



Schedule of aircraft disinsection procedures for flights into Australia and New Zealand

This Schedule gives effect to the approved aircraft disinsection methods and procedures for flights arriving into Australia and New Zealand through:

- adoption of the World Health Organization (WHO) aircraft disinsection methods and procedures 2nd Edition¹ as the base standard
- additional requirements for Australia and New Zealand detailed in this document, including *points of difference*:
 - holds must be treated with either residual treatment or the combination aerosol
 - Permethrin 2% and d-phenothrin 2% (or 1*R-trans*-phenothrin)
 - use of prescribed disinsection certificate templates available within this document – refer to treatment method certification and Appendices A, B and C
 - pre-requisite restrictions and conditions for airlines using Residual (RD) or Pre-embarkation disinsection (PED) methods for arrival in Australia and New Zealand
 - scheduled airlines using the Pre-Departure Disinsection (PDD) Method are to prepare and submit aircraft disinsection procedures for review
 - other information relevant to biosecurity controls, measures and compliance standards for Australia and New Zealand.

The Schedule must be read in conjunction with the *World Health Organization (WHO) aircraft disinsection methods and procedures (2nd Edition)* as the standard for Australia and New Zealand. Any specific information contained in this Schedule is to be taken to override the *World Health Organization (WHO) aircraft disinsection methods and procedures* for aircraft operators to comply with those disinsection requirements specific for arrival in Australia and New Zealand.

Australia Only: This *Schedule*, read in conjunction with the *World Health Organization (WHO) aircraft disinsection methods and procedures*, will define the aircraft disinsection methods and procedures approved by the Director of Human Biosecurity, Department of Health and Aged Care under the *Biosecurity (Human Health) Regulation 2016* section 7 (2). This Schedule reflect Australia's requirements for vector controls on arriving aircraft.

New Zealand Only: This *Schedule*, read in conjunction with the *World Health Organization (WHO) aircraft disinsection methods and procedures*, will define the aircraft disinsection methods as required under the New Zealand Health (Quarantine) Regulations 1983.

Version 5.3

¹ [WHO Aircraft Disinsection Methods and Procedures \(2nd Edition\)](#) 23 November 2023:

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The requirements in this document are subject to change and it is the responsibility of the user to check they have the latest version. See <https://www.agriculture.gov.au/biosecurity-trade/aircraft-vessels-military/aircraft/disinsection/procedures> to access the latest version.

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- Special arrangements permitting additional or alternative disinsection methods may override these procedures when directed by the Australian Director of Human Biosecurity or the Director-General of Agriculture or the Ministry of Health in New Zealand (or their representatives).

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Version control

Updates will occur automatically on the Department of Agriculture, Fisheries and Forestry and the Ministry for Primary Industries websites and this page will summarise the amendments as they occur.

| Version | Date | Author | Description of change | Sections |
|---------|----------------|---|--|--|
| 1.0 | 1998 | AQIS/MAFBNZ | First issue | all |
| 2.0 | October 2009 | DAFF | Review | all |
| 2.1 | December 2010 | AQIS/MAFBNZ | Review | all |
| 2.2 | September 2012 | DAFF/MPI | Review | all |
| 3.0 | May 2013 | DAFF | Update of links | all |
| 3.1 | December 2013 | Department of Agriculture | Branding update Inclusion of \$40 fee Timing requirements to update ADI | all 2.1, 3.1 2.1, 3.1 |
| 3.2 | March 2014 | Department of Agriculture/MPI | Inclusion of how to appropriately treat the flight deck Inclusion of Supervision/conducting of treatment by officer | 3.1-10 4.1-10 6.1-11 1.5, 6 |
| 4.0 | June 2016 | Department of Agriculture and Water Resources | Branding update Review of contents for accuracy and consistency under the <i>Biosecurity Act 2015</i> | all |
| 4.1 | February 2017 | Department of Agriculture and Water Resources | Aligned residual and pre-embarkation ADI update timeframe to 1 hour Inclusion of Airbus 380 Removal of exemption Changes to the retention request for top of descent certificates Passenger exemption Review of full document to adhere to accessibility requirements | 1.1, 1.3, 1.4, 2.1, 2.2 2.4 3 3.1 5 all |
| 4.2 | March 2018 | Department of Agriculture and Water Resources | Link to WHO IPCS Report of the information consultation on aircraft disinsection | Disinsection aerosols |
| 4.3 | September 2019 | Department of Agriculture, Water, and the Environment and MPI | Update Department name throughout Time Zone advice Electronic Certificates advice Aircraft delays advice Added - Airbus A380 Pre-flight spray Added - Airbus A380 Top of descent spray | 1.1 P3,1.5, 2.3,3.2 2.4, 3.1 Table 22 Table 23 |

