



# HOT WATER TREATMENT OF GRAPEVINES

## REVISION REGISTER

Version Number	Date of Issue	Amendment Details
Ver 1	22/05/03	All Pages / GSC
Ver 2	21/08/09	Updated Logo / Application Form
Ver 3	14/12/2015	Updated Logo / minor edits (RE)

Authorised:  
Manager, Market Access and Systems

Controlled:

Uncontrolled:

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## 1. PURPOSE

The purpose of this procedure is to describe

- the principles of operation, design features and standards required for hot water treatment equipment; and
- the responsibilities and actions of personnel;

that apply 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 South Australia where approved by Biosecurity SA.

***Certification of hot water treatment under this Operational 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 quarantine certification for pests and disease 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 from Biosecurity SA by telephoning the Market Access Officer on 08 8207 7814.***

## 3. REFERENCES

WI-02

Guidelines for Completion of Plant Health Assurance Certificates



#### 4. DEFINITIONS

Accredit	Means to authorise persons to issue Assurance Certificates under <i>The Plant Health Act 2009</i> .
Application for Accreditation	Means an <i>Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) Arrangement</i> .
Assurance Certificate	Means a <i>Plant Health Assurance Certificate</i> .
Authorised Signatory	Means an officer of an ICA accredited Business whose name and signature is provided as an authorised signatory with the Business' Application for Accreditation.
Batch	Means the total number of cuttings or rootling's covered by one hot water treatment.
Business	Means the legal entity responsible for the operation of the facility and ICA arrangement detailed in the Business' Application for Accreditation.
Certification Assurance	Means a voluntary arrangement between Biosecurity SA 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 Assurance Certificate.
Dormant Vine	The period between natural leaf fall and spring growth. Generally one month after leaf-fall and one month prior to budburst.
Facility	Means the location of the hot water treatment operation covered by the Interstate Certification Assurance arrangement.
HWT	Means hot water treatment.
ICA	Means Interstate Certification Assurance.
Inspector	Means an inspector appointed under <i>The Plant Health Act 2009</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.
Phylloxera	Means all stages of the species <i>Daktulosphaira vitifolia</i> .

## 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.

The **Certification Controller** is responsible for -

- representing the Business during audits and other matters relevant to ICA accreditation;
- training staff in their duties and responsibilities under this Operational Procedure; and
- ensuring the Business and its staff comply with their responsibilities under this Operational Procedure.

### PART A (covering HWT)

- ensuring the Business has current accreditation for an ICA arrangement under Part A of this Operational Procedure (refer 7.1); and
- ensuring hot water tanks and temperature sensing and recording equipment conform to the requirements of this Operational Procedure (refer 7.3).

### PART B (covering vine receipt, packing and certification)

- ensuring the Business has current accreditation for an ICA arrangement under Part B of this Operational Procedure (refer 7.1);
- ensuring all vine material received for packing and/or certification under Part B of this Operational Procedure is sourced from a Business accredited under Part A and if applicable, is accompanied by a valid Hot Water Treatment Declaration (refer Attachment 6);
- overseeing the packing and grading of vine material for certification under this Operational Procedure; and
- maintaining packing records for all certified vine material that allows trace back of material to the original treatment lot and Hot Water Treatment Record or Hot Water Treatment Declaration.

The **Treatment Operator** is responsible for-

- calibrating temperature sensors and recording equipment (refer 7.3.6);



- ensuring the correct equipment is being used (refer 7.3);
- maintaining temperature sensing and recording equipment calibration test records (refer 7.3.8);
- loading the hot water tank, placement of temperature sensors and oversight of hot water treatment and temperature recording (refer 7.3); and
- maintaining hot water treatment records (refer 7.4).

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); and
- maintaining copies of all Assurance Certificates issued by the Business under the ICA arrangement (refer 7.6.2).

**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' ICA arrangement and that the details on the certificate are true and correct in every particular (refer 7.6.2).

## 6. REQUIREMENT

Vine material certified under this Operational 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.

***Biosecurity SA 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.***

***Biosecurity SA accepts no responsibility for any damage to produce from this treatment.***



## 7. PROCEDURE

### 7.1.1 Application for Accreditation

A Business seeking accreditation for an ICA arrangement under this Operational Procedure shall make application for accreditation (refer Attachment 1) at least 10 working days prior to the intended date of commencement of treatment of produce.

If the Business hot water treats vine material for packing and certification by another Business, then Part A is indicated on the application.

If the Business only packs and certifies vine material treated by other Businesses, then Part B is indicated on the application.

If the Business hot water treats, packs and certifies vine material then Part A and Part B are indicated on the application.

### 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 in place 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 provided a Certificate of Accreditation (refer 7.1.4 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.

Compliance audits are, wherever practical, conducted when the ICA system is operating.

