# Aquaculture Atlantic salmon residue testing annual datasets 2019–20

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

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**Table 1: Additives**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| brilliant green | flesh | 0.00022 | not set | 6 | 0 | 0 | 0 |
| crystal violet | flesh | 0.00014 | not set | 6 | 0 | 0 | 0 |
| leucocrystal violet | flesh | 0.0005 | not set | 6 | 0 | 0 | 0 |
| leucomalachite green | flesh | 0.00044 | not set | 6 | 0 | 0 | 0 |
| malachite green | flesh | 0.00025 | not set | 6 | 0 | 0 | 0 |
| methylene blue | flesh | 0.0011 | not set | 6 | 0 | 0 | 0 |
| Victoria blue B | flesh | 0.00066 | not set | 6 | 0 | 0 | 0 |
| Victoria blue R | flesh | 0.00025 | not set | 6 | 0 | 0 | 0 |
| Victoria pure blue BO | flesh | 0.0011 | not set | 6 | 0 | 0 | 0 |

**Table 2: Anthelmintics**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| abamectin | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| derquantel | flesh | 0.001 | not set | 6 | 0 | 0 | 0 |
| doramectin | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| emamectin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| eprinomectin B1a | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| ivermectin H2B1a | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| milbemectin | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| monepantel sulphone | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| moxidectin | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| praziquantel | flesh | 0.005 | 0.02 | 6 | 0 | 0 | 0 |

**Table 3: Antibiotics**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| AHD | flesh | 0.0004 | not set | 6 | 0 | 0 | 0 |
| amoxicillin | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| AMOZ | flesh | 0.000077 | not set | 6 | 0 | 0 | 0 |
| ampicillin | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| AOZ | flesh | 0.000072 | not set | 6 | 0 | 0 | 0 |
| apramycin | flesh | 0.25 | not set | 6 | 0 | 0 | 0 |
| avilamycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| benzyl G penicillin | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| ceftiofur (desfuroylceftiofur) | flesh | 0.2 | not set | 6 | 0 | 0 | 0 |
| cefuroxime | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| cephalonium | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| chloramphenicol | flesh | 0.00027 | not set | 3 | 0 | 0 | 0 |
| chlortetracycline | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| ciprofloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| cloxacillin | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| danofloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| difloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| dihydrostreptomycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| dimetridazole | flesh | 0.0001 | not set | 5 | 0 | 0 | 0 |
| doxycycline | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| enrofloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| erythromycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| florfenicol | flesh | 0.003 | not set | 3 | 0 | 0 | 0 |
| flumequine | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| gatifloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| gentamycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| levofloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| lincomycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| lomefloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| marbofloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| metronidazole | flesh | 0.0001 | not set | 5 | 0 | 0 | 0 |
| moxifloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| nalidixic acid | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| neomycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| norfloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| oleandomycin | flesh | 0.2 | not set | 6 | 0 | 0 | 0 |
| orbifloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| oxolinic acid | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| oxytetracycline | flesh | 0.01 | 0.2 | 6 | 0 | 0 | 0 |
| ronidazole | flesh | 0.0001 | not set | 5 | 0 | 0 | 0 |
| sarafloxacin | flesh | 0.002 | not set | 6 | 0 | 0 | 0 |
| SEM | flesh | 0.00041 | not set | 6 | 0 | 0 | 0 |
| streptomycin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| sulfachloropyridazine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfadiazine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfadimethoxine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfadimidine (sulfamethazine) | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfadoxine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfafurazole | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfamerazine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfamethoxazole | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfamethoxydiazine (sulfameter) | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfamethoxypyridazine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfapyridine | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfaquinoxaline | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfathiazole | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| sulfatroxazole | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| tetracycline | flesh | 0.01 | not set | 6 | 0 | 0 | 0 |
| thiamphenicol | flesh | 0.0029 | not set | 3 | 0 | 0 | 0 |
| tilmicosin | flesh | 0.2 | not set | 6 | 0 | 0 | 0 |
| trimethoprim | flesh | 0.05 | not set | 6 | 0 | 0 | 0 |
| tulathromycin | flesh | 0.3 | not set | 6 | 0 | 0 | 0 |
| tylosin | flesh | 0.1 | not set | 6 | 0 | 0 | 0 |
| virginiamycin | flesh | 0.005 | not set | 6 | 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) | flesh | 0.02 | 0.1 | 4 | 0 | 0 | 0 |
| arochlor 1254 | flesh | 0.03 | 0.5 | 4 | 0 | 0 | 0 |
| arochlor 1260 | flesh | 0.03 | 0.5 | 4 | 0 | 0 | 0 |
| chlordane | flesh | 0.02 | 0.05 | 4 | 0 | 0 | 0 |
| DDT | flesh | 0.02 | 1 | 4 | 0 | 0 | 0 |
| endrin | flesh | 0.01 | not set | 4 | 0 | 0 | 0 |
| HCB (hexachlorobenzene) | flesh | 0.02 | 0.1 | 4 | 0 | 0 | 0 |
| HCH (BHC) | flesh | 0.02 | 0.01 | 4 | 0 | 0 | 0 |
| heptachlor | flesh | 0.02 | 0.05 | 4 | 0 | 0 | 0 |
| lindane (gamma-HCH) | flesh | 0.02 | 1 | 4 | 0 | 0 | 0 |
| mirex | flesh | 0.05 | not set | 4 | 0 | 0 | 0 |
| toxaphene | flesh | 0.03 | not set | 4 | 0 | 0 | 0 |

**Table 5: Hormones**

| **Chemical** | **Matrix** | **LOR (mg/kg)** | **MRL (mg/kg)** | **Number of samples tested** | **>LOR to ≤½MRL** | **>½MRL to ≤MRL** | **>MRL** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| boldenone 17-alpha | flesh | 0.00036 | not set | 4 | 0 | 0 | 0 |
| boldenone 17-beta | flesh | 0.00036 | not set | 4 | 0 | 0 | 0 |
| dienoestrol | flesh | 0.00009 | not set | 4 | 0 | 0 | 0 |
| diethylstilboestrol | flesh | 0.00009 | not set | 4 | 0 | 0 | 0 |
| hexoestrol | flesh | 0.00006 | not set | 4 | 0 | 0 | 0 |
| nortestosterone 17-alpha | flesh | 0.00036 | not set | 4 | 0 | 0 | 0 |
| nortestosterone 17-beta | flesh | 0.00036 | not set | 4 | 0 | 0 | 0 |
| trenbolone | flesh | 0.00075 | not set | 4 | 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** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| spinetoram | flesh | 0.005 | not set | 6 | 0 | 0 | 0 |
| spinosad | flesh | 0.005 | not set | 6 | 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 | flesh | 0.01 | no limit | 6 | 0 | 0 | 0 |
| arsenic (total) | flesh | 0.05 | no limit | 6 | 6 | 0 | 0 |
| cadmium | flesh | 0.01 | no limit | 6 | 0 | 0 | 0 |
| chromium | flesh | 0.05 | no limit | 6 | 0 | 0 | 0 |
| lead | flesh | 0.01 | 0.5 | 6 | 0 | 0 | 0 |
| mercury (total) | flesh | 0.01 | 1 | 6 | 6 | 0 | 0 |