Pesticide Residue Monitoring Databases User Manual - 2016

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INTRODUCTION

The U.S. Food and Drug Administration (FDA) conducts an ongoing program of monitoring for pesticide residues in foods, and the results are published annually in the FDA Pesticide Residue Monitoring Report. The analytical data used to create the report are made available here.

The data files include the original analytical sample data (SampleDataYYYY.txt), and three statistical summary files (ProductYYYY.txt, ChemicalYYYY.txt, and CountryProductResidueYYYY.txt). Additionally, five other reference files are provided including: MethodScopeYYYY.txt, ProdCode.txt, ExtCode.txt, DetCode.txt, Country.txt, and Chemical.txt. All files are described below.

The data in these files are the same as those provided in previous years, however for ease of use and clarity some changes were made in the file and field names beginning in 2013. For example, the four statistical summary files analyzing the sample data by country/product/residue (formerly named USYYYY.txt, IMFRYYYY.txt, IMVEYYYY.txt, and IMOTYYYY.txt) have been consolidated into a single file named CountryProductResidueYYYY.txt. Changes in the file names are summarized in the table below.

File names: 2016 vs. prior to 2013

2016	Prior to 2013
SampleData2016.txt	SMPLYYYY.TXT
Product2016.txt	PRODYYYY.TXT
Chemical2016.txt	CHEMYYYY.TXT
CountryProductResidue2016.txt	USYYYYY.TXT IMFRYYYY.TXT IMVEYYYY.TXT IMOTYYYY.TXT
MethodScope2016.txt	METHYYYY
ProdCode.txt	Prodcode.txt
ExtCode.txt	Extncode.txt
DetCode.txt	Detncode.txt
Country.txt	Country.txt
Chemical.txt	Chemical.txt

Field names that have been changed are flagged using an asterisk (*) and the previous field name has been provided in descriptions of the fields for each file. Directions for downloading and executing (decompressing) the individual files follow the background information about the pesticide program and the details of file structure and content.

DATA FILES

General Information

1. All files are in tab-delimited text format.
2. The field “Year” always refers to samples for which sample analysis was completed during the FDA fiscal year of October 1st through September 30th. Some samples may have been collected in the prior fiscal year.
3. The field “Country” always refers to the country of origin of the commodity, i.e., where the commodity was produced.
4. Domestic samples are produced and held for sale in the U.S. Import samples refer to commodities that have been submitted for entry into U.S. commerce through U.S. customs.
5. Percentages are rounded to two significant figures in the statistically derived fields.
6. In the field names, “#” refers to the count or number of occurrences and “%” refers to the corresponding percentage.
7. In this manual “YYYY” in a file name refers to the four digit year code.

Analytical Sample Data File and Reference Code Tables

FDA pesticide analytical results are entered into a computerized reporting system by FDA's field staff. Generally, each sample is analyzed using multiple methods (combination of extraction and determination procedures). At least one record is entered for each method employed following the analysis of a sample. If no residues were detected by a method, a residue code indicating “No residue found” is entered for the method. The scope of residues not found using the method is listed in the “MethodScopeYYYY.txt” file. When reportable residues are found, at least one record is entered for each residue found. Because the analytical methods used for a given sample may overlap in scope, i.e., a given pesticide may be covered by more than one of the methods used, a residue might be reported multiple times per sample when it was detected under multiple methods. A residue might also be reported multiple times per sample when multiple types of analyses are conducted; e.g., “Original”, “Check”, “Duplicate” or “Additional” analyses (see description of analytical types in the description of the “Type” field in the table below).

Individual residue components (e.g., endosulfan I, endosulfan II, endosulfan sulfate) are generally reported, rather than the total of components related to a given parent pesticide.

The field names and their descriptions for the SampleDataYYYY.txt file are provided below.

