Australian Government

Department of Agriculture, Fisheries and Forestry

Sheep residue testing annual datasets 2023-24

National Residue Survey (NRS), Department of Agriculture, Fisheries and Forestry

Dataset abbreviations

LOR Limit of reporting.
MRL Maximum Residue Limit.
no limit No Australian standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.
not defined Standards are not defined in inedible matrixes (urine, retina and faeces).
not set No Australian standard has been set for the chemical in the edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

Disclaimer

Table 1: ANTHELMINTICS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
abamectin	Fat	0.005	0.05	302	0	0	0
albendazole	Liver	0.001	3	372	4	0	0
clorsulon	Liver	0.08	not set	372	0	0	0
closantel	Liver	0.05	5	372	14	0	0
derquantel	Fat	0.001	0.0002	302	0	0	0
doramectin	Fat	0.005	0.1	302	0	0	0
emamectin	Fat	0.002	0.01	302	0	0	0
eprinomectin	Fat	0.005	not set	302	0	0	0
fenbendazole	Liver	0.001	0.5	372	26	0	0
fenbendazole sulfone	Liver	0.001	0.5	372	3	0	0
flubendazole	Liver	0.002	not set	372	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
fluensulfone	Fat	0.01	0.01	302	0	0	0
ivermectin	Fat	0.005	0.02	302	0	0	0
levamisole	Liver	0.001	1	372	38	0	0
mebendazole	Liver	0.005	0.02	372	0	0	0
mebendazole, 5-hydroxy-	Liver	0.005	not set	372	0	0	0
milbemectin	Fat	0.01	0.002	302	0	0	0
monepantel sulphone	Fat	0.005	7	302	2	0	0
morantel	Liver	0.001	2	372	0	0	0
moxidectin	Fat	0.005	0.5	302	26	0	0
nitroxynil	Liver	0.012	1	372	0	0	0
oxfendazole (fenbendazole sulfoxide)	Liver	0.001	3	372	47	0	0
oxibendazole	Liver	0.001	not set	372	0	0	0
oxyclozanide	Liver	0.005	2	372	0	0	0
parbendazole	Liver	0.001	not set	372	0	0	0
praziquantel	Fat	0.005	0.05	302	0	0	0
rafoxanide	Liver	0.01	not set	372	0	0	0
spinetoram	Fat	0.005	2	302	0	0	0
spinosad	Fat	0.005	2	302	10	0	0
thiabendazole	Liver	0.004	0.2	372	0	0	0
triclabendazole	Liver	0.05	2	302	0	0	0

