

Interstate Certification Assurance Fumigation with Methyl Bromide

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ICA-04

Revision Register

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3.2	12-11-18	6. Requirement. Revised treatment schedule
3.3	10-06-21	Amendment to 6. Requirement, 7.6.3 Produce Temperature Measurement and 7.12.2 Assurance Certificates and addition of 7.5 Ambient air temperature and chamber heating and Attachment 6
3.4	03-09-21	All pages, wording and layout updated to improve readability and consistency; <ul style="list-style-type: none"> • addition of a pre-fumigation inspection for high-risk product; • addition of definitions for consignment, fruit fly infestation, lot and standard concentration; • update to bring protocol in line with national DAWE for fumigation rates, produce temperature, impervious packaging, loading, preparing the chamber, placement of gas sampling lines, chamber testing, gas retention testing, vaporiser/volatiliser, monitoring fumigant concentration, failed treatment; • addition of placement of Gas Sampling Lines to align with the DAWE methodology; • post treatment security; • chamber identification and chamber suspension pending a detection.

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1. PURPOSE

The purpose of this procedure is to describe –

- (a) the principles of operation, design features and standards required for fumigation chambers and facilities; and
- (b) the responsibilities and actions of personnel;

that apply to the certification of methyl bromide fumigation of produce under an Interstate Certification Assurance (ICA) arrangement.

2. SCOPE

This procedure covers all certification of methyl bromide fumigation by a Business operating under an Interstate Certification Assurance arrangement in Western Australia.

This procedure covers the requirements for

- Pre-fumigation inspection of high-risk product for Queensland and Mediterranean fruit fly; and
- Fumigation with methyl bromide

by businesses operating inside areas where the requirements specified in 6. Requirements are a specified condition of entry of and interstate quarantine authority.

This procedure does not abrogate or override the responsibility of licensed fumigators to comply with the legislative requirements as prescribed in the Health (Pesticides) Regulations 1956 and the *Occupational Safety and Health Act 1984*.

Certification of methyl bromide fumigation under this Operational Procedure may not be an accepted quarantine entry condition for all produce to all intrastate or interstate markets.

Some intrastate or interstate markets may require additional quarantine certification as a condition of entry.

It is the responsibility of the business consigning the produce to ensure compliance with all applicable quarantine requirements.

Information on intrastate and interstate quarantine requirements can be obtained from Quarantine WA.

3. REFERENCES

WI-QA015

Plant Health Assurance Certificate Completion

Health (Pesticides) Regulations 1956

Occupational Safety and Health Act 1984.

4. DEFINITIONS

Accrediting Authority

means the Department of Primary Industries and Regional Development Western Australia.

**Application
for Accreditation**

means an Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) arrangement.

APVMA

Agricultural and Veterinary Medicines Authority

Authorised Inspection Person	means a person trained, assessed and found competent in the signs and symptoms of all stages of Queensland fruit fly, who is authorised to conduct inspections on behalf of the business by having their names, specimen signatures and date of demonstrated competency on a register of Authorised Inspection Persons maintained by the accredited business.
business	means the legal entity responsible for the operation of the fumigation facility and ICA arrangement detailed on the business's Application for Accreditation.
Certification Assurance	means a voluntary arrangement between the Department of Primary Industries and Regional Development Western Australia and a Business that demonstrates effective in-house quality management and provides assurance through documented procedures and records that produce meets specified requirements.
certified/certification	means covered by a valid Plant Health Interstate Assurance Certificate.
chamber	means a permanent or tarped enclosure made from gas-proof material specifically designed for the purpose of fumigation.
colorimetric tubes	Draeger/Kitagawa stain or detector tubes for measuring fumigant concentrations.
facility	means the location of the fumigation chamber or chambers covered by the Interstate Certification Assurance arrangement.
fruit fly infestation	means the presence of viable/live eggs or larvae of Queensland and/or Mediterranean fruit fly
fumigant	means 1000g/kg methyl bromide (CH ₃ Br).
fumigation	means the treatment of produce with a fumigant.
fumigator	means a person licensed to undertake fumigation pursuant to the Health (Pesticides) Regulations 1956
high-risk product	means product as defined by the receiving jurisdiction as requiring pre-fumigation inspection.
ICA	means Interstate Certification Assurance.
Inspector	means an inspector appointed under the <i>Biosecurity and Agriculture Management Act 2007</i> .
Interstate Certification Assurance	means a system of Certification Assurance developed to meet the requirements of State and Territory governments for the certification of produce for interstate and intrastate quarantine purposes.
lot	means a discrete number of packages of one produce type (e.g. apples or mangoes) from one source (e.g. one packer).
Mediterranean fruit fly (MFF)	means all stages of the species <i>Ceratitidis capitata</i>
nonconformance	means a nonfulfillment of a specified requirement.

other plant pests	means plant pests other than Mediterranean fruit fly and Queensland fruit fly for which there is a specified condition of entry, such as silver leaf whitefly (<i>Bemisia tabaci</i>), thrips (all species of the Thysanoptera Order) and tomato potato psyllid (<i>Bactericera cockerelli</i>)
Plant Health Assurance Certificate	means an Assurance Certificate (PHAC) issued under the Biosecurity and Agriculture Management (Quality Assurance and Accreditation) Regulations 2013.
pre-treatment inspection	means the process by which a representative sample is drawn and inspected from the chamber load prior to fumigation.
Queensland fruit fly (QFF)	means all life stages of the species <i>Bactrocera tryoni</i> (Froggatt).
standard concentration	means the fumigant concentration below which the fumigation will not be effective unless additional fumigation is added to the chamber to compensate.
stone fruit	means peach, nectarine, plum, apricot and hybrids of peach, nectarine, plum and apricot, but excludes cherries.
unit	means a single whole piece of fruit.

5. RESPONSIBILITY

These position titles have been used to reflect the responsibilities of staff under the ICA arrangement. These positions may not be present in all Businesses, or different titles may be used for staff who carry out these responsibilities. In some Businesses one person may carry out the responsibilities of more than one position. Staff responsible for these process control activities are called "Nominated Persons"

The **Certification Controller** is responsible for -

- representing the Business during audits and other matters relevant to ICA accreditation;
- ensuring the Business has current accreditation for an ICA arrangement under this Operational Procedure;
- training staff in their duties and responsibilities under this Operational Procedure;
- ensuring the Business and its staff comply with their responsibilities and duties under this Operational Procedure;
- ensuring that all fumigation of produce certified under the Business's ICA arrangement is carried out in accordance with this Operational Procedure.
- ensuring all fumigations are performed by a licensed fumigator (refer 6);
- if applicable, ensuring weighing scales are calibrated at least every 6 months (refer 7.8.6).

The **Fumigator** is responsible for –

- determining the chamber volume (refer 7.6.1);
- ensuring thermometers used for measuring produce temperatures are identified and calibrated at least every 6 months (refer 7.4.3);
- determining the minimum produce temperature for each fumigation (refer 7.4);
- ensuring each fumigation chamber operated at the facility is covered by a valid Chamber Test Certificate issued by a licensed fumigator within the last six months (refer 7.7);
- ensuring a Fumigation Dosage Chart is maintained for each fumigation chamber operated at the facility (refer 7.8.3)
- determining the rate and dosage of fumigant required for each fumigation (refer 7.8.2);

- if applicable, maintaining weighing scale calibration records (refer 7.8.6).
- maintaining fumigation treatment records (refer 0).

