

# Tissue Residue Information

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# Tissue Residue Information

## Residue Avoidance

**The Primary Causes and How to  
Avoid Them**



# What Are The Primary Causes?

- The number one cause is failure to maintain written treatment records.
- The number two cause is failure to properly identify treated cows.
- The number three cause is failure to maintain a drug inventory system.



# The Best Way to Avoid Residues

- **READING, UNDERSTANDING, AND FOLLOWING ALL THE DIRECTIONS FOR USE ON THE DRUG LABEL IS THE MOST IMPORTANT CONTROL MEASURE FOR PREVENTING A RESIDUE!**



# Six Ways to Help Avoid Residues

- *In addition to the most important step of always following the label directions, here are six (6) other suggested control measures to help avoid violative drug residues in milk & meat:*



# Step 1

- **Always have a valid veterinarian-client-patient-relationship (VCPR).**
- **Working closely with your veterinarian is a good way to help avoid residues.**



# Step 2

- **Keep a Record of All Animal Treatments**
- Failure to keep animal treatment records is a major cause of violative drug residues in milk and meat. Good records include; the identity of treated animals, diagnosis, drug used, time treated, the duration of treatment, milk discard time, and slaughter withhold time.

# Step 3

- **Identify (ID) Treated Cows and Calves or Keep Them Separated from Non-Treated Cattle.**
- **It is a good idea to use two types of ID like two leg bands or a leg band and a paint mark.**





# Step 4

- **Keep an Inventory of Drugs Used**
- It is important for you to record every drug you purchase, how you use it, and when you dispose of unused product.



# Step 5

- ***Limit the Need for Animal Drugs. Animal Drug Use Cannot Replace Sound Management Practice and Control Measures.***
- Prevent disease in your animals, emphasize good animal husbandry practices, vaccinations, biosecurity, health maintenance, and diagnose sick animals early. Work with your veterinarian to select appropriate treatments.

# Step 6

- *Train People Who Medicate Your Animals*
- People responsible for the care of your livestock should be adequately trained to recognize the signs of the common diseases that may occur in your operation as well as trained in proper drug use, ID of treated cows, and record keeping.

# Tissue Residue Information

## Tissue Residue Inspections May Reveal:

- Failure to follow withdrawal times
- Illegal extralabel use of drugs (which includes inadequate pre-slaughter withdrawal period)
- Illegal sales of veterinary prescription drugs
- Illegal use of bulk drugs
- Use of unapproved new animal drugs



# Tissue Residue Information

## Tissue Residue Inspections May Reveal:

- Cross-contamination of animal feeds with drugs due to poor Good Manufacturing Practices (GMPs) for Medicated Feeds (21 CFR Parts 225 or 226)
- Misuse of drugs in medicated animal feeds
- Failure to follow good animal husbandry practices



# Tissue Residue Information

## Tissue Residue Inspections May Reveal:

- Diversion of treated/medicated animals intended for rendering purposes to slaughter for human consumption
- Failure to adequately identify animals treated with drugs



# Tissue Residue Information

| DRUG                | 2005 | 2006 | 2007 | 2008 | Total | Percent |
|---------------------|------|------|------|------|-------|---------|
| Amikacin            | 4    | 2    | 0    | 1    | 7     | 0.20%   |
| Ampicillin          | 6    | 10   | 13   | 8    | 37    | 1.04%   |
| Ceftiofur           | *    | *    | *    | 71   | 71    | 1.99%   |
| Dihydrostreptomycin | 14   | 10   | 8    | 3    | 35    | 0.98%   |
| Florfenicol         | 1    | 0    | 0    | 0    | 1     | 0.03%   |
| Flunixin            | 121  | 133  | 262  | 233  | 749   | 20.99%  |
| Furazolidone        | 1    | 1    | 0    | 0    | 2     | 0.06%   |
| Gentamicin          | 77   | 95   | 58   | 50   | 280   | 7.85%   |
| Kanamycin           | 2    | 1    | 0    | 0    | 3     | 0.08%   |
| Lincomycin          | 0    | 0    | 1    | 0    | 1     | 0.03%   |



