

Appendix K: Foodborne Illness Outbreak Food Specimen Sampling Criteria and Protocol

Sampling Criteria

Division of Epidemiology and Health Planning (DEHP)

- Food is potentially associated with outbreak **OR**
- Poses a potential public health threat
- Clinical presentation, suspected pathogen and suspected food item(s) make sense
- Other possible/more likely exposures ruled out
- Other considerations:
 - Food is consumed by vulnerable population
 - Pathogen virulence/disease severity

Division of Laboratory Services (DLS)

- Pathogen to test for identified
 - Positive clinical specimens
 - Unless testing for toxin
 - Negative clinical specimens
 - Norovirus has been ruled out
 - Clinical signs/symptoms, incubation period, symptom duration
- DEHP approval with known test organisms
- FSB approval to test

Division of Public Health Protection and Preparedness – Food Safety Branch (FSB)

The FSB will determine if collection of food samples and testing is warranted and will collaborate with Epi and Lab for further decision making. While the determination is being made, based on the below criteria, samples should remain with the collector until given further directions.

Samples should be kept in its original container and state.

- Routine monthly sampling in conjunction with the Division of Laboratory Services
- Unopened samples with the same lot number that are associated with a potential outbreak.
- Testing an opened sample may be considered on a case-by-case basis by the FSB for vulnerable populations associated with a foodborne illness or outbreak.
- Unopened samples with the same lot number that are associated with a consumer complaint that has a positive clinical specimen.
- Food implicated in a recall and/or included in traceback/traceforward investigations.

Sampling Protocol

Division of Laboratory Services (DLS)

- If **anaerobic** bacteria are suspected (such as *Clostridium perfringens*) and approved by DEHP



- Samples will not be tested for anaerobic bacteria after 48hrs of collection
- Testing options: (Average time it takes to complete testing)
 - Pathogenic E. coli (3-4 Days)
 - Salmonella sp. (6-7 Days)
 - Listeria sp. (4-5 Days)
 - Staph aureus count (2-3 Days)
 - Staph Toxin (1-2 Days)
 - Bacillus cereus count (2-3 Days)
 - Shigella sp. (2-3 Days)
 - Cronobacter sp. (2-3 Days)
 - Clostridium perfringens count (2-3 Days)
 - Campylobacter sp. (4-5 Days)
 - **Special requests with Lab approval**
- Food in original container and state (frozen, refrigerated, etc.)
 - Food samples should be collected aseptically and maintained and transported in controlled temperatures (frozen, refrigerated, etc.)
 - Open samples must be authorized by FSB manager and approvals should be in consultation with DLS and DEHP
 - Special storage considerations can be made with lab consultation
 - Consider shipping sample to DLS as soon as possible.
 - Notify DLS prior to shipping and how much sample to expect to determine storage availability.
 - If sample cannot be shipped overnight/next day or transported immediately to DLS, collector must store sample in its existing state at a dedicated, secure location at the LHD and contact DLS for further direction. DLS will determine if samples are viable for testing due to storage handling.
 - Wait as long as possible before freezing sample, especially for *Campylobacter*.
 - *There is a 15-day window to complete testing from date received at DLS. It becomes a non-conformance if past 15 days. It can be justified, but it affects lab's performance metrics.*
- 504 and Chain of Custody Forms **MUST** be filled out prior to food drop-off to the lab
- Food Samples **MUST** have state seal used over the opening of the bag/container
 - Fill out information on seal
 - Used as a tampering check

Division of Public Health Protection and Preparedness – Food Safety Branch (FSB)

- 1) When an outbreak is identified, Food Safety Branch (FSB) is to be notified by the Division of Epi within 24 hours.
- 2) FSB reviews the epi data to verify they have jurisdiction.
- 3) FSB notifies other agencies that also have jurisdiction.
- 4) FSB takes action to remove the suspect food from commerce and to prevent its further distribution.



- 5) FSB develops and coordinates a sample collection plan with the other agencies that have jurisdiction.
- 6) FSB organizes sample collection and transportation to the Division of Laboratory Services.
- 7) If the suspect food is manufactured within the State of Kentucky, FSB will conduct an inspection/investigation of the manufacturer and if appropriate, collect samples.
- 8) All samples collected in intact containers will be collected as “official” samples following the “Chain of Custody” procedure.
- 9) FSB will determine if regulatory action is warranted.
- 10) FSB will provide the Division of Epi with the findings for inclusion in the final incident report.

