# Emu residue testing annual datasets 2020–21

National Residue Survey (NRS), Department of Agriculture, Water and the Environment

## 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

Although the Australian Government has exercised due care and skill in the preparation and compilation of this publication, it does not warrant its accuracy, completeness, currency or suitability for any purpose. To the maximum extent permitted by law, the Australian Government disclaims all liability, including liability in negligence for any loss, damage, cost or expense incurred by persons as a result of accessing, using or relying on any of the information or data set out in this publication. Before relying on the material in any matters, users should carefully evaluate its accuracy, currency, completeness and relevance for the purposes intended, and should obtain any appropriate professional advice relevant to their particular circumstances.

**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 | not set | 1 | 0 | 0 | 0 |
| derquantel | fat | 0.001 | not set | 1 | 0 | 0 | 0 |
| doramectin | fat | 0.005 | not set | 1 | 0 | 0 | 0 |
| emamectin | fat | 0.002 | not set | 1 | 0 | 0 | 0 |
| eprinomectin B1a | fat | 0.005 | not set | 1 | 0 | 0 | 0 |
| fluensulfone | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| ivermectin H2B1a | fat | 0.005 | not set | 1 | 0 | 0 | 0 |
| milbemectin | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| monepantel sulphone | fat | 0.005 | not set | 1 | 0 | 0 | 0 |
| moxidectin | fat | 0.005 | not set | 1 | 0 | 0 | 0 |
| praziquantel | fat | 0.005 | not set | 1 | 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** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| amoxicillin | kidney | 0.01 | 0.01 | 2 | 0 | 0 | 0 |
| ampicillin | kidney | 0.01 | not set | 2 | 0 | 0 | 0 |
| apramycin | kidney | 0.25 | 1 | 2 | 0 | 0 | 0 |
| avilamycin | kidney | 0.1 | 0.05 | 2 | 0 | 0 | 0 |
| benzyl G penicillin | kidney | 0.01 | not set | 2 | 0 | 0 | 0 |
| ceftiofur (desfuroylceftiofur) | kidney | 0.2 | not set | 2 | 0 | 0 | 0 |
| cefuroxime | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| cephalonium | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| chlortetracycline | kidney | 0.01 | 0.6 | 2 | 0 | 0 | 0 |
| cloxacillin | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| dihydrostreptomycin | kidney | 0.1 | not set | 2 | 0 | 0 | 0 |
| dimetridazole | muscle | 0.0001 | not set | 2 | 0 | 0 | 0 |
| doxycycline | kidney | 0.01 | not set | 2 | 0 | 0 | 0 |
| erythromycin | kidney | 0.1 | 0.3 | 2 | 0 | 0 | 0 |
| gentamycin | kidney | 0.1 | not set | 2 | 0 | 0 | 0 |
| lincomycin | kidney | 0.1 | 0.1 | 2 | 0 | 0 | 0 |
| metronidazole | muscle | 0.0001 | not set | 2 | 0 | 0 | 0 |
| neomycin | kidney | 0.1 | 10 | 2 | 0 | 0 | 0 |
| oleandomycin | kidney | 0.2 | not set | 2 | 0 | 0 | 0 |
| oxytetracycline | kidney | 0.01 | 0.6 | 2 | 0 | 0 | 0 |
| ronidazole | muscle | 0.0001 | not set | 2 | 0 | 0 | 0 |
| streptomycin | kidney | 0.1 | not set | 2 | 0 | 0 | 0 |
| sulfachloropyridazine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfadiazine | kidney | 0.05 | 0.1 | 2 | 0 | 0 | 0 |
| sulfadimethoxine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfadimidine (sulfamethazine) | kidney | 0.05 | 0.1 | 2 | 0 | 0 | 0 |
| sulfadoxine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfafurazole | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfamerazine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfamethoxazole | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfamethoxydiazine (sulfameter) | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfamethoxypyridazine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfapyridine | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfaquinoxaline | kidney | 0.05 | 0.1 | 2 | 0 | 0 | 0 |
| sulfathiazole | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| sulfatroxazole | kidney | 0.05 | not set | 2 | 0 | 0 | 0 |
| tetracycline | kidney | 0.01 | not set | 2 | 0 | 0 | 0 |
| tilmicosin | kidney | 0.2 | not set | 2 | 0 | 0 | 0 |
| trimethoprim | kidney | 0.05 | 0.05 | 2 | 0 | 0 | 0 |
| tulathromycin | kidney | 0.3 | not set | 2 | 0 | 0 | 0 |
| tylosin | kidney | 0.1 | 0.2 | 2 | 0 | 0 | 0 |
| virginiamycin | kidney | 0.005 | 0.2 | 2 | 0 | 0 | 0 |

**Table 3: 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 | 1 | 0 | 0 | 0 |
| arochlor 1254 | fat | 0.03 | 0.2 | 1 | 0 | 0 | 0 |
| arochlor 1260 | fat | 0.03 | 0.2 | 1 | 0 | 0 | 0 |
| chlordane | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| DDT | fat | 0.05 | 5 | 1 | 0 | 0 | 0 |
| endosulfan | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| endrin | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| HCB (hexachlorobenzene) | fat | 0.02 | 1 | 1 | 0 | 0 | 0 |
| HCH (BHC) | fat | 0.02 | 0.3 | 1 | 0 | 0 | 0 |
| heptachlor | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| lindane (gamma-HCH) | fat | 0.01 | 0.7 | 1 | 0 | 0 | 0 |
| mirex | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| pentachlorobenzene | fat | 0.02 | not set | 1 | 0 | 0 | 0 |

