ICA-37

HOT WATER TREATMENT OF GRAPEVINES

NUMBER  ICA-37  VERSION 3.0

AUTHORISED BY  Manager, Plant Product Integrity & Standards

AUTHORISED DATE  27/06/2017  EFFECTIVE DATE  01/07/2017

ISSUED BY  Primary Industries, Biosecurity & Food Safety

REVISION HISTORY

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<td>17/09/2003</td>
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<td>Pages 7, 21, 22, 23 and 24.</td>
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<td>All pages reformatted. Changes made to align with the Biosecurity Act 2015. Updated definitions, removed details for accreditation, auditing procedures, sanctions policy and charging, and replaced the application form and PHAC. Updated NSW Department of Primary Industries contact details. Changed requirement from the use of a Hot water treatment declaration, to a PHAC</td>
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NEXT REVIEW DATE:  01/07/2018
Disclaimers

The information contained in this Procedure is based on knowledge and understanding at the time of writing (June 2017). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up-to-date and to check currency of the information with the appropriate officer of the Department or the user’s independent adviser.
## PROCEDURE

### Contents

1. PURPOSE........................................................................................................................................ 4
2. SCOPE ............................................................................................................................................ 4
3. REFERENCES................................................................................................................................. 4
4. DEFINITIONS................................................................................................................................... 4
5. RESPONSIBILITY ............................................................................................................................ 6
6. REQUIREMENTS............................................................................................................................. 7
7. PROCEDURE – PART A .................................................................................................................. 7
   7.1 Facility plan ............................................................................................................................ 7
   7.2 Hot water treatment equipment requirements .......................................................................... 7
      7.2.1 Hot water tank ................................................................................................................ 7
      7.2.2 Temperature sensors and recording equipment ............................................................... 7
      7.2.3 Calibration of temperature sensing and recording equipment ......................................... 8
   7.3 Hot water treatment ................................................................................................................ 9
      7.3.1 Sensor placement ................................................................................................................ 9
      7.3.2 Verification of hot water treatment .................................................................................... 9
   7.4 Treatment records .................................................................................................................. 10
      7.4.1 Unit infrastructure records .............................................................................................. 11
   7.5 Plant Health Assurance Certificate ...................................................................................... 11
   7.6 Plant Health Assurance Certificate ...................................................................................... 11
8. PROCEDURE – PART B ................................................................................................................ 11
   8.1 Vine material receival ............................................................................................................. 11
      8.1.1 Receival of vine material treated by another Business ..................................................... 12
   8.2 Grading and packing ............................................................................................................. 12
      8.2.1 Identification of treated and untreated material during packing ....................................... 12
      8.2.2 Identification of treated and untreated material after packing ......................................... 12
   8.3 Post-treatment security ......................................................................................................... 12
   8.4 Dispatch ................................................................................................................................... 13
      8.4.1 Package identification ....................................................................................................... 13
      8.4.2 Plant Health Assurance Certificates (PHACs) .................................................................. 13
      8.4.3 PHAC distribution ............................................................................................................. 13
9. RECORDS AND DOCUMENT CONTROL ...................................................................................... 14
   9.1 ICA system records ................................................................................................................. 14
   9.2 ICA system documentation .................................................................................................... 14
10. ATTACHMENTS............................................................................................................................. 14
1. PURPOSE

The purpose of this Procedure is to describe:
(a) the principles of operation, design features and standards required for hot water treatment equipment; and
(b) the responsibilities and actions of personnel;
that applies to the certification of hot water treatment (HWT) of grapevine material for phylloxera under an Interstate Certification Assurance (ICA) arrangement.

2. SCOPE

This Procedure covers all certification of hot water treatment of grapevine material by a Business operating under an ICA arrangement in New South Wales.

This Procedure is applicable to the requirements specified in Section 6 Requirements where the requirements are a specified entry condition of an interstate authority for phylloxera.

Pest/s: Grapevine phylloxera
Produce: Vine material (dormant)
Location: New South Wales insert text.

This Procedure is separated into two (2) sections.

• Part A covering the hot water treatment facility; and
• Part B covering packer activities.

Certification hot water treatment under this Procedure may not be an accepted quarantine entry condition for all produce to all intrastate and interstate markets.

Grapevine material from a known phylloxera infested area cannot be certified under this Procedure.

Some intrastate or interstate markets may require additional plant health certification for pests and diseases other than phylloxera 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 by phoning 1800 084 881 or accessing http://www.interstatequarantine.org.au/.