| Version | Date | Author | Description of change | Sections |
|---------|------------------|---|---|---|
| | | | Amended - words table 25 | Table 25 |
| 4.4 | 20 February 2020 | Department of Agriculture, Water, and the Environment and MPI | Aircraft delays Table updates to residual method regarding cleaning practices Updated departments name. | |
| 5 | 2 July 2021 | Department of Agriculture, Water and the Environment and MPI | New Schedule incorporating the World Health Organization (WHO) aircraft disinsection methods and procedures as the base standard. Additional requirements for Australia and New Zealand detailed in this document - including points of difference and other information relevant to biosecurity controls, measures and compliance standards for Australia and New Zealand This will define the legally approved methods. | All |
| 5.1 | 26 July 2021 | Department of Agriculture, Water and the Environment and MPI | Inconsequential amendments made as supported by Department of Health. | 2 2.1 3 3.1 |
| 5.2 | 1 October 2021 | Department of Agriculture, Water and the Environment and MPI | Update to New Zealand Ministry for Primary Industries section for aircraft arriving from Antarctica into New Zealand. Further amendments made to sections supported by Department of Health and Ministry of Health. | 4.1.3 |
| 5.3 | 23 February 2024 | Department of Agriculture, Fisheries and Forestry and MPI | This version now references the revised WHO aircraft disinsection methods and procedures 2 nd Edition document - with key WHO changes reflecting: <ul style="list-style-type: none"> • WHO aircraft holds aerosol disinsection rates recommendations are now same as former Aust/NZ higher hold disinsection rates (WHO section 5.1.2), including a new aerosol spray rate listing published in Annex 3 – adopted – removing a previous <i>point of difference</i>. Airlines to refer to WHO rates. • new requirements for airline residual disinsection droplet size requirements as per WHO section 3.2 - adopted • additional aircraft in WHO table 6 in section 6.2.1 - adopted • correction of some previous aircraft disinsection rates - minor but relevant changes for compliance requirements – for noting and airlines to reconfirm all aircraft rates as per WHO 2nd Edition rates listed for all aircraft types and series. | All Note: major section review of the WHO aircraft disinsection methods and procedures are 5.1.2, Annex 3 (All tables, cargo hold area aerosol requirements), 3.2.2 and 6.2.1 (Note Table 6), The WHO aircraft disinsection methods and procedures (2 nd Edition) to form the basis of aircraft disinsection requirements |

| Version | Date | Author | Description of change | Sections |
|---------|------|--------|---|--|
| | | | <p>All disinsection rates required for aircraft cabin areas and hold/cargo areas are as published by the WHO (2nd Edition) published rates. (hold/cargo area rates were previously published on DAFF website under the previous Schedule (Version 5.2).</p> <p>DAFF web to redirect spray rates to WHO 2nd Edition – DAFF/MPI hold rates to be removed.</p> <p>Branding updates, DAFF name change</p> | <p>under, and to be read in conjunction with, this Schedule.</p> |

Introduction

This Schedule has been prepared by the Australian Department of Agriculture, Fisheries and Forestry (the department) and the New Zealand Ministry for Primary Industries (MPI), affirming the alignment of disinsection procedures for aircraft flying into Australia and New Zealand.

The Schedule conditionally adopts the requirements for aircraft disinsection as recommended by the [World Health Organization \(WHO\) aircraft disinsection methods and procedures \(2nd Edition\)](#) including the following approved treatment² methods Residual Treatment Method, the Pre-Embarkation Method, and the Pre-Departure Method, whilst also defining additional 'points of difference' requirements beyond those recommended by the WHO. They include:

1. Holds (cargo areas) must be treated with either residual permethrin treatment or the combination aerosol (Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%)).
2. The use/acceptance of only disinsection treatment certificate formats defined in the appendix section of this Schedule – for Residual, Pre-embarkation and Pre-departure disinsection methods for arrival into Australia and New Zealand. Refer to 'Certification of disinsection treatments' section of this schedule for certification requirements.
3. The required use of the Aircraft Disinsection Information (ADI) application for airlines and aircraft operators on an approved arrangement with the department or a compliance agreement with MPI.
4. Additional administrative and governance controls and requirements for airlines conducting Residual and Pre-embarkation disinsection methods.

Important: Airlines are expected to familiarise themselves with the methods and the conditions governing their use prior to undertaking a particular disinsection method for arrival in Australia or New Zealand.

The department and MPI work in partnership in managing Australian and New Zealand aircraft disinsection requirements and compliance. This includes recognition of each other's disinsection arrangements (Australia 43.1 AA) / Compliance Agreements (New Zealand), the shared use of the ADI application software, disinsection certificates and any other undertakings as required.

Australian Government Department of Agriculture, Fisheries and Forestry

The Australian Government Department of Agriculture, Fisheries and Forestry plays an essential role in maintaining Australia's animal, plant and human health status.

