

**NATIONAL MILK DRUG RESIDUE DATA BASE
FISCAL YEAR 1995 ANNUAL REPORT**

October 1, 1994 - September 30, 1995

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
INTRODUCTION	1
BACKGROUND	1
SUMMARY	2
SAMPLE RESULTS	3
TABLE 1 Sample Results	4
TABLE 2 Industry and Regulatory Samples	5
TESTS CONDUCTED	6
TABLE 3 Tests Conducted	6
TABLE 4 Tests Conducted by Industry and Regulatory Agencies	7
TABLE 5 Number of Tests Conducted by Family/Drug	8
TABLE 6 Number of Tests by Method by Family/Drug	10
TABLE 7-1 Grade A Bulk Milk Pick-Up Tanker Testing	14
TABLE 7-2 Grade A Pasteurized Fluid Milk and Milk Products Testing	15
TABLE 7-3 Grade A Producer Testing	16
TABLE 7-4 Grade A Other Testing (milk from silos, over-the-road tankers, etc.)	17
TABLE 7-5 Non-Grade A Bulk Milk Pick-Up Tanker Testing	18
TABLE 7-6 Non-Grade A Pasteurized Fluid Milk and Milk Products Testing	18
TABLE 7-7 Non-Grade A Producer Testing	19
TABLE 7-8 Non-Grade A Other Testing (milk from silos, over-the-road tankers, etc.)	19

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
TABLE 8-1 Number of Tests by Method by Family/Drug for Grade A Bulk Milk Pick-Up Tanker Testing	20
TABLE 8-2 Number of Tests by Method by Family/Drug for Grade A Pasteurized Fluid Milk and Milk Products Testing	26
TABLE 8-3 Number of Tests by Method by Family/Drug for Grade A Producer Testing	29
TABLE 8-4 Number of Tests by Method by Family/Drug for Grade A Other Testing (milk from silos, over-the-road tankers, etc.)	33
TABLE 8-5 Number of Tests by Method by Family/Drug for Non-Grade A Bulk Milk Pick-Up Tanker Testing	37
TABLE 8-6 Number of Tests by Method by Family/Drug for Non-Grade A Pasteurized Fluid Milk and Milk Products Testing	39
TABLE 8-7 Number of Tests by Method by Family/Drug for Non-Grade A Producer Testing	40
TABLE 8-8 Number of Tests by Method by Family/Drug for Non-Grade A Other Testing (milk from silos, over-the-road tankers, etc.)	41

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INTRODUCTION

The National Milk Drug Residue Data Base 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, including whether it was disposed of properly for non-human use. The system includes all milk, Grade A and non-Grade A, commonly known as manufacturing grade. Grade A milk represents approximately 90% of the milk supply and is regulated through NCIMS by 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 National Milk Drug Residue Data Base are for educational and analytical purposes and are not intended or suitable for regulatory follow-up.

BACKGROUND

NCIMS is a cooperative State-Public Health Service/Food and Drug Administration (FDA) Program for certification of interstate milk shippers. Its procedures, administration, and enforcement actions provide the framework for the nation's Grade A milk safety program. During the 1991 meeting of the NCIMS, the Conference authorized a national program to compile the results of residue testing by industry and regulatory agencies.

Subsequently, FDA awarded a contract to develop a National Milk Drug Residue Data Base. 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 without compromising any confidential data. Information regarding individual firm's data is not submitted to the data base contractor.

Two States, New York and Oklahoma, began submitting data in April 1993 to pilot-test the data base. At the end of July 1993, all States were requested to begin reporting their testing data and the testing data of their State's dairy industry to the data base contractor. As of October 31, 1994, all fifty States and Puerto Rico were participating in the data base program. The data base includes results of the National Drug Residue Milk Monitoring Program (NDRMMP), a national drug residue in milk sampling program administered by FDA with the full cooperation by the States. Results from this program are reported to the data base by the States.

It is important to recognize that the samples and tests reported do not necessarily represent one hundred percent 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.

SUMMARY

This report presents summary data on samples and tests conducted during the Fiscal Year 1995, October 1, 1994 to September 30, 1995. At the time the report was prepared, some States did not submit complete data; e.g., a few States submitted data for only certain quarters of the Fiscal Year, submitted only industry data, or only industry Bulk Milk Pickup (BMP) tanker data. One State did not participate in the program during this period. Information on the status of reporting by individual States has been submitted to FDA and NCIMS for follow-up.

The Pasteurized Milk Ordinance requires that all bulk milk tankers be sampled and analyzed for animal drug residues before the milk is processed. Any BMP found positive is rejected for human consumption.

During this period, 4,034,167 samples were analyzed for animal drug residues. Of these samples, 3,974 were positive for a residue. A total of 4,454,401 tests were reported on the samples for 23 different groups of families or individual drugs. Sixty separate testing methods were used to analyze the samples for 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, or over-the-road tanker, 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. Includes milk products such as milk, cream, condensed milk and dry milk products, and condensed and dry whey products.
3. Producer - raw milk obtained from a dairy farm. Samples are reported by the permitting State, rather than by the analyzing State.
4. Other - milk from silos, over-the-road tankers, etc.

A POSITIVE result, as used in this report and as set forth in Tables 1 and 2, 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 test by the milk processors.

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. The PMO governs the rules which State agencies use to implement their milk program.

TABLE 1 -- Sample Results October 1, 1994 to September 30, 1995				
Source of Sample	Total Samples	Number Positive	Percent Positive	Disposition per PMO (Pounds)
Bulk Milk Pick-Up Tanker	3,219,071	3,263	0.101%	105,144,000
Pasteurized Fluid Milk and Milk Products	70,381	8	0.011%	189,000
Producer	637,078	659	0.103%	4,462,000
Other	107,637	44	0.041%	1,039,000
TOTALS	4,034,167	3,974	*	110,834,000

The asterisk (*) notes that a summary of the percent positive cannot be provided because there is not uniformity in terms of sampling in the four categories. For example, the Pasteurized Milk Ordinance (PMO) sets forth specific sampling requirements for beta-lactam testing as follows:

1. Bulk Milk Pickup Tanker Samples -- samples are taken daily on every tanker;
2. Pasteurized Fluid Milk and Milk Products -- a minimum of four samples must be tested for each product at each plant every six months;
3. Producer -- each producer must be tested at least four times every six months; and
4. Other -- samples are conducted on a random basis.

