MAXIMUM RESIDUE LIMITS (MRLs) AND RISK MANAGEMENT RECOMMENDATIONS (RMRs)
FOR RESIDUES OF VETERINARY DRUGS IN FOODS
CX/MRL 2-2018
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADI</td>
<td>Acceptable Daily Intake</td>
</tr>
<tr>
<td>ARfD</td>
<td>Acute Reference Dose</td>
</tr>
<tr>
<td>BMD</td>
<td>Benchmark Dose</td>
</tr>
<tr>
<td>BMDL</td>
<td>Confidence Limit for BMD</td>
</tr>
<tr>
<td>bw</td>
<td>Body Weight</td>
</tr>
<tr>
<td>CAC</td>
<td>Codex Alimentarius Commission</td>
</tr>
<tr>
<td>CCPR</td>
<td>Codex Committee on Pesticide Residues</td>
</tr>
<tr>
<td>CCRVDF</td>
<td>Codex Committee on Residues of Veterinary Drugs in Foods</td>
</tr>
<tr>
<td>EDI</td>
<td>Estimated Daily Intake</td>
</tr>
<tr>
<td>GEADE</td>
<td>Global Estimated Acute Dietary Exposure</td>
</tr>
<tr>
<td>GECDE</td>
<td>Global Estimated Chronic Dietary Exposure</td>
</tr>
<tr>
<td>JECFA</td>
<td>Joint FAO/WHO Expert Committee on Food Additives</td>
</tr>
<tr>
<td>JMPR</td>
<td>Joint FAO/WHO Expert Meeting on Pesticide Residues</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest-Observed-Adverse-Effect Level</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No-Observed-Adverse-Effect Level</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantification</td>
</tr>
<tr>
<td>mADI</td>
<td>Microbiological Acceptable Daily Intake</td>
</tr>
<tr>
<td>MRL</td>
<td>Maximum Residue Limit</td>
</tr>
<tr>
<td>RMR</td>
<td>Risk Management Recommendation</td>
</tr>
<tr>
<td>TMDI</td>
<td>Theoretical Maximum Daily Intake</td>
</tr>
</tbody>
</table>
### Maximum Residue Limits (MRL)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Corresponding Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abamectin</td>
<td>Gentamicin</td>
</tr>
<tr>
<td>Albendazole</td>
<td>Imidocarb</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>Isometamidium</td>
</tr>
<tr>
<td>Ampicillin</td>
<td>Ivermectin</td>
</tr>
<tr>
<td>Avlylamycin</td>
<td>Lasalocid sodium</td>
</tr>
<tr>
<td>Azaperone</td>
<td>Levamisole</td>
</tr>
<tr>
<td>Benzylpenicillin/Procaine</td>
<td>Lincomycin</td>
</tr>
<tr>
<td>Carazolol</td>
<td>Lufenuron</td>
</tr>
<tr>
<td>Ceflouxur</td>
<td>Melengestrol acetate</td>
</tr>
<tr>
<td>Ceftiofur</td>
<td>Monensin</td>
</tr>
<tr>
<td>Chlortetracycline/Oxytetracycline</td>
<td>Monepantel</td>
</tr>
<tr>
<td>Clenbuterol</td>
<td>Moxidectin</td>
</tr>
<tr>
<td>Closantel</td>
<td>Narasin</td>
</tr>
<tr>
<td>Colistin</td>
<td>Neomycin</td>
</tr>
<tr>
<td>Cyfluthrin</td>
<td>Nicarbazin</td>
</tr>
<tr>
<td>Cyhalothrin</td>
<td>Phoxim</td>
</tr>
<tr>
<td>Cypermethrin and alpha-cypermethrin</td>
<td>Pirlimycin</td>
</tr>
<tr>
<td>Danofloxacin</td>
<td>Porcine somatotropin</td>
</tr>
<tr>
<td>Deltamethrin</td>
<td>Progesterone</td>
</tr>
<tr>
<td>Derquantel</td>
<td>Ractopamine</td>
</tr>
<tr>
<td>Dexamethasone</td>
<td>Sarafloxacin</td>
</tr>
<tr>
<td>Dicyclanil</td>
<td>Spectinomycin</td>
</tr>
<tr>
<td>Dihydrostreptomycin/Streptomycin</td>
<td>Spiramycin</td>
</tr>
<tr>
<td>Diminazene</td>
<td>Sulfadimidine</td>
</tr>
<tr>
<td>Doramectin</td>
<td>Teflubenzuron</td>
</tr>
<tr>
<td>Emamectin benzoate</td>
<td>Testosterone</td>
</tr>
<tr>
<td>Eprinomectin</td>
<td>Thiambenzoate</td>
</tr>
<tr>
<td>Erythromycin</td>
<td>Tilmicosin</td>
</tr>
<tr>
<td>Estradiol-17beta</td>
<td>Trenbolone acetate</td>
</tr>
<tr>
<td>Febantel/Fenbendazole/Oxfendazole</td>
<td>Trichlorfon (Metrifonate)</td>
</tr>
<tr>
<td>Fluazuron</td>
<td>Triclabendazole</td>
</tr>
<tr>
<td>Flubendazole</td>
<td>Tylosin</td>
</tr>
<tr>
<td>Flumequine</td>
<td>Zeranol</td>
</tr>
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</table>

### Risk Management Recommendations (RMR) for Residues of Veterinary Drugs

<table>
<thead>
<tr>
<th>Substance</th>
<th>Corresponding Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbadox</td>
<td>Malachite Green</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>Metronidazole</td>
</tr>
<tr>
<td>Chlorpromazine</td>
<td>Nitrofural</td>
</tr>
<tr>
<td>Dimetridazole</td>
<td>Olaquindox</td>
</tr>
<tr>
<td>Furazolidone</td>
<td>Ronidazole</td>
</tr>
<tr>
<td>Gentian Violet</td>
<td>Stilbens</td>
</tr>
<tr>
<td>Ipronidazole</td>
<td></td>
</tr>
</tbody>
</table>
### ABAMECTIN (anthelmintic agent)

**JECFA Evaluation** 45 (1995); 47 (1996)

**Acceptable Daily Intake** 0-2 µg/kg bw (1997) established for the sum of abamectin and (Z)-8,9 isomer by JMPR (1997)

**Residue Definition** Avermectin B1a

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>100</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>26 (2003)</td>
<td></td>
</tr>
</tbody>
</table>

### ALBENDAZOLE (anthelmintic agent)

**JECFA Evaluation** 34 (1989)

**Acceptable Daily Intake** 0-50 µg/kg bw (JECFA34)

**Residue Definition** Except milk, 2-aminosulfone metabolite; Milk, not yet identified

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not specified</td>
<td>Muscle</td>
<td>100</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Liver</td>
<td>5000</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Kidney</td>
<td>5000</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Fat</td>
<td>100</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>20 (1993)</td>
<td></td>
</tr>
</tbody>
</table>
**AMOXICILLIN** (antimicrobial agent)

**JECFA Evaluation**  
75 (2011); 85 (2017)

**Microbiological Acceptable Daily Intake**  
0–0.002 mg/kg body weight (bw) based on the effects of amoxicillin on the intestinal microbiota

**Acute Reference Dose**  
0.005 mg/kg bw based on microbiological effects on the intestinal microbiota

**Estimated Chronic Dietary Exposure**  
0.14 μg/kg bw per day (for the general population), which represents 7% of the upper bound of the mADI

**Estimated Acute Dietary Exposure**  
1.4 μg/kg bw (for the general population), which represents 28% of the microbiological ARfD  
1.6 μg/kg bw (for children), which represents 31% of the microbiological ARfD

