



WORK INSTRUCTION

Initiating an in-transit cold treatment for plant exports

Direction to staff

You must comply with this instructional material under the Practice Statement Framework.

Direction to authorised officers

Authorised officers must exercise powers and perform functions in accordance with any instructions or lawful directions issued by the department.

Summary of main points

This document outlines the procedures for authorised officers (AOs) to follow when initiating an in-transit cold treatment for plant exports. It includes how to:

- prepare to initiate an in-transit cold treatment
- verify that the consignment has passed a phytosanitary inspection
- inspect the container to approve for loading
- supervise the calibration of temperature sensors
- secure the container for transport
- supervise the loading of the container and sensor placement.

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Purpose of this document

This document details the procedures for initiating an in-transit cold treatment for plant exports.

Definitions

The following table defines terms used in this document.

Term	Definition
Authorised officer (AO)	<p>A person authorised under section 291 of the <i>Export Control Act 2020</i> to be an authorised officer. The authorised officer may exercise powers and functions conferred on them through an instrument of authorisation.</p> <p>Note: An AO may be a Commonwealth, State or Territory government officer, or third-party individual. Examples of third-party individuals include, but are not limited to:</p> <ul style="list-style-type: none">• employees of registered establishments• employees of an exporter• self-employed individuals/sole traders.
Certificate of loading and calibration record for an in-transit cold treatment (ITCT-calibration record)	<p>The approved form on which an AO records results related to the initiation of an in-transit cold treatment for plants and plant products for export.</p> <p>Note: The term ITCT-calibration record includes PEMS or the equivalent manual record available on the PEOM.</p>
Client	The exporter, exporter's representative or person responsible for prescribed goods intended for export.
Consignment	The quantity of plants or plant products identified on the notice of intention to export for export to a particular importing country.
Container	A unit of cargo handling equipment used in the transport of prescribed goods by aircraft or ship, including a shipping container, air cargo container and empty dry box container.
Correction factor	<p>A mathematical adjustment made to a calculation to account for deviations in the accuracy of the temperature sensor.</p> <p>In this case it is the numerical adjustment (+ or -) required to adjust the reading on the temperature sensor to 0°C.</p>
Exporter	The person or entity identified as the exporter in a notice of intention, request for permit to export or export permit.
Horticulture inspection record	<p>The approved form for an AO to record the findings and result of an inspection of horticulture goods for export.</p> <p>Note: The horticulture inspection record includes PEMS or the equivalent manual record available on the PEOM.</p>
Load out	Process of loading a consignment into its final export container.
Manual of Importing Country Requirements (Micor) Plants	A database maintained by the department that outlines importing country requirements for a range of plants and plant products for export.

Term	Definition
Notice of Intention to export (NOI)	<p>An approved form submitted by an exporter (or the exporter's agent) to the department, containing information about goods they intend to export.</p> <p>See also 'RFP'.</p> <p>Note: An electronic NOI is called a request for permit (RFP) and is submitted through the department's electronic documentation system, EXDOC. For contingency purposes a manual NOI, called an EX28, can be used.</p>
Plant Export Management System (PEMS)	An IT system that is used by the Department of Agriculture, Fisheries and Forestry, to capture and store information relating to the export of plants and plant products from Australia.
Portable probe thermometer	A portable thermometer used by the AO to measure the core temperature of fruit to verify pre-cooling temperatures. It has a metal probe that is pushed into the fruit and a digital display showing the temperature.
Protocol	<p>A government-to-government document that specifies import requirements and is bilaterally agreed to by Australia and the importing country authority.</p> <p>Note: Countries in which Australia has an agreed protocol with are referred to as 'protocol markets'. For a list of protocol markets for horticulture exports see the Reference: Table of plant export protocol markets.</p>
Registered establishment	An establishment that is registered under chapter 4 of the <i>Export Control Act 2020</i> for a kind of export operations in relation to a kind of prescribed plants or plant products.
Request for permit (RFP)	<p>Request for Permit to export. An RFP in the 'INIT' or 'FINL' status is the approved electronic (EXDOC) form of the notice of intention.</p> <p>See also 'Notice of intention to export'.</p>
Serial number (for treatment data recorder)	A number attached to a temperature data recorder that uniquely identifies it.
Temperature data recorder/logger	A measurement instrument that records temperature readings from probes over a defined period of time. The digital data can be retrieved, viewed and evaluated after it has been recorded.
Temperature sensor	<p>Equipment/probe for monitoring the product/air temperature during cold treatment.</p> <p>Note: This is also commonly referred to as a probe.</p>

Policy statements

- In-transit cold treatments must be carried out in accordance with the Reference: [Australian phytosanitary treatment application standard for cold disinfestation treatment](#).

- This work instruction must be used in conjunction with the importing country's requirements (ICRs) listed in import permits, [protocols, work plans](#) and the Manual of Importing Country Requirements ([Micor](#)).

Important: Where the ICRs contradict the requirements in this document, the ICRs must take precedence.

Supervision by an AO

- The initiation of an ITCT must be supervised by an AO for
 - protocol markets
 - non-protocol markets, only when specified by the importing country.
- This role must be performed by AOs with the following job functions
 - **HOR3002** Export inspection of fruit and vegetables (any attachment)
 - **TRE3001:1** Export phytosanitary treatments – In-transit cold treatment.

Legislative framework

The following legislation applies to specific tasks involved in initiating in-transit cold treatment.

- *Export Control Act 2020*
 - Part 1 of Chapter 8 – Notices of intention to export
 - Part 2 of Chapter 9 – Assessment of goods
 - Part 5 of Chapter 11 – Records
- Export Control (Plants and Plant Products) Rules 2021
 - Part 1 of Chapter 8 – Notices of intention to export
 - Part 2 of Chapter 9 – Assessments
 - Part 1 of Chapter 11 – Records

Roles and responsibilities

The following table outlines the roles and responsibilities undertaken in this work instruction.

Role	Responsibility
Client	<ul style="list-style-type: none"> • Providing the horticulture inspection record and RFP to the AO. • Nominating a treatment schedule. • Providing facilities and assistance to the AO, where required. • Conducting the calibration of the temperature sensors. • Providing the container seal. • Loading the container. • Placing the temperature sensors. • Sealing the container.

Role	Responsibility
Container technician	<ul style="list-style-type: none"> • Providing the temperature recorder serial number. • Demonstrating that the container is set to Greenwich Mean Time (GMT). • Operating container equipment to demonstrate the sensor readings. • Replacing faulty temperature sensors, if required.
AO	<ul style="list-style-type: none"> • Ensuring they have appropriate job functions. • Determining site-specific work health and safety (WHS) requirements. • Regularly calibrating their portable probe thermometer (thermometer) to ensure it is reading accurately. • Verifying that the consignment has been inspected. • Inspecting the container to approve for loading. • Ensuring the product is pre-cooled prior to loading if required. • Supervising the calibration of temperature sensors. • Supervising the loading of the container and sensor placement. • Completing the certificate of loading and calibration record (ITCT-calibration record).
Assessment Services - Exports	<ul style="list-style-type: none"> • Validating documents. • Issuing export permits and certificates.

