NATIONAL MILK DRUG RESIDUE DATA BASE

FISCAL YEAR 2015 ANNUAL REPORT

October 1, 2014 - September 30, 2015

Submitted by:

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INTRODUCTION

The National Milk Drug Residue Data Base (NMDRD) is a voluntary industry reporting program. Mandatory reporting is required by State Regulatory Agencies under the National Conference on Interstate Milk Shipments (NCIMS). Data are reported on the extent of the national testing activities, the analytical methods used, the kind and extent of the animal drug residues identified, and the amount of contaminated milk that was removed from the human food supply. The system includes all milk, Grade "A" and non-Grade "A", commonly known as manufacturing grade. Grade "A" milk represents approximately 99% of the milk supply in the United States and is regulated through the NCIMS by the State Regulatory Agencies. Manufacturing grade milk is under the direction of the Regulatory Agencies in the States where it is produced and may be subject to the standards recommended by the United States Department of Agriculture (USDA). Data reported to the NMDRD are for educational and analytical purposes and are not intended or suitable for regulatory action or follow up.

BACKGROUND

The NCIMS is a voluntary organization directed and controlled by member States to promote the availability of a high quality milk supply. The Food and Drug Administration (FDA) and the NCIMS through their collaborative efforts have developed a cooperative, federal-state program (the Grade "A" Interstate Milk Shippers Program) to ensure the sanitary quality of Grade "A" milk and milk products shipped in interstate commerce. During the 1991 meeting of the NCIMS, the Conference authorized a national program to compile the results of milk drug residue testing by industry and State Regulatory Agencies.

Subsequently, FDA awarded a contract to develop a NMDRD. The data base is operated by an independent third party, under contract to the FDA. The data base design was developed in consultation with a project advisory group with members from the FDA and a NCIMS committee representing dairy producers, dairy processors, USDA, State Regulatory Agencies, and academia. The data base was designed to promote maximum participation by the dairy industry to report on a voluntary basis all of their testing results, without compromising any confidential data. Information regarding an individual firm's data is not submitted to the data base contractor.

It is important to recognize that the samples and tests reported do not necessarily represent one hundred percent (100%) of the milk supply from every State. However, as State and industry participation in the data base increased, reporting of the number of samples and tests similarly increased.

Continuing efforts are being made to ensure that there is uniform reporting among all the States and the industry and to ensure that the drugs and test methods reported are correct. Through collaboration with test kit manufacturers and FDA, the contractor is attempting to update the drug code list utilized with the reporting application at least every six months to assure that outdated codes are removed and new test codes have been created for new test kits. The most recent drug code list can be found on the data base contractor's web site at: https://www.kandc-sbcc.com/nmdrd/.

During FY 2006, a web-based version of the reporting software was developed, field evaluated, and then made available to all data reporters on September 1, 2006. Instructions for registering and using the software are posted on the contractor's web site at: https://www.kandc-sbcc.com/nmdrd/. Forty-nine (49) data reporters utilized the web-based software to submit all or part of their data for the FY 2015 Annual Report.

On April 26, 2015, contractor staff made a presentation to thirty-nine (39) attendees of the NCIMS meeting in Portland, Oregon, addressing the Annual Reports for FY 2013 and 2014, and the web-based reporting application. This included a demonstration of the software and a "real-time" opportunity for participants to use the application.

At the request of one of the attendees at a meeting of the NCIMS, the contractor converted all of the tabular information from previous Annual Reports into Microsoft Excel format and posted them on the contractor's web site at: https://www.kandc-sbcc.com/nmdrd/. All of the Annual Reports are now available in portable document file (pdf), Microsoft Excel and Open Document Spreadsheet (ods) formats.

SUMMARY

This report presents summary data on samples and tests conducted during Fiscal Year 2015 (October 1, 2014 to September 30, 2015). Forty-nine (49) States and Puerto Rico submitted data for this report. Partial data was received from Puerto Rico. No data was received from Texas. The report was revised on February 18, 2016, following late receipt of data from Mississippi. We appreciate all the data providers' cooperation for this fiscal year's report.

