



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON RESIDUES OF VETERINARY DRUGS IN FOODS**

Twenty-first Session

Minneapolis, Minnesota, United States of America, 26 – 30 August 2013

DATABASE ON COUNTRIES' NEEDS FOR MRLS

(Draft Report of the Electronic Working Group on Countries' Needs for MRLs)

(Australia, Brazil, Canada, Chile, Croatia, France, India, Republic of Korea, Philippines, Thailand, United States of America, WHO and IFAH)

Background

1. The work on a database of Countries' Needs for MRLs began in 2009 following the 18th Session of the Codex Committee on Residues of Veterinary Drugs in Foods in Natal, Brazil. The vision for the database was to collect requests and information from countries in need of MRLs for specific veterinary drugs. The purpose was to create a list could help find sufficient data to permit an evaluation by JECFA. With the renewal of this effort by the 20th Session of the CCRVDF in San Juan, Puerto Rico, the Committee created an electronic Working Group to:

- (i) Continue its work on the database;
- (ii) Clearly identify country requirements taking into account what had already been done by JECFA; and
- (iii) Identify data needs and define the exact request (e.g. MRLs species and tissue) for the three veterinary drugs of common interest to many countries, namely: bacitracin, enrofloxacin and florfenicol.

Proceedings of the electronic Working Group

2. The electronic Working Group worked through email. In continuing to develop and maintain the database of countries' needs for MRLs, the electronic Working Group:

- a) Approached countries that had previously contributed to the database to confirm that the requests already in the database reflected current needs and to refine them as necessary with additional information on species, tissues, and country registration;
- b) Expanded the database to include additional information on data gaps identified by JECFA where veterinary drugs had previously been evaluated;
- c) Surveyed working group members for specific information regarding current country registration and availability of data for bacitracin, enrofloxacin, florfenicol, and ivermectin; and
- d) Revised the database based on information collected, including any new requests.

3. In some cases, the MRL requests included in the database were very broad. The electronic Working Group worked with the country providing the request to narrow down each request to include only those species in which the drug is being used, while striving to include as much information as possible that could define the potential request to JECFA. In order to better define each request, members of this Working Group contacted each country that had previously contributed to the database in order to gain more information. Members from Australia, Canada, France, and the United States of America made efforts to contact the original requesting countries. The Working Group updated the database incorporating new information from Argentina, Armenia, Kenya, Morocco, Philippines, and Uruguay. The Republic of Korea, as a member of the Working Group, provided additional specific requests to the database.

4. The database on Countries' Needs for MRLs included information on whether JECFA has previously evaluated each drug, and whether JECFA had established a full ADI or recommended MRLs. The Working Group revised the database to include data gaps identified by the JECFA during past evaluations. Where

JECFA has established an ADI and recommended MRLs in other species than what are being requested, the Working Group noted that residue data for the requested species is needed.

5. The Working Group was asked to define the data needs and exact request for bacitracin, enrofloxacin, and florfenicol. The Working Group added ivermectin to this list as the need for a cattle muscle MRL has been a topic of discussion at recent sessions of the CCRVDF and the database contains additional requests for ivermectin MRLs in other species. To facilitate defining data needs, members of the Working Group were asked to provide information on veterinary use patterns for bacitracin, enrofloxacin, florfenicol, and ivermectin from within their own country. Information received on the use of these four veterinary drugs was added to the Database on Countries' Needs for MRLs.

Discussion

6. The Working Group and other member countries provided more information on tissues required and dosages for many of the veterinary drugs included in the Database on Countries' Needs for MRLs. The addition of JECFA's identified data gaps also helps to define the data needs for those veterinary drugs that JECFA has already evaluated. While many of the MRL requests have been refined, some requests remain too broad.

7. The Database on Countries' Needs for MRLs contains requests for 83 veterinary drugs. JECFA has previously evaluated 29 of the requested veterinary drugs.

Recommendations

8. The electronic Working Group recommends that the Committee continue to develop and maintain the Database of Veterinary Drugs of Potential Interest to Developing Countries. The electronic Working Group also recommends that the Database on Countries' Needs for MRLs be circulated to all member countries seeking additional information for those veterinary drugs currently included in the database.

Annex**Database on Countries' Needs for MRLs**

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
All Approved drugs for large animals	Egypt, Kenya	Camel	Meat /fat Liver Kidney Milk		No data are available for any tissue or milk					Camel meat and milk are widely used in Egypt and other countries especially rural areas and in Arab countries. Camel meat and milk are widely consumed in Kenya in the arid and semi arid areas. Camel milk has inherent nutritional and medicinal benefits and has gained popularity among consumers in urban areas and in the city. Demand for camel milk in the international market has increased especially in South Africa and European Union.
Aminosydine	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Aminosydine	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Aminosydine	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Aminosydine	Armenia	Rabbit			MRLs (ppb) in Armenia: Muscle (1000), Liver (10,000), Kidney (20,000)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Amoxicillin	Republic of Korea	Fish	Muscle	Republic of Korea Dosing Resimen: 20-40 mg a.i./kg b.w. orally(in feed) for 4 - 7 days		Republic of Korea: Daesung Microbiological Labs Co., Ltd.; Daone Chemical Co., Ltd.; WooGene B&G; KOPAVET Special, Inc.; Jin woo medicine; Ubtech	75th JECFA, 2011	Codex MRL in Cattle, Sheep, Pig	Republic of Korea (0.05-fish)	Fish residue data needed

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Ampicillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth		No Codex MRLs	Armenia; Australia: milk; Canada; EU; USA	
Ampicillin	Republic of Korea	Fish	Muscle	Republic of Korea Dosing Resimen : 5-20 mg a.i./kg b.w. Orally(in feed) for 5 days; 2-7 mg a.i./kg b.w. Orally(in feed) for 3-5 days; 0.05-0.1 mg a.i./kg b.w. Orally(in feed) for 3 days; 20-80 mg a.i./kg b.w. Orally(in feed) for 5 days		Republic of Korea: WooSung Vet.; JB Solution; KOPAVET Special, Inc.; Green cross veteritary products; Korea thumb vet.; EWHA PHARMTEK; ChoongAng Biotech Co., Ltd.; Sung-Won Co., Ltd; Samyang Anipharm Co., Ltd.; HANDONG Co., Ltd.; Komi pharm international Co., Ltd; Samu Median Co., Ltd; WooGene B&G; Daehan New Pharm Coperation; Dongbu Farm Hanong; ELT Science; Jin woo medicine; Chamshin pharma Co., Ltd; Da One Chemical; Ubtech		No Codex MRLs	Republic of Korea (0.05-fish)	
Ampicillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth		No Codex MRLs	Armenia; Canada; EU; USA	
Ampicillin	Armenia	Swine	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50	Wyeth		No Codex MRLs	Armenia; EU	
Apramycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (1000), Fat (1000), Liver (10,000), Kidney (20, 000)	Elanco		No Codex MRLs	Armenia; Australia; EU	Need more specific tissue information
Bacitracin	Democratic People's Republic of Korea	All animals		Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg/kg in feed for 10 - 50 days		Alpharma, Inc.; Zoetis, Inc.		No Codex MRLs	Australia: chicken; Canada: chicken, turkey, and pig; EU:	Need to better define species and tissues