3. REFERENCES

Biosecurity Act 2015
   Accreditation of Biosecurity Certifiers
   Biosecurity Audit Frequency
   WI-01 – ‘Guidelines for Completion of Plant Health Assurance Certificates’

4. DEFINITIONS

In this Procedure:
**Act** means the [Biosecurity Act 2015](#).

**APVMA** means the Australian Pesticides and Veterinary Medicines Authority.

**Approved laboratory** means a laboratory approved by the National Association of Testing Authorities (NATA), or approved by NSW Department of Primary Industries.

**Authorised Person** means an authorised officer under the Act or a person authorised under a law of another State or Territory that relates to plant biosecurity.

**Authorised Signatory** means a person whose name is notified to the Secretary as a person who can issue a biosecurity certificate on behalf of the Business.

**batch** means the total number of cuttings or rootlings covered by one hot water treatment.

**Business** means the legal entity accredited as a biosecurity certifier under the Act.

**Certification** means a Plant Health Certificate or a Plant Health Assurance Certificate, which verifies that a consignment meets the requirements of an Interstate Certification Assurance Procedure or an interstate quarantine entry requirement.

**Certification Assurance Arrangement** means a CA Arrangement that enables a Business or a person authorised under a corresponding law of a State or Territory, to issue a Plant Health Assurance Certificate that meets certain plant health quarantine conditions for trade within the State or between the State and other States and Territories.

**Department** means the NSW Department of Industry – Office of Primary Industries.

**dormant vine** means the period between natural leaf fall and spring growth. Generally one month after leaf-fall and one month prior to budburst.

**facility** means the approved location of the hot water treatment operation where certification operations covered by the ICA arrangement are conducted.

**fruit fly** means Queensland fruit fly, *Bactrocera tyroni* (Froggatt).

**HWT** means hot water treatment.

**ICA Scheme** means a scheme developed by the States and Territories to meet their respective plant quarantine requirements under the Memorandum of Understanding on Interstate Certification Assurance dated 6 August 1999.

**non-conformance** means a failure to fulfil a specified requirement.

**phylloxera** means all stages of the species *Daktulosphaira vitifolia.*

**PHAC** means a Plant Health Assurance Certificate that is issued in accordance with the requirements of a Certification Assurance Arrangement.
5. RESPONSIBILITY

Position titles have been created to reflect the responsibilities which must be met by the Business under the ICA arrangement. These positions must be assigned to trained staff. One person may carry out the responsibilities of more than one position.

Certification Controller is responsible for:

- ensuring the Business and its staff comply with their responsibilities and duties under this Procedure;
- representing the Business during audits and other matters relevant to ICA Procedure;
- training staff in their duties and responsibilities under this Procedure; and
- ensuring all certification of vine material is carried out in accordance with this Procedure.

PART A (covering HWT)

- ensuring the Business has a current accreditation for an ICA arrangement under Part A of this Procedure; and
- ensuring hot water tanks and temperature sensing and recording equipment conforms to the requirements of this Procedure.
- ensuring a PHAC is completed.

PART B (covering vine receival, packing and certification)

- ensuring the Business has a current accreditation for an ICA arrangement under Part B of this Procedure;
- ensuring all vine material received for packing and/or certification under Part B of this Procedure is sourced from a Business accredited under Part A and if applicable, is accompanied by a valid PHAC;
- overseeing the packing and grading of vine material for certification under this Procedure; and
- maintaining packing records for all certified vine material that allows traceback of material to the original treatment lot and Hot Water Treatment Record or PHAC

Treatment Operator is responsible for:

- calibrating temperature sensors and recording equipment;
- ensuring the correct equipment is being used;
- maintaining temperature sensing and recording equipment calibration test records;
- loading the hot water tank, placement of temperature sensors and oversight of hot water treatment and temperature recording; and
- maintaining hot water treatment records.

Authorised Dispatcher is responsible for:

- ensuring all packages covered by a PHAC are identified; and
- maintaining copies of all PHACs issued by the Business under this Procedure.

Authorised Signatory is responsible for:

- ensuring, prior to signing and issuing a PHAC, that produce covered by the PHAC has been prepared in accordance with this Procedure;
- ensuring the details on the PHAC are true and correct in every particular; and
- signing and issuing the PHAC.
6. REQUIREMENTS

Vine material certified under this Procedure must be subjected to hot water treatment in accordance with one of the following treatment schedules:

- 54°C ± 1°C for 5 minutes; or
- 50°C ± 1°C for 30 minutes.

The Department 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.

Grapevine material may be susceptible to damage by hot water treatment. Businesses applying hot water treatment should check with experienced persons such as departmental officers for any available information. Testing of small quantities is recommended.

The Department accepts no responsibility for any damage to produce from this treatment.