SampleDataYYYY.txt

Field Name	Description
Year	FDA fiscal year sample analysis was completed in the format "YYYY." The FDA fiscal year begins October 1st and ends September 30th.
SplNo*	Sample number *(prior to 2013 “SmplNo”)*

Field Name	Description
SplDescr*	Sample description in narrative format provided by sample collector *(prior to 2013 "Smpl")*
ProdCode	Five character alphanumeric product code classification of the sample commodity. A list of product codes and full product names is also included in the "ProductCode.txt" reference file.
ProdName	FDA product description based upon the product code. A list of product codes and full product names is also included in the "ProductCode.txt" reference file.
Origin*	Origin of sample "I" for import samples, "R" for import samples collected while in domestic commerce, or "D" for domestic samples *(prior to 2013 "Orig")*
Country	Country of origin; i.e., where it was produced. A list of countries is also included in the "Country.txt" reference file.
State	Two character postal abbreviation of state where sample was collected
PAC	Program Assignment Code indicates the program or assignment under which the sample was analyzed; see list of PACs
CollDist*	Code for FDA district where sample was collected, see list of collection districts *(prior to 2013 "ColDist")*
CollDate*	Date sample collected in text format "YYYYMMDD" *(prior to 2013 "ColDate")*
CmplDate*	Date sample analysis completed in text format "YYYYMMDD" *(prior to 2013 "CompDate")*
LabClass	Code for compliance classification assigned by lab, see list of lab classifications
SubNo	Code identifies an individual subsample within the sample. It is normally blank indicating no subsamples were analyzed, otherwise it may contain a numeric value or standardized code
Portion	Code that identifies what portion of the sample was analyzed (B=bottoms, C=cooked, E=edible portion, P=packaging material, R=raw, T=tops, W=whole product, X=other). If blank, whole product was composited and analyzed.
Type*	Code indicates type of analysis, e.g., "O" = original analysis, "C" = check analysis, "A" = additional analysis, "D" = duplicate analysis, "I" = identification of the residue only. *(prior to 2013 "AnalType")*
VioType*	Code given to violative residues indicating the type of violation. VioTypes are described in a separate table below. *(prior to 2013 "AdvFlag")*
ResCode	Three digit residue code, e.g., "000" = No residue found. Note: Residue code "RES" indicates a residue was found and reported under a different analysis.
ResName	Name of pesticide residue
Trace	"T" indicates residue level is below the Limit of Quantitation or 0.01 ppm, whichever is higher.
Amount	Numeric level of residue found

Field Name	Description
Unit	Unit for amount of residue found, e.g., "M" = ppm, "B" = ppb
ExtCode	Three digit code indicating the extraction method used for the analysis. See reference table "ExtCode.txt" for list of extraction codes with description of extraction method.
DetCode	Two digit code indicating the determination method used for the analysis. See reference table "DetCode.txt" for list of determination codes with description of determination method.
Lab*	Analytical laboratory code *(prior to 2013 "AnalDist")*
Remarks	Remarks about method or sample

In addition to the Field Name descriptions provided for the SampleDataYYYY.txt, reference code tables for several fields and codes found in the SampleDataYYYY.txt file are listed below:

Collection District Codes (CollDist)

District Code	Collection District Office
ATL-DO	Atlanta District Office
BLT-DO	Baltimore District Office
CHI-DO	Chicago District Office
CIN-DO	Cincinnati District Office
DAL-DO	Dallas District Office
DEN-DO	Denver District Office
DET-DO	Detroit District Office
FLA-DO	Florida District Office
KAN-DO	Kansas City District Office
LOS-DO	Los Angeles District Office
MIN-DO	Minneapolis District Office
NOL-DO	New Orleans District Office
NWE-DO	New England District Office
NWJ-DO	New Jersey District Office
NYK-DO	New York District Office
PHI-DO	Philadelphia District Office
SAN-DO	San Francisco District Office
SEA-DO	Seattle District Office
SJN-DO	San Juan District Office
SWI-DO	Southwest Import District

Program Assignment Codes (PAC)

PAC Code	Program
04004A	Pesticides and Industrial Chemicals in Food - Domestic and Import
04R800	Regulatory follow-up and/or audit sample