**Residue Definition**  
Amoxicillin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>4</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Milk</td>
<td>4</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Muscle</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Liver</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Kidney</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Fat/Skin</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
</tbody>
</table>
| Finfish | Fillet | 50          | 41 (2018) | The term “finfish” includes all fish species  
Muscle plus skin in natural proportion |
| Finfish | Muscle | 50          | 41 (2018) | The term “finfish” includes all fish species |
**AMPICILLIN** (antimicrobial agent)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>85 (2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Microbiological Acceptable Daily Intake</strong></td>
<td>0–0.003 mg/kg bw based on a NOAEL equivalent to 0.025 mg/kg bw per day for increase in population(s) of ampicillin-resistant bacteria in the gastrointestinal tract in humans, and using a safety factor of 10 (for the variability in the composition of the intestinal microbiota within and between individuals)</td>
</tr>
<tr>
<td><strong>Acute Reference Dose</strong></td>
<td>0.012 mg/kg bw based on the microbiological end-point</td>
</tr>
<tr>
<td><strong>Estimated Chronic Dietary Exposure</strong></td>
<td>0.29 μg/kg bw per day (for the general population), which represents 10% of the upper bound of the ADI</td>
</tr>
<tr>
<td><strong>Estimated Acute Dietary Exposure</strong></td>
<td>1.9 μg/kg bw per day (for the general population), which represents 16% of the ARfD</td>
</tr>
<tr>
<td><strong>1.7 μg/kg bw per day (for children), which represents 14% of the ARfD</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Residue Definition</strong></td>
<td>Ampicillin</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>JECFA85 recommended an MRL of 50 μg/kg for ampicillin in finfish muscle and in finfish muscle plus skin in natural proportion, the same as that recommended for amoxicillin, because the modes of action, the physicochemical properties and the toxicological and pharmacokinetic profiles of amoxicillin and ampicillin are very similar.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finfish</td>
<td>Fillet</td>
<td>50</td>
<td>41 (2018)</td>
<td>The term “finfish” includes all fish species</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The term “finfish” includes all fish species</td>
</tr>
</tbody>
</table>
AVILAMYCIN (antimicrobial agent)

**JECFA Evaluation** 70 (2008)

**Acceptable Daily Intake** 0-2 mg/kg bw on the basis of a NOAEL of 150 mg avilamycin activity/kg bw per day and a safety factor of 100 and rounding to one significant figure (JECFA70)

**Residue Definition** Dichloroisoverninic acid (DIA)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL  (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigs</td>
<td>Muscle</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Liver</td>
<td>300</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Kidney</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>Fat/Skin</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>300</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat/Skin</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>300</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Fat/Skin</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>Muscle</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>Liver</td>
<td>300</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>Kidney</td>
<td>200</td>
<td>32 (2009)</td>
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</tr>
<tr>
<td>Rabbits</td>
<td>Fat/Skin</td>
<td>200</td>
<td>32 (2009)</td>
<td></td>
</tr>
</tbody>
</table>

AZAPERONE (tranquilizing agent)

**JECFA Evaluation** 38 (1991); 43 (1994); 50 (1998); 52 (1999)

**Acceptable Daily Intake** 0-6 µg/kg bw (JECFA50)

**Residue Definition** Sum of azaperone and azaperol

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL  (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>60</td>
<td>23 (1999)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>60</td>
<td>23 (1999)</td>
<td></td>
</tr>
</tbody>
</table>
**BENZYLPENCILLIN/PROCAINE BENZYLPENICILLIN** (antimicrobial agent)

**JECFA Evaluation**
36 (1990); 50 (1998)

**Acceptable Daily Intake**
30 µg-penicillin/person/day (JECFA50). Residues of benzylpenicillin and procaine benzylpenicillin should be kept below this level.

**Residue Definition**
Benzylpenicillin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>4</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>50</td>
<td>23 (1999)</td>
<td>Applies to procaine benzylpenicillin only</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>50</td>
<td>23 (1999)</td>
<td>Applies to procaine benzylpenicillin only</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>50</td>
<td>23 (1999)</td>
<td>Applies to procaine benzylpenicillin only</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>50</td>
<td>23 (1999)</td>
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<td>Pig</td>
<td>Liver</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
</tbody>
</table>

**CARAZOLOL** (beta-adrenceptor-blocking agent)

**JECFA Evaluation**
38 (1991); 43 (1994); 52 (1999)

**Acceptable Daily Intake**
0-0.1 µg/kg bw (JECFA43). ADI based on the acute pharmacological effects of carazolol

**Residue Definition**
Carazolol

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>5</td>
<td>26 (2003)</td>
<td>The concentration at the injection site two hours after treatment may result in an intake that exceeds the ARID and therefore, an appropriate withdrawal period should be applied</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat/Skin</td>
<td>5</td>
<td>26 (2003)</td>
<td>The concentration at the injection site two hours after treatment may result in an intake that exceeds the ARID and therefore, an appropriate withdrawal period should be applied</td>
</tr>
</tbody>
</table>
**CEFTIOFUR** (antimicrobial agent)

**JECFA Evaluation**
45 (1995); 48 (1997)

**Acceptable Daily Intake**
0-50 µg/kg bw (JECFA45)

**Residue Definition**
Desfuroylceftiofur

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>1000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>6000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>1000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
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<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
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<td>6000</td>
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</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
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</table>
### CHLORTETRACYCLINE/OXYTETRACYCLINE/TETRACYCLINE (antimicrobial agent)

**JECFA Evaluation**  
45 (1995); 47 (1996); 50 (1998); 58 (2002)

**Acceptable Daily Intake**  
Group ADI for chlortetracycline, oxytetracycline and tetracycline: 0-30 µg/kg bw (JECFA50). Group ADI for chlortetracycline, oxytetracycline and tetracycline.

**Residue Definition**  
Parent drugs, singly or in combination

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>600</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>Muscle</td>
<td>200</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Giant prawn</td>
<td>Muscle</td>
<td>200</td>
<td>26 (2003)</td>
<td>Applies only to oxytetracycline</td>
</tr>
<tr>
<td>(Paeneus monodon)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>200</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>600</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>1200</td>
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<td>Poultry</td>
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<td>600</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>Eggs</td>
<td>400</td>
<td>26 (2003)</td>
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</tr>
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<td>Sheep</td>
<td>Liver</td>
<td>600</td>
<td>26 (2003)</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Milk (µg/l)</td>
<td>100</td>
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<tr>
<td>Species</td>
<td>Tissue</td>
<td>MRL (µg/kg)</td>
<td>CAC</td>
<td>Notes</td>
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<td>---------</td>
<td>--------------</td>
<td>-------------</td>
<td>------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>0.2</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>0.6</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>0.6</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>0.2</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>0.05</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Horse</td>
<td>Muscle</td>
<td>0.2</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Horse</td>
<td>Liver</td>
<td>0.6</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Horse</td>
<td>Kidney</td>
<td>0.6</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
</tr>
<tr>
<td>Horse</td>
<td>Fat</td>
<td>0.2</td>
<td>26 (2003)</td>
<td>Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunct therapy in respiratory diseases</td>
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</table>
**CLOSANTEL** (anthelmintic agent)

**JECFA Evaluation**  
36 (1990); 40 (1992)

**Acceptable Daily Intake**  
0-30 µg/kg bw (JECFA40)

**Residue Definition**  
Closantel

<table>
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<tr>
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<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>1000</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>1000</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>3000</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>3000</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>1500</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>1500</td>
<td>20</td>
<td>(1993)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>5000</td>
<td>20</td>
<td>(1993)</td>
</tr>
</tbody>
</table>
COLISTIN (antimicrobial agent)

