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**INFORMATION DOCUMENT IN SUPPORT TO THE DISCUSSION ON THE MAXIMUM RESIDUES LIMITS
FOR VETERINARY DRUGS**

prepared by the Codex Secretariat

INTRODUCTION

This working document is in support to the discussion on the residues of veterinary drugs in foods of the 21st Session of the Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF). The document includes:

- Part 1 - Codex Maximum Residue Limits (MRLs) for Veterinary Drugs as adopted by the Codex Alimentarius Commission as its 35th Session (July 2012); and
- Part 2 - Draft and proposed draft MRLs.

Part 1**CODEX MAXIMUM RESIDUE LIMITS FOR VETERINARY DRUGS IN FOODS***Updated as at the 35th Session of the Codex Alimentarius Commission (July 2012)*

ABAMECTIN (anthelmintic agent)				
JECFA Evaluation:		45 (1995); 47 (1996)		
Acceptable Daily Intake (ADI):		0-2 µg/kg body weight (1997) Established for the sum of abamectin and (Z)-8,9 isomer by the 1997 JMPR.		
Residue Definition:		Avermectin B1a.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Liver	100	26 th (2003)	
Cattle	Kidney	50	26 th (2003)	
Cattle	Fat	100	26 th (2003)	

ALBENDAZOLE (anthelmintic agent)				
JECFA Evaluation:		34 (1989)		
Acceptable Daily Intake (ADI):		0-50 µg/kg body weight (34 th JECFA, 1989).		
Residue Definition:		Except milk, 2-aminosulfone metabolite; Milk, not yet identified.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Not specified	Muscle	100	20 th (1993)	
Not specified	Liver	5000	20 th (1993)	
Not specified	Kidney	5000	20 th (1993)	
Not specified	Fat	100	20 th (1993)	
Not specified	Milk (µg/l)	100	20 th (1993)	

AMOXICILLIN (antimicrobial agent)				
JECFA Evaluation:		75 (2011)		
Acceptable Daily Intake (ADI):		0-0.7 µg/kg body weight on the basis of microbiological effects (75 th JECFA, 2011).		
Estimated Dietary Exposure (EDI):		The 75 th JECFA (2001) did not calculate an EDI for amoxicillin owing to the small number of quantifiable residue data points. Using the model diet of 300 g muscle, 100 g live, 50 g kidney, 50 g fat and 1.5 liter of milk with the MRLs recommended, the theoretical maximum daily intake (TMDI) is 31 µg/person, which represents 74% of the upper bound of the ADI.		
Residue Definition:		Amoxicillin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	50	35 th (2012)	
Cattle	Liver	50	35 th (2012)	
Cattle	Kidney	50	35 th (2012)	
Cattle	Fat	50	35 th (2012)	
Cattle	Milk	4	35 th (2012)	
Sheep	Muscle	50	35 th (2012)	
Sheep	Liver	50	35 th (2012)	
Sheep	Kidney	50	35 th (2012)	
Sheep	Fat	50	35 th (2012)	
Sheep	Milk	4	35 th (2012)	
Pigs	Muscle	50	35 th (2012)	
Pigs	Liver	50	35 th (2012)	
Pigs	Kidney	50	35 th (2012)	
Pigs	Fat/Skin	50	35 th (2012)	

AVILAMYCIN (antimicrobial agent)				
JECFA Evaluation:		70 (2008)		
Acceptable Daily Intake (ADI):		0-2 mg/kg body weight on the basis of a NOAEL of 150 mg avilamycin activity/kg body weight per day and a safety factor of 100 and rounding to one significant figure (70 th JECFA, 2008).		
Residue Definition:		Dichloroisoeverninic acid (DIA).		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Pigs	Muscle	200	32 nd (2009)	
Pigs	Liver	300	32 nd (2009)	
Pigs	Kidney	200	32 nd (2009)	
Pigs	Fat/Skin	200	32 nd (2009)	
Chicken	Muscle	200	32 nd (2009)	
Chicken	Liver	300	32 nd (2009)	
Chicken	Kidney	200	32 nd (2009)	
Chicken	Fat/Skin	200	32 nd (2009)	
Turkey	Muscle	200	32 nd (2009)	
Turkey	Liver	300	32 nd (2009)	
Turkey	Kidney	200	32 nd (2009)	
Turkey	Fat/Skin	200	32 nd (2009)	
Rabbits	Muscle	200	32 nd (2009)	
Rabbits	Liver	300	32 nd (2009)	
Rabbits	Kidney	200	32 nd (2009)	
Rabbits	Fat/Skin	200	32 nd (2009)	

AZAPERONE (tranquilizing agent)				
JECFA Evaluation:		38 (1991); 43 (1994); 50 (1998); 52 (1999)		
Acceptable Daily Intake (ADI):		0-6 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Sum of azaperone and azaperol.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Pig	Muscle	60	23 rd (1999)	
Pig	Liver	100	23 rd (1999)	
Pig	Kidney	100	23 rd (1999)	
Pig	Fat	60	23 rd (1999)	

BENZYL PENICILLIN/PROCAINE BENZYL PENICILLIN (antimicrobial agent)				
JECFA Evaluation:		36 (1990); 50 (1998)		
Acceptable Daily Intake (ADI):		30 µg-penicillin/person/day (50 th JECFA, 1998). Residues of benzylpenicillin and procaine benzylpenicillin should be kept below this level.		
Residue Definition:		Benzylpenicillin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	50	23 rd (1999)	
Cattle	Liver	50	23 rd (1999)	
Cattle	Kidney	50	23 rd (1999)	
Cattle	Milk (µg/l)	4	23 rd (1999)	
Chicken	Muscle	50	23 rd (1999)	Applies to procaine benzylpenicillin only.
Chicken	Liver	50	23 rd (1999)	Applies to procaine benzylpenicillin only.
Chicken	Kidney	50	23 rd (1999)	Applies to procaine benzylpenicillin only.
Pig	Muscle	50	23 rd (1999)	
Pig	Liver	50	23 rd (1999)	
Pig	Kidney	50	23 rd (1999)	

CARAZOLOL (beta-adreniceptor-blocking agent)				
JECFA Evaluation:		38 (1991); 43 (1994); 52 (1999)		
Acceptable Daily Intake (ADI):		0-0.1 µg/kg body weight (43 rd JECFA, 1994). ADI based on the acute pharmacological effects of carazolol.		
Residue Definition:		Carazolol.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Pig	Muscle	5	26 th (2003)	The concentration at the injection site two hours after treatment may result in an intake that exceeds the acute RfD and therefore, an appropriate withdrawal period should be applied.
Pig	Liver	25	26 th (2003)	
Pig	Kidney	25	26 th (2003)	
Pig	Fat/Skin	5	26 th (2003)	The concentration at the injection site two hours after treatment may result in an intake that exceeds the acute RfD and therefore, an appropriate withdrawal period should be applied.

