



# Foodborne Illness Outbreak Investigation Sampling Supply List & Guidance

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This guide outlines recommended supplies, core principles, and operational considerations for collecting environmental, food, and clinical samples during foodborne illness outbreak investigations. Agencies can adapt this guidance to match their laboratory requirements, jurisdictional authorities, and response protocols.

A customizable template is included to support maintenance of outbreak sampling kits, inventory tracking, and documentation of expiration dates. Programs are responsible for keeping appropriate PPE, collection tools, and field supplies stocked and ready. Not all supplies or procedures listed here will apply to every outbreak. Agencies should tailor this guidance to their investigation protocols and laboratory capacity.

## Specimen Submission Process and Forms

Before collecting or submitting any specimens, investigators should consult with their state's designated outbreak response coordinator, epidemiology program, or public health laboratory (PHL). Coordination ensures:

- The sample type is appropriate for the suspected pathogen and outbreak scenario.
- The correct laboratory assays are available.
- All required forms, chain-of-custody materials, and approvals are completed.
- Testing is aligned with state procedures, accreditation standards, and legal considerations.

Some states require laboratory approval before samples are collected or shipped. Specimens submitted without prior authorization may be rejected. Agencies should clearly communicate expectations to local partners to avoid delays. Investigators should also follow applicable regulations for packaging and shipping biological specimens (for example, Category B triple packaging requirements).

## Required Forms

Forms vary by state and laboratory system. Common documents include:

- Food and environmental submission forms
- Clinical specimen submission forms
- Chain-of-custody records
- Manifests for shipping or transport
- Investigation-specific supplemental questionnaires

Investigators should review current state laboratory instructions before collecting any samples.

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## Aseptic Technique & Sterile Supplies

Using aseptic technique and sterile supplies is the preferred approach for collecting samples intended for microbiological testing. This protects sample integrity and supports reliable results, which is especially important when findings may influence regulatory or legal decisions.

Investigators should use sterile gloves and sterile tools whenever possible, avoid touching surfaces that will contact the sample, and limit any opportunities for contamination. When sterile gloves are not available, disposable gloves such as powder-free nitrile are acceptable as long as the inside of containers, the tips of tools or swabs, and the sampling area are not touched. Gloves should be changed between sample types or locations, or anytime they become contaminated. Even when field conditions are less than ideal, careful handling and clear documentation help ensure that laboratory results remain interpretable and defensible.

If aseptic technique cannot be fully maintained:

- Make every reasonable effort to reduce contamination
  - Use single-use sterile tools whenever possible
  - Document any deviations in the investigation record or chain of custody
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## Sampling Supplies

The following reflects a generalized supply list. Programs should adjust based on local laboratory capacity, available vendors, and outbreak priorities.

States may source some items through their PHL or contract distributors.

## Human Sample Collection Supplies

Item	Key Specifications	Rationale
<b>Stool Collection Kits*</b>	Leak-proof container, scoop/spoon inside, labeled, with instructions	For ill individuals to provide samples for lab testing.
<b>Cary-Blair specimen tubes*</b>	Transport media for enteric bacteria, with fill line, screw-cap tube	Preserves viability of bacteria ( <i>Salmonella</i> , <i>Shigella</i> ) during transport to lab.
<b>EcoFix Ultra O&amp;P kits*</b>	Contains EcoFix preservative, dual-chamber vial, parasite-specific instructions	Used for preserving and transporting stool samples for ova and parasite examination.
<b>Viral transport kits*</b>	UTM or VTM media, sterile polyester swab, labeled tube	Maintains integrity of viruses like norovirus for testing.
<b>Sterile Leak-Proof Screw-Top Cups+</b>	Sterile, 90–120 mL capacity, graduated, screw top, individually wrapped specimen container	General-purpose container for food, stool, or vomit samples.
<b>Mailing tubes and instructions*</b>	Padded, crush-resistant mailers, leak-resistant bags	Provides safe transport of specimens to PHL.

\*Items may be available through your state public health laboratory or centralized supply program. Availability and shipping timelines vary, so confirm ordering and delivery expectations with your laboratory or supply office.