7. PROCEDURE – PART A

Part A – Hot water treatment

7.1 Facility plan

The Certification Controller shall maintain a plan of the facility.

The Facility plan shall include the following details:

(a) road access including street name/s;
(b) internal roadways within the facility providing access to the hot water treatment tanks;
(c) the location and identification of buildings at the facility; and
(d) the location and size (m³) of each hot water tank and the hot water tank number or other code that uniquely identifies each hot water tank at the facility.

A copy of the facility plan shall be included with the Businesses Application for Accreditation if accreditation for Part A is required.

A blank Facility Plan is included as Attachment 2 and should be copied for completion and inclusion with the Businesses Application for Accreditation.

7.2 Hot water treatment equipment requirements

7.2.1 Hot water tank

Hot water tanks in which treatment is to occur under this Procedure shall be purpose built, constructed from inert material and have appropriate temperature measurement and recording equipment.

The Treatment Operator shall ensure all material is placed into appropriate dipping containers to prevent material from floating. An open mesh cage, or similar device made from inert material that allows adequate circulation of hot water should be constructed for immersion of vine material in the tank. The cage should fit inside the main tank with a nominal 150 mm clearance on all sides.

A mesh lid or other device may be required to ensure all material remains fully immersed during hot water treatment.

A mesh lid or other device may be required to ensure all material remains fully immersed during hot water treatment.

7.2.2 Temperature sensors and recording equipment

Temperature sensing and recording systems shall have a combined overall accuracy of not more than ± 0.5°C in the range of 50-55°C and a resolution of up to 0.2°C (i.e. 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 0.2°C or less).
Low-resolution mini data loggers may be used which have an overall accuracy of not more than \( \pm 0.5^\circ C \) and a resolution of up to \( 0.5^\circ C \). Where mini data loggers are used, certification shall be based on the temperature that is \( 0.5^\circ C \) above the maximum temperature recorded during the treatment period.

**Strip chart recorder display standards**

The scale deflection for strip chart recorders shall not be less than 5 mm for each degree Celsius. A print interval of 1 minute for the 5 minute treatment and 5 minutes for the 30 minute treatment and a chart speed of approximately 500 mm per hour shall be used.

The chart scale shall be graduated with major scale marks at every degree Celsius and minor scale marks at every \( 0.2^\circ C \). Temperature values for each sensor shall be printed at least once every minute for the 5 minute treatment and at least once every 5 minutes for the 30 minute treatment.

Each symbol on the wheel shall correspond to and identify the sensor it represents. The chart shall be of sufficient length to display a complete treatment record.

**Data logger display standards**

For each sensor the temperature value shall be sampled at least once every minute for the 5 minute treatment and once every 5 minutes for the 30 minute treatment. Each reading shall be displayed on the data log sheet and contain a clear, fully informative record including the sensor identity/location, the temperature reading to a resolution of at least \( 0.2^\circ C \), and the date and time of sampling.

**Mini data logger display standards**

For mini data loggers, temperature records shall be downloaded onto a personal computer at completion of the treatment period. At conclusion of the treatment, the Treatment Operator shall obtain print outs of the treatment temperatures throughout the treatment period and date and sign these data log sheets as the treatment record.

For each sensor the temperature value shall be sampled at least once every minute for the 5 minute treatment and once every 5 minutes for the 30 minute treatment. Each reading shall be displayed on the data log sheet and contain a clear, fully informative record including the sensor identity/location, the temperature reading to a resolution of at least \( 0.2^\circ C \) (or \( 0.5^\circ C \) for low resolution data loggers), and the date and time of sampling.

**7.2.3 Calibration of temperature sensing and recording equipment**

Temperature sensors and recording systems must be calibrated against a certified Reference Thermometer by using the hot water treatment bath method at the beginning of each season, and at monthly intervals thereafter during the period of operation. At calibration, each sensor must be uniquely identified and matched with the corresponding data recorder.

Calibration shall be monitored by an Inspector or undertaken by a recognised Testing Authority. For the purpose of this Procedure, a recognised Testing Authority is a person or company that is approved by the Department to calibrate hot water treatment temperature sensing and recording equipment.

**Note:** The Business must have temperature sensors and recording equipment calibrated by a recognised testing authority, or under monitoring by an inspector prior to seeking accreditation under this Procedure.

**Calibration method**

Temperature sensors shall be placed in the water bath and sufficient time (approximately 1 hour) allowed for the temperature in the water bath to stabilise. The primary standard used for determining the temperature of the water bath at the time of calibration will be a Reference Thermometer.