# Tissue Residue Information

| DRUG                 | 2005 | 2006 | 2007 | 2008 | Total | Percent |
|----------------------|------|------|------|------|-------|---------|
| Neomycin             | 22   | 28   | 23   | 21   | 94    | 2.63%   |
| Oxytetracycline      | 31   | 30   | 21   | 32   | 114   | 3.20%   |
| Penicillin           | 301  | 358  | 413  | 304  | 1376  | 38.57%  |
| Phenylbutazone       | 2    | 0    | 4    | 3    | 9     | 0.25%   |
| Sulfachlorpyridazine | 0    | 1    | 0    | 0    | 1     | 0.03%   |
| Sulfadimethoxine     | 102  | 158  | 159  | 135  | 554   | 15.53%  |
| Sulfamethazine       | 24   | 33   | 33   | 22   | 112   | 3.14%   |
| Sulfathiazole        | 1    | 2    | 0    | 0    | 3     | 0.08%   |
| Tetracycline         | 16   | 16   | 7    | 15   | 54    | 1.51%   |
| Tilmicosin           | 17   | 27   | 14   | 4    | 62    | 1.74%   |
| Tylosin              | 1    | 0    | 1    | 1    | 3     | 0.08%   |
|                      | 743  | 905  | 1017 | 903  | 3568  |         |

\* Prior to July 28, 2008 USDA could not quantitate Cefiofur





**Table 40b**  
**Specific FAST Violative Residues**  
**2006 Inspector Generated Sampling Results**

| Pro-<br>duc-<br>tion<br>Class         |              |                |                             |                |               |              |                         |                |                  |                |             |                  |                          |                        |                          |                       |              | Totals |
|---------------------------------------|--------------|----------------|-----------------------------|----------------|---------------|--------------|-------------------------|----------------|------------------|----------------|-------------|------------------|--------------------------|------------------------|--------------------------|-----------------------|--------------|--------|
|                                       | Ami<br>lacin | Ampi<br>cillin | Dihydro<br>strepto<br>mycin | Genta<br>mycin | Kana<br>mycin | Neo<br>mycin | Oxy<br>tetra<br>cycline | Peni<br>cillin | Tetracy<br>cline | Tilmi<br>cosin | Tylo<br>sin | Sulfa<br>diazine | Sulfadi<br>metho<br>xine | Sulfa<br>metha<br>zine | Sulfa<br>metho<br>xazole | Sulfa<br>thia<br>zole | Fluni<br>xin |        |
| Beef<br>Cows <sup>3</sup>             | 0            | 2              | 0                           | 28             | 0             | 8            | 12                      | 36             | 0                | 11             | 0           | 0                | 6                        | 16                     | 0                        | 1                     | 5            | 125    |
| Bob<br>veal <sup>3</sup>              | 0            | 0              | 0                           | 9              | 0             | 95           | 14                      | 13             | 3                | 1              | 1           | 0                | 7                        | 10                     | 4                        | 0                     | 1            | 158    |
| Bovine                                | 0            | 0              | 0                           | 0              | 0             | 0            | 1                       | 1              | 0                | 0              | 0           | 0                | 2                        | 0                      | 0                        | 0                     | 1            | 5      |
| Bulls <sup>3</sup>                    | 0            | 0              | 0                           | 4              | 0             | 1            | 1                       | 1              | 0                | 3              | 0           | 0                | 0                        | 2                      | 0                        | 0                     | 0            | 12     |
| Diary<br>cows <sup>3</sup>            | 2            | 10             | 10                          | 89             | 1             | 28           | 29                      | 359            | 15               | 25             | 0           | 0                | 158                      | 30                     | 0                        | 2                     | 130          | 888    |
| Formu<br>la fed-<br>veal <sup>3</sup> | 0            | 0              | 0                           | 0              | 0             | 3            | 0                       | 1              | 0                | 0              | 0           | 4                | 0                        | 0                      | 0                        | 0                     | 0            | 8      |
| Heavy<br>Calves <sup>3</sup>          | 0            | 0              | 0                           | 11             | 0             | 7            | 1                       | 4              | 0                | 1              | 0           | 0                | 4                        | 6                      | 0                        | 0                     | 1            | 35     |
| Heifers                               | 0            | 0              | 0                           | 3              | 0             | 0            | 1                       | 2              | 0                | 0              | 0           | 0                | 0                        | 0                      | 0                        | 0                     | 0            | 6      |
| Market<br>Swine                       | 0            | 0              | 0                           | 0              | 0             | 0            | 0                       | 0              | 0                | 0              | 0           | 0                | 0                        | 1                      | 0                        | 0                     | 0            | 1      |
| Non-FFV <sup>4</sup>                  | 0            | 0              | 0                           | 0              | 0             | 0            | 0                       | 1              | 0                | 1              | 0           | 0                | 0                        | 1                      | 0                        | 0                     | 0            | 3      |
| Steers <sup>3</sup>                   | 0            | 0              | 0                           | 4              | 0             | 2            | 0                       | 4              | 0                | 0              | 0           | 0                | 3                        | 0                      | 0                        | 0                     | 1            | 14     |
| Totals                                | 2            | 12             | 10                          | 148            | 1             | 144          | 59                      | 422            | 18               | 42             | 1           | 4                | 180                      | 66                     | 4                        | 3                     | 139          | 1,255  |