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
									cattle and rabbit; USA: cattle, swine, chicken, turkey, quail, pheasant, and quail	
Bacitracin	Armenia, Democratic People's Republic of Korea, Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru	MRLs (ppb) in Armenia: Milk (100), Muscle (150), Fat (150), Liver (150), Kidney (150)	Alpharma, Inc.; Zoetis, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia; EU; USA	Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7 IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).
Bacitracin	Costa Rica, Democratic People's Republic of Korea, Peru, Philippines	Chicken	All tissues; Muscle, Liver, Kidney, Egg	Costa Rica Dosing Regimen: 275. ppm, 55 ppm, 220 ppm, oral; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru; Philippines Dosage: 50-200ppm, 100-200ppm		Alpharma, Inc. Agri-Bio Philippines Zoetis, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Australia, Canada; USA	Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7 IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).
Bacitracin	Chile, Costa Rica, Democratic People's Republic of Korea, Peru, Philippines	Pig	Muscle, Fat, Liver, Kidney	Registered in Chile; Costa Rica Dosing Regimen: 275. ppm, 55 ppm, 220 ppm, oral; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days; Registered in Peru; Philippines dosage:		Alpharma, Inc. Agri-Bio Philippines Zoetis, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Canada; USA	Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				50-100ppm, 250-275ppm						IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).
Bacitracin	Chile, Democratic People's Republic of Korea	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Registered in Chile; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days		Alpharma, Inc.; Zoetis, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Australia: chicken; Canada: chicken and turkey; USA	Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7 IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).
Bacitracin	Armenia, Democratic People's Republic of Korea	Rabbit		Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days	MRLs (ppb) in Armenia: Muscle (150), Fat (150), Liver (150), Kidney (150)	Alpharma, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia; EU	Need more specific tissue information; Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7 IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).
Bacitracin	Chile, Democratic People's Republic of Korea	Turkey	Muscle, Fat, Liver, Kidney	Registered in Chile; Democratic People's Republic of Korea Dosing Regimen: Oral, 20 - 50 mg.kg in feed for 10 - 50 days		Alpharma, Inc.; Zoetis, Inc.	12th JECFA, 1968; Full ADI	No Codex MRLs	Canada	Summary of 12th JECFA evaluation: If bacitracin is used, it should not be allowed to give rise to detectable residues in food for consumption by humans. If the methods of analysis recommended by the Committee are used, it will be possible to ensure that the residues in food will not exceed the following limits: Milk 0-1.2 IU/ml Meat, 0-0.7 IU/g and Eggs 0-4.8 IU/g (1 mg of bacitracin = 42 IU).

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Benzyl Penicillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 50, Fat, 50, Liver 50, Kidney 50, Milk 4	Wyeth, G. C. Hanford, Walco International, Teva, Cross Vetpharm	36th JECFA, 1990; Full ADI; MRLs recommended in all species (muscle, liver, kidney, milk)	Codex MRLs in cattle, pig, and chicken	Armenia; Australia; Canada; EU; USA: zero tolerance	JECFA recommended MRLs in "all species," Codex MRLs adopted for cattle, pig, and chicken. May require additional sheep residue data
Boldenone Undecylenate	Guatemala	None specified				Wyeth		No Codex MRLs		Need to better define species and tissues
Carbadox	Guatemala	None specified				Phibro	36th JECFA, 1990; 60th JECFA, 2003; No ADI	No Codex MRLs	USA: swine	Need to better define species and tissues. Codex MRLs withdrawn due to human health concerns
Cefoperazone	Costa Rica	Cattle	Milk	25 mg/mL, intramammary		Pfizer (Italy)		No Codex MRLs	EU: cattle	
Cefotaxim	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	5 mg/kg bw/day orally		Pfizer		No Codex MRLs		
Cephacetrile	Armenia	Cattle	Muscle, Liver, Kidney, Milk	Intramammary Use only		Unknown		No Codex MRLs		
Cephalexine	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 200, Liver 200, Kidney 200, Milk 1000	Unknown		No Codex MRLs	Armenia	
Cephalonium	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 20	Unknown		No Codex MRLs	Armenia: milk	
Cephazoline	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Unknown		No Codex MRLs	Armenia: milk	
Cephazoline	Armenia	Goat	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Unknown		No Codex MRLs	Armenia: milk	
Cephazoline	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Milk 50	Unknown		No Codex MRLs	Armenia: milk	

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Chlorhexidine	Democratic People's Republic of Korea	Rabbit		Oral, 0.1% solution for 5 days		Wyeth, First Priority		No Codex MRLs	EU: all food producing species - not required	Need more specific tissue information
Cloxacillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Pfizer		No Codex MRLs	Armenia; Australia: milk; Canada; EU; USA	
Cloxacillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300	Pfizer		No Codex MRLs	Armenia; EU	
Cloxacillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Pfizer		No Codex MRLs	Armenia; EU	
Colistin	Armenia	All livestock			MRLs (ppb) in Armenia: Fat (150), Muscle (150), Liver (150, Kidney (200), Milk (50), Egg (300)	Unknown	66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, goat, rabbit, chicken, and turkey	Armenia; EU: all food producing species	Need to better define species and tissues
Coumaphos	Republic of Korea	Bees		Republic of Korea Dosing Resimen : 0.64 mg a.i./hive (12 combs); 0.16 mg a.i./hive		Republic of Korea: Bisen, Bayer Korea Limited.		No Codex MRLs	Republic of Korea (0.1-honey)	
Coumaphos	Costa Rica	Cattle	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs	Australia	
Coumaphos	Costa Rica	Goat	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs		
Coumaphos	Costa Rica	Pig	Tissues	20% topically		Bayer de Mejico		No Codex MRLs		Need more specific tissue information
Coumaphos	Costa Rica	Sheep	Tissues and milk	20% topically		Bayer de Mejico		No Codex MRLs		
Cypermethrin	Guatemala	None specified				Unknown	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle and sheep	Australia: cattle, deer, goat, horse, pig, poultry, and sheep; EU: all ruminants and salmonids	Need to better define species and tissues