**JECA Evaluation** 66 (2006)

**Acceptable Daily Intake** 0-7 µg/kg bw (JECA66)

**Residue Definition** Sum of colistin A and colistin B

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>50</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>200</td>
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<tr>
<td>Sheep</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Milk</td>
<td>50</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Goat</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Goat</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Goat</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Goat</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Eggs</td>
<td>300</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Muscle</td>
<td>150</td>
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<td>(2008)</td>
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<tr>
<td>Rabbit</td>
<td>Liver</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Kidney</td>
<td>200</td>
<td>31</td>
<td>(2008)</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Fat</td>
<td>150</td>
<td>31</td>
<td>(2008)</td>
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</tbody>
</table>
### CYFLUTHRIN (insecticide)

**JECFA Evaluation** 48 (1997)

**Acceptable Daily Intake** 0-20 µg/kg bw (JECFA48)

**Residue Definition** Cyfluthrin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>20</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>20</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>200</td>
<td>26 (2003)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>40</td>
<td>26 (2003)</td>
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</tr>
</tbody>
</table>

### CYHALOTHIRN (insecticide)

**JECFA Evaluation** 54 (2000); 58 (2002); 62 (2004)

**Acceptable Daily Intake** 0-5 µg/kg bw (JECFA62)

**Residue Definition** Cyhalothrin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>20</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
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<td>Liver</td>
<td>20</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>20</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>400</td>
<td>28 (2005)</td>
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</tr>
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<td>Cattle</td>
<td>Milk</td>
<td>30</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>20</td>
<td>28 (2005)</td>
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</tr>
<tr>
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<td>Liver</td>
<td>20</td>
<td>28 (2005)</td>
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<tr>
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<td>Kidney</td>
<td>20</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>400</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>20</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>50</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>20</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>400</td>
<td>28 (2005)</td>
<td></td>
</tr>
</tbody>
</table>
### CYPERMETHRIN AND ALPHA-CYPERMETHRIN (insecticide)

**JECFA Evaluation**

**Acceptable Daily Intake**
JECFA62 established a common ADI of 0-20 µg/kg bw for both cypermethrin and alpha-cypermethrin

**Residue Definition**
Total of cypermethrin residues (resulting from the use of cypermethrin or alpha-cypermethrin as veterinary drugs)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRLs (µg/kg)</th>
<th>CAC</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>50</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>50</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>50</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>1000</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>100</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>50</td>
<td>29</td>
<td>(2006)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>1000</td>
<td>29</td>
<td>(2006)</td>
</tr>
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</table>

### DANOFLOXACIN (antimicrobial agent)

**JECFA Evaluation**
48 (1997)

**Acceptable Daily Intake**
0-20 µg/kg bw (JECFA48)

**Residue Definition**
Danofloxacin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>200</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>400</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>400</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>200</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>400</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>400</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>100</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
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<tr>
<td>Pig</td>
<td>Liver</td>
<td>50</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>200</td>
<td>24</td>
<td>(2001)</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>24</td>
<td>(2001)</td>
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</table>
**DELTMETHRIN** (insecticide)

**JECFA Evaluation** 52 (1999); 60 (2003)


**Residue Definition** Deltamethrin

<table>
<thead>
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<th>MRL (µg/kg)</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
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<td>Liver</td>
<td>50</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>500</td>
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<td>Liver</td>
<td>50</td>
<td>26 (2003)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>50</td>
<td>26 (2003)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>500</td>
<td>26 (2003)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Eggs</td>
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</tr>
<tr>
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<td>Liver</td>
<td>50</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>7.0</td>
<td>38 (2015)</td>
<td></td>
</tr>
</tbody>
</table>

**DERQUANTEL** (anthelmintic agent)

**JECFA Evaluation** 75 (2011); 78 (2013)

**Acceptable Daily Intake** 0-0.3 µg/kg bw on the basis of a LOAEL of 0.1 mg/kg bw per day for acute clinical observations in dogs, consistent with antagonistic activity on the nicotinic acetylcholine receptors. A safety factor of 300 was applied to the LOAEL. (JECFA75)

**Estimated Dietary Exposure** There were insufficient data to calculate an EDI, and the TMDI approach was used. Using the model diet and the MT:TR approach, these MRLs result in an estimated dietary exposure of 6.8 µg/person, which represents approximately 38% of the upper bound of the ADI. (JECFA78)

**Residue Definition** Derquantel

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>0.3</td>
<td>38 (2015)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>0.8</td>
<td>38 (2015)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>0.4</td>
<td>38 (2015)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>7.0</td>
<td>38 (2015)</td>
<td></td>
</tr>
</tbody>
</table>
### Dexamethasone (glucocorticosteroid)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>2.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>0.3</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>2.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Horses</td>
<td>Muscle</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Horses</td>
<td>Liver</td>
<td>2.0</td>
<td>32</td>
<td>2009</td>
</tr>
<tr>
<td>Horses</td>
<td>Kidney</td>
<td>1.0</td>
<td>32</td>
<td>2009</td>
</tr>
</tbody>
</table>

### Diclazuril (antiprotozoal agent)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Poultry</td>
<td>Liver</td>
<td>3000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Poultry</td>
<td>Kidney</td>
<td>2000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Poultry</td>
<td>Fat/Skin</td>
<td>1000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Liver</td>
<td>3000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Kidney</td>
<td>2000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Rabbit</td>
<td>Fat</td>
<td>1000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>3000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>2000</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>1000</td>
<td>23</td>
<td>1999</td>
</tr>
</tbody>
</table>
**DICYCLANIL** (insecticide)

**JECAF Evaluation**  54 (2000); 60 (2003)

**Acceptable Daily Intake**  0-7 µg/kg bw (JECAFA54)

**Residue Definition**  Dicyclanil

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>150</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>125</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>125</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>200</td>
<td>28 (2005)</td>
<td></td>
</tr>
</tbody>
</table>

**DIHYDROSTREPTOMYCIN / STREPTOMYCIN** (antimicrobial agent)

**JECAF Evaluation**  43 (1994); 48 (1997); 52 (1999); 58 (2002)

**Acceptable Daily Intake**  0-50 µg/kg bw (JECAFA48). Group ADI for combined residues of dihydrostreptomycin and streptomycin.

**Residue Definition**  Sum of dihydrostreptomycin and streptomycin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>1000</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>200</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>1000</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>600</td>
<td>24 (2001)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>1000</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>1000</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>600</td>
<td>24 (2001)</td>
<td></td>
</tr>
</tbody>
</table>
**DIMINAZENE** (trypanocide)

**JECFA Evaluation** 34 (1989); 42 (1994)

**Acceptable Daily Intake** 0-100 µg/kg bw (JECFA42)

**Residue Definition** Diminazene

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>500</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>12000</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>6000</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>150</td>
<td>22 (1997)</td>
<td>LOQ of the analytical method</td>
</tr>
</tbody>
</table>

**DORAMECTIN** (anthelmintic agent)

**JECFA Evaluation** 45 (1995); 52 (1999); 58 (2002); 62 (2004)

**Acceptable Daily Intake** 0-1 µg/kg bw (JECFA58)

**Residue Definition** Doramectin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>10</td>
<td>22 (1997)</td>
<td>High concentration of residues at the injection site over a 35 day period after subcutaneous or intramuscular administration of the drug at the recommended dose</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>100</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>30</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>150</td>
<td>22 (1997)</td>
<td>High concentration of residues at the injection site over a 35 day period after subcutaneous or intramuscular administration of the drug at the recommended dose</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>15</td>
<td>29 (2006)</td>
<td>Depending on the route and/or time of administration the use of doramectin in dairy cows may result in extended withdrawal periods in milk. This may be addressed in national/regional regulatory programmes.</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>5</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>100</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>30</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>150</td>
<td>24 (2001)</td>
<td></td>
</tr>
</tbody>
</table>
EMAMECTIN BENZOATE (antiparasitic agent)