<sup>3</sup> Animals with multiple violations, <sup>4</sup> Non-FFV = Non-formula-fed veal

Table 40b

**Specific FAST Violative Residues**  
**2006 Inspector Generated Sampling Results**

| <b>Pro-<br/>duc-<br/>tion<br/>Class</b> | <b>Ami<br/>kacin</b> | <b>Ampi<br/>cillin</b> | <b>Dihydro<br/>strepto<br/>mycin</b> | <b>Genta<br/>mycin</b> | <b>Kana<br/>mycin</b> | <b>Neo<br/>mycin</b> | <b>Oxy<br/>tetra<br/>cycline</b> | <b>Peni<br/>cillin</b> | <b>Tetracy<br/>cline</b> |
|---|----------------------|------------------------|--------------------------------------|------------------------|-----------------------|----------------------|----------------------------------|------------------------|--------------------------|
| Beef<br>Cows <sup>3</sup>               | 0                    | 2                      | 0                                    | 28                     | 0                     | 8                    | 12                               | 36                     | 0                        |
| Bob<br>veal <sup>3</sup>                | 0                    | 0                      | 0                                    | 9                      | 0                     | 60.1%<br>95          | 14                               | 13                     | 3                        |
| Bovine                                  | 0                    | 0                      | 0                                    | 0                      | 0                     | 0                    | 1                                | 1                      | 0                        |
| Bulls <sup>3</sup>                      | 0                    | 0                      | 0                                    | 4                      | 0                     | 1                    | 1                                | 1                      | 0                        |
| Diary<br>cows <sup>3</sup>              | 2                    | 10                     | 10                                   | 10.0%<br>89            | 1                     | 28                   | 29                               | 40.4%<br>359           | 15                       |
| Formu<br>la fed-<br>veal <sup>3</sup>   | 0                    | 0                      | 0                                    | 0                      | 0                     | 3                    | 0                                | 1                      | 0                        |
| Heavy<br>Calves <sup>3</sup>            | 0                    | 0                      | 0                                    | 11                     | 0                     | 7                    | 1                                | 4                      | 0                        |
| Heifers                                 | 0                    | 0                      | 0                                    | 3                      | 0                     | 0                    | 1                                | 2                      | 0                        |
| Market<br>Swine                         | 0                    | 0                      | 0                                    | 0                      | 0                     | 0                    | 0                                | 0                      | 0                        |
| Non-FFV <sup>4</sup>                    | 0                    | 0                      | 0                                    | 0                      | 0                     | 0                    | 0                                | 1                      | 0                        |
| Steers <sup>3</sup>                     | 0                    | 0                      | 0                                    | 4                      | 0                     | 2                    | 0                                | 4                      | 0                        |
| <b>Totals</b>                           | <b>2</b>             | <b>12</b>              | <b>10</b>                            | <b>148</b>             | <b>1</b>              | <b>144</b>           | <b>59</b>                        | <b>422</b>             | <b>18</b>                |

