratory Services

☐ No further Regulatory Action is indicated on this sample
☐ Analysis indicates sample is in violation of the following law and/or regulations based thereon. (Check appropriate one):
☐ KRS 217.801 Lead Based Paint Law: ☐ KRS 217.005 to 217.215 KY Food, Drug, & Cosmetic Act; ☐ 217.650 to 217.710 KY Hazardous Substances
Labeling Act: ☐ KRS 217C KY Milk and Milk Products Act; ☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation.
Sample Considered: ☐ Adulterated ☐ Misbranded ☐ Other
Further Regulatory Action: ☐ Resample ☐ Reinspect ☐ Official Action ☐ Other

Signature _____ Title _____ Agency _____ Date _____

A complete & accurate
Laboratory 504 Form
must accompany each
sample submitted for
examination.



LAB FORM 504

Lab form 504
Revised By ISF 4/4/05

Sample Collection Data and Analysis Report

Cabinet For Health And Family Services, Department for Public Health

Division of Laboratory Services

100 Sower Blvd., North Loading Dock, P.O. Box 2020

Frankfort, Kentucky 40602-2020

Phone: 502/564-4446 Fax: 502/564-7019

Stephanie K. Mayfield, MD, FCAP: Director of the Division of Laboratory Services

Please complete a separate form for each sample submitted.

Back copy may be retained by the submitter.

Sample No.: 06 (2-10-2k6) control Date Collected: 2/8/06 Cost of Sample: \$2.12

Collector/ Health Dept.: Joe Smith #8911 R.S. Sample Procured From: Kroger's
(Name and Title) (Signature)

Reason for Collection: Control Sample Establishment Number: 345-78-43

Amount in Lot before Sampling: 1/2 Gallon 2% Milk

Description of Sample (Code No. if any), & Method of Collection: 2% milk in original container, Dairyrite Lot #5325

expiration date 3/27/06

Mail Report To: Mark Reed Address: Food Branch Zip: 40601

Manufacturer/ Health Dept.: _____ Address: Frankfort, KY Zip: _____

Other (Name): Joe Smith, XYZ County Dept. Address: Anywhere, KY Zip: 12345

Remarks: This sample is to serve as a control, but could not match up lot numbers exactly since none were available. Manager states "to the best of his knowledge, he has not heard from other customer complaining in regards to Dairyrite 2% milk".

Requested Laboratory Analysis: ☐ Bacteriological ☒ Chemical ☐ Other
☐ Standard Plate Count ☐ Listeria monocytogenes ☒ Pesticide Residue ☐ Rodent Contamination
☐ Coliform count ☐ Staphylococcus ☐ Thiamine ☐ Insect Contamination
☐ Sterility ☐ Salmonella ☐ Iron ☐ Preservatives (List)
☐ E. coli ☐ Mold & Yeast ☐ Excessive Water ☐ Other (Describe)
☐ E. coli O157: H7 ☐ Antibiotics ☐ Food Additives (List)

Laboratory Receiving Record (This block to be completed upon receipt in the laboratory)

Lab Received: 2/10/06 IF 1234(a)c From: Hand Delivered
Date Initials Lab Number Signature of Submitter

State Seal Attached? ☒ Yes ☐ No Sample Received: ☒ Refrigerated ☐ Frozen ☐ Other

Report of Laboratory Analysis: No Organophosphate(s)(OP's) Residue(s) detected by Gas Chromatography (GC) Flame Photometric Detector (FPD) ISF 2/13/06

No Pesticide(s) Residue(s) detected by Gas Chromatography(GC) Electron Capture Detector(ECD) ISF 2/14/06

No odor detected ISF 2/13/06

No Residue(s) detected by Mass Spec ISF 2/14/06

Comments: _____

Date Started 2/13/06 Date Completed 2/14/06 Date Reported 2/14/06 Signature of Analyst: [Signature]
Laboratory Services

☐ No further Regulatory Action is indicated on this sample
☐ Analysis indicates sample is in violation of the following law and/or regulations based thereon. (Check appropriate one):
☐ KRS 217.801 Lead Based Paint Law; ☐ KRS 217.005 to 217.215 KY Food, Drug, & Cosmetic Act; ☐ 217.650 to 217.710 KY Hazardous Substances

Labeling Act: ☐ KRS 217C KY Milk and Milk Products Act; ☐ KRS 152.105 to 152.190 Regulates Use and Control of Radiation.