The Reference Thermometer used for calibrating temperature sensors shall be uniquely identified and shall be calibrated and certified by a recognised Testing Authority as accurate to within \( \pm 0.1^\circ C \) at \( 50^\circ C \). Calibration by a recognised Testing Authority, registered in the appropriate class of testing shall be performed annually, or as specified on the instrument calibration certificate immediately prior to the commencement of the season.
The Business shall maintain records of the Reference Thermometer calibration as provided by the Testing Authority. Certificates of calibration must be traceable to the specified Reference Thermometer.

The reading of each sensor shall be within ± 0.5°C of 50°C for three consecutive readings taken at 5 minute intervals, recorded and compared to the certified Reference Thermometer. Variations will be recorded for each sensor.

If the temperature recording equipment provides a zeroing function, the reading of each sensor may be adjusted to the same temperature as the certified reference thermometer.

Temperature sensors that fail calibration or are otherwise deemed as unusable shall be disposed of or identified to prevent inadvertent use.

**Temperature sensing and recording equipment calibration records**

The Treatment Operator shall maintain records of the results of calibration of all temperature sensors and recording equipment used under this Procedure.

Records shall be in the form of calibration test records from the recognised Testing Authority or a Sensor Calibration Test Record (see Attachment 8) or similar record completed by the Treatment Operator and authorised by an inspector.

Calibration test records shall include the following information:

- the date of calibration;
- the identification of the sensor and data recording instrument;
- the results of the three readings taken at 50°C;
- the correction (variation) if any to be applied to the sensor reading; and
- the name of the inspector or recognised Testing Authority responsible for conducting the calibration test.

### 7.3 Hot water treatment

All vine material certified under this Procedure must have been treated for phylloxera in an approved Hot Water Treatment facility in accordance with an appropriate temperature/time schedule as detailed in Section 6 Requirements.

Access to facilities containing Hot Water Treatment equipment shall be restricted to essential personnel during treatment.

#### 7.3.1 Sensor placement

A minimum of three sensors shall be used for each tank. One sensor should be located at a depth of 100 mm from the base of the tank, another at 100 mm from the surface and the other inserted into the centre of the load mass.

Each sensor shall be uniquely identified in a manner such as a tag attached to the sensor or on the adjacent wall or container. Sensors shall be matched to a specific data recorder.

A plan indicating the location and identity of each sensor shall be kept with the data-recording instrument. A blank Sensor Placement Plan is provided as Attachment 7.

#### 7.3.2 Verification of hot water treatment

**Treatment method**

- The tank must be filled with clean water and be free from any soil residue.
- Raise the temperature of the bath to the upper limit allowable

Option 1: 5 minute treatment, upper limit is 55°C.
Option 2: 30 minute treatment, upper limit is 51°C.

- Heat must be applied uniformly and at sufficient distance from the material to prevent localised hot spots.
- Immerse the material fully (in appropriate dipping containers). Do not plunge the material repeatedly as this has an evaporative cooling effect with excessive temperature loss. The temperature of the product should recover to the minimum allowable within the specified time limit (if recovery is not being achieved then reduce the amount of material being processed in each batch).

Option 1: (5 minute treatment) should recover to 54°C within 1 minute.
Option 2: (30 minute treatment) should recover to 50°C within 2 minutes.

- Agitation of water in the heating tank is essential to eliminate the temperature differential within the tank and to aid the heat transfer process between the material and the body of water. An electric pump with sufficient capacity to circulate the entire volume of the tank within 15 minutes is required (e.g. a 5,000 litre tank would require circulation at a rate of 330 litres per minute).
- Temperatures at each sensor must remain at the target temperature during the entire treatment period.

If the water temperature during treatment falls more than 1.0°C below the specified target temperature at any time during the treatment period, the water temperature must be raised to target temperature and the treatment recommenced. Alternatively, treatment may be continued at a lower target temperature and corresponding treatment period (i.e. Treatment commenced under Option 1 can be recommenced under Option 2).

An accurate timing mechanism capable of measuring time to the second shall be used for timing the duration of treatment.

7.4 Treatment records

The Treatment Operator shall maintain records of each hot water treatment. Records must include a Hot Water Treatment Record (see Attachment 3 and Attachment 4) for each treatment lot and a strip chart, continuous data log sheet or manual data log sheet for each hot water treatment.

Strip charts, continuous data log sheets or manual data log sheets shall be maintained with the Hot Water Treatment Record to which they relate.

For mini data loggers, temperature records may be downloaded onto a personal computer at completion of the treatment period. At conclusion of the treatment, the Treatment Operator shall obtain printed data log sheets of the treatment temperatures throughout the treatment period.

Treatment temperature records must identify:

- batch number;
- date and time of temperature sampling;
- the sensor identification to which the temperature reading relates; and
- maximum, minimum and average temperature.