Table 2 presents these results in greater detail and shows the number of samples conducted by industry and by regulatory agencies. Industry samples are taken by processing facilities, receiving and transfer stations, and marketing groups or cooperatives. Industry samples may be conducted to meet the industry requirements of Appendix N of the PMO which sets forth testing 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, 1994 to September 30, 1995

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 Pick-Up Tanker	2,890,157	2,859	11,897	85	2,902,054	2,944	0.101%	97,737,000
Pasteurized Fluid Milk and Milk Products	15,609	1	54,161	7	69,770	8	0.011%	189,000
Producer	424,691	432	181,085	190	605,776	622	0.103%	4,303,000
Other	95,874	36	5,188	3	101,062	39	0.039%	885,000
NON-GRADE A								
Bulk Milk Pick-Up Tanker ¹	316,823	318	194	1	317,017	319	0.101%	7,407,000
Pasteurized Fluid Milk and Milk Products	88	0	523	0	611	0	0%	0
Producer	26,136	37	5,166	0	31,302	37	0.118%	159,000
Other	6,398	5	177	0	6,575	5	0.076%	154,000
TOTALS	3,775,776	3,688	258,391	286	4,034,167	3,974	*	110,834,000²

¹ It is a common practice in some States, including two large milk production States, that bulk milk pick-up tankers pickup milk from Grade A and non-Grade A milk producers on the same truck. 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 0.072% of the total milk supply of the annual production of 154 billion pounds.

* = See Table 1 for explanation.

TESTS CONDUCTED

An objective of the National Milk Drug Residue Data Base 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 run is greater than the number of samples. 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, 1994 to September 30, 1995.

TABLE 3 -- Tests Conducted October 1, 1994 to September 30, 1995			
Source of Sample	Total Tests	Number of Tests Positive	Percent Positive
Bulk Milk Pick-Up Tanker	3,600,557	5,251	0.146%
Pasteurized Fluid Milk and Milk Products	73,887	15	0.02%
Producer	648,371	999	0.154%
Other	131,586	145	0.11%
TOTALS	4,454,401	6,410	*

* = See Table 1 for explanation.

Table 4 presents additional details in terms of the tests conducted by industry and by regulatory agencies.

**TABLE 4 -- Tests Conducted by Industry and Regulatory Agencies
October 1, 1994 to September 30, 1995**

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 Pick-Up Tanker	3,186,220	4,577	20,792	147	3,207,012	4,724	0.147%
Pasteurized Fluid Milk and Milk Products	16,827	2	56,363	13	73,190	15	0.021%
Producer	434,996	643	181,039	256	616,035	899	0.146%
Other	116,242	134	6,411	6	122,653	140	0.114%
NON-GRADE A							
Bulk Milk Pick-Up Tanker ¹	393,346	526	199	1	393,545	527	0.134%
Pasteurized Fluid Milk and Milk Products	88	0	609	0	697	0	0%
Producer	27,166	93	5,170	7	32,336	100	0.309%
Other	8,428	5	505	0	8,933	5	0.056%
TOTALS	4,183,313	5,980	271,088	430	4,454,401	6,410	*

¹ It is a common practice in some States, including two large milk production States, that bulk milk pick-up tankers pickup milk from Grade A and non-Grade A milk producers on the same truck. 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 2 shows data on the disposition of milk in compliance with the PMO.

Table 5 shows the number of tests conducted by family and by individual drug.

TABLE 5 -- Number of Tests Conducted by Family/Drug October 1, 1994 to September 30, 1995		
Family/Drug	Total Tests	Total Positive
AMINOGLYCOSIDES	2,771	1
Gentamicin	13,978	8
BETA-LACTAMS	3,893,971	6,060
Ceftiofur	5,240	6
Cloxacillin	3,273	30
CHLORAMPHENICOL	465	0
MACROLIDES	1,629	0
NOVOBIOCIN	334	0
SULFONAMIDES	151,071	43
Sulfachloropyridazine	10	0
Sulfadiazine	10	0
Sulfadimethoxine	85,145	150
Sulfamerazine	10	0
Sulfamethazine	125,259	10
Sulfamethizole	10	0
Sulfanilamide	10	0
Sulfapyridine	10	0
Sulfaquinoxaline	10	0
Sulfathiazole	83,804	0

TABLE 5 -- Number of Tests Conducted by Family/Drug October 1, 1994 to September 30, 1995		
Family/Drug	Total Tests	Total Positive
TETRACYCLINES	86,957	101
Chlortetracycline	90	0
Oxytetracycline	90	1
Tetracycline	90	0
OTHER DRUG GROUPS	164	0
TOTALS	4,454,401	6,410

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 data show that 60 tests were used to analyze the samples for residues. The test with the largest use was SNAP - Beta-Lactams, used to test over 1.29 million samples.

After we developed this program, we found that the method codes originally provided were inadequate in some cases in that they lacked sufficient detail to fully describe the method. In other cases, the methods failed to meet the validation requirements established by FDA and/or were withdrawn from the market by manufactures. To clarify this situation, revised instructions were distributed to data providers on May 25, 1995. They will not appear in future reports but are included at this time to reflect the testing and the methods used during this reporting period. For example, Beta-Lactams EIA is no longer valid. Cite-Probe-Beta-Lactams was removed from the market and replaced by a different test by the manufacturer. To provide better information about the methods used, terms such as Charm II Tablet were tied to a specific drug. For example, testing of Macrolides in this report shows that some were tested with Charm II Tablet Competitive - Macrolides, some were tested with Charm II Sequential - Macrolides, while some were reported under the old code, Charm II Tablet.

**TABLE 6 - Number of Tests by Method by Family/Drug
October 1, 1994 to September 30, 1995**

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
AMINOGLYCOSIDES			
Charm II Tablet ^①	114	0	0%
Charm II Tablet Competitive - Aminoglycosides	1,132	0	0%
Charm II Tablet Sequential - Aminoglycosides	1,513	1	0.066%
GENTAMICIN			
Charm II Tablet Competitive - Gentamicin	3,457	1	0.029%
Cite Probe Gentamicin	7,121	3	0.042%
ID Block - Gentamicin	9	1	11.111%
Lak Tek - Gentamicin	3,403	3	0.088%
BETA-LACTAMS			
Beta Lactams EIA ^①	2,000	7	0.35%
Charm BSDA Tablet - Beta-Lactams	167,567	125	0.075%
Charm Cowside ^①	10,289	11	0.107%
Charm Farm - Beta-Lactams	1,347	1	0.074%
Charm I Liquid - Beta-Lactams	26,246	28	0.107%
Charm I Tablet ^①	50,270	79	0.157%
Charm I/Cowside II Tablet - Beta-Lactams	100,790	145	0.144%
Charm II Liquid - Beta-Lactams	38,351	41	0.107%
Charm II Tablet ^①	137,561	237	0.172%
Charm II Tablet Competitive - Beta-Lactams	351,041	421	0.12%
Charm II Tablet Quantitative - Beta-Lactams	38,025	375	0.986%
Charm II Tablet Sequential - Beta-Lactams	407,265	531	0.13%
Charm II Tablet Transit - Beta-Lactams	13,613	13	0.095%
Charm Rapid Inhibition Test - Beta-Lactams	7	0	0%
Cite Probe (Heat Step) - Beta-Lactams ^①	12,917	36	0.279%
Cite Probe Beta Lactams ^①	109,273	60	0.055%
Delvotest P - Beta-Lactams	11,970	9	0.075%
Delvotest SP - Beta-Lactams	10,079	6	0.06%
Delvo-X-PRESS - Beta-Lactams	26,522	91	0.343%

