

BHUTAN MANDATORY STANDARD FOR VETERINARY DRUG RESIDUE IN FOOD**1. PREAMBLE**

This Technical Regulation is issued pursuant to the Food Rules and Regulations of Bhutan 2017. This Technical Regulation is based mainly on the latest version of the Codex Maximum Residue Limits (MRLs) and Risk Management Recommendations (RMRs) for Veterinary Drug Residues in Foods (CAC/MRL 2-2015).

2. SCOPE

This Technical Regulation applies to Residues of Veterinary drugs in foods. The Residues of Veterinary drugs in foods, Codex Maximum Residue Limits (MRLs) shall apply.

3. DEFINITIONS

Egg means the fresh edible portion of the spheroid reproductive body laid by hen, duck or turkey.

Fat is the lipid-based tissue that is trimmable from an animal carcass or cuts from an animal carcass. It may include subcutaneous, omental or perirenal fat. It does not include interstitial or intramuscular carcass fat or milk fat.

Fish means any of the cold-blooded aquatic vertebrate animals commonly known as such. This includes Pisces, Elasmobranches and Cyclostomes. Aquatic mammals, invertebrate animals and amphibians are not included. This term may also apply to certain invertebrates, particularly Cephalopods.

Maximum Residue Limit for Veterinary Drugs (MRLVD), also MRLIs the maximum concentration of residue resulting from the use of a veterinary drug (expressed in mg/kg or mg/kg on a fresh weight basis) that is recommended to be legally permitted or recognized as acceptable in or on a food

Meat is the edible part of any mammal.

Milk is the normal mammary secretion of milking animals obtained from one or more milkings without either addition to it or extraction from it, intended for consumption as liquid milk or for further processing.

Muscle is the skeletal tissue of an animal carcass or cuts of these tissues from an animal carcass that contains interstitial and intramuscular fat. The muscular tissue may also include bone, connective tissue, tendons as well as nerves and lymph nodes in natural portions. It does not include edible offal or trimmable fat.

Poultry means any domesticated bird including chickens, turkeys, ducks, geese, guinea-fowls or pigeons.

Veterinary drug residue is the parent compounds and/or their metabolites in any edible portion of the animal product, and includes residues of associated impurities of the veterinary drug concerned.

Tissue means all edible animal tissue, including muscle and by-products

4 LIMITS FOR VETERINARY DRUG RESIDUES

This Standard consists of maximum permitted veterinary drug residue (MRL) or (MRLVD) in various animal foods.

The food specified in column (2) of the table below shall not contain the Veterinary drug specified in relation thereto in column (1) in proportion greater than the maximum permitted proportion specified in column (3) thereof in relation to the food.

MAXIMUM PERMITTED PROPORTION OF DRUG RESIDUES IN FOOD

<i>Substance</i>	<i>(1) Drug Definition of residues in which MRL was set</i>	<i>(2) Food</i>	<i>(3) Maximum Residue Limits (MRLs) in food ($\mu\text{g}/\text{kg}$)</i>
Albendazole (Anthelmintic)	2-Aminosulfone metabolite	Muscle, fat (cattle and other species), milk (cattle)	100
		Liver, kidney (cattle and other species)	5000
Amoxicillin	Amoxicillin	Milk (cattle)	4

		Muscle, liver, kidney, fat (all food producing species)	50
Ampicillin	Ampicillin	Milk (cattle)	4
		Muscle, liver, kidney, fat (all food producing species)	50
Amprolium	1-4 amino-2-n-propyl-5-(pyrimidinylmethyl)-2-picolinium chloride hydrochloride	Muscle (chicken, turkey, pheasant and calf), liver (calf), kidney (calf)	500
		Liver (chicken, turkey and pheasant), kidney (chicken and turkey)	1000
		Fat (calf)	2000
		Egg (chicken and turkey)	4000
Avoparcin	Avoparcin	Milk (cattle)	10
		Edible offal, muscle (mammalian and poultry)	100
Benzylpenicillin	Benzylpenicillin	Milk (cattle)	4
		Liver, kidney, muscle (cattle and pig)	50
Carazolol	Carazolol	Muscle, fat (pig)	5
		Liver, kidney (pig)	25
Carbadox	Carbadox	Muscle (pig)	5
		Liver (pig)	30
Carprofen	Carprofen	Muscle (horse)	50
		Fat (horse)	100
		Muscle, fat (cattle)	500
		Liver, kidney (cattle and horse)	1000