The Treatment Operator shall date and sign the treatment record at the conclusion of the treatment as verification of the accuracy of the record.

Any alterations to treatment temperature or time schedules must be noted on the relevant treatment temperature record with an explanation for the alterations and the date and initials of the Treatment Operator.
7.4.1 Unit infrastructure records

The unit infrastructure must meet the requirements of Australian Standard AS2853 ‘Enclosures Temperature controlled-performance testing and grading’ (Copy of certificate of compliance to AS2853 is included as Attachment 10).

**Note:** The Business must possess the Certificate of Compliance to AS2853 prior to seeking accreditation under this Procedure.

7.5 Plant Health Assurance Certificate

A Business which hot water treats material to be packed by another Business for certification must be accredited for an ICA arrangement under Part A of this Procedure.

The Treatment Operator must ensure a PHAC is completed and signed by an Authorised Signatory prior to the consignment being dispatched.

PHACs must be completed, issued and distributed in accordance with the Work Instruction *WI-01 Guidelines for the completion of Plant Health Assurance Certificates*.

PHACs must include:

(a) in the ‘Accredited Business that Prepared the Produce’ section, the name and address of the Accredited Business that hot water treated the vine material; and

(b) in the ‘Consignment Details’ section,
   (i) the batch number and the type and quantity of vine material from the treatment lot; and
   (ii) in the ‘Type of Produce’ column, a description of the host produce; and

(c) in the ‘Treatment’ section:
   • in the Date column, the date the hot water treatment period was completed;
   • in the Treatment column, the words “Hot Water Treatment”; and
   • in the Duration and Temperature column, the words “XX minutes at ##°C where XX is the number of minutes in the treatment period and ##°C is the maximum temperature reached during the treatment period.

(d) in the ‘Grower’ section, the name and address of the property on which the host produce was grown.

7.6 Plant Health Assurance Certificate

The Business must not issue a PHAC for host produce owned by another Business. An individual PHAC must be issued to cover each consignment to avoid splitting of consignments.

Books of pre-printed PHACs are available from ICA Records Management, Department of Primary Industries, phone 02 6552 3000. Upon suspension, cancellation or withdrawal of accreditation, the PHAC book must be immediately returned to the Department.

A PHAC is not required where the Business that grows and pre-harvest treats and inspects the host produce is the same Business that packs, inspects, certifies and dispatches the host produce under this Procedure.

8. PROCEDURE – PART B

**Part B** – Covers the packer activities of vine material receival, grading, packing, and certification.

8.1 Vine material receival

The Vine Receival Officer shall ensure that all vine material received for certification under this Procedure:

(a) are supplied by a Business accredited under Part A; and
(b) each container is identified with the batch number of the treatment lot in which it was treated. Any container that is not clearly identified with the batch number shall be regarded as untreated for the purpose of this Procedure.

8.1.1 Receival of vine material treated by another Business

A Business that packs and/or certifies vine material that has been hot water treated by another Business shall ensure:

(a) each delivery of vine material received from another Business for certification under this Procedure is accompanied by a PHAC;
(b) vine material supplied for certification has undergone a hot water treatment regime in accordance with Section 6 Requirements; and
(c) the batch number and hot water treatment details are maintained for all produce received and certified under this Procedure from receival through to certification and dispatch.

The Business shall maintain copies of each PHAC received from a Business accredited under Part A that treated vine material they grade, pack and certify under this Procedure.

8.2 Grading and packing

A Business that grades and packs both treated (i.e. meets the requirements listed in Section 6 Requirements) and untreated material shall implement systems to identify the treatment status of material to prevent mixing of treated and untreated material.

8.2.1 Identification of treated and untreated material during packing

Examples of acceptable methods of identifying treated and untreated vine material during grading and packing include:

(a) packing treated vine material at different times to untreated vine material and clearing lines before changing over; or
(b) packing treated and untreated vine material on different packing lines.

Other methods may be used provided they clearly identify and segregate treated and untreated vine material.

8.2.2 Identification of treated and untreated material after packing

Examples of acceptable methods of identifying the treatment status of conforming and nonconforming vine material after packing include:

(a) using packaging that differs significantly in appearance; or
(b) immediately marking each package of treated material in a manner that clearly identifies the material as conforming to the requirements specified under this Procedure.

8.3 Post-treatment security

Once treated, the material is to be treated as sterile and appropriate precautions taken to prevent contamination. This includes the following practices:

• keeping soil away from treated material; and
• covering material with clean covers that have not been in contact with untreated material or soil.
8.4 Dispatch

8.4.1 Package identification

Prior to the issuance of a PHAC by the Business under this Procedure the Authorised Dispatcher shall ensure that, after treating and packing, each package is marked in indelible and legible characters of at least 5 mm, with:

- the Interstate Produce number of the Business that operates the approved facility in which the produce was treated;
- the words “MEETS ICA-37”; and
- the date (or date code) on which the material was treated.