Work health and safety

AOs must:

- read and be familiar with the Reference: [Work health and safety in the plant export environment](#)
- not enter work sites unless it is safe, they are wearing the required personal protective equipment (PPE) and have considered any work health and safety (WHS) hazards
- discontinue their activities if, at any time, they consider there is a risk to their safety
- comply with applicable Commonwealth, state and territory WHS legislation
- comply with WHS requirements of employers and third-party sites, unless they assess the requirements as placing them at risk, in which case they must take reasonable action to ensure their safety
- continually assess the possible risks while performing their duties.

Personal protective equipment

AOs must wear the following PPE for initiating in-transit cold treatments:

- hi-visibility vest
- safety boots.

AOs must have the following PPE with them and use when required:

- thermal clothing for cold rooms
- first aid kit
- water
- sunscreen

- appropriate emergency-communication equipment such as a phone carrier with coverage or satellite phone.

An AO must wear the following PPE where required by the work site or where they have identified a risk in the work environment:

- steel-cap boots
- safety glasses
- long-sleeve clothing
- hard hat
- hair net
- hearing protection
- face mask
- portable gas detector.

Note: For more information, see the Reference: [Work health and safety in the plant export environment](#).

WHS reporting requirements

All WHS incidents, near misses, and any hazards must be reported to the department, the occupier of registered establishment and the client.

- Departmental AOs must record all WHS incidents, near misses, and any hazards in Aurion.
- Third-party AOs must report all WHS incidents, near misses, and any hazards to [Plant Export Training](#).

Essential equipment

AOs must have the following equipment:

- access to a computer/mobile device
- portable probe thermometer
- torch.

System requirements

AOs must have access to the following systems:

- the department's website
- [Micor](#)
- [Micor Plants Documents section](#) (username and password required) – protocol markets only
- [Plant Exports Management System \(PEMS\)](#).

Initiating an in-transit cold treatment for plant exports procedures

Where it is not prohibited by the importing country, clients can request the following for any reason after a container is loaded and before it is exported from Australia:

- treatment re-start
- sensor replacement or recalibration
- container change.

Section 1. How do I prepare to initiate an in-transit cold treatment?

Requirements for facilities

- Facilities must be registered establishments except where the only activity being undertaken is the calibration of temperature sensors.
- The name of the facility recorded on the calibration record must enable the facility to be identified.

When does this procedure initiate?

This procedure initiates when a request is received from the client for the supervision of an in-transit cold treatment.

The following table outlines how to prepare to initiate an in-transit cold treatment.

Step	Action						
1.	<p>Look up the relevant Micor case to obtain the importing country's requirements. Check if the Micor refers to a protocol.</p> <p>Note: Micor cases for protocol markets will have <i>Protocol market</i> set to <i>Yes</i> under the section <i>Export Criteria</i> and will refer to the work plans and protocols in the section <i>General requirements</i>.</p> <table><tr><th>If the Micor case...</th><th>Then...</th></tr><tr><td>does not refer to a work plan or protocol</td><td>continue to Step 2.</td></tr><tr><td>refers to a work plan or protocol</td><td><ul style="list-style-type: none">• go to password-protected Document section of Micor• first check if there is a work plan (by opening the link to <i>View the work plans and protocols</i>)• if there is no work plan, find the relevant protocol and refer to this when prompted by this work instruction• continue to Step 2.</td></tr></table>	If the Micor case...	Then...	does not refer to a work plan or protocol	continue to Step 2.	refers to a work plan or protocol	<ul style="list-style-type: none">• go to password-protected Document section of Micor• first check if there is a work plan (by opening the link to <i>View the work plans and protocols</i>)• if there is no work plan, find the relevant protocol and refer to this when prompted by this work instruction• continue to Step 2.
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2.	<p>Check that you are appointed in the job function TRE3001:1 Export phytosanitary treatments – In-transit cold treatment.</p> <p>Note: PEMS will not allow you to create an ITCT-calibration record if you do not have this job function.</p> <table><tr><th>If you are...</th><th>Then...</th></tr><tr><td>accredited with the required job functions</td><td>continue to Step 3.</td></tr><tr><td>not accredited with the required job functions</td><td><ul style="list-style-type: none">• you cannot conduct this task• inform the bookings officer or client• do not continue.</td></tr></table>	If you are...	Then...	accredited with the required job functions	continue to Step 3.	not accredited with the required job functions	<ul style="list-style-type: none">• you cannot conduct this task• inform the bookings officer or client• do not continue.
If you are...	Then...						
accredited with the required job functions	continue to Step 3.						
not accredited with the required job functions	<ul style="list-style-type: none">• you cannot conduct this task• inform the bookings officer or client• do not continue.						
3.	Gather your personal protective and essential equipment and travel to the establishment.						

Step	Action										
4.	<p>On arrival at the registered establishment:</p> <ul style="list-style-type: none"> sign in at the office ask staff member about any site-specific work health and safety requirements, including mandatory personal protective equipment (PPE) put on the required PPE assess the site for safety. 										
5.	<p>Are you using PEMS or a manual (hard copy) ITCT-calibration record?</p> <p>Important: Records must be completed in accordance with the Work Instruction: Completing plant export inspection and treatment records.</p> <table> <tr> <th>If using...</th><th>Then...</th></tr> <tr> <td>PEMS</td><td>continue to Step 6.</td></tr> <tr> <td>manual record</td><td> <ul style="list-style-type: none"> download or print a copy of the Reference: Certificate of loading and calibration record for an in-transit cold treatment go to Step 7. </td></tr> </table>	If using...	Then...	PEMS	continue to Step 6.	manual record	<ul style="list-style-type: none"> download or print a copy of the Reference: Certificate of loading and calibration record for an in-transit cold treatment go to Step 7. 				
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6.	<p>Initiate the ITCT-calibration record in PEMS.</p> <p>Note:</p> <ul style="list-style-type: none"> For information on how to use PEMS see the Reference: Plant Exports Management System Authorised officer user guide. Where internet connectivity is unreliable or unknown, checkout the ITCT-calibration record before arriving at the site to use PEMS offline. 										
7.	<p>Ask the client to identify the consignment and/or container/s.</p> <table> <tr> <th>If the container...</th><th>Then...</th></tr> <tr> <td>has not been loaded</td><td>continue to Step 8.</td></tr> <tr> <td>has been previously loaded and requires a treatment re-start</td><td>go to Section 9: How do I supervise a treatment re-start?</td></tr> <tr> <td>has been previously loaded and requires sensor replacement or recalibration</td><td>go to Section 10: How do I supervise a sensor replacement or container change?</td></tr> <tr> <td>has been previously loaded and a new container is needed</td><td>go to Section 10: How do I supervise a sensor replacement or container change?</td></tr> </table>	If the container...	Then...	has not been loaded	continue to Step 8.	has been previously loaded and requires a treatment re-start	go to Section 9: How do I supervise a treatment re-start?	has been previously loaded and requires sensor replacement or recalibration	go to Section 10: How do I supervise a sensor replacement or container change?	has been previously loaded and a new container is needed	go to Section 10: How do I supervise a sensor replacement or container change?
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Step	Action						
8.	<p>Ask the client if the container will be loaded immediately while you are on site.</p> <table> <tr> <th>If the container...</th><th>Then...</th></tr> <tr> <td>will be loaded immediately</td><td>continue to Section 2: How do I verify that the consignment has passed a phytosanitary inspection?</td></tr> <tr> <td>will not be loaded immediately</td><td> <ul style="list-style-type: none"> record the following information on the ITCT-calibration record <ul style="list-style-type: none"> container number container size whether the container is calibrated offsite establishment name or number. go to Section 5: How do I supervise the calibration of temperature sensors? </td></tr> </table>	If the container...	Then...	will be loaded immediately	continue to Section 2: How do I verify that the consignment has passed a phytosanitary inspection?	will not be loaded immediately	<ul style="list-style-type: none"> record the following information on the ITCT-calibration record <ul style="list-style-type: none"> container number container size whether the container is calibrated offsite establishment name or number. go to Section 5: How do I supervise the calibration of temperature sensors?
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Section 2. How do I verify that the consignment has passed a phytosanitary inspection?