The **Authorised Dispatcher** is responsible for –

- ensuring all packages covered by an Assurance Certificate issued by the Business under this Operational Procedure are identified (refer 7.10.1);
- maintaining copies of all Assurance Certificates issued by the business under the ICA arrangement (refer 7.11).

The **Authorised Signatories** are responsible for –

- ensuring prior to signing and issuing an Assurance Certificate, that produce covered by the certificate has been prepared in accordance with the Business's ICA arrangement, and the details on the certificate are true and correct in every particular (refer 7.10.2).

6. REQUIREMENT

1. Pre-Treatment Inspection (High-Risk Products)

Where high-risk products are being treated for Queensland and/or Mediterranean fruit fly, a 600-unit pre-treatment inspection **must** be completed by an Authorised Inspection Person. Each unit **must** be inspected and found free of live Queensland or Mediterranean fruit fly.

Separate 600-unit inspections **must** be completed for each high-risk product in a chamber load.

Where there are less than 600 units of any type of high-risk product in a chamber load, all the high-risk product of that type in the chamber load **must** be inspected.

2. Fumigating with Methyl Bromide

2.1. Chamber Identification

Businesses **must** uniquely number each fumigation chamber.

2.2. Produce temperature

The produce temperature prior to fumigation **must** not be below:

- 17°C for fruit and fruiting vegetables - taken from the flesh next to the seed (if seed present) treated for Queensland Fruit Fly; or
- 10°C for fruit and fruiting vegetables - taken from the flesh next to the seed (if seed present) treated for Mediterranean Fruit Fly; or
- 10°C for all other plants and plant products – taken adjacent to, or within the article being fumigated (e.g. centre of carton).

2.3. Loading rates

Loading rates within the chamber **must** be –

- for fruits and vegetables - not less than 30% nor more than 50% of the volume of the chamber when empty;
- for all other plants and plant products – not more than 50% of the volume of the chamber when empty.

2.4. Packaging

Impervious materials (such as plastic bags/sleeves, stacked plastic punnets or waxed paper), **must** be opened, cut, or removed to allow adequate penetration of the fumigant, or be designed in such a way to allow fumigant penetration (as detailed in 7.3).

2.5. Fumigation rates

Fumigation **must** be conducted with a product which is approved by the Australian Pesticides and Veterinary Medicines Authority (APMVA) for control of plant pests and contains 1000g/kg methyl bromide as active constituent. Methyl bromide containing chloropicrin **must** not be used.

All methyl bromide fumigations **must** be carried out by a licensed fumigator.

Fumigation treatment **must** be conducted for two hours at one of the following rates:

Fumigation for Queensland fruit fly-

Produce Temperature (°C)	Methyl Bromide (g/m3)
21 – 31.9	32
17 – 20.9	40

Fumigation for Mediterranean fruit fly and other plant pests

Produce Temperature (°C)	Methyl Bromide (g/m3)
21 – 31.9	32
16 – 20.9	40
11 – 15.9	48
10 – 10.9	56

100% methyl bromide **must** be used for fumigating fruit and fruiting vegetables, food producing plants and ornamentals. Chloropicrin is phytotoxic and is likely to cause damage to any living plant material.

A licensed fumigator must carry out all methyl bromide fumigations.

All treated food **must** not be made available for retail sale unless residues of Methyl Bromide are at or below the maximum residue limit (MRL) of 0.05 mg/kg.

The Department of Primary Industries and Regional Development Western Australia Industries and interstate quarantine authorities maintain the right to inspect at any time certified produce and to refuse to accept a certificate where produce is found not to conform to specified requirements.

Inadequate ventilation of produce after fumigation may lead to residues of methyl bromide above the MRL and leave produce open to seizure by relevant authorities at intrastate or interstate markets.

Do not use fumigated commodities for stock or human consumption or for fabrication into food for human or animal consumption within 3 days of completion and until the commodity had been adequately ventilated.

2.6. Post treatment security

Where required by the importing jurisdiction, following treatment, fruit **must** be stored at and transported from the facility in secure conditions which prevent infestation by fruit fly.

7. PROCEDURE

7.1 Accreditation

7.1.1 Application for Accreditation

A Business seeking accreditation for an ICA arrangement under this Operational Procedure **must** make application for accreditation at least 10 working days prior to the intended date of commencement of certification of produce.

7.1.2 Audit Process

Initial Audit

Prior to accrediting a Business, an Inspector carries out an initial audit of the Business to verify the ICA system is implemented and capable of operating in accordance with the requirements of the Operational Procedure, and the system is effective in ensuring compliance with the specified requirements of the ICA arrangement.

On completion of a successful initial audit, applicants will be granted provisional accreditation and posted a Certificate of Accreditation (refer 7.1.3 Certificate of Accreditation).

Compliance Audits

Compliance audits are conducted to verify that the ICA system continues to operate in accordance with the requirements of the Operational Procedure.

A compliance audit is conducted within four weeks of the initial audit and accreditation of the Business.

On completion of a successful compliance audit, annual accreditation is granted to cover the current season, up to a maximum of twelve months from the date of provisional accreditation, and a new Certificate of Accreditation is issued (refer 7.1.3 Certificate of Accreditation).

Ongoing compliance audits are conducted at least once every six months for a Business that operates for more than six months of each year.

Random audits are conducted on a selected number of accredited Businesses each year. Random audits may take the form of a full compliance audit, or audits of limited scope to sample treatment mixtures, certified produce, ICA system records or ICA system documentation.

Unscheduled compliance audits may be conducted at any time to investigate reported or suspected non-conformance.

Re-Accreditation

Accredited Businesses are required to re-apply for accreditation each year the business seeks to operate under the ICA arrangement. Businesses seeking re-accreditation **must** lodge a renewal application prior to accreditation lapsing, or if accreditation has lapsed, prior to being accredited to certify produce under the ICA arrangement.

A compliance audit is conducted within four weeks of the Business applying for re-accreditation each year.

7.1.3 Certificate of Accreditation

An accredited Business will receive a Certificate of Accreditation for an Interstate Certification Assurance Arrangement detailing the facility location, Operational Procedure, scope (type of produce and chemical covered) and period of accreditation.

The Business **must** maintain a current Certificate of Accreditation and make this available on request by an Inspector.

A Business may not commence or continue certification of produce under the ICA arrangement unless it is in possession of a valid and current Certificate of Accreditation for the procedure, produce type and chemical covered by the Interstate Assurance Certificate.

7.2 High-risk Product Inspection

7.2.1 Authorised Inspection Persons

The Certification Controller **must** maintain a register of Authorised Inspection Persons within the accredited business. The register **must** contain the following minimum information for each Authorised Inspection Person: (*Register of Authorised Inspection Persons* - refer Attachment 6).

- Authorised Inspection Person
- Specimen signature
- Date of demonstrated competency

Authorised Inspection Persons **must** be assessed as competent by the Accrediting Authority at least annually.