A compliance audit is conducted within twelve (12) weeks of the commencement of treatment following 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 issued (refer 7.1.3. Certificate of Accreditation).

A second compliance audit is conducted within the treatment period following accreditation.

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-conformances.

### 7.1.3 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 commencing further certification of produce under the ICA arrangement.

A compliance audit is conducted each year within four weeks of the Business commencing treatment of produce following re-accreditation.

A second compliance audit is conducted within the treatment period following re-accreditation.

### 7.1.4 Certificate of Accreditation

An accredited Business will receive a *Certificate of Accreditation for an Interstate Certification Assurance Arrangement* detailing the scope of the arrangement including-

- the facility location;
- the Operational Procedure;
- any restrictions on the accreditation such as the type of produce covered; and
- the 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.**

## PART A – Hot Water Treatment

### 7.2 Facility Plan

The Certification Controller shall maintain a plan of the facility.

The facility plan shall include the following details-

- road access including street name/s;
- internal roadways within the facility providing access to the hot water treatment tanks;
- the location and identification of buildings at the facility; and
- the location and size (m<sup>3</sup>) 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 Business's Application for Accreditation if accreditation for Part A is required (refer 7.1).

A blank Facility Plan is included as Attachment 3 and should be copied for completion and inclusion with the Business's Application for Accreditation.

### **7.3 Hot Water Treatment Equipment Requirements**

#### **7.3.1 Hot Water Tank**

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

Hot Water tanks and reference thermometers must be checked by a NATA accredited calibration authority prior to the initial audit and be issued with a certificate of compliance AS2853 "Enclosures – temperature controlled – performance testing and grading".

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 150mm clearance on all sides.

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

#### **7.3.2 Temperature Sensors and Recording Equipment**

Temperature sensing and recording systems shall have a combined overall accuracy of not more than  $\pm 0.5^{\circ}\text{C}$  in the range of  $50\text{-}55^{\circ}\text{C}$  and a resolution of up to  $0.2^{\circ}\text{C}$  (i.e. the combined sensing and data recording systems must be accurate to within  $0.5^{\circ}\text{C}$  of the true temperature and must be able to be read in increments of  $0.2^{\circ}\text{C}$  or less).

Low-resolution mini data loggers may be used which have an overall accuracy of not more than  $\pm 0.5^{\circ}\text{C}$  and a resolution of up to  $0.5^{\circ}\text{C}$ . Where mini data loggers are used, certification shall be based on the temperature that is  $0.5^{\circ}\text{C}$  above the maximum temperature recorded during the treatment period.

#### **7.3.3 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°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.

#### **7.3.4 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 C, and the date and time of sampling.

#### **7.3.5 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 (refer 7.4 Treatment Records)

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° C (or 0.5° C for low resolution data loggers), and the date and time of sampling.

#### **7.3.6 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.

#### **7.3.7 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 Certified 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  $\pm 0.1^{\circ}\text{C}$  at  $50^{\circ}\text{C}$ . Calibration by a recognised Testing Authority, registered in the appropriate class of testing shall be performed annually, or by the date or time period specified on the instrument calibration certificate.

**Note: The Business must hold a current Reference Thermometer calibration certificate issued by a recognised testing authority prior to seeking accreditation under this procedure (refer Attachment 12).**

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  $\pm 0.5^{\circ}\text{C}$  of  $50^{\circ}\text{C}$  for 3 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.

### 7.3.8 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 Operational Procedure.

Records shall be in the form of calibration test records from the recognised Testing Authority or a *Sensor Calibration Test Record* (refer Attachment 10) or similar record completed by the Treatment Operator. 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  $50^{\circ}\text{C}$ ;
- the correction (variation) if any to be applied to the sensor reading; and
- the name of the Treatment Operator or recognised Testing Authority responsible for conducting the calibration test.

### 7.3.9 Hot Water Treatment

All vine material certified under this Operational 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 6. Requirement.



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

### 7.3.10 Sensor Placement

A minimum of three (3) sensors shall be used for each tank. One sensor should be located at a depth of 100mm from the base of the tank, another at 100mm 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 9.

### 7.3.11 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* or equivalent (refer Attachment 4) for each treatment lot or a strip chart, continuous data log sheet or manual data log sheet capturing the same information 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* (or equivalent) 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 Hot Water Treatment Declaration

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 Operational Procedure.

The Business shall supply a *Hot Water Treatment Declaration* (refer Attachment 5) with each delivery of vines supplied to the packing business accredited under Part B for certification.

An example of a completed Hot Water Treatment Declaration is included as Attachment 6.