CEFTIOFUR (antimicrobial agent)				
JECFA Evaluation:		45 (1995); 48 (1997)		
Acceptable Daily Intake (ADI):		0-50 µg/kg body weight (45 th JECFA, 1995).		
Residue Definition:		Desfuoylceftiofur.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	1000	23 rd (1999)	
Cattle	Liver	2000	23 rd (1999)	
Cattle	Kidney	6000	23 rd (1999)	
Cattle	Fat	2000	23 rd (1999)	
Cattle	Milk (µg/l)	100	23 rd (1999)	
Pig	Muscle	1000	23 rd (1999)	
Pig	Liver	2000	23 rd (1999)	
Pig	Kidney	6000	23 rd (1999)	
Pig	Fat	2000	23 rd (1999)	

CHLORTETRACYCLINE/OXYTETRACYCLINE/TETRACYCLINE (antimicrobial agent)				
JECFA Evaluation:		45 (1995); 47 (1996); 50 (1998); 58 (2002)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (50 th JECFA, 1998). Group ADI for chlortetracycline, oxytetracycline and tetracycline.		
Residue Definition:		Parent drugs, singly or in combination.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	200	26 th (2003)	
Cattle	Liver	600	26 th (2003)	
Cattle	Kidney	1200	26 th (2003)	
Cattle	Milk (µg/l)	100	26 th (2003)	
Fish	Muscle	200	26 th (2003)	Applies only to oxytetracycline.
Giant prawn (<i>Paeneus monodon</i>)	Muscle	200	26 th (2003)	Applies only to oxytetracycline.
Pig	Muscle	200	26 th (2003)	
Pig	Liver	600	26 th (2003)	
Pig	Kidney	1200	26 th (2003)	
Poultry	Muscle	200	26 th (2003)	
Poultry	Liver	600	26 th (2003)	
Poultry	Kidney	1200	26 th (2003)	
Poultry	Eggs	400	26 th (2003)	
Sheep	Muscle	200	26 th (2003)	
Sheep	Liver	600	26 th (2003)	
Sheep	Kidney	1200	26 th (2003)	
Sheep	Milk (µg/l)	100	26 th (2003)	

CLENBUTEROL (adrenoceptor agonist)				
JECFA Evaluation:		47 (1996)		
Acceptable Daily Intake (ADI):		0-0.004 µg/kg body weight (47 th JECFA, 1996).		
Residue Definition:		Clenbuterol.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	0.2	26 th (2003)	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.
Cattle	Liver	0.6	26 th (2003)	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.
Cattle	Kidney	0.6	26 th (2003)	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.
Cattle	Fat	0.2	26 th (2003)	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.
Cattle	Milk (µg/l)	0.05	26 th (2003)	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.
Horse	Muscle	0.2	26 th (2003)	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.
Horse	Liver	0.6	26 th (2003)	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.
Horse	Kidney	0.6	26 th (2003)	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.
Horse	Fat	0.2	26 th (2003)	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.

CLOSANTEL (anthelmintic agent)				
JECFA Evaluation:		36 (1990); 40 (1992)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (40 th JECFA, 1992).		
Residue Definition:		Closantel.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	1000	20 th (1993)	
Cattle	Liver	1000	20 th (1993)	
Cattle	Kidney	3000	20 th (1993)	
Cattle	Fat	3000	20 th (1993)	
Sheep	Muscle	1500	20 th (1993)	
Sheep	Liver	1500	20 th (1993)	
Sheep	Kidney	5000	20 th (1993)	
Sheep	Fat	2000	20 th (1993)	

COLISTIN (antimicrobial agent)				
JECFA Evaluation:		66 (2006)		
Acceptable Daily Intake (ADI):		0-7 µg/kg body weight (66 th JECFA, 2006).		
Residue Definition:		Sum of colistin A and colistin B.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	150	31 st (2008)	
Cattle	Liver	150	31 st (2008)	
Cattle	Kidney	200	31 st (2008)	
Cattle	Fat	150	31 st (2008)	
Cattle	Milk	50	31 st (2008)	
Sheep	Muscle	150	31 st (2008)	
Sheep	Liver	150	31 st (2008)	
Sheep	Kidney	200	31 st (2008)	
Sheep	Fat	150	31 st (2008)	
Sheep	Milk	50	31 st (2008)	
Goat	Muscle	150	31 st (2008)	
Goat	Liver	150	31 st (2008)	
Goat	Kidney	200	31 st (2008)	
Goat	Fat	150	31 st (2008)	
Pig	Muscle	150	31 st (2008)	
Pig	Liver	150	31 st (2008)	
Pig	Kidney	200	31 st (2008)	
Pig	Fat	150	31 st (2008)	The MRL includes skin + fat
Chicken	Muscle	150	31 st (2008)	
Chicken	Liver	150	31 st (2008)	
Chicken	Kidney	200	31 st (2008)	
Chicken	Fat	150	31 st (2008)	The MRL includes skin + fat
Chicken	Eggs	300	31 st (2008)	
Turkey	Muscle	150	31 st (2008)	
Turkey	Liver	150	31 st (2008)	
Turkey	Kidney	200	31 st (2008)	
Turkey	Fat	150	31 st (2008)	The MRL includes skin + fat
Rabbit	Muscle	150	31 st (2008)	
Rabbit	Liver	150	31 st (2008)	
Rabbit	Kidney	200	31 st (2008)	
Rabbit	Fat	150	31 st (2008)	

CYFLUTHRIN (insecticide)				
JECFA Evaluation:		48 (1997)		
Acceptable Daily Intake (ADI):		0-20 µg/kg body weight (48 th JECFA, 1997).		
Residue Definition:		Cyfluthrin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	20	26 th (2003)	
Cattle	Liver	20	26 th (2003)	
Cattle	Kidney	20	26 th (2003)	
Cattle	Fat	200	26 th (2003)	
Cattle	Milk (µg/l)	40	26 th (2003)	

CYHALOTHRIN (insecticide)				
JECFA Evaluation:		54 (2000); 58 (2002); 62 (2004)		
Acceptable Daily Intake (ADI):		0-5 µg/kg body weight (62 nd JECFA, 2004).		
Residue Definition:		Cyhalothrin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	20	28 th (2005)	
Cattle	Liver	20	28 th (2005)	
Cattle	Kidney	20	28 th (2005)	
Cattle	Fat	400	28 th (2005)	
Cattle	Milk	30	28 th (2005)	
Pig	Muscle	20	28 th (2005)	
Pig	Liver	20	28 th (2005)	
Pig	Kidney	20	28 th (2005)	
Pig	Fat	400	28 th (2005)	
Sheep	Muscle	20	28 th (2005)	
Sheep	Liver	50	28 th (2005)	
Sheep	Kidney	20	28 th (2005)	
Sheep	Fat	400	28 th (2005)	