7.2.2 Inspection facilities and equipment

The Certification Controller **must** maintain the following inspection facilities and equipment –

- an inspection bench or table in an area protected from adverse weather conditions which is constructed of stable, rigid and durable material i.e. steel, timber or plastic that is of a reasonable size and height which is painted in a light colour or covered in a durable light coloured material placed in a well-lit and ventilated area on a flat sealed and durable surface i.e. concrete;
- a hand lens, microscope or other device that provides at least X10 magnification for the observation of suspected fruit fly;
- a white coloured tray i.e. plastic photograph tray or other surface for dislodging fruit fly into for inspection and;
- reference illustrations and photographs for identification of fruit fly;
- sealable plastic bags for collecting specimens of infested produce;
- sealable specimen bottles for placing samples of suspected fruit fly;
- sticky labels for identification of specimens;
- a fine paint brush or other suitable equipment for collecting samples of suspected fruit fly;
- a pocketknife or similar item to further investigate for the presence of fruit fly.

NOTE: Fruit fly larval samples for identification **must** be collected and prepared for submission in the host fruit in which they were detected. Submersion in a fixative solution (e.g. methylated spirits) can be detrimental to the specimen and make morphological identification difficult.

The business **must** also provide a means of:

- segregating and isolating produce which has 'passed' inspection from all other fruit fly host produce; and
- segregating and isolating produce which has 'failed' inspection, either due to suspect or confirmed presence of fruit fly, from all other fruit fly host produce.

7.2.3 Inspection Procedure for QFF and MFF

A pre-treatment inspection for fruit fly **must** occur for each lot containing high-risk product.

Inspection for fruit fly **must** be carried out as close as practical and not more than 48 hours prior to the time of treatment.

High-risk product **must** be inspected by conducting a packed product inspection following assembly of a chamber load prior to treatment. The pre-treatment inspection **must** be undertaken by an Authorised Inspection Person.

7.2.4 Inspection Rate

A separate representative 600-unit inspection **must** be completed for each high-risk product in a chamber load (i.e. 600 mangoes and 600 stone fruit for a given chamber load).

Inspection of high-risk product **must** be completed as follows:

- Inspect a random representative selection of 600-unit of high-risk product obtained from a minimum of three cartons for live fruit fly;
- Ensure that the selection represents an even distribution of all the high-risk product varieties and suppliers (growers/packers) in the chamber load (see example).

Example 1: If a chamber load contains three varieties of mango (from the same mango grower) and ten varieties of stone fruit (from the same stone fruit grower), then 200 units are to be inspected from each variety of mango and 60 units from each variety of stone fruit.

Example 2: If a treatment chamber contains five varieties of stone fruit from ten growers, then 60 units of stone fruit from each grower **must** be inspected, making sure that samples are drawn in a way that ensures a proportional sub-sample from each variety is inspected.

Where there are less than 600 units of any high-risk product in a chamber load, all the high-risk product of that type **must** be inspected. Additionally, where there are not enough units to inspect from one inspection lot, the lot **must** be made up of fruit of the same type from other inspection lots.

Example: Where a chamber load comprises ten inspection lots of mangoes, 60 units **must** be inspected from each inspection lot. Where one inspection lot of mangoes in the chamber load comprises only 18 units, the additional 42 units **must** be inspected from across the nine other inspection lots of mangoes.

7.2.5 Examination of sample

Each unit in the sample **must** receive 100 percent inspection of the surface area. Particular attention **must** be paid to cracks, splits, bruises, rots and other blemishes. Special attention **must** also be given to any sting marks. Further examination for evidence of any fruit fly infestation is required if any signs or symptoms are present.

Suspect fruit **must** be carefully cut and examined with proper inspection equipment (7.2.2). The presence of moving white larvae in the flesh may indicate fruit fly and the product is deemed to be non-conforming.

7.2.6 Inspection Records

The accredited business must maintain records of all fruit fly inspections. *Pre-treatment Fruit Fly Inspection Record* (refer attachment 7) must include-

- date and time of inspection;
- produce type;
- grower/packer name for each inspection lot;
- number of packages sampled;
- number of units sampled in each inspection lot;
- the inspection results including freedom or presence of live fruit fly
- comments on the inspection, including any actions taken resulting from suspected detection of fruit fly
- name and signature of Authorised Inspection Person.

7.2.7 Failed Inspection Procedure (following the detection of suspect QFF or MFF)

Produce that has failed inspection due to the suspected presence of fruit fly and is intended to be sent to a fruit fly restricted market **must** be segregated and isolated from all other fruit fly host produce until it is confirmed that fruit fly are not present.

The Authorised Inspection Person **must** immediately advise the Certification Controller of any detection of suspect fruit fly identified during the inspection.

If suspect fruit fly are detected during inspection, all high-risk product from that particular grower/packer **must** be rejected for certification until the suspect fruit fly are properly identified.

If the business is unable or unwilling to identify the suspect fruit fly, all host produce from that particular grower/packer **must** be rejected for certification under this protocol for that treatment day.

If the suspect fruit fly is subsequently confirmed not to be fruit fly, all rejected product may be reconsidered for certification provided all requirements of this protocol have been met.

If Queensland or Mediterranean fruit fly is confirmed, all produce from that particular grower/packer **must** be rejected for certification under the Operational Procedure for that treatment day. Confirmation of fruit fly may be reported to the Accrediting Authority within 24 hours by the accredited business, if required by the Accrediting Authority.

Where a new inspection lot is substituted from a different grower/packer, the same original proportional inspection as that conducted on the original inspection lot **must** be conducted on the substituted produce (7.2.4).

7.2.8 Pest Identification

Where the Certification Controller still wishes to treat the produce under the procedure, samples of suspect fruit fly **must** be taken by an Authorised Inspection Person immediately on detection. The Authorised Inspection Person **must** place a sample of the suspect fruit fly with a portion of the fruit in which it was detected into a watertight and sealable specimen bottle.

The specimen bottle **must** be labelled with the:

- name of the Authorised Inspection Person taking the sample,
- date of inspection and sample taken,
- the Interstate Produce (IP No.) number of the accredited business inspecting the produce,
- the name and address of the grower or packer or Interstate Produce number (IP No.) from which the produce that the sample was taken from originated
- the type of produce and quantity of produce from which the sample was taken.

The Authorised Inspection Person **must** seal the specimen bottle into a sealable plastic bag then forward the sample by secured means (e.g. registered post or courier) to a qualified entomologist that is approved by the Accrediting Authority within 24 hours of detection.

Where suspected fruit fly is identified by an entomologist, the Certification Controller of the accredited business **must** obtain written notification from the entomologist.

7.2.9 Storage and Identification Procedure

The Authorised Inspection Person **must** identify each inspection lot of high-risk product which has passed inspection. Each inspection lot which has passed inspection is to be marked in such a way to be clear that the inspection lot has been 'inspected and found free of Queensland and/or Mediterranean fruit fly'. Each inspection lot which has passed inspection **must** be segregated from all other fruit fly host produce to prevent mixing with nonconforming produce and produce that has not been inspected.

7.3 Impervious Packaging

The Fumigator **must** ensure that all packaging is opened or otherwise arranged as follows to allow the fumigant to readily circulate around and into the target of the fumigation:

- Products that are tightly packed into cartons in plastic sleeves (e.g. Cut flowers) **must** be loosened within boxes to ensure adequate gas penetration during fumigation;
- Polythene type liners or non-perforated liners **must** be opened at the top;
- If open ends of plastic sleeves are packed together in the middle of the carton, the cartons **must** be re-packed with the open ends be placed towards the sides of the cartons;
- Cartons without ventilation holes or with flowers in plastic sleeves obscuring the holes **must** be stacked with the tops open or with holes punctured in the sides.