Table 2: ANTIBIOTICS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
AHD	Retina	0.02	not defined	52	0	-	-
amoxicillin	Kidney	0.01	0.01	301	0	0	0
AMOZ	Retina	0.02	not defined	52	0	-	-
ampicillin	Kidney	0.005	not set	301	0	0	0
AOZ	Retina	0.02	not defined	52	0	-	-
apramycin	Kidney	0.05	2	301	0	0	0
avilamycin	Kidney	0.05	not set	301	0	0	0
benzyl G penicillin	Kidney	0.01	0.06	301	0	0	0
ceftiofur (desfuroylceftiofur)	Kidney	0.1	not set	301	0	0	0
cefuroxime	Kidney	0.05	not set	301	0	0	0
cephalonium	Kidney	0.005	not set	301	0	0	0
chloramphenicol	Muscle	0.0001	not set	304	0	0	0
chlortetracycline	Kidney	0.01	not set	301	0	0	0
ciprofloxacin	Kidney	0.005	not set	53	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
cloxacillin	Kidney	0.005	not set	301	0	0	0
danofloxacin	Kidney	0.005	not set	53	0	0	0
difloxacin	Kidney	0.005	not set	53	0	0	0
dihydrostreptomycin	Kidney	0.05	0.3	301	0	0	0
doxycycline	Kidney	0.01	not set	301	0	0	0
enrofloxacin	Kidney	0.005	not set	53	0	0	0
erythromycin	Kidney	0.05	0.3	301	0	0	0
florfenicol	Muscle	0.001	not set	304	0	0	1
flumequine	Kidney	0.005	not set	53	0	0	0
gatifloxacin	Kidney	0.005	not set	53	0	0	0
gentamycin	Kidney	0.05	not set	301	0	0	0
levofloxacin	Kidney	0.005	not set	53	0	0	0
lincomycin	Kidney	0.05	not set	301	0	0	0
lomefloxacin	Kidney	0.005	not set	53	0	0	0
marbofloxacin	Kidney	0.005	not set	53	0	0	0
moxifloxacin	Kidney	0.005	not set	53	0	0	0
nalidixic acid	Kidney	0.005	not set	53	0	0	0
neomycin	Kidney	0.05	10	301	0	0	0
norfloxacin	Kidney	0.005	not set	53	0	0	0
oleandomycin	Kidney	0.05	0.1	301	0	0	0
orbifloxacin	Kidney	0.005	not set	53	0	0	0
oxolinic acid	Kidney	0.005	not set	53	0	0	0
oxytetracycline	Kidney	0.01	0.6	301	0	0	0
sarafloxacin	Kidney	0.005	not set	53	0	0	0
SEM	Retina	0.02	not defined	52	0	-	-
streptomycin	Kidney	0.05	0.3	301	0	0	0
sulfachloropyridazine	Kidney	0.02	not set	301	0	0	0
sulfadiazine	Kidney	0.01	0.1	301	0	0	0
sulfadimethoxine	Kidney	0.02	not set	301	0	0	0
sulfadimidine (sulfamethazine)	Kidney	0.01	0.1	301	0	0	0
sulfadoxine	Kidney	0.02	0.1	301	0	0	0
sulfafurazole	Kidney	0.02	not set	301	0	0	0
sulfamerazine	Kidney	0.02	not set	301	0	0	0
sulfamethoxazole	Kidney	0.02	not set	301	0	0	0
sulfamethoxydiazine (sulfameter)	Kidney	0.02	not set	301	0	0	0
sulfamethoxypyridazine	Kidney	0.02	not set	301	0	0	0
sulfapyridine	Kidney	0.02	not set	301	0	0	0
sulfaquinoxaline	Kidney	0.02	not set	301	0	0	0
sulfathiazole	Kidney	0.02	not set	301	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
sulfatroxazole	Kidney	0.02	0.1	301	0	0	0
tetracycline	Kidney	0.01	not set	301	0	0	0
thiamphenicol	Muscle	0.001	not set	304	0	0	0
tilmicosin	Kidney	0.05	not set	301	0	0	0
trimethoprim	Kidney	0.01	0.05	301	0	0	0
tulathromycin	Kidney	0.05	0.3	301	0	0	0
tylosin	Kidney	0.1	not set	301	0	0	0
virginiamycin	Kidney	0.005	0.2	301	0	0	0

*In some instances, tetracycline may be present as an impurity in a chlortetracycline or oxytetracycline product and is not considered to be a violative residue.

Table 3: ANTICOCCIDIALS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
amprolium	Liver	0.01	not set	302	0	0	0
decoquinate	Liver	0.002	not set	302	0	0	0
diclazuril	Liver	0.01	not set	302	0	0	0
halofuginone	Liver	0.01	not set	302	0	0	0
lasalocid	Liver	0.01	0.7	302	0	0	0
maduramicin	Liver	0.002	not set	302	0	0	0
monensin	Liver	0.005	0.2	302	0	0	0
narasin	Liver	0.01	not set	302	0	0	0
nicarbazin (4,4'-dinitrocarbanilide)	Liver	0.01	not set	302	0	0	0
salinomycin	Liver	0.002	not set	302	0	0	0
semduramycin	Liver	0.002	not set	302	0	0	0
toltrazuril	Liver	0.01	not set	302	0	0	0

Table 4: CONTAMINANTS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
aldrin and dieldrin (HHDN+HEOD)	Fat	0.02	0.2	302	0	0	0
arochlor 1254	Fat	0.03	0.2	302	0	0	0
arochlor 1260	Fat	0.03	0.2	302	0	0	0
chlordane	Fat	0.02	0.2	302	0	0	0
DDT	Fat	0.05	5	302	0	0	0
endosulfan	Fat	0.02	not set	302	0	0	0
endrin	Fat	0.01	not set	302	0	0	0
HCB (hexachlorobenzene)	Fat	0.02	1	302	0	0	0
HCH (BHC)	Fat	0.02	0.3	302	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
heptachlor	Fat	0.02	0.2	302	0	0	0
lindane (gamma-HCH)	Fat	0.01	2	302	0	0	0
mirex	Fat	0.02	not set	302	0	0	0
pentachlorobenzene	Fat	0.02	not set	302	0	0	0

Table 5: DIOXINS

Chemical	Matrix	LOR* (pg/g)	MRL* (pg/g)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
Dioxin-like PCBs	Fat	0.1	no limit	13	13	0	0
Dioxins+Furans	Fat	0.1	no limit	13	13	0	0
Dioxins+Furans+Dioxin-like PCBs	Fat	0.1	no limit	13	13	0	0

*pg TEQ/g (fat) expressed on an upper bound basis.