**TABLE 6 - Number of Tests by Method by Family/Drug
October 1, 1994 to September 30, 1995**

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
Difco BSDA - Beta-Lactams	552,237	620	0.112%
Lak Tek - Beta-Lactams	335,375	722	0.215%
Penzyme & Penzyme III ^①	99,712	142	0.142%
Penzyme III Test - Beta-Lactams	60,112	100	0.166%
Penzyme Milk Test - Beta-Lactams	33,345	32	0.096%
SNAP - Beta-Lactams	1,298,057	2,228	0.172%
CEFTIOFUR			
Lak Tek - Ceftiofur	5,240	6	0.115%
CLOXACILLIN			
Charm II Tablet Competitive - Cloxacillin	2,474	0	0%
Charm II Tablet Quantitative - Cloxacillin	799	30	3.755%
CHLORAMPHENICOL			
Charm II Tablet ^①	9	0	0%
Charm II Tablet Competitive - Chloramphenicol	415	0	0%
E-Z Screen ^①	29	0	0%
GC Chloramphenicol - FDA Method	12	0	0%
MACROLIDES			
Charm I/Cowside II Tablet - Macrolides	16	0	0%
Charm II Tablet ^①	39	0	0%
Charm II Tablet Competitive - Macrolides	1,348	0	0%
Charm II Tablet Sequential - Macrolides	226	0	0%
NOVOBIOCIN			
Charm II Tablet ^①	2	0	0%
Charm II Tablet Competitive - Novobiocin	332	0	0%
SULFONAMIDES			
Charm Cowside ^①	165	0	0%
Charm I/Cowside II Tablet - Sulfonamides	12,699	2	0.016%
Charm II Liquid - Sulfonamides	690	0	0%
Charm II Tablet ^①	21,259	6	0.028%
Charm II Tablet Competitive - Sulfonamides	63,987	13	0.02%

**TABLE 6 - Number of Tests by Method by Family/Drug
October 1, 1994 to September 30, 1995**

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
Charm II Tablet Sequential - Sulfonamides	51,290	22	0.043%
HPLC ^①	1	0	0%
HPLC 8 Sulfonamide ^①	53	0	0%
TLC Sulfonamide	465	0	0%
Other (Test Method Not Identified)	17	0	0%
SULFACHLOROPYRIDAZINE			
HPLC 8 Sulfonamides - Sulfachloropyridazine	10	0	0%
SULFADIAZINE			
HPLC 8 Sulfonamides - Sulfadiazine	10	0	0%
SULFADIMETHOXINE			
Charm II Tablet Competitive - Sulfadimethoxine	1,341	0	0%
Cite Sulfa Trio - Sulfadimethoxine	83,939	150	0.179%
HPLC 8 Sulfonamides - Sulfadimethoxine	10	0	0%
SULFAMERAZINE			
HPLC 8 Sulfonamides - Sulfamerazine	10	0	0%
SULFAMETHAZINE			
Cite Probe Beta-Lactams/Sulfamethazine ^①	11,786	3	0.025%
Cite Sulfa Trio - Sulfamethazine	83,939	2	0.002%
ID Block - Sulfamethazine	441	0	0%
Lak Tek - Sulfamethazine	29,238	5	0.017%
HPLC 8 Sulfonamides - Sulfamethazine	10	0	0%
SULFAMETHIZOLE			
HPLC 8 Sulfonamides - Sulfamethizole	10	0	0%

**TABLE 6 - Number of Tests by Method by Family/Drug
October 1, 1994 to September 30, 1995**

Tests Used by Family/Drug	Number of Tests	Number Positive	Percent Positive
SULFANILAMIDE			
HPLC 8 Sulfonamides - Sulfanilamide	10	0	0%
SULFAPYRIDINE			
HPLC 8 Sulfonamides - Sulfapyridine	10	0	0%
SULFAQUINOXALINE			
HPLC 8 Sulfonamides - Sulfaquinoxaline	10	0	0%
SULFATHIAZOLE			
Cite Sulfa Trio - Sulfathiazole	83,939	0	0%
HPLC 8 Sulfonamides - Sulfathiazole	10	0	0%
TETRACYCLINES			
Charm I/Cowside II Tablet - Tetracyclines	1,784	0	0%
Charm II Tablet ^①	7,635	5	0.065%
Charm II Tablet Competitive - Tetracyclines	44,525	15	0.034%
Cite Probe Beta-Lactams/Tetracyclines ^①	3,475	18	0.518%
HPLC Tetracyclines ^①	34	2	5.882%
Lak Tek - Tetracyclines	7,967	4	0.05%
SNAP - Tetracyclines	21,537	57	0.265%
CHLORTETRACYCLINE			
HPLC Tetracyclines - Chlortetracycline	90	0	0%
OXYTETRACYCLINE			
HPLC Tetracyclines - Oxytetracycline	90	1	1.111%
TETRACYCLINE			
HPLC Tetracyclines - Tetracycline	90	0	0%
OTHER DRUG GROUPS			
Other (Test Method Not Identified)	164	0	0%
TOTALS	4,454,401	6,410	*

^① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

* = See Table 1 for explanation.

Tables 7-1 to 7-8 present additional details of the testing conducted. These tables show the testing by family 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., gentamicin, ceftiofur, etc., are not included in the total for the family, e.g., aminoglycosides, beta-lactams, etc.