The department is responsible for reducing the risk to agricultural industries and the environment posed by exotic pests and diseases. The department administers human biosecurity functions on behalf of the Department of Health and Aged Care including the screening of arriving passengers for Listed Human Diseases (LHD), surveillance activities relating to aircraft disinsection and vector monitoring.

Biosecurity controls at Australia's borders are governed by the *Biosecurity Act 2015*. These controls aim to minimise the risk of exotic pests and diseases entering Australia and help protect our agriculture export industries as well as our environment, tourism industries and lifestyle.

Under Section 204A of the *Biosecurity Act 2015*, the operator of an incoming aircraft must take measures to control or destroy insect vectors of human diseases that have a potential to cause, directly or indirectly, a LHD, and may exist in or on the aircraft or goods in or on the aircraft.

² A further method, "*Disinsection on arrival*" is a treatment administered at the port of arrival and carried out under supervision of local biosecurity officers whilst passengers remain onboard.

Note: This *Schedule of aircraft disinsection procedures for flights into Australia and New Zealand (Version 5.3)* is effective from 23 February 2023 and will void any previous versions.

These measures must be carried out in a manner and at a time or within a period, approved by the Director of Human Biosecurity.

New Zealand Ministry for Primary Industries

The Ministry for Primary Industries (MPI) is charged with the leadership of Biosecurity New Zealand. It encompasses facilitating international trade, protecting the health of New Zealanders, and ensuring the welfare of its environment, flora and fauna, marine life and Māori resources.

MPI incorporates Biosecurity New Zealand, Border Clearance Services which is the first line of defence for reducing risk to New Zealand's natural resources, plants, animals and people from exotic pests and diseases.

The various biosecurity controls in place across New Zealand's borders are mandated by the *New Zealand Biosecurity Act 1993*, the *New Zealand Health Act 1956* and the *Health (Quarantine) Regulations 1983*.

These controls are administered by MPI, the New Zealand Ministry of Health.

Disinsection is undertaken to prevent the introduction and spread of unwanted insect pests (many of which are also vectors of human, animal, and plant diseases). The disinsection of aircraft to specifically control vectors of human diseases (such as mosquitoes) is carried out on behalf of New Zealand's Ministry of Health.

Note: Due to the absence of mosquitoes in Antarctica, disinsection is not required for flights arriving in New Zealand which originate from Antarctica.

Certification of disinsection treatments

The airline operator is responsible for ensuring that a certificate detailing the cabin and hold treatment is completed by an appropriately trained person and for airlines using an aerosol method, that the fully or partly used cans remain on-board until the intended destination is reached.

Airline and aircraft operators flying to Australia or New Zealand **must use** the certificates hyperlinked below and attached as an appendix in this document, rather than the ICAO certificates noted within the *WHO aircraft disinsection methods and procedures*:

- [Appendix A](#) – Residual Disinsection Certificate
- [Appendix B](#) – Pre-embarkation Disinsection Certificate
- [Appendix C](#) – Pre-departure Disinsection Certificate

All sections of the certificate must be accurately completed in English and any amendments to the original certificate issued may only be made and authorised by the person who originally issued/signed the certificate. Incorrect information must only be ruled through once and be initialled by the original issuer.

Certificates must be held on-board (hardcopy or electronic) with the exhausted or partly used cabin and hold³ cans to be made available by cabin staff on request of a biosecurity officer in Australia or New Zealand for assessment.

If electronic certificates are used, airlines must carry a device that can access and display the certificate for that aircraft and flight.

Certification serves as a declaration by the airline or aircraft operator that the disinsection treatment has been undertaken in accordance with the method requirements. It will remain the

³ Hold cans are permitted to remain in the hold but must be easily accessible for collection by ground crew and subsequent presentation to a biosecurity officer on arrival.

right of biosecurity officers in Australia or New Zealand to satisfy themselves that a compliant treatment has been completed.

Airlines and aircraft operators are free to add headers, footers, or serial numbers to the certificates, but the content required (format) within the box on the certificates must remain and not be amended.

Multiple certificates will be required when an aircraft's cabin and hold have been treated using different methods (e.g., Cabin Pre-embarkation method and Holds Residual method).

Note: the use of correction fluid, or any other method of removing the original certified information, to make it illegible, will void the certificate.

Important: Failure to comply with the department or MPI disinsection requirements prior to arrival will result in on-arrival verification. This may result in disinsection being conducted *prior* to granting of pratique in Australia and the commencement of passenger disembarkation; and/or, cargo and baggage discharge in Australia and New Zealand.

Aircraft Disinsection Information (ADI) application

The Aircraft Disinsection Information (ADI) application ([ADI \(awe.gov.au\)](http://ADI.awe.gov.au)) is available for airlines holding a current and valid Approved Arrangement (the department) or Compliance Agreement (MPI).