Any packages containing material that has been treated and meets the requirements of this Procedure shall be marked as stated above.

8.4.2 Plant Health Assurance Certificates (PHACs)

The Authorised Dispatcher shall ensure a PHAC 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 hot water treatment for Phyloxera.

PHACs shall include:

(a) in the ‘Accredited Business that Prepared the Produce’ section:
   - the name and address of the Accredited Business that hot water treated the vine material;
(b) in the ‘IP Number of Acc. Business’ section:
   - the IP Number of the Accredited Business that hot water treated the vine material;
(c) in the ‘Grower or Packer’ section:
   - the name and address of the Accredited Business that packed the vine material;
(d) in the ‘Treatment’ section:
   - in the Date column, the date the hot water treatment period was completed;
   - in the Treatment column, the words “Hot Water Treatment”; and
   - in the Duration and Temperature column, the words “XX minutes at ## °C where XX is the number of minutes in the treatment period and ##°C is the maximum temperature reached during the treatment period.

Assurance Certificates shall be in the form of a PHAC (see Attachment 11).

Individual PHACs shall 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.

PHACs shall be completed, issued and distributed in accordance with the Work Instruction WI-01 ‘Guidelines for Completion of Plant Health Assurance Certificates’.

Books of pre-printed PHACs are available from ICA Records Management, Department of Primary Industries, phone 02 6552 3000.

Upon suspension, cancellation or withdrawal of accreditation, the PHAC book must be immediately returned to the Department.

8.4.3 PHAC distribution

The original (yellow copy) must accompany the consignment.

The duplicate (white copy) must be retained by the accredited Business.
9. RECORDS AND DOCUMENT CONTROL

9.1 ICA system records
The Business must maintain the following records, or similar, which record the same information:

Under PART A
(a) ‘Facility Plan’ (Attachment 2); and
(b) ‘Hot Water Treatment Record’ (Attachment 3, Attachment 4); and
(c) ‘Sensor Placement Plan’ (Attachment 7); and
(d) ‘Sensor Calibration Test Record’ (Attachment 8); and
(e) ‘Hot Water Treatment Temperature Records’ (strip charts, data log sheets); and
(f) ‘Reference Thermometer Test Certificate’ (Attachment 9); and
(g) a copy of each PHAC issued under this Procedure (Attachment 11).
(h) Vine Hot Water Treatment Packing Record

Under PART B
(a) If applicable, a copy of each PHAC received; and
(b) the duplicate copy of each PHAC issued under this Procedure (Attachment 11).

Records must be retained for at least 4 years from completion.
Records shall be made available on request to an Authorised Person.

9.2 ICA system documentation
The Business must maintain the following documentation:
(a) a current copy of the ICA Procedure; and
(b) a current Certificate of Accreditation.

Documentation must be made available on request to an Authorised Person.

10. ATTACHMENTS

Attachment 1 Application for Accreditation as a Biosecurity Certifier
Attachment 2 Facility Plan
Attachment 3 Hot Water Treatment record – 5 min @ 54°C
Attachment 4 Hot Water Treatment record – 30 min @ 50°C
Attachment 5 Vine Hot Water Treatment Packing Record
Attachment 6 Vine Hot Water Treatment Packing Record – completed example
Attachment 7 Sensor Placement Plan
Attachment 8 Sensor Calibration Test Record
Attachment 9 Reference Thermometer Test Certificate – example
Attachment 10 Certificate of Compliance to AS2853 – example
Attachment 11 Plant Health Assurance Certificate
Application for accreditation as a Biosecurity Certifier

A business seeking to become accredited or renew accreditation for an ICA or CA arrangement must complete and lodge an application for accreditation using the prescribed form and paying the application fee.

The application form can be accessed at:

Alternatively, contact ICA Records Management:
Phone: 02 6552 3000
Fax: 02 6552 7239
Email: ica.scheme@dpi.nsw.gov.au
Facility Plan – ICA-37

The Facility Plan is to include the following:

(a) road access including street name/s; and
(b) internal roadways within the facility providing access to the HWT plant; and
(c) the location and identification of buildings at the facility; and
(d) the location and size (m³) of each HWT plant and the Serial number or other code that uniquely identifies each HWT plant at the facility.

Note: A Facility Plan (overleaf) must be included for each property covered by the Certification Assurance arrangement of the Business.