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Dexamethasone	Iran	Goat	muscle	1 - 2.5 mL (2mg) IM, IV, SC		Interchemistry (Netherlands), Schering Plough, Teva, Cross Vetpharm	70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, and horse	EU	Goat residue data needed
Dexamethasone	Iran	Sheep	muscle	1 - 2.5 mL (2mg) IM, IV, SC		Interchemistry (Netherlands), Schering Plough, Teva, Cross Vetpharm	70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, and horse	Australia: cattle; EU: cattle and goat	Sheep residue data needed
Diazinon	Guatemala	None specified				Unknown		No Codex MRLs	Australia: mammals and poultry; EU: cattle, sheep, goat, and pig	Need to better define species and tissues
Diclazuril	Guatemala	None specified				Schering Plough	50th JECFA, 1998; Full ADI	Codex MRLs in sheep, rabbit, and poultry	Canada: chicken and turkey; EU: all ruminants and pig; USA: chicken and turkey	Need to better define species and tissues
Dicloxacillin	Armenia	Cattle	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Wyeth		No Codex MRLs	Armenia; EU	
Dicloxacillin	Armenia	Pig	Muscle, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300	Wyeth		No Codex MRLs	Armenia; EU	
Dicloxacillin	Armenia	Sheep	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Wyeth		No Codex MRLs	Armenia; EU	
Dimetridazole	Guatemala	None specified				Unknown	34th JECFA, 1989; No ADI	No Codex MRLs		Need to better define species and tissues. 34th JECFA: "Before reviewing the compound again, the Committee would wish to see results from the following studies: 1. A long-term study in mice. 2. Studies aimed at investigating the mechanism of tumorigenesis.

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
										3. Adequate studies of total residue depletion in poultry and swine using ring-labelled [¹⁴ C]-dimetridazole. 4. Metabolism studies in swine and poultry that characterize the total bound residues."
Doxycycline	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (100), Liver (300)	Unknown		No Codex MRLs	Armenia; EU	Need more specific tissue information
Doxycycline	Armenia Philippines	Chicken	Muscle, Liver, Kidney, Egg	Philippines: 1ml/10-15kg bw; 100-200pp, Oral; 50-100ppm, Oral;	MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (200), Liver (300), Kidney (600)	Unknown; Jickstar Pharma, Inc. Horizon Link, Inc. Carrington Trading, Inc.		No Codex MRLs	Armenia; EU	
Doxycycline	Armenia Philippines	Pig	Muscle, Liver, Kidney	Philippines: 1ml/20kg bw; 1ml/10-15kg bw; 100-200ppm, Oral; 50-100ppm, Oral; 10mg/kg BW, Oral	MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (200), Liver (300), Kidney (600)	Unknown; Jickstar Pharma, Inc. Horizon Link, Inc. Supervet International, Inc. Carrington Trading, Inc. Hipra Phils., Inc.		No Codex MRLs	Armenia; EU	Need more specific tissue information
Emamectin Benzoate	Chile, Peru	Finfish	Muscle and Skin	Registered in Chile		Schering			Canada: salmonids; EU	
Enrofloxacin	Belize, Peru	Aquaculture	Muscle	Registered in Belize; Registered in Peru		Various (Bayer, Laboratorios California, Colombia) Anupco UK	48th JECFA, 1997; Full ADI	No Codex MRLs	EU	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Armenia, Peru	Cattle	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; Canada; EU; USA	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Armenia, Peru, Philippines	Chicken	Muscle, Fat/Skin, Liver, Kidney, Egg	Registered in Peru; Philippines: 10mg/kg bw, Oral; 0.1-0.2ml/kg bw, Oral; 0.25ml/kg bw, Oral; 100ppm, Oral; 1ml/10-15kg bw, IM injection	MRLs (ppb) in Armenia: Muscle 100, Fat with Skin 100, Liver 200, Kidney 300	Bayer Health Care - Animal Health; First Fil-Bio; Provet International Corporation; Transcend Phils., Inc.; Jickstar Pharma, Inc.	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."

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Enrofloxacin	Armenia, Peru	Goat	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Armenia, Peru, Philippines	Pig	Muscle, Fat, Liver, Kidney	Registered in Peru; Philippines: 0.25ml/10kg BW, Oral; 50-75ppm; 1ml/10-15kg bw (piglet), IM injection; 1ml/20kg bw (adult), IM injection	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 200, Kidney 300	Bayer; Provet International Corporation; Transcend Phils., Inc.; Jickstar Pharma, Inc.	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU; USA	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Belize, Syria	Poultry	Muscle, liver, kidney, fat	Registered in Belize; Registered by the Codex National Syrian Committee	Temporary MRLs in Syria: Liver (200), Kidney (300), Muscle (100) (Studies under development)	Enrosol; Various (Bayer, Laboratorios California, Colombia) Anupco UK	48th JECFA, 1997; Full ADI	No Codex MRLs	EU; Syria	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Armenia	Rabbit	Muscle, Fat, Liver, Kidney		MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 200, Kidney 300	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Enrofloxacin	Armenia, Peru	Sheep	Muscle, Fat, Liver, Kidney, Milk	Registered in Peru	MRLs (ppb) in Armenia: Muscle 100, Fat 100, Liver 300, Kidney 200, Milk 100	Bayer	48th JECFA, 1997; Full ADI	No Codex MRLs	Armenia; EU	48th JECFA requested: "studies to determine the antimicrobial activity of the residues other than enrofloxacin and ciprofloxacin."
Erythromycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40) (Studies under development)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU; USA: cattle tissues	Need more specific tissue information Cattle residue data needed
Erythromycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; EU	Need more specific tissue information Goat residue data needed
Erythromycin	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU; USA	Need more specific tissue information Pig residue data needed