***A declaration is not required where the Business that hot water treats the vine material is the same Business that packs and certifies the vine material under this Operational Procedure.***

The declaration must identify –

- the name and Interstate Produce (IP) Number of the accredited Business that hot water treats the vine material;
- a statement the business is accredited under Part A of this Operational Procedure;
- the identity of the facility in which the vine material was treated;
- identification of the batch number and the type and quantity of vine material from the treatment lot in the delivery covered by the declaration; and
- details of hot water treatment of each treatment lot covered by the declaration including the date of treatment, and the treatment temperature.



## **PART B - Packer activities of vine material receipt, grading, packing and certification**

### **7.5 Vine Material Receipt**

The Vine Receipt Officer shall ensure that all vine material received for certification under this Operational Procedure –

- (a) is 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 Operational Procedure.

#### **7.5.1 Receipt 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 –

- each delivery of vine material received from another Business for certification under this Operational Procedure is accompanied by a *Hot Water Treatment Declaration*;
- vine material supplied for certification has undergone a hot water treatment regime in accordance with 6. Requirement; and
- the batch number and hot water treatment details are maintained for all produce received and certified under this Operational Procedure from receipt through to certification and dispatch.

The Business shall maintain copies of each *Hot Water Treatment Declaration* received from a Business accredited under Part A that treated vine material they grade, pack and certify under this Operational Procedure.

#### **7.5.2 Grading and Packing**

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

#### **7.5.3 Identification of Treated and Untreated Material During Packing**

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

- packing treated vine material at different times to untreated vine material and clearing lines before changing over; or
- 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.



#### **7.5.4 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 Operational Procedure (See 7.6.1).

#### **7.5.5 Packing Records**

The Certification Controller shall maintain packing records for each consignment of produce certified under this Operational Procedure.

The record shall be in the form of a Vine Hot Water Treatment Packing Record (Attachment 8) or similar record authorised by an Inspector.

Packing records shall include the following information-

- the date of packing;
- the batch code or number;
- the variety and material type;
- the number and type of packages;
- the PHAC number; and
- the certification controller's initials.

#### **7.5.6 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.





## 7.6 Dispatch

### 7.6.1 Package Identification

The Authorised Dispatcher shall ensure that, after treating and packing, each package is marked in indelible and legible characters of at least 5mm, with -

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

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

### 7.6.2 Assurance Certificates

The Authorised Dispatcher shall ensure an 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 hot water treatment for Phylloxera.

Assurance Certificates shall include-

- in the “Accredited Business that Prepared the Produce” section -
  - the name and address of the Accredited Business that hot water treated the vine material;
- in the “IP No. of Acc. Business” section -
  - the IP No. of the Accredited Business that hot water treated the vine material;
- in the “Grower or Packer” section -
  - the name and address of the Accredited Business that packed the vine material;
- 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”;
  - 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 minimum temperature reached during the treatment period.

Assurance Certificates shall be in the form of a *Plant Health Assurance Certificate* (refer Attachment 2).

Individual Assurance Certificates 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.



Assurance Certificates shall be completed, issued and distributed in accordance with the Work Instruction Guidelines *for Completion of Plant Health Assurance Certificates* [WI-02].

### 7.6.3 Assurance Certificate Distribution

The **original** (yellow copy) must accompany the consignment.  
The **duplicate** (white copy) must be retained by the Business.

## 8. ICA SYSTEM RECORDS

The Business shall maintain the following records-

### PART A

1. Facility Plan (refer 7.2);
2. Hot Water Treatment Records (refer 7.4);
3. Hot Water Treatment Sensor Placement Plan (refer 7.3.1);
4. Hot Water Treatment Calibration Test Records (refer 7.3.8);
5. Hot Water Treatment Temperature Records (strip charts, data log sheets etc.) (refer 7.4); and
6. Reference Thermometer Test Certificate (refer Attachment 11).
7. A Certificate of Compliance with AS2853 “Enclosures – temperature controlled performance testing and grading” for the hot water treatment tank (Refer Attachment 13)

### PART B

- If applicable, a copy of each *Hot Water Treatment Declaration* received (refer 7.4.1);
- Vine Hot Water Treatment Packing Records (refer 7.5.5); and
- a copy of each *Plant Health Assurance Certificate* issued by the Business (refer Attachment 2)

ICA system records shall 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 shall be made available when requested by an Inspector.



## 8.1 ICA System Documentation

The Business shall maintain the following documentation-

1. a copy of the Business' current Application for Accreditation (refer Attachment 1);
2. a current copy of this Operational Procedure; and
3. a current *Certificate of Accreditation for an Interstate Certification Assurance (ICA) Arrangement*.

ICA system documentation shall be made available when requested by an Inspector.



