Australian Government
Department of Agriculture and Water Resources

# Lemon residue testing annual datasets 2018

National Residue Survey, Department of Agriculture and Water Resources

## 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 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 Fungicides

| Chemical | Matrix | LOR (mg/kg) | MRL (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| 2-phenylphenol | whole | 0.05 | 10 | 21 | 0 | 0 |
| azoxystrobin | whole | 0.01 | 3 | 21 | 0 | 0 |
| benalaxyl | whole | 0.01 | not set | 21 | – | 0 |
| bitertanol | whole | 0.01 | not set | 21 | – | 0 |
| boscalid | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| bupirimate | whole | 0.01 | not set | 21 | – | 0 |
| captafol | whole | 0.05 | not set | 21 | – | 0 |
| captan | whole | 0.05 | not set | 21 | – | 0 |
| carbendazim | whole | 0.01 | not set | 21 | – | 0 |
| chlorothalonil | whole | 0.01 | not set | 21 | – | 0 |
| cyproconazole | whole | 0.01 | not set | 21 | – | 0 |
| cyprodinil | whole | 0.01 | not set | 21 | – | 0 |

| Chemical | Matrix | LOR (mg/kg) | MRL (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| difenoconazole | whole | 0.01 | not set | 21 | – | 0 |
| dimethomorph (sum of E and Z isomers) | whole | 0.01 | not set | 21 | – | 0 |
| dithianon | whole | 0.01 | 2 | 21 | 0 | 0 |
| dodine | whole | 0.01 | not set | 21 | – | 0 |
| epoxiconazole | whole | 0.01 | not set | 21 | – | 0 |
| etridiazole | whole | 0.01 | not set | 21 | – | 0 |
| fenarimol | whole | 0.01 | not set | 21 | – | 0 |
| fenbuconazole | whole | 0.01 | not set | 14 | – | 0 |
| fenhexamid | whole | 0.01 | not set | 21 | – | 0 |
| fluazinam | whole | 0.01 | not set | 21 | – | 0 |
| fludioxonil | whole | 0.01 | 10 | 21 | 0 | 0 |
| fluopyram | whole | 0.01 | not set | 14 | – | 0 |
| fluquinconazole | whole | 0.01 | not set | 21 | – | 0 |
| flusilazole | whole | 0.01 | not set | 21 | – | 0 |
| flutriafol | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| hexaconazole | whole | 0.01 | not set | 21 | – | 0 |
| imazalil | whole | 0.01 | 10 | 21 | 0 | 3 |
| iprodione | whole | 0.05 | not set | 21 | – | 0 |
| kresoxim-methyl | whole | 0.01 | not set | 21 | – | 0 |
| mandestrobin | whole | 0.01 | not set | 14 | – | 0 |
| metalaxyl | whole | 0.01 | not set | 21 | – | 0 |
| metrafenone | whole | 0.01 | not set | 21 | – | 0 |
| myclobutanil | whole | 0.01 | not set | 21 | – | 0 |
| oxadixyl | whole | 0.01 | not set | 21 | – | 0 |
| paclobutrazol | whole | 0.01 | not set | 21 | – | 0 |
| penconazole | whole | 0.01 | not set | 21 | – | 0 |
| penthiopyrad | whole | 0.01 | not set | 21 | – | 0 |
| prochloraz | whole | 0.01 | not set | 21 | – | 0 |
| procymidone | whole | 0.01 | not set | 21 | – | 0 |
| propiconazole | whole | 0.01 | 7 | 21 | 0 | 0 |
| prothioconazole | whole | 0.05 | not set | 21 | – | 0 |
| pyraclostrobin | whole | 0.01 | not set | 21 | – | 0 |
| pyrimethanil | whole | 0.01 | 7 | 21 | 0 | 0 |
| tebuconazole | whole | 0.01 | not set | 21 | – | 0 |
| thiabendazole-P | whole | 0.01 | 10 | 21 | 0 | 2 |
| tolclofos methyl | whole | 0.01 | not set | 21 | – | 0 |
| triadimefon | whole | 0.01 | not set | 21 | – | 0 |
| triadimenol | whole | 0.01 | not set | 21 | – | 0 |
| trifloxystrobin | whole | 0.01 | not set | 21 | – | 0 |

| Chemical | Matrix | LOR (mg/kg) | MRL (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| triforine | whole | 0.01 | not set | 14 | – | 0 |
| triticonazole | whole | 0.01 | not set | 21 | – | 0 |
| vinclozolin | whole | 0.01 | not set | 21 | – | 0 |