<table>
<thead>
<tr>
<th>Business Name:</th>
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<tbody>
<tr>
<td>Property address of the Facility:</td>
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Complete the following details for each HWT plant shown on the Facility Plan:

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<th>HWT Plant Reference code or Serial No.</th>
<th>Size m³</th>
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# Hot Water Treatment Record – 5 minutes @ 54°C

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<th>Date of Treatment</th>
<th>Treatment Temp. (°C)</th>
<th>Start Time</th>
<th>Sensor ID</th>
<th>Sensor Reading (°C) @ Minute</th>
<th>Finish Time</th>
<th>Batch Size Treated</th>
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<td>0 1 2 3 4 5</td>
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</tbody>
</table>

**Note:**
- The table is designed to record the temperature readings over a 5-minute period at 54°C with columns for each minute.
- The Treatment Operator section is for recorded signatures.
<table>
<thead>
<tr>
<th>Date of Treatment</th>
<th>Treatment Temp. (°C)</th>
<th>Start Time</th>
<th>Sensor ID</th>
<th>Sensor Reading (°C) @ Minute</th>
<th>Finish Time</th>
<th>Batch Size Treated</th>
<th>Treatment Operator</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
## Vine Hot Water Treatment Packing Record

<table>
<thead>
<tr>
<th>Packing Date</th>
<th>Treatment Lot Code or No.</th>
<th>Variety &amp; Material Type</th>
<th>Number &amp; Type of Packages</th>
<th>PHAC No.</th>
<th>Certification Controller’s Initials</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Packing Date</td>
<td>Treatment Lot Code or No.</td>
<td>Variety &amp; Material Type</td>
<td>Number &amp; Type of Packages</td>
<td>PHAC No.</td>
<td>Certification Controller’s Initials</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
<td>----------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>1/07/17</td>
<td>A1234</td>
<td>Merlot rootlings</td>
<td>30 cartons</td>
<td>900909</td>
<td>JC</td>
</tr>
<tr>
<td>1/07/17</td>
<td>A1237</td>
<td>Chardonnay cuttings</td>
<td>40 cartons</td>
<td>900910</td>
<td>JC</td>
</tr>
<tr>
<td>4/07/17</td>
<td>B1211</td>
<td>Merlot rootlings</td>
<td>16 cartons</td>
<td>900915</td>
<td>JC</td>
</tr>
<tr>
<td>5/07/17</td>
<td>A1234</td>
<td>Pinot Noir rootlings</td>
<td>50 cartons</td>
<td>900911</td>
<td>JC</td>
</tr>
</tbody>
</table>
The Sensor Placement Plan should comprise a diagram of the hot water treatment facility and include the location and identification of each temperature sensor.
### Sensor Calibration Test Record

<table>
<thead>
<tr>
<th>Date of Testing</th>
<th>Sensor Identification</th>
<th>First Reading at 50.0°C</th>
<th>Second Reading at 50.0°C</th>
<th>Sensor Correction Value (±°C)</th>
<th>Authorised Inspector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Printed Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Signature</td>
</tr>
</tbody>
</table>
# DOBBIE INSTRUMENTS

A division of BEACON Engineering Products Pty Limited  
A.C.N. 008 650 226  

25 South Street  
Rydalmere N.S.W 2116  

Phone: (02)9841 2444  
Fax: (02) 9638 3316

## NATA CERTIFICATE ON THERMOMETER

<table>
<thead>
<tr>
<th>NAME OF THERMOMETER</th>
<th>AM</th>
<th>THERMOMETER NO.</th>
<th>9561341</th>
</tr>
</thead>
<tbody>
<tr>
<td>RANGE</td>
<td>40° to 70.0°C</td>
<td>DIVIDED TO</td>
<td>0.1°C</td>
</tr>
<tr>
<td>UNCERTAINTY</td>
<td>±0.05</td>
<td>IMMERSION</td>
<td>78mm</td>
</tr>
<tr>
<td>TYPE</td>
<td>MERCURY IN GLASS</td>
<td>SPECIFICATION NO.</td>
<td>ASTM 92C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITEM NO.</td>
<td>820.22575NC</td>
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</tbody>
</table>

## RESULT OF TEST

<table>
<thead>
<tr>
<th>THERMOMETER READING</th>
<th>Correction to Reading</th>
<th>TEMPERATURE</th>
<th>AVG. STEM TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>°C</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>40.00</td>
<td>+0.01</td>
<td>40.01</td>
<td>25°</td>
</tr>
<tr>
<td>50.00</td>
<td>-0.01</td>
<td>49.99</td>
<td>25°</td>
</tr>
<tr>
<td>60.00</td>
<td>+0.04</td>
<td>60.04</td>
<td>25°</td>
</tr>
<tr>
<td>70.00</td>
<td>+0.10</td>
<td>70.10</td>
<td>25°</td>
</tr>
</tbody>
</table>

DATE ISSUED: 07-Oct-98  
CERTIFICATE No.: 103798  
SHEET No.: S374.98

A Laboratory Report may Not be published except in full unless permission for the publication of an approved abstract has been obtained from the Secretary, BEACON Engineering Products Pty Limited. This Laboratory is registered by the National Association of Testing Authorities, Australia. The Test(s) reported herein have been performed in accordance with its terms of registration.