**9. ATTACHMENTS**

Attachment 1	<i>Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) Arrangement</i>	<b>ICA AP-FORM (BLANK)</b>
Attachment 2	Plant Health Assurance Certificate	<b>PHAC FORM (COMPLETED EXAMPLE)</b>
Attachment 3	Facility Plan	<b>37 FP (BLANK)</b>
Attachment 4	Hot Water Treatment Record- 5 min. @ 54°C	<b>HWT5-37 (BLANK)</b>
Attachment 5	Hot Water Treatment Record- 30 min. @ 50°C	<b>HWT30-37 (BLANK)</b>
Attachment 6	Hot Water Treatment Declaration	<b>HWTD-37 (BLANK)</b>
Attachment 7	Hot Water Treatment Declaration	<b>HWTDx-37 (COMPLETED EXAMPLE)</b>
Attachment 8	Hot Water Treatment Packing Record	<b>HWTP-37 (BLANK)</b>
Attachment 9	Hot Water Treatment Packing Record.	<b>HWTPx-37 (COMPLETED EXAMPLE)</b>
Attachment 10	Sensor Placement Plan	<b>SPP-37 (BLANK)</b>
Attachment 11	Sensor Calibration Test Record	<b>SCTR-37 (BLANK)</b>
Attachment 12	Reference Thermometer Test Certificate	<b>(EXAMPLE)</b>
Attachment 13	Certificate of compliance to AS2853	<b>(EXAMPLE)</b>

**APPLICATION for ACCREDITATION / REGISTRATION or ANNUAL RETURN (ICA / CA / IR)**

Complete clearly and return to Biosecurity SA - Plant Health Operations, 33 Flemington St, Glenside SA, 5065.  
(Please print. See Conditions / Application Instructions on pages 2 and 3 of this Application.)

Type of application being made (Tick or mark one):  Annual Return  New  Amendment

NOTE: This application can only cover one Procedure (Arrangement) at one Facility

Has Business previously been registered for movement of produce?  Yes  No  
If yes, provide Interstate Produce (IP) Number (& Facility number).

S									
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**Operational Procedure / Arrangement (# Arrangement details must be included - see note on page 3)**

ICA/CA/IR Number

Title of Arrangement Operational Procedure or Registration \*

ICA	37
-----	----

<b>HOT WATER TREATMENT OF GRAPEVINES</b>
--

Tick box if you wish this application to apply to both CA01/(IVCA) and IR01 ?  yes

**Applicant Details.**

Type of Ownership of Business. (Tick or mark one)

Individual  Partnership  Incorporated Company  Cooperative Association  Trust  Government

Individual Name:

Last Name		First Name	
-----------	--	------------	--

Business Name:

--

Postal Address Line 1:

--

Suburb:

Line 2:	
---------	--

Partner Names:

Last Name		First Name	
-----------	--	------------	--

(Provide additional partners on a separate sheet)

Last Name		First Name	
-----------	--	------------	--

Last Name		First Name	
-----------	--	------------	--

Other Trading Names:

--

ABN / ACN Number:

--

Have you, any Partner or Director of the Business or anyone in a Management role been convicted of an indictable offence or other offence involving dishonesty in the past five years ? (answer by circling / marking appropriate box).

Yes	No
-----	----

A Company must attach a copy of *Certification of Incorporation* with new applications.

A Co-operative Association must attach a copy of *Certificate or Registration* to new applications

Certification is attached

**Facility / Accreditation Details**

Facility Address Line 1:

Line 2:	
---------	--

Suburb:

State:		Postcode:	
--------	--	-----------	--

Accreditation Contact:

Last Name		First Name	
-----------	--	------------	--

Position:

--

Property Valuation No.:

Section:		Hundred:	
----------	--	----------	--

Contact Details:

Phone:		Mobile:	
--------	--	---------	--

Fax:		Email:	
------	--	--------	--

Postal Address

Line 2:	
---------	--

Postal Suburb

State:		Postcode:	
--------	--	-----------	--

**Persons Permitted to Sign or Verify Plant Health Certification**

Role	Last Name	Given Name(s)	Specimen Signature
Certification Controller / Responsible Person			
Backup Cert Controller / Responsible Person			
Authorised Signatory / Responsible Person			
Authorised Signatory / Responsible Person			

Products Certified / Imported:

(List all fruit & vegetable types, machinery, grapevines or nursery stock)

--

Seasonal Operator: (tick or Y = Yes)

NO	YES	If yes, indicate operating months	
----	-----	-----------------------------------	--

**Importing Details**

Consignments per year

	Nursery Membership Y= Yes / N= No	NGISA	NIASA	AGCAS
--	-----------------------------------	-------	-------	-------

States of Origin: (tick or Y = Yes)

QLD	VIC	WA	NSW	NT	TAS	Overseas
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ENSURE YOU ALSO COMPLETE AND SIGN SECOND PAGE

**APPLICATION for ACCREDITATION / REGISTRATION or ANNUAL RETURN (ICA / CA / IR)**

**Product / Certification Assurance Records and Methodology**

The business must carry out the necessary responsibilities and duties, and maintain records strictly in accordance with the applicable Operational Procedure unless permission to use different records/methods is requested below and is granted and endorsed by Biosecurity SA - Plant and Food Standards on this form.