JECFA Evaluation 78 (2013)

Acceptable Daily Intake ADI of 0–0.5 µg/kg bw established by JMPR (2011), based on an overall NOAEL of 0.25 mg/kg bw per day for neurotoxicity from 14- and 53-week studies in dogs, supported by an overall NOAEL of 0.25 mg/kg bw per day from 1- and 2-year studies in rats. An uncertainty factor of 500 was applied to the NOAEL, which includes an additional uncertainty factor of 5 to account for the steep dose–response curve and irreversible histopathological effects in neural tissues at the lowest-observed-adverse-effect level (LOAEL) in dogs, as used by JMPR and confirmed by JECFA78.

Estimated Dietary Exposure 11 µg/person per day, which represents approximately 37% of the upper bound of the ADI (JECFA78)

Residue Definition Emamectin B1a

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmon</td>
<td>Muscle</td>
<td>100</td>
<td>38 (2015)</td>
<td></td>
</tr>
<tr>
<td>Salmon</td>
<td>Fillet</td>
<td>100</td>
<td>38 (2015)</td>
<td>Muscle plus skin in natural proportion</td>
</tr>
<tr>
<td>Trout</td>
<td>Muscle</td>
<td>100</td>
<td>38 (2015)</td>
<td></td>
</tr>
<tr>
<td>Trout</td>
<td>Fillet</td>
<td>100</td>
<td>38 (2015)</td>
<td>Muscle plus skin in natural proportion</td>
</tr>
</tbody>
</table>

EPRINOMECTIN (anthelmintic agent)

JECFA Evaluation 50 (1998)

Acceptable Daily Intake 0-10 µg/kg bw (JECFA50)

Residue Definition Eprinomectin B1a

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>300</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>250</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>20</td>
<td>26 (2003)</td>
<td></td>
</tr>
</tbody>
</table>
**ERYTHROMYCIN** (antimicrobial agent)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>100</td>
<td>31 (2008)</td>
<td>The MRL includes skin + fat</td>
</tr>
<tr>
<td>Chicken</td>
<td>Eggs</td>
<td>50</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>100</td>
<td>31 (2008)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Fat</td>
<td>100</td>
<td>31 (2008)</td>
<td>The MRL includes skin + fat</td>
</tr>
</tbody>
</table>

**ESTRADIOL-17BETA** (production aid)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substance as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substance as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substance as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substance as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
</tbody>
</table>
**FEBANTEL/FENBENDAZOLE/OXFENDAZOLE** (anthelmintic agent)

**JECFA Evaluation**
38 (1991); 45 (1995); 50 (1998)

**Acceptable Daily Intake**
Group ADI of 0-7 µg/kg bw (JECFA50)

**Residue Definition**
Sum of fenbendazole, oxfendazole and oxfendazole sulphone, expressed as oxfendazole sulphone equivalents

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Goat</td>
<td>Muscle</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Goat</td>
<td>Liver</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Goat</td>
<td>Kidney</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Goat</td>
<td>Fat</td>
<td>100</td>
<td>23</td>
<td>1999</td>
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<tr>
<td>Horse</td>
<td>Muscle</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Horse</td>
<td>Liver</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Horse</td>
<td>Kidney</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Horse</td>
<td>Fat</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>500</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
<tr>
<td>Sheep</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>23</td>
<td>1999</td>
</tr>
</tbody>
</table>
**FLUAZURON** (insecticide)

**JECFA Evaluation**  
48 (1997)

**Acceptable Daily Intake**  
0-40 µg/kg bw (JECFA48)

**Residue Definition**  
Fluazuron

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>200</td>
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<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>500</td>
<td>23 (1999)</td>
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<tr>
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<td>500</td>
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</tr>
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**FLUBENDAZOLE** (anthelmintic agent)

**JECFA Evaluation**  
40 (1992)

**Acceptable Daily Intake**  
0-12 µg/kg bw (JECFA40)

**Residue Definition**  
Flubendazole

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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<td>10</td>
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<tr>
<td>Pig</td>
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<td>10</td>
<td>21 (1995)</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>Muscle</td>
<td>200</td>
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<tr>
<td>Poultry</td>
<td>Eggs</td>
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<td></td>
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### FLUMEQUINE (antimicrobial agent)

**JECFA Evaluation**

42 (1994); 48 (1997); 54 (2000); 60 (2002); 62 (2004); 66 (2006)

**Acceptable Daily Intake**

0-30 µg/kg bw (JECFA62)

**Residue Definition**

Flumequine

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>500</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
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<td>28 (2005)</td>
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<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>3000</td>
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<td>Muscle</td>
<td>500</td>
<td>28 (2005)</td>
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<tr>
<td>Chicken</td>
<td>Liver</td>
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<td>28 (2005)</td>
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</tr>
<tr>
<td>Chicken</td>
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<td>3000</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>1000</td>
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<td>Muscle</td>
<td>500</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>500</td>
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<td>28 (2005)</td>
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</tr>
<tr>
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<td>Muscle</td>
<td>500</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>500</td>
<td>28 (2005)</td>
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<tr>
<td>Sheep</td>
<td>Fat</td>
<td>1000</td>
<td>28 (2005)</td>
<td></td>
</tr>
<tr>
<td>Trout</td>
<td>Muscle</td>
<td>500</td>
<td>28 (2005)</td>
<td>Muscle including normal proportion of skin</td>
</tr>
</tbody>
</table>

### GENTAMICIN (antimicrobial agent)

**JECFA Evaluation**

43 (1994); 48 (1997); 50 (1998)

**Acceptable Daily Intake**

0-20 µg/kg bw (JECFA50)

**Residue Definition**

Gentamicin

<table>
<thead>
<tr>
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<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Muscle</td>
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<td>24 (2001)</td>
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<tr>
<td>Cattle</td>
<td>Liver</td>
<td>2000</td>
<td>24 (2001)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>5000</td>
<td>24 (2001)</td>
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</tr>
<tr>
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<td>Fat</td>
<td>100</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>200</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>100</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>2000</td>
<td>24 (2001)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>5000</td>
<td>24 (2001)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>24 (2001)</td>
<td></td>
</tr>
</tbody>
</table>
### IMIDOCARB (antiprotozoal agent)

**JECFA Evaluation** 50 (1998); 60 (2003)

**Acceptable Daily Intake** 0-10 µg/kg bw (JECFA50)

**Residue Definition** Imidocarb

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>300</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>1500</td>
<td>28 (2005)</td>
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<tr>
<td>Cattle</td>
<td>Fat</td>
<td>50</td>
<td>28 (2005)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>50</td>
<td>28 (2005)</td>
<td></td>
</tr>
</tbody>
</table>

### ISOMETAMIDIUM (trypanocide)

**JECFA Evaluation** 34 (1989); 40 (1992)

**Acceptable Daily Intake** 0-100 µg/kg bw (JECFA40)

**Residue Definition** Isometamidium

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>21 (1995)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>500</td>
<td>21 (1995)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>1000</td>
<td>21 (1995)</td>
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<td>Cattle</td>
<td>Fat</td>
<td>100</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>100</td>
<td>21 (1995)</td>
<td></td>
</tr>
</tbody>
</table>
IVERMECTIN (anthelmintic agent)