Produce packaged or covered with impervious materials (such as plastic bags/sleeves, stacked plastic punnets or waxed paper), **must** be opened, cut or removed to allow adequate penetration of the fumigant unless impervious materials contain:

- not less than four unobstructed perforations of 6mm diameter per 100mm x 100mm of surface area; or

- not less than five unobstructed perforations of 5mm diameter per 100mm x 100mm of surface area; or
- not less than 6 pinholes per 10 mm x 10 mm surface area).

Wrapped products **must** be in a single layer so that the perforations are not blocked by the wrapping overlapping itself.

7.4 Produce Temperature Probing

Immediately prior to the commencement of fumigation, the Fumigator **must** determine the lowest flesh temperature of each lot to be fumigated.

The temperature prior to fumigation **must** not be below:

- 17°C for fruit and fruiting vegetables - taken from the flesh next to the seed (if seed present) treated for Queensland fruit fly; or
- 10°C for fruit and fruiting vegetables - taken from the flesh next to the seed (if seed present) treated for Mediterranean fruit fly; or
- 10°C for food producing plants and ornamental plants – taken adjacent to, or within the article being fumigated (e.g. centre of carton).

The core temperature for fruits and fruiting vegetables **must** be verified by placing the tip of the temperature probe into the centre of a piece of fruit located in the middle of a carton. Separate temperature measurements **must** be taken from each inspection lot in the chamber load as described below. If minimum temperature requirements are not met, the product **must** be rejected for fumigation and until it meets minimum required temperature. This may be achieved through heating the product until sampling confirms that the produce meets the requirements specified above.

(a) For fruit and fruiting vegetables:

At least three temperature readings **must** be taken from each bin or pallet or lot on each pallet. Separate temperature measurements **must** be taken from each lot of fruit or vegetables in the load as described below:

- Where the lot is on a pallet, at least three different cartons in a lot **must** be inspected, including samples taken from:
 - One from the top of the pallet;
 - One from the centre/inside/middle of the pallet; and
- Where the lot is in a bin, at least three different samples readings **must** be taken from each bin, including samples taken from:
 - One from the top of the pallet;
 - One from the centre/inside/middle of the pallet; and
- In addition to three readings specified above, a further three readings **must** be taken for each commodity in the pallet, lot on a pallet or bin that is either a different fruit variety or supplied by a different grower and/or packer.

(b) For other plants and plant products:

- Temperature readings **must** be taken adjacent to, or within the article being fumigated (e.g. centre of carton).

7.4.1 Produce Temperature Records

The Fumigator **must** record each temperature reading and the maximum and minimum produce temperature of the load on the *Fumigation Treatment Record (0)*.

7.4.2 Temperature Probing Equipment

Probe thermometers used for measuring produce pulp temperature **must** be uniquely identified for calibration purposes. Thermometers **must** be capable of reading in graduations of 0.1°C..

7.4.3 Calibration of Thermometers

Thermometers used for measuring produce pulp temperatures **must** have been calibrated within the previous six months and **must** be accurate to within +/- 0.5°C.

Calibration may be undertaken using the ice-point check method, by checking against a calibrated reference platinum resistance thermometer, or by a recognised testing authority.

The Fumigator **must** maintain results of thermometer calibration checks in the form of a *Thermometer Calibration Record* (refer Attachment 5).

Thermometer calibration records **must** record the following information-

- the date of calibration;
- the identification of the thermometer calibrated;
- the temperature reading(s) and the correction if any to the thermometer reading to an accuracy of at least +/- 0.1 °C;
- the name of the officer or recognised testing authority responsible for conducting the calibration checks.

7.5 Loading and Preparing the Chamber

The minimum and maximum loading volume within the chamber **must** be –

- for fruits and vegetables - not less than 30% nor more than 50% of the volume of the chamber when empty;
- for all other plants and plant products – not more than 50% of the volume of the chamber when empty.

The Fumigator **must** ensure that an adequate distance is maintained between each package, within the chamber to allow circulation of the fumigant and so that it can penetrate easily into boxes, bags or other types of packaging. A minimum space of 100 mm **must** be maintained between the top, sides and bottom of produce to the walls, ceiling and floor.

Each chamber **must** be pre-heated to not less than the minimum required temperature prior to produce being loaded into the chamber for fumigation. Any chamber which fails to meet the minimum temperature requirement **must** not be used for fumigation.

7.6 Fumigation Facility

Each chamber operated at the facility for methyl bromide fumigation treatment under the procedure **must**–

- be a permanently constructed fumigation chamber or a semipermanent fumigation chamber made from gas-proof material designed specifically for the purpose of fumigation;
- be covered by a current and valid Chamber Test Certificate issued by a licensed fumigator within the last six months (7.7.3); and
- include temperature measurement and recording equipment to measure the ambient air temperature during treatment (7.6.4); and
- include appropriate internal heating equipment (7.6.4); and
- include fans to adequately mix the fumigant throughout the chamber (7.8.7).

Stack fumigation under impervious gas sheets (tarpaulins) is not permitted under this Operational Procedure.

7.6.1 Calculation of Fumigation Chamber Volume

The volume of the space to be fumigated is the volume of the total space enclosed for fumigation.

Where an enclosed chamber is used for fumigation, the volume of any gas circulation equipment external to the chamber, which is not sealed from the chamber during fumigation, **must** also be included in calculation of the chamber volume.

Details of chamber volume in cubic meters and fumigant dosage rates **must** be prominently displayed in the vicinity of the chamber in the form of a *Fumigation Dosage Chart* (7.8.3).

The volume of each chamber load **must** be recorded on the *Fumigation Treatment Record* (0).

Where the addition of the chamber load does not meet the minimum required treatment chamber loading volume (7.5), the fumigator **must** use dunnage to make up the additional required volume.

7.6.2 Placement of Gas Supply Line (s)

The gas supply line(s) **must** be placed within the chamber to effectively introduce and allow dispersal of fumigant. Precautions **must** be taken to prevent any liquid fumigant coming in contact with produce being fumigated. Adequate fan circulation **must** be provided to circulate the fumigant within the chamber.

7.6.3 Placement of Gas Sampling Lines

When gas concentrations are to be monitored during fumigations, gas-sampling lines **must** be positioned within the chamber for each fumigation. Sampling lines **must** be crushproof (for example 6 mm internal diameter hydraulic hose is effective) and **must** be positioned as follows-

- for chambers less than 5 m³ one gas sampling line **must** be located in the centre of the stack where possible within the centre carton/package;
- for chambers 5 m³ or greater three sampling lines **must** be used and located at the top back, centre, and base front of the stack where possible within the top carton/package at one end of the enclosure and the centre carton/package in the middle of the enclosure and the bottom carton/package at the opposite end of the enclosure from the top sampling tube.

7.6.4 Ambient Air Temperature and Chamber Heating

The ambient air temperature within the fumigation chamber **must** be maintained at the minimum temperature specified in section 2.5 above for the relevant dosage to be applied. Each chamber **must** be equipped with appropriate internal heating equipment to ensure the chamber is maintained at the minimum temperature required during fumigation treatment.

Temperature monitoring devices **must** be checked on a regular basis to ensure they continue to operate effectively.

The fumigator **must**:

- ensure that ambient air temperature sensing instruments in the chamber are located in a position that does not receive direct airflow from the circulation fans and heating element. The sensor **must** be located in an area either behind the circulation fans or an area in which the air passing the sensor is returning to the fans (i.e. return air monitoring); and
- take ambient air temperature recordings every thirty minutes during the fumigation.