I hereby request to use the following alternative or additional records/methods detailed below.

	Granted by PIRSA <input type="checkbox"/>	PIRSA <input type="checkbox"/>
	Inspector Initials / Stamp	STAMP <input type="checkbox"/>

I / We the undersigned applicant(s) do hereby declare that the information provided herein is accurate to the best of my/our knowledge and belief and make this application on my behalf, or on behalf of the above-mentioned business as a representative appointed to do so.

*Name of Partner / Director (print)	Designation	Signature	Date
			/ /
			/ /
			/ /

**Note: Where applicants are members of a partnership, each partner must sign the application.**  
**For corporations/associations a Director, Company Secretary or Manager with legal authority to sign for the company must sign.**  
**Use the following checklist to ensure you have provided key information to enable the application to be processed.**

- You, All Partners or Director have signed above.  All Responsible Persons have signed page 1.  ABN is provided.  
 Type of ownership indicated.  Copy of Company Certification attached (new applicants).

Applicants must provide an Annual Return on the prescribed form each year they are accredited.

**Incomplete applications will delay processing as they will need to be returned.**

**Please direct any queries regarding this application or the Accreditation/Registration to the Market Access Officer on 8207 7814.**

**Office Use Only**

<b>DESK AUDIT</b> <input type="checkbox"/> <b>Passed</b> <input type="checkbox"/> <b>Not Passed</b> because .....			
Alternate record-keeping granted Yes <input type="checkbox"/> No <input type="checkbox"/> .....			
.....	.....	..... / ..... / .....	PIRSA STAMP
Name of Desk Auditor (please print)	Signature of Officer	Date	

**Conditions of Accreditation S16 / Registration S26**

For the purposes of this accreditation / registration the following conditions may apply:

- The applicant must operate in full accordance with the Act and for ICA/CA Arrangements with the applicable Operational Procedure, which includes maintenance and provision of prescribed records for regular audit.
- The applicant is responsible to ensure that staff undertaking responsibilities required of the accreditation are adequately trained to do so.
- The frequency and number of audits will be determined by the Minister and carried out by persons authorised by the Minister.
- All fees for audits and inspections will be set by the Minister and the costs borne by the accredited person or business.
- The applicant will receive a Certificate of Accreditation / Registration which must be prominently displayed at the Business Facility.
- Restrictions may be imposed on the type of product an importer may bring into South Australia.

A copy of the relevant Operation Procedure or Act can be viewed or downloaded from – [www.pir.sa.gov.au/ica](http://www.pir.sa.gov.au/ica)

**Issue of Assurance Certificates / Registration of Importers / Verification of Product**

The Plant Health Act 2009 requires any person issuing a Plant Health Assurance Certificate (PHAC) to be accredited to do so. Penalties apply. (see section 25).

The Plant Health Act 2009 requires any person bringing or introducing plant or plant related products into SA to be registered (section 26) and imported products require verification. It is an offence to import without being registered or to fail to have imported product verified. Penalties apply (see sections 7, 25 and 33).

Only an accredited person may issue an assurance certificate (PHAC) or verify imported products (ie verify that an assurance certificate or other document relating to a plant or plant related product under a corresponding law complies with the requirements of the corresponding law). It is an offence to issue a Plant Health Assurance Certificate or verify imported product without being accredited. Penalties apply (see sections 7, 25 and 33).

**ENSURE YOU ALSO READ PAGE 3**

**APPLICATION for ACCREDITATION / REGISTRATION or ANNUAL RETURN (ICA / CA / IR)**

**Application Notes**

The form must be fully completed by an Applicant on their behalf or on behalf of a legal entity/business that they have authority to represent. Partnerships require all partners to sign.

Attach a separate page if there is insufficient space available for all required details. (Late fees apply for Annual Returns)

**Operational Procedure / Arrangement**

**The ICA / CA / IR number and name you are seeking Accreditation/Registration for must be entered here. E.g. ICA23, CA01 etc. Applications without these details will be delayed or not processed. (You may make application for both CA01/(IVCA) and IR01 by ticking the YES box)**

**Applicant Details**

- **Type of Ownership** shall be either – Individual, Partnership, Incorporated Company, Co-operative Association, Trust or other legal entity. (It may not be a Family Trust).
- **Name of the Legal Entity** either Individual, Business, Corporation, Association or Trust (if a Family Trust a trustee representing the Trust). Use attachment if insufficient room.
- **Address**; physical address of business is required
- **Partner Names**; all partners names must be provided.
- **Other Trading Name(s)**; List any other trading names used. Use attachment if insufficient room.
- **ABN / ACN Number**; ABN is the Australian Business Number.
- **Convictions**; Need to answer whether you, or any Director of the business or anyone in a Management role been convicted of an indictable offence or offence involving dishonesty in the past five years ? This question must be answered. If it is not, the application will not be processed.