The Grade "A" Pasteurized Milk Ordinance (PMO), the regulations, which govern the State Regulatory Agencies in the implementation and enforcement of their Grade "A" milk safety program, requires that all bulk milk tankers be sampled and analyzed for animal drug residues before the milk is processed. Any bulk milk tanker found positive is rejected for human consumption.

During this period **3,615,460** samples were analyzed for animal drug residues. Of these samples **579** were positive for a drug residue. A total of **3,731,183** tests were reported on the samples for seven (7) different groups of families or individual drugs. Twenty-one (21) testing methods were used to analyze the samples for drug residues. Details are presented in the Tables in this report.

SAMPLE RESULTS

A SAMPLE is defined as representing a load or lot of milk sampled and analyzed, e.g. a bulk milk pickup tanker, producer, milk transport tankers, a silo, etc.

Table 1 shows the results of the samples tested by source.

Data are reported by four SOURCES OF SAMPLES:

1. Bulk Milk Pickup Tanker - bulk raw milk from a dairy farm.
2. Pasteurized Fluid Milk and Milk Products - after pasteurization; finished product in package form or bulk. This term includes milk products such as milk, cream, condensed and dry milk and milk products, and condensed and dry whey and whey products.

3. Producer - raw milk obtained from the bulk tank/silo from a dairy farm. Samples are reported by the permitting State, rather than by the analyzing State.
4. Other - milk from milk plant tank/silos, milk transport tankers, etc.

A POSITIVE result, as used in this report, means that the sample was found to be positive for a drug residue by a test acceptable for taking regulatory action in a certified laboratory by a certified analyst or the milk was rejected on the basis of an initial screening test by the milk processor.

The DISPOSITION per PMO column represents the amount of milk contained in the tank or lot found to be positive and disposed of in accordance with the PMO and/or applicable State regulations.

TABLE 1 -- Sample Results
October 1, 2014 to September 30, 2015

Source of Sample	Total Samples	Number Positive	Percent Positive	Disposition per PMO (Pounds)
Bulk Milk Pickup Tanker	3,072,702	371	0.012%	15,889,000
Pasteurized Fluid Milk and Milk Products	32,527	0	0.000%	0
Producer	459,562	199	0.043%	676,000
Other	50,669	9	0.018%	274,000
TOTALS	3,615,460	579	*	16,839,000

The asterisk (*) notes that a summary of the percent positive cannot be provided because there is no uniformity in terms of sampling in the four categories. For example, the PMO sets forth specific sampling requirements for Beta lactams testing as follows:

1. Bulk Milk Pickup Tanker Samples -- samples are taken on receipt of every tanker load at a milk receiving facility;
2. Pasteurized Fluid Milk and Milk Products -- a minimum of four samples in at least four separate months, except when three months show a month containing two sampling dates separated by at least twenty days, must be tested for each finished milk or milk product from each plant during any consecutive six months;

3. Producer -- each producer must be tested at least four times in at least four separate months, except when three months show a month containing two sampling dates separated by at least twenty days, during any consecutive six months; and
4. Other -- samples are conducted on a random basis.

Table 2 presents these results in greater detail and indicates the number of samples conducted by industry and by State Regulatory Agencies. Industry samples are taken by processing facilities, receiving and transfer stations, and marketing groups or cooperatives. Industry sampling and testing may be conducted to meet the industry requirements of Appendix N of the PMO, which sets forth testing and reporting requirements for animal drug residues or for quality control purposes. Regulatory samples are taken by State and Local Regulatory Agencies.