Cefquinome	Cefquinome	Milk (cattle)	20
		Muscle, fat (cattle)	50
		Liver (cattle)	100
		Kidney (cattle)	200
Ceftiofur sodium	Desfuroylceftiofur	Milk (cattle)	100
		Muscle (pig and cattle)	200
		Fat (pig and cattle)	600
		Liver (pig and cattle)	2000
		Kidney (pig and cattle)	4000
Clorsulon	Clorsulon	Muscle (cattle)	100
		Liver (cattle)	200
		Kidney (cattle)	300
		Fat (cattle)	400
Closantel	Closantel	Muscle, liver (cattle)	1000
		Muscle, liver (sheep)	1500
		Fat (sheep)	2000
		Kidney, fat (cattle)	3000
		Kidney (sheep)	5000
Cloxacillin	Cloxacillin	Milk (cattle)	30
		Muscle, liver, kidney, fat (all food producing species)	300
Colistin	Colistin	Milk (cattle)	50
		Muscle, liver, fat (cattle, chicken, pig, rabbit and sheep)	150
		Kidney (cattle, chicken, pig, rabbit and sheep)	200
		Egg (chicken)	300
Danofloxacin	Danofloxacin	Fat (cattle)	200

		Muscle (cattle and chicken)	300
		Kidney (cattle)	500
		Fat (chicken)	600
		Liver (cattle)	900
		Liver, kidney (chicken)	1200
Decoquate	Decoquate	Muscle, liver, kidney, fat (cattle and sheep)	500
Dexamethazone	Dexamethazone	Milk (cattle)	0.3
		Muscle, kidney (cattle, horse and pig)	0.5
		Liver (cattle and pig)	2.5
Dicloxacillin	Dicloxacillin	Milk (cattle)	30
		Muscle, liver, kidney, fat (all food producing species)	300
Dihydrostreptomycin	Dihydrostreptomycin	Milk (cattle)	200
		Muscle, liver, fat (cattle, chicken, pig and sheep)	500
		Kidney (cattle, chicken, pig and sheep)	1000
Dimetridazole	Dimetridazole	Edible offal, muscle (chicken and pig)	5
Diminazene	Diminazene	Milk (cattle)	150
		Muscle (cattle)	500
		Kidney (cattle)	6000
		Liver (cattle)	12000
Doramectin	Doramectin	Muscle (cattle)	10
		Kidney (cattle)	30
		Liver (cattle)	100

		Fat (cattle)	150
Doxycycline	Doxycycline	Muscle (cattle, pig and poultry)	100
		Liver (cattle, pig and poultry), fat (pig and poultry)	300
		Kidney (cattle, pig and poultry)	600
Enrofloxacin	Sum of enrofloxacin and ciprofloxacin	Muscle, liver, kidney (cattle, chicken and pig)	30
Erythromycin	Erythromycin	Milk (mammalian)	40
		Edible offal, muscle, egg	300
Ethopabate	Ethopabate	Muscle (chicken)	500
		Liver, kidney (chicken)	1500
Febantel	Sum of febandazole, oxfendazole and oxfendazole sulfone	Milk (cattle), muscle, kidney, fat (cattle, pig and sheep)	100
		Liver (cattle, pig and sheep)	500
Fenbendazole	Sum of febandazole, oxfendazole and oxfendazole sulfone	Milk (cattle), muscle, kidney, fat (cattle, pig and sheep)	100
		Liver (cattle, pig and sheep)	500