Table 6: FUNGICIDES

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
amisulbrom	Fat	0.01	0.01	302	0	0	0
azoxystrobin	Fat	0.01	0.02	302	0	0	0
benzovindiflupyr	Fat	0.01	0.01	302	0	0	0
bixafen	Fat	0.01	0.2	302	0	0	0
boscalid	Fat	0.01	0.3	302	0	0	0
carbendazim	Fat	0.01	0.2	302	0	0	0
cyproconazole	Fat	0.02	0.03	302	0	0	0
cyprodinil	Fat	0.01	0.01	91	0	0	0
difenoconazole	Fat	0.01	0.05	302	0	0	0
epoxiconazole	Fat	0.01	0.01	302	0	0	0
fenhexamid	Fat	0.01	0.05	302	0	0	0
fenpyrazamine	Fat	0.01	0.01	302	0	0	0
fludioxonil	Fat	0.01	0.05	302	0	0	0
fluopicolide	Fat	0.01	0.01	302	0	0	0
fluopyram	Fat	0.01	0.1	302	0	0	0
fluquinconazole	Fat	0.01	0.5	302	0	0	0
flutriafol	Fat	0.02	0.05	302	0	0	0
fluxapyroxad	Fat	0.01	0.05	302	0	0	0
imazalil	Fat	0.01	not set	302	0	0	0
isofetamid	Fat	0.01	0.02	302	0	0	0
isopyrazam	Fat	0.01	0.005	302	0	0	0
isotianil	Fat	0.01	0.02	91	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
mandestrobin	Fat	0.01	0.02	302	0	0	0
mefentrifluconazole	Fat	0.01	0.2	302	0	0	0
procymidone	Fat	0.02	0.2	302	0	0	0
propamocarb	Fat	0.01	0.01	302	0	0	0
propiconazole	Fat	0.02	0.1	302	0	0	0
proquinazid	Fat	0.01	0.01	302	0	0	0
prothioconazole	Fat	0.01	0.02	302	0	0	0
pydiflumetofen	Fat	0.01	0.02	302	0	0	0
pyraclostrobin	Fat	0.01	0.05	302	0	0	0
pyrimethanil	Fat	0.01	0.05	302	0	0	0
pyriofenone	Fat	0.01	0.01	302	0	0	0
quinoxyfen	Fat	0.01	0.1	302	0	0	0
quintozene	Fat	0.02	0.2	302	0	0	0
spiroxamine	Fat	0.01	0.05	302	0	0	0
tebuconazole	Fat	0.01	0.1	302	0	0	0
trifloxystrobin	Fat	0.01	0.05	302	0	0	0

Table 7: HERBICIDES

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
amicarbazone	Fat	0.01	0.01	302	0	0	0
cinmethylin	Fat	0.01	0.01	302	0	0	0
cloquintocet-mexyl	Fat	0.01	0.1	302	0	0	0
ethofumesate	Fat	0.02	0.5	302	0	0	0
florpyrauxifen-benzyl	Fat	0.01	0.02	302	0	0	0
indaziflam	Fat	0.01	0.03	302	0	0	0
metamitron	Fat	0.01	0.05	302	0	0	0
metazachlor	Fat	0.01	0.05	302	0	0	0
metolachlor	Fat	0.02	0.05	302	0	0	0
propachlor	Fat	0.02	0.02	302	0	0	0
pyrasulfotole	Fat	0.01	0.01	302	0	0	0
pyroxsulam	Fat	0.01	0.01	302	0	0	0
saflufenacil	Fat	0.01	0.01	302	0	0	0
topramezone	Fat	0.01	0.01	302	0	0	0
trifludimoxazin	Fat	0.01	0.01	302	0	0	0