CYPERMETHRIN AND ALPHA-CYPERMETHRIN (insecticide)				
JECFA Evaluation:		62 (2004)		
Acceptable Daily Intake (ADI):		JECFA 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).		
Species	Tissue	MRLs(µg/kg)	CAC	Note
Cattle	Muscle	50	29 th (2006)	
Cattle	Liver	50	29 th (2006)	
Cattle	Kidney	50	29 th (2006)	
Cattle	Fat	1000	29 th (2006)	
Cattle	Milk	100	29 th (2006)	
Sheep	Muscle	50	29 th (2006)	
Sheep	Liver	50	29 th (2006)	
Sheep	Kidney	50	29 th (2006)	
Sheep	Fat	1000	29 th (2006)	

DANOFLOXACIN (antimicrobial agent)				
JECFA Evaluation:		48 (1997)		
Acceptable Daily Intake (ADI):		0-20 µg/kg body weight (48 th JECFA, 1997).		
Residue Definition:		Danofloxacin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	200	24 th (2001)	
Cattle	Liver	400	24 th (2001)	
Cattle	Kidney	400	24 th (2001)	
Cattle	Fat	100	24 th (2001)	
Chicken	Muscle	200	24 th (2001)	
Chicken	Liver	400	24 th (2001)	
Chicken	Kidney	400	24 th (2001)	
Chicken	Fat	100	24 th (2001)	Fat/skin in normal proportion.
Pig	Muscle	100	24 th (2001)	
Pig	Liver	50	24 th (2001)	
Pig	Kidney	200	24 th (2001)	
Pig	Fat	100	24 th (2001)	

DELTAMETHRIN (insecticide)				
JECFA Evaluation:		52 (1999); 60 (2003)		
Acceptable Daily Intake (ADI):		0-10 µg/kg body weight (1982). Established by the 1982 JMPR.		
Residue Definition:		Deltamethrin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	30	26 th (2003)	
Cattle	Liver	50	26 th (2003)	
Cattle	Kidney	50	26 th (2003)	
Cattle	Fat	500	26 th (2003)	
Cattle	Milk	30	26 th (2003)	
Chicken	Muscle	30	26 th (2003)	
Chicken	Liver	50	26 th (2003)	
Chicken	Kidney	50	26 th (2003)	
Chicken	Fat	500	26 th (2003)	
Chicken	Eggs	30	26 th (2003)	
Salmon	Muscle	30	26 th (2003)	
Sheep	Muscle	30	26 th (2003)	
Sheep	Liver	50	26 th (2003)	
Sheep	Kidney	50	26 th (2003)	
Sheep	Fat	500	26 th (2003)	

DEXAMETHASONE (glucocorticosteroid)				
JECFA Evaluation:		70 (2008)		
Acceptable Daily Intake (ADI):		0-0.015 µg/kg body weight (42 nd JECFA, 1995).		
Residue Definition:		Dexamethasone.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	1.0	32 nd (2009)	
Cattle	Liver	2.0	32 nd (2009)	
Cattle	Kidney	1.0	32 nd (2009)	
Cattle	Milk (µg/l)	0.3	32 nd (2009)	
Pig	Muscle	1.0	32 nd (2009)	
Pig	Liver	2.0	32 nd (2009)	
Pig	Kidney	1.0	32 nd (2009)	
Horses	Muscle	1.0	32 nd (2009)	
Horses	Liver	2.0	32 nd (2009)	
Horses	Kidney	1.0	32 nd (2009)	

DICLAZURIL (antiprotozoal agent)				
JECFA Evaluation:		45 (1995); 50 (1998)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Diclazuril.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Poultry	Muscle	500	23 rd (1999)	
Poultry	Liver	3000	23 rd (1999)	
Poultry	Kidney	2000	23 rd (1999)	
Poultry	Fat/Skin	1000	23 rd (1999)	
Rabbit	Muscle	500	23 rd (1999)	
Rabbit	Liver	3000	23 rd (1999)	
Rabbit	Kidney	2000	23 rd (1999)	
Rabbit	Fat	1000	23 rd (1999)	
Sheep	Muscle	500	23 rd (1999)	
Sheep	Liver	3000	23 rd (1999)	
Sheep	Kidney	2000	23 rd (1999)	
Sheep	Fat	1000	23 rd (1999)	

DICYCLANIL (insecticide)				
JECFA Evaluation:		54 (2000); 60 (2003)		
Acceptable Daily Intake (ADI):		0-7 µg/kg body weight (54 th JECFA, 2000).		
Residue Definition:		Dicyclanil.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Sheep	Muscle	150	28 th (2005)	
Sheep	Liver	125	28 th (2005)	
Sheep	Kidney	125	28 th (2005)	
Sheep	Fat	200	28 th (2005)	

DIHYDROSTREPTOMYCIN/STREPTOMYCIN (antimicrobial agent)				
JECFA Evaluation:		43 (1994); 48 (1997); 52 (1999); 58 (2002)		
Acceptable Daily Intake (ADI):		0-50 µg/kg body weight (48 th JECFA, 1997). Group ADI for combined residues of dihydrostreptomycin and streptomycin.		
Residue Definition:		Sum of dihydrostreptomycin and streptomycin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	600	24 th (2001)	
Cattle	Liver	600	24 th (2001)	
Cattle	Kidney	1000	24 th (2001)	
Cattle	Fat	600	24 th (2001)	
Cattle	Milk	200	26 th (2003)	
Chicken	Muscle	600	24 th (2001)	
Chicken	Liver	600	24 th (2001)	
Chicken	Kidney	1000	24 th (2001)	
Chicken	Fat	600	24 th (2001)	
Pig	Muscle	600	24 th (2001)	
Pig	Liver	600	24 th (2001)	
Pig	Kidney	1000	24 th (2001)	
Pig	Fat	600	24 th (2001)	
Sheep	Muscle	600	24 th (2001)	
Sheep	Liver	600	24 th (2001)	
Sheep	Kidney	1000	24 th (2001)	
Sheep	Fat	600	24 th (2001)	
Sheep	Milk	200	26 th (2003)	

DIMINAZENE (trypanocide)				
JECFA Evaluation:		34 (1989); 42 (1994)		
Acceptable Daily Intake (ADI):		0-100 µg/kg body weight (42 nd JECFA, 1994).		
Residue Definition:		Diminazene.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	500	22 nd (1997)	
Cattle	Liver	12000	22 nd (1997)	
Cattle	Kidney	6000	22 nd (1997)	
Cattle	Milk (µg/l)	150	22 nd (1997)	Limit of quantitation of the analytical method.