Laboratory Classification Codes (LabClass)

Code	Lab Classification Description
1	In compliance
2	Regulatory action not indicated
3	Adverse findings
4	No classification required
5	Sample not analyzed or reviewed

Residue Violation Types (VioType)

Code	Description of Residue/Commodity Violations
N	Residue found for which no US tolerance is registered for the pesticide or the pesticide/commodity combination
X	Residue found at a level exceeding an established US tolerance
A	Residue found at a level exceeding an FDA action level

Statistical Summary Files

The ProductYYYY.txt, ChemicalYYYY.txt, and CountryProductResidueYYYY.txt files are statistically derived from a metafile generated by combining the analytical results listed in SampleDataYYYY.txt and the MethodScopeYYYY.txt. The metafile is created by entering a zero value for all the unreported pesticides within the scope of a method used for the analysis of a sample. For example, if a method used for the analysis of a sample lists a scope of 200 pesticides, for each pesticide not reported under the method a residue concentration level of 0 would be added for the sample. In the case where "No residue found" was reported for the sample/method combination, a concentration of zero for all 200 pesticides would be added to the sample records. This is done for each sample method combination.

The resulting metafile is then statistically evaluated. In ProductYYYY.txt, sample counts are analyzed by country/product combinations. In ChemicalYYYY.txt, sample counts are analyzed by country/residue combinations. And in CountryProductResidueYYYY.txt, sample counts are analyzed by country/product/residue combinations.

ProductYYYY.txt

Field Name	Description
Year*	FDA fiscal year sample was collected and analysis completed in the format "YYYY". The FDA fiscal year begins October 1st and ends September 30th. *(prior to 2013 "FY")*
Country	Country of origin; i.e., where it was produced. A list of countries is also included in the "Country.txt" reference file.
ProdCode*	Five character alphanumeric product code classification of the sample commodity. A list of product codes and full product names is also included in the "ProductCode.txt" reference file. *(prior to 2013 INDPD")*
ProdName*	FDA product description based upon the product code. A list of product codes and full product names is also included in the "ProductCode.txt" reference file *(prior to 2013 "Product Name").*
Spls#*	Number (#) of samples analyzed for the product code/country combination *(prior to 2013 "ANAL")*
Pos#*	Number (#) of samples found to contain at least one residue for the product code/country combination *(prior to 2013 "POS")*
Pos%*	Percentage (%) of samples found to contain at least one residue for the product code/country combination *(prior to 2013 "%POS")*
Vio#*	Number (#) of samples found to contain at least one violative residue for the product code/country combination *(prior to 2013 "VIOL")*
Vio%*	Percentage (%) of samples found to contain at least one violative residue for the product code/country combination *(prior to 2013 "%VI")*

ResScope#*	Total number (#) of different pesticides included in the scope of analysis for the method(s) used to analyze the samples for the country/product combination *(prior to 2013 "CVRD")*
ResFound#*	Number (#) of different pesticides found in the samples for the country/product combination *(prior to 2013 "FND")*

ChemicalYYYY.txt

Field Name	Description
Year*	FDA fiscal year sample was collected and analysis completed in the format "YYYY". The FDA fiscal year begins October 1st and ends September 30th. *(prior to 2013 "YR or FISCAL YEAR")*
Country	Country of origin; i.e., where it was produced. A list of countries is also included in the "Country.txt" reference file.
ResName*	Name of pesticide residue. See also list of pesticides within scope of all analyses in reference file "Chemical.txt" *(prior to 2013 "Chemical Name")*
Spls#*	Number (#) of samples analyzed for chemical by country *(prior to 2013 "# CHEM CVRD")*
Spls%*	Percentage (%) of samples analyzed for chemical by country *(prior to 2013 "% CVRD")*
Res#*	Number (#) of samples the chemical was found by country *(prior to 2013 "& FND CHEM")*
Res%*	Percentage (%) of samples chemical found by country *(prior to 2013 "% FND")*
Vio#*	Number (#) of samples chemical found at violative levels by country *(prior to 2013 "VIOL RES")*
Vio%*	Percentage (%) of samples chemical found at violative levels by country *(prior to 2013 "% VIOL")*