The ADI provides a common-user portal through which approved airlines can report the disinsection status of their aircraft prior to arrival into Australia or New Zealand. The ADI application serves to provide up-to-date aircraft disinsection certification information for border authorities in Australia and New Zealand.⁴

For compliance assessment, it is the airlines responsibility to:

- update ADI aircraft/flight information at least one hour prior to the aircraft's scheduled arrival at its first port of landing in Australia or New Zealand
- ensure the information certified in ADI is based on treatments approved and correctly applied in accordance with the airline's approved arrangement or compliance agreement conditions
- ensure that the information entered in ADI meets the ADI data entry requirements and is true, correct and supported by copies of relevant certification (retained onboard the aircraft).

Residual and Pre-embarkation Method Approval Process

Acceptance of residual or pre-embarkation disinsection method certification is subject to airlines:

- Meeting the criteria to be approved under an Approved Arrangement (43.1) with the department or a Compliance Agreement with MPI.
- Maintaining compliance with all requirements under the above Approved Arrangement (43.1) or Compliance Agreement and other related legislative obligations.

These arrangements and agreements ensure airlines have prescribed management controls, procedures and processes that meet the requirements set out by the department and MPI.

Airlines holding an arrangement or agreement will be subject to auditing and compliance monitoring requirements. This may include conducting verification and efficacy testing of the disinsection treatments applied. Any non-compliance identified during assessment and assurance monitoring activities may trigger for further action.

Airlines can contact either the department or MPI for further information.

⁴ **Australia Only:** Airlines and aircraft operators on an Approved Arrangement could incur a fee for service charge if they fail to update ADI correctly for flights into Australia.

Department of Agriculture, Fisheries and Forestry

To apply for an Approved Arrangement (AA 43.1) with the department, specific requirements must be met as outlined in the *applying for an approved arrangement* section of the department's website.

The requirements for treatment of international aircraft by disinsection to prevent the introduction of potential disease vectors and harmful pests are outlined in the [requirements for operating approved arrangements for class 43.1](#) section of the department's website.

Note: Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have an [AA43.1 Contract of Service](#) (AA43.1 CoS) included into their Approved Arrangement documents with the department. One AA43.1 CoS is to be supplied for each 3rd party entity engaged by the airline to perform an AA43.1 disinsection treatment and certification.

MPI

To apply for a Compliance Agreement with MPI, please contact:
disinsectionmatters@mpi.govt.nz.

Aerosol requirements and rates

Preparation of chemicals currently used in aircraft disinsection are based on two active ingredients, Permethrin and d-Phenothrin (of 1*R*-trans-phenothrin), currently recommended by WHO as per Section 3 and 4 of the [WHO Aircraft Disinsection Methods and procedures \(2nd Edition\)](#).

| Method | Active ingredient |
|---|--|
| Pre-embarkation Cabin | 2% Permethrin |
| Pre-departure Cabin | 2% d-phenothrin or 2% 1 <i>R</i> -trans-phenothrin |
| On-arrival (Cabin) | 2% d-phenothrin or 2% 1 <i>R</i> -trans-phenothrin |
| Pre-departure Hold ⁵ (lower holds and main deck freighter) | 2% Permethrin and 2% d-phenothrin (or 2% 1 <i>R</i> -trans-phenothrin) |
| On-arrival (Hold) (lower holds and main deck of freighters) | 2% Permethrin and 2% d-phenothrin (or 2% 1 <i>R</i> -trans-phenothrin) |

It is the airlines responsibility to ensure that aerosol products used meet all aviation and aircraft manufacturers technical and safety requirements, the WHO and International Civil Aviation Organization (ICAO) guidelines, as well as meeting the department and MPI's requirements.

As a minimum requirement for both countries, all aerosol cans must be clearly labelled, in English, with a list of all active ingredients used. Alternatively, they must be accompanied with an English version of the MSDS (material safety data sheet) for each product used.

Airlines will need to ensure that products used in New Zealand are registered with the Environmental Protection Authority (EPA New Zealand).

Airlines will need to ensure that products used in Australia are registered for use by the Australian Pesticide and Veterinary Medicine Authority (APVMA). This may affect spray on arrival of aircraft or aircraft that have not met Australia's disinsection requirements and are required to perform the re-treatment application under the supervision of departmental officers.

⁵ Pre-departure hold method should be used in conjunction with an approved cabin disinsection method.

A list of spray rates by aircraft categories is available in the [WHO Aircraft Disinsection Methods and procedures \(2nd Edition\)](#). Spray rates apply to all aircraft types and series, unless otherwise stated. If an aircraft model is not listed, WHO Aerosol and Residual spray rate calculator tools can be used to estimate spray rates. The recommended calculator, for an aerosol or a residual treatment, is downloadable from within the publication by searching under the appropriate application method.