7.6.5 Ambient Air Temperature Sensing and Recording Equipment

Ambient air temperature sensing and recording systems **must** have an overall variance of not more than $\pm 0.5^{\circ}\text{C}$ in the range of 10°C to 17°C . The sensor and recording system **must** have a resolution of not more than 0.1°C .

The combined sensing and data recording systems **must** be accurate to within 0.5°C of the true temperature and **must** be able to be read in increments of 0.1°C or less.

7.6.6 Ambient Air Temperature Sensors

Ambient air temperature sensors **must** be uniquely identified e.g. a tag attached to the sensor or on the adjacent wall. Each sensor **must** be matched to a specific data recorder or uniquely identifiable in a computer database.

A plan indicating the location and identity of each sensor **must** be kept with the data recording instrument.

7.6.7 Ambient Air Temperature Recording Equipment

Output of recording instruments **must** be accurate to within $\pm 0.1^{\circ}\text{C}$ of the true temperature in the range of 10°C to 17°C in the normal operating environment. The instrument **must** be capable of repeatability in the range of 10°C to 17°C .

7.6.8 Calibration of Ambient Air Temperature Sensing and Recording Equipment

The Fumigator **must** ensure ambient air temperature sensors and recording systems are calibrated/serviced at least annually as per the manufacturer's instructions. Temperature calibration **must** be conducted at the freezing point of water (0°C). At calibration, each sensor **must** be uniquely identified and matched with the corresponding data recorder.

Calibration is to be undertaken by the Fumigator or by a recognised Testing Authority.

7.7 Chamber Testing

All chambers used for methyl bromide fumigation under an Interstate Certification Assurance arrangement **must** be tested not less than at six monthly intervals. Non-permanent fumigation chambers i.e., tent **must** undergo a gas retention test (7.7.1), permanent chambers **must** undergo either gas retention test or Pressure Decay Testing. Each chamber that passes the test **must** be covered by a valid *Chamber Test Certificate* (7.7.3) issued by a licensed fumigator.

7.7.1 Gas Retention Testing

The Fumigator **must** ensure all operational chambers are tested for gas retention at least every six (6) months, or as required by an Authorised Inspector. All chambers used for methyl bromide fumigation **must** be covered by a valid Chamber Test Certificate.

Chamber Test Certificates (7.7.3) **must** be issued following testing by a licensed fumigator in accordance with the following:

- after preparing the chamber in accordance with the requirements of this procedure, gas concentrations **must** be measured and recorded twenty (20) minutes after the start of the fumigation and at two (2) hours after the start of the fumigation prior to venting.
- a measurement **must** be taken at all monitoring points to determine the concentration of fumigant. All measurements **must** be within $\pm 5\%$ of each other at the twenty (20) minute monitoring where more than one monitoring point is in use (refer 7.8.9).
- where measurements are not within $\pm 5\%$ of each other at the twenty (20) minute monitoring, the fumigation will be deemed to have failed and the Fumigator **must** vent off all fumigant, ensure gas freedom and then inspect the chamber for the possible cause.
- a minimum of 60% of the original fumigant concentration is required to be retained at the final monitoring (after two hours). If the required final concentration is not reached then the fumigation will be deemed to have failed and the Fumigator **must** vent off all fumigant, ensure gas freedom and then inspect the chamber for the possible cause.
- a Chamber Test Certificate may be issued for that chamber immediately following at least one successful fumigation retention test for that chamber.

7.7.2 Pressure Decay Testing (permanent or fixed chamber)

Chamber Test Certificates **must** be issued following testing by a licenced fumigator in accordance with the following –

- Pressure inside the closed chamber **must** be raised by 250 Pa using high-pressure compressed air supplied from a compressor or gas cylinder;
- Allow the pressure to decay to 200 Pa; and
- Start measuring the time (in seconds) when it reaches 200 Pa; and
- Stop measuring the time (in seconds) when it reaches 100 Pa; and
- Record the pressure decay time (in seconds).

A minimum of 10 seconds **must** elapse for the chamber to pass the pressure decay test. At least one successful Pressure Decay test for each chamber **must** be undertaken before a Chamber Test Certificate may be issued for that chamber. The licenced fumigator that is conducting the test may require additional pressure decay testing where considered necessary.

7.7.3 Chamber Test Certificate

The *Chamber Test Certificate* (refer attachment 4) **must** record –

- the name and Interstate Produce (IP) number of the Business that operates the fumigation chamber;
- the facility address;
- the identification of the chamber or impervious tarpaulins to which the certificate applies;
- the date of the test;
- the measurements of the chamber;
- the chamber volume;
- the volume of any external ducting;
- the total chamber volume in cubic metres;
- for testing under the retention test method:
 - the fumigation rate (g/m³);
 - the time of vaporisation;
 - the quantity of methyl bromide in grams (g) added to the chamber to achieve the concentration at the time of the test(s);
 - the readings for each monitoring point for each test at 20 minutes after vaporisation is complete;
 - the readings for each monitoring point for each test at the end of the test (at two hours after vaporisation is complete);
 - the time venting commenced;
 - the percentage of gas retained for each test at the end of the test;
- for testing under the pressure decay method:
 - the time in seconds it takes for the pressure to decay from 200 Pa to 100 Pa;
- the licence number, printed name and signature of the licensed fumigator who performed the test(s).

7.8 Fumigation Treatment

7.8.1 Sealing the Chamber

Once all the produce has been placed into the chamber, the Fumigator **must** ensure the chamber is gas tight by closing all vents and access points and checking all possible leak sites such as doors, gaskets and joints. After the chamber has been sealed the Fumigator turns on all circulation fan(s).

7.8.2 Calculation of Fumigant Dosage

The dosage rate applied for the fumigation treatment **must** be determined by the temperature of the **coldest produce** from any inspection lot to be fumigated in the chamber load.

Treatment for **Queensland fruit fly** must not commence if the temperature of the product is below 17 °C or is 32 °C or above.

Treatment for **Mediterranean fruit fly** or **other pests** must not commence if the temperature of the product is below 10 °C or is 32 °C or above.

Determine the amount of methyl bromide required in grams (g) using the following formula –

$$\text{Chamber volume} \times \text{dosage rate} = \text{g methyl bromide}$$

For example –

$$22.5\text{m}^3 \times 32\text{g/m}^3 = 720\text{gms methyl bromide}$$

The Fumigator **must** maintain records of the total amount of methyl bromide applied for each fumigation on the *Fumigation Treatment Record* (0).

7.8.3 Fumigation Dosage Chart

The Fumigator **must** maintain a *Fumigation Dosage Chart* or similar record in close proximity to the chamber for each chamber used by the Business for fumigation under this Protocol.

The *Fumigation Dosage Chart* (refer attachment 2) **must** provide the following details –

- the Business's name and Interstate Produce (IP) number;
- the identification of the chamber to which the chart applies;
- the total chamber volume in cubic metres
- the quantity of methyl bromide in grams (g) required to be added to the chamber to achieve the correct concentration
- The printed name and signature of the licensed fumigator responsible for the preparation of the chart and the date of preparation.

7.8.4 Application of Fumigant

A. Sealed System

The Fumigator measures out the required amount of fumigant into the measuring cylinder. After the required amount of fumigant has been decanted and checked the fumigant is introduced into the chamber via the volatiliser.