**Table 4: 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 | 1 | 0 | 0 | 0 |
| azoxystrobin | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| bixafen | fat | 0.02 | 0.02 | 1 | 0 | 0 | 0 |
| boscalid | fat | 0.01 | 0.5 | 1 | 0 | 0 | 0 |
| carbendazim | fat | 0.01 | 0.1 | 1 | 0 | 0 | 0 |
| cyproconazole | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| difenoconazole | fat | 0.01 | 0.05 | 1 | 0 | 0 | 0 |
| epoxiconazole | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| fenpyrazamine | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| fludioxonil | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| fluopicolide | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| fluopyram | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| fluquinconazole | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| flutriafol | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| fluxapyroxad | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| imazalil | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| isopyrazam | fat | 0.01 | 0.005 | 1 | 0 | 0 | 0 |
| mandestrobin | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| procymidone | fat | 0.02 | 0.1 | 1 | 0 | 0 | 0 |
| propamocarb | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| propiconazole | fat | 0.02 | 0.1 | 1 | 0 | 0 | 0 |
| prothioconazole | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| pydiflumetofen | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| pyraclostrobin | fat | 0.01 | 0.05 | 1 | 0 | 0 | 0 |
| pyrimethanil | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| pyriofenone | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| quinoxyfen | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| quintozene | fat | 0.02 | 0.1 | 1 | 0 | 0 | 0 |
| spiroxamine | fat | 0.01 | 0.05 | 1 | 0 | 0 | 0 |
| tebuconazole | fat | 0.01 | 0.1 | 1 | 0 | 0 | 0 |
| trifloxystrobin | fat | 0.01 | not set | 1 | 0 | 0 | 0 |

**Table 5: Herbicides**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| amicarbazone | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| Cloquintocet-mexyl | fat | 0.01 | 0.1 | 1 | 0 | 0 | 0 |
| ethofumesate | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| florpyrauxifen-benzyl | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| indaziflam | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| metamitron | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| metazachlor | fat | 0.01 | 0.05 | 1 | 0 | 0 | 0 |
| metolachlor | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| propachlor | fat | 0.02 | 0.02 | 1 | 0 | 0 | 0 |
| pyrasulfotole | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| pyroxsulam | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| saflufenacil | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| topramezone | fat | 0.01 | not set | 1 | 0 | 0 | 0 |

**Table 6: Insecticides**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| acetamiprid | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| afidopyropen | fat | 0.012 | 0.1 | 1 | 0 | 0 | 0 |
| bifenthrin | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| bioresmethrin | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| carbaryl | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| chlorantraniliprole | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| chlorfenapyr | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| chlorfenvinphos (sum of isomers) | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| chlorpyrifos | fat | 0.01 | 0.1 | 1 | 0 | 0 | 0 |
| chlorpyrifos-methyl | fat | 0.01 | 0.05 | 1 | 0 | 0 | 0 |
| clothianidin | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| coumaphos | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| cyantraniliprole | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| cyclaniliprole | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| cyfluthrin (sum of isomers) | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| cyhalothrin (sum of isomers) | fat | 0.02 | 0.02 | 1 | 0 | 0 | 0 |
| cypermethrin (sum of isomers) | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| deltamethrin | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| diafenthiuron | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| diazinon | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| dichlorvos | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| dicofol | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| dimethoate | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| dinotefuran | fat | 0.03 | 0.02 | 1 | 0 | 0 | 0 |
| ethion | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| famphur | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| famphur oxygen-analogue | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| fenitrothion | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| fenthion | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| fenvalerate (sum of isomers) | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| fipronil | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| flonicamid | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| flubendiamide | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| flumethrin | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| flupyradifurone | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| imidacloprid | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| indoxacarb | fat | 0.02 | 0.01 | 1 | 0 | 0 | 0 |
| malathion (maldison) | fat | 0.01 | 1 | 1 | 0 | 0 | 0 |
| metaflumizone | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| methidathion | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| methoxychlor | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| mevinphos | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| omethoate | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| parathion-methyl | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| permethrin (sum of isomers) | fat | 0.02 | 0.1 | 1 | 0 | 0 | 0 |
| phosmet | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| pirimiphos-methyl | fat | 0.02 | 0.05 | 1 | 0 | 0 | 0 |
| prothiofos | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| pyraclofos | fat | 0.02 | not set | 1 | 0 | 0 | 0 |
| spinetoram | fat | 0.005 | 0.01 | 1 | 0 | 0 | 0 |
| spinosad | fat | 0.005 | 0.5 | 1 | 1 | 0 | 0 |
| spirotetramat | fat | 0.01 | 0.02 | 1 | 0 | 0 | 0 |
| sulfoxaflor | fat | 0.01 | 0.01 | 1 | 0 | 0 | 0 |
| tau-fluvalinate | fat | 0.01 | not set | 1 | 0 | 0 | 0 |
| temephos | fat | 0.02 | not set | 1 | 0 | 0 | 0 |

**Table 7: 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 | 2 | 0 | 0 | 0 |
| arsenic (total) | liver | 0.05 | no limit | 2 | 0 | 0 | 0 |
| cadmium | liver | 0.01 | no limit | 2 | 2 | 0 | 0 |
| lead | liver | 0.01 | 0.5 | 2 | 1 | 1 | 0 |
| mercury (total) | liver | 0.01 | no limit | 2 | 0 | 0 | 0 |

**Table 8: 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 | 1 | 0 | 0 | 0 |
| clenbuterol | liver | 0.0003 | not set | 1 | 0 | 0 | 0 |
| mabuterol | liver | 0.0003 | not set | 1 | 0 | 0 | 0 |
| ractopamine | liver | 0.0003 | not set | 1 | 0 | 0 | 0 |
| salbutamol | liver | 0.001 | not set | 1 | 0 | 0 | 0 |
| zilpaterol | liver | 0.0003 | not set | 1 | 0 | 0 | 0 |