## Table 2 Herbicides

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| 2,2-DPA (2,2-dichloropropionic acid) | whole | 0.05 | 0.1 | 21 | 0 | 0 |
| 2,4-D | whole | 0.01 | 5 | 21 | 0 | 0 |
| atrazine | whole | 0.01 | not set | 21 | – | 0 |
| bromacil | whole | 0.01 | 0.04 | 21 | 0 | 0 |
| bromoxynil | whole | 0.01 | not set | 21 | – | 0 |
| carfentrazone-ethyl | whole | 0.01 | 0.05 | 21 | 0 | 0 |
| chlorpropham | whole | 0.05 | not set | 21 | – | 0 |
| chlorsulfuron | whole | 0.01 | not set | 21 | – | 0 |
| chlorthal-dimethyl | whole | 0.01 | not set | 21 | – | 0 |
| clethodim (parent only) | whole | 0.01 | not set | 21 | – | 0 |
| clodinafop-propargyl | whole | 0.01 | not set | 21 | – | 0 |
| clopyralid | whole | 0.05 | not set | 21 | – | 0 |
| cyanazine | whole | 0.01 | not set | 21 | – | 0 |
| dicamba | whole | 0.01 | not set | 21 | – | 0 |
| dichlobenil | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| dichlorprop-P | whole | 0.01 | 0.2 | 21 | 0 | 0 |
| diflufenican | whole | 0.01 | not set | 21 | – | 0 |
| diuron | whole | 0.01 | not set | 21 | – | 0 |
| ethofumesate | whole | 0.01 | not set | 21 | – | 0 |
| flumioxazin | whole | 0.02 | 0.05 | 14 | 0 | 0 |
| iodosulfuron-methyl | whole | 0.01 | not set | 21 | – | 0 |
| ioxynil | whole | 0.01 | not set | 21 | – | 0 |
| isoxaben | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| linuron | whole | 0.05 | not set | 21 | – | 0 |
| MCPA | whole | 0.01 | not set | 21 | – | 0 |
| methabenzthiazuron | whole | 0.01 | not set | 21 | – | 0 |
| metolachlor | whole | 0.01 | not set | 21 | – | 0 |
| metosulam | whole | 0.01 | not set | 21 | – | 0 |
| metribuzin | whole | 0.01 | not set | 21 | – | 0 |
| metsulfuron-methyl | whole | 0.01 | not set | 21 | – | 0 |
| napropamide | whole | 0.01 | not set | 21 | – | 0 |
| norflurazon | whole | 0.01 | 0.2 | 21 | 0 | 0 |

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| oryzalin | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| oxyfluorfen | whole | 0.01 | not set | 21 | – | 0 |
| pendimethalin | whole | 0.01 | 0.05 | 21 | 0 | 0 |
| picloram | whole | 0.01 | not set | 21 | – | 0 |
| propachlor | whole | 0.01 | not set | 21 | – | 0 |
| propyzamide | whole | 0.01 | not set | 21 | – | 0 |
| quizalofop-ethyl | whole | 0.01 | not set | 21 | – | 0 |
| quizalofop-P-tefuryl | whole | 0.01 | not set | 21 | – | 0 |
| saflufenacil | whole | 0.01 | 0.03 | 21 | 0 | 0 |
| sethoxydim | whole | 0.01 | not set | 21 | – | 0 |
| simazine | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| tralkoxydim | whole | 0.01 | not set | 21 | – | 0 |
| triasulfuron | whole | 0.01 | not set | 21 | – | 0 |
| triclopyr | whole | 0.01 | 0.2 | 21 | 0 | 0 |
| trifluralin | whole | 0.01 | 0.05 | 21 | 0 | 0 |