+Items typically need to be purchased from commercial vendors. Shipping times, stock levels, and product specifications can vary, so verify details directly with the vendor before ordering.

## Food & Environmental Sample Collection Supplies

Item	Key Specifications	Rationale
<b>Sterile Whirl-Pak Bags+</b>	18-24 oz, write-on strip, puncture-resistant, sterility validated	Used for aseptically collecting solid or semi-solid food or environmental items.
<b>Sterile Conical Tubes+ (Screw Cap)</b>	50 mL, graduated, sterile polypropylene, secure screw cap	Collecting small liquid food samples.
<b>Sterile Leak-Proof Screw-Top Cups+</b>	Sterile, 90–120 mL capacity, graduated, screw top, individually wrapped specimen container	Used for collecting sauces, dressings, or small-volume liquid foods.
<b>Large Biohazard Bags*</b>	2–4 mil thick, red/orange, autoclavable, marked with biohazard symbol	Stores PPE, contaminated materials, or spills to ensure safe disposal.
<b>Ziploc/Secondary Containment Bags</b>	Quart/gallon size, freezer-rated, sealable	Provides double-layer containment to prevent contamination during transport.
<b>Labeling Supplies (Sharpies, Tags, Tape)</b>	Waterproof, permanent ink; tamper-evident tape; sample tags	Ensures clear labeling and chain-of-custody documentation of collected samples.

## Personal Protective Equipment (PPE)

Item	Key Specifications	Rationale
<b>Disposable gloves</b> (multiple sizes)	Powder-free nitrile, impermeable, ambidextrous, FDA-compliant for food handling	Protects investigators from contamination during sample collection and protects samples from contact with potential biological or chemical contaminants.
<b>Sterile gloves+</b> (multiple sizes)	Individually packaged, sterile, powder-free, nitrile or latex, verify meeting FDA Premarket Notification	Used when aseptic technique is required to prevent introducing pathogens into samples.
<b>Disposable lab coats</b>	Fluid-resistant, full-sleeve with elastic cuffs, breathable material, single-use	Provides body protection from spills and cross-contamination in high-risk areas.
<b>Face masks</b>	ASTM Level 2 or 3, fluid-resistant, pleated with nose wire	Protects investigator and samples from contamination during sampling.
<b>Face shields or goggles</b>	Splash-resistant, anti-fog, reusable with replaceable lens or disposable	Provides eye protection during cleaning observations or splash-prone procedures.
<b>Hairnets</b>	Elastic edge, latex-free material to cover hair	Prevents contamination of sample sites or food areas from human hair.
<b>Boot covers</b>	Waterproof, non-slip sole, disposable	Prevents contamination between environments, especially when entering food prep or animal-contact areas.

## Sampling Tools (Sterile)

Item	Key Specifications	Rationale
<b>Knives+</b>	Sterile, individually wrapped, stainless or plastic knife	Used to cut food or packaging for internal sampling or surface assessment.
<b>Forceps/Tongs/Tweezers+</b>	Sterile, stainless or disposable, 6–10 inch length	Assists in collecting solid samples without contact with contaminated equipment.
<b>Disposable Wooden Tongue Depressors+</b>	Sterile, individually wrapped, flat, wooden	Aids in transferring or manipulating small food items during aseptic sampling.
<b>Scoops+</b>	Sterile, single-use, 1–4 oz capacity	Allows for safe collection of powders or granulated foods.

These additional supplies support environmental sampling when sterile tools are not required or when broader surface coverage is needed.

## Additional Sampling Supplies

Item	Key Specifications	Rationale
<b>Alcohol swabs or wipes</b>	70% isopropyl, individually wrapped	Used to clean utensils or contact points before sample collection or between uses.
<b>Environmental Swabs w/ Neutralizing Buffer+</b>	Cleanroom swabs, sterile, individually wrapped, with neutralizing buffer	Used to detect bacteria on food-contact surfaces while neutralizing residual sanitizer.
<b>Sterile Gauze Pads+</b>	4x4", individually wrapped, USP-grade	Can be moistened and used for broad surface sampling.
<b>Spongescicles or Swabscicles+</b>	Pre-moistened sponges with neutralizer, sterile pouch	Designed for environmental sampling, including large surface areas.