- [WHO Aircraft Disinsection Methods and Procedures \(Edition 2\)](#) - refer to section 5.1.4 Rate and method of application:- [aircraft-aerosol-spray-amount-calculator](#)
- [WHO Aircraft Disinsection Methods and Procedures \(Edition 2\)](#) - refer to section 6.2.3 Aircraft residual spray amount calculator - [aircraft-residual-spray-amount-calculator](#)

If the operator is still unsure, then they can contact the department or MPI for additional assistance.

Due to the single shot nature of hold aerosols, when amounts of hold spray are specified for a particular hold, an applicator must use the minimum requirement, for example:

- Hold spray used to be rounded up to the nearest full can (e.g., if using 150-gram aerosol cans and the minimum requirement is 180 grams, you must fully exhaust 2x150g grams hold spray).

For small jets, regional, private, and military aircraft (including private helicopters) for any holds requiring 20 grams of spray or less, it is acceptable to use:

- A permethrin 2% aerosol as an alternative when using pre-embarkation method.
- A d-phenothrin (1*R*-*trans*-Phenothrin) 2% aerosol as an alternative when using Pre-departure or On-arrival cabin method.

Any additional baggage cavities not mentioned, such as small nose cone storage areas on private aircrafts are to be sprayed for a minimum of 2 seconds.

Transporting freight in the main cabin of passenger aircraft

Some passenger aircraft transport freight in the main cabin. If the aircraft is not configured with cargo doors on the main deck, airline operators and their contractors should continue to treat this aircraft as a passenger aircraft.

All cargo should be stowed in a manner that that allows disinsection to be carried out as per the correct procedures and will not obstruct the ability to carry out spray on arrival.

Conditions for arrival into Australia

International aircraft arriving into Australia who have failed to comply with the department's disinsection treatment requirements prior to departure from last overseas port, in accordance with the [WHO Aircraft Disinsection Methods and procedures \(2nd Edition\)](#) and this Schedule, must:

1. Submit a **pre-arrival report (PAR)** to a biosecurity official at the arriving airport, advising that disinsection of the aircraft **has not been completed**, prior to arrival. In the event the operator of an aircraft cannot make direct contact with the department, the aircraft operator must ensure their Ground Handling Agent or the Air Traffic Controller at the relevant airport contacts the department and reports the prescribed information prior to the aircraft arrival. The operator of an aircraft must also report any changes to the above information.
2. Where the above circumstance is reported, the aircraft will not have positive pratique (negative pratique conditions and restrictions apply) which will require:
 - a. all passengers and crew, baggage and cargo must remain on board the secured aircraft on arrival

- b. on-arrival disinsection treatment to be completed under supervision of a biosecurity officer.
3. Upon completion of the on-arrival disinsection treatment, the biosecurity officer may then grant pratique allowing disembarkation of passengers and discharge of goods to commence.

If an arriving aircraft disinsection treatment has not been certified in ADI, as fully and correctly disinsected prior to arrival in Australia:

- a) A biosecurity officer will attend the aircraft on arrival to verify disinsection compliance.
- b) The operator and aircrew must keep all cabin and hold/cargo doors/ramps secured (closed) from landing to arrival at the terminal gate/Biosecurity Entry Point pending assessment by a biosecurity officer. The arriving aircraft must remain secure with all exterior doors, including hold doors closed, and are not to be opened until a biosecurity officer has given approval.
- c) After the certificate has been sighted by an officer, the airline must keep the certificate for a period of 12 months.
- d) The above also applies to aircraft not having conducted disinsection prior to arrival, as is required to be reported in a Pre-arrival Report (PAR) and arriving under Negative Pratique controls and restrictions.
- e) The above applies to all aircraft disinsection methods conducted and certified prior to arrival in Australia.

Note: For specific aircraft types requiring opening of a door for manual de-pressurization, on landing, the operator:

- is to use de-pressurization hatches (if fitted)
or alternatively
- may open doors/ramps to perform this function only – may only be opened to the minimum distance required and for the least time necessary to achieve the required de-pressurization, then re-secure the aircraft doors for arrival at the terminal.

A fee for service charge will be incurred by airline operators for these flights arriving in Australia.

Biosecurity Officers in Australia may meet aircraft on arrival to verify disinsection certificates and aerosol cans or to complete disinsection treatment testing for compliance assessment. Engagement with airline or aircraft operator representatives may occur if any delays are expected.

Note: Failure to comply may be an offence and penalties may apply for providing false or misleading information – including for Australia civil penalties, may impact on the airline's approved arrangement status and/or result in conditional restriction, suspension, or revocation of airline access to ADI.

Conditions for arrival into New Zealand

International aircraft must meet the requirements of the [*Craft Risk Management Standard: Aircraft from All Countries*](#).

International aircraft arriving in New Zealand who have not carried out; or incorrectly carried out disinsection prior to departure from their last overseas port; or have found live flying insects on route, must contact MPI at their intended port of arrival to organise for the aircraft to be disinsected on arrival.

A full contact list of local MPI offices is available [here](#)⁶.