**TABLE 7-1 -- Grade A Bulk Milk Pick-Up Tanker Testing
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES	2,126	1	111	0	2,237	1
Gentamicin	10,460	4	1,426	0	11,886	4
BETA-LACTAMS	2,778,955	4,354	11,616	124	2,790,571	4,478
Ceftiofur	4,354	3	97	1	4,451	4
Cloxacillin	3,266	30	1	0	3,267	30
CHLORAMPHENICOL	84	0	9	0	93	0
MACROLIDES	1,169	0	113	0	1,282	0
NOVOBIOCIN	3	0	0	0	3	0
SULFONAMIDES	142,903	39	644	1	143,547	40
Sulfachloropyridazine	0	0	10	0	10	0
Sulfadiazine	0	0	10	0	10	0
Sulfadimethoxine	41,871	74	1,533	0	43,404	74
Sulfamerazine	0	0	10	0	10	0
Sulfamethazine	80,250	6	1,526	1	81,776	7
Sulfamethizole	0	0	10	0	10	0
Sulfanilamide	0	0	10	0	10	0
Sulfapyridine	0	0	10	0	10	0
Sulfaquinoxaline	0	0	10	0	10	0
Sulfathiazole	40,530	0	1,533	0	42,063	0

**TABLE 7-1 -- Grade A Bulk Milk Pick-Up Tanker Testing
October 1, 1994 to September 30, 1995**

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
TETRACYCLINES	79,903	66	2,113	20	82,016	86
Chlortetracycline	85	0	0	0	85	0
Oxytetracycline	85	0	0	0	85	0
Tetracycline	85	0	0	0	85	0
OTHER DRUG GROUPS	91	0	0	0	91	0
TOTALS	3,186,220	4,577	20,792	147	3,207,012	4,724

**TABLE 7-2 -- Grade A Pasteurized Fluid Milk and Milk Products Testing
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES	0	0	0	0	0	0
Gentamicin	51	0	191	0	242	0
BETA-LACTAMS	16,168	2	54,433	10	70,601	12
Ceftiofur	3	0	0	0	3	0
CHLORAMPHENICOL	0	0	29	0	29	0
SULFONAMIDES	311	0	211	1	522	1
Sulfadimethoxine	46	0	257	0	303	0
Sulfamethazine	46	0	257	0	303	0
Sulfathiazole	46	0	257	0	303	0
TETRACYCLINES	156	0	728	2	884	2
TOTALS	16,827	2	56,363	13	73,190	15

**TABLE 7-3 -- Grade A Producer Testing
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES	0	0	141	0	141	0
Gentamicin	192	0	203	3	395	3
BETA-LACTAMS	423,536	633	179,998	243	603,534	876
Ceftiofur	12	0	158	2	170	2
Cloxacillin	1	0	5	0	6	0
CHLORAMPHENICOL	0	0	12	0	12	0
SULFONAMIDES	4,292	1	114	1	4,406	2
Sulfadimethoxine	1,861	0	4	0	1,865	0
Sulfamethazine	2,230	0	220	3	2,450	3
Sulfathiazole	1,861	0	4	0	1,865	0
TETRACYCLINES	1,011	9	168	3	1,179	12
Chlortetracycline	0	0	4	0	4	0
Oxytetracycline	0	0	4	1	4	1
Tetracycline	0	0	4	0	4	0
TOTALS	434,996	643	181,039	256	616,035	899

**TABLE 7-4 -- Grade A Other Testing (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES	331	0	50	0	381	0
Gentamicin	744	0	50	0	794	0
BETA-LACTAMS	95,502	134	5,395	5	100,897	139
Ceftiofur	615	0	0	0	615	0
CHLORAMPHENICOL	331	0	0	0	331	0
MACROLIDES	337	0	2	0	339	0
NOVOBIOCIN	331	0	0	0	331	0
SULFONAMIDES	1,996	0	94	0	2,090	0
Sulfadimethoxine	4,092	0	169	0	4,261	0
Sulfamethazine	5,249	0	169	0	5,418	0
Sulfathiazole	4,092	0	169	0	4,261	0
TETRACYCLINES	2,549	0	310	1	2,859	1
Chlortetracycline	0	0	1	0	1	0
Oxytetracycline	0	0	1	0	1	0
Tetracycline	0	0	1	0	1	0
OTHER DRUG GROUPS	73	0	0	0	73	0
TOTALS	116,242	134	6,411	6	122,653	140

**TABLE 7-5 -- Non-Grade A Bulk Milk Pick-Up Tanker Testing
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES						
Gentamicin	673	1	0	0	673	1
BETA-LACTAMS	288,695	449	185	1	288,880	450
Ceftiofur	0	0	1	0	1	0
SULFONAMIDES	16	0	0	0	16	0
Sulfadimethoxine	34,652	76	0	0	34,652	76
Sulfamethazine	34,652	0	0	0	34,652	0
Sulfathiazole	34,652	0	0	0	34,652	0
TETRACYCLINES	6	0	13	0	19	0
TOTALS	393,346	526	199	1	393,545	527

**TABLE 7-6 -- Non-Grade A Pasteurized Fluid Milk and Milk Products Testing
October 1, 1994 to September 30, 1995**

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	88	0	609	0	697	0
TOTALS	88	0	609	0	697	0

**TABLE 7-7 -- Non-Grade A Producer Testing
October 1, 1994 to September 30, 1995**

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	26,941	93	5,170	7	32,111	100
SULFONAMIDES	0	0	0	0	0	0
Sulfadimethoxine	75	0	0	0	75	0
Sulfamethazine	75	0	0	0	75	0
Sulfathiazole	75	0	0	0	75	0
TOTALS	27,166	93	5,170	7	32,336	100

**TABLE 7-8 -- Non-Grade A Other Testing (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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	6,400	5	280	0	6,680	5
MACROLIDES	0	0	8	0	8	0
SULFONAMIDES	0	0	55	0	55	0
Sulfadimethoxine	676	0	54	0	730	0
Sulfamethazine	676	0	54	0	730	0
Sulfathiazole	676	0	54	0	730	0
TOTALS	8,428	5	505	0	8,933	5

Tables 8-1 to 8-8 present details on the number of tests conducted by industry and by 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. The data show that 60 tests were used to analyze the samples for residues.