TABLE 2 -- Industry and Regulatory Samples
October 1, 2014 to September 30, 2015

Source of Sample	Number of Industry Samples	Number of Positive Industry Samples	Number of Regulatory Samples	Number of Positive Regulatory Samples	Total Samples	Total Positive Samples	Total Percent Positive	Disposition Per PMO (Pounds)
GRADE A								
Bulk Milk Pickup Tanker	2,840,362	341	109,084	7	2,949,446	348	0.012%	14,964,000
Pasteurized Fluid Milk and Milk Products	1,141	0	29,885	0	31,026	0	0.000%	0
Producer	363,249	146	74,565	37	437,814	183	0.042%	676,000
Other	38,443	8	8,799	1	47,242	9	0.019%	274,000
NON-GRADE A								
Bulk Milk Pickup Tanker[1]	123,236	23	20	0	123,256	23	0.019%	925,000
Pasteurized Fluid Milk and Milk Products	1,235	0	266	0	1,501	0	0.000%	0
Producer	21,567	16	181	0	21,748	16	0.074%	0
Other	2,876	0	551	0	3,427	0	0.000%	0
TOTALS	3,392,109	534	223,351	45	3,615,460	579	*	16,839,000[2]

[1] It is a common practice in some States, including two large milk production States, that bulk milk pickup tankers pickup milk from both Grade "A" and non-Grade "A" milk producers on the same tanker. Then, these loads are delivered to non-Grade "A" processing facilities. Because of this commingling of the two grades of milk, all data related to these loads are reported under non-Grade "A".

[2] Note that this represents 0.01% of the total milk supply of the United States with an annual production of 208.2 billion pounds.

* See Table 1 for explanation

TESTS CONDUCTED

An objective of the NMDRD is to record every test run on each sample analyzed. Since some samples are analyzed for more than one drug residue, the number of tests conducted, 3,731,183, is greater than the number of samples 3,615,460. To avoid duplicate reporting of samples, the number of samples analyzed is reported separately from the number of tests run in the data base.

Table 3 presents summary results of the number of tests which were conducted during October 1, 2014 to September 30, 2015. The term, validated test, as used in this report, is a test used for the screening of raw milk for drug residue, which has been evaluated by FDA in accordance with the standards established for the evaluation of these types of tests and found acceptable by the NCIMS in accordance with Appendix N of the PMO. In addition, FDA validated drug residue detection procedures for screening and quantization of drug residues in milk may be used. Table 3A presents summary results using validated tests and Table 3B presents summary results using non-validated tests.

TABLE 3 -- Tests Conducted
October 1, 2014 to September 30, 2015

Source of Sample	Total Tests	Number of Positive Tests	Percent Positive
Bulk Milk Pickup Tanker	3,180,659	371	0.012%
Pasteurized Fluid Milk and Milk Products	32,709	0	0.000%
Producer	467,095	205	0.044%
Other	50,720	10	0.020%
TOTALS	3,731,183	586	*

* See Table 1 for explanation

TABLE 3A -- Validated Tests Conducted October 1, 2014 to September 30, 2015			
Source of Sample	**Total Tests**	**Number of Positive Tests**	**Percent Positive**
Bulk Milk Pickup Tanker	3,034,454	362	0.012%
Pasteurized Fluid Milk and Milk Products	32,709	0	0.000%
Producer	463,017	205	0.044%
Other	49,979	10	0.020%
TOTALS	3,580,159	577	*

* See Table 1 for explanation

TABLE 3B -- Non-Validated Tests Conducted October 1, 2014 to September 30, 2015			
Source of Sample	**Total Tests**	**Number of Positive Tests**	**Percent Positive**
Bulk Milk Pickup Tanker	146,205	9	0.006%
Pasteurized Fluid Milk and Milk Products	0	0	0.000%
Producer	4,078	0	0.000%
Other	741	0	0.000%
TOTALS	151,024	9	*

* See Table 1 for explanation

Table 4 presents additional details in terms of the tests conducted by industry and by State Regulatory Agencies. Tables 4A and 4B present these data by validated and non-validated tests.

