Risk-based *Listeria monocytogenes* Sampling Data – Data Documentation

Overview

These data are the sampling results of FSIS' routine risk-based *Listeria monocytogenes* (RLm) sampling program that was designed to detect *Listeria monocytogenes* in the environment of a production establishment. The RLm sampling program collects a set of product, food contact, and environmental (non-food contact) samples at an establishment, which is done in conjunction with a risk-based Public Health Risk Evaluation (PHRE) or a routine Food Safety Assessment (FSA). Additional information can be found on the FSIS Microbiological Testing Program for Ready-to-Eat (RTE) Meat and Poultry Products web page at:

https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/testing-program-for-rte-meat-and-poultry-products/testing-program-rte

A set of samples collected at an establishment is sent to one of the three FSIS laboratories for analysis. Each row in this data set represents one sample collected.

Data contained in this dataset on tested product from establishments are not sufficient to determine an association to human illnesses. Further epidemiologic information is needed to determine if there is an association between the non-clinical isolates and human illnesses.

Data Dictionary

- EstablishmentID
    - Definition: A unique identifier that is used to identify an establishment across data tables in the FSIS databases.
- EstablishmentNumber
    - Definition: A letter/number combination uniquely identifying each establishment.
- EstablishmentName
    - Definition: The name of an establishment on the FSIS grant of inspection.
- State
    - Definition: The state the establishment is located.
- ProjectCode
    - Definition: A short name given to easily identify a FSIS sampling project.
    - See FSIS Directive 10,240.5, Revision 3 for additional details
        - https://www.fsis.usda.gov/wps/wcm/connect/398d4b7b-56fc-4bd9-af0e-379edcd9274d/10240.5.pdf?MOD=AJPERES
    - Projects in this dataset

- **RLMPRODC** – Routine risk-based product samples taken for post-lethality-exposed product.
- **RLMPRODC_EL** – Routine risk-based product samples taken for post-lethality-exposed product that were analyzed at the FSIS Eastern Laboratory.
- **RLMPRODC_MWL** – Routine risk-based product samples taken for post-lethality-exposed product that were analyzed at the FSIS Midwestern Laboratory.
- **RLMPRODC_WL** – Routine risk-based product samples taken for post-lethality-exposed product that were analyzed at the FSIS Western Laboratory.
- **RLMCONT** – Routine risk-based food contact surface swab samples taken for post-lethality-exposed product.
- **RLMCONT_EL** - Routine risk-based food contact surface swab samples taken for post-lethality-exposed product that were analyzed at the FSIS Eastern Laboratory.
- **RLMCONT_MWL** - Routine risk-based food contact surface swab samples taken for post-lethality-exposed product that were analyzed at the FSIS Midwestern Laboratory.
- **RLMCONT_WL** – Routine risk-based food contact surface swab samples taken for post-lethality-exposed product that were analyzed at the FSIS Western Laboratory.
- **RLMENVR** – Routine risk-based samples of brine or chill water that does not come into direct contact with post-lethality-exposed product.
- **RLMENVC** – Routine risk-based non-food contact environmental surface swabs samples exposed to the post-lethality environment.
- **RLMENVC_EL** - Routine risk-based non-food contact environmental surface swabs samples exposed to the post-lethality environment that were analyzed at the FSIS Eastern Laboratory.
- **RLMENVC_MWL** - Routine risk-based non-food contact environmental surface swabs samples exposed to the post-lethality environment that were analyzed at the FSIS Midwestern Laboratory.
- **RLMENVC_WL** - Routine risk-based non-food contact environmental surface swabs samples exposed to the post-lethality environment that were analyzed at the FSIS Western Laboratory.
- **ProjectName**
    - Definition: The name of the FSIS sampling project.
- **FormID**
    - Definition: The form number used to identify a specific sample.
- **CollectionDate**
    - The date the FSIS inspector collected the sample at the FSIS regulated establishment.
- **SampleSource**
    - The type of product collected in the sample.

- ProductionAlternative
  - Definition: The production alternative used by the establishment to produce the product that was sampled.
  - Possible Alternatives
    - ALT 1 – The establishment uses a post-lethality treatment (PLT) to reduce or eliminate *Lm* in the product and an antimicrobial agent or process (AMAP) to limit or suppress growth of *Lm* in the product.
    - ALT 2 PLT (Post-Lethality Treatment) – The establishment uses a PLT to reduce or eliminate *Lm* in the product.
    - ALT 2 AMAP (Anti-Microbial Agent or Process) – The establishment uses AMAP to limit or suppress growth of *Lm* in the product.
    - ALT 3 – The establishment relies on sanitation alone to control *Lm* in the processing environment and on the product
- ListeriaMonocytogeneseAnalysis
  - Definition: The result of the analysis for *Listeria Monocytogenes* (*Lm*) in the sample.
  - Negative = *Lm* was not found in the sample
  - Positive = *Lm* was found in the sample.
  - All RTE samples with a positive *Lm* result were either prevented from going into commerce due to test and hold or were recalled.
- LmPFGEPattern
  - Definition: The specific pattern identified from Pulsed-Field Gel Electrophoresis, the laboratory technique used to produce a DNA fingerprint for a group of the same type of bacteria.
- LmAlleleCode
  - Definition: The allele code designation assigned by CDC-PulseNet based on the number of differences in pre-defined genes, used to analyze the Whole Genome Sequencing (WGS) data. WGS is a DNA sequencing technology that can be used to help characterize bacterial pathogens.

Relationship to Other Data

This data can be combined with other FSIS datasets using the EstablishmentID variable.

Notes and Limitations

Information about FSIS sampling laboratories and procedures can be found on the FSIS website as follows:

- Laboratories and Procedures: https://www.fsis.usda.gov/wps/portal/fsis/topics/science/laboratories-and-procedures
- Microbiology Laboratory Guidebook: https://www.fsis.usda.gov/wps/portal/fsis/topics/science/laboratories-and-

procedures/guidebooks-and-methods/microbiology-laboratory-guidebook/microbiology-laboratory-guidebook

NULL values indicate that the specific variable is not available for that record.

Prior Analysis

Prior analysis using this data can be found on the FSIS Microbiological Testing Program for Ready-to-Eat (RTE) Meat and Poultry Products web page at:
https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/testing-program-for-rte-meat-and-poultry-products/testing-program-rte