DORAMECTIN (anthelmintic agent)				
JECFA Evaluation:		45 (1995); 52 (1999); 58 (2002); 62 (2004)		
Acceptable Daily Intake (ADI):		0-1 µg/kg body weight (58 th JECFA, 2002).		
Residue Definition:		Doramectin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	10	22 nd (1997)	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.
Cattle	Liver	100	22 nd (1997)	
Cattle	Kidney	30	22 nd (1997)	
Cattle	Fat	150	22 nd (1997)	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
Cattle	Milk	15	29 th (2006)	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.
Pig	Muscle	5	24 th (2001)	
Pig	Liver	100	24 th (2001)	
Pig	Kidney	30	24 th (2001)	
Pig	Fat	150	24 th (2001)	

EPRINOMECTIN (anthelmintic agent)				
JECFA Evaluation:		50 (1998)		
Acceptable Daily Intake (ADI):		0-10 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Eprinomectin B1a.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	26 th (2003)	
Cattle	Liver	2000	26 th (2003)	
Cattle	Kidney	300	26 th (2003)	
Cattle	Fat	250	26 th (2003)	
Cattle	Milk (µg/l)	20	26 th (2003)	

ERYTHROMYCIN (antimicrobial agent)				
JECFA Evaluation:		66 (2006)		
Acceptable Daily Intake (ADI):		0-0.7 µg/kg body weight (66 th JECFA, 2006).		
Residue Definition:		Erythromycin A		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Chicken	Muscle	100	31 st (2008)	
Chicken	Liver	100	31 st (2008)	
Chicken	Kidney	100	31 st (2008)	
Chicken	Fat	100	31 st (2008)	The MRL includes skin + fat
Chicken	Eggs	50	31 st (2008)	
Turkey	Muscle	100	31 st (2008)	
Turkey	Liver	100	31 st (2008)	
Turkey	Kidney	100	31 st (2008)	
Turkey	Fat	100	31 st (2008)	The MRL includes skin + fat

ESTRADIOL-17BETA (production aid)				
JECFA Evaluation:		25 (1981); 32 (1987); 52 (1999)		
Acceptable Daily Intake (ADI):		unnecessary (32 nd JECFA, 1987); 0-0.05 µg/kg body weight (52 nd JECFA, 1999).		
Residue Definition:		Estradiol-17beta.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	unnecessary	21 st (1995)	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.
Cattle	Liver	unnecessary	21 st (1995)	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.
Cattle	Kidney	unnecessary	21 st (1995)	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.
Cattle	Fat	unnecessary	21 st (1995)	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.

FEBANTEL/FENBENDAZOLE/OXFENDAZOLE (anthelmintic agent)				
JECFA Evaluation:		38 (1991); 45 (1995); 50 (1998)		
Acceptable Daily Intake (ADI):		0-7 µg/kg body weight (50 th JECFA, 1998). Group ADI		
Residue Definition:		Sum of fenbendazole, oxfendazole and oxfendazole sulphone, expressed as oxfendazole sulphone equivalents.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	23 rd (1999)	
Cattle	Liver	500	23 rd (1999)	
Cattle	Kidney	100	23 rd (1999)	
Cattle	Fat	100	23 rd (1999)	
Cattle	Milk (µg/l)	100	23 rd (1999)	
Goat	Muscle	100	23 rd (1999)	
Goat	Liver	500	23 rd (1999)	
Goat	Kidney	100	23 rd (1999)	
Goat	Fat	100	23 rd (1999)	
Horse	Muscle	100	23 rd (1999)	
Horse	Liver	500	23 rd (1999)	
Horse	Kidney	100	23 rd (1999)	
Horse	Fat	100	23 rd (1999)	
Pig	Muscle	100	23 rd (1999)	
Pig	Liver	500	23 rd (1999)	
Pig	Kidney	100	23 rd (1999)	
Pig	Fat	100	23 rd (1999)	
Sheep	Muscle	100	23 rd (1999)	
Sheep	Liver	500	23 rd (1999)	
Sheep	Kidney	100	23 rd (1999)	
Sheep	Fat	100	23 rd (1999)	
Sheep	Milk (µg/l)	100	23 rd (1999)	

FLUAZURON (insecticide)				
JECFA Evaluation:		48 (1997)		
Acceptable Daily Intake (ADI):		0-40 µg/kg body weight (48 th JECFA, 1997).		
Residue Definition:		Fluazuron.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	200	23 rd (1999)	
Cattle	Liver	500	23 rd (1999)	
Cattle	Kidney	500	23 rd (1999)	
Cattle	Fat	7000	23 rd (1999)	

FLUBENDAZOLE (anthelmintic agent)				
JECFA Evaluation:		40 (1992)		
Acceptable Daily Intake (ADI):		0-12 µg/kg body weight (40 th JECFA, 1992).		
Residue Definition:		Flubendazole.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Pig	Muscle	10	21 st (1995)	
Pig	Liver	10	21 st (1995)	
Poultry	Muscle	200	21 st (1995)	
Poultry	Liver	500	21 st (1995)	
Poultry	Eggs	400	21 st (1995)	

FLUMEQUINE (antimicrobial agent)				
JECFA Evaluation:		42 (1994); 48 (1997); 54 (2000); 60 (2002); 62 (2004); 66 (2006)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (62 nd JECFA, 2004).		
Residue Definition:		Flumequine.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	500	28 th (2005)	
Cattle	Liver	500	28 th (2005)	
Cattle	Kidney	3000	28 th (2005)	
Cattle	Fat	1000	28 th (2005)	
Chicken	Muscle	500	28 th (2005)	
Chicken	Liver	500	28 th (2005)	
Chicken	Kidney	3000	28 th (2005)	
Chicken	Fat	1000	28 th (2005)	
Pig	Muscle	500	28 th (2005)	
Pig	Liver	500	28 th (2005)	
Pig	Kidney	3000	28 th (2005)	
Pig	Fat	1000	28 th (2005)	
Sheep	Muscle	500	28 th (2005)	
Sheep	Liver	500	28 th (2005)	
Sheep	Kidney	3000	28 th (2005)	
Sheep	Fat	1000	28 th (2005)	
Trout	Muscle	500	28 th (2005)	Muscle including normal proportion of skin

GENTAMICIN (antimicrobial agent)				
JECFA Evaluation:		43 (1994); 48 (1997); 50 (1998)		
Acceptable Daily Intake (ADI):		0-20 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Gentamicin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	24 th (2001)	
Cattle	Liver	2000	24 th (2001)	
Cattle	Kidney	5000	24 th (2001)	
Cattle	Fat	100	24 th (2001)	
Cattle	Milk (µg/l)	200	24 th (2001)	
Pig	Muscle	100	24 th (2001)	
Pig	Liver	2000	24 th (2001)	
Pig	Kidney	5000	24 th (2001)	
Pig	Fat	100	24 th (2001)	

IMIDOCARB (antiprotozoal agent)				
JECFA Evaluation:		50 (1998), 60 (2003)		
Acceptable Daily Intake (ADI):		0-10 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Imidocarb.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	300	28 th (2005)	
Cattle	Liver	1500	28 th (2005)	
Cattle	Kidney	2000	28 th (2005)	
Cattle	Fat	50	28 th (2005)	
Cattle	Milk	50	28 th (2005)	