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES							
Charm II Tablet ^①	114	0	0	0	114	0	0%
Charm II Tablet Competitive - Aminoglycosides	622	0	46	0	668	0	0%
Charm II Tablet Sequential - Aminoglycosides	1,390	1	65	0	1,455	1	0.069%
GENTAMICIN							
Charm II Tablet Competitive - Gentamicin	3,267	1	36	0	3,303	1	0.03%
Cite Probe Gentamicin	4,277	2	1,390	0	5,667	2	0.035%
ID Block - Gentamicin	9	1	0	0	9	1	11.111 %
Lak Tek - Gentamicin	2,907	0	0	0	2,907	0	0%
BETA-LACTAMS							
Beta-Lactams EIA ^①	1,364	7	0	0	1,364	7	0.513%
Charm BSDA Tablet - Beta-Lactams	13,008	22	3,073	3	16,081	25	0.155%
Charm Cowside ^①	8,690	8	259	1	8,949	9	0.101%
Charm Farm - Beta-Lactams	1,347	1	0	0	1,347	1	0.074%
Charm I Liquid - Beta-Lactams	25,798	28	0	0	25,798	28	0.109%
Charm I Tablet ^①	47,096	69	20	4	47,116	73	0.155%
Charm I/Cowside II Tablet - Beta-Lactams	93,606	139	20	0	93,626	139	0.148%
Charm II Liquid - Beta-Lactams	35,323	36	15	0	35,338	36	0.102%
Charm II Tablet ^①	133,349	231	26	0	133,375	231	0.173%

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
Charm II Tablet Competitive - Beta-Lactams	307,128	324	508	12	307,636	336	0.109%
Charm II Tablet Quantitative - Beta-Lactams	31,735	337	264	10	31,999	347	1.084%
Charm II Tablet Sequential - Beta-Lactams	377,964	455	2,026	17	379,990	472	0.124%
Charm II Tablet Transit - Beta-Lactams	9,920	12	0	0	9,920	12	0.121%
Charm Rapid Inhibition Test - Beta-Lactams	7	0	0	0	7	0	0%
Cite Probe (Heat Step) - Beta Lactams	10,731	27	8	0	10,739	27	0.251%
Cite Probe Beta Lactams ^①	109,273	60	0	0	109,273	60	0.055%
Delvotest P - Beta-Lactams	5,911	8	1,507	0	7,418	8	0.108%
Delvotest SP - Beta-Lactams	2,007	4	0	0	2,007	4	0.199%
Delvo-X-PRESS - Beta-Lactams	22,075	59	0	0	22,075	59	0.267%
Difco BSDA - Beta-Lactams	79,776	191	3,097	2	82,873	193	0.233%
Lak Tek - Beta-Lactams	238,105	473	177	31	238,282	504	0.212%
Penzyme & Penzyme III ^①	63,382	78	0	0	63,382	78	0.123%
Penzyme III Test - Beta-Lactams	42,178	44	0	0	42,178	44	0.104%
Penzyme Milk Test - Beta-Lactams	13,033	21	24	0	13,057	21	0.161%
SNAP - Beta-Lactams	1,106,149	1,720	592	44	1,106,741	1,764	0.159%

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
CEFTIOFUR							
Lak Tek - Ceftiofur	4,354	3	97	1	4,451	4	0.09%
CLOXACILLIN							
Charm II Tablet Competitive - Cloxacillin	2,474	0	0	0	2,474	0	0%
Charm II Tablet Quantitative - Cloxacillin	792	30	1	0	793	30	3.783%
CHLORAMPHENICOL							
Charm II Tablet ^①	0	0	9	0	9	0	0%
Charm II Tablet Competitive - Chloramphenicol	84	0	0	0	84	0	0%
MACROLIDES							
Charm I/Cowside II Tablet - Macrolides	16	0	0	0	16	0	0%
Charm II Tablet ^①	39	0	0	0	39	0	0%
Charm II Tablet Competitive - Macrolides	1,009	0	98	0	1,107	0	0%
Charm II Tablet Sequential - Macrolides	105	0	15	0	120	0	0%
NOVOBIOCIN							
Charm II Tablet ^①	2	0	0	0	2	0	0%
Charm II Tablet Competitive - Novobiocin	1	0	0	0	1	0	0%
SULFONAMIDES							
Charm Cowside ^①	165	0	0	0	165	0	0%
Charm I/Cowside II Tablet - Sulfonamides	11,878	2	0	0	11,878	2	0.017%
Charm II Liquid - Sulfonamides	690	0	0	0	690	0	0%
Charm II Tablet ^①	19,877	5	34	1	19,911	6	0.03%
Charm II Tablet Competitive - Sulfonamides	59,206	11	382	0	59,588	11	0.018%

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
Charm II Tablet Sequential - Sulfonamides	50,724	21	46	0	50,770	21	0.041%
HPLC 8 Sulfonamide ^①	2	0	51	0	53	0	0%
TLC Sulfonamide	344	0	121	0	465	0	0%
Other (Test Method Not Identified)	17	0	0	0	17	0	0%
SULFACHLOROPYRIDAZINE							
HPLC 8 Sulfonamides - Sulfachloropyridazine	0	0	10	0	10	0	0%
SULFADIAZINE							
HPLC 8 Sulfonamides - Sulfadiazine	0	0	10	0	10	0	0%
SULFADIMETHOXINE							
Charm II Tablet Competitive - Sulfadimethoxine	1,341	0	0	0	1,341	0	0%
Cite Sulfa Trio - Sulfadimethoxine	40,530	74	1,523	0	42,053	74	0.176%
HPLC 8 Sulfonamides - Sulfadimethoxine	0	0	10	0	10	0	0%
SULFAMERAZINE							
HPLC 8 Sulfonamides - Sulfamerazine	0	0	10	0	10	0	0%
SULFAMETHAZINE							
Cite Probe Beta Lactams/ Sulfamethazine ^①	10,478	0	3	1	10,481	1	0.01%
Cite Sulfa Trio - Sulfamethazine	40,530	2	1,523	0	42,053	2	0.005%
ID Block - Sulfamethazine	441	0	0	0	441	0	0%
Lak Tek - Sulfamethazine	28,801	4	0	0	28,801	4	0.014%
HPLC 8 Sulfonamides - Sulfamethazine	0	0	10	0	10	0	0%
SULFAMETHIZOLE							

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
HPLC 8 Sulfonamides - Sulfamethizole	0	0	10	0	10	0	0%
SULFANILAMIDE							
HPLC 8 Sulfonamides - Sulfanilamide	0	0	10	0	10	0	0%
SULFAPYRIDINE							
HPLC 8 Sulfonamides - Sulfapyridine	0	0	10	0	10	0	0%
SULFAQUINOXALINE							
HPLC 8 Sulfonamides - Sulfaquinoxaline	0	0	10	0	10	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	40,530	0	1,523	0	42,053	0	0%
HPLC 8 Sulfonamides - Sulfathiazole	0	0	10	0	10	0	0%
TETRACYCLINES							
Charm I/Cowside II Tablet - Tetracyclines	1,725	0	18	0	1,743	0	0%
Charm II Tablet ^①	7,236	5	94	0	7,330	5	0.068%
Charm II Tablet Competitive - Tetracyclines	43,036	13	418	2	43,454	15	0.035%
Cite Probe Beta Lactams/ ^① Tetracyclines	2,769	9	270	2	3,039	11	0.362%
HPLC Tetracyclines ^①	16	2	13	0	29	2	6.897%
Lak Tek - Tetracyclines	7,701	4	10	0	7,711	4	0.052%
SNAP - Tetracyclines	17,420	33	1,290	16	18,710	49	0.262%
CHLORTETRACYCLINE							
HPLC Tetracyclines - Chlortetracycline	85	0	0	0	85	0	0%
OXYTETRACYCLINE							