TABLE 4 -- Tests Conducted by Industry and Regulatory Agencies
October 1, 2014 to September 30, 2015

Source of Sample	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Total Percent Positive
GRADE A							
Bulk Milk Pickup Tanker	2,938,660	341	118,740	7	3,057,400	348	0.011%
Pasteurized Fluid Milk and Milk Products	1,157	0	30,051	0	31,208	0	0.000%
Producer	370,400	147	74,947	39	445,347	186	0.042%
Other	38,483	8	8,810	2	47,293	10	0.021%
NON-GRADE A							
Bulk Milk Pickup Tanker[1]	123,239	23	20	0	123,259	23	0.019%
Pasteurized Fluid Milk and Milk Products	1,235	0	266	0	1,501	0	0.000%
Producer	21,567	19	181	0	21,748	19	0.087%
Other	2,876	0	551	0	3,427	0	0.000%
TOTALS	3,497,617	538	233,566	48	3,731,183	586	*

[1] It is a common practice in some States, including two large milk production States, that bulk milk pickup tankers pickup milk from both Grade "A" and non-Grade "A" milk producers on the same tanker. Then, these loads are delivered to non-Grade "A" processing facilities. Because of this commingling of the two grades of milk, all data related to these loads are reported under non-Grade "A".

* See Table 1 for explanation

TABLE 4A -- Validated Tests Conducted by Industry and Regulatory Agencies
October 1, 2014 to September 30, 2015

Source of Sample	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Total Percent Positive
GRADE A							
Bulk Milk Pickup Tanker	2,802,570	332	109,088	7	2,911,658	339	0.012%
Pasteurized Fluid Milk and Milk Products	1,157	0	30,051	0	31,208	0	0.000%
Producer	366,373	147	74,896	39	441,269	186	0.042%
Other	37,742	8	8,810	2	46,552	10	0.021%
NON-GRADE A							
Bulk Milk Pickup Tanker[1]	122,776	23	20	0	122,796	23	0.019%
Pasteurized Fluid Milk and Milk Products	1,235	0	266	0	1,501	0	0.000%
Producer	21,567	19	181	0	21,748	19	0.087%
Other	2,876	0	551	0	3,427	0	0.000%
TOTALS	3,356,296	529	223,863	48	3,580,159	577	*

[1] It is a common practice in some States, including two large milk production States, that bulk milk pickup tankers pickup milk from both Grade "A" and non-Grade "A" milk producers on the same tanker. Then, these loads are delivered to non-Grade "A" processing facilities. Because of this commingling of the two grades of milk, all data related to these loads are reported under non-Grade "A".

* See Table 1 for explanation

TABLE 4B -- Non-Validated Tests Conducted by Industry and Regulatory Agencies
October 1, 2014 to September 30, 2015

Source of Sample	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Total Percent Positive
GRADE A							
Bulk Milk Pickup Tanker	136,090	9	9,652	0	145,742	9	0.006%
Pasteurized Fluid Milk and Milk Products	0	0	0	0	0	0	0.000%
Producer	4,027	0	51	0	4,078	0	0.000%
Other	741	0	0	0	741	0	0.000%
NON-GRADE A							
Bulk Milk Pickup Tanker[1]	463	0	0	0	463	0	0.000%
Pasteurized Fluid Milk and Milk Products	0	0	0	0	0	0	0.000%
Producer	0	0	0	0	0	0	0.000%
Other	0	0	0	0	0	0	0.000%
TOTALS	141,321	9	9,703	0	151,024	9	*

[1] It is a common practice in some States, including two large milk production States, that bulk milk pickup tankers pickup milk from both Grade "A" and non-Grade "A" milk producers on the same tanker. Then, these loads are delivered to non-Grade "A" processing facilities. Because of this commingling of the two grades of milk, all data related to these loads are reported under non-Grade "A".

* See Table 1 for explanation

Table 5 shows the number of tests conducted by the family of drugs and by individual drug. Tables 5A and 5B present these data by validated and non-validated tests.

TABLE 5 -- Number of Tests Conducted by Family/Drug
October 1, 2014 to September 30, 2015

Family/Drug	Total Tests	Total Positive
BETA lactams	3,550,086	575
CLOXACILLIN	111	0
ENROFLOXACIN	5,631	0
SULFONAMIDES	75,981	10
SULFAMETHAZINE	445	0
TETRACYCLINES	73,397	0
TETRACYCLINE	25,532	1
TOTALS	3,731,183	586

TABLE 5A -- Number of Validated Tests Conducted by Family/Drug
October 1, 2014 to September 30, 2015