ISOMETAMIDIUM (trypanocide)				
JECFA Evaluation:		34 (1989); 40 (1992)		
Acceptable Daily Intake (ADI):		0-100 µg/kg body weight (40 th JECFA, 1992).		
Residue Definition:		Isometamidium.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	21 st (1995)	
Cattle	Liver	500	21 st (1995)	
Cattle	Kidney	1000	21 st (1995)	
Cattle	Fat	100	21 st (1995)	
Cattle	Milk (µg/l)	100	21 st (1995)	

IVERMECTIN (anthelmintic agent)				
JECFA Evaluation:		36 (1990); 40 (1992); 54 (2000); 58 (2002)		
Acceptable Daily Intake (ADI):		0-1 µg/kg body weight (40 th JECFA, 1992).		
Residue Definition:		22,23-Dihydroivermectin B1a (H2B1a).		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Liver	100	20 th (1993)	
Cattle	Fat	40	20 th (1993)	
Cattle	Milk	10	26 th (2003)	
Pig	Liver	15	20 th (1993)	
Pig	Fat	20	20 th (1993)	
Sheep	Liver	15	20 th (1993)	
Sheep	Fat	20	20 th (1993)	

LEVAMISOLE (anthelmintic agent)				
JECFA Evaluation:		36 (1990); 42 (1994)		
Acceptable Daily Intake (ADI):		0-6 µg/kg body weight (42 nd JECFA, 1994).		
Residue Definition:		Levamisole.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	10	22 nd (1997)	
Cattle	Liver	100	22 nd (1997)	
Cattle	Kidney	10	22 nd (1997)	
Cattle	Fat	10	22 nd (1997)	
Pig	Muscle	10	22 nd (1997)	
Pig	Liver	100	22 nd (1997)	
Pig	Kidney	10	22 nd (1997)	
Pig	Fat	10	22 nd (1997)	
Poultry	Muscle	10	22 nd (1997)	
Poultry	Liver	100	22 nd (1997)	
Poultry	Kidney	10	22 nd (1997)	
Poultry	Fat	10	22 nd (1997)	
Sheep	Muscle	10	22 nd (1997)	
Sheep	Liver	100	22 nd (1997)	
Sheep	Kidney	10	22 nd (1997)	
Sheep	Fat	10	22 nd (1997)	

LINCOMYCIN (antimicrobial agent)				
JECFA Evaluation:		54 (2000); 58 (2002); 62 (2004)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (54 th JECFA, 2000).		
Residue Definition:		Lincomycin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Milk	150	26 th (2003)	
Chicken	Muscle	200	26 th (2003)	
Chicken	Liver	500	26 th (2003)	
Chicken	Kidney	500	26 th (2003)	
Chicken	Fat	100	26 th (2003)	Additional MRL for skin with adhering fat of 300 µg/kg.
Pig	Muscle	200	26 th (2003)	
Pig	Liver	500	26 th (2003)	
Pig	Kidney	1500	26 th (2003)	
Pig	Fat	100	26 th (2003)	Additional MRL for skin with adhering fat of 300 µg/kg.

MELENGESTROL ACETATE (production aid)				
JECFA Evaluation:		54 (2000); 66 (2006)		
Acceptable Daily Intake (ADI):		0-0.03 µg/kg body weight.		
Residue Definition:		Melengestrol acetate.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Chicken	Muscle	1	32 nd (2009)	
Chicken	Liver	10	32 nd (2009)	
Chicken	Kidney	2	32 nd (2009)	
Chicken	Fat	18	32 nd (2009)	

MONENSIN (antimicrobial agent)				
JECFA Evaluation:		70 (2008); 75 (2011)		
Acceptable Daily Intake (ADI):		0-10 µg/kg body weight on the basis of a NOAEL of 1.14 mg/kg body weight per day and a safety factor of 100 and rounding to one significant figure (70 th JECFA, 2008).		
Estimated Dietary Exposure (EDI)		Using the revised MRL, the theoretical maximum daily intake (TMDI) from the 70 th JECFA was recalculated, resulting in a value of 481 µg/person, which represents 80% of the upper bound of the ADI (75 th JECFA, 2011).		
Residue Definition:		Monensin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	10	32 nd (2009)	
Cattle	Liver	100	35 th (2012) ¹	
Cattle	Kidney	10	32 nd (2009)	
Cattle	Fat	100	32 nd (2009)	
Cattle	Milk	2	32 nd (2009)	
Sheep	Muscle	10	32 nd (2009)	
Sheep	Liver	20	32 nd (2009)	
Sheep	Kidney	10	32 nd (2009)	
Sheep	Fat	100	32 nd (2009)	
Goats	Muscle	10	32 nd (2009)	
Goats	Liver	20	32 nd (2009)	
Goats	Kidney	10	32 nd (2009)	
Goats	Fat	100	32 nd (2009)	
Chicken	Muscle	10	32 nd (2009)	
Chicken	Liver	10	32 nd (2009)	
Chicken	Kidney	10	32 nd (2009)	
Chicken	Fat	100	32 nd (2009)	
Turkey	Muscle	10	32 nd (2009)	
Turkey	Liver	10	32 nd (2009)	
Turkey	Kidney	10	32 nd (2009)	
Turkey	Fat	100	32 nd (2009)	
Quail	Muscle	10	32 nd (2009)	
Quail	Liver	10	32 nd (2009)	
Quail	Kidney	10	32 nd (2009)	
Quail	Fat	100	32 nd (2009)	

¹ The 75th JECFA was unable to revise the current MRLs for goats and sheep, as no additional residue data were provided.

MOXIDECTIN (anthelmintic agent)				
JECFA Evaluation:		45 (1995); 47 (1996); 48 (1998); 50 (1998)		
Acceptable Daily Intake (ADI):		0-2 µg/kg body weight (45 th JECFA, 1995).		
Residue Definition:		Moxidectin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	20	22 nd (1997)	Very high concentration and great variation in the level of residues at the injection site in cattle over a 49 day period after dosing.
Cattle	Liver	100	22 nd (1997)	
Cattle	Kidney	50	22 nd (1997)	
Cattle	Fat	500	22 nd (1997)	
Deer	Muscle	20	23 rd (1999)	
Deer	Liver	100	23 rd (1999)	
Deer	Kidney	50	23 rd (1999)	
Deer	Fat	500	23 rd (1999)	
Sheep	Muscle	50	22 nd (1997)	
Sheep	Liver	100	22 nd (1997)	
Sheep	Kidney	50	22 nd (1997)	
Sheep	Fat	500	22 nd (1997)	