Florfenicol	Sum of florfenicol and its metabolites measured as florfenol-amine	Muscle (cattle)	200
		Kidney (cattle)	300
		Liver (cattle)	3000

Flubendazole	Flubendazole	Muscle, liver (pig)	10
		Fat (pig)	20
		Fat (cattle)	40
		Liver (cattle)	100
		Muscle (poultry)	200
		Egg (poultry)	400
		Liver (poultry)	500
Flumequine	Flumequine	Muscle, fat (cattle, pig, poultry and sheep)	50
		Liver (cattle, pig, poultry and sheep)	100
		Kidney (cattle, pig, poultry and sheep)	300
Flumehttrin	Flumethrin	Edible offal, muscle and milk (cattle)	50
Gentamicin	Gentamicin	Milk (cattle), muscle, fat (cattle and pig)	100
		Liver (cattle and pig)	200
		Kidney (cattle and pig)	1000
Isometamidium	Isometamidium	Muscle, fat, milk (cattle)	100
		Liver (cattle)	500
		Kidney (cattle)	1000
Ivermectin	22,23 Dihydroavermectin B1a	Liver (pig and sheep)	15
		Fat (pig and sheep)	20
		Fat (cattle)	40
		Liver (cattle)	100
Levamisole	Levamisole	Muscle, kidney, fat (cattle, pig, poultry and sheep)	10

		Liver (poultry)	100
Lincomycin	Lincomycin	Edible tissue (pig)	100
Maduramicin	Maduramicin	Edible tissue, muscle (chicken)	240
		Fat (chicken)	480
		Liver (chicken)	720
Moxidectin	Moxidectin	Liver (cattle)	20
		Liver (sheep), fat (cattle and sheep)	50
		kidney (cattle and sheep)	100
		milk (cattle and sheep)	500
Neomycin	Neomycin	Muscle, liver, fat (chicken, turkey, duck, cattle, goat, sheep and pig), egg (chicken), milk(cattle)	500
		Kidney (chicken, turkey, duck, cattle, goat, sheep and pig)	1000
Nicarbazin	Nicarbazin	Muscle, liver, kidney (chicken)	4000
Nystatin	Nystatin	Edible tissue (pig and poultry), egg (poultry)	0
Oxacillin	Oxacillin	Milk (all food producing species)	30
		Muscle, liver, kidney, fat (all food producing species)	300

Oxfendazole	Sum of fenbendazole, oxfendazole and oxfendazole sulfone	Muscle, kidney, fat (cattle, pig and sheep), milk (cattle)	100
		Liver (cattle, pig and sheep)	500
Oxibendazole	Oxibendazole	Milk (cattle and sheep)	50
		Muscle, liver, kidney, fat (cattle, horse, pig and sheep)	100
Oxytetracycline	Oxytetracycline	Fat (cattle, sheep, pig, chicken and turkey)	10
		Milk (cattle), muscle (cattle, sheep, pig, chicken and turkey)	100
		Egg (chicken)	200
		Liver (cattle, sheep, pig, chicken and turkey)	300
		Kidney (cattle, sheep, pig, chicken and turkey)	600
Penicillin	Penicillin	Edible tissue (chicken, quail, pig and sheep), egg (chicken and quail),	0
		milk (cattle)	10
		Edible tissue (cattle)	50
Phoxim	Phoxim	Edible offal, muscle (pig)	10
		Fat (pig)	50