**JECFA Evaluation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 (1990); 40 (1992); 54 (2000); 58 (2002); 81 (2015)</td>
<td></td>
</tr>
</tbody>
</table>

**Acceptable Daily Intake**

0-10 μg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day for neurological effects (mydriasis) and retardation of weight gain in a 14-week dog study, with application of an uncertainty factor of 50 (5 for interspecies differences based on pharmacokinetic studies in dogs and humans and 10 for intraspecies differences). The previous ADI of 0-1 μg/kg bw was withdrawn. (JECFA81)

**Estimated Chronic Dietary Exposure**

The estimated daily intake (EDI) is 38 μg/person per day, based on a 60 kg individual, which represents 6% of the upper bound of the ADI. The GECDE for the general population is 0.9 μg/kg bw per day, which represents 9% of the upper bound of the ADI. The GECDE for children is 1.5 μg/kg body weight per day, which represents 15% of the upper bound of the ADI. The GECDE for infants is 1.3 μg/kg bw per day, which represents 13% of the upper bound of the ADI. (JECFA81)

**Acute Reference Dose**

0.2 mg/kg bw, based on a NOAEL of 1.5 mg/kg bw, the highest dose tested in a safety, tolerability and pharmacokinetics study in healthy human subjects, with application of an uncertainty factor of 10 for intraspecies variability. (JECFA81)

**Estimated Acute Dietary Exposure**

A combined analysis of all studies submitted showed that after 14 days, the maximum values of residues found at injection sites led to a GEADE of 52 μg/kg bw for the general population and 87 μg/kg bw for children, corresponding, respectively, to 27% and 43% of the ARfD. (JECFA81)

**Residue Definition**

Ivermectin B₁₄

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>30</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>800</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>100</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>400</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>10</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>15</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>20</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>15</td>
<td>20 (1993)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>20</td>
<td>20 (1993)</td>
<td></td>
</tr>
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</table>
**LASALOCID SODIUM** (antiparasitic agent)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>78 (2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acceptable Daily Intake</strong></td>
<td>0-5 μg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day from a developmental toxicity study in rabbits and a multigeneration reproductive toxicity study in rats, with application of an uncertainty factor of 100 for interspecies and intraspecies variability. (JECFA78)</td>
</tr>
<tr>
<td><strong>Estimated Dietary Exposure</strong></td>
<td>80 μg/person per day was calculated, which represents approximately 27% of the upper bound of the ADI (JECFA78)</td>
</tr>
<tr>
<td><strong>Residue Definition</strong></td>
<td>Lasalocid A</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>JECFA78 extended the MRLs in chicken to turkey and quail and extrapolated the MRLs in chicken to pheasant. No information was available for duck, including on approved uses. As the compound is not registered for use in laying hens, according to the sponsor, it is not appropriate to recommend MRLs for egg.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>400</td>
<td>40 (2017)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>1200</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Skin + Fat</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>400</td>
<td>40 (2017)</td>
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</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>1200</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Skin + Fat</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Quail</td>
<td>Muscle</td>
<td>400</td>
<td>40 (2017)</td>
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</tr>
<tr>
<td>Quail</td>
<td>Liver</td>
<td>1200</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Quail</td>
<td>Kidney</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Quail</td>
<td>Skin + Fat</td>
<td>600</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Pheasant</td>
<td>Muscle</td>
<td>400</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Pheasant</td>
<td>Liver</td>
<td>1200</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Pheasant</td>
<td>Kidney</td>
<td>600</td>
<td>40 (2017)</td>
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</tr>
<tr>
<td>Pheasant</td>
<td>Skin + Fat</td>
<td>600</td>
<td>40 (2017)</td>
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</tbody>
</table>
**LEVAMISOLE** (anthelmintic agent)

**JECFA Evaluation** 36 (1990); 42 (1994)

**Acceptable Daily Intake** 0-6 µg/kg bw (JECFA42)

**Residue Definition** Levamisole

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
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<td>10</td>
<td>22  (1997)</td>
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</tr>
<tr>
<td>Cattle</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>10</td>
<td>22  (1997)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>10</td>
<td>22  (1997)</td>
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<tr>
<td>Pig</td>
<td>Liver</td>
<td>100</td>
<td>22  (1997)</td>
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<tr>
<td>Pig</td>
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<td>22  (1997)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>Muscle</td>
<td>10</td>
<td>22  (1997)</td>
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</tr>
<tr>
<td>Poultry</td>
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<td>100</td>
<td>22  (1997)</td>
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</tr>
<tr>
<td>Poultry</td>
<td>Kidney</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>Fat</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>100</td>
<td>22  (1997)</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>10</td>
<td>22  (1997)</td>
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<tr>
<td>Sheep</td>
<td>Fat</td>
<td>10</td>
<td>22  (1997)</td>
<td></td>
</tr>
</tbody>
</table>

**LINCOMYCIN** (antimicrobial agent)

**JECFA Evaluation** 54 (2000); 58 (2002); 62 (2004)

**Acceptable Daily Intake** 0-30 µg/kg bw (JECFA54)

**Residue Definition** Lincomycin

<table>
<thead>
<tr>
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<th>CAC</th>
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<tbody>
<tr>
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<td>150</td>
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</tr>
<tr>
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<td>Liver</td>
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<td>26  (2003)</td>
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</tr>
<tr>
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<td>500</td>
<td>26  (2003)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>100</td>
<td>26  (2003)</td>
<td>Additional MRL for skin with adhering fat of 300 µg/kg</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>200</td>
<td>26  (2003)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>500</td>
<td>26  (2003)</td>
<td></td>
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<tr>
<td>Pig</td>
<td>Kidney</td>
<td>1500</td>
<td>26  (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>26  (2003)</td>
<td>Additional MRL for skin with adhering fat of 300 µg/kg</td>
</tr>
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</table>
**LUFENURON** (insecticide)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>85 (2017)</th>
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<tbody>
<tr>
<td><strong>Acceptable Daily Intake</strong></td>
<td>0–0.02 mg/kg bw based on the NOAEL of 1.93 mg/kg bw per day for tonic-clonic seizures and findings in lungs, gastrointestinal tract, liver and urinary tract in a 2-year dietary study in rats, and using a safety factor of 100 (10 for interspecies variability and 10 for intraspecies variability)</td>
</tr>
<tr>
<td><strong>Acute Reference Dose</strong></td>
<td>Unnecessary, in view of lufenuron low acute oral toxicity and the absence of developmental toxicity and other toxicological effects likely to be elicited by a single dose</td>
</tr>
<tr>
<td><strong>Estimated chronic dietary exposure</strong></td>
<td>1.1 μg/kg bw per day (for the general population), which represents 5.5% of the upper bound of the ADI. As lufenuron is also used as pesticide, the overall dietary exposure was estimated. The assumptions and detailed results will be displayed in the JECFA85 report. Results below are only for use as veterinary drug.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residue Definition</th>
<th>Lufenuron</th>
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</thead>
<tbody>
<tr>
<td><strong>Species</strong></td>
<td><strong>Tissue</strong></td>
</tr>
<tr>
<td>Salmon</td>
<td>Fillet</td>
</tr>
<tr>
<td>Trout</td>
<td>Fillet</td>
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**MELENGESTROL ACETATE** (production aid)