NARASIN (antimicrobial agent)				
JECFA Evaluation:		70 (2008); 75 (2011)		
Acceptable Daily Intake (ADI):		0-5 µg/kg body weight on the basis of a NOAEL of 0.5 mg/kg body weight per day and a safety factor of 100 (70 th JECFA, 2008).		
Residue Definition:		Narasin A.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	15	35 th (2012)	
Cattle	Liver	50	35 th (2012)	
Cattle	Kidney	15	35 th (2012)	
Cattle	Fat	50	35 th (2012)	
Chicken	Muscle	15	32 nd (2009)	
Chicken	Liver	50	32 nd (2009)	
Chicken	Kidney	15	32 nd (2009)	
Chicken	Fat	50	32 nd (2009)	
Pig	Muscle	15	34 th (2011)	
Pig	Liver	50	34 th (2011)	
Pig	Kidney	15	34 th (2011)	
Pig	Fat	50	34 th (2011)	

NEOMYCIN (antimicrobial agent)				
JECFA Evaluation:		43 (1994); 47 (1996); 52 (1999); 58 (2002); 60 (2003)		
Acceptable Daily Intake (ADI):		0-60 µg/kg body weight (47 th JECFA, 1996).		
Residue Definition:		Neomycin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	500	23 rd (1999)	
Cattle	Liver	500	28 th (2005)	
Cattle	Kidney	10000	28 th (2005)	
Cattle	Fat	500	23 rd (1999)	
Cattle	Milk	1500	28 th (2005)	
Chicken	Muscle	500	23 rd (1999)	
Chicken	Liver	500	23 rd (1999)	
Chicken	Kidney	10000	23 rd (1999)	
Chicken	Fat	500	23 rd (1999)	
Chicken	Eggs	500	23 rd (1999)	
Duck	Muscle	500	23 rd (1999)	
Duck	Liver	500	23 rd (1999)	
Duck	Kidney	10000	23 rd (1999)	
Duck	Fat	500	23 rd (1999)	
Goat	Muscle	500	23 rd (1999)	
Goat	Liver	500	23 rd (1999)	
Goat	Kidney	10000	23 rd (1999)	
Goat	Fat	500	23 rd (1999)	
Pig	Muscle	500	23 rd (1999)	
Pig	Liver	500	23 rd (1999)	
Pig	Kidney	10000	23 rd (1999)	
Pig	Fat	500	23 rd (1999)	
Sheep	Muscle	500	23 rd (1999)	
Sheep	Liver	500	23 rd (1999)	
Sheep	Kidney	10000	23 rd (1999)	
Sheep	Fat	500	23 rd (1999)	
Turkey	Muscle	500	23 rd (1999)	
Turkey	Liver	500	23 rd (1999)	
Turkey	Kidney	10000	23 rd (1999)	
Turkey	Fat	500	23 rd (1999)	

NICARBAZIN (antiprotozoal agent)				
JECFA Evaluation:		50 (1998)		
Acceptable Daily Intake (ADI):		0-400 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		N,N'-bis(4-nitrophenyl)urea.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Chicken	Muscle	200	23 rd (1999)	Broilers.
Chicken	Liver	200	23 rd (1999)	Broilers.
Chicken	Kidney	200	23 rd (1999)	Broilers.
Chicken	Fat/Skin	200	23 rd (1999)	Broilers.

PHOXIM (insecticide)				
JECFA Evaluation:		52 (1999); 62 (2004)		
Acceptable Daily Intake (ADI):		0-4 µg/kg body weight (52 nd JECFA, 1999).		
Residue Definition:		Phoxim		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Goat	Muscle	50	26 th (2003)	
Goat	Liver	50	26 th (2003)	
Goat	Kidney	50	26 th (2003)	
Goat	Fat	400	26 th (2003)	
Pig	Muscle	50	26 th (2003)	
Pig	Liver	50	26 th (2003)	
Pig	Kidney	50	26 th (2003)	
Pig	Fat	400	26 th (2003)	
Sheep	Muscle	50	26 th (2003)	
Sheep	Liver	50	26 th (2003)	
Sheep	Kidney	50	26 th (2003)	
Sheep	Fat	400	26 th (2003)	

PIRLIMYCIN (antimicrobial agent)				
JECFA Evaluation:		62 (2004)		
Acceptable Daily Intake (ADI):		0-8 µg/kg bw (62 nd JECFA, 2004).		
Residue Definition:		Pirlimycin.		
Species	Tissue	MRLs(µg/kg)	CAC	Note
Cattle	Muscle	100	29 th (2006)	
Cattle	Liver	1000	29 th (2006)	
Cattle	Kidney	400	29 th (2006)	
Cattle	Fat	100	29 th (2006)	
Cattle	Milk	100	29 th (2006)	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.

PORCINE SOMATOTROPIN (production aid)				
JECFA Evaluation:		52 (1999)		
Acceptable Daily Intake (ADI):		Not Specified (52 nd JECFA, 1999).		
Residue Definition:		Not applicable.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Pig	Muscle	not specified	26 th (2003)	
Pig	Liver	not specified	26 th (2003)	
Pig	Kidney	not specified	26 th (2003)	
Pig	Fat	not specified	26 th (2003)	

PROGESTERONE (production aid)				
JECFA Evaluation:		25 (1981); 32 (1987); 52 (1999)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight (52 nd JECFA, 1999).		
Residue Definition:		Progesterone.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	unnecessary	21 st (2005)	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
Cattle	Liver	unnecessary	21 st (2005)	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
Cattle	Kidney	unnecessary	21 st (2005)	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
Cattle	Fat	unnecessary	21 st (2005)	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

RACTOPAMINE (production aid)				
JECFA Evaluation:		40 (1992); 62 (2004); 66 (2006)		
Acceptable Daily Intake (ADI):		0-1 µg/kg body weight (62 nd JECFA, 2004)		
Residue Definition:		Ractopamine.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	10	35 th (2012)	
Cattle	Liver	40	35 th (2012)	
Cattle	Kidney	90	35 th (2012)	
Cattle	Fat	10	35 th (2012)	
Pigs	Muscle	10	35 th (2012)	
Pigs	Liver	40	35 th (2012)	
Pigs	Kidney	90	35 th (2012)	
Pigs	Fat/skin	10	35 th (2012)	

SARAFLOXACIN (antimicrobial agent)				
JECFA Evaluation:		50 (1998)		
Acceptable Daily Intake (ADI):		0-0.3 µg/kg body weight (50 th JECFA, 1998).		
Residue Definition:		Sarafloxacin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Chicken	Muscle	10	24 th (2001)	
Chicken	Liver	80	24 th (2001)	
Chicken	Kidney	80	24 th (2001)	
Chicken	Fat	20	24 th (2001)	
Turkey	Muscle	10	24 th (2001)	
Turkey	Liver	80	24 th (2001)	
Turkey	Kidney	80	24 th (2001)	
Turkey	Fat	20	24 th (2001)	