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Erythromycin	Armenia	Sheep			MRLs (ppb) in Armenia: Muscle (200), Fat (200), Liver (250), Kidney (220), Milk (40)	Cross Vetpharm	66th JECFA, 2006; Full ADI	Codex MRLs in chicken and turkey	Armenia; Australia; Canada; EU	Need more specific tissue information Sheep residue data needed
Flavophospholipol	Costa Rica	Cattle	All tissues	100 ppm oral		Intervet International GmbH		No Codex MRLs	Australia	Need more specific tissue information
Flavophospholipol	Costa Rica, Philippines	Chicken	All tissues; Muscle, Liver, Kidney, Egg	Costa Rica: 100 ppm oral Philippines: 4ppm, Oral; 2.6-5ppm, Oral		Intervet International GmbH; APF Corporation; Inphilco, Inc.; RNSV Corporation		No Codex MRLs		Need more specific tissue information
Flavophospholipol	Costa Rica, Philippines	Pig	All tissues; Muscle, Liver, Kidney	Costa Rica: 100 ppm oral; Philippines: 5ppm, Oral; 5-10ppm, Oral; 10-20ppm, Oral		Intervet International GmbH; APF Corporation; Inphilco, Inc.; RNSV Corporation		No Codex MRLs		Need more specific tissue information
Flavophospholipol	Chile	Poultry	Muscle, Fat, Liver, Kidney, Eggs	Registered in Chile		Intervet International GmbH		No Codex MRLs		
Florfenicol	Belize	Aquaculture	Muscle	Registered in Belize	Dossier Avi –Mex SA de CV	Flor-Blend Aqua from Avi-Mex, Mexico; Intervet, Inc.		No Codex MRLs	Australia: fish; Canada: salmonids; EU: finfish; USA: catfish and salmonids	
Florfenicol	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Schering, Intervet, Inc.		No Codex MRLs	Australia; Canada; EU; USA	
Florfenicol	Egypt, Peru, Philippines	Chicken	Muscle, fat/ skin, Liver, Kidney, Eggs	Egypt Dosage Regimen: 10 mg/kg bw/day orally; Registered in Peru; Philippines: 20ppm, Oral; 20mg/kg bw, Oral		Schering; Carrington Trading, Inc.; Ceva Animal Health Phils., Inc.		No Codex MRLs	EU	
Florfenicol	Peru, Republic of Korea	Fish	Muscle	Registered in Peru; Republic of Korea Dosing Regimen: 10 mg/kg b.w. Orally(in feed) for 5 days; 1 mg/kg b.w. Orally(in feed) for 5 days;		Peru: Schering Republic of Korea: RNL Bio Co., Ltd; JB Solution; Daesung Microbiological Labs Co., Ltd.; Samu Median Co., Ltd; Sung-Won Co., Ltd;		No Codex MRLs	Australia; Canada: salmonids; EU: finfish; USA: catfish and salmonids; Republic of Korea (0.2-	Republic of Korea trade names: MEGAFEN · FISH solution, DANAPEN-C, Aqua Florfen, Aquaflor, Ultra floro, etc.

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				10 a.i. mg/kg b.w. i.m. injection (Bastard halibut) Registered for use in salmon, yellowtail, eel, cherry salmon, Ayu sweetfish. Withdrawal times: 5 day for oral product in yellowtail, 7 days for oral product in eel, 14 days for oral product in salmon, cherry salmon, Ayu sweetfish, 40 days for i.m. injection in bastard halibut		Chamshin pharma Co., Ltd; KBNP, INC.; Green cross veterinary products; Dongbu Farm Hanong; Seoul vet pharma; Eaglevet; Daehan New Pharm Coperation; SF., Inc; Samyang Anipharm Co., Ltd.; EWHA PHARMTEK; Jin woo medicine; CTC bio Co., Ltd; Korea thumb vet.; Namjoon local products; ELT Science; WooGene B&G; Daone Chemical; NEL biotech. Ltd; Ubtech; HANDONG Co., Ltd. USA: Intervet, Inc.			fish)	
Florfenicol	Peru	Goat	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Schering		No Codex MRLs	EU	
Florfenicol	Peru, Philippines	Pig	Muscle, Fat/Skin, Liver, Kidney	Registered in Peru; Philippines: Broad Spectrum Antibiotic (Control of Swine Respiratory Diseases), dosage: 20ppm, Oral; 40-80ppm, Oral; 20-40ppm Oral; 20mg/kg bw, Oral; 15mg/kg bw, IM injection product label available	The European Agency for the Evaluation of Medicinal Products- Veterinary Medicines and Inspections: Muscle (300µg/kg), Skin+Fat (500µg/kg), Liver (2000µg/kg) and Kidney (500µg/kg) Australian Pesticide and Veterinary Medicine Authority- Muscle (0.5mg/kg), Skin+Fat (1mg/kg), Liver (3mg/kg) and Kidney (1mg/kg)	Intervet Schering Plough Animal Health Mexico; Carrington Trading, Inc., Plaridel, Virbac Animal Health, Ceva Animal Health, Schering Plough Animal Health, Intervet, Inc.		No Codex MRLs	Australia; Canada; EU	
Florfenicol	Syria	Poultry	Liver Kidney Muscle	Registered by the Codex National Syrian Committee	Temporary MRLs in Syria: Liver (2500), Kidney (750), Muscle (100) (Studies under development)	Floridin		No Codex MRLs	EU; Syria	