<table>
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<tbody>
<tr>
<td><strong>Acceptable Daily Intake</strong></td>
<td>0-0.03 µg/kg bw (JECFA54)</td>
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<table>
<thead>
<tr>
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<th>Melengestrol acetate</th>
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</thead>
<tbody>
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<td><strong>Tissue</strong></td>
</tr>
<tr>
<td>Cattle</td>
<td>Muscle</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
</tr>
</tbody>
</table>
**MONENSIN** (antimicrobial agent)

**JECFA Evaluation**
70 (2008); 75 (2011)

**Acceptable Daily Intake**
0–10 µg/kg bw on the basis of a NOAEL of 1.14 mg/kg bw per day and a safety factor of 100 and rounding to one significant figure (JECFA70)

**Estimated Dietary Exposure**
Using the revised MRL, the TMDI from JECFA70 was recalculated, resulting in a value of 481 µg/person, which represents 80% of the upper bound of the ADI (JECFA75)

**Residue Definition**
Monensin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
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<td>10</td>
<td>32  (2009)</td>
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<tr>
<td>Cattle</td>
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<td>100</td>
<td>35  (2012)</td>
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<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>10</td>
<td>32  (2009)</td>
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</tr>
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</tr>
<tr>
<td>Cattle</td>
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<tr>
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<td>Muscle</td>
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<td>32  (2009)</td>
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<tr>
<td>Sheep</td>
<td>Liver</td>
<td>20</td>
<td>32  (2009)</td>
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<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>10</td>
<td>32  (2009)</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
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<td></td>
</tr>
<tr>
<td>Goats</td>
<td>Muscle</td>
<td>10</td>
<td>32  (2009)</td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td>Liver</td>
<td>20</td>
<td>32  (2009)</td>
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<tr>
<td>Goats</td>
<td>Kidney</td>
<td>10</td>
<td>32  (2009)</td>
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<tr>
<td>Goats</td>
<td>Fat</td>
<td>100</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
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<td>32  (2009)</td>
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<td>32  (2009)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>10</td>
<td>32  (2009)</td>
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</tr>
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<td>Chicken</td>
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<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>10</td>
<td>32  (2009)</td>
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<tr>
<td>Turkey</td>
<td>Liver</td>
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<td>32  (2009)</td>
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<td>Kidney</td>
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<td>32  (2009)</td>
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<tr>
<td>Turkey</td>
<td>Fat</td>
<td>100</td>
<td>32  (2009)</td>
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<tr>
<td>Quail</td>
<td>Muscle</td>
<td>10</td>
<td>32  (2009)</td>
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<td>Quail</td>
<td>Liver</td>
<td>10</td>
<td>32  (2009)</td>
<td></td>
</tr>
<tr>
<td>Quail</td>
<td>Kidney</td>
<td>10</td>
<td>32  (2009)</td>
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</tr>
<tr>
<td>Quail</td>
<td>Fat</td>
<td>100</td>
<td>32  (2009)</td>
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</tr>
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</table>
MONEPANTEL (anthelmintic agent)

JECFA Evaluation 75 (2011); 78 (2013), 85 (2017)

Acceptable Daily Intake 0–0.02 mg/kg bw based on the NOAEL of 1.93 mg/kg bw per day for tonic-clonic seizures and findings in lungs, gastrointestinal tract, liver and urinary tract in a 2-year dietary study in rats, and using a safety factor of 100 (10 for interspecies variability and 10 for intraspecies variability)

Acute Reference Dose Unnecessary

Estimated Chronic Dietary Exposure 13.7 µg per kg bw per day (for the general population), which represents 68% of the upper bound of the ADI
5.0 µg per kg bw per day (for children), which represents 22% of the upper bound of the ADI
4.4 µg per kg bw per day (for infants), which represents 25% of the upper bound of the ADI

Estimated Chronic Dietary Exposure

Residue Definition Monepantel sulfone, expressed as monepantel

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>500</td>
<td>38  (2015)</td>
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</tr>
<tr>
<td>Sheep</td>
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<td>7000</td>
<td>38  (2015)</td>
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<td>Kidney</td>
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<td>13000</td>
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<tr>
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<td>Fat</td>
<td>7000</td>
<td>41  (2018)</td>
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<tr>
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<td>Kidney</td>
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<td>41  (2018)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Muscle</td>
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<td>41  (2018)</td>
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</table>
**MOXIDECTIN** (anthelmintic agent)

**JECFA Evaluation**  

**Acceptable Daily Intake**  
0-2 µg/kg bw (JECFA45)

**Residue Definition**  
Moxidectin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>20</td>
<td>22 (1997)</td>
<td>Very high concentration and great variation in the level of residues at the injection site in cattle over a 49 day period after dosing</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>100</td>
<td>22 (1997)</td>
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</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>50</td>
<td>22 (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
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<td>500</td>
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<tr>
<td>Deer</td>
<td>Muscle</td>
<td>20</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Deer</td>
<td>Liver</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Deer</td>
<td>Kidney</td>
<td>50</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Deer</td>
<td>Fat</td>
<td>500</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>50</td>
<td>22 (1997)</td>
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</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>100</td>
<td>22 (1997)</td>
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<td>Sheep</td>
<td>Kidney</td>
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<td>22 (1997)</td>
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<tr>
<td>Sheep</td>
<td>Fat</td>
<td>500</td>
<td>22 (1997)</td>
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</tbody>
</table>

**NARASIN** (antimicrobial agent)

**JECFA Evaluation**  
70 (2008); 75 (2011)

**Acceptable Daily Intake**  
0-5 µg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day and a safety factor of 100 (JECFA70)

**Residue Definition**  
Narasin A

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>15</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>50</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>15</td>
<td>35 (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>50</td>
<td>35 (2012)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>15</td>
<td>32 (2009)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>50</td>
<td>32 (2009)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>15</td>
<td>32 (2009)</td>
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</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>50</td>
<td>32 (2009)</td>
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</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>15</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>50</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>15</td>
<td>34 (2011)</td>
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<tr>
<td>Pig</td>
<td>Fat</td>
<td>50</td>
<td>34 (2011)</td>
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**NEOMYCIN** (antimicrobial agent)

**JECFA Evaluation**
43 (1994); 47 (1996); 52 (1999); 58 (2002); 60 (2003)

**Acceptable Daily Intake**
0-60 µg/kg bw (JECFA47)

**Residue Definition**
Neomycin

<table>
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<th>Tissue</th>
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<th>CAC</th>
<th>Notes</th>
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<tbody>
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</tr>
<tr>
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<td>28 (2005)</td>
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</tr>
<tr>
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<td>28 (2005)</td>
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</tr>
<tr>
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</tr>
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<td>Muscle</td>
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</tr>
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<td>23 (1999)</td>
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</tr>
<tr>
<td>NICARBAZIN (antiprotozoal agent)</td>
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<td>----------------------------------</td>
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<tr>
<td><strong>JECFA Evaluation</strong></td>
<td>50 (1998)</td>
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<tr>
<td><strong>Acceptable Daily Intake</strong></td>
<td>0-400 µg/kg bw (JECFA50)</td>
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<tr>
<td><strong>Residue Definition</strong></td>
<td>N,N'-bis(4-nitropheyl)urea</td>
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<tr>
<td><strong>Species</strong></td>
<td><strong>Tissue</strong></td>
<td><strong>MRL (µg/kg)</strong></td>
<td><strong>CAC</strong></td>
<td><strong>Notes</strong></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>200</td>
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</tr>
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<table>
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<tr>
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<tr>
<td><strong>Acceptable Daily Intake</strong></td>
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<tr>
<td><strong>Residue Definition</strong></td>
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<td><strong>Species</strong></td>
</tr>
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</tr>
<tr>
<td>Pig</td>
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<tr>
<td>Pig</td>
</tr>
<tr>
<td>Pig</td>
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<tr>
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**PIRLIMYCIN** (antimicrobial agent)