## Table 3 Insecticides

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| abamectin | whole | 0.01 | 1 | 21 | 0 | 0 |
| acephate | whole | 0.05 | not set | 21 | – | 0 |
| acetamiprid-P | whole | 0.01 | 1 | 21 | 0 | 0 |
| aldicarb | whole | 0.01 | not set | 21 | – | 0 |
| amitraz | whole | 0.01 | not set | 21 | – | 0 |
| azamethiphos | whole | 0.01 | not set | 21 | – | 0 |
| azinphos-methyl | whole | 0.01 | not set | 21 | – | 0 |
| bifenazate | whole | 0.01 | not set | 21 | – | 0 |
| bifenthrin | whole | 0.01 | 0.05 | 21 | 0 | 0 |
| bioresmethrin | whole | 0.01 | not set | 21 | – | 0 |
| buprofezin | whole | 0.01 | 2 | 21 | 0 | 0 |
| cadusafos | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| carbaryl | whole | 0.01 | 3 | 21 | 0 | 0 |
| carbofuran | whole | 0.01 | not set | 21 | – | 0 |
| chlorantraniliprole | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| chlorfenapyr | whole | 0.01 | not set | 21 | – | 0 |
| chlorfenvinphos (sum of isomers) | whole | 0.01 | not set | 21 | – | 0 |
| chlorpyrifos | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| chlorpyrifos-methyl | whole | 0.01 | not set | 21 | – | 0 |
| clofentezine | whole | 0.01 | not set | 21 | – | 0 |

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| clothianidin | whole | 0.01 | 0.2 | 21 | 0 | 0 |
| cyantraniliprole | whole | 0.01 | 0.7 | 14 | 1 | 0 |
| cyfluthrin (sum of isomers) | whole | 0.01 | not set | 21 | 3 | 0 |
| cyhalothrin (sum of isomers) | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| cypermethrin (sum of isomers) | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| deltamethrin | whole | 0.01 | not set | 21 | – | 0 |
| diazinon | whole | 0.01 | 0.7 | 21 | 0 | 0 |
| dichlorvos | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| dicofol | whole | 0.01 | 5 | 21 | 0 | 0 |
| diflubenzuron | whole | 0.01 | not set | 21 | – | 0 |
| dimethoate | whole | 0.01 | 5 | 21 | 0 | 0 |
| disulfoton | whole | 0.01 | not set | 21 | – | 0 |
| emamectin | whole | 0.01 | not set | 21 | – | 0 |
| esfenvalerate | whole | 0.01 | not set | 21 | – | 0 |
| ethion | whole | 0.01 | 1 | 21 | 0 | 0 |
| ethoprophos | whole | 0.005 | not set | 21 | – | 0 |
| etoxazole | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| fenamiphos | whole | 0.01 | not set | 21 | – | 0 |
| fenbutatin oxide | whole | 0.01 | 5 | 21 | 0 | 0 |
| fenitrothion | whole | 0.01 | not set | 21 | – | 0 |
| fenoxycarb | whole | 0.01 | not set | 21 | – | 0 |
| fenpyroximate | whole | 0.01 | not set | 21 | – | 0 |
| fenthion | whole | 0.01 | not set | 21 | – | 0 |
| fenvalerate (sum of isomers) | whole | 0.01 | not set | 21 | – | 0 |
| fipronil | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| flonicamid | whole | 0.01 | not set | 21 | – | 0 |
| hexythiazox | whole | 0.01 | not set | 21 | – | 0 |
| imidacloprid | whole | 0.01 | 2 | 21 | 1 | 0 |
| indoxacarb | whole | 0.01 | not set | 21 | – | 0 |
| malathion (maldison) | whole | 0.01 | 4 | 21 | 0 | 0 |
| metaldehyde | whole | 0.05 | 1 | 21 | 0 | 0 |
| methacrifos | whole | 0.01 | not set | 21 | – | 0 |
| methamidophos | whole | 0.01 | not set | 21 | – | 0 |
| methidathion | whole | 0.01 | 2 | 21 | 3 | 0 |
| methiocarb | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| methomyl | whole | 0.01 | 1 | 21 | 0 | 0 |
| methoprene | whole | 0.01 | not set | 21 | – | 0 |