Requirements for consignments

Before the consignment is loaded into the container for export, it must:

- have passed a phytosanitary inspection within the last 28 days or have been granted an extension to the inspection validity period that is still valid (has not expired)
- match the details on the RFP.

The following table outlines how to verify that the consignment has passed a phytosanitary inspection.

Step	Action						
1.	<p>Sight a copy of the RFP and completed horticulture inspection record and record the container calibration details on the ITCT-calibration record.</p> <table> <tr> <th>If the container has...</th><th>Then...</th></tr> <tr> <td>not previously been calibrated</td><td> <ul style="list-style-type: none"> • record <ul style="list-style-type: none"> ○ container number ○ container size ○ establishment name or number ○ RFP number • indicate whether the destination country is Taiwan • continue to Step 2. <p>Note: Destination country and exporter are automatically populated in PEMS based on RFP details.</p> </td></tr> <tr> <td>previously been calibrated, and destination country is not Japan or Korea</td><td> <ul style="list-style-type: none"> • join the calibration record in PEMS or request a copy of the ITCT-calibration record • confirm the <ul style="list-style-type: none"> ○ seal number ○ RFP number ○ establishment number • continue to Step 2. <p>Note: Japan and Korea require the calibration of temperature sensors immediately prior to loading.</p> </td></tr> </table>	If the container has...	Then...	not previously been calibrated	<ul style="list-style-type: none"> • record <ul style="list-style-type: none"> ○ container number ○ container size ○ establishment name or number ○ RFP number • indicate whether the destination country is Taiwan • continue to Step 2. <p>Note: Destination country and exporter are automatically populated in PEMS based on RFP details.</p>	previously been calibrated, and destination country is not Japan or Korea	<ul style="list-style-type: none"> • join the calibration record in PEMS or request a copy of the ITCT-calibration record • confirm the <ul style="list-style-type: none"> ○ seal number ○ RFP number ○ establishment number • continue to Step 2. <p>Note: Japan and Korea require the calibration of temperature sensors immediately prior to loading.</p>
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Step	Action						
2.	<ul style="list-style-type: none"> Check the inspection record to verify that the consignment has passed a phytosanitary inspection within the last 28 days. Note: Importing countries may set their own inspection validity period, which must be met. If the inspection validity period has lapsed, ask the client whether an extension to the inspection validity period has been granted. <table> <tr> <th>If the consignment...</th><th>Then...</th></tr> <tr> <td> <ul style="list-style-type: none"> has passed within the last 28 days or has a valid extension to the inspection validity period </td><td>continue to Step 3.</td></tr> <tr> <td>has not passed within 28 days</td><td> <ul style="list-style-type: none"> advise the client that the consignment has passed the inspection validity period and must be reinspected do not continue. Note: If the client provides a new inspection record at that time, repeat Step 2. </td></tr> </table>	If the consignment...	Then...	<ul style="list-style-type: none"> has passed within the last 28 days or has a valid extension to the inspection validity period 	continue to Step 3.	has not passed within 28 days	<ul style="list-style-type: none"> advise the client that the consignment has passed the inspection validity period and must be reinspected do not continue. Note: If the client provides a new inspection record at that time, repeat Step 2.
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3.	<p>Check that the consignment presented matches the details listed on the RFP and the inspection record.</p> <table> <tr> <th>If the consignment...</th><th>Then...</th></tr> <tr> <td>matches the RFP and inspection record</td><td>continue to Section 3: How do I inspect the container to approve for loading?</td></tr> <tr> <td>does not match the RFP and/or inspection record</td><td> <ul style="list-style-type: none"> advise the client that they do not match do not continue. Note: If the client provides a new RFP and inspection record at that time, repeat Step 3. </td></tr> </table>	If the consignment...	Then...	matches the RFP and inspection record	continue to Section 3: How do I inspect the container to approve for loading?	does not match the RFP and/or inspection record	<ul style="list-style-type: none"> advise the client that they do not match do not continue. Note: If the client provides a new RFP and inspection record at that time, repeat Step 3.
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Section 3. How do I inspect the container to approve for loading?

Condition of containers for loading

Containers must:

- be capable of holding temperature for the required period
- have all drain holes and vents covered or meshed (mesh must have gaps <1.6 mm)
- be clean and secure so that contamination by pests will not occur
- be set within five minutes of Greenwich Mean Time (GMT).

The following table outlines how to inspect the container to approve for loading.

Step	Action								
1.	<div>Compare the number on the container to the container number listed on the RFP.</div> <table><tr><th>If the container numbers...</th><th>Then...</th></tr><tr><td>match</td><td><ul style="list-style-type: none">• continue to Step 2.</td></tr><tr><td>do not match</td><td><ul style="list-style-type: none">• advise the client that the container number on the RFP needs to be amended• add relevant comments on the ITCT-record• do not continue.<p>Note: If the client provides an amended RFP, repeat Step 1.</p></td></tr></table>	If the container numbers...	Then...	match	<ul style="list-style-type: none">• continue to Step 2.	do not match	<ul style="list-style-type: none">• advise the client that the container number on the RFP needs to be amended• add relevant comments on the ITCT-record• do not continue. <p>Note: If the client provides an amended RFP, repeat Step 1.</p>		
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2.	<div>Check all drain holes and vents are covered or meshed so that no gap is bigger than 1.6 mm.</div> <table><tr><th>If all container holes...</th><th>Then...</th></tr><tr><td>are adequately covered</td><td>continue to Step 3.</td></tr><tr><td>are not adequately covered</td><td><ul style="list-style-type: none">• advise the client that the container is not secure, identifying what areas need addressing• do not continue.<p>Note: If the client advises that the holes have been covered, repeat Step 2.</p></td></tr><tr><td><ul style="list-style-type: none">• are not adequately covered and• cannot be rectified at the time of loading</td><td><ul style="list-style-type: none">• advise the client that a new container will need to be sourced• add relevant comments on the OSCT record• return to Step 1.</td></tr></table>	If all container holes...	Then...	are adequately covered	continue to Step 3.	are not adequately covered	<ul style="list-style-type: none">• advise the client that the container is not secure, identifying what areas need addressing• do not continue. <p>Note: If the client advises that the holes have been covered, repeat Step 2.</p>	<ul style="list-style-type: none">• are not adequately covered and• cannot be rectified at the time of loading	<ul style="list-style-type: none">• advise the client that a new container will need to be sourced• add relevant comments on the OSCT record• return to Step 1.
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<ul style="list-style-type: none">• are not adequately covered and• cannot be rectified at the time of loading	<ul style="list-style-type: none">• advise the client that a new container will need to be sourced• add relevant comments on the OSCT record• return to Step 1.								

