

DPI Primefact

Decontamination process for commercial abalone divers: Standard operating procedure

September 2023, Primefact 714, Fifth edition

DPI Aquatic Biosecurity, Animal Biosecurity, Biosecurity and Food Safety

Hygiene protocols – standard operating procedures

To protect NSW abalone stocks from disease risks and the potential spread of diseases such as Abalone Viral Ganglioneuritis (AVG) and Perkinsus, NSW DPI has worked with industry to develop standard operating procedures (SOPs) based on biosecurity best practice guidelines.

The risk of aquatic disease outbreaks can be greatly reduced by applying appropriate biosecurity protocols through thorough hygiene practices. This SOP is designed to minimise the risk posed by activities associated with abalone fishing.

Decontamination

- Decontamination procedures should be carried out when moving to a different fishing zone. To make decontamination more practical, divers should limit the spatial extent of their diving within each day. Decontamination is recommended when diving in a different area from the previous day, e.g., diving in a northern area and then travelling south of the original diving location the next day.
- All equipment and persons that come into contact with abalone should be decontaminated as outlined in this document.
- Effective decontamination requires a two-step process, and involves a detergent wash followed by treatment with a disinfectant.
- Detergents remove gross organic matter, which impede the ability of disinfectants to inactivate pathogens. Disinfectants are then able to effectively inactivate or kill the pathogens. Suitable disinfectants for inactivation of AVG include registered products such as Detsan and F10 SC Veterinary Disinfectant and those approved by the Australian Pesticides and Management Authority under PER92725.
- While diving, attention should be given to ensuring equipment, divers and decks are clean and routinely rinsed and kept free of any residue and organic matter such as seaweed, shell, sand etc. to promote effective decontamination.

Registered disinfectants

For all registered disinfectants suitable for disinfection of AVG such as Detsan and F10SC Veterinary Disinfectant, refer to the label and follow all usage instructions for disinfection of viruses.

Preparation of effective chlorine or iodine solution

Both chlorine and iodine solution should be made up fresh for disinfection and not stored for any longer than 24 hours. Both solutions need to be kept out of light and kept cool in order to minimise breakdown of chlorine and iodine.

To prepare chlorine solution from granular pool chlorine:

1. Use only registered products containing 650 g/kg available chlorine present as calcium hypochlorite as the only active constituent as outlined in [APVMA Permit PER92725](#).
2. Dissolve 31 grams granular pool chlorine in 100 litres of water to produce a 200ppm effective chlorine solution.
3. Ensure cleaned equipment is treated with the solution for a minimum of 20 minutes
4. Note: adhere to all other instructions as indicated in [APVMA Permit PER92725](#) (valid until 31 January 2026).

To prepare an iodine solution from Agri Dyne

1. Use only registered products containing 16g/L available iodine as the only active constituent as outlined in permit [APVMA Permit PER92725](#).
2. Dissolve 62.5mL Agri Dyne in 1 Litre of water to produce an effective iodine solution.
3. Keep wet for 5 minutes.

Refer to the chemical product's Material Safety Data Sheets for instructions regarding the safe use of any chemical. This information should be available from the distributor when you purchase the product or by contacting the manufacturer.

Decontamination of harvesting equipment

- All equipment that has come in contact with abalone, such as baskets, abalone irons, gloves, measures and catch bags, should be scrubbed clean and soaked in soapy water (which acts as a detergent) for 30 minutes, rinsed with fresh water and then treated using a suitable disinfectant in accordance with label instructions or as outlined above.
 - Throughout the diving operation, divers, equipment and decks should be rinsed to remove any organic material.
 - Diving equipment that has not had direct contact with abalone, such as masks, buoyancy vests and regulators, can be washed with fresh water.
 - After decontamination is completed, allow equipment to dry in the sun before next use.
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Vessel decontamination

- Throughout diving activity, decks and boating equipment should be regularly washed down (with fresh water if possible) and scrubbed, to remove all organic material such as sand, shell and seaweed.
 - On returning to port, a thorough vessel cleaning should be undertaken. Cleaning should start from the highest point and work down to ensure all areas are cleaned. The deck and all parts
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of the boat that have contacted abalone or abalone equipment should be thoroughly rinsed with fresh water, washed with disinfectant and rinsed again with fresh water.

- Once vessels are removed from the water the hull should be cleaned to remove any fouling organisms and organic material then should be hosed down with fresh water. Bungs should be removed for drainage and bilge areas rinsed with fresh water.
- Detergents specifically designed for cleaning boats should be used.

Decontamination procedures should be carried out away from the water's edge to prevent detergents and disinfectants from entering the marine environment.

Care should be taken to ensure that wastewater from bilges is not discharged into the waterway.

Decontamination of people and clothing

- Wherever possible, divers should rinse with fresh water between dives.
- Divers and any person who has handled abalone should wash their hands with soapy water.
- After diving, wetsuits should be washed both inside and out with a neoprene wash or with liquid soap or shampoo.
- Waterproof clothing should be rinsed with soapy water, rinsed with fresh water and dried in the sun.
- Gumboots and any footwear worn on the boat should be washed with soapy water, rinsed with fresh water and dried in the sun.
- Clothes should be washed with laundry detergent.

Decontamination of transport containers

- Transport or holding containers should be thoroughly cleaned and disinfected after use.
- Remove any residue and organic material from containers.
- Soak containers with detergent, then wipe insides with disinfectant and thoroughly rinse with fresh water. A thorough rinsing is necessary to ensure no harmful chemicals remain which can affect the next catch of abalone.

Disposal of abalone shell, meat and gut

- Abalone should not be shucked at sea.
- Shell, meat and gut should not be discarded into marine waters and should instead be disposed with rubbish.

Help to protect abalone in NSW

- Decontaminate equipment and vessels during and after abalone diving.
- Plan your work to avoid or limit diving in different zones.
- Do not discard abalone or any part of abalone at sea.

- Divers are encouraged to not hang abalone outside the subzone in which they were collected, as this practice increases the risk of disease transmission from one location to another.

Report anything you may notice in abalone that is unusual and could be an indication of disease to the 24-hour Emergency Animal Disease Hotline on 1800 675 888

Abalone Viral Ganglioneuritis



Figure 1 Diseased abalone displaying a symptom of AVG - curling of the foot (Photo: DPI Victoria)

AVG affects the nervous system of abalone and symptoms include swollen mouthparts, curling of the foot resulting in exposure of shiny edges of the shell, difficulty adhering to surfaces, and lethargy, often causing death.

AVG is listed as a prohibited matter under the *Biosecurity Act 2015*. This means it is illegal to buy, sell or move the disease or any abalone suspected to have the disease. It is required by law to notify Aquatic Biosecurity of any suspicion of AVG on **1800 675 888**.

This disease is not known to occur in NSW and any suspected occurrences should be immediately reported.

See <https://www.dpi.nsw.gov.au/avg> for more.



Figure 2 Healthy abalone (Photo: Mike Heasman)

Perkinsus

Perkinsus is a disease that was first detected in NSW abalone stocks in 1992. It is an infection of molluscs caused by the genus of parasite *Perkinsus*, with *Perkinsus olseni* being the particular species that infects abalone. The disease has different symptoms from AVG. It causes abscesses, particularly in stressed abalone, which can result in mortality. The impact of *Perkinsus* in NSW demonstrates the importance of safeguarding remaining abalone stocks from further disease incursions with effective decontamination processes.

More information

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