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Florfenicol	Peru	Sheep	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Schering		No Codex MRLs	EU	
Flumequine	Armenia	Cattle	Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Unknown	48th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	48th JECFA did not receive residue data for milk
Flumequine	Armenia	Chicken	Fat with Skin		MRLs (ppb) in Armenia: Muscle 400, Fat and Skin 250, Liver 800, Kidney 1000	Unknown	48th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	Need more specific tissue information
Flumequine	Chile	Finfish	Muscle and Skin	Registered in Chile			66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and trout	EU	Codex MRLs in trout, additional residue data may be required to cover all finfish
Flumequine	Armenia	Goat	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Unknown	66th JECFA, 2006; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and trout	Armenia; EU	Goat residue data needed
Flumequine	Armenia	Sheep	Milk		MRLs (ppb) in Armenia: Muscle 200, Fat 300, Liver 300, Kidney 500, Milk 50	Unknown	66th JECFA, 2006; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia; EU	48th JECFA did not receive residue data for milk
Flumetrina (Flumethrin)	Guatemala	Bees	Honey					No Codex MRLs	EU: not required	
Flunixin meglumine	Costa Rica	Cattle	Tissues and Milk	83 mg/mL parenteral		Schering Plough, Calox Venezuela		No Codex MRLs	Australia; Canada; EU; USA	
Flunixin meglumine	Costa Rica	Pig	Tissues and Milk	83 mg/mL parenteral		Schering Plough, Calox Venezuela		No Codex MRLs	Canada; EU; USA	
Formic Acid	Guatemala	Bees	Honey			Unknown		No Codex MRLs	EU: all food producing species - not required	
Fosfomicina	Costa Rica	Chicken	All tissues	300 - 500 ppm, oral		Bedson de Centroamerica		No Codex MRLs		Need more specific tissue information
Fosfomicina	Chile	Poultry	Fat, Muscle, Liver, Kidney, Eggs	Registered in Chile		Bedson, Argentina		No Codex MRLs		
Fumagillin	Guatemala	Bees	Honey			Unknown		No Codex MRLs		

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Gentamicin	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	5mg/kg bw/day orally		Bayer ADWIA	50th JECFA, 1998; Full ADI	Codex MRLs in cattle and pig	Canada; USA	Chicken residue data needed
Hydrocortisone	Democratic People's Republic of Korea	Pig		Oral, 0.1 - 0.3g three times a day		Unknown		No Codex MRLs	EU: all food producing species - not required	Need more specific tissue information
Ivermectin	19th CCRVDF	Camel	all tissues				58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	EU	Need more specific tissue information Camel residue data needed
Ivermectin	Uruguay, 19th CCRVDF	Cattle	Muscle	Uruguay: Endectocide. Dosage regimen is parenteral (1% & 2% product): 0.2 mg/kg bw in cattle, sheep, horses, and goats; 0.3 mg/kg bw in swine; 3.15% product has dose of 0.63 mg/kg in cattle; 3.5% product has dose of 0.75 mg/kg bw in cattle. Widely used in the country in food producing animals. Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5% Ivermectin, Product label available	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs liver, fat, and milk	Australia; Canada; EU; USA	36th JECFA recommended MRLs in liver and fat only because residues were highest in these tissues and suitable methods were available.
Ivermectin	Uruguay	Horse	Muscle	Uruguay: Endectocide, Dosage regimen is parenteral 0.2 mg/kg bw, Widely used in the country in food producing animals.	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	Australia; EU	Horse residue data needed

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5% Ivermectin, product label available						
Ivermectin	Guatemala	None specified				Merial	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	Australia: cattle, deer, horse, pig, and sheep; Canada: cattle, sheep, and pig; EU: all mammalian food producing species; USA: cattle, swine, sheep, reindeer, and American bison	Need to better define species and tissues
Ivermectin	19th CCRVDF	Rabbit	all tissues				58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, and sheep	EU	Need more specific tissue information Rabbit residue data needed
Ivermectin	Uruguay	Sheep	Muscle	Uruguay: Endectocide, Dosage regimen is parenteral 0.2 mg/kg bw, Widely used in the country in food producing animals. Registered in Uruguay: 80 registered 1% Ivermectin, 1 registered 2% Ivermectin, 18 registered 3.15% Ivermectin, and 3 registered 3.5%	MRLs (ppb) in US: Cattle Muscle (10).	Merial	58th JECFA, 2002; Full ADI	Codex MRLs in liver and fat	Australia; Canada; EU: fat, liver, and kidney; USA: liver	36th JECFA recommended MRLs in liver and fat only because residues were highest in these tissues and suitable methods were available.

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				Ivermectin, product label available						
Kanamycin	Armenia	All livestock except fish			MRLs in Armenia: Muscle (100), Fat (100), Liever (600), Kidney (2500), Milk (150)	Wyeth	12th JECFA, 1968; No ADI	No Codex MRLs	Armenia; EU: all food producing species except fin fish	Need to better define species and tissues 12th JECFA reported: "Kanamycin could not be fully evaluated toxicologically on the basis of the data that were made available."
Kitasamycin	Costa Rica	Chicken	All tissues	110 - 330 ppm oral		Anupco, Inglaterra		No Codex MRLs	Australia	Need more specific tissue information
Kitasamycin	Costa Rica	Pig	All tissues	110 - 330 ppm oral		Anupco, Inglaterra		No Codex MRLs	Australia	Need more specific tissue information
Levamisole	Morocco	Goat	Fat, Muscle, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCI CEVA INTERVET CALIER PHARMA 5 ECOMED	42nd JECFA, 1994; Full ADI	Codex MRLs in cattle, sheep, and poultry.	Australia; Canada: cattle and sheep; EU: cattle and sheep; USA: cattle and sheep	Goat residue data needed
Lincomycin	Armenia	Cattle			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRL in milk	Armenia; Australia; EU	Need more specific tissue information
Lincomycin	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Egg (50)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in liver, kidney, muscle, fat, and fat with skin	Armenia; Australia; Canada; EU; USA	Need more specific tissue information
Lincomycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in Cattle milk, and pig and chicken tissues	Armenia; Australia; EU	Need more specific tissue information Goat residue data needed
Lincomycin	Armenia	Sheep			MRLs (ppb) in Armenia: Muscle (100), Fat (50), Liver (500), Kidney (1500), Milk (150)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in Cattle milk, and pig and chicken tissues	Armenia; EU	Need more specific tissue information Goat residue data needed
Marbofloxacin	Armenia	Cattle			MRLs in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Unknown		No Codex MRLs	Armenia; EU	Need more specific tissue information

