

FSIS Guidance for Foreign Countries – Summary of FSIS’ Official Government Chemical Residue Sampling Program (v2024-001)

The United States (U.S.) Department of Agriculture’s (USDA) Food Safety and Inspection Service (FSIS) administers the *U.S. National Residue Program (NRP) for Meat, Poultry, and Egg Products*. The NRP is an interagency program designed to identify, prioritize and analyze chemical residue and contaminants in meat, poultry, and egg products. The NRP is an important component of FSIS’ mission to protect the health and welfare of consumers by regulating domestic and imported meat, poultry, and egg products and preventing the distribution into commerce of any such products that are adulterated or misbranded. An essential aspect of food safety in meat, poultry, and egg products is the control of residues that may result from the use of animal drugs and pesticides, or from exposure to environmental contaminants. The NRP¹ is designed to provide a structured process for:

- (1) identifying and evaluating chemical compounds intentionally and unintentionally used in food animals;
- (2) testing for chemical compounds of public health concern;
- (3) reporting test results; and
- (4) determining the appropriate regulatory response to findings of chemical residues.

FSIS analyzes domestic and imported products for veterinary drugs, pesticides, metals, and other environmental contaminants. FSIS tests these products using methods that can be found in the [FSIS Chemistry Laboratory Guidebook](#). A summary of the compounds tested in each method is available in the [List of Chemical Residues by Class/Method](#). The U.S. Food and Drug Administration (FDA) sets acceptable tolerance levels for veterinary drugs ([Title 21 of the U.S. Code of Federal Regulations \(21 CFR\) part 556](#)) and the U.S. Environmental Protection Agency (EPA) set acceptable tolerance levels for pesticides ([40 CFR part 180](#)).

Each year, FSIS publishes an [Annual Sampling Plan](#) that describes FSIS’ major activities related to microbiological and chemical residue sampling in domestic establishments, import, and in-commerce facilities during the fiscal year and the Agency’s overall strategy for directing its sampling resources for the following year.² Currently, FSIS’ Annual Sampling Plan Appendix B includes a description of: 1) the domestic chemical residue sampling plan, which includes (routine) surveillance, inspector-generated (targeted), and special project sampling in both federal and state-inspected slaughter facilities (Tables B1 and B2); and 2) the import reinspection chemical residue sampling plan, which includes normal (routine) sampling, increased (targeted) sampling, and intensified (targeted) sampling (Table B3). FSIS also publishes results of its sampling programs in the [Annual Sampling Summary Report](#).

Additional detailed information regarding FSIS’ chemical residue sampling policies and procedures for domestic and imported products can be found in the following FSIS Directives:

- [FSIS Directive 9900.6](#), *Laboratory Sampling Program for Imported Meat, Poultry, and Egg Products*;
- [FSIS Directive 10,800.1](#), *Residue Sampling, Testing and Other Verification Procedures under the National Residue Program for Meat and Poultry Products*;
- [FSIS Directive 10,800.4](#), *The National Residue Program Roles, Functions, and Responsibilities*
- [FSIS Directive 14,010.1](#), *Siluriformes Sampling in Domestic Establishments*; and
- [FSIS Directive 14,100.1](#), *Siluriformes Sampling at Import Establishments*.

¹ The detailed statistical basis for chemical residue sampling in the U.S. NRP is presented in FSIS’ [Number of Samples Required to Detect Violations with Predefined Probabilities](#). The major acronyms for the NRP are found in [NRP Acronyms](#), and a description of animal production classes included in the NRP is found in [Animal Production Class Nomenclature](#).

² Prior to fiscal year 2021, the chemical residue sampling plan for meat, poultry, and egg products was published in the *NRP Residue Sampling Plan* “Blue Book”. Historically, results from the previous year’s NRP sampling were published in the “Red Book”. These historical reports can be found on FSIS’ website on the [Residue Chemistry](#) page.

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Summary of Classes of Compounds (by Production Class) included in testing for FSIS’ Official Government Chemical Residue Sampling Program

A summary of the classes of compounds included in FSIS’ official government chemical residue sampling program by production class is presented in the table below.³ This information is intended as a reference for Central Competent Authorities (CCAs) to consider when implementing official testing for chemical residues for products intended for export to the United States and to understand the chemical residue testing that may be conducted during FSIS import reinspection in the United States.

The classes of compounds included in FSIS’ official government chemical residue sampling program is summarized by production class in the table below.

| Compound Class | Production Class | | | | | | |
|-------------------------------------|------------------|---------|---------|-------|---------|--------------|------|
| | Bovine | Porcine | Poultry | Ovine | Caprine | Siluriformes | Eggs |
| Sulfonamides | X | X | X | X | X | X | X |
| Aminoglycosides | X | X | X | X | X | - | - |
| Beta-Lactams | X | X | X | X | X | X | X |
| Beta-Agonists | X | X | X | X | X | X | X |
| Coccidiostats | X | X | X | X | X | X | X |
| Tetracyclines | X | X | X | X | X | X | X |
| Phenicol | X | X | X | X | X | X | X |
| Nitroimidazoles | X | X | X | X | X | X | X |
| Organochlorines | X | X | X | X | X | X | X |
| Organophosphates | X | X | X | X | X | X | X |
| Avermectins | X | X | X | X | X | X | X |
| Tranquilizers/Sedatives | X | X | X | X | X | X | X |
| Fluoroquinolones | X | X | X | X | X | X | X |
| Benzimidazoles | X | X | X | X | X | X | X |
| Hormones | X | X | X | X | X | X | X |
| Analgesics/Anti-inflammatories | X | X | X | X | X | X | X |
| Macrolides | X | X | X | X | X | X | X |
| Perfluoroyl alkyl substances (PFAS) | X | X | - | - | - | X | - |
| Synergists | X | X | X | X | X | X | X |
| Insecticides | X | X | X | X | X | X | X |
| - Pyrethroids | X | X | X | X | X | X | X |
| - Carbamates | X | X | X | X | X | X | X |
| - Neonicotinoids | X | X | X | X | X | X | X |
| - Phenylpyrazoles | X | X | X | X | X | X | X |
| Herbicides | X | X | X | X | X | X | X |
| - Triazine Herbicides | X | X | X | X | X | X | X |
| Fungicides | X | X | X | X | X | X | X |
| - Triazole Fungicides | X | X | X | X | X | X | X |
| Antifungal Dyes | - | - | - | - | - | X | - |
| Nitrofurans | - | - | - | - | - | X | - |

³ FSIS has developed a document to provide a description of [animal production classes](#) included in its official chemical residue sampling program.