**Table 8-1 -- Number of Tests by Method by Family/Drug
Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
HPLC Tetracyclines - Oxytetracycline	85	0	0	0	85	0	0%
TETRACYCLINE							
HPLC Tetracyclines - Tetracycline	85	0	0	0	85	0	0%
OTHER DRUG GROUPS							
Other (Test Method Not Identified)	91	0	0	0	91	0	0%
TOTALS	3,186,220	4,577	20,792	147	3,207,012	4,724	0.147%

① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-2 -- Number of Tests by Method by Family/Drug
Grade A Pasteurized Fluid Milk and Milk Products
October 1, 1994 to September 30, 1995**

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
GENTAMICIN							
Cite Probe Gentamicin	51	0	191	0	242	0	0%
BETA-LACTAMS							
Charm BSDA Tablet - Beta-Lactams	582	0	10,291	1	10,873	1	0.009%
Charm I/Cowside II Tablet - Beta-Lactams	192	0	0	0	192	0	0%
Charm II Tablet ^①	2	2	0	0	2	2	100%
Charm II Tablet Competitive - Beta-Lactams	4,290	0	2,196	0	6,486	0	0%
Charm II Tablet Quantitative - Beta-Lactams	146	0	152	0	298	0	0%
Charm II Tablet Sequential - Beta-Lactams	138	0	3,325	1	3,463	1	0.029%
Delvotest P	754	0	219	0	973	0	0%
Delvotest SP	354	0	0	0	354	0	0%
Difco BSDA - Beta-Lactams	8,225	0	33,226	8	41,451	8	0.019%
Lak Tek - Beta-Lactams	441	0	918	0	1,359	0	0%
Penzyme & Penzyme III ^①	396	0	0	0	396	0	0%
Penzyme III Test - Beta-Lactams	533	0	0	0	533	0	0%
Penzyme Milk Test - Beta-Lactams	23	0	0	0	23	0	0%
SNAP - Beta-Lactams	92	0	4,106	0	4,198	0	0%
CHLORAMPHENICOL							

**Table 8-2 -- Number of Tests by Method by Family/Drug
Grade A Pasteurized Fluid Milk and Milk Products
October 1, 1994 to September 30, 1995**

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
E-Z Screen ^①	0	0	29	0	29	0	0%
CEFTIOFUR							
Lak Tek - Ceftiofur	3	0	0	0	3	0	0%
SULFONAMIDES							
Charm I/Cowside II Tablet - Sulfonamides	0	0	26	0	26	0	0%
Charm II Tablet Competitive - Sulfonamides	196	0	117	1	313	1	0.319%
HPLC ^①	0	0	1	0	1	0	0%
Charm II Tablet Sequential - Sulfonamides	115	0	67	0	182	0	0%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	46	0	257	0	303	0	0%
SULFAMETHAZINE							
Cite Sulfa Trio - Sulfamethazine	46	0	257	0	303	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	46	0	257	0	303	0	0%
TETRACYCLINES							
Charm I/Cowside II Tablet - Tetracyclines	0	0	26	0	26	0	0%
Charm II Tablet ^①	0	0	138	0	138	0	0%
Charm II Tablet Competitive - Tetracyclines	0	0	60	0	60	0	0%
Lak Tek - Tetracyclines	41	0	0	0	41	0	0%

**Table 8-2 -- Number of Tests by Method by Family/Drug
Grade A Pasteurized Fluid Milk and Milk Products
October 1, 1994 to September 30, 1995**

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
Cite Probe Beta-Lactams/ ^① Tetracyclines	0	0	79	0	79	0	0%
SNAP - Tetracyclines	115	0	425	2	540	2	0.37%
TOTALS	16,827	2	56,363	13	73,190	15	0.02%

^① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-3 -- Number of Tests by Method by Family/Drug
Grade A Producer
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES							
Charm II Tablet Competitive - Aminoglycosides	0	0	91	0	91	0	0%
Charm II Tablet Sequential - Aminoglycosides	0	0	50	0	50	0	0%
GENTAMICIN							
Cite Probe Gentamicin	1	0	0	0	1	0	0%
Lak Tek - Gentamicin	191	0	203	3	394	3	0.761%
BETA-LACTAMS							
Beta Lactams EIA ^①	636	0	0	0	636	0	0%
Charm BSDA Tablet - Beta-Lactams	98,481	51	30,034	39	128,515	90	0.07%
Charm Cowside ^①	451	2	0	0	451	2	0.443%
Charm I Tablet ^①	1	1	100	0	101	1	0.99%
Charm I/Cowside II Tablet - Beta-Lactams	1,068	2	726	2	1,794	4	0.223%
Charm II Liquid	835	0	0	0	835	0	0%
Charm II Tablet ^①	621	5	0	0	621	5	0.805%
Charm II Tablet Competitive - Beta-Lactams	9,758	30	3,438	16	13,196	46	0.349%
Charm II Tablet Quantitative - Beta-Lactams	3,977	18	1,334	10	5,311	28	0.527%
Charm II Tablet Sequential - Beta-Lactams	2,434	14	3,994	37	6,428	51	0.793%

**Table 8-3 -- Number of Tests by Method by Family/Drug
Grade A Producer
October 1, 1994 to September 30, 1995**

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
Cite Probe (Heat Step) - Beta Lactams ^①	95	0	0	0	95	0	0%
Delvotest P - Beta-Lactams	1,554	0	0	0	1,554	0	0%
Delvotest SP - Beta-Lactams	157	0	0	0	157	0	0%
Delvo-X-PRESS - Beta-Lactams	3,584	19	0	0	3,584	19	0.53%
Difco BSDA - Beta-Lactams	261,129	277	103,809	86	364,938	363	0.099%
Lak Tek - Beta-Lactams	943	8	21,956	35	22,899	43	0.188%
Penzyme & Penzyme III ^①	649	4	104	0	753	4	0.531%
Penzyme III Test - Beta-Lactams	618	43	0	0	618	43	6.958%
Penzyme Milk Test - Beta-Lactams	1,141	6	0	0	1,141	6	0.526%
SNAP - Beta-Lactams	35,404	153	14,503	18	49,907	171	0.343%
CEFTIOFUR							
Lak Tek - Ceftiofur	12	0	158	2	170	2	1.176%
CLOXACILLIN							
Charm II Tablet Quantitative - Cloxacillin	1	0	5	0	6	0	0%