Step	Action								
3.	<p>Use your torch as required, walk inside the container and check it is free from pests and contaminants, including soil.</p> <table> <tr> <th>If the container is...</th><th>Then...</th></tr> <tr> <td>clean</td><td>continue to Step 4.</td></tr> <tr> <td>not clean</td><td> <ul style="list-style-type: none"> advise the client that the container requires cleaning do not continue. <p>Note: If the client advises that the container has been cleaned, repeat Step 3.</p> </td></tr> <tr> <td> <ul style="list-style-type: none"> not clean and cannot be rectified at the time of loading </td><td> <ul style="list-style-type: none"> advise the client that a new container will need to be sourced add relevant comments on the OSCT record return to Step 1. </td></tr> </table>	If the container is...	Then...	clean	continue to Step 4.	not clean	<ul style="list-style-type: none"> advise the client that the container requires cleaning do not continue. <p>Note: If the client advises that the container has been cleaned, repeat Step 3.</p>	<ul style="list-style-type: none"> not clean and cannot be rectified at the time of loading 	<ul style="list-style-type: none"> advise the client that a new container will need to be sourced add relevant comments on the OSCT record return to Step 1.
If the container is...	Then...								
clean	continue to Step 4.								
not clean	<ul style="list-style-type: none"> advise the client that the container requires cleaning do not continue. <p>Note: If the client advises that the container has been cleaned, repeat Step 3.</p>								
<ul style="list-style-type: none"> not clean and cannot be rectified at the time of loading 	<ul style="list-style-type: none"> advise the client that a new container will need to be sourced add relevant comments on the OSCT record return to Step 1. 								
4.	<p>Check there is no structural damage to the container and the door seals are intact so no pests can enter after it is sealed.</p> <table> <tr> <th>If the container and door seals are...</th><th>Then...</th></tr> <tr> <td>intact</td><td>continue to Step 5.</td></tr> <tr> <td>not intact and the client provides a new container</td><td>return to Step 1.</td></tr> <tr> <td>not intact and the client does not provide a new container</td><td> <ul style="list-style-type: none"> advise the client that the container will not be approved for loading because it cannot maintain product security add relevant comments on the OSCT record do not continue. </td></tr> </table>	If the container and door seals are...	Then...	intact	continue to Step 5.	not intact and the client provides a new container	return to Step 1.	not intact and the client does not provide a new container	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading because it cannot maintain product security add relevant comments on the OSCT record do not continue.
If the container and door seals are...	Then...								
intact	continue to Step 5.								
not intact and the client provides a new container	return to Step 1.								
not intact and the client does not provide a new container	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading because it cannot maintain product security add relevant comments on the OSCT record do not continue. 								

Step	Action						
5.	<p>Ask the container technician to demonstrate that the container is set to within five minutes of GMT.</p> <p>Note:</p> <ul style="list-style-type: none"> If only one temperature sensor is used (Indonesia only), GMT does not need to be set. See Attachment 1: Calculating local time to Greenwich Mean Time on how to calculate GMT manually. <table> <tr> <th>If the container is...</th><th>Then...</th></tr> <tr> <td>set to GMT</td><td> <ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 6. <p>Note: GMT is automatically calculated in PEMS based off local time.</p> </td></tr> <tr> <td>not set to GMT</td><td> <ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to Step 1.</p> </td></tr> </table>	If the container is...	Then...	set to GMT	<ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 6. <p>Note: GMT is automatically calculated in PEMS based off local time.</p>	not set to GMT	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to Step 1.</p>
If the container is...	Then...						
set to GMT	<ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 6. <p>Note: GMT is automatically calculated in PEMS based off local time.</p>						
not set to GMT	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to Step 1.</p>						
6.	<p>Record the serial number of the temperature data recorder on the ITCT-calibration record.</p> <p>Note: For the USA, also record the make and model of the temperature data recorder on the ITCT-calibration record.</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>three temperature sensors will be used</td><td> <ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 7. </td></tr> <tr> <td>only one temperature sensor will be used</td><td> <ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 7. </td></tr> </table>	If...	Then...	three temperature sensors will be used	<ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 7. 	only one temperature sensor will be used	<ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 7.
If...	Then...						
three temperature sensors will be used	<ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 7. 						
only one temperature sensor will be used	<ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 7. 						
7.	<p>Continue to Section 4: How do I ensure the product is pre-cooled prior to loading?</p>						

Section 4. How do I ensure the product is pre-cooled prior to loading?

Requirements for pre-cooling

- The AO does not need to verify pre-cooling if there is no requirement by the importing country authority.
- The importing country authority will specify whether product intended for in-transit cold treatment must be pre-cooled to, or below, the target treatment temperature before loading and verified by an AO.

Calibrating portable probe thermometers

The AO must regularly calibrate their portable probe thermometer (thermometer) to ensure it is reading accurately.

The following table outlines how to ensure the product is pre-cooled prior to loading.

Step	Action						
1.	Determine if you need to verify that the product is pre-cooled prior to loading.						
	<table><tr><th>If the importing country...</th><th>Then...</th></tr><tr><td>mandates AO verification of pre-cooling</td><td>continue to Step 2.</td></tr><tr><td>does not mandate AO verification of pre-cooling</td><td>go to Step 6.</td></tr></table>	If the importing country...	Then...	mandates AO verification of pre-cooling	continue to Step 2.	does not mandate AO verification of pre-cooling	go to Step 6.
	If the importing country...	Then...					
	mandates AO verification of pre-cooling	continue to Step 2.					
does not mandate AO verification of pre-cooling	go to Step 6.						
2.	Select a minimum of five pallets from the consignment. Note: Focus on pallets and cartons known to be warmer within that cool room. If the warmer areas are unknown sample cartons haphazardly across the consignment.						
3.	For one carton on each pallet, place your thermometer through a packaging vent or carton opening and into a piece of fruit, ensuring that the tip of the thermometer is fully covered by the fruit.						
4.	Wait until the reading on the thermometer stabilises and then record the fruit pulp temperature on the ITCT-calibration record. Note: <ul style="list-style-type: none">• A minimum of five pre-cooling temperatures is mandatory.• PEMS will display a warning message if pre-cooling temperatures are above 3°C. PEMS will not record temperatures greater than 4°C.						