**Facility/ Accreditation Details**

- **Facility Address / Location**; Clearly indicate the location or physical address details where product will be prepared/verified that will enable a PIRSA officer to easily locate the premises. (Usually the registered address of the business).
- **Contact**: Name and role of the principal contact to be used in regard to the accreditation/Registration.
- **Property Valuation Number and Section and Hundred**; Must clearly indicate the Property Valuation Number, Section and Hundred of the property. These are available from the Council rate notice.
- **Postal Address**; A mailing address may be provided for posting of all correspondence.

**Persons Permitted To Sign or Verify Plant Health Certification**

- **Role**; The role of the person able to verify product on behalf of the accredited business.
- **Names**; The full name and specimen signature of each of these persons.

**Product Details**

- **Products Certified / Imported**; Indicate the imported product / equipment / machinery you expect to certify/verify using this procedure.
- **Seasonal Operator**; Indicate whether seasonal operation will apply and if so what months.
- **Consignments per year**; Importers to provide estimate number of consignments per year
- **Nursery Membership**; Nurseries to provide membership details
- **States of Origin**; Provide a yes for States that product is expected to come from.

**Product / Certification Assurance Records and Methodology**

- Complete only if you wish to maintain records in alternate method to that specified in Procedure.

**Authorising / Signing**

The Applicant (individual, all partners or company director/senior manager) must sign acknowledging they represent the business seeking accreditation and the information is accurate. It is an offence under section 51 of the Plant Health Act 2009 to make a false or misleading statement (whether by reason of the inclusion or omission of a particular) in an application made or information provided. Penalties apply.

Separate applications are required for each accreditation / registration. (i.e. ICA, CA, IVCA, Importer etc)

see [www.pir.sa.gov.au/ica](http://www.pir.sa.gov.au/ica)

Please direct queries regarding this Application, Accreditation or Registration to the Market Access Officer on 8207 7814.

Gary Cox,

Manager, Market Access & Systems, Biosecurity SA - Plant Health.



**INTERSTATE CERTIFICATION  
ASSURANCE  
HOT WATER TREATMENT OF GRAPEVINES**

**ICA-37**



**Certificate Number** **9999999**

**Consignment Details (Please print)**

Consignor

Name <b>Specialist Vine Suppliers</b>
Address <b>Vinyard Road</b>
<b>Renmark SA 5341</b>

Consignee

Name <b>Mildura Vines</b>
Address <b>Sunraysia Road</b>
<b>Mildura VIC 3500</b>

Reconsigned To (Splitting consignments or reconsigning whole consignments)


Method of Transport (Provide details where known)

<input checked="" type="checkbox"/> Road Truck Trailer Registration no.
<input type="checkbox"/> Rail Consignment no..
<input type="checkbox"/> Air Airline/Flight no.
<input type="checkbox"/> Sea Vessel Name & Voyage no.

**Certification Details (Please Print)**

Accredited Business that Prepared the Produce

Name <b>Specialist Vine Suppliers</b>
Address <b>Vinyard Road</b>
<b>Renmark SA 5341</b>

Grower or Packer

Name <b>Specialist Vine Suppliers</b>
Address <b>Vinyard Road</b>
<b>Renmark SA 5341</b>

IP No of Acc Business

<b>S 9999</b>
---------------

Brand Name or Identifying Marks (as marked on packages)

<b>Specialist Vines</b>
-------------------------

Date Code (as marked on packages)

<b>250601</b>
---------------

No. of Packages	Type of Packages	Type of Produce	Authorisation for Split Consignment
<b>100</b>	<b>Cartons</b>	<b>Chardonnay Cuttings</b>	

Date	Treatment	Chemical (Active)	Concentration	Duration and Temperature
/ /	<input type="checkbox"/> Dipping	Dimethoate	400ppm	<input type="checkbox"/> one min <input type="checkbox"/> 10 sec then wet for 60 sec
/ /	<input type="checkbox"/> Dipping	Fenthion	412.5ppm	<input type="checkbox"/> one min <input type="checkbox"/> 10 sec then wet for 60 sec
/ /	<input type="checkbox"/> Flood spraying	Dimethoate	400ppm	10 sec then wet for 60 sec
/ /	<input type="checkbox"/> Flood spraying	Fenthion	412.5ppm	10 sec then wet for 60 sec
/ /	<input type="checkbox"/> Non-recirculated	Fenthion	412.5ppm	10 sec then wet for 60 sec
/ /	<input type="checkbox"/> Fumigation			Hours @ °C
<b>25/06/00</b>	<input checked="" type="checkbox"/> Heat Treatment	<input type="checkbox"/> Hot air <input checked="" type="checkbox"/> Hot water		<b>5 Mins @ 54°C</b>
/ /	<input type="checkbox"/>			

**Additional Certification**

--

**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 facility 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 Plant Health and Plant Products Act 1995 to issue assurance certificates without being accredited and/ or making false statements in certificates and declarations.