Before purchasing sampling supplies, consult with your state's food safety program and public health laboratory to confirm which supplies are appropriate for the suspected pathogen and the planned testing methods.

## Storage & Transport Supplies

Item	Key Specifications	Rationale
<b>Ice Chests</b>	Hard-sided, insulated, 20–50 quart capacity, drain plug, cleanable interior	Maintains required cold chain during collection and transport of perishable samples.
<b>Ice Packs* / Blue Ice</b>	Reusable, non-toxic gel packs, leak-proof casing	Keeps samples below 41°F during transit without dilution or leakage.
<b>Insulated Sample Transport Containers*</b>	Lightweight, labeled with "Biohazard" or "Specimens"	Provides tamper-resistant temperature-controlled transport for samples requiring strict chain of custody.
<b>Tamper-Evident Custody Seals+</b>	Adhesive seals, pre-numbered, destructible film or break-tape	Ensures sample integrity by preventing undetected access during transport or storage.

States should align temperature and custody requirements with their laboratory's accreditation standards. Programs should confirm that receiving laboratories require documentation of cooler temperature on arrival.

Programs can use this table to assemble jurisdiction-ready kits. Replace the state-specific references with your program’s structure, distribution process, and inventory expectations. Record quantities, expiration dates, and any relevant notes to support regular inventory checks.

## Build Your Own Foodborne Illness Outbreak Investigation Sampling Kit

Reviewed by:

Date Reviewed:

### Personal Protective Equipment (PPE)

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Disposable gloves (multiple sizes)			
<input type="checkbox"/>	Sterile gloves (multiple sizes)			
<input type="checkbox"/>	Disposable lab coats			
<input type="checkbox"/>	Face masks			
<input type="checkbox"/>	Face shields or goggles			
<input type="checkbox"/>	Hairnets			
<input type="checkbox"/>	Boot covers			

### Human Sample Collection Supplies

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Stool Collection Kits*			
<input type="checkbox"/>	Cary-Blair specimen tubes*			
<input type="checkbox"/>	EcoFix Ultra O&P kits*			
<input type="checkbox"/>	Viral transport kits*			
<input type="checkbox"/>	Leak-proof sterile screw-top specimen cups			
<input type="checkbox"/>	Mailing tubes and instructions			

## Food & Environmental Sample Collection Supplies

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Sterile Whirl-Pak Bags			
<input type="checkbox"/>	Sterile Conical Tubes (Screw Cap)			
<input type="checkbox"/>	Sterile Leak-Proof Screw-Top Cups			
<input type="checkbox"/>	Large Biohazard Bags*			
<input type="checkbox"/>	Ziploc/Secondary Containment Bags			
<input type="checkbox"/>	Labeling Supplies (Sharpies, Tags, Tape)			

## Sampling Tools (Sterile)

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Knives+			
<input type="checkbox"/>	Forceps/Tongs/Tweezers+			
<input type="checkbox"/>	Disposable Wooden Tongue Depressors+			
<input type="checkbox"/>	Scoops+			

## Additional Sampling Supplies

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Alcohol swabs or wipes			
<input type="checkbox"/>	Environmental Swabs w/ Neutralizing Buffer+			
<input type="checkbox"/>	Sterile Gauze Pads+			
<input type="checkbox"/>	Spongescicles or Swabscicles+			

## Storage & Transport Supplies

	Item	Qty	Expiration Date	Notes
<input type="checkbox"/>	Ice Chests			
<input type="checkbox"/>	Ice Packs* / Blue Ice			
<input type="checkbox"/>	Insulated Sample Transport Containers*			
<input type="checkbox"/>	Tamper-Evident Custody Seals+			

\*Items may be available through your state public health laboratory or centralized supply program. Availability and shipping timelines vary, so confirm ordering and delivery expectations with your laboratory or supply office.

+Items typically need to be purchased from commercial vendors. Shipping times, stock levels, and product specifications can vary, so verify details directly with the vendor before ordering.

Refer to your state's foodborne illness outbreak investigation sampling guidance for additional details. For questions, contact your state food safety program or foodborne disease epidemiology team.