CountryProductResidueYYYY.txt

Field Name	Description
Year*	FDA fiscal year sample was collected and analysis completed in the format "YYYY". The FDA fiscal year begins October 1st and ends September 30th. *(prior to 2013 "FY")*
Country*	Country of origin; i.e., where it was produced. A list of countries is also included in the "Country.txt" reference file. *(prior to 2013 "ORIGIN")*

Field Name	Description
ProdCode*	Five character alphanumeric product code classification of the sample commodity. A list of product codes and full product names is also included in the "ProductCode.txt" reference file. *(prior to 2013 "INDPD")*
ProdName*	FDA product description based upon the product code. A list of product codes and full product names is also included in the "ProductCode.txt" reference file. *(prior to 2013 "PRODUCT NAME")*
ResName*	Name of pesticide residue. See also list of pesticides within scope of all analyses in reference file "Chemical.txt" *(prior to 2013 "RESIDUE NAME")*
Spls#*	Number (#) of samples analyzed for the residue for the product code/country combination *(prior to 2013 "CVRD")*
Spls%*	Percentage (%) of samples analyzed for the residue for the product code/country combination *(prior to 2013 "% CV")*
Pos#*	Number (#) of samples found to contain the residue for the product code/country combination *(prior to 2013 "FND")*
Pos%*	Percentage (%) of samples found to contain the residue for the product code/country combination *(prior to 2013 "% FD")*
Vio#*	Number (#) of samples found to contain the residue at violative levels for the product code/country combination *(prior to 2013 "VIO")*
Vio%*	Percentage (%) of samples found to contain the residue at violative levels for the product code/country combination *(prior to 2013 "% VI")*
Trace#*	Number (#) of trace level residues found *(prior to 2013 "TRACE")*
Mean	Mean residue level
Minimum	Minimum residue level, includes trace levels
Median	Median residue level, include trace levels
90th	90th percentile residue level, includes trace levels
Maximum	Maximum residue level, includes trace levels

REFERENCE FILES

Six additional reference files are included.

1. MethodScopeYYYY.txt

Lists all pesticide chemicals analyzed by each extraction/determination combination during the current fiscal year.

Field Name	Description
ExtCode	Three digit code indicating the extraction method used for the analysis. See reference table "ExtCode.txt" for list of extraction codes with description of extraction method.
DetCode	Two digit code indicating the determination method used for the analysis. See reference table "DetCode.txt" for list of determination codes with description of determination method.
ResCode	Three digit residue code, e.g., "000" = No residue found. Note: Residue code "RES" indicates a residue was found and reported under a different analysis.
ResName	Name of pesticide residue

2. ProdCode.txt

Lists each product code “ProdCode” and its corresponding description “ProdName.” The first two positions of the five-position product code field are called the "industry code" and indicate the general category of product. For example, industry code 16 is fishery/seafood products and industry codes 20, 21, and 22 are fruits. The third position is the "subclass code," which designates a subcategory of product; subclass codes vary among industry codes. The last two positions identify a specific product within the industry and subclass. The term "N.E.C." indicates "not elsewhere classified."

3. ExtCode.txt

Lists each extraction method code “ExtCode” with corresponding description “Description.” In the extraction descriptions, the term "PAM" refers to the FDA Pesticide Analytical Manual and the term "LIB" refers to Laboratory Information Bulletin, which is an internal FDA publication.

4. DetCode.txt

Lists each determination method code “DetCode” with corresponding description “Description.” In the determination descriptions, the term "PAM" refers to the FDA Pesticide Analytical Manual and the term "LIB" refers to Laboratory Information Bulletin, which is an internal FDA publication.

5. Chemical.txt

Lists each residue code “ResCode” with its corresponding residue name “ResName.”

6. Country.txt

Lists each country from which samples have been collected.