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Marbofloxacin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Marbofloxacin	Armenia	Sheep			MRLs in Armenia: Muscle (150), Fat (50), Liver (150), Kidney (150), Milk (75)	Unknown		No Codex MRLs	Armenia	Need more specific tissue information
Mebendazole	Costa Rica	Cattle	All tissues	500 - 600 ppm, oral		Schering Plough, Cenavisa, Espana		No Codex MRLs	Australia	Need more specific tissue information
Mebendazole	Costa Rica, Philippines	Chicken	All tissues; Muscle, Liver, Kidney, Egg	Costa Rica: 500 - 600 ppm, oral; Philippines: 60ppm, Oral; 60-120ppm, Oral		Schering Plough, Cenavisa, Espana; Equalivet; JCS Chemical Industries, Inc.; Transcend Phils., Inc.; Masstock Laboratories		No Codex MRLs		Need more specific tissue information
Mebendazole	Costa Rica, Philippines	Pig	All tissues; Muscle, Liver, Kidney	Costa Rica: 500 - 600 ppm, oral; Philippines: 15-60ppm, Oral; 30-60ppm, Oral; 30-72ppm, Oral		Schering Plough, Cenavisa, Espana; Equalivet; JCS Chemical Industries, Inc.; Transcend Phils., Inc.; Masstock Laboratories		No Codex MRLs	Australia	Need more specific tissue information
Metronidazole	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	2mg/kg bw/day orally, Used together with colistin		Marcyrl	34th JECFA, 1989; No ADI	No Codex MRLs		34th JECFA reported: "Metronidazole was not evaluated toxicologically because the relevant data were not made available to the Committee. Studies on the depletion of residues of metronidazole in food-producing animals were not made available to the Committee."
Monensin	Guatemala	None specified				Elanco	70th JECFA, 2008; Full ADI	Codex MRLs in quail, cattle, sheep, goat, chicken, and turkey	Australia: cattle, goat, poultry, and sheep; Canada: cattle, chicken and turkey; EU: cattle; USA: cattle, goat, chicken, turkey, and quail	Need to better define species and tissues

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Nafcillin	Armenia	All ruminant animals	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Unknown		No Codex MRLs	Armenia; EU: all ruminants	Need to better define species
Nandrolone	Guatemala	None specified				Unknown		No Codex MRLs		Need to better define species and tissues
Nitroimidazoles	Guatemala	None specified				Unknown		No Codex MRLs		Need to better define species and tissues
Norfloxacin	Belize	Aquaculture	Muscle	Registered in Belize		Various (Bayer, Laboratorios California, Colombia) Anupco UK		No Codex MRLs		
Norfloxacin	Belize, Philippines	Poultry	Muscle, liver, kidney, fat, egg	Registered in Belize; Philippines: 100ppm, Oral; 25-50ppm, Oral		Various (Bayer, Laboratorios California, Colombia) Anupco UK; Jickstar Pharma, Inc.; Chemvet Products; Apt Vet Link, Inc.; Carrington Trading, Inc.		No Codex MRLs		
Novobiocin	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (50)	Pfizer	12th JECFA, 1968; Full ADI	No Codex MRLs	Armenia: milk; Australia; Canada; EU; USA	Need more specific tissue information Summary of 12th JECFA: "When novobiocin is used, it should not be allowed to give rise to detectable residues in food for human consumption. The quantification limits of the analytical methods recommended by the Committee are: milk 0-0.15 mg/kg; meat 0-0.5mg/kg; and eggs 0-0.1 mg/kg."
Olaquinox	Guatemala	None specified				Unknown	42nd JECFA, 1994; No ADI	No Codex MRLs	Australia: pig and poultry	Need to better define species and tissues 42nd JECFA requested: "The Committee requires for review by 1996 the results of studies to determine residues in liver and kidney of pigs, MQCA being used as the marker residue." Summary of 42nd JECFA: "The Committee concluded that due to the genotoxic potential of olaquinox and in the absence of specific toxicity studies on the

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
										metabolites, no ADI could be allocated. Noting that the parent compound was absent in muscle at the proposed withdrawal period of 28 days and that the metabolites could partly be evaluated on the basis of toxicity studies in experimental animals, a temporary acceptance of residues resulting from the use of olaquinox in pigs in accordance with Good Practice in the Use of Veterinary Drugs was recommended."
Olaquinox	Belize	Poultry	Muscle, Kidney	Registered in Belize		Helm Mexico and Calier Spain	42nd JECFA, 1994; No ADI	No Codex MRLs	Australia	Need to better define species and tissues 42nd JECFA requested: "The Committee requires for review by 1996 the results of studies to determine residues in liver and kidney of pigs, MQCA being used as the marker residue." Summary of 42nd JECFA: "The Committee concluded that due to the genotoxic potential of olaquinox and in the absence of specific toxicity studies on the metabolites, no ADI could be allocated. Noting that the parent compound was absent in muscle at the proposed withdrawal period of 28 days and that the metabolites could partly be evaluated on the basis of toxicity studies in experimental animals, a temporary acceptance of residues resulting from the use of olaquinox in pigs in accordance with Good Practice in the Use of Veterinary Drugs was recommended."

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Oxacillin	Armenia	All ruminant animals	Muscle, Liver, Kidney, Milk		MRLs (ppb) in Armenia: Muscle 300, Fat 300, Liver 300, Kidney 300, Milk 30	Unknown		No Codex MRLs	Armenia; EU: all food producing species	Need to better define species
Oxalic Acid	Guatemala	Bees	Honey			Unknown		No Codex MRLs	EU: not required	
Oxolinic Acid	Chile, Republic of Korea	Finfish	Muscle and Skin	Registered in Chile Republic of Korea Dosing Resimen: 5-10 a.i. mg/kg b.w. Orally(in feed) for 5-7 days(carp, Aeromonas hydrophila); 5-20 a.i. mg/kg b.w. - Orally(in feed) for 3-5 days(cherry salmon, Vivrio anguillarum); 5-10 a.i. mg/kg, Orally (in feed) for 5-7 days(salmon, Aeromonas salmonicida) 5-20 a.i. mg/kg b.w. Orally(in feed) for 4-6 days(eel, Aeromonas hydrophila) 5-20 a.i. mg/kg b.w. Orally(in feed) for 5-7 days(eel, Edwardsiella tarda) 1-5 a.i. mg/kg b.w. Orally(in feed) for 3-5 days(eel, Pseudomonas anguillaum) 10-30 a.i. mg/kg b.w. Orally(in feed) for 5 days(yellowtail, Pasteurella piscicida) 5-20 a.i. mg/kg b.w. Orally(in feed) for 3-7 days(ayu sweetfish, Vivrio anguillarum); 5-20 a.i. mg/kg b.w. Orally(in feed) for 4-6 days(eel,		Republic of Korea: Samyang Anipharm Co., Ltd.; Sung-Won Co., Ltd; Dongbu Farm Hanong; HANDONG Co., Ltd.; WooGene B&G; WooSung Vet.; Samu Median Co., Ltd; Chamshin pharma Co., Ltd; SF., Inc; Bayer Korea Limited.; Seoul vet pharma; Daehan New Pharm Coperation; Korea thumb vet.; Namjoon local products; NEL biotech. Ltd; EWHA PHARMTEK; Green cross veteritary products; Dawon Chemical	43rd JECFA, 1994; No ADI	No Codex MRLs	EU; Republic of Korea (0.1-cherry salmon, salmon, Yellowtail, eel, Ayu sweetfish, carp)	Summary of 43rd JECFA: "In view of the major deficiencies in the reporting and protocols of the toxicological studies available for evaluation, and as a clear NOEL in the arthropathy study in dogs could not be identified, the Committee was unable to establish an ADI. The Committee was not able to set MRLs for oxolinic acid because no ADI was established. No additional residue data were requested."