Family/Drug	Total Tests	Total Positive
BETA lactams	3,550,086	575
CLOXACILLIN	111	0
SULFONAMIDES	2,825	1
TETRACYCLINES	1,605	0
TETRACYCLINE	25,532	1
TOTALS	3,580,159	577

TABLE 5B -- Number of Non-Validated Tests Conducted by Family/Drug
October 1, 2014 to September 30, 2015

Family/Drug	Total Tests	Total Positive
ENROFLOXACIN	5,631	0
SULFONAMIDES	73,156	9
SULFAMETHAZINE	445	0
TETRACYCLINES	71,792	0
TOTALS	151,024	9

Table 6 presents details on the tests used. The data in this table are comparable to Table 5, but the data are arranged by tests within each family/drug. Therefore, the Totals are the same in both tables. The testing methods with the largest use were: Charm SL - Beta lactams, which was used more than 2.1 million times, Charm 3 SL-3, which was used more than 688 thousand times, Delvotest P 5 Pack - Beta lactams, which was used more than 388 thousand times, and IDEXX New SNAP, which was used for more than 148 thousand tests. Table 6A shows a comparison of tests conducted using Validated and Non-Validated test methods for Sulfonamides and Tetracyclines.

TABLE 6 -- Number of Tests by Method by Family/Drug
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
BETA lactams			
Charm 3 SL-3	688,394	74	0.011%
Charm BSDA Tablet - Beta lactams++	32,182	17	0.053%
Charm II Tablet Competitive	42,709	6	0.014%
Charm II Tablet Quantitative	1	0	0.000%
Charm II Tablet Sequential	43,104	3	0.007%
Charm SL Beta lactams	2,182,826	251	0.011%
Delvotest P 5 Pack - Beta lactams++	388,930	185	0.048%
Delvotest P/Delvotest P Mini++	23,143	0	0.000%
IDEXX New SNAP	148,536	39	0.026%
Neogen BetaStar	261	0	0.000%
CLOXACILLIN			
Charm II Test for Cloxacillin	111	0	0.000%
ENROFLOXACIN			
Charm SL-Floroquinlone**	5,631	0	0.000%
SULFONAMIDES			
Charm II Tablet Competitive	2,707	1	0.037%
Charm II Tablet Sequential**	641	0	0.000%
Charm SL Sulfa Test**	72,515	9	0.012%
TLC Sulfonamide	118	0	0.000%
SULFAMETHAZINE			
IDEXX SNAP SULFA (SMZ)**	445	0	0.000%
TETRACYCLINES			
Charm II Tablet Competitive	1,605	0	0.000%
Charm SL - Tetracyclines**	60,151	0	0.000%

TABLE 6 -- Number of Tests by Method by Family/Drug
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
SNAP - Tetracycline**	11,641	0	0.000%
TETRACYCLINE			
HPLC Tetracyclines - Tetracycline	25,532	1	0.004%
TOTALS	3,731,183	586	*

* See Table 1 for explanation

** Non-Validated Test Method

++ NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

TABLE 6A -- Comparison of Validated and Non-Validated Tests for Sulfonamides and Tetracyclines October 1, 2014 to September 30, 2015

Tests By Method by Family/Drug	Number of Tests	Number Positive	Percent Positive
VALIDATED FOR SULFONAMIDES			
Charm II Tablet Competitive	2,707	1	0.037%
TLC Sulfonamide	118	0	0.000%
NON-VALIDATED FOR SULFONAMIDES			
Charm II Tablet Sequential**	641	0	0.000%
Charm SL Sulfa Test**	72,515	9	0.012%
NON-VALIDATED FOR SULFAMETHAZINE			
IDEXX SNAP SULFA (SMZ)**	445	0	0.000%
VALIDATED FOR TETRACYCLINES			
Charm II Tablet Competitive	1,605	0	0.000%
VALIDATED FOR TETRACYCLINE			
HPLC Tetracyclines - Tetracycline	25,532	1	0.004%
NON-VALIDATED FOR TETRACYCLINES			
Charm SL - Tetracyclines**	60,151	0	0.000%
SNAP - Tetracycline**	11,641	0	0.000%
TOTALS	175,355	11	*

* See Table 1 for explanation

** Non-Validated Test Method

Tables 7-1 to 7-8 present additional details of the testing conducted. These Tables show the testing by the family of drugs and by individual drugs and present results in terms of Grade "A" and Non-Grade "A" testing. Data on individual drugs listed in these Tables, e.g., Cloxacillin, Sulfamethazine, etc., are not included in the Totals for the family of drugs, e.g, Beta lactams, Sulfonamides, etc.