Step	Action						
5.	<p>Check the pulp temperature readings on the thermometer for each pallet.</p> <table> <tr> <th>If the reading is...</th><th>Then...</th></tr> <tr> <td>at or below the nominated treatment temperature</td><td> <ul style="list-style-type: none"> go to Step 6. </td></tr> <tr> <td>Higher than the nominated treatment temperature on any of the tested pallets</td><td> <ul style="list-style-type: none"> advise the client the consignment will require additional pre-cooling return to Step 2 once additional pre-cooling is complete. <p>Note: PEMS will not allow you to proceed with the calibration if any temperature readings are above 4°C</p> </td></tr> </table>	If the reading is...	Then...	at or below the nominated treatment temperature	<ul style="list-style-type: none"> go to Step 6. 	Higher than the nominated treatment temperature on any of the tested pallets	<ul style="list-style-type: none"> advise the client the consignment will require additional pre-cooling return to Step 2 once additional pre-cooling is complete. <p>Note: PEMS will not allow you to proceed with the calibration if any temperature readings are above 4°C</p>
If the reading is...	Then...						
at or below the nominated treatment temperature	<ul style="list-style-type: none"> go to Step 6. 						
Higher than the nominated treatment temperature on any of the tested pallets	<ul style="list-style-type: none"> advise the client the consignment will require additional pre-cooling return to Step 2 once additional pre-cooling is complete. <p>Note: PEMS will not allow you to proceed with the calibration if any temperature readings are above 4°C</p>						
6.	<p>Has a valid sensor calibration been done?</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>yes</td><td>go to Section 7: How do I verify a previous sensor calibration?</td></tr> <tr> <td>No</td><td>go to Section 5: How do I supervise the calibration of temperature sensors?</td></tr> </table>	If...	Then...	yes	go to Section 7: How do I verify a previous sensor calibration?	No	go to Section 5: How do I supervise the calibration of temperature sensors?
If...	Then...						
yes	go to Section 7: How do I verify a previous sensor calibration?						
No	go to Section 5: How do I supervise the calibration of temperature sensors?						

Section 5. How do I supervise the calibration of temperature sensors?

Calibrating temperature sensors

- Temperature sensors can be calibrated at a different time and place to the container loading for most importing countries.
Note: Exceptions include Japan and Korea, which require calibration of temperature sensors immediately prior to loading.
- The calibration is valid for 30 days before loading.
- The calibration of temperature sensors (sensors) must be carried out by the client and done using the ice-slurry method as specified in the Reference: [Australian phytosanitary treatment application standard for cold disinfestation treatment](#).

The following table outlines how to supervise the calibration of temperature sensors.

Step	Action						
1.	<ul style="list-style-type: none"> Ask the client to begin the calibration of the sensors while you supervise. Check that the client is using the ice-slurry method as specified in the Reference: Australian phytosanitary treatment application standard for cold disinfestation treatment. <table> <tr> <th>If the ice slurry method is carried out...</th><th>Then...</th></tr> <tr> <td>correctly</td><td>continue to Step 2.</td></tr> <tr> <td>Incorrectly</td><td> <ul style="list-style-type: none"> advise the client to re-do the procedure correctly once it has been carried out correctly continue to Step 2. </td></tr> </table>	If the ice slurry method is carried out...	Then...	correctly	continue to Step 2.	Incorrectly	<ul style="list-style-type: none"> advise the client to re-do the procedure correctly once it has been carried out correctly continue to Step 2.
If the ice slurry method is carried out...	Then...						
correctly	continue to Step 2.						
Incorrectly	<ul style="list-style-type: none"> advise the client to re-do the procedure correctly once it has been carried out correctly continue to Step 2. 						

Step	Action								
2.	<p>Observe the temperature of each sensor.</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>three sensors will be used</td><td> <ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 3. </td></tr> <tr> <td>Only one sensor will be used</td><td> <ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 3. </td></tr> </table>	If...	Then...	three sensors will be used	<ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 3. 	Only one sensor will be used	<ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 3. 		
If...	Then...								
three sensors will be used	<ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 3. 								
Only one sensor will be used	<ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 3. 								
3.	<p>Record the first temperature reading of each sensor on the ITCT-calibration record.</p> <p>Note: Some countries will require the sensor to be zeroed.</p> <table> <tr> <th>If the temperature ...</th><th>Then...</th></tr> <tr> <td>is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician decides to zero the sensor</td><td> <ul style="list-style-type: none"> record the temperature as 0°C continue to Step 4. </td></tr> <tr> <td> <ul style="list-style-type: none"> is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician does not zero the sensor </td><td> <ul style="list-style-type: none"> record the actual temperature continue to Step 4. </td></tr> <tr> <td>Exceeds $\pm 0.3^{\circ}\text{C}$</td><td> <ul style="list-style-type: none"> advise the technician that the sensor must be replaced wait for technician to replace the sensor return to Step 1 for the new sensor. </td></tr> </table>	If the temperature ...	Then...	is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician decides to zero the sensor	<ul style="list-style-type: none"> record the temperature as 0°C continue to Step 4. 	<ul style="list-style-type: none"> is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician does not zero the sensor 	<ul style="list-style-type: none"> record the actual temperature continue to Step 4. 	Exceeds $\pm 0.3^{\circ}\text{C}$	<ul style="list-style-type: none"> advise the technician that the sensor must be replaced wait for technician to replace the sensor return to Step 1 for the new sensor.
If the temperature ...	Then...								
is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician decides to zero the sensor	<ul style="list-style-type: none"> record the temperature as 0°C continue to Step 4. 								
<ul style="list-style-type: none"> is within $\pm 0.3^{\circ}\text{C}$ of 0°C and the container technician does not zero the sensor 	<ul style="list-style-type: none"> record the actual temperature continue to Step 4. 								
Exceeds $\pm 0.3^{\circ}\text{C}$	<ul style="list-style-type: none"> advise the technician that the sensor must be replaced wait for technician to replace the sensor return to Step 1 for the new sensor. 								
4.	<p>Once the sensors have been removed and then returned to the ice slurry, take the second temperature reading for each sensor.</p> <p>Important: For each sensor, the temperature must be the same across all readings.</p>								
5.	<p>Record the second temperature reading of each sensor on the ITCT-calibration record.</p> <table> <tr> <th>If the product is...</th><th>Then...</th></tr> <tr> <td>citrus to the USA</td><td>continue to Step 6.</td></tr> <tr> <td>Any other product</td><td>go to Step 7.</td></tr> </table>	If the product is...	Then...	citrus to the USA	continue to Step 6.	Any other product	go to Step 7.		
If the product is...	Then...								
citrus to the USA	continue to Step 6.								
Any other product	go to Step 7.								
6.	<ul style="list-style-type: none"> Once the sensors have been removed and then returned to the ice slurry, take the third temperature reading for each sensor. Record the third temperature reading of each sensor on the ITCT-calibration record. 								