<b>Vincent Yard</b>
---------------------

Authorised Signatory's Name (Please Print)

<i>Vin Yard</i>
-----------------

Signature

<b>26/04/09</b>
-----------------

Date





# INTERSTATE CERTIFICATION ASSURANCE

ICA-37



## HOT WATER TREATMENT OF GRAPEVINES

### ICA-37 FACILITY PLAN DETAILS

The facility plan (overleaf) is to include the following-

1. road access including street name/s;
2. internal roadways within the facility providing access to the HWT plant;
3. the location and identification of buildings at the facility;
4. the location and size (m<sup>3</sup>) of each HWT plant and the Serial number or other code that uniquely identifies each HWT plant at the facility.

### COMPLETE THE FOLLOWING DETAILS FOR EACH HWT PLANT SHOWN ON THE FACILITY PLAN -

HWT Plant Reference Code or Serial No.	Size (m <sup>3</sup> )

### ARRANGEMENT DETAILS

Applicant's Name *(as shown on the application form)*

Street Address of Facility *(as shown on the application form)*

  
  


Postcode

### SCOPE OF ARRANGEMENT

Application is made for accreditation under Part A of *ICA-37 Hot Water Treatment* -

I ..... *(full printed name)* the

.....*(position in business)*

am authorised to sign on behalf of the business and I understand that-

- (a) accreditation will only be granted for the HWT plant nominated on the Facility Plan;
- (b) following accreditation, certification can only be issued in accordance with scope of accreditation detailed in the *Certificate of Accreditation for an Interstate Certification Assurance (ICA) Arrangement* covering the arrangement;
- (c) application must be made to amend any of the current details in the *Application for Accreditation of a Business for an Interstate Certification Assurance Arrangement* or this Facility Plan.

Signature.....Date.../.../...



**HOT WATER TREATMENT RECORD - 5 Minute**

Treatment				Sensor Reading (°C) @ Minute							Batch Size Treated	Treatment Operator	
Date	Temp (°C)	Start Time	Sensor ID	0	1	2	3	4	5	Finish Time		Printed Name	Signature



INTERSTATE CERTIFICATION  
ASSURANCE

ICA-37



HOT WATER TREATMENT OF GRAPEVINES

**HOT WATER TREATMENT RECORD - 30 Minutes**

Treatment				Sensor Reading (°C) @ Minute						Finish Time	Batch Size Treated	Treatment Operator	
Date	Temp (°C)	Start Time	Sensor ID	5	10	15	20	25	30			Printed Name	Signature



**HOT WATER TREATMENT DECLARATION**

A Hot Water Treatment Declaration must be provided to the certifying/packer business to cover each delivery (lot) of vines delivered to the other business for certification under the Operational Procedure ICA-37.

I \_\_\_\_\_ (full printed name)

an Authorised Signatory of -

\_\_\_\_\_ (Business name)

Interstate Produce (IP) No. **S**

--	--	--	--

hereby declare that the vine material listed below and delivered to -

\_\_\_\_\_ (Business name)

Interstate Produce (IP) No. **S**

--	--	--	--

on -        /        /        (date) for certification under the Operational Procedure  
Hot Water Treatment of Grapevines [ICA-37], were hot water treated as follows –

Batch Code or Number	Variety & Material Type	Number and Type of Packages	Date of Treatment	Duration of treatment (minutes)	Maximum Temperature (C)

Signature \_\_\_\_\_

Signature

Date        /        /

Date



**INTERSTATE CERTIFICATION  
ASSURANCE**  
**HOT WATER TREATMENT OF GRAPEVINES**

**ICA-37**



**HOT WATER TREATMENT DECLARATION**

A Hot Water Treatment Declaration must be provided to the certifying/packer business to cover each delivery (lot) of vines delivered to the other business for certification under the Operational Procedure ICA-37.