TABLE 7-1 – Grade A Bulk Milk Pickup Tanker Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	2,796,408	331	109,003	7	2,905,411	338
Cloxacillin	0	0	81	0	81	0
ENROFLOXACIN	5,631	0	0	0	5,631	0
SULFONAMIDES	70,498	10	4,828	0	75,326	10
SULFAMETHAZINE	118	0	0	0	118	0
TETRACYCLINES	63,970	0	4,828	0	68,798	0
Tetracycline	2,035	0	0	0	2,035	0
TOTALS	2,938,660	341	118,740	7	3,057,400	348

TABLE 7-2 -- Grade A Pasteurized Fluid Milk and Milk Products Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	1,157	0	30,038	0	31,195	0
SULFONAMIDES	0	0	13	0	13	0
TOTALS	1,157	0	30,051	0	31,208	0

TABLE 7-3 -- Grade A Producer Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	342,876	146	74,744	39	417,620	185
SULFONAMIDES	0	0	152	0	152	0
TETRACYCLINES	4,027	0	51	0	4,078	0
Tetracycline	23,497	1	0	0	23,497	1
TOTALS	370,400	147	74,947	39	445,347	186

TABLE 7-4 -- Grade A Other Testing (Milk from silos, milk transport tankers, etc.)
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	37,742	8	8,646	2	46,388	10
Cloxacillin	0	0	30	0	30	0
SULFONAMIDES	192	0	111	0	303	0
SULFAMETHAZINE	310	0	0	0	310	0
TETRACYCLINES	239	0	23	0	262	0
TOTALS	38,483	8	8,810	2	47,293	10

TABLE 7-5 -- Non-Grade A Bulk Milk Pickup Tanker Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	122,776	23	20	0	122,796	23
SULFONAMIDES	187	0	0	0	187	0
SULFAMETHAZINE	17	0	0	0	17	0
TETRACYCLINES	259	0	0	0	259	0
TOTALS	123,239	23	20	0	123,259	23

TABLE 7-6 -- Non-Grade A Pasteurized Fluid Milk and Milk Products Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	1,235	0	266	0	1,501	0
TOTALS	1,235	0	266	0	1,501	0

TABLE 7-7 -- Non-Grade A Producer Testing
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	21,567	19	181	0	21,748	19
TOTALS	21,567	19	181	0	21,748	19

TABLE 7-8 -- Non-Grade A Other Testing (Milk from silos, milk transport tankers, etc.)
October 1, 2014 to September 30, 2015

Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests
BETA lactams	2,876	0	551	0	3,427	**0**
TOTALS	2,876	0	551	0	3,427	**0**

Tables 8-1 to 8-8 present details on the number of tests conducted by industry and by State Regulatory Agencies. The data are arranged by test within each family/drug and present results in terms of sample type and Grade "A" and Non-Grade "A" testing.

Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	631,698	62	21,906	2	653,604	64	0.010%
Charm BSDA Tablet - Beta lactams++	23,034	8	0	0	23,034	8	0.035%
Charm II Tablet Competitive	42,085	6	0	0	42,085	6	0.014%
Charm II Tablet Quantitative	0	0	1	0	1	0	0.000%
Charm II Tablet Sequential	42,654	3	201	0	42,855	3	0.007%
Charm SL Beta lactams	1,903,263	216	79,276	4	1,982,539	220	0.011%
Delvotest P 5 Pack - Beta lactams++	11,718	3	6,125	1	17,843	4	0.022%
Delvotest P/Delvotest P Mini++	1,842	0	731	0	2,573	0	0.000%
IDEXX New SNAP	139,853	33	763	0	140,616	33	0.023%
Neogen BetaStar	261	0	0	0	261	0	0.000%
Cloxacillin							
Charm II Test for Cloxacillin	0	0	81	0	81	0	0.000%
Enrofloxacin							
Charm SL-Floroquinlone**	5,631	0	0	0	5,631	0	0.000%
Sulfonamides							
Charm II Tablet Competitive	2,547	1	2	0	2,549	1	0.039%
Charm II Tablet Sequential**	454	0	0	0	454	0	0.000%
Charm SL Sulfa Test**	67,497	9	4,826	0	72,323	9	0.012%
SULFAMETHAZINE							
IDEXX SNAP SULFA (SMZ)**	118	0	0	0	118	0	0.000%

Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
Tetracyclines							
Charm II Tablet Competitive	1,580	0	2	0	1,582	0	0.000%
Charm SL - Tetracyclines**	51,298	0	4,826	0	56,124	0	0.000%
SNAP - Tetracycline**	11,092	0	0	0	11,092	0	0.000%
Tetracycline							
HPLC Tetracyclines - Tetracycline	2,035	0	0	0	2,035	0	0.000%
TOTALS	2,938,660	341	118,740	7	3,057,400	348	0.011%

** Non-Validated Test Method

++ NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-2 -- Number of Tests by Method by Family/Drug
Grade A Pasteurized Fluid Milk and Milk Products
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	549	0	169	0	718	0	0.000%
Charm BSDA Tablet - Beta lactams[++]	0	0	1,603	0	1,603	0	0.000%
Charm SL Beta lactams	34	0	325	0	359	0	0.000%
Delvotest P 5 Pack - Beta lactams[++]	350	0	25,206	0	25,556	0	0.000%
Delvotest P/Delvotest P Mini[++]	224	0	2,262	0	2,486	0	0.000%
IDEXX New SNAP	0	0	473	0	473	0	0.000%
Sulfonamides							
Charm II Tablet Competitive	0	0	8	0	8	0	0.000%
TLC Sulfonamide	0	0	5	0	5	0	0.000%
TOTALS	1,157	0	30,051	0	31,208	0	0.000%

[++] NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-3 -- Number of Tests by Method by Family/Drug
Grade A Producer
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	16,487	5	248	1	16,735	6	0.036%
Charm BSDA Tablet - Beta lactams++	6,275	8	274	0	6,549	8	0.122%
Charm II Tablet Competitive	338	0	12	0	350	0	0.000%
Charm II Tablet Sequential	0	0	1	0	1	0	0.000%
Charm SL Beta lactams	65,951	5	3,938	1	69,889	6	0.009%
Delvotest P 5 Pack - Beta lactams++	244,183	126	59,701	36	303,884	162	0.053%
Delvotest P/Delvotest P Mini++	6,036	0	10,176	0	16,212	0	0.000%
IDEXX New SNAP	3,606	2	394	1	4,000	3	0.075%
Sulfonamides							
Charm II Tablet Competitive	0	0	39	0	39	0	0.000%
TLC Sulfonamide	0	0	113	0	113	0	0.000%
Tetracyclines							
Charm SL - Tetracyclines**	4,027	0	0	0	4,027	0	0.000%
SNAP - Tetracycline**	0	0	51	0	51	0	0.000%
Tetracycline							
HPLC Tetracyclines - Tetracycline	23,497	1	0	0	23,497	1	0.004%
TOTALS	370,400	147	74,947	39	445,347	186	0.042%