Table 8: HORMONES

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
16-hydroxystanozolol	Urine	0.001	not defined	303	0	-	-
betamethasone	Liver	0.001	not set	10	0	0	0
boldenone 17-alpha	Urine	0.001	not defined	303	4	-	-
boldenone 17-beta	Urine	0.001	not defined	303	0	-	-
dexamethasone	Liver	0.001	not set	10	0	0	0
dienoestrol	Liver	0.0002	not set	302	0	0	0
diethylstilboestrol	Liver	0.0002	not set	302	0	0	0
flumethasone	Liver	0.001	not set	10	0	0	0
hexoestrol	Liver	0.0002	not set	302	0	0	0
methandriol	Urine	0.005	not defined	303	0	-	-
methylprednisolone	Liver	0.001	not set	10	0	0	0
nortestosterone 17-alpha	Urine	0.001	not defined	303	0	-	-
nortestosterone 17-beta	Urine	0.001	not defined	303	0	-	-
stanozolol	Urine	0.001	not defined	303	0	-	-
trenbolone	Liver	0.0005	not set	302	0	0	0
triamcinolone	Liver	0.001	not set	10	0	0	0
triamcinolone acetonide	Liver	0.001	not set	10	0	0	0
zeranol (alpha-zearalanol)	Liver	0.002	not set	302	0	0	0

Table 9: INSECTICIDES

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
acequinocyl	Fat	0.01	0.02	302	0	0	0
acetamiprid	Fat	0.01	0.01	302	0	0	0
afidopyropen	Fat	0.012	0.1	302	0	0	0
bifenthrin	Fat	0.02	2	302	0	0	0
bioresmethrin	Fat	0.02	0.02	302	0	0	0
buprofezin	Fat	0.01	0.05	302	0	0	0
carbaryl	Fat	0.01	0.07	302	0	0	0
chlorantraniliprole	Fat	0.01	0.02	302	0	0	0
chlorfenapyr	Fat	0.02	0.05	302	0	0	0
chlorfenvinphos	Fat	0.005	0.2	302	0	0	0
chlorfluazuron	Fat	0.01	not set	302	0	0	0
chlorpyrifos	Fat	0.01	0.5	302	0	0	0
chlorpyrifos-methyl	Fat	0.01	0.05	302	0	0	0
clothianidin	Fat	0.01	0.02	302	0	0	0
coumaphos	Fat	0.02	not set	302	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
cyantraniliprole	Fat	0.01	0.01	302	0	0	0
cyclaniliprole	Fat	0.01	0.05	302	0	0	0
cyfluthrin	Fat	0.02	0.5	302	0	0	0
cyhalothrin	Fat	0.02	0.5	302	1	0	0
cypermethrin	Fat	0.02	0.5	302	1	0	0
cyromazine	Kidney	0.01	0.2	301	0	0	0
deltamethrin	Fat	0.02	0.2	302	0	0	0
diafenthiuron	Fat	0.01	0.02	302	0	0	0
diazinon	Fat	0.02	0.7	302	0	0	0
dichlorvos	Fat	0.02	0.01	302	0	0	0
dicofol	Fat	0.01	not set	302	0	0	0
dicyclanil	Kidney	0.01	0.3	301	1	0	0
diflubenzuron	Fat	0.01	0.05	302	0	0	0
dimethoate	Fat	0.02	0.05	302	0	0	0
dinotefuran	Fat	0.03	0.02	302	0	0	0
ethion	Fat	0.02	not set	302	0	0	0
etofenprox	Fat	0.01	0.01	302	0	0	0
famphur	Fat	0.02	not set	302	0	0	0
famphur oxygen-analogue	Fat	0.02	not set	302	0	0	0
fenitrothion	Fat	0.02	0.05	302	0	0	0
fenthion	Fat	0.02	not set	302	0	0	0
fenvalerate	Fat	0.02	1	302	0	0	0
fipronil	Fat	0.01	0.1	302	0	0	0
flonicamid	Fat	0.01	0.02	302	0	0	0
fluazuron	Fat	0.01	not set	302	0	0	0
flubendiamide	Fat	0.01	0.05	302	0	0	0
flumethrin	Fat	0.02	not set	302	0	0	0
flupyradifurone	Fat	0.01	0.1	302	0	0	0
fluralaner	Fat	0.01	0.35	302	0	0	0
imidacloprid	Fat	0.01	0.05	302	0	0	0
indoxacarb	Fat	0.02	3	302	0	0	0
isocycloseram	Fat	0.01	0.01	91	0	0	0
malathion	Fat	0.01	1	302	0	0	0
melamine	Kidney	0.01	2.5	301	0	0	0
metaflumizone	Fat	0.01	not set	302	0	0	0
methidathion	Fat	0.02	not set	302	0	0	0
methoxychlor	Fat	0.02	not set	302	0	0	0
methoxyfenozide	Fat	0.01	0.1	91	0	0	0
mevinphos	Fat	0.01	0.05	302	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
novaluron	Fat	0.01	0.1	302	0	0	0
omethoate	Fat	0.02	0.05	302	0	0	0
parathion-methyl	Fat	0.02	not set	302	0	0	0
permethrin	Fat	0.02	1	302	0	0	0
phosmet	Fat	0.02	0.05	302	0	0	0
pirimiphos-methyl	Fat	0.02	0.05	302	0	0	0
prothiofos	Fat	0.01	not set	302	0	0	0
pyraclofos	Fat	0.02	0.5	302	0	0	0
pyriproxyfen	Fat	0.01	0.02	302	0	0	0
spirotetramat	Fat	0.01	0.02	302	0	0	0
sulfoxaflor	Fat	0.01	0.7	302	0	0	0
tau-fluvalinate	Fat	0.01	not set	302	0	0	0
temephos	Fat	0.02	3	302	0	0	0
triflumuron	Fat	0.01	2	302	0	0	0