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				<p>Aeromonas hydrophila); 10-30 a.i. mg/kg b.w. Orally(in feed) for 3-7 days; 10-20 a.i. mg/kg b.w. Orally(in feed) (eel, carp, cherry salmon); 10-30 a.i. mg/kg b.w. Orally(in feed) (yellowtail); 5-10 a.i. mg/kg b.w. Orally(in feed) for 5-7 days (salmon, Aeromonas salmonicida); 5-20 a.i. mg/kg b.w. Orally(in feed) for 3-5 days(salmon, Vivrio anguillarum); 20 a.i. mg/kg b.w. - Orally(in feed) for 5 days(eel, Edwardsiella trada); 5-10 a.i. mg/kg b.w. Oral(in feed) for 3-7 days; 4-10 a.i. mg/kg water, Dip treatment for 5-8 hours; 1 a.i. g/kg water, Dip treatment for 24 hours(carp, Aeromonas spp.)</p>						
Oxytetracycline	Armenia	All livestock			MRLs (ppb) in Armenia: Muscle (300), Liver (300), Kidney (100), Milk (100)	Pfizer, Boehringer Ingeleheim, Phibro, Pennfield	50th JECFA, 1998; 58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Armenia; Australia: fish, bees, cattle, goat, pig, sheep, mammals, poultry, shrimp, and prawns; Canada: cattle, pig, sheep, salmonids, lobster, chicken, turkey, and bees; EU: all	Need to better define species and tissues

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
									food producing species; USA: beef cattle, dairy cattle, calves, swine, sheep, chicken, turkey, finfish, and lobster	
Oxytetracycline	Argentina, Republic of Korea	Bees	Honey	Registered in Argentina in cattle, sheep, goats, pigs, bees, fur bearing animals, and aquaculture Republic of Korea Dosing Resimen : 0.03 g a.i./comb (3 combs-0.09 g, 5 combs-0.15g, 8 combs-0.24g)		Argentina: Unknown Republic of Korea: Ubtech	50th JECFA, 1998; 58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Australia; Canada; Republic of Korea (0.3-honey)	Honey residue data needed
Oxytocin	Costa Rica	Cattle	Tissues and milk	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Apropharma		No Codex MRLs	EU: not required	
Oxytocin	Costa Rica	Pig	Tissues	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Apropharma		No Codex MRLs	EU: not required	Need more specific tissue information
Oxytocin	Costa Rica	Sheep	Tissues and milk	10 IU/mL, parenteral		Boehringer Ingelheim, Wyeth, Teva, United Vaccines, Cross Vetpharm, Intervet, Holanda, Apropharma		No Codex MRLs	EU: not required	

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Phenoxymethylpenicillin	Armenia	Cattle	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Unknown		No Codex MRLs	Armenia	
Phenoxymethylpenicillin	Armenia	Pig	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Unknown		No Codex MRLs	Armenia; EU	
Phenoxymethylpenicillin	Armenia	Poultry	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Unknown		No Codex MRLs	Armenia; EU	
Phenoxymethylpenicillin	Armenia	Sheep	Muscle, Liver, Skin, Kidney, Milk	Intramuscular	MRLs (ppb) in Armenia: Muscle 25, Skin and Fat: 25, Liver 25, Kidney 50, Milk 4	Unknown		No Codex MRLs	Armenia	
Phosphomycin	Argentina	Aquaculture	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs	Japan	
Phosphomycin	Argentina	Cattle	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs	Japan	
Phosphomycin	Argentina	Pig	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Phosphomycin	Argentina	Poultry	Muscle Skin and fat Liver Kidney Milk Eggs	Dose in poultry and pigs: 10 mg/Kg Pv to 40 mg /Kg Pv, Registered in Argentina in poultry and pigs, but not cattle and aquaculture	ADI Japan: 0.019 mg/Kg Pv/day	Bedson S.A.		No Codex MRLs		
Piperazine	Democratic People's Republic of Korea	Pig		Oral, 0.4 g/kg BW/day		Fleming Labs		No Codex MRLs	EU; USA	Need more specific tissue information
Pirlimycin	Armenia	Chicken			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (50), Liver 500), Kidney (1500), Egg (50)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle	Armenia	Need more specific tissue information Chicken residue data needed
Pirlimycin	Armenia	Pig			MRLs (ppb) in Armenia: Muscle (100), Skin and Fat (50), Liver (500), Kidney (1500)	Pfizer	62nd JECFA, 2004; Full ADI	Codex MRLs in cattle	Armenia	Need more specific tissue information Pig residue data needed
Ractopamine	Guatemala	None specified				Elanco	Most recent evaluation by JECFA in 2010; Full ADI; MRLs recommended in cattle and pig	Codex MRLs in cattle and pig	Australia: pig; Canada: pig, cattle, and turkey; USA: cattle, swine, and turkey	Need to better define species and tissues
Rafoxanide	Morocco	Cattle	Muscle, Fat, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCI CEVA INTERVET NOVOVET ECOMED		No Codex MRLs	EU	
Rafoxanide	Morocco	Sheep	Muscle, Fat, Liver, Kidney	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire BCI CEVA INTERVET NOVOVET ECOMED		No Codex MRLs	EU	