Step	Action						
7.	<p>For each sensor, check if the temperature is same for all readings.</p> <p>Note: PEMS will not allow you to proceed if the temperature is not the same for all readings.</p> <table> <tr> <th>If the temperature is...</th><th>Then...</th></tr> <tr> <td>the same</td><td>continue to Step 8.</td></tr> <tr> <td>Not the same</td><td> <ul style="list-style-type: none"> the sensor(s) that did not display the same temperature in each reading are not valid return to Step 1. </td></tr> </table>	If the temperature is...	Then...	the same	continue to Step 8.	Not the same	<ul style="list-style-type: none"> the sensor(s) that did not display the same temperature in each reading are not valid return to Step 1.
If the temperature is...	Then...						
the same	continue to Step 8.						
Not the same	<ul style="list-style-type: none"> the sensor(s) that did not display the same temperature in each reading are not valid return to Step 1. 						
8.	<p>Determine the correction factor for each sensor.</p> <p>Note: PEMS will calculate the correction factor for each sensor.</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>the temperature readings are 0°C (including where the technician has zeroed the sensor)</td><td> <ul style="list-style-type: none"> record the correction factor as 0 on the ITCT-calibration record continue to step 9. </td></tr> <tr> <td>The temperature is not 0°C</td><td> <ul style="list-style-type: none"> calculate the number required to get to 0°C and record it on the ITCT-calibration record <p>For example:</p> <p>If readings for sensor 1 are all -0.2°C then the correction factor is +0.2, as this is what you need to add to -0.2°C to get back to 0°C.</p> <ul style="list-style-type: none"> continue to step 9. </td></tr> </table>	If...	Then...	the temperature readings are 0°C (including where the technician has zeroed the sensor)	<ul style="list-style-type: none"> record the correction factor as 0 on the ITCT-calibration record continue to step 9. 	The temperature is not 0°C	<ul style="list-style-type: none"> calculate the number required to get to 0°C and record it on the ITCT-calibration record <p>For example:</p> <p>If readings for sensor 1 are all -0.2°C then the correction factor is +0.2, as this is what you need to add to -0.2°C to get back to 0°C.</p> <ul style="list-style-type: none"> continue to step 9.
If...	Then...						
the temperature readings are 0°C (including where the technician has zeroed the sensor)	<ul style="list-style-type: none"> record the correction factor as 0 on the ITCT-calibration record continue to step 9. 						
The temperature is not 0°C	<ul style="list-style-type: none"> calculate the number required to get to 0°C and record it on the ITCT-calibration record <p>For example:</p> <p>If readings for sensor 1 are all -0.2°C then the correction factor is +0.2, as this is what you need to add to -0.2°C to get back to 0°C.</p> <ul style="list-style-type: none"> continue to step 9. 						
9.	<p>Check if the consignment is going to be loaded into the container.</p> <table> <tr> <th>If you are there to...</th><th>Then...</th></tr> <tr> <td>secure the container for transport (that is, for sensor calibration only)</td><td>go to Section 6: How do I secure a calibrated container for transport to the place of loading?</td></tr> <tr> <td>Supervise the loading of the container and sensor placement</td><td>go to Section 8: How do I supervise the loading of the container and sensor placement?</td></tr> </table>	If you are there to...	Then...	secure the container for transport (that is, for sensor calibration only)	go to Section 6: How do I secure a calibrated container for transport to the place of loading?	Supervise the loading of the container and sensor placement	go to Section 8: How do I supervise the loading of the container and sensor placement?
If you are there to...	Then...						
secure the container for transport (that is, for sensor calibration only)	go to Section 6: How do I secure a calibrated container for transport to the place of loading?						
Supervise the loading of the container and sensor placement	go to Section 8: How do I supervise the loading of the container and sensor placement?						

Section 6. How do I secure a calibrated container for transport to the place of loading?

Securing calibrated containers

- Containers being transferred to another establishment for loading must have a tamper-evident seal applied after sensor calibration.
- If using a manual record, a copy of the completed ITCT-calibration record must be placed inside the container door in an invoice envelope slip.

The following table outlines how to secure the container for transport.

Step	Action						
1.	<p>Check all drain holes and vents are covered or meshed so that no gap is bigger than 1.6 mm.</p> <table> <tr> <th>If all container holes...</th><th>Then...</th></tr> <tr> <td>are adequately covered</td><td>continue to Step 2.</td></tr> <tr> <td>Are not adequately covered</td><td> <ul style="list-style-type: none"> advise the client that the container is not secure, identifying what areas need addressing allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 2. </td></tr> </table>	If all container holes...	Then...	are adequately covered	continue to Step 2.	Are not adequately covered	<ul style="list-style-type: none"> advise the client that the container is not secure, identifying what areas need addressing allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 2.
If all container holes...	Then...						
are adequately covered	continue to Step 2.						
Are not adequately covered	<ul style="list-style-type: none"> advise the client that the container is not secure, identifying what areas need addressing allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 2. 						
2.	<p>Using your torch as required, walk inside the container and check that it:</p> <ul style="list-style-type: none"> is free from pests and contaminants, including soil does not have structural damage and the door seals are intact. <table> <tr> <th>If the container is...</th><th>Then...</th></tr> <tr> <td>clean and structurally sound</td><td>continue to Step 3.</td></tr> <tr> <td>Not clean and/or not structurally sound</td><td> <ul style="list-style-type: none"> advise the client that the container requires cleaning and/or maintenance, as it will not be approved for loading in its current state allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 3. </td></tr> </table>	If the container is...	Then...	clean and structurally sound	continue to Step 3.	Not clean and/or not structurally sound	<ul style="list-style-type: none"> advise the client that the container requires cleaning and/or maintenance, as it will not be approved for loading in its current state allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 3.
If the container is...	Then...						
clean and structurally sound	continue to Step 3.						
Not clean and/or not structurally sound	<ul style="list-style-type: none"> advise the client that the container requires cleaning and/or maintenance, as it will not be approved for loading in its current state allow the client to rectify the issues before the container is sealed, otherwise advise that this will need to be rectified by the establishment where load out occurs and will be verified by another AO continue to Step 3. 						

Step	Action						
3.	<p>Ask the container technician to demonstrate that the container is set to GMT.</p> <p>Note:</p> <ul style="list-style-type: none"> If only one temperature sensor is used (Indonesia only), GMT does not need to be set. See Attachment 1: Calculating local time to Greenwich Mean Time on how to calculate GMT manually. <table border="1"> <thead> <tr> <th>If the container is...</th><th>Then...</th></tr> </thead> <tbody> <tr> <td>set to GMT</td><td> <ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 4. <p>Note: GMT is automatically calculated in PEMS based off local time.</p> </td></tr> <tr> <td>Not set to GMT</td><td> <ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to step 1.</p> </td></tr> </tbody> </table>	If the container is...	Then...	set to GMT	<ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 4. <p>Note: GMT is automatically calculated in PEMS based off local time.</p>	Not set to GMT	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to step 1.</p>
If the container is...	Then...						
set to GMT	<ul style="list-style-type: none"> record on the ITCT-calibration record that the container clock is set to GMT continue to Step 4. <p>Note: GMT is automatically calculated in PEMS based off local time.</p>						
Not set to GMT	<ul style="list-style-type: none"> advise the client that the container will not be approved for loading as it is not set to GMT do not continue. <p>Note: If the client provides a new container, return to step 1.</p>						
4.	<p>Record the serial number of the temperature data recorder on the ITCT-calibration record.</p> <p>Note: For the USA, also record the make and model of the temperature data recorder on the ITCT-calibration record.</p> <table border="1"> <thead> <tr> <th>If...</th><th>Then...</th></tr> </thead> <tbody> <tr> <td>three temperature sensors will be used</td><td> <ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 5. </td></tr> <tr> <td>Only one temperature sensor will be used</td><td> <ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 5. </td></tr> </tbody> </table>	If...	Then...	three temperature sensors will be used	<ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 5. 	Only one temperature sensor will be used	<ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 5.
If...	Then...						
three temperature sensors will be used	<ul style="list-style-type: none"> ask the container technician to obtain the serial number for you continue to Step 5. 						
Only one temperature sensor will be used	<ul style="list-style-type: none"> take the number directly from the temperature sensor continue to Step 5. 						
5.	<p>Complete the remaining fields on the ITCT-calibration record.</p> <p>Note:</p> <ul style="list-style-type: none"> The finish time is automatically recorded in PEMS. If using manual ITCT-calibration record, you must place a copy of the record in an invoice envelope slip on the inside of the container door. 						
6.	<ul style="list-style-type: none"> Ensure the client seals the container using the nominated off-site calibration seal number. Do not continue. 						