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| methoxychlor | whole | 0.01 | not set | 21 | – | 0 |
| methoxyfenozide | whole | 0.01 | 1 | 21 | 0 | 0 |
| mevinphos | whole | 0.01 | not set | 21 | – | 0 |
| monocrotophos | whole | 0.01 | not set | 21 | – | 0 |
| novaluron | whole | 0.01 | not set | 14 | – | 0 |
| omethoate | whole | 0.01 | 2 | 21 | 0 | 0 |
| parathion | whole | 0.01 | not set | 21 | – | 0 |
| parathion-methyl | whole | 0.01 | not set | 21 | – | 0 |
| permethrin (sum of isomers) | whole | 0.01 | not set | 21 | – | 0 |
| phenothrin (sum of isomers) | whole | 0.01 | not set | 21 | – | 0 |
| phorate | whole | 0.01 | not set | 21 | – | 0 |
| phosmet | whole | 0.01 | not set | 21 | – | 0 |
| piperonyl butoxide | whole | 0.01 | 8 | 21 | 0 | 0 |
| pirimicarb | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| pirimiphos-methyl | whole | 0.01 | not set | 21 | – | 0 |
| profenofos | whole | 0.01 | not set | 21 | – | 0 |
| propargite | whole | 0.01 | not set | 21 | – | 0 |
| prothiofos | whole | 0.01 | not set | 21 | – | 0 |
| pymetrozine | whole | 0.01 | not set | 21 | – | 0 |
| pyrethrins | whole | 0.05 | 1 | 21 | 0 | 0 |
| pyridaben | whole | 0.02 | not set | 21 | – | 0 |
| pyriproxyfen | whole | 0.01 | 0.3 | 21 | 1 | 0 |
| spinetoram | whole | 0.01 | 0.2 | 21 | 0 | 0 |
| spinosad | whole | 0.01 | 0.3 | 21 | 0 | 0 |
| spirotetramat | whole | 0.01 | 1 | 21 | 4 | 0 |
| sulfoxaflor | whole | 0.01 | 0.7 | 21 | 0 | 0 |
| tau-fluvalinate | whole | 0.01 | not set | 21 | – | 0 |
| tebufenozide | whole | 0.01 | 1 | 21 | 0 | 0 |
| tebufenpyrad | whole | 0.01 | not set | 21 | – | 0 |
| terbufos | whole | 0.01 | not set | 21 | – | 0 |
| tetradifon | whole | 0.01 | not set | 21 | – | 0 |
| thiacloprid | whole | 0.01 | not set | 21 | – | 0 |
| thiamethoxam | whole | 0.01 | 1 | 21 | 0 | 0 |
| thiodicarb | whole | 0.01 | not set | 21 | – | 0 |
| triazofos | whole | 0.01 | not set | 21 | – | 0 |
| trichlorfon | whole | 0.01 | 0.1 | 21 | 0 | 0 |
| triflumuron | whole | 0.01 | not set | 21 | – | 0 |

## Table 4 Contaminants

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| aldrin and dieldrin (HHDN+HEOD) | whole | 0.01 | 0.05 | 21 | 0 | 0 |
| chlordane | whole | 0.01 | 0.02 | 21 | 0 | 0 |
| DDT | whole | 0.01 | 1 | 21 | 0 | 0 |
| endosulfan | whole | 0.01 | not set | 21 | – | 0 |
| endrin | whole | 0.01 | not set | 21 | – | 0 |
| HCB (hexachlorobenzene) | whole | 0.01 | not set | 21 | – | 0 |
| HCH (BHC) | whole | 0.01 | not set | 21 | – | 0 |
| heptachlor | whole | 0.01 | 0.01 | 21 | 0 | 0 |
| lindane (gamma-HCH) | whole | 0.01 | 0.5 | 21 | 0 | 0 |
| mirex | whole | 0.01 | not set | 21 | – | 0 |

## Table 4 - Physiological Modifier

| Chemical | Matrix | LOR (mg/kg) | Australian standard (mg/kg) | No. of samples tested | > ½ MRL to ≤ MRL | > MRL |
|---|---|---|---|---|---|---|
| diphenylamine | whole | 0.01 | not set | 21 | – | 0 |