SPECTINOMYCIN (antimicrobial agent)				
JECFA Evaluation:		42 (1994); 50 (1998)		
Acceptable Daily Intake (ADI):		0-40 µg/kg body weight (42 nd JECFA, 1994).		
Residue Definition:		Spectinomycin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	500	23 rd (1999)	
Cattle	Liver	2000	23 rd (1999)	
Cattle	Kidney	5000	23 rd (1999)	
Cattle	Fat	2000	23 rd (1999)	
Cattle	Milk (µg/l)	200	23 rd (1999)	
Chicken	Muscle	500	23 rd (1999)	
Chicken	Liver	2000	23 rd (1999)	
Chicken	Kidney	5000	23 rd (1999)	
Chicken	Fat	2000	23 rd (1999)	
Chicken	Eggs	2000	23 rd (1999)	
Pig	Muscle	500	23 rd (1999)	
Pig	Liver	2000	23 rd (1999)	
Pig	Kidney	5000	23 rd (1999)	
Pig	Fat	2000	23 rd (1999)	
Sheep	Muscle	500	23 rd (1999)	
Sheep	Liver	2000	23 rd (1999)	
Sheep	Kidney	5000	23 rd (1999)	
Sheep	Fat	2000	23 rd (1999)	

SPIRAMYCIN (antimicrobial agent)				
JECFA Evaluation:		38 (1991); 43 (1994); 47 (1996); 48 (1997)		
Acceptable Daily Intake (ADI):		0-50 µg/kg body weight (43 rd JECFA, 1994).		
Residue Definition:		Cattle and chickens, sum of spiramycin and neospiramycin; Pigs, spiramycin equivalents (antimicrobially active residues).		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	200	22 nd (1997)	
Cattle	Liver	600	22 nd (1997)	
Cattle	Kidney	300	22 nd (1997)	
Cattle	Fat	300	22 nd (1997)	
Cattle	Milk (µg/l)	200	22 nd (1997)	
Chicken	Muscle	200	22 nd (1997)	
Chicken	Liver	600	22 nd (1997)	
Chicken	Kidney	800	22 nd (1997)	
Chicken	Fat	300	22 nd (1997)	
Pig	Muscle	200	22 nd (1997)	
Pig	Liver	600	22 nd (1997)	
Pig	Kidney	300	22 nd (1997)	
Pig	Fat	300	22 nd (1997)	

SULFADIMIDINE (antimicrobial agent)				
JECFA Evaluation:		34 (1989); 38 (1991); 42 (1994)		
Acceptable Daily Intake (ADI):		0-50 µg/kg body weight (42 nd JECFA, 1994).		
Residue Definition:		Sulfadimidine.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Milk (µg/l)	25	21 st (1995)	
Not specified	Muscle	100	21 st (1995)	
Not specified	Liver	100	21 st (1995)	
Not specified	Kidney	100	21 st (1995)	
Not specified	Fat	100	21 st (1995)	

TESTOSTERONE (production aid)				
JECFA Evaluation:		25 (1981); 32 (1987); 52 (1999)		
Acceptable Daily Intake (ADI):		0-2 µg/kg body weight (52 nd JECFA, 1999).		
Residue Definition:		Testosterone.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	unnecessary	21 st (1995)	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.
Cattle	Liver	unnecessary	21 st (1995)	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.
Cattle	Kidney	unnecessary	21 st (1995)	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.
Cattle	Fat	unnecessary	21 st (1995)	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.

THIABENDAZOLE (anthelmintic agent)				
JECFA Evaluation:		40 (1992); 48 (1997); 58 (2002)		
Acceptable Daily Intake (ADI):		0-100 µg/kg body weight (40 th JECFA, 1992).		
Residue Definition:		Sum of thiabendazole and 5-hydroxythiabendazole.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Cattle	Liver	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Cattle	Kidney	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Cattle	Fat	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Cattle	Milk (µg/l)	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Goat	Muscle	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Goat	Liver	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Goat	Kidney	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Goat	Fat	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Goat	Milk (µg/l)	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Pig	Muscle	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Pig	Liver	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Pig	Kidney	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Pig	Fat	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Sheep	Muscle	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Sheep	Liver	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Sheep	Kidney	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
Sheep	Fat	100	21 st (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.

TILMICOSIN (antimicrobial agent)				
JECFA Evaluation:		47 (1996); 54 (2000); 70 (2008)		
Acceptable Daily Intake (ADI):		0-40 µg/kg body weight (47 th JECFA, 1996).		
Residue Definition:		Tilmicosin.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	100	23 rd (1999)	
Cattle	Liver	1000	23 rd (1999)	
Cattle	Kidney	300	23 rd (1999)	
Cattle	Fat	100	23 rd (1999)	
Chicken	Muscle	150	34 th (2011)	
Chicken	Liver	2400	34 th (2011)	
Chicken	Kidney	600	34 th (2011)	
Chicken	Skin/Fat	250	34 th (2011)	
Pig	Muscle	100	23 rd (1999)	
Pig	Liver	1500	23 rd (1999)	
Pig	Kidney	1000	23 rd (1999)	
Pig	Fat	100	23 rd (1999)	
Sheep	Muscle	100	23 rd (1999)	
Sheep	Liver	1000	23 rd (1999)	
Sheep	Kidney	300	23 rd (1999)	
Sheep	Fat	100	23 rd (1999)	
Turkey	Muscle	100	34 th (2011)	
Turkey	Kidney	1200	34 th (2011)	
Turkey	Liver	1400	34 th (2011)	
Turkey	Skin/Fat	250	34 th (2011)	

TRENBOLONE ACETATE (growth promoter)				
JECFA Evaluation:		26 (1982); 27 (1983); 32 (1987); 34 (1989)		
Acceptable Daily Intake (ADI):		0-0.02 µg/kg body weight (34 th JECFA, 1989).		
Residue Definition:		Cattle muscle, beta-Trenbolone; Cattle liver, alpha-Trenbolone.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	2	21 st (1995)	
Cattle	Liver	10	21 st (1995)	

TRICHLORFON (METRIFONATE) (insecticide)				
JECFA Evaluation:		54 (2000); 60 (2003); 66 (2006)		
Acceptable Daily Intake (ADI):		0-2 µg/kg bw (60 th JECFA, 2003).		
Residue Definition:		JECFA confirmed the MRL for cows' milk and the guidance levels for muscle, liver, kidney and fat of cattle recommended at the 54 th meeting (WHO TRS 900, 2001).		
Species	Tissue	MRLs(µg/kg)	CAC	Notes
Cattle	Milk	50	29 th (2006)	

TRICLABENDAZOLE (anthelmintic agent)				
JECFA Evaluation:		40 (1992); 66 (2006); 70 (2008)		
Acceptable Daily Intake (ADI):		0-3 µg/kg body weight (40 th JECFA, 1993).		
Residue Definition:		Ketotriclabnedazole		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	250	32 nd (2009)	
Cattle	Liver	850	32 nd (2009)	
Cattle	Kidney	400	32 nd (2009)	
Cattle	Fat	100	32 nd (2009)	
Sheep	Muscle	200	32 nd (2009)	
Sheep	Liver	300	32 nd (2009)	
Sheep	Kidney	200	32 nd (2009)	
Sheep	Fat	100	32 nd (2009)	