B. Loss of Weight System

The Fumigator measures out the required amount of fumigant by the loss of weight in the dispensing cylinder.

To operate this method, the dispensing cylinder is placed onto scales to allow the weight of the cylinder to be determined before application of the fumigant.

The Fumigator **must** tare off the weight of the required amount of fumigant on the dispensing cylinder and open the valve to apply the required amount until the cylinder is at the tared weight.

7.8.5 Vaporiser/Volatiliser

Although methyl bromide has a boiling point of 3.6 °C and will vaporise when released at temperatures above 4.0 °C, freezing may occur as the gas is released from the delivery cylinder. For this reason, a vaporiser or volatiliser **must** be used to introduce the methyl bromide into the treatment chamber as a hot gas.

The heat source for the vaporiser **must** be capable of heating the water in the vaporiser to at least 65 °C and maintaining the temperature at or above this while the methyl bromide is being applied to the enclosure.

7.8.6 Calibration of weighing scales

Scales used for the Loss of Weight System **must** be calibrated using a known weight at least every 6 months. The Business **must** maintain results of weighing scale calibration checks.

The *Weighing Equipment Calibration Records* (refer attachment 8) **must** record the following information:

- the date of calibration;
- the identification of the scales calibrated;
- confirmation that the equipment is accurate to within ± 1 percent of the minimum dosage of methyl bromide used for the chamber; and
- the officer responsible for conducting the calibration check.

7.8.7 Mixing of Fumigant and Treatment Commencement

To ensure adequate mixing of the fumigant, fans **must** be used to disperse the gas throughout the chamber and thereby enhance the penetration of the fumigant.

The fumigation treatment period will start when:

- all concentration readings are equal to or above the standard concentration; and
- equilibrium has been established

Equilibrium is achieved when the highest concentration reading is within 15% of the lowest concentration reading.

The formula for calculating equilibrium is:

$$\frac{\text{Highest Reading} - \text{Lowest Reading}}{\text{Lowest Reading}} \times 100 = \text{Equilibrium \%}$$

If the result of this calculation is more than 15%, equilibrium has not been achieved and the fans **must** be turned on again to further circulate the fumigant. Additional readings **must** then be taken until equilibrium has been achieved or the concentration falls below the standard concentration. Once initial equilibrium has been achieved it is not required at any other time.

If additional fumigant needs to be added before the start point has been reached, the amount **must** be calculated by subtracting the lowest concentration reading from the initial dose rate and multiplying that by the volume of the enclosure.

The formula for this is:

$$(\text{Initial Dose Rate} - \text{Lowest Concentration Reading}) \times \text{Volume}$$

If more fumigant is added to the enclosure before start time is achieved, the time the injection of additional fumigant is completed becomes the new injection completion time for determining the required start time concentration.

All initial concentration readings and the time they were taken **must** be recorded. This includes any readings taken prior to achieving start point.

7.8.8 Testing for Leaks

Once the fumigation has commenced, the Fumigator **must** test the chamber for leaks using a suitable leak detector (such as TIF or Riken). Sites checked **must** include -

- doors sealing points;
- external ducting; and
- exit points for supply lines and gas sampling lines.

Any leaks detected **must** be repaired immediately. If leaks are detected that cannot be repaired during the treatment, the fumigation **must** be aborted, and the chamber repaired before further use.

7.8.9 Monitoring Fumigant Concentration

The business **must** maintain a satisfactory level of fumigant within the chamber during the fumigation. Fumigant concentration readings **must** be taken at the start (7.8.7) and end of fumigation exposure period for all fumigation treatments

The fumigant concentration **must** not fall below 60% of the required concentration (2.5) for the duration of the treatment. (See 7.8.10 Concentration Standard)

'Topping-up' of fumigant is prohibited once treatment has begun.

1. Start Point monitoring

The fumigation exposure period begins when the fumigant concentrations at all monitoring points are at or above the concentration standard and have reached equilibrium (when all readings are within 15% of the lowest reading).

Example:

For a fumigation @ 32g/m³, all concentration readings after 15 - 30 min must be at or above 27.2g/m³ (refer 7.8.10 Concentration Standard)

2. End Point monitoring

Fumigant concentrations at all monitoring points **must** be at or above the concentration standard at the end of the fumigation period, before fumigation can be declared successful.

Example:

For a fumigation @ 32g/m³, all concentration readings after 2 hours must be at or above 19.2g/m³ (refer 7.8.10 Concentration Standard)

7.8.10 Concentration Standard

Initial Dose (g/m ³)	Start Point (g/m ³)		End of Exposure Period(g/m ³)
	≥85% 15 - 30 min after end of vaporisation	≥75% 30 min to 1 hr after end of vaporisation	≥60% 2 hrs after Start Point
32	27.2	24	19.2
40	34	30	24
48	40.8	36	28.8
56	47.6	42	33.6

The Fumigator **must** record the monitoring results for each fumigation on the Fumigation Treatment Record (refer 0 Treatment Record.) or records which capture the same information.

7.8.11 Failed Treatment

Where monitoring indicates that the required concentration will not be maintained, the Fumigator **must** vent all fumigant, ensure gas freedom and then inspect the chamber for the possible cause.

Where the fumigation has failed, it is subsequently unsuitable for further treatment with methyl bromide, requiring the consignment to be sent for an alternative treatment or to a non-sensitive market.

7.8.12 Fumigation Treatment Records

The Fumigator **must** record each fumigation using a *Fumigation Treatment Record* or records which capture the same information.

Fumigation Treatment Record (refer attachment 3) **must** identify –

- unique treatment chamber identification reference
- the date of fumigation;
- the packer's identification;
- the type of produce treated;
- the quantity of produce treated;
- all temperatures measurements taken prior to fumigation;
- the fumigation dosage rate;
- the total quantity in grams of fumigant released in the fumigation;
- the time vaporisation is completed;
- start point reading/s concentration, time and % of original dosage;
- end point reading/s concentration, time and % of original dosage;
- the completion time of the fumigation (the time venting commenced);
- licence number, name and signature.

7.8.13 Fumigation Chamber and Fumigation Equipment Maintenance

The Fumigator **must** carry out regular checks of the fumigation chamber and any fumigation equipment such as halide lamps, gas monitoring devices and gas sampling tubes to ensure they continue to operate effectively and remain free from malfunction, damage or excessive wear.

7.8.14 Venting the chamber

After the two-hour treatment period is complete, the chamber **must** be ventilated by running the exhaust system to extract all of the remaining gas and ensure that the concentration of methyl bromide is below 5 ppm before produce is released from the chamber.

7.8.15 Unloading the Chamber

Unloading of the chamber may commence after the Fumigator has released the produce. The ventilation system **must** be kept running during this process.

7.8.16 Aeration of Produce

Treated produce **must** be given sufficient time to air after treatment to allow adequate dispersal of the fumigant out of the produce and ensure that the Exposure Standards of 5 ppm of methyl bromide and any applicable maximum residue limits are not exceeded.

7.9 Storage and Secure Packing

All produce that has been successfully treated with methyl bromide **must** be stored under secure conditions and segregated from any untreated product until dispatched from the facility.

7.9.1 Post Treatment Security

Where post-treatment security is a condition of entry, treated fruit may be allowed to air adequately prior to securing the produce against reinfestation. Treated fruit **must** be held for the minimum practical period after fumigation and airing before it **must** be secured against reinfestation.

