



Australian Government

**Department of Agriculture
and Water Resources**

National Residue Survey 2016–17

Fish



The National Residue Survey (NRS) is an operational unit within the Australian Government Department of Agriculture and Water Resources, and since 1992 has been funded by industries through levies or contracted by direct funding.

The NRS is an essential part of Australia's pesticide and veterinary medicine residue management framework providing verification of good agricultural practice in support of chemical control-of-use legislation and guidelines.

NRS residue monitoring programs monitor the levels of, and associated risks from, pesticides and veterinary medicine residues in Australian food products. The programs help to facilitate and encourage ongoing access to domestic and export markets. NRS supports Australia's primary producers and food processors who provide quality animal, grain and horticulture products which meet both Australian and relevant international standards.

Fish program overview

The fish program has been operating since the early 1990s and is currently funded by the Commonwealth Fisheries Association. The program involves the testing of Australian aquaculture and wildcaught seafood fisheries products for a range of pesticides, veterinary medicines and environmental contaminants.

Key points

- National Residue Survey is certified to ISO 9001 Quality Management System
- In 2016–17, the overall compliance rate with Australian standards was 98.55 percent for aquaculture samples and 100 percent for wild caught samples
- Australian primary producers continue to demonstrate a high degree of compliance with Australian standards

The program:

- ensures fish exports satisfy Australian export certification and importing country requirements
- supports industry quality assurance initiatives
- enables domestic fish processing facilities to satisfy state and territory government regulatory authority licensing requirements

Sample Collection

The number of samples collected is based on Australian production levels and/or overseas export market requirements.

Formal requests are sent to government-approved officers seeking a random selection of samples at specified times from aquaculture farms or processing establishments.

Analytical screens

Analytical screens covering pesticides, veterinary medicines and environmental contaminants are developed in consultation with industry and take into account Australian registered chemicals, chemical residue profiles and overseas market requirements.

Fish samples are screened for a range of chemicals, as shown in Table 1.

Results

In 2016–17, a total of 138 aquaculture and 70 wild caught samples were collected and analysed. The results were compared with the relevant Australian standards and where appropriate relevant international standards.

TABLE 1 Fish program chemical screens

Chemical group	Chemical screen
Veterinary drugs/ pesticides	Anthelmintics (ivermectin, doramectin, derquantel, emamectin, eprinomectin, ivermectin, milbemectin, monepantel, moxidectin and praziquantel)
	Antibiotics (including aminoglycosides, antimicrobials, beta lactams, cephalosporins, macrolides, nitrofurans, sulphonamides and tetracyclines)
	Insecticides (spinosad and spinetoram)
Environmental contaminants, elements and additives	Hormones (dienoestrol, diethylstilbestrol, hexestrol, trenbolone, boldenone and nor-testosterone)
	Chemical elements (antimony, arsenic, cadmium, chromium, lead and mercury)
	Dyes (crystal violet, malachite green, brilliant green, methylene blue and victoria blue)



The results over the past five years shown in Table 2 highlight Australia's excellent compliance status against Australian standards which helps maintain the reputation and integrity of Australian fish in international and domestic markets.

TABLE 2 Compliance rates for the last six years

Years	Origin	Compliance rates (%)
2011–12	Aquaculture	100
	Wild-caught	85.61
2012–13	Aquaculture	98.95
	Wild-caught	83.33
2013–14	Aquaculture	99.31
	Wild-caught	97.39
2014–15	Aquaculture	100
	Wild-caught	100
2015–16	Aquaculture	100
	Wild-caught	100
2016–17	Aquaculture	98.55
	Wild-caught	100

Laboratory Selection and Performance

The NRS contracts laboratories to analyse animal and plant product samples for pesticide/veterinary medicine residues and environmental contaminants.

Laboratories are selected through the Australian Government tendering process on the basis of their proficiency, accreditation against international standards (ISO/IEC 17025) and value for money.

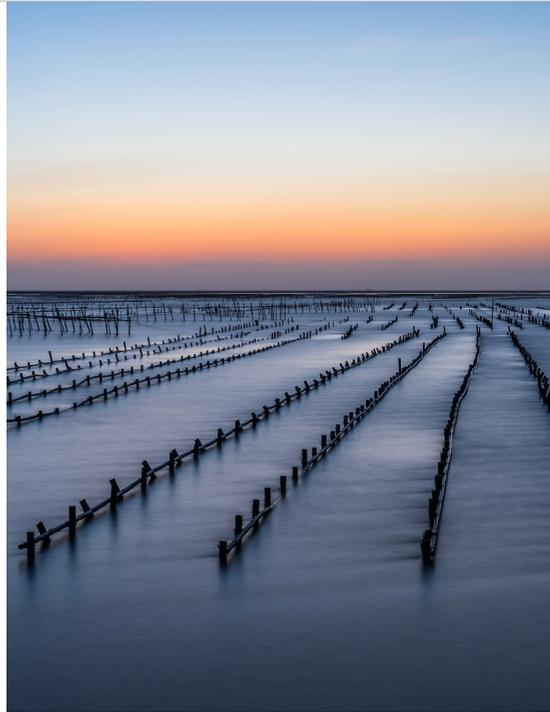
Contracted laboratories are proficiency tested by the NRS to ensure the validity of their analytical results and technical competence.

The NRS has been accredited by the National Association of Testing Authorities as a proficiency test provider since July 2005.

International export markets

The NRS maintains a database of international maximum residue limits (MRLs) for countries that are major export markets for Australian animal and plant products.

All results are checked for compliance with Australian standards and relevant international MRLs. The database can be accessed at apps.agriculture.gov.au/NRSMRLExternal/Public/Disclaimer.aspx



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MRL database
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