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Rifamycine	Egypt	Chicken	Meat fat/ skin Liver Kidney Eggs	10 mg/kg bw/day orally		EI- NASR		No Codex MRLs		
Rifaximine	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (60)	Unknown		No Codex MRLs	Armenia: milk; EU: not required	Need more specific tissue information
Robenidine	Costa Rica	Chicken	Tissues	500 ppm, oral		Alpharma, Inc., Farivet		No Codex MRLs	Australia; Canada	Need more specific tissue information
Roxarsone	Peru	Chicken	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Canada; USA	
Roxarsone	Belize	Poultry	Muscle, Kidney	Registered in Belize		Helm Mexico and Calier Spain		No Codex MRLs	Canada: chicken and turkey; USA: chicken and turkey	
Salicylic acid	Democratic People's Republic of Korea	All		Tetter, Applied, Ointment (5-10%)		Democratic People's Republic of Korea		No Codex MRLs	EU: not required	Need to better define species and tissues
Streptomycin	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (500), Fat (500), Liver (500), Kidney (1000), Milk (200)	Unknown	58th JECFA, 2002; Full ADI	Codex MRLs in cattle, pig, sheep, and chicken	Armenia; Australia; Canada: cattle; EU; USA: calves	Need more specific tissue information Goat residue data needed
Sulfadimethoxine	Democratic People's Republic of Korea	All		Bacterial infection; Oral, 0.05- 0.1g/kg-bw/day, or injection, 15-30% solution (subcutaneous, intravenous)		Alpharma		No Codex MRLs	Canada: cattle, swine, horse, chicken, and turkey; EU: all food producing species; USA: chicken, turkey, cattle, duck, salmonids, catfish, and chukar partridges	Need to better define species and tissues
Sulfamerazine	Democratic People's Republic of Korea	All		Bacterial infection, coccidiosis; Oral, 0.05-0.1g/ kg-bw/day,or injection, 15-30% solution(subcutaneo		Alpharma		No Codex MRLs	Canada: cattle, sheep, and pig; EU: all food producing	Need to better define species and tissues

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
				us, intravenous)					species	
Sulfamethoxypridazin	Democratic People's Republic of Korea	All		Bacterial infection; Oral, 0.02-0.2 g/kg•bw/day		Unknown		No Codex MRLs	EU: all food producing species; USA: swine and cattle	Need to better define species and tissues
Sulfaquinoxaline	Democratic People's Republic of Korea	Poultry		Bacterial infection, coccidiosis; Oral, 0.02-0.03% of the feed for prevention, 0.05-0.07% for therapy for 3 days		Teva		No Codex MRLs	Australia; Canada: chicken and turkey; EU; USA: chicken and turkey	Need more specific tissue information
Sulfaquinoxaline	Democratic People's Republic of Korea	Rabbit		Coccidiosis; Oral, 0.01-0.02% of the feed for prevention for 10 days, 0.05-0.07% for therapy for 3-5 days		Teva		No Codex MRLs	Canada; EU	Need more specific tissue information
Sulfonamides	Guatemala	None specified				Unknown		Codex MRLs in cattle milk and tissues of unspecified species	EU: all food producing species	Need to better define species and tissues
Tetracycline	Guatemala	Bees	Honey			Pfizer, Boehringer, Igelheim, Wyeth, Alpharma, Medpharmex, Agri Laboratories, Teva	50th JECFA, 1998; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn		Honey residue data needed
Tetracycline	Armenia	Goat			MRLs (ppb) in Armenia: Muscle (100), Liver (300), Kidney (600), Milk (100)	Pfizer, Boehringer, Igelheim, Wyeth, Alpharma, Medpharmex, Agri Laboratories, Teva	50th JECFA, 1998; Full ADI	Codex MRLs in cattle, pig, sheep, poultry, fish, and giant prawn	Armenia; Canada: cattle and sheep; EU; USA: calves	Need more specific tissue information Goat residue data needed
Thymol	Guatemala	Bees	Honey			Unknown		No Codex MRLs		
Tilmicosin	Armenia	Cattle			MRLs (ppb) in Armenia: Milk (40)	Elanco	70th JECFA, 2008; Full ADI	Codex MRLs in fat, kidney, liver, and muscle	Armenia: milk; Australia; Canada; EU; USA	If seeking MRL for cattle milk, residue data needed
Tilmicosin	19th CCRVDF	Chicken	Eggs				70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and turkey tissues		Egg residue data needed

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
Tilmicosin	19th CCRVDF	Turkey	Eggs				70th JECFA, 2008; Full ADI	Codex MRLs in cattle, pig, sheep, chicken, and turkey tissues		Egg residue data needed
Tolfinamic Acid (tolfin)	Egypt	Cattle	Meat /fat Liver Kidney Milk	2 mg/kg bw/day i.m/i.v		Egg residue data needed		No Codex MRLs	EU	
Triamcinolone	Argentina	Cattle	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Unknown		No Codex MRLs		
Triamcinolone	Argentina	Goat	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Unknown		No Codex MRLs		
Triamcinolone	Argentina	Pig	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Unknown		No Codex MRLs		
Triamcinolone	Argentina	Sheep	Muscle	Route of administration IM, 7mg/300kg; Registered in Argentina		Unknown		No Codex MRLs		
Triclabendazole	Kenya, Iran	Goat	Liver, Kidney, Milk, Muscle	Iran dosage regimen: 5 mg/kg oral		Novartis	70th JECFA, 2008; Full ADI	Codex MRLs in cattle and sheep	Australia; EU	Goat residue data needed
Trimethoprim	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Chicken	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Morocco	Every producing food species	Fat, Muscle, Liver, Kidney, Milk	Registered in Morocco	EU regulation 37/2010	ATLAS Vétérinaire VIRBAC CEVA SOPHAVET INTERVET NOVOVET BIMEDA UPHAR FRANVET		No Codex MRLs	Australia: mammals and poultry; Canada: salmonids; EU: horse and all other food	Need more specific species information

Name	Countries Requesting	Species	Tissues	Good Practice in the Use of Veterinary Drugs (GPVD)	Existing Data & Source	Manufacturer	JECFA Evaluation	Codex MRLs	Member Country MRLs	COMMENTS
									producing species	
Trimethoprim	Peru	Goat	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Pig	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Trimethoprim	Peru	Sheep	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru		Roche		No Codex MRLs	Australia; EU	
Virginiamycin	Peru	Cattle	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA: not required	
Virginiamycin	Peru	Chicken	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA: broiler chickens - not required	
Virginiamycin	Guatemala	None specified				Phibro, Alpharma		No Codex MRLs	Australia: cattle, pig, poultry, and sheep; USA: swine	Need to better define species and tissues
Virginiamycin	Peru	Pig	Muscle, Liver, Fat/Skin, Kidney	Registered in Peru				No Codex MRLs	Australia; USA	