Sample Considered: ☐ Adulterated ☐ Misbranded ☐ Other
Further Regulatory Action: ☐ Resample ☐ Reinspect ☐ Official Action ☐ Other

Signature _____ Title _____ Agency _____ Date _____

CONTROL
SAMPLE

A complete & accurate
Laboratory 504 Form
must accompany each
sample submitted for
examination.



METALS IN WATER

SAMPLING AND TRANSPORTATION INSTRUCTIONS FOR THE DETERMINATION OF METALS IN WATER

1. Take sample in the cubetainer provided. It contains Nitric Acid as a preservative.
2. Do Not Rinse Out the cubetainer.
3. IF sample collection is for Lead analysis, take first draw water from the primary drinking water source in household. If you cannot, then let water stand for approximately six hours.
4. Fill out Lab-504 Form provided completely.
5. Ship to Laboratory Services as soon as possible using the following address:

North Loading Dock
Instrumentation Chemistry Section
Division of Laboratory Services
100 Sower Blvd., Suite 204
Frankfort, KY 40601
Attn: Metals in Water



Cubetainer is for METALS testing only

Sample Submission – Temperature Guideline

Submit food samples at their appropriate temperature.

Examples:

- a. **Dry perishables like cold cereal – Room Temperature**
- b. **Dairy Products – Refrigerator temperature**
- c. **Ice cream – Freezer Temperature**



**Do not package & ship foods in “loose” ice,
use cold packs or “blue” ice**

CHEMICAL ANALYSIS – QUESTIONS??

CONTACTS:

PESTICIDE LABORATORY

(502) 564-4446/ EXT 4409

IRA FINK - ira.fink@ky.gov

CHEMISTRY SUPERVISOR

(502) 564-4446/ EXT 4439

ISABELLE BERBERIAN

isabelle.berberian@ky.gov

FAX: 502-564-7019

When in Doubt or QuestionsCall



Special Consideration - Human Origin/Source

The Kentucky DLS Laboratory
Does **NOT**

Analyze Food or Water for
Human Origins or Sources
Such as Tissue or **Blood**



REFER TO THE **FORENSIC LAB**
(502) 564-5230



(Forensic Biology Caseworking Unit)

SAMPLE COLLECTION

FORENSIC LAB - GUIDELINES

- Wear Clean Disposable Gloves
- Instruments used to Collect & Transfer Food item(s) should be Clean
- Collection Containers should be Sturdy, Leak Proof, and Clean (avoid containers that encourage bacteria, mold, or mildew).
 1. Paper Wraps, White Typing Paper, or Butcher Paper
 2. Wax Paper, Lab Collection Containers
 3. Glass Jars are suitable for liquids

FORENSIC LAB - GUIDELINES CONTINUED

- Seal and Appropriately Label
- **Freeze** it as soon as possible.
- Place in a Transport Container
- **Keep Frozen** until it can be submitted to the Forensic Lab for analysis via an appropriate law enforcement agency.
- **Law Enforcement** has necessary paperwork

CENTRAL FORENSIC LAB

CONTACT PERSON:

EDWARD TAYLOR
KENTUCKY STATE POLICE
CENTRAL FORENSIC LAB
(502) 564-5230 Ext# 309

OR

ASK FOR FORENSIC BIOLOGY CASEWORKING UNIT

OVERT – BIOLOGICAL FOOD & WATER INCIDENT

Contact Local Emergency Management

They are TRAINED to RESPOND

**Call Epidemiology (502-564-3418) or
888 – 9 –REPORT (737678)**

Call Preparedness Branch (502-564- 7243)

Contact Lab Services (502) 564-4446

NOTE: Allows follow your internal communication policy

BIOLOGICAL INCIDENT

Reported to the Emergency Operation Center (EOC)
& assigned an EOC#

Emergency Operation Center – 502-607-1630
1-800-255-2587

Required Documentation:

