

Generic *E. coli* Verification Task Job Aid

Instructions: Review this Job Aid and policy documents, regulations, and inspection methodologies with a mentor.

Acronyms/Definitions

- Generic *E. coli* (*Escherichia coli* Biotype 1) – An indicator organism utilized to verify the effectiveness of sanitation and process control in slaughter establishments.
- Very Low Volume (VLV) Establishment – Annually slaughters no more than 6,000 cattle, 6,000 sheep, 6,000 goats, 6,000 horses, mules or other equines, or a combination of livestock not exceeding 6,000 cattle and 20,000 total of all livestock.

Task Overview

- The purpose of generic *E. coli* testing is to verify the effectiveness of sanitation and process control in slaughter facilities.
- IPP perform the Generic *E. coli* Verification task to verify that establishments that slaughter livestock (other than swine) or ratites test carcasses of the species slaughtered in the greatest number for generic *E. coli* in accordance with [9 CFR 310.25\(a\)](#) or [381.94\(a\)](#), respectively.
- The Generic *E. coli* Verification task **does not apply to establishments that slaughter swine or poultry** (other than ratites) **in the greatest number** (refer to [FSIS Directive 6410.4](#) and [FSIS Directive 6420.5](#)).

Basic Procedure

- Schedule a Generic *E. coli* Verification task ([FSIS Directive 5000.1](#), Ch. IV., Sec. I., F. – G.).
- Review the establishment's written sampling procedures. Verify the procedures include:
 - Sampling procedures
 - Employees designated to collect samples
 - Location of sampling
 - How randomness is achieved
 - Measures to ensure sample integrity
- Observe establishment employees collecting samples from chilled livestock carcasses (other than swine) or after the final wash for hot-boned carcasses.
 - For **cattle**, establishments are to **sponge** or **excise** tissue from the flank, brisket, and rump.
 - For **hide-on** calves, sheep, and goats, establishments are to take samples by **sponging** from inside the flank, inside the brisket, and inside the rump.
 - For **sheep** and **goat**, establishments are to **sponge** from the flank, brisket, and rump.
- Verify the frequency of sample collection.
 - Cattle, sheep, and goat slaughter establishments, except VLV establishments, are to test 1 per 300 carcasses, but a minimum of one sample during each week of operation.

- VLV establishments shall collect at least one sample per week, starting the first full week of operation after June 1 of each year, and continue sampling at a minimum of once each week the establishment operates until June 1 of the following year or until 13 samples have been collected, whichever comes first.
 - IPP verify that VLV slaughter establishments collect at least one sample each week **from at least 13 different weeks**, when operating at least 13 weeks.
- Review the establishment's written programs and records.
 - Verify the laboratory analyzing the samples uses an AOAC Official Method or another method approved and published by another scientific body ([FSIS Directive 5000.1](#), Ch. IV., Sec. IV., A.).
 - Verify the establishment accurately documents the generic *E. coli* results using either Colony Forming Units (CFU) or Most Probable Number (MPN) based methods, noting that the methodologies are different and cannot be used interchangeably.
 - Verify the establishment records the results on a process control chart or table that shows at least the most recent 13 test results.
 - Verify the establishment maintains records of test results for 12 months.
- Verify the establishment is evaluating the generic *E. coli* test results using statistical process control techniques ([FSIS Directive 5000.1](#), Ch. IV., Sec. VI., A. – B.).
 - Verify the establishment has assessed the historical “normal” performance of the slaughter process when it was in control and developed criteria that will indicate when the process may not be in control.
 - Verify the establishment uses generic *E. coli* testing results to identify times when the slaughter process is trending toward a loss of control and takes necessary actions to reestablish control.
 - Review the generic *E. coli* testing results and verify that the establishment has set generic *E. coli* criteria to define process control and responds to results outside those criteria.
 - **Note:** If the establishment uses **excision** sampling in **cattle**, refer to [9 CFR 310.25\(a\)\(5\)\(i\)](#) for criteria for evaluation of test results.
- When IPP find noncompliance with any generic *E. coli* regulatory requirement:
 - Notify the establishment.
 - Document the noncompliance on an NR.
 - Consider whether findings are associated with past noncompliances or other findings that did not result in a noncompliance that may indicate systemic problems.
 - **Note:** The establishment's generic *E. coli* testing results cannot, by themselves, support a finding of noncompliance. However, if an establishment's testing results indicate a failure of process control, IPP are to verify the establishment's sanitary dressing procedures ([FSIS Directive 5000.1](#), Ch. V., Sec. VI.).
- Document findings and complete task in PHIS.

Discussion Points

- Discuss how to review establishment's generic *E. coli* test results to identify the AOAC method and verify the establishment is evaluating the test results to assess process control.
- Discuss how IPP verify the establishment's sanitary dressing procedures when IPP observe that the establishment's generic *E. coli* test results indicate a failure of process control.

Knowledge Check

- What are IPP to do if an establishment's generic *E. coli* test results indicate a failure of process control?
- Are IPP to perform the Generic *E. coli* Verification task in establishments that slaughter swine or poultry in the greatest number?

Resources

- [FSIS Directive 5000.1 – Verifying an Establishment's Food Safety System](#)
- [Guidelines for *Escherichia coli* Testing for Process Control Verification in Cattle and Swine Slaughter Establishments](#)
- IM Workbook – Sampling Requirements to Demonstrate Process Control