Ractopamine	Ractopamine	Muscle (pig)	10
		Fat (pig)	10
		Liver (pig)	40
		Kidney (pig)	90
Robenidine hydrochlorine	Robenidine hydrochlorine	Edible tissue (poultry)	100
		Fat (poultry)	200
Salinomucin		Egg(poultry)	50
		Muscle (Cattle)	20
		Edible offal (pig), Muscle(pig and poultry)	100
		Edible offal (cattle)	500
		Poultry	100
Sarafloxacin	Sarafloxacin	Fat (chicken)	10
		Liver (chicken)	100
Spectinomycin	Spectinomycin	Milk (cattle)	200
		Muscle (cattle, chicken and pig)	300
		Fat (cattle, chicken and pig)	500
		Liver (cattle, chicken and pig)	2000
		Kidney (cattle, chicken and pig)	5000
Spiramycin	Expressed as spiramycin equivalents antimicrobially active residues	Muscle (pig)	200
		Kidney, fat (pig)	300
		Liver (pig)	600

	Sum of spiramycin and neospiramycin	Muscle (cattle and chicken) milk (cattle)	200
		Kidney (cattle) ,fat (cattle & chicken)	300
		Liver (cattle and chicken)	600
		Kidney (chicken)	800
Streptomycin	Streptomycin	Milk (cattle)	200
		Muscle, liver, fat (cattle, chicken, pig and sheep)	500
		Kidney (cattle, chicken, pig and sheep)	1000
Sulphadiazine	Sulphadiazine	Edible offal (mammalian), muscle (mammalian), milk (cattle)	100
Sulphadimethoxine	Sulphadimethoxine	Milk (cattle)	10
		Edible offal, muscle (cattle and chicken)	100
Sulphadimidine	Sulphadimidine	Milk (cattle)	25
		Edible offal (chicken and mammalian), muscle (chicken and mammalian), liver, kidney, fat (cattle)	100
Sulphamethazine	Sulphamethazine	Edible tissue (cattle, turkey, chicken and pig)	100

Sulphaquinoxaline	Sulphaquinoxaline	Edible offal, muscle (poultry)	100
Sulphonamide	Sulphonamide	Muscle, liver, kidney, fat (all food producing species), milk (cattle)	100
Tetracycline	Sum of parent drug and its 4-epimer	Muscle (cattle, poultry, pig and sheep), milk (cattle)	100
		Egg (poultry)	200
		Liver (cattle, poultry, pig and sheep)	300
		Kidney (cattle, poultry, pig and sheep)	600
Thiabendazole	Sum of thiabendazole and 5-hydroxy-thiabendazole	Muscle, liver, kidney and fat (cattle, pig, goat and sheep), milk (cattle and goat)	100
Tiamulin	8-alpha-hydroxymutilin	Muscle (pig)	3600
		Liver (pig)	10800
		Kidney, fat (pig)	14400
Tilmicosin	Tilmicosin	Milk (sheep)	50
		Muscle, fat (cattle, poultry, pig and sheep)	100
		Kidney (cattle and sheep)	300
		Liver (cattle and sheep), kidney (pig)	1000
		Liver (pig)	1500
Trenbolone acetate	β -Trenbolone	Muscle (cattle)	2
	α -Trenbolone	Liver (cattle)	10

Triclabendazole	5-chloro-6-(2'3'-dichloro-phenoxy)-benzimidazole-2-one	Fat (cattle and sheep)	100
		Muscle (cattle and sheep)	250
		Liver (Cattle)	850
		Liver (sheep)	300
Trimethoprim	Trimethoprim	Edible offal, muscle (mammalian and chicken), egg (chicken), milk (cattle)	50
Tylosin	Tylosin	Milk (cattle)	50
		Muscle, liver, kidney (chicken and cattle), edible tissue (cattle), fat (chicken), egg (chicken)	200
Virginiamycin	Virginiamycin	Muscle, liver, kidney, fat (cattle)	0
		Muscle (pig and poultry)	100
		Fat (poultry)	200
		Liver (pig and poultry)	300
		Kidney, fat (pig)	400
		Kidney (poultry)	500
Zeranol	Zeranol	Muscle (cattle)	2
		Liver (cattle)	10

PROHIBITED DRUGS

The following drugs are prohibited in food:

Beta agonists excluding Ractopamine, Nitrofurans, Chloramphenicol