**Table 8-3 -- Number of Tests by Method by Family/Drug
Grade A Producer
October 1, 1994 to September 30, 1995**

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
CHLORAMPHENICOL							
GC Chloramphenicol - FDA Method	0	0	12	0	12	0	0%
SULFONAMIDES							
Charm I/Cowside II Tablet - Sulfonamides	447	0	13	0	460	0	0%
Charm II Tablet ^①	835	0	0	0	835	0	0%
Charm II Tablet Competitive - Sulfonamides	2,798	1	52	0	2,850	1	0.035%
Charm II Tablet Sequential - Sulfonamides	212	0	49	1	261	1	0.383%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	1,861	0	4	0	1,865	0	0%
SULFAMETHAZINE							
Cite Probe Beta Lactams/ Sulfamethazine ^①	198	0	12	2	210	2	0.952%
Cite Sulfa Trio - Sulfamethazine	1,861	0	4	0	1,865	0	0%
Lak Tek - Sulfamethazine	171	0	204	1	375	1	0.267%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	1,861	0	4	0	1,865	0	0%

**Table 8-3 -- Number of Tests by Method by Family/Drug
Grade A Producer
October 1, 1994 to September 30, 1995**

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 I/Cowside II Tablet - Tetracyclines	0	0	13	0	13	0	0%
Charm II Tablet ^①	1	0	78	0	79	0	0%
Charm II Tablet Competitive - Tetracyclines	557	0	65	0	622	0	0%
Cite Probe Beta Lactams/ Tetracyclines ^①	28	6	1	1	29	7	24.138%
HPLC Tetracyclines ^①	0	0	5	0	5	0	0%
Lak Tek - Tetracyclines	124	0	0	0	124	0	0%
SNAP - Tetracyclines	301	3	6	2	307	5	1.629%
CHLORTETRACYCLINE							
HPLC Tetracyclines - Chlortetracycline	0	0	4	0	4	0	0%
OXYTETRACYCLINE							
HPLC Tetracyclines - Oxytetracycline	0	0	4	1	4	1	25%
TETRACYCLINE							
HPLC Tetracyclines - Tetracycline	0	0	4	0	4	0	0%
TOTALS	434,996	643	181,039	256	616,035	899	0.146%

^① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-4 -- Number of Tests by Method by Family/Drug
Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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
AMINOGLYCOSIDES							
Charm II Tablet Competitive - Aminoglycosides	331	0	42	0	373	0	0%
Charm II Tablet Sequential - Aminoglycosides	0	0	8	0	8	0	0%
GENTAMICIN							
Charm II Tablet Competitive - Gentamicin	147	0	7	0	154	0	0%
Cite Probe Gentamicin	544	0	15	0	559	0	0%
Lak Tek - Gentamicin	53	0	28	0	81	0	0%
BETA-LACTAMS							
Charm BSDA Tablet - Beta-Lactams	1,052	0	1,779	1	2,831	1	0.035%
Charm Cowside ^①	28	0	0	0	28	0	0%
Charm I Tablet ^①	2,829	2	6	0	2,835	2	0.071%
Charm I Liquid - Beta-Lactams	448	0	0	0	448	0	0%
Charm I/Cowside II Tablet - Beta-Lactams	3,236	0	4	0	3,240	0	0%
Charm II Liquid - Beta-Lactams	2,162	0	0	0	2,162	0	0%
Charm II Tablet ^①	1,521	0	0	0	1,521	0	0%
Charm II Tablet Competitive - Beta-Lactams	9,360	16	376	3	9,736	19	0.195%
Charm II Tablet Quantitative - Beta-Lactams	247	0	104	0	351	0	0%

**Table 8-4 -- Number of Tests by Method by Family/Drug
Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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
Charm II Tablet Sequential - Beta-Lactams	10,432	3	313	0	10,745	3	0.028%
Delvotest P - Beta-Lactams	437	0	0	0	437	0	0%
Delvotest SP - Beta-Lactams	239	0	0	0	239	0	0%
Difco BSDA - Beta-Lactams	25,358	5	2,364	1	27,722	6	0.022%
Lak Tek - Beta-Lactams	17,922	84	153	0	18,075	84	0.465%
Penzyme & Penzyme III	1,909	0	0	0	1,909	0	0%
Penzyme III Test - Beta-Lactams	1,092	0	0	0	1,092	0	0%
Penzyme Milk Test - Beta-Lactams	142	0	0	0	142	0	0%
SNAP - Beta-Lactams	17,088	24	296	0	17,384	24	0.138%
CEFTIOFUR							
Lak Tek - Ceftiofur	615	0	0	0	615	0	0%
CHLORAMPHENICOL							
Charm II Tablet Competitive - Chloramphenicol	331	0	0	0	331	0	0%
MACROLIDES							
Charm II Tablet Competitive - Macrolides	231	0	2	0	233	0	0%
Charm II Tablet Sequential - Macrolides	106	0	0	0	106	0	0%
NOVOBIOCIN							

**Table 8-4 -- Number of Tests by Method by Family/Drug
Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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
Charm II Tablet Competitive - Novobiocin	331	0	0	0	331	0	0%
SULFONAMIDES							
Charm I/Cowside II Tablet - Sulfonamides	333	0	2	0	335	0	0%
Charm II Tablet ^①	513	0	0	0	513	0	0%
Charm II Tablet Competitive - Sulfonamides	1,095	0	86	0	1,181	0	0%
Charm II Tablet Sequential - Sulfonamides	55	0	6	0	61	0	0%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	4,092	0	169	0	4,261	0	0%
SULFAMETHAZINE							
Cite Probe Beta Lactams/ Sulfamethazine ^①	1,095	0	0	0	1,095	0	0%
Lak Tek - Sulfamethazine	62	0	0	0	62	0	0%
Cite Sulfa Trio - Sulfamethazine	4,092	0	169	0	4,261	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	4,092	0	169	0	4,261	0	0%

**Table 8-4 -- Number of Tests by Method by Family/Drug
Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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 I/Cowside II Tablet - Tetracyclines	0	0	2	0	2	0	0%
Charm II Tablet ^①	77	0	11	0	88	0	0%
Charm II Tablet Competitive - Tetracyclines	362	0	27	0	389	0	0%
Cite Probe Beta Lactams/ Tetracyclines ^①	328	0	0	0	328	0	0%
Lak Tek - Tetracyclines	23	0	68	0	91	0	0%
SNAP - Tetracyclines	1,759	0	202	1	1,961	1	0.051%
CHLORTETRACYCLINE							
HPLC Tetracyclines - Chlortetracycline	0	0	1	0	1	0	0%
OXYTETRACYCLINE							
HPLC Tetracyclines - Oxytetracycline	0	0	1	0	1	0	0%
TETRACYCLINE							
HPLC Tetracyclines - Tetracycline	0	0	1	0	1	0	0%
OTHER DRUG GROUPS							
Other (Test Method Not Identified)	73	0	0	0	73	0	0%
TOTALS	116,242	134	6,411	6	122,653	140	0.114%

^① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-5 -- Number of Tests by Method by Family/Drug
Non-Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
GENTAMICIN							
Cite Probe Gentamicin	652	1	0	0	652	1	0.153%
Lak Tek - Gentamicin	21	0	0	0	21	0	0%
BETA-LACTAMS							
Charm BSDA Tablet - Beta-Lactams	4,602	1	150	0	4,752	1	0.021%
Charm Cowside ^①	861	0	0	0	861	0	0%
Charm I Tablet ^①	216	1	0	0	216	1	0.463%
Charm I/Cowside II Tablet - Beta-Lactams	1,938	2	0	0	1,938	2	0.103%
Charm II Liquid	15	4	0	0	15	4	26.667%
Charm II Tablet ^①	2,044	1	0	0	2,044	1	0.049%
Charm II Tablet Competitive - Beta-Lactams	13,986	20	0	0	13,986	20	0.143%
Charm II Tablet Sequential - Beta-Lactams	6,359	4	0	0	6,359	4	0.063%
Charm II Tablet Transit - Beta-Lactams	3,693	1	0	0	3,693	1	0.027%
Cite Probe (Heat Step) - Beta Lactams ^①	2,083	9	0	0	2,083	9	0.432%
Delvotest P - Beta-Lactams	39	1	0	0	39	1	2.564%
Delvotest SP - Beta-Lactams	5,097	2	0	0	5,097	2	0.039%
Delvo - X-PRESS - Beta-Lactams	863	13	0	0	863	13	1.506%

**Table 8-5 -- Number of Tests by Method by Family/Drug
Non-Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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
Difco BSDA - Beta-Lactams	14,980	34	22	0	15,002	34	0.227%
Lak Tek - Beta-Lactams	54,279	72	1	1	54,280	73	0.134%
Penzyme & Penzyme III	32,551	60	0	0	32,551	60	0.184%
Penzyme III Test - Beta-Lactams	14,908	6	0	0	14,908	6	0.04%
Penzyme Milk Test - Beta-Lactams	18,506	5	0	0	18,506	5	0.027%
SNAP - Beta-Lactams	111,675	213	12	0	111,687	213	0.191%
CEFTIOFUR							
Lak Tek - Ceftiofur	0	0	1	0	1	0	0%
SULFONAMIDES							
Charm II Tablet Sequential - Sulfonamides	16	0	0	0	16	0	0%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	34,652	76	0	0	34,652	76	0.219%
SULFAMETHAZINE							
Cite Sulfa Trio - Sulfamethazine	34,652	0	0	0	34,652	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	34,652	0	0	0	34,652	0	0%

**Table 8-5 -- Number of Tests by Method by Family/Drug
Non-Grade A Bulk Milk Pickup Tanker
October 1, 1994 to September 30, 1995**

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							
SNAP - Tetracyclines	6	0	13	0	19	0	0%
TOTALS	393,346	526	199	1	393,545	527	0.134%

① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-6 -- Number of Tests by Method by Family/Drug
Non-Grade A Pasteurized Fluid Milk and Milk Products
October 1, 1994 to September 30, 1995**

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	0	0	443	0	443	0	0%
Difco BSDA - Beta-Lactams	88	0	166	0	254	0	0%
TOTALS	88	0	609	0	697	0	0%

① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-7 -- Number of Tests by Method by Family/Drug
Non-Grade A Producer
October 1, 1994 to September 30, 1995**

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	3,848	7	89	0	3,937	7	0.178%
Charm II Liquid	1	1	0	0	1	1	100%
Delvotest P - Beta-Lactams	1,508	0	0	0	1,508	0	0%
Delvotest SP - Beta-Lactams	2,225	0	0	0	2,225	0	0%
Difco BSDA - Beta-Lactams	14,951	11	4,497	5	19,448	16	0.082%
Lak Tek - Beta-Lactams	201	18	0	0	201	18	8.955%
Penzyme & Penzyme III ^①	312	0	0	0	312	0	0%
Penzyme III Test - Beta-Lactams	219	7	0	0	219	7	3.196%
SNAP - Beta-Lactams	3,676	49	584	2	4,260	51	1.197%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	75	0	0	0	75	0	0%
SULFAMETHAZINE							
Cite Sulfa Trio - Sulfamethazine	75	0	0	0	75	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	75	0	0	0	75	0	0%
TOTALS	27,166	93	5,170	7	32,336	100	0.309%

^① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.

**Table 8-8 -- Number of Tests by Method by Family/Drug
Non-Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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	27	0	108	0	135	0	0%
Charm II Tablet Competitive - Beta-Lactams	1	0	0	0	1	0	0%
Charm II Tablet Quantitative - Beta-Lactams	0	0	66	0	66	0	0%
Charm II Tablet Sequential - Beta-Lactams	216	0	64	0	280	0	0%
Delvotest P - Beta-Lactams	41	0	0	0	41	0	0%
Difco BSDA - Beta-Lactams	507	0	42	0	549	0	0%
Lak Tek - Beta-Lactams	279	0	0	0	279	0	0%
Penzyme & Penzyme III	409	0	0	0	409	0	0%
Penzyme III Test - Beta-Lactams	564	0	0	0	564	0	0%
Penzyme Milk Test - Beta-Lactams	476	0	0	0	476	0	0%
SNAP - Beta-Lactams	3,880	5	0	0	3,880	5	0.129%
SULFONAMIDES							
Charm II Tablet Competitive - Sulfonamides	0	0	55	0	55	0	0%

**Table 8-8 -- Number of Tests by Method by Family/Drug
Non-Grade A Other (milk from silos, over-the-road tankers, etc.)
October 1, 1994 to September 30, 1995**

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
MACROLIDES							
Charm II Tablet Competitive - Macrolides	0	0	8	0	8	0	0%
SULFADIMETHOXINE							
Cite Sulfa Trio - Sulfadimethoxine	676	0	54	0	730	0	0%
SULFAMETHAZINE							
Cite Sulfa Trio - Sulfamethazine	676	0	54	0	730	0	0%
SULFATHIAZOLE							
Cite Sulfa Trio - Sulfathiazole	676	0	54	0	730	0	0%
TOTALS	8,428	5	505	0	8,933	5	0.056%

① Test method discontinued during the reporting period after adoption of new methods or new codes by program participants in accordance with May 25, 1995 instructions.