⁶ <https://www.mpi.govt.nz/bring-send-to-nz/clearance-of-personal-goods-and-mail-to-nz/list-of-border-clearance-offices/>

Upon arrival all cabin windows, doors and cargo hold doors must remain closed until Quarantine Officers in New Zealand meet the aircraft and provide further instructions.

Non-compliant arrivals

Australia

If Biosecurity Officers are unable to verify the disinsection status of an aircraft arriving into Australia, the aircraft will be subject to negative pratique restrictions and controls refer *Sect 49 Biosecurity Act 2015*. This will apply to the aircraft if it has arrived and either:

- an approved disinsection method treatment has **not been applied prior to departure last overseas airport**, as per approved methods and procedures herein – **when a Pre-arrival report must be submitted**, or
- if the aircraft disinsection treatment applied is:
 - **Incorrectly certified** – including using non-approved certificates or
 - **Incorrectly applied** (not in accordance with approved disinsection methods and procedures – such as incorrect rates of treatment, incorrect application method or using non-approved method (as per *WHO aircraft disinsection methods and procedures*))

Where possible, Biosecurity officers will remain on board the aircraft to supervise the spray on arrival disinsection treatment.

A fee for service charge will be incurred by airline operators for these non-compliant flights arriving into Australia.

New Zealand

If Quarantine Officers are unable to verify the disinsection status of an aircraft arriving into New Zealand, then they will conduct/supervise the spray on arrival disinsection treatment.

Disinsection products used within New Zealand must also be registered with the Environmental Protection Agency (EPA) New Zealand.

1 Residual cabin and hold disinsection

Airlines and aircraft operators may only undertake residual disinsection of their aircraft after they have entered into an arrangement or agreement with either the department or MPI, see [Residual and Pre-embarkation Method Approval Process](#) (page 3) for more information.

1.1 Procedures for residual cabin and hold treatments

For residual cabin and hold treatment procedures please refer to the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#). To meet the WHO requirements, airlines and aircraft operators and their treatment providers should familiarise themselves with the following key sections.

| Section | Section Summary |
|--|--|
| Section 3.2 Residual application | Guidance on the insecticide formula, the acceptable equipment and Personal Protective Equipment required to undertake residual disinsection. |
| Section 4.5 Residual treatment of cabin and cargo hold | Detailed application procedures. |
| Section 4.5.2 Residual top-up after fixture replacement or intensified surface cleaning procedures | When and what to do in these situations. |
| Section 6.2 Amounts of residual spray in aircraft | Details recommended residual spray amounts. |

Time Zone – Residual updates: Airline operators should note that if the residual treatment is current at the local time of departure for a flight to Australia or New Zealand, however, expires in flight, the port of arrival will consider this compliant.

1.2 Certification for residual cabin and hold treatments

The applicator⁷ is responsible for ensuring that a certificate detailing the treatment is completed for each section of the aircraft that has been treated, the aircraft operator must ensure it is available on request on arrival in Australia or New Zealand.

Airlines and aircraft operators must use the residual disinsection certificate detailed in [Appendix A](#) and comply with the [Certification of disinsection treatments](#) requirements.

Important: The aircraft operator must retain a copy of the certificate for a period of 12 months.

1.3 ADI for residual cabin and hold treatments

It is the airline and aircraft operator's responsibility to ensure ADI has been updated accordingly, see [Aircraft Disinsection Information \(ADI\) application](#) for more information.

Failure to update the ADI accordingly, could result in the aircraft being met on arrival to ascertain disinsection status.

⁷ **Australia Only:** Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have a Contract of Service included into their Approved Arrangement with the department.

2 Pre-embarkation (cabin and hold) disinsection

Airlines and aircraft operators may only undertake pre-embarkation cabin treatment of their aircraft after they have entered into an arrangement with the department or agreement with MPI, see [Residual and Pre-embarkation Method Approval Process](#) for more information.

If the holds (cargo areas) do not have a residual treatment, then they must be treated with an aerosol method.

2.1 Procedures for pre-embarkation cabin treatments

For single sector flights, pre-embarkation treatment must be carried out at the departing port before departing to Australia or New Zealand.

For multi-sector flights, pre-embarkation treatment must be carried out at the **last overseas port** before departure to Australia or New Zealand. All transit passengers must disembark the aircraft for the duration of the pre-embarkation treatment.