If required by receiving jurisdictions, any fruit which is stored outside the treatment facility after treatment and prior to dispatch **must** be held under secure conditions.

Secure conditions include -

- unvented packages;

- vented packages with the vents secured with gauze/mesh with a maximum aperture of 1.6 mm;
- fully enclosed under tarpaulins, hessian, shade cloth, mesh or other covering which provides a maximum aperture of 1.6 mm;
- shrink wrapped and sealed as a palletised unit;
- fully enclosed or screened buildings, cold rooms, vehicles or other facilities free from gaps or other entry points greater than 1.6 mm.

7.10 Dispatch

7.10.1 Package Identification

The Authorised Dispatcher **must** ensure that each package is marked in indelible and legible characters of at least 5 mm, with –

- the **Interstate Produce (IP)** number of the Business that operates the approved facility in which the produce was treated; and
- the words “**MEETS ICA –04**”; and
- the **date (or date code)** on which the fruit was treated.

Prior to the issuance of an Interstate Assurance Certificate by the Business under this Operational Procedure.

7.10.2 Assurance Certificates

The Authorised Dispatcher **must** ensure an Interstate Assurance Certificate is completed and signed by an Authorised Signatory of the Business prior to dispatch of the consignment from the facility to a market requiring certification of fumigation with methyl bromide.

Interstate Assurance Certificates **must** be in the form of a Plant Health Interstate Assurance Certificate. A completed example is shown as Attachment 1.

Individual Interstate Assurance Certificates **must** be issued to cover each consignment (i.e. a discrete quantity of product transported to a single consignee at one time) to avoid splitting of consignments.

Interstate Assurance Certificates **must** be completed, issued to cover each consignment (i.e. a discrete quantity of product transported to a single consignee at one time) to avoid splitting of consignments.

Interstate Assurance Certificates **must** be completed, issued and distributed in accordance with the Work Instruction Guidelines for Completion of Plant Health Assurance Certificates (WI-QA015).

For **Tasmania only**, the Plant Health Assurance Certificate **must** clearly indicate the chamber room number for each lot in the consignment (all fruit fly host produce):

- a. where the whole consignment has been fumigated in the one chamber room, the words ‘*Chamber Room XX*’ can be written in the ‘Additional certification/Codes’ section, where XX references the unique identification reference for the treatment chamber; and
- b. where the consignment has been fumigated in multiple chamber rooms, a unique identification reference **must** be written next to each lot certified; and
- c. where the same chamber room has been used for multiple fumigation treatments on the same day, the unique identification reference for the treatment chamber, and the time of fumigation **must** be written next to each lot certified.

For **South Australia only**, the Plant Health Assurance Certificate **must** clearly indicate the total load of produce being treated in the chamber (including anything else in the chamber contributing to the total load).

7.10.3 Plant Health Assurance Certificate Distribution

The **original** (yellow copy) **must** accompany the consignment.

The **duplicate** (blue copy) is to be sent to the below address not less than monthly.

- Quality Assurance Officer
Quarantine WA
Locked Bag 69
WELSHPOOL DC, WA 6986

The **triplicate** (white copy) **must** be retained by the QA accredited Business that issued the certificate.

7.11 ICA System Records

The Business **must** maintain the following records –

- (a) Register of Authorised Inspection Persons (7.2.1);
- (b) Pre-treatment Fruit Fly Inspection Record (7.2.6);
- (c) Fumigation Dosage Chart (7.8.3) for each chamber;
- (d) Chamber Test Certificate (7.7) for each chamber;
- (e) If applicable, thermometer calibration records (7.6.8);
- (f) If applicable, scale calibration records (7.8.6);
- (g) Fumigation Treatment Record (0);
- (h) the duplicate copy of each Plant Health Assurance Certificate issued by the business.

ICA system records **must** be retained for a period of at least 12 months from completion, or until the next compliance audit of the ICA arrangement, whichever is the later.

An accredited Business **must** hold a minimum of 12 months ICA system records at the time of any compliance audit. If the compliance audit is conducted more than 12 months from the last compliance audit, the business **must** maintain all records completed since the previous compliance audit.

ICA system records **must** be made available on request by an Inspector.

7.12 ICA System Documentation

The Business **must** maintain the following documentation –

- (a) a copy of the Business's current Application for Accreditation;
- (b) a current copy of this Operational Procedure;
- (c) a current Certificate of Accreditation for an Interstate Certification Assurance Arrangement.

ICA system documentation **must** be made available on request by an Inspector.

8. NON-CONFORMANCES AND SANCTIONS

8.1 Non-conformances

Audits are regularly undertaken to evaluate the effectiveness of implementation of ICA requirements. If, in the opinion of the auditor, there is evidence indicating that there has been a failure to meet one or more accreditation requirements, the auditor may raise a Non-conformance Report (NCR). Actions required to address the non-conformance **must** be discussed and recorded on the NCR.

If the integrity of the accreditation has been significantly compromised, the non-conformance may provide grounds for the suspension or cancellation of the accreditation.

8.2 Incident Reports

Incident Reports may be raised by interstate quarantine authorities to report the detection of a non-conformance in produce certified under this ICA arrangement. An investigation into the incident **must** be conducted and findings reported back to the originator.

If the integrity of the accreditation has been significantly compromised, the incident may provide grounds for the suspension or cancellation of the accreditation.

8.3 Suspension and Cancellation

DPIRD may suspend or cancel an accreditation when an accredited business is found, for example, to have:

- obtained accreditation through the provision of false or misleading information;
- not paid fees owing to the DPIRD;
- contravened an accreditation requirement that compromises the integrity of the arrangement; and/or
- not rectified a non-conformance.

Any action taken by DPIRD to suspend or cancel an accreditation **must** be provided in writing to the business. This will also provide guidance on the lodgement of a written appeal requesting that the decision be reviewed.

9. ATTACHMENTS

Attachment 1	Plant Health Interstate Assurance Certificate (completed example)
Attachment 2	Fumigation Dosage Chart (blank)
Attachment 3	Fumigation Treatment Record (blank)
Attachment 4	Chamber Test Certificate (blank).
Attachment 5	Thermometer Calibration Record (blank)
Attachment 6	Register of Authorised Inspection Persons (blank)
Attachment 7	Pre-treatment Fruit Fly Inspection Record (blank)
Attachment 8	Weighing Equipment Calibration Record (blank)

PLANT HEALTH ASSURANCE CERTIFICATE (ICA04 EXAMPLE)



Department of
Primary Industries and
Regional Development

ORIGINAL (Yellow) – Consignment Copy
DUPLICATE (Blue) – Quarantine WA Copy
TRIPLICATE (White) – Business (Book) Copy

Certificate Number:

XXXXX

Business Specific Information*

Dispatch Date: / /

Ref No: _____

Arrival Date: / /

PO No: _____

* These items display business specific information entered at the discretion of the consignor. They do not represent any part of the certifying conditions of the produce.

Plant Health Assurance Certificate

Biosecurity and Agriculture Management (Quality Assurance and Accreditation) Regulations 2013

All accreditation details must be completed. Please print clearly and initial any alterations

Consignment Details

Consignor

Name **ABC Pty Ltd**Address **Block Road****Perth WA 6000**

Consignee

Name **Fresh Agents**Address **Somewhere Road****Somewhere VIC**

Re-consigned To

(Splitting consignments or re-consigning whole consignments).