TYLOSIN (antimicrobial agent)				
JECFA Evaluation:		70 (2008)		
Acceptable Daily Intake (ADI):		0-30 µg/kg body weight based on a microbiological end-point derived from in vitro MIC susceptibility testing and faecal binding data (MICcalc = 1.698) (70 th JECFA, 2008).		
Residue Definition:		Tylosin A.		
Species	Tissue	MRLs(µg/kg)	CAC	Notes
Cattle	Muscle	100	32 nd (2009)	
Cattle	Liver	100	32 nd (2009)	
Cattle	Kidney	100	32 nd (2009)	
Cattle	Fat	100	32 nd (2009)	
Cattle	Milk	100	32 nd (2009)	
Pig	Muscle	100	32 nd (2009)	
Pig	Liver	100	32 nd (2009)	
Pig	Kidney	100	32 nd (2009)	
Pig	Fat	100	32 nd (2009)	
Chicken	Muscle	100	32 nd (2009)	
Chicken	Liver	100	32 nd (2009)	
Chicken	Kidney	100	32 nd (2009)	
Chicken	Fat/Skin	100	32 nd (2009)	
Chicken	Eggs	300	32 nd (2009)	

ZERANOL (growth promoter)				
JECFA Evaluation:		26 (1982); 27 (1983); 32 (1987)		
Acceptable Daily Intake :		0-0.5 µg/kg body weight (32 nd JECFA, 1987).		
Residue Definition:		Zeranol.		
Species	Tissue	MRL (µg/kg)	CAC	Notes
Cattle	Muscle	2	21 st (1995)	
Cattle	Liver	10	21 st (1995)	

Part 2**DRAFT AND PROPOSED DRAFT MAXIMUM RESIDUE LIMITS FOR VETERINARY DRUGS IN FOOD****A) Currently under consideration by CCRVDF****APRAMYCIN** (antimicrobial agent)

Acceptable Daily Intake (ADI): 0-30 µg/kg body weight on the basis of microbiological effects (75th JECFA, 2011).

Estimated Dietary Exposure (EDI): Using the limits of quantification (LOQs) of the analytical methods as calculated by the 75th JECFA as residue levels for muscle, fat and liver, together with the proposed MRLs for kidney, the theoretical intake in the worst-case scenario would be around 1400 µg/day and would not exceed the upper bound of the ADI (75th JECFA, 2011).

Residue Definition: Apramycin.

Species	Tissue	MRLs (µg/kg)	Step	JECFA
Cattle	Kidney	5000 T ^a	4	75
Chickens	Kidney	5000 T ^a	4	75

(a) The MRLs are temporary. The sponsor is requested to provide improved analytical methods with better performance and lower limits of quantification (LOQs) and residue depletion studies with appropriate sampling points close to the zero withdrawal periods for all tissues and species. The validated analytical methods and residue depletion studies are requested by the end of 2014.

Because of data limitations, the 75th JECFA was unable to recommend MRLs in tissues and species other than cattle kidney and chicken kidney.

DERQUANTEL (antiparasitic agent)

Acceptable Daily Intake (ADI): 0-0.3 µg/kg body weight on the basis of a lowest-observed-adverse-effect level (LOAEL) of 0.1 mg/kg body weight 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 (75th JECFA, 2011).

Estimated Dietary Exposure (EDI): As the ADI was based on an acute effect, the 75th JECFA (2011) did not calculate an EDI. Using the model diet of 300 g muscle, 100 g live, 50 g kidney, 50 g fat and 1.5 liter of milk with the MRLs recommended, the theoretical maximum daily intake (TMDI) is 8 µg/person, which represents 45% of the upper bound of the ADI.

Residue Definition: Derquantel.

Species	Tissue	MRLs (µg/kg)	Step	JECFA
Sheep	Muscle	0.2	4	75
Sheep	Liver	2.0	4	75
Sheep	Kidney	0.2	4	75
Sheep	Fat	0.7	4	75

The 75th JECFA was not able to recommend a MRL for sheep milk, as no residue data were provided.

MONEPANTEL (anthelmintic)

Acceptable Daily Intake (ADI): 0-20 µg/kg body weight on the basis of a lowest-observed-adverse-effect level (LOAEL) of 1.8 mg/kg body weight per day considering liver effects in mice, and a safety factor of 100, with rounding to one significant figure (75th JECFA, 2011).

Estimated Dietary Exposure (EDI): Using the model diet and a ration of marker residue to total residue of 100% for muscle and 66% for fat, liver and kidney, and applying a correction factor of 0.94 to account for the mass difference between the marker residue and

monepantel, the EDI is 201 µg/person, which represents 17% of the upper bound of the ADI (75th JECFA, 2011).

Residue Definition: Monepantel sulfone.

Species	Tissue	MRLs (µg/kg)	Step	JECFA
Sheep	Muscle	300	6	75
Sheep	Liver	3000	6	75
Sheep	Kidney	700	6	75
Sheep	Fat	5500	6	75

The 75th JECFA was unable to propose an MRL for sheep milk, as no data were provided.

B) MRLs held at Step 8 by the Codex Alimentarius Commission

BOVINE SOMATOTROPINS (production aid)						
JECFA Evaluation:		40 (1992); 50 (1998)				
Acceptable Daily Intake (ADI):		Not specified (1992) The ADI applies to somagrebave, sometribave, somavubave, somidobave				
Residue Definition:		Not applicable				
Species	Tissue	MRL (µg/kg)	Step	JECFA	CCRVDF	
Cattle	Muscle	Not specified	1/ 8	40, 50	7IV, 8II	
Cattle	Liver	Not specified	1/ 8	40	7IV, 8II	
Cattle	Kidney	Not specified	1/ 8	40	7IV, 8II	
Cattle	Fat	Not specified	1/ 8	40	7IV, 8II	
Cattle	Milk	Not specified	1/ 8	40	7IV, 8II	

ADI "not specified" means that available data on the toxicity and intake of the veterinary drug indicate a large margin of safety for consumption of residues in food when the drug is used according to good practice in the use of veterinary drugs. For that reason, and for the reasons stated in the individual evaluation, the JECFA concluded that use of the veterinary drugs does not represent a hazard to human and that there is no need to specify a numerical ADI.

1/ MRL "not specified" means that available data on the identity and concentration of residues of the veterinary drug in animal tissues indicate a wide margin of safety for consumption of residues in food when the drug is used according to good practice in the use of veterinary drugs. For that reason, and for the reasons stated in the individual evaluation, the JECFA concluded that the presence of drug residues in the named animal product does not present a health concern and that there is no need to specify a numerical MRL.