I John Controller (full printed name)

an Authorised Signatory of -

Peninsula Vine Nursery (Business name),

Interstate Produce (IP) No. **S**

9	9	9	8
---	---	---	---

hereby declare that the fruit listed below and delivered to -

Adelaide Vines. (Business name)

Interstate Produce (IP) No. **S**

9	9	9	9
---	---	---	---

on - 23/05/09 (date), for certification under the Operational Procedure *Hot Water Treatment of Grapevines* [ICA-37], were hot water treated as follows –

Batch Code or Number	Variety & Material Type	Number and Type of Packages	Date of Treatment	Duration of treatment (minutes)	Maximum Temperature (°C)
A1234	Merlot Rootlings	30 Cartons	22/06/00	5 min	54° C
A1237	Chardonnay Cuttings	15 Cartons	24/06/00	5 min	54° C

*J Controller*  
Signature

25/06/09  
Date



INTERSTATE CERTIFICATION  
ASSURANCE  
HOT WATER TREATMENT OF GRAPEVINES

ICA-37



### HOT WATER TREATMENT PACKING RECORD

Business Name

-----

Interstate Produce No.

**S**

Date of Packing	Treatment Lot Code or Number	Variety & Material Type	Number & Type of Packages	PHAC Number	Certification Controller's Initials



Government of South Australia  
Biosecurity SA

**INTERSTATE CERTIFICATION  
ASSURANCE**

**ICA-37**



**HOT WATER TREATMENT OF GRAPEVINES**

**HOT WATER TREATMENT PACKING RECORD**

Business Name

ADELAIDE VINES

Interstate Produce No.

**S** 9 9 9 9

Date of Packing	Batch Code or Number	Variety & Material Type	Number & type of Packages	PHAC Number	Certification Controller's Initials
26/06/09	A1234	Merlot Rootlings	30 cartons	900909	JC
26/06/09	A1237	Chardonnay Cuttings	40 cartons	900910	JC
28/07/09	B1211	Merlot Rootlings	16 cartons	900915	JC
01/07/09	A1234	Pinot Noir Rootlings	50 cartons	900911	JC



## HOT WATER TREATMENT SENSOR PLACEMENT PLAN

The Sensor Placement Plan should comprise a diagram of the hot water treatment facility and include the location and identification of each temperature sensor.

**BUSINESS**.....

**S** .....

**FACILITY** .....





**INTERSTATE CERTIFICATION  
ASSURANCE**

**ICA-37**



**HOT WATER TREATMENT OF GRAPEVINES**

**SENSOR CALIBRATION TEST RECORD**

Business Name  
Hot Water Tank

.....  
.....

Interstate Produce No. **S**

Data Recording Instrument ID. ....

Date of Testing	Sensor Identification	First Reading at 50.0° C	Second Reading at 50.0° C	Sensor Correction Value (± °C)	Authorised Inspector	
					Printed Name	Signature



Government of South Australia  
Biosecurity SA

INTERSTATE CERTIFICATION  
ASSURANCE

ICA-37



HOT WATER TREATMENT OF GRAPEVINES

REFERENCE THERMOMETER TEST CERTIFICATE  
**DOBBIE INSTRUMENTS**

A divisions 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

NAME OF THERMOMETER	AMA	THERMOMETER No.	9561341
RANGE	40° to 70.0°C	DIVIDED TO	0.1°C
UNCERTAINTY	±0.05	IMMERSION	76mm
TYPE	MERCURY IN GLASS	SPECIFICATION No.	ASTM 92C
		ITEM No.	625.22575NC

RESULT OF TEST

THERMOMETER READING °C	CORRECTION TO READING °C	TEMPERATURE °C	AVG. STEM TEMPERATURE
40.00	+0.01	40.01	25°
50.00	-0.01	49.99	25°
60.00	+0.04	60.04	25°
70.00	+0.10	70.10	25°

DATE ISSUED: 07-Oct-98  
CERTIFICATE No.: 1037/98  
SHEET No.: S374.98

DATE TESTED: 06.010.98

CHECKED BY: *[Signature]*

NEAL MURRELLS  
NATA SIGNATORY. *[Signature]*

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)841 2444

**DOBBIE**



S374.98



# CERTIFICATE OF COMPLIANCE TO AS 2853



ADI

## TEST AND CALIBRATION CENTRE FOOTSCRAY

TESTED FOR : AUSTRALIAN VINE IMPROVEMENT ASSOCIATION  
 ADDRESS : P.O.Box 5057  
 MILDURA VIC 3502

ORDER NO: 24

ENCLOSURE : Manufacturer : VAMVIA  
 Type of Installation : TREATMENT TANK  
 Serial No : HWT-1  
 Internal Dimensions : 2400mm(l)\*1020mm(w)\*1600mm(D)

TEST CONDITIONS : Ambient 19 ± 2°C

TEST EQUIPMENT : YOKOGAWA HR 1300 Hybrid Recorder Serial No.42 VH0173  
 MICROCAL Temperature Calibrator Serial No.H0165  
 Thermocouples Type "T" Batch 74

EXAMPLE ONLY

Date of Test : 20 August 1998  
 Reference : HT8651 (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.