Name

Address

Certification Details

IP Number

Facility Number

Procedure

w 9999**01****ICA-04**

Accredited Business That Prepared The Produce

Name **Mr Fumie**Address **Fume Lane****Perth WA 6000**

Grower or Packer

Name **ABC Pty Ltd**Address **Block Road****Perth WA 6000**

Other Facilities Supplying Produce

Number of Packages	Type of Packages (e.g. trays, cartons)	Type of Produce	Brand Name or identifying marks (As marked on packages)	Date Code (As marked on packages)	Authorisation for Split Consignment
144	Cartons	Cut flowers	ABC Produce	230321	Affix Authorisation Stamp to Split / Re-consignee here

Treatment Details

Treatment	Chemical (Active Ingredient)	Treatment Date	Concentration / Duration and Temperature
Fumigation	Methyl Bromide 100%	23/3/21	32g/m³ for 2 hour @ 24°C

Additional Certification / Codes

Declaration

I, an authorised Signatory of the accredited business that prepared the plants or plant produce described above, hereby declare that the plants or plant produce have been prepared in the business's approved facilities in accordance with the business's Certification Assurance arrangement and that the details shown above are true and correct in every particular. I acknowledge that it is an offence under the Biosecurity and Agriculture Management (Quality Assurance and Accreditation) Regulations 2013 to issue assurance certificates without being accredited and/ or making false statements in certificates and declarations.

Authorised Signatory's Name (If Name is Printed)

Signature

Date

Joe Bloggs
23/03/2021

FUMIGATION DOSAGE CHART

Chamber Identification:

Total Chamber Volume:

Business Name:

IP Number: **W**

Facility Address:

.....Post Code.....

DOSAGE CHART

CONCENTRATION (g/m³)	CALCULATED QUANTITY OF METHYL BROMIDE (g) (required to achieve indicated concentration)
32	
40	
48	
56	

This chart is to be located in close proximity to each Fumigation Chamber

Prepared by: (Fumigators Name).

Signature: Date:

FUMIGATION TREATMENT RECORD

Fumigation Details													
Owner of Fumigation Facility								Interstate Produce Number:		W			
Date of Fumigation		/ /		Chamber ID:				Chamber Volume:		m³			
Fumigator's Name						WADH Licence No:							
Ambient Temp		°C	Maximum Temperature			°C	Minimum Temperature		°C	Fumigation Rate:		g/m³ hrs	
Time Vaporisation Complete		:		Time of Venting				:		Amount of Fumigant Used:		g	
Grower / Packer Name						# and type of packages	Product Type (e.g. Banana)		Total volume of load (m3)	Chamber Loading (% of produce)	Produce temp Readings (°C)		
											1	2	3

Concentration Readings						
Time of reading		Reading g/m³			Equilib %	% Original
		1	2	3		
Start	:					
End 2hrs after Start	:					

Equilibrium % =
$$\frac{\text{Highest Reading} - \text{Lowest Reading}}{\text{Lowest Reading}} \times 100$$

% Original dosage =
$$\frac{\text{Original Dosage}}{100} \times \text{Lowest Reading}$$

Result	
Pass <input type="checkbox"/>	Comments
Fail <input type="checkbox"/>	
Fumigator Signature	

CHAMBER TEST CERTIFICATE

Operator of Fumigation Chamber				Interstate Produce No:	W	
Facility Address:				Chamber Identification:		
				Date of Test:	/ /	
Chamber Dimensions (internal):	Length	m	Width	m	Height	m
Fumigator's Printed Name:				Chamber Volume:	m ³	
Fumigator's WADH Licence No:				External Ducting	m ³	
				Total Chamber Volume:	m ³	

Perform 1 (one) of the following options**Option 1 (Gas Retention Test)**

Methyl Bromide Dosing				Methyl Bromide Concentrations						
Test Number	Fumigation Rate (g/m ³)	Quantity of Fumigant added (g)	Time Vaporisation Completed	15-30 minutes after Vaporisation Finished (Start Point) (g/m ³)				(End of Exposure) 2 Hours after 'Start Point' (g/m ³)	Percentage retained after 2 hr exposure period	Time Venting Commenced
				1	2	3	Equilibrium Calculation %			
			:							:
			:							:
			:							:

Option 2 (Pressure Decay Test)

Test Number	Pressurised to 250 Pa	Time (seconds) for pressure to decay from 200 Pa to 100 Pa	Comments
	<input type="checkbox"/>		
	<input type="checkbox"/>		
	<input type="checkbox"/>		

The fumigation chamber described above has been tested in accordance with requirements of Department of Primary Industries and Regional Development, Western Australia Operational Procedure '**Treatment of Potential Carriers (Fumigation with Methyl Bromide) (QF-T2)**' using one of the above options and has been shown to achieve at least 60% retention of methyl bromide after 2 hour exposure period.

Fumigator's Name	
Signature	
Date	/ /

THERMOMETER CALIBRATION

Name of Fumigation Company or Fumigator's Business Name	Date	Thermometer Number	Temperature Reading	Variation of Temperature from Ice Point - 0°C	Name of Testing Officer (please print)	Signature of Testing Officer
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					
	... / ... / ...					

Note: Place a line through any entry for any person who is no longer Authorised to carry out inspections under the business's Interstate Certification Assurance arrangement.

PRE-TREATMENT FRUIT FLY INSPECTION RECORD (ICA66)

To be completed prior to fumigation of High-risk products

Inspection						Authorised Inspection Person	
Inspection date	Produce type	Grower/ Packer for each Inspection lot	Number packages sampled	Inspection results (Pass / Fail)	Comments	Name	Signature

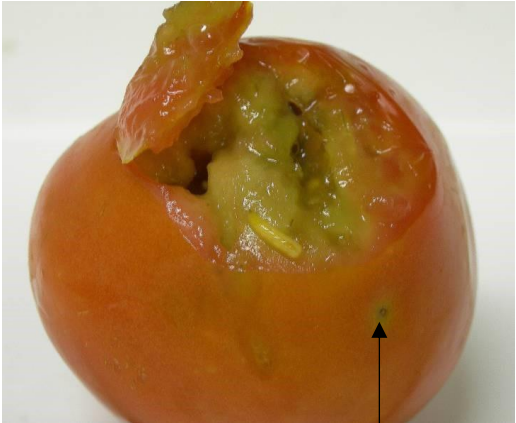
WEIGHING EQUIPMENT CALIBRATION RECORD

Date of test	Equipment type	Calibration result			Adjustment	Comments	Testing Person	
		Test 1	Test 2	Test 3			Name	Signature

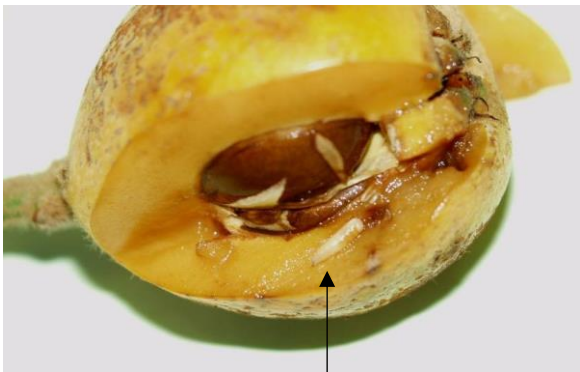
INSPECTION FOR FRUIT FLY INFORMATION SHEET

(Images courtesy of Department of Environment and Primary Industries, Victoria)

Larvae and sting marks



Sting marks



Larvae