1. Request for Examination
2. Chain of Custody
3. Results & Sample Acquisition/ Destruction



Forms on line - www.chfs.ky.gov/DPH/info/lab

ENVIRONMENTAL (B T) CHECKLIST

ENVIRONMENTAL (BT) CHECKLIST (✓)

TRIAGE: ☐ Chemical
☐ Radiological
☐ Explosives
☐ Biological

Submit a
Copy of
Results

SIZE: ☐ 8"H x 10"D x 15"L
(maximum limit)

PACKAGING:

☐ Double - bagged/contained
☐ Exclude gloves/cleaning materials
☐ Outer packaging decontaminated
(i.e. 10% bleach soln)

TRACKING:

☐ EOC# (Call EOC: 800-255-2587
502-607-1630)

FORMS: ☐ Request for Examination

☐ Chain of Custody

☐ Results Acquisition

forms: <http://chfs.ky.gov/dph/info/lab/>

CONTACTS:

☐ Lab Services

502-564-4446 (Mon-Fri: 8am-4:30pm)

502-330-6235 – After hours paging

REQUEST FOR EXAMINATION FORM

KENTUCKY CABINET FOR HEALTH AND FAMILY SERVICES

Division of Laboratory Services
100 Sower Blvd., Ste 204
Frankfort, KY 40601
PH: (502) 564- 4446
Fax: 564-7505

Request for Examination

Submitted By:	Agency:
Address:	Phone:
City: State: Zip:	Fax:

Sample Screened for: Radiological: () Chemical ()

FOR STATE LAB USE ONLY

EXHIBITS:

EOC NUMBER:

Lab Number:

State Lab Signatures:

Specimen Preparation:

Date/Time:

Specimen Processing:

Date/Time:

Specimen Storage:

Date/Time:

**LABORATORY SUBMISSION
FORM
COMPLETED by the
SUBMITTING PERSON/AGENCY**

CHAIN OF CUSTODY FORM

Samples must be accounted for at all times from the point of collection to the submission of the sample to the State Laboratory.

**SUBMITTER
COMPLETES FORM
WITH INFORMATION
(THOROUGH)**

**ALL SIGNATURES are
REQUIRED**

(If a sample is submitted with a Law enforcement chain of custody, the Submitter additionally completes this form)

DIVISION OF LABORATORY SERVICES - CHAIN OF CUSTODY / PROPERTY FORM		LAB NUMBER:
		E O C NUMBER:
NAME OF PERSON FROM WHOM RECEIVED:		
LOCATION WHERE SAMPLE WAS OBTAINED:		ADDRESS:
SAMPLE SCANNED FOR: RADIOLOGICAL () CHEMICAL ()		REASON OBTAINED: TIME/DATE OBTAINED:

ITEM NUMBER	QUANTITY	DESCRIPTION OF ARTICLES

CHAIN OF CUSTODY				
ITEM NO.	DATE	RELEASED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
		Signature	Signature	
		Name, Grade, or Title	Name, Grade, or Title	
		Signature	Signature	
		Name, Grade, or Title	Name, Grade, or Title	
		Signature	Signature	
		Name, Grade, or Title	Name, Grade, or Title	
		Signature	Signature	
		Name, Grade, or Title	Name, Grade, or Title	
		Signature	Signature	
		Name, Grade, or Title	Name, Grade, or Title	

Revised 6/04

FOOD & WATER

collection, packaging, testing, & communication

**COLLABORATIVE EFFORT
OF
PUBLIC HEALTH
PROFESSIONALS**

THANK YOU !!!!!



CONTACT INFORMATION

Power Point Contributors:

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MEDICAL TECHNOLOGIST (ASCP)

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CHEMIST III

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FAX: 502-564-7019
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MEDICAL TECHNOLOGIST (ASCP)

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FAX: 502-564-7019
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CHARLES E SEAY

FOOD SECURITY COORDINATOR

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E-MAIL: Eddie.Seay @msn.com