

# **Summary of Calendar Year 2003 AMR Testing**

Food Safety and Inspection Service  
Office of Public Health and Science  
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This report summarizes the laboratory results from analyzing samples of product from Advanced Meat Recovery (AMR) systems during 2003. FSIS initiated a regulatory testing program for beef AMR in March 2003. The purpose of the program was to test for Central Nervous System (CNS) tissue in samples of beef AMR. Since brain tissue would not be expected, a CNS positive can be viewed as a sample positive for spinal cord. The results from this program are summarized in Table 1. By December 31, 2003, OPHS had analyzed 843 beef AMR samples, 342 randomly scheduled verification samples and 501 follow-up samples to verify corrective action following an initial positive result. The 843 samples were collected in 31 federally inspected establishments.

The randomly scheduled verification samples represent the best estimate of actual prevalence of spinal cord. FSIS found spinal cord in 23 of 342 randomly scheduled samples, an estimated prevalence of 6.7 percent. Over the last six months (July – December) the combined prevalence was down to 4.8 percent. Table 1 also shows that the prevalence in follow-up samples was 13.8 %, indicating that establishments with an initial positive continued to have some problems controlling for spinal cord in beef AMR.

Table 2 shows the distribution of samples by establishment. Eleven of the 31 establishments have not had a sample positive for spinal cord.

While the regulatory program was looking for spinal cord, FSIS pathologists also examined samples for Dorsal Root Ganglia (DRG). DRG results were recorded for 579 of the 843 regulatory samples. Table 3 shows that DRG were found in 10.9 percent of the samples where DRG findings were recorded.

Table 4 shows the findings from the pork AMR survey conducted during 2003. Table 4 shows that 23 of 114 samples (or 20.2 %) were positive for CNS tissue. Every sample in the survey was uniformly examined for DRG, but no DRG was identified.

Table 1

Regulatory Testing of AMR Beef Samples  
For Central Nervous System (CNS) Tissue  
Calendar Year 2003

Quarter	Random Verification Testing			Follow-Up Verification Testing		
	Number of Samples	Number of Positives	Percentage Positive	Number of Samples	Number of Positives	Percentage Positive
January - March	31	5	16.1 %	70	19	27.1 %
April - June	143	10	7.0 %	300	37	12.3 %
July - September	120	5	4.2 %	111	10	9.0 %
October - December	48	3	6.3 %	20	3	15.0 %
TOTAL	342	23	6.7 %	501	69	13.8 %

Note: A comprehensive regulatory testing program was initiated on March 3, 2003. Two plants that had positive samples on inspector generated samples collected before the start of the regulatory program have follow-up samples included as part of the regulatory program

Table 2

Regulatory Testing of AMR Beef Samples  
For Central Nervous System (CNS) Tissue  
Calendar Year 2003

Establishment Code	Total Samples	Number of Positives	Percentage Positive
1	11	0	0
2	11	0	0
3	22	0	0
4	12	0	0
5	11	0	0
6	8	0	0
7	3	0	0
8	3	0	0
9	3	0	0
10	20	0	0
11	23	0	0
12	23	1	4.3 %
13	27	1	3.7 %
14	37	1	2.7 %
15	32	4	12.5 %
16	35	3	8.6 %
17	25	1	4.0 %
18	21	1	4.8 %
19	37	1	2.7 %
20	27	1	3.7 %
21	25	1	4.0 %
22	54	9	16.7 %
23	34	12	35.3 %
24	37	11	29.7 %
25	36	8	22.2 %
26	16	9	56.3 %
27**	57	3	5.3 %
28**	47	3	6.4 %
29	45	8	17.8 %
30	21	2	9.5 %
31	80	12	15.0 %
<b>TOTAL</b>	<b>843</b>	<b>92</b>	<b>10.9 %</b>

\*\* These two plants had positive samples on inspector generated samples collected before the start of the regulatory program and have follow-up samples included as part of the regulatory program.

Table 3

Testing of AMR Beef Samples  
For Dorsal Root Ganglia (DRG)  
Calendar Year 2003

Quarter	Number of AMR Samples Analyzed for DRG	Number Positive For DRG	Percentage Positive
January – March	65	10	15.4%
April – June	308	36	11.7%
July - September	152	12	7.9%
October - December	54	5	9.3%
TOTAL	579	63	10.9%

Note: Dorsal Root Ganglia (DRG) results were recorded for 579 of the 843 beef AMR samples.

Table 4

Summary of 2003 Pork AMR Survey

Quarter	CNS Findings			DRG Findings		
	Number of Samples	Number Positive	Percentage Positive	Number of Samples	Number Positive	Percent Positive
Jan – Mar	26	3	11.5 %	26	0	0.0 %
Apr – Jun	88	20	22.7 %	88	0	0.0 %
Jul – Sep	0	0	0.0 %	0	0	0.0 %
Total	114	23	20.2 %	114	0	0.0 %