Registered Laboratory No., 410

If further Information regarding this report is required, Telephone (02)9841 2444

ATTACHMENT 9
TEST AND CALIBRATION CENTRE FOOTSCRAY

TESTED FOR: AUSTRALIAN VINE IMPROVEMENT ASSOCIATION
ADDRESS: P.O. Box 5037
           MILDURA VIC 3502

ORDER NO: 24

ENCLOSURE:
Manufacturer: VAM VWA
Type of Installation: GREAT VANDTANK
Serial No: HWT-1
Internal Dimensions: 1400mm(l)*1020mm(w)*1600mm(D)

TEST CONDITIONS: Ambient 19 ± 2°C

TEST EQUIPMENT:
YOKOJOH N4150 Digital Recorder Serial No 42VH0173
MICROCAL Temperature Calibrator Serial No 490165
Thermocouples Type "T" Batch 74

Date of Test: 20 August 1998
Reference: H15651 (26-84766)
Sheet: 1 of 5

Checked by: R. Schwarz

Date of Issue: 31 August, 1998

REPORT OF TEST ON
TREATMENT TANK HWT-1

The tests, calibrations or measurements covered by this document have been performed in accordance with NATA requirements which include the requirements of ISO/IEC Guide 25:1990 and are traceable to Australian national standards of measurement.

This report may not be reproduced except in full, and the endorsement shall not be used on any extract or abstract of the endorsed document without the approval in writing from the manager in charge of the Laboratory.

Temperature Test Facility. Registered No. 1079

ADI Limited, Systems Group, Test and Calibration Centre, Gordon Street, Footscray, VIC 3011, Australia.
Postal Address: PO Box 170, Highpoint City, VIC 3032, Australia.
Telephone: +61 3 9319 4444. Facsimile: +61 3 9317 9954. Website: www.adi-limited.com.au
ACN 008 642 751.
### Plant Health Assurance Certificate

A biosecurity certificate issued under Part 13 of the *NSW Biosecurity Act 2015*

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

#### Consignment Details

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>State</th>
<th>Postcode</th>
</tr>
</thead>
<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>State</th>
<th>Postcode</th>
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<table>
<thead>
<tr>
<th>Reconsign to: (if applicable)</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
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#### Certification Details

<table>
<thead>
<tr>
<th>IP Number</th>
<th>Facility Number</th>
<th>Procedure</th>
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<tr>
<td>N</td>
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<table>
<thead>
<tr>
<th>Accredited Business that prepared produce</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<th>Grower(s) (if more than one grower – attach list)</th>
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<tbody>
<tr>
<td>Name</td>
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</table>

#### Number of Packages

<table>
<thead>
<tr>
<th>Packages</th>
<th>Type of Packages (e.g. trays, cartons)</th>
<th>Type of Produce</th>
<th>Brand Name or identifying marks (as marked on packages)</th>
<th>Date Code (as marked on packages)</th>
<th>Authorisation for reconsignment</th>
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</thead>
<tbody>
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#### Treatment Details

<table>
<thead>
<tr>
<th>Treatment Date</th>
<th>Chemical (Active Ingredient), Concentration, Duration, Temperature</th>
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</thead>
<tbody>
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#### Additional Certification Codes

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This certificate is valid for 21 days from date of certification.

### Declaration

I am a person authorized under the *NSW Biosecurity Act 2015* to issue this biosecurity certificate and I hereby certify that the details shown above are true and correct and the procedure(s) listed above have been completed.

Full name
Signature
Date

Note: A person who provides false or misleading information on a biosecurity certificate is guilty of an offence under the Act. Such action could result in a penalty infringement notice or prosecution. The maximum penalty for an individual is $1,100,000, and the maximum penalty for a corporation is $2,200,000. This information is collected by the collecting agency identified in this form in relation to its functions under the Biosecurity Act 2016. This agency and the NSW Department of Industry may use and disclose this information as reasonably necessary for the purpose of performing biosecurity risk functions under, or reasonably contemplated by, the Biosecurity Act 2016.