Section 7. How do I verify a previous sensor calibration?

The following table outlines how to verify a previous sensor calibration.

Step	Action						
1.	<p>Determine if the container is sealed.</p> <table> <tr> <th>If the container is...</th><th>Then...</th></tr> <tr> <td>sealed</td><td>continue to Step 2.</td></tr> <tr> <td>Not sealed</td><td> <ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? </td></tr> </table>	If the container is...	Then...	sealed	continue to Step 2.	Not sealed	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading?
If the container is...	Then...						
sealed	continue to Step 2.						
Not sealed	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? 						
2.	<ul style="list-style-type: none"> Ask the client to break the seal and open the container. Sight the ITCT-calibration record. <p>Note: The ITCT-calibration record can be viewed in PEMS or found inside the container door.</p> <table> <tr> <th>If the ITCT-calibration record is...</th><th>Then...</th></tr> <tr> <td>sighted</td><td>continue to Step 3.</td></tr> <tr> <td>Not sighted</td><td> <ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? </td></tr> </table>	If the ITCT-calibration record is...	Then...	sighted	continue to Step 3.	Not sighted	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading?
If the ITCT-calibration record is...	Then...						
sighted	continue to Step 3.						
Not sighted	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? 						
3.	<p>Check that the off-site calibration seal number recorded on the ITCT-calibration record matches the number of the seal that was on the container.</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>yes</td><td>continue to Step 4.</td></tr> <tr> <td>No</td><td> <ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? </td></tr> </table>	If...	Then...	yes	continue to Step 4.	No	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading?
If...	Then...						
yes	continue to Step 4.						
No	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? 						

Step	Action						
4.	<p>Check that the date the sensors were calibrated on the ITCT-calibration record has not exceeded 30 days.</p> <p>Note: PEMS will verify the previous sensor calibration date is within 30 days validity period.</p> <table> <tr> <th>If the sensors were calibrated...</th><th>Then...</th></tr> <tr> <td>30 days ago or less</td><td>continue to Step 5.</td></tr> <tr> <td>more than 30 days ago</td><td> <ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? </td></tr> </table>	If the sensors were calibrated...	Then...	30 days ago or less	continue to Step 5.	more than 30 days ago	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading?
If the sensors were calibrated...	Then...						
30 days ago or less	continue to Step 5.						
more than 30 days ago	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? 						
5.	<p>Check the following fields on the original ITCT-calibration record have been completed:</p> <ul style="list-style-type: none"> Calibration results for all sensors including the <ul style="list-style-type: none"> 1st Reading 2nd Reading 3rd Reading, where applicable Correction factor. If for Taiwan, information on the company who performed the calibration. AO details. <table> <tr> <th>If the ITCT-calibration record...</th><th>Then...</th></tr> <tr> <td>contains the required information</td><td>go to Section 8: How do I supervise the loading of the container and sensor placement?</td></tr> <tr> <td>does not contain the required information</td><td> <ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? </td></tr> </table>	If the ITCT-calibration record...	Then...	contains the required information	go to Section 8: How do I supervise the loading of the container and sensor placement?	does not contain the required information	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading?
If the ITCT-calibration record...	Then...						
contains the required information	go to Section 8: How do I supervise the loading of the container and sensor placement?						
does not contain the required information	<ul style="list-style-type: none"> any prior calibration of sensors is invalid complete a new ITCT-calibration record go to Section 3: How do I inspect the container to approve for loading? 						

Section 8. How do I supervise the loading of the container and sensor placement?

Containers must be loaded in a manner that ensures contamination by biosecurity pests does not occur.

The following table outlines how to supervise the loading of the container and sensor placement.

Step	Action						
1.	Observe the pallets being loaded into the container.						
2.	<p>Supervise the client's placement of each sensor by ensuring:</p> <ul style="list-style-type: none"> the sensors are in the locations specified in the Micor case or protocol/work plan the client covers at least 2/3 of the sensor and the tip is covered by the fruit pulp the client has allowed a coil of slack cable spooled either inside the carton or taped to the outside of the carton to prevent sensor dislodgement during treatment the running end of the cable is taped to the carton to prevent the sensor being pulled out of the fruit. <p>Note: For small fruit like grapes and cherries, multiple pieces of fruit can be placed on the sensor to ensure 2/3 is covered.</p>						
3.	<p>Record the following information on the ITCT-calibration record:</p> <ul style="list-style-type: none"> edit establishment number (if necessary) confirm that the probes have been placed as per the importing country requirements record pulp temperatures for each sensor after it is placed and stabilised (not required for Taiwan). <p>Important: If the temperature reading has gone above the nominated treatment temperature for the importing countries that mandate pre-cooling, then loading can continue (if it is not prohibited in the relevant protocol). However, a treatment start time cannot be recorded on the ITCT-calibration record until the sensors are all reading below the nominated treatment temperature.</p> <table border="1"> <thead> <tr> <th>If...</th><th>Then...</th></tr> </thead> <tbody> <tr> <td>three sensors will be used</td><td> <ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 4. </td></tr> <tr> <td>only one sensor will be used</td><td> <ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 4. </td></tr> </tbody> </table>	If...	Then...	three sensors will be used	<ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 4. 	only one sensor will be used	<ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 4.
If...	Then...						
three sensors will be used	<ul style="list-style-type: none"> ask the container technician to show you the temperatures for each sensor continue to Step 4. 						
only one sensor will be used	<ul style="list-style-type: none"> find the temperature reading directly on the sensor continue to Step 4. 						

