Australian Government
Department of Agriculture, Water and the Environment

National Residue Survey 2020–21
Seafood

The National Residue Survey (NRS) operates within the Australian Government Department of Agriculture, Water and the Environment and since 1992 has been funded by industries through levies and direct contracts.

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 programs monitor the levels of, and associated risks from, pesticides and veterinary medicine residues and contaminants 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.

Key points

- In 2020–21, the overall compliance with Australian standards was 100 percent for aquaculture samples and 100 percent for wild-caught samples.
- Australian seafood producers continue to demonstrate a high degree of good catching, growing and processing practice.
- The National Residue Survey's quality management system is ISO 9001:2015 certified.

Seafood program overview

The seafood program has been operating since the early 1990s and is funded through industry cost recovery arrangements. The program involves the testing of Australian aquaculture and wild-caught seafood products for a range of pesticides, veterinary medicines and environmental contaminants.

The program ensures seafood exports satisfy Australian export certification and importing country requirements. In addition, the program supports industry quality assurance initiatives and enables domestic seafood 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.

Samples are collected by government approved officers who obtain a random selection of samples at specified times from aquaculture farms or processing establishments.

Analytical screens

Analytical screens are developed in consultation with the industry and take into account chemicals registered in Australia, chemical residue profiles and overseas market requirements.

Seafood samples are screened for a range of pesticides, veterinary drugs and environmental contaminants, as shown in Table 1.

Results

In 2020–21, a total of 181 aquaculture and 25 wild caught seafood samples were collected for analysis. The results were compared with the Australian standards and where appropriate, relevant international standards.

A summary of seafood compliance with Australian standards over the past six years is provided in Table 2. The results highlight excellent compliance with Australian standards and demonstrate the strong commitment of the seafood industry to good catching, growing and processing practice. The consistently high compliance rates help maintain the reputation and integrity of Australian seafood in domestic and international markets.

The yearly summary datasets for the seafood program are located on the department's website **agriculture.gov.au/nrs-results-publications**.

TABLE 1 Analytical screens for the seafood program

Analytical screen	Chemical group	Analytes
Veterinary medicines and pesticides	Anthelmintics	includes macrocyclic lactones
	Antimicrobials	includes aminoglycosides, beta lactams, macrolides, nitrofurans, nitroimidazoles, phenicols, sulfonamides, tetracyclines and quinolones
	Hormones	includes stilbenes and androgenic steroids
Environmental contaminants	Organochlorines	aldrin, chlordane, dieldrin, DDT, endrin, HCB, HCH, heptachlor, lindane, mirex, toxaphene and PCBs
	Metals	antimony, arsenic, cadmium, chromium, lead and mercury
	Dyes	crystal violet, malachite green, brilliant green, methylene blue and Victoria blue

TABLE 2 Compliance rates for the past six years relative to Australian standards

Years	Samples collected	Compliance rates (%)
2015–16	Aquaculture	100
	Wild caught	100
2016–17	Aquaculture	98.55
	Wild caught	100
2017–18	Aquaculture	100
	Wild caught	100
2018–19	Aquaculture	99.48
	Wild caught	100
2019–20	Aquaculture	100
	Wild caught	100
2020–21	Aquaculture	100
	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 and value for money. Laboratories must be accredited to international standard ISO/IEC 17025 at commencement of testing.

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 information on maximum residue limits (MRLs) that apply for Australia and major export markets for industries supported by the NRS. All analysis results are checked for compliance with Australian standards and relevant international MRLs.

For the Australian MRL standard see **legislation.gov.au/Series/F2019L01105**.

For MRL requirements for some international export markets see links at **agriculture.gov.au/nrs-databases**.

CFA Commonwealth Fisheries Association

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ADA311.0721