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<td>Acceptable Daily Intake</td>
<td>0-8 µg/kg bw (JECFA62)</td>
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<th>CAC</th>
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<tr>
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<td>Kidney</td>
<td>400</td>
<td>29 (2006)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>29 (2006)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>100</td>
<td>29 (2006)</td>
<td>JECFA evaluated the effect of pirlimycin residues on starter cultures and for this reason recommended an MRL of 100 µg/kg of milk. Codex Members may therefore adapt national/regional MRLs in order to address this technological aspect for trade of fresh liquid milk intended for processing using starter culture.</td>
</tr>
</tbody>
</table>

**PORCINE SOMATOTROPIN** (production aid)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>52 (1999)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable Daily Intake</td>
<td>Not Specified (JECFA52)</td>
</tr>
<tr>
<td>Residue Definition</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>not specified</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>not specified</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>not specified</td>
<td>26 (2003)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>not specified</td>
<td>26 (2003)</td>
<td></td>
</tr>
</tbody>
</table>
### PROGESTERONE (production aid)

**JECFA Evaluation**  
25 (1981); 32 (1987); 52 (1999)

**Acceptable Daily Intake**  
0-30 µg/kg bw (JECFA52)

**Residue Definition**  
Progesterone

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>unnecessary</td>
<td>21  (2005)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>unnecessary</td>
<td>21  (2005)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>unnecessary</td>
<td>21  (2005)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>unnecessary</td>
<td>21  (2005)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health</td>
</tr>
</tbody>
</table>

### RACTOPAMINE (production aid)

**JECFA Evaluation**  

**Acceptable Daily Intake**  
0-1 µg/kg bw (JECFA66)

**Residue Definition**  
Ractopamine

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>10</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>40</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>90</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>10</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>10</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>40</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>90</td>
<td>35  (2012)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>10</td>
<td>35  (2012)</td>
<td>The MRL includes skin + fat</td>
</tr>
</tbody>
</table>
### SARAFLOXACIN (antimicrobial agent)

**JECFA Evaluation** 50 (1998)

**Acceptable Daily Intake** 0-0.3 µg/kg bw (JECFA50)

**Residue Definition** Sarafloxacin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>10</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>80</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>80</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>20</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>10</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>80</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>80</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
<tr>
<td>Turkey</td>
<td>Fat</td>
<td>20</td>
<td>24</td>
<td>24 (2001)</td>
</tr>
</tbody>
</table>

### SPECTINOMYCIN (antimicrobial agent)

**JECFA Evaluation** 42 (1994); 50 (1998)

**Acceptable Daily Intake** 0-40 µg/kg bw (JECFA42)

**Residue Definition** Spectinomycin

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>5000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>200</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>5000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Eggs</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>5000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>500</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>5000</td>
<td>23</td>
<td>(1999)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>2000</td>
<td>23</td>
<td>(1999)</td>
</tr>
</tbody>
</table>
**SPIRAMYCIN** (antimicrobial agent)

**JECFA Evaluation** 38 (1991); 43 (1994); 47 (1996); 48 (1997)

**Acceptable Daily Intake** 0-50 µg/kg bw (JECFA43)

**Residue Definition** Cattle and chickens, sum of spiramycin and neospiramycin; Pigs, spiramycin equivalents (antimicrobially active residues)

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>200</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>600</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>300</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>300</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>200</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>200</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>600</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>800</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat</td>
<td>300</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>200</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>600</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>300</td>
<td>22  (1997)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>300</td>
<td>22  (1997)</td>
<td></td>
</tr>
</tbody>
</table>

**SULFADIMIDINE** (antimicrobial agent)

**JECFA Evaluation** 34 (1989); 38 (1991); 42 (1994)

**Acceptable Daily Intake** 0-50 µg/kg bw (JECFA42)

**Residue Definition** Sulfadimidine

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Milk (µg/l)</td>
<td>25</td>
<td>21  (1995)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Muscle</td>
<td>100</td>
<td>21  (1995)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Liver</td>
<td>100</td>
<td>21  (1995)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Kidney</td>
<td>100</td>
<td>21  (1995)</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>Fat</td>
<td>100</td>
<td>21  (1995)</td>
<td></td>
</tr>
</tbody>
</table>
**TEFLUBENZURON** (insecticide)

**JECFA Evaluation**  81 (2015)

**Acceptable Daily Intake**  0-5 μg/kg bw on the basis of a lower 95% confidence limit on the benchmark dose for a 10% response (BMDL10) of 0.54 mg/kg bw per day for hepatocellular hypertrophy in male mice observed in a carcinogenicity study, with application of an uncertainty factor of 100 to account for interspecies and intraspecies variability. (JECFA81)

**Estimated chronic dietary exposure**  The EDI is 42.9 μg/person per day, on the basis of a 60 kg individual, which represents approximately 14% of the upper bound of the ADI. The GECDE for the general population is 1.6 μg/kg bw per day, which represents 31% of the upper bound of the ADI. The GECDE for children is 2.1 μg/kg bw per day, which represents 43% of the upper bound of the ADI. The GECDE for infants is 0.9 μg/kg bw per day, which represents 18% of the upper bound of the ADI. (JECFA81)

**Residue Definition**  Teflubenzuron

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (μg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmon</td>
<td>Muscle</td>
<td>400</td>
<td>40 (2017)</td>
<td></td>
</tr>
<tr>
<td>Salmon</td>
<td>Fillet</td>
<td>400</td>
<td>40 (2017)</td>
<td>Muscle plus skin in natural proportion</td>
</tr>
</tbody>
</table>

**TESTOSTERONE** (production aid)

**JECFA Evaluation**  25 (1981); 32 (1987); 52 (1999)

**Acceptable Daily Intake**  0-2 μg/kg bw (JECFA52)

**Residue Definition**  Testosterone

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (μg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>unnecessary</td>
<td>21 (1995)</td>
<td>Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.</td>
</tr>
</tbody>
</table>
**THIABENDAZOLE** (anthelmintic agent)

**JECAF Evaluation**  
40 (1992); 48 (1997); 58 (2002)

**Acceptable Daily Intake**  
0-100 µg/kg bw (JECAF40)

**Residue Definition**  
Sum of thiabendazole and 5-hydroxythiabendazole

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk (μg/l)</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Goat</td>
<td>Muscle</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Goat</td>
<td>Liver</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Goat</td>
<td>Kidney</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Goat</td>
<td>Fat</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Goat</td>
<td>Milk (μg/l)</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Species</td>
<td>Tissue</td>
<td>MRL (µg/kg)</td>
<td>CAC</td>
<td>Notes</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>100</td>
<td>21 (1995)</td>
<td>The MRL also covers residues derived from feed containing the residues resulted from agricultural use</td>
</tr>
</tbody>
</table>

**TILMICOSIN** (antimicrobial agent)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>47 (1996); 54 (2000); 70 (2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable Daily Intake</td>
<td>0-40 µg/kg bw (JECFA47)</td>
</tr>
<tr>
<td>Residue Definition</td>
<td>Tilmicosin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>1000</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>300</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>150</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>2400</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>600</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Skin/Fat</td>
<td>250</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>1500</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>1000</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>1000</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>300</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>100</td>
<td>23 (1999)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Muscle</td>
<td>100</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Kidney</td>
<td>1200</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Liver</td>
<td>1400</td>
<td>34 (2011)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Skin/Fat</td>
<td>250</td>
<td>34 (2011)</td>
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</table>
### Trenbolone Acetate (growth promoter)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Acceptable Daily Intake</td>
<td>0-0.02 µg/kg bw (JECFA34)</td>
</tr>
<tr>
<td>Residue Definition</td>
<td>Cattle muscle, beta-Trenbolone; Cattle liver, alpha-Trenbolone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>2</td>
<td>21</td>
<td>(1995)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>10</td>
<td>21</td>
<td>(1995)</td>
</tr>
</tbody>
</table>