Table 40b

**Specific FAST Violative Residues**  
**2006 Inspector Generated Sampling Results**

| <b>Pro-<br/>duc-<br/>tion<br/>Class</b> |                        |                     |                          |                                   |                                 |                                   |                                |                            | <b>Totals</b>              |
|---|------------------------|---------------------|--------------------------|-----------------------------------|---------------------------------|-----------------------------------|--------------------------------|----------------------------|----------------------------|
|   | <b>Tilmi<br/>cosin</b> | <b>Tylo<br/>sin</b> | <b>Sulfa<br/>diazine</b> | <b>Sulfadi<br/>metho<br/>xine</b> | <b>Sulfa<br/>metha<br/>zine</b> | <b>Sulfa<br/>metho<br/>xazole</b> | <b>Sulfa<br/>thia<br/>zole</b> | <b>Fluni<br/>xin</b>       |                            |
| Beef<br>Cows <sup>3</sup>               | 11                     | 0                   | 0                        | 6                                 | 16                              | 0                                 | 1                              | 5                          | <b>125</b>                 |
| Bob<br>veal <sup>3</sup>                | 1                      | 1                   | 0                        | 7                                 | 10                              | 4                                 | 0                              | 1                          | <b>12.6%</b><br><b>158</b> |
| Bovine                                  | 0                      | 0                   | 0                        | 2                                 | 0                               | 0                                 | 0                              | 1                          | <b>5</b>                   |
| Bulls <sup>3</sup>                      | 3                      | 0                   | 0                        | 0                                 | 2                               | 0                                 | 0                              | 0                          | <b>12</b>                  |
| Diary<br>cows <sup>3</sup>              | 25                     | 0                   | 0                        | <b>17.8%</b><br><b>158</b>        | <b>3.4%</b><br><b>30</b>        | 0                                 | 2                              | <b>14.6%</b><br><b>130</b> | <b>70.8%</b><br><b>888</b> |
| Formu<br>la fed-<br>veal <sup>3</sup>   | 0                      | 0                   | 4                        | 0                                 | 0                               | 0                                 | 0                              | 0                          | <b>8</b>                   |
| Heavy<br>Calves <sup>3</sup>            | 1                      | 0                   | 0                        | 4                                 | 6                               | 0                                 | 0                              | 1                          | <b>35</b>                  |
| Heifers                                 | 0                      | 0                   | 0                        | 0                                 | 0                               | 0                                 | 0                              | 0                          | <b>6</b>                   |
| Market<br>Swine                         | 0                      | 0                   | 0                        | 0                                 | 1                               | 0                                 | 0                              | 0                          | <b>1</b>                   |
| Non-FFV <sup>4</sup>                    | 1                      | 0                   | 0                        | 0                                 | 1                               | 0                                 | 0                              | 0                          | <b>3</b>                   |
| Steers <sup>3</sup>                     | 0                      | 0                   | 0                        | 3                                 | 0                               | 0                                 | 0                              | 1                          | <b>14</b>                  |
| <b>Totals</b>                           | <b>42</b>              | <b>1</b>            | <b>4</b>                 | <b>180</b>                        | <b>66</b>                       | <b>4</b>                          | <b>3</b>                       | <b>139</b>                 | <b>1,255</b>               |

# GOOGLE THESE WEBSITES

- Compliance policy guide 654.200
- Compliance police guide 615.200
- Compliance policy 7371.006



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## QUESTIONS??

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