Table 10: METALS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
antimony	Liver	0.01	no limit	302	0	0	0
arsenic (total)	Liver	0.05	no limit	302	8	0	0
cadmium	Liver	0.01	1.25	302	273	6	3
lead	Liver	0.01	0.5	302	157	1	0
mercury (total)	Liver	0.01	no limit	302	17	0	0

Table 11: MYCOTOXINS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
taleranol (beta-zearalanol)	Liver	0.002	no limit	302	0	0	0
zearalanone	Liver	0.002	no limit	302	0	0	0
zearalenol alpha	Liver	0.002	no limit	302	6	0	0
zearalenol beta	Liver	0.002	no limit	302	8	0	0
zearalenone	Liver	0.002	no limit	302	0	0	0

Table 12: OTHER VETERINARY DRUGS

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
cimaterol	Liver	0.0003	not set	302	0	0	0

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
clenbuterol	Liver	0.0003	not set	302	0	0	0
flunixin	Kidney	0.01	not set	301	0	0	0
ketoprofen	Kidney	0.01	not set	301	0	0	0
mabuterol	Liver	0.0003	not set	302	0	0	0
meloxicam	Kidney	0.005	0.01	301	0	0	0
oxyphenbutazone	Kidney	0.005	not set	301	0	0	0
phenylbutazone	Kidney	0.005	not set	301	0	0	0
ractopamine	Liver	0.0003	not set	302	0	0	0
salbutamol	Liver	0.001	not set	302	0	0	0
tolfenamic acid	Kidney	0.005	not set	301	0	0	0
zilpaterol	Liver	0.0003	not set	302	0	0	0

Table 13: SEDATIVES

Chemical	Matrix	LOR (mg/kg)	MRL (mg/kg)	Number of samples tested	>LOR to ≤½MRL	>½MRL to ≤MRL	>MRL
2,6-dimethylaniline	Fat	0.02	not set	101	0	0	0
4-acetamidobenzoic acid	Fat	0.02	not set	101	0	0	0
4-aminobenzoic acid	Fat	0.02	not set	101	0	0	0
benzocaine	Fat	0.005	not set	101	0	0	0
bupivacaine	Fat	0.005	0.07	101	0	0	0
bupivacaine-desbutyl	Fat	0.02	not set	101	0	0	0
fentanyl	Fat	0.005	not set	101	0	0	0
glycinexylidide	Fat	0.02	not set	101	0	0	0
lidocaine	Fat	0.005	not set	101	0	0	0
mepivacaine	Fat	0.005	not set	101	0	0	0
norlidocaine	Fat	0.02	not set	101	0	0	0
procaine	Fat	0.005	not set	101	0	0	0
xylazine	Fat	0.005	not set	101	0	0	0