** Non-Validated Test Method

++ NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-4 -- Number of Tests by Method by Family/Drug
Grade A Other (Milk from silos, milk transport tankers, etc.)
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	4,803	1	106	0	4,909	1	0.020%
Charm BSDA Tablet - Beta lactams++	0	0	142	0	142	0	0.000%
Charm II Tablet Competitive	274	0	0	0	274	0	0.000%
Charm II Tablet Sequential	31	0	30	0	61	0	0.000%
Charm SL Beta lactams	32,166	7	1,381	1	33,547	8	0.024%
Delvotest P 5 Pack - Beta lactams++	44	0	5,281	0	5,325	0	0.000%
Delvotest P/Delvotest P Mini++	177	0	1,591	0	1,768	0	0.000%
IDEXX New SNAP	247	0	115	1	362	1	0.276%
Cloxacillin							
Charm II Test for Cloxacillin	0	0	30	0	30	0	0.000%
Sulfonamides							
Charm II Tablet Competitive	0	0	111	0	111	0	0.000%
Charm SL Sulfa Test**	192	0	0	0	192	0	0.000%
SULFAMETHAZINE							
IDEXX SNAP SULFA (SMZ)**	310	0	0	0	310	0	0.000%
Tetracyclines							
Charm II Tablet Competitive	0	0	23	0	23	0	0.000%
SNAP - Tetracycline**	239	0	0	0	239	0	0.000%
TOTALS	38,483	8	8,810	2	47,293	10	0.021%

** Non-Validated Test Method

++ NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-5 -- Number of Tests by Method by Family/Drug
Non-Grade A Bulk Milk Pickup Tanker
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	12,427	3	0	0	12,427	3	0.024%
Charm II Tablet Sequential	187	0	0	0	187	0	0.000%
Charm SL Beta lactams	95,934	17	7	0	95,941	17	0.018%
Delvotest P 5 Pack - Beta lactams++	11,092	1	5	0	11,097	1	0.009%
Delvotest P/Delvotest P Mini++	51	0	8	0	59	0	0.000%
IDEXX New SNAP	3,085	2	0	0	3,085	2	0.065%
Sulfonamides							
Charm II Tablet Sequential**	187	0	0	0	187	0	0.000%
SULFAMETHAZINE							
IDEXX SNAP SULFA (SMZ)**	17	0	0	0	17	0	0.000%
Tetracyclines							
SNAP - Tetracycline**	259	0	0	0	259	0	0.000%
TOTALS	123,239	23	20	0	123,259	23	0.019%

** Non-Validated Test Method

++ NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-6 -- Number of Tests by Method by Family/Drug
Non-Grade A Pasteurized Fluid Milk and Milk Products
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Delvotest P 5 Pack - Beta lactams[++]	1,235	0	266	0	1,501	0	0.000%
TOTALS	1,235	0	266	0	1,501	0	0.000%

[++] NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-7 -- Number of Tests by Method by Family/Drug
Non-Grade A Producer
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm BSDA Tablet - Beta lactams[++]	854	1	0	0	854	1	0.117%
Charm SL Beta lactams	0	0	104	0	104	0	0.000%
Delvotest P 5 Pack - Beta lactams[++]	20,713	18	32	0	20,745	18	0.087%
Delvotest P/Delvotest P Mini[++]	0	0	45	0	45	0	0.000%
TOTALS	21,567	19	181	0	21,748	19	0.087%

[++] NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.

Table 8-8 -- Number of Tests by Method by Family/Drug
Non-Grade A Other (Milk from silos, milk transport tankers, etc.)
October 1, 2014 to September 30, 2015

Tests Used by Family/Drug	Number of Industry Tests	Number of Positive Industry Tests	Number of Regulatory Tests	Number of Positive Regulatory Tests	Total Tests	Total Positive Tests	Percent Positive
BETA lactams							
Charm 3 SL-3	0	0	1	0	1	0	0.000%
Charm SL Beta lactams	447	0	0	0	447	0	0.000%
Delvotest P 5 Pack - Beta lactams[++]	2,429	0	550	0	2,979	0	0.000%
TOTALS	2,876	0	551	0	3,427	0	0.000%

[++] NCIMS evaluated these kits for detection of beta lactams; however, unless the kits are used with beta lactamase, they do not specifically identify the presence of beta lactams. The reporting of these tests does not make it possible to separate the use/nonuse of beta lactamase. A finding of "Not Found" would indicate the test did not detect any inhibitor for which it is sensitive, including, but not limited to, antibiotics or non-specific inhibitors such as sanitizers. See technical bulletin on the contractor's website at: www.kandc-sbcc.com/nmdrd/.