### Trichlorfon (Metrifonate) (insecticide)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>54 (2000); 60 (2003); 66 (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable Daily Intake</td>
<td>0-2 µg/kg bw (JECFA60)</td>
</tr>
<tr>
<td>Residue Definition</td>
<td>JECFA54 confirmed the MRL for cows’s milk and the guidance levels for muscle, liver, kidney and fat of cattle recommended (WHO TRS 900, 2001)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRLs (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>50</td>
<td>29</td>
<td>(2006)</td>
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</tbody>
</table>

### Triclabendazole (anthelmintic agent)

<table>
<thead>
<tr>
<th>JECFA Evaluation</th>
<th>40 (1992); 66 (2006); 70 (2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable Daily Intake</td>
<td>0-3 µg/kg bw (JECFA40)</td>
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<tr>
<td>Residue Definition</td>
<td>Ketotriclabnedazole</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>250</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>850</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>400</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Muscle</td>
<td>200</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Liver</td>
<td>300</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Kidney</td>
<td>200</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
</tbody>
</table>
**TYLOSIN** (antimicrobial agent)

**JECFA Evaluation**  
70 (2008)

**Acceptable Daily Intake**  
0-30 µg/kg bw based on a microbiological end-point derived from in vitro MIC susceptibility testing and faecal binding data (MIC\textsubscript{calc} = 1.698) (JECFA70)

**Residue Definition**  
Tylosin A

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRLs (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kidney</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Fat</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Milk</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Pig</td>
<td>Muscle</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Pig</td>
<td>Liver</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Pig</td>
<td>Kidney</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Pig</td>
<td>Fat</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Muscle</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Liver</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Kidney</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Fat/Skin</td>
<td>100</td>
<td>32</td>
<td>(2009)</td>
</tr>
<tr>
<td>Chicken</td>
<td>Eggs</td>
<td>300</td>
<td>32</td>
<td>(2009)</td>
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</tbody>
</table>

**ZERANOL** (growth promoter)

**JECFA Evaluation**  
26 (1982); 27 (1983); 32 (1987)

**Acceptable Daily Intake**  
0-0.5 µg/kg bw (JECFA32)

**Residue Definition**  
Zeranol

<table>
<thead>
<tr>
<th>Species</th>
<th>Tissue</th>
<th>MRL (µg/kg)</th>
<th>CAC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Muscle</td>
<td>2</td>
<td>21</td>
<td>(1995)</td>
</tr>
<tr>
<td>Cattle</td>
<td>Liver</td>
<td>10</td>
<td>21</td>
<td>(1995)</td>
</tr>
</tbody>
</table>
RISK MANAGEMENT RECOMMENDATIONS (RMRs) FOR RESIDUES OF VETERINARY DRUGS

CARBADOX (growth promoter)

JECFA evaluation: 36 (1990); 60 (2003)
CAC adoption: 37 (2014)

Recommended risk management measures

In view of the JECFA conclusions on the available scientific information, there is no safe level of residues of carbadox or its metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of carbadox in food. This can be accomplished by not using carbadox in food producing animals.

CHLORAMPHENICOL (antimicrobial agent)

CAC adoption: 37 (2014)

Recommended risk management measures

In view of the JECFA conclusions on the available scientific information, there is no safe level of residues of chloramphenicol or its metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of chloramphenicol in food. This can be accomplished by not using chloramphenicol in food producing animals.

CHLORPROMAZINE (tranquilliser agent)

JECFA evaluation: 38 (1991)
CAC adoption: 37 (2014)

Recommended risk management measures

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of chlorpromazine or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of chlorpromazine in food. This can be accomplished by not using chlorpromazine in food producing animals.

DIMETRIDAZOLE (antiprotozoal agent)

JECFA evaluation: 34 (1989)
CAC adoption: 38 (2015)

Recommended risk management measures

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of dimetridazole or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of dimetridazole in food. This can be accomplished by not using dimetridazole in food producing animals.

FURAZOLIDONE (antimicrobial agent)

JECFA evaluation: 40 (1992)
CAC adoption: 37 (2014)

Recommended risk management measures

In view of the JECFA conclusions on the available scientific information, there is no safe level of residues of furazolidone or its metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of furazolidone in food. This can be accomplished by not using furazolidone in food producing animals.

GENTIAN VIOLET (antibacterial, antifungal and anthelminthic agent)

JECFA evaluation: 78 (2013) JECFA
CAC adoption: 41 (2018)

Recommended risk management measures

In view of the JECFA conclusions on the available scientific information, there is no safe level of residues of gentian violet or its metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of gentian violet in food. This can be accomplished by not using gentian violet in food producing animals.
IPRONIDAZOLE (antiprotozoal agent)

**JECFA evaluation:** 34 (1989)

**CAC adoption:** 38 (2015)

**Recommended risk management measures**

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of ipronidazole or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of ipronidazole in food. This can be accomplished by not using ipronidazole in food producing animals.

MALACHITE GREEN (antifungal and antiprotozoal agent)

**JECFA evaluation:** 70 (2008)

**CAC adoption:** 37 (2014)

**Recommended risk management measures**

In view of the JECFA conclusions on the available scientific information, there is no safe level of residues of malachite green or its metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of malachite green in food. This can be accomplished by not using malachite green in food producing animals.

METRONIDAZOLE (antiprotozoal agent)

**JECFA evaluation:** 34 (1989)

**CAC adoption:** 38 (2015)

**Recommended risk management measures**

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of metronidazole or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of metronidazole in food. This can be accomplished by not using metronidazole in food producing animals.

NITROFURAL (antimicrobial agent)

**JECFA evaluation:** 40 (1992)

**CAC adoption:** 37 (2014)

**Recommended risk management measures**

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of nitrofural or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of nitrofural in food. This can be accomplished by not using nitrofural in food producing animals.

1 Semicarbazide is not a unique indicator of nitrofural use and low levels can be associated with other legitimate sources.

OLAQUINDOX (antibacterial agent)

**JECFA evaluation:** 36 (1990); 42 (1994)

**CAC adoption:** 37 (2014)

**Recommended risk management measures**

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of olaquindox or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of olaquindox in food. This can be accomplished by not using olaquindox in food producing animals.

RONIDAZOLE (antiprotozoal agent)

**JECFA evaluation:** 34 (1989); 42 (1994)

**CAC adoption:** 38 (2015)

**Recommended risk management measures**

In view of the JECFA conclusions, although insufficient data were available or there was a lack of data to establish a safe level of residues of ronidazole or its metabolites in food representing an acceptable risk to consumers, significant health concerns were identified. For this reason, competent authorities should prevent residues of ronidazole in food. This can be accomplished by not using ronidazole in food producing animals.
STILBENES (growth promoter)

JECAF evaluation: 5 (1960)

IARC evaluation: monograph 100A (2012)

CAC adoption: 37 (2014)

Recommended risk management measures

In view of the available scientific information, there is no safe level of residues of stilbenes or their metabolites in food that represents an acceptable risk to consumers. For this reason, competent authorities should prevent residues of stilbenes in food. This can be accomplished by not using stilbenes in food producing animals.