For pre-embarkation cabin treatment procedures please refer to the following key sections of the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#).

| Section | Section Summary |
|---|---|
| Section 4.2 Pre-embarkation cabin treatment | Detailed application procedures. |
| Section 5 Amounts of aerosol spray required for aircraft | General information pertaining to aerosol spray requirements for different aircraft type. |
| Annex 1. Examples of pre-embarkation cabin treatment by aircraft type | Some examples of spray methodology for different aircraft types. |
| Annex 3. Amounts of aerosol spray required by aircraft type | Details recommended aerosol spray amounts. |

2.2 Procedures for pre-embarkation hold treatments

For pre-embarkation cargo hold treatment procedures please refer to the following key sections of the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#).

| Section | Section Summary |
|---|---|
| Section 4.4 Pre-departure cargo hold disinsection | Detailed application procedures. |
| Section 5 Amounts of aerosol spray required for aircraft | General information pertaining to aerosol spray requirements for different aircraft type. |
| Annex 3. Amounts of aerosol spray required by aircraft type | Details recommended aerosol spray amounts. |

Holds (cargo areas) must be treated using an aerosol fitted with a single shot vertical ejection nozzle containing a combination of Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%) for the forward and rear lower holds, and the main deck cargo area of freighters.

Note: There are some special circumstances exempting the use of a combination of Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%) aerosol, see [Aerosol requirements and rates](#) for more information.

2.3 Certification for pre-embarkation treatments

The applicator⁸ is responsible for ensuring that a certificate detailing the treatment is completed for each section of the aircraft that has been treated.

Airlines and aircraft operators must use the pre-embarkation disinsection certificate detailed in [Appendix B](#) and comply with the [Certification of disinsection treatments](#) requirements.

The aircraft operator must ensure the disinsection certificate is available on request and retain a copy of the certificate for a period of 12 months.

The exhausted or partly used cans for the treatment conducted, must be carried on-board the aircraft, should verification by an officer upon arrival be required.

2.4 ADI for pre-embarkation treatments

It is the airline and aircraft operator's responsibility to ensure the ADI has been updated accordingly, see [Aircraft Disinsection Information \(ADI\) application](#) for more information.

Failure to update the ADI accordingly, could result in the aircraft being met on arrival to ascertain disinsection compliance status.

⁸ **Australia Only:** Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have a Contract of Service included under their Approved Arrangement with the department.

3 Pre-departure (cabin and hold) disinsection

Airlines and aircraft operators may use the pre-departure disinsection method to treat the aircraft without entering into an arrangement with the department or an agreement with MPI.

Prior to commencing use of this method for scheduled flights, aircraft operators are required to contact the department or MPI. This is to confirm correct documented procedures are in place to ensure compliance is met for the airline’s pre-departure cabin and hold treatment procedures.

If the holds (cargo areas) do not have a residual treatment, then they must be treated with an approved combination single shot aerosol method.

3.1 Procedures for pre-departure cabin treatments

For single sector flights, pre-departure treatment must be carried out at the last overseas port before departing to Australia or New Zealand.

For multi-sector flights, pre-departure treatment must be carried out at the last overseas port before departure to Australia or New Zealand.

For pre-departure cabin treatment procedures please refer to the following key sections of the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#).

| Section | Section Summary |
|---|---|
| Section 4.3 Pre-departure cabin treatment | Detailed application procedures. |
| Section 5 Amounts of aerosol spray required for aircraft | General information pertaining to aerosol spray requirements for different aircraft type. |
| Annex 2. Examples of pre-departure cabin treatment by aircraft type | Some examples of spray methodology for different aircraft types. |
| Annex 3. Amounts of aerosol spray required by aircraft type | Details recommended aerosol spray amounts. |

3.2 Procedures for pre-departure cargo hold treatments

For pre-departure cargo hold treatment procedures and cargo hold aerosol spray rates, please refer to the following key sections of the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#).

| Section | Section Summary |
|---|---|
| Section 4.4 Pre-departure cargo hold disinsection | Detailed application procedures. |
| Section 5 Amounts of aerosol spray required for aircraft | General information pertaining to aerosol spray requirements for different aircraft type. |
| Annex 3. Amounts of aerosol spray required by aircraft type | Details recommended aerosol spray amounts. |

Holds (cargo areas) must be treated using an aerosol fitted with a single shot vertical ejection nozzle containing a combination of Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%) for the forward and rear lower holds, and the main deck cargo area of freighters.

Note: There are some special circumstances exempting the use of a combination of Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%) aerosol, see [Aerosol requirements and rates](#) for more information.

3.3 Certification for pre-departure treatments

The applicator is responsible for ensuring that a certificate detailing the treatment is completed. The certificate for the disinsection treatment conducted must be carried on-board the aircraft and made available to be sighted by an officer upon arrival.

The exhausted or partly used cans for the treatment conducted, must be carried on-board the aircraft, and will be collected by an officer upon arrival.

Airlines and aircraft operators must use the pre-departure disinsection certificate detailed in [Appendix C](#) and comply with the [Certification of disinsection treatments](#) requirements.

Follow the below steps on-arrival:

Australia only:

- On arrival, all exterior doors, and windows, including hold doors must remain closed and only be opened once a biosecurity officer has given approval.
- After the certificate has been sighted by an officer, the airline must keep the certificate for a period of 12 months.

New Zealand only:

- On arrival, all exterior doors, and windows, including hold doors must remain closed and only be opened once granted by an officer.
- The certificates and cans will be collected by an officer upon arrival.

4 On-arrival cabin and hold disinsection

4.1 On-arrival cabin and hold procedures

The reasons for conducting an on-arrival cabin and/or hold disinsection treatment and the procedures and cabin and hold (cargo areas) aerosol spray rates list that need to be followed are found in the [WHO aircraft disinsection methods and procedures \(2nd Edition\)](#). The key sections in that document are detailed below.

Disinsection on-arrival will be used in circumstances where a suitable and compliant disinsection treatment cannot or has not been applied by the airline operator at the last port of departure.

| WHO (2 nd Edition) Section | Section Summary |
|---|--|
| Section 4.6 On-arrival cabin and hold disinsection | Details reasons for conducting on-arrival disinsection |
| Section 4.6.1 Passenger exemption | Details passenger exemption procedures |
| Section 4.6.2 On-arrival cabin and hold procedures | Details on-arrival cabin and hold procedures |
| Section 5 Amounts of aerosol spray required for aircraft | General information pertaining to aerosol spray requirements for different aircraft types. |
| Annex 3. Amounts of aerosol spray required by aircraft type | Details recommended aerosol spray amounts. |

4.2 On-arrival disinsection notification

The airline or the aircraft operator must notify the relevant authorities at the arriving airport **if disinsection has not been conducted**. The notification should be made at least an hour before arrival so that the local authority can meet the aircraft and supervise or perform on-arrival disinsection. See [conditions of arrival](#) for further information.

4.3 Passenger exemption

If a passenger has identified themselves as having a serious medical condition which may be affected by the on-arrival treatment (which can be verbal or written), they may be permitted to disembark the aircraft. However, their personal belongings must remain on board the aircraft. Once the aircraft has undergone ‘on-arrival disinsection’ treatment and all other passengers have disembarked, the exempted passenger may then retrieve their belongings from the aircraft.

4.4 Inflight announcement

In preparation for the on-arrival disinsection, an in-flight announcement must be made by the crew to inform passengers of the upcoming disinsection. The following text should be read:

“Ladies and gentlemen, to conform to health requirements, the aircraft cabin will now be sprayed with an insecticide. This procedure is recommended by the World Health Organization. The treatment is necessary to avoid introduction of insects at our destination airport that can be carriers of serious human diseases. Please remain seated and keep the aisles clear while spraying takes place. If you have a serious medical condition that could be affected by the spray, please press your call button to discuss this with your cabin crew. Thank you”

Appendix A: Residual disinsection certificate

Residual Disinsection Certificate

This is to certify that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture, Fisheries and Forestry, the New Zealand Ministry for Primary Industries and the World Health Organization aircraft disinsection methods and procedures.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft type _____

Aircraft series _____

Date of spray (dd/mm/yyyy) _____

Date of expiry (dd/mm/yyyy) _____

Airport where treatment applied _____

Note: Residual treatments are valid for a maximum of 8 weeks.

Cabin

Name of active ingredient _____

Treatment undertaken by:

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Hold (all cargo areas in freighters)

Name of active ingredient _____

Treatment undertaken by (if same as above, write "As above"):

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Appendix B: Pre-embarkation disinsection certificate

Pre-embarkation Disinsection Certificate

This certificate is valid for one flight sector only and certifies that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture, Fisheries and Forestry and the New Zealand Ministry for Primary Industries.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft series _____
Flight number _____ Port of departure _____
Aircraft type _____ Date sprayed (dd/mm/yyyy) _____

Cabin

Name of active ingredient _____
Size of aerosol cans used (grams) _____
Serial numbers of cans used _____

Treatment undertaken by:

Signature _____
Full name (block letters) _____
Position _____ Company Name _____

Holds (all cargo areas in freighters)

Name of active ingredient _____
Size of aerosol cans used (grams) _____
Serial numbers of cans used _____

Treatment undertaken by (if same as above, write "As above"):

Signature _____
Full name (block letters) _____
Position _____ Company Name _____

Appendix C: Pre-departure disinsection certificate

Pre-departure Disinsection Certificate

This certificate is valid for one flight sector only and certifies that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture, Fisheries and Forestry and the New Zealand Ministry for Primary Industries.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft series _____
Flight number _____ Port of departure _____
Aircraft type _____ Date sprayed (dd/mm/yyyy) _____

Cabin

Name of active ingredient _____
Size of aerosol cans used (grams) _____
Serial numbers of cans used _____

Treatment undertaken by:

Signature _____
Full name (block letters) _____
Position _____ Company Name _____

Holds (all cargo areas in freighters)

Name of active ingredient _____
Size of aerosol cans used (grams) _____
Serial numbers of cans used _____

Treatment undertaken by (if same as above, write "As above"):

Signature _____
Full name (block letters) _____
Position _____ Company Name _____