Step	Action										
4.	<p>Observe the client sealing the container.</p> <table> <tr> <th>If destination country is...</th><th>Then record the following information on the ITCT-calibration record...</th></tr> <tr> <td>Japan</td><td> <ul style="list-style-type: none"> • Australian Government seal number • sealed date • sealed time • treatment readings • treatment start time in GMT. <p>Important: If the sensors are reading above the nominated treatment temperature you must wait until all sensors are reading below the required temperature before noting the treatment start time and readings.</p> </td></tr> <tr> <td>Taiwan</td><td> <ul style="list-style-type: none"> • seal number • loading date. </td></tr> <tr> <td>USA</td><td> <ul style="list-style-type: none"> • seal number • sealed date • sealed time • loading date • start load time • finish load time. <p>Note: Ensure the client places cardboard between the back door and last row of pallets (as required in the work plan) prior to sealing the container. Do not proceed with the ITCT-record if this is not complete.</p> </td></tr> <tr> <td>Other</td><td> <ul style="list-style-type: none"> • seal number • sealed date • sealed time. </td></tr> </table>	If destination country is...	Then record the following information on the ITCT-calibration record...	Japan	<ul style="list-style-type: none"> • Australian Government seal number • sealed date • sealed time • treatment readings • treatment start time in GMT. <p>Important: If the sensors are reading above the nominated treatment temperature you must wait until all sensors are reading below the required temperature before noting the treatment start time and readings.</p>	Taiwan	<ul style="list-style-type: none"> • seal number • loading date. 	USA	<ul style="list-style-type: none"> • seal number • sealed date • sealed time • loading date • start load time • finish load time. <p>Note: Ensure the client places cardboard between the back door and last row of pallets (as required in the work plan) prior to sealing the container. Do not proceed with the ITCT-record if this is not complete.</p>	Other	<ul style="list-style-type: none"> • seal number • sealed date • sealed time.
If destination country is...	Then record the following information on the ITCT-calibration record...										
Japan	<ul style="list-style-type: none"> • Australian Government seal number • sealed date • sealed time • treatment readings • treatment start time in GMT. <p>Important: If the sensors are reading above the nominated treatment temperature you must wait until all sensors are reading below the required temperature before noting the treatment start time and readings.</p>										
Taiwan	<ul style="list-style-type: none"> • seal number • loading date. 										
USA	<ul style="list-style-type: none"> • seal number • sealed date • sealed time • loading date • start load time • finish load time. <p>Note: Ensure the client places cardboard between the back door and last row of pallets (as required in the work plan) prior to sealing the container. Do not proceed with the ITCT-record if this is not complete.</p>										
Other	<ul style="list-style-type: none"> • seal number • sealed date • sealed time. 										
5.	<ul style="list-style-type: none"> • Complete the remaining fields on the ITCT-calibration record as per the Work Instruction: Completing plant export inspection and treatment records. • Confirm on the record that you have checked all container holes are adequately covered, the container is clean and structurally sound, and the container is set to GMT. • Approve the container for loading. 										

Step	Action						
6.	<p>Submit the ITCT-calibration record.</p> <table> <tr> <th>If you are...</th><th>Then...</th></tr> <tr> <td>using PEMS</td><td> <ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. </td></tr> <tr> <td>not using PEMS</td><td> <ul style="list-style-type: none"> provide a copy of the record to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of two years for audit purposes. </td></tr> </table>	If you are...	Then...	using PEMS	<ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. 	not using PEMS	<ul style="list-style-type: none"> provide a copy of the record to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of two years for audit purposes.
If you are...	Then...						
using PEMS	<ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. 						
not using PEMS	<ul style="list-style-type: none"> provide a copy of the record to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of two years for audit purposes. 						
7.	<ul style="list-style-type: none"> If you used PEMS, record the relevant invoice number under the time entry tab of the OSCT record. For departmental AOs not completing the record in PEMS, invoice the client as per the Work Instruction: Invoicing plant export clients. End of procedure, do not continue. 						

Section 9. How do I supervise a treatment re-start?

An AO can only perform a restart where they:

- attend to the container in person
- can confirm pulp temperature readings from the data recorder.

Important: If an AO is unable to view the pulp temperature readings from the data recorder, a remote restart is required. Advise the client to contact [Assessment Services - Exports](#) for assistance.

The following table outlines how to supervise a treatment re-start following loading.

Step	Action
1.	Confirm the client has rectified any technical issues that caused the need for a treatment re-start.
2.	Use a new ITCT-calibration record and note that it is a 'Treatment Restart'.
3.	<ul style="list-style-type: none"> Complete the following fields on the ITCT-calibration record from information provided on the RFP or original ITCT-calibration record: <ul style="list-style-type: none"> container number container size establishment number RFP number (if known) indicate whether the destination country is Taiwan. <p>Note: Destination country and exporter are automatically populated in PEMS based on RFP details.</p> <ul style="list-style-type: none"> continue to Step 4.

Step	Action						
4.	<ul style="list-style-type: none"> Ask the container technician to show you the temperature reading of each sensor at the back of the container. Edit the establishment number (if necessary). Record the pulp temperatures for each sensor. Complete the following additional information from the original ITCT-calibration record <ul style="list-style-type: none"> confirm container clock is set to GMT recorder serial number calibration results including correction factors pre-cooling temperatures (if applicable) confirm the probes are placed as per importing country requirements. 						
5.	Complete the remaining fields on the ITCT-calibration record as per the Work Instruction: Completing plant export inspection and treatment records .						
6.	<p>Submit the ITCT-calibration record.</p> <table> <tr> <th>If you are...</th><th>Then...</th></tr> <tr> <td>using PEMS</td><td> <ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. </td></tr> <tr> <td>not using PEMS</td><td> <ul style="list-style-type: none"> provide a copy to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of 2 years for audit purposes. </td></tr> </table>	If you are...	Then...	using PEMS	<ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. 	not using PEMS	<ul style="list-style-type: none"> provide a copy to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of 2 years for audit purposes.
If you are...	Then...						
using PEMS	<ul style="list-style-type: none"> ensure the ITCT-calibration record is checked in submit the record if requested, download and print (or email) a copy to the client. 						
not using PEMS	<ul style="list-style-type: none"> provide a copy to the client send a copy, along with any supporting documents, to the Assessment Services - Exports keep the original and copies of the supporting documents for a minimum of 2 years for audit purposes. 						
7.	<ul style="list-style-type: none"> If you used PEMS, record the relevant invoice number under the time entry tab of the OSCT record. For departmental AOs not completing the record in PEMS, invoice the client as per the Work Instruction: Invoicing plant export clients. End of procedure, do not continue. 						

Section 10. How do I supervise a sensor replacement or container change?

The following table outlines how to supervise a sensor replacement or a container change following loading of produce into the container.

Step	Action						
1.	Ensure the client has presented the container at a registered establishment.						
2.	Use a new ITCT-calibration record and note that it is a 'Sensor replacement' or 'Container change' as appropriate.						
3.	<ul style="list-style-type: none"> Complete the following fields from information provided on the RFP or original ITCT-calibration record <ul style="list-style-type: none"> container number container size establishment number RFP number (if known) indicate whether the destination country is Taiwan. <p>Note: Destination country and exporter are automatically populated in PEMS based on RFP details.</p> continue to step 4. 						
4.	<p>Supervise the unloading of the container into a secure area.</p> <p>Important: Ensure the product is kept secure as per the Guideline: Maintenance of phytosanitary security for horticulture exports.</p> <p>Note: Clients should keep the product cool in-between loading.</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>a sensor replacement is required</td><td>go to Section 3: How do I inspect the container to approve for loading?</td></tr> <tr> <td>a container change is required</td><td>go to Step 5.</td></tr> </table>	If...	Then...	a sensor replacement is required	go to Section 3: How do I inspect the container to approve for loading?	a container change is required	go to Step 5.
If...	Then...						
a sensor replacement is required	go to Section 3: How do I inspect the container to approve for loading?						
a container change is required	go to Step 5.						
5.	<p>Does the new container have sensors that require calibration?</p> <table> <tr> <th>If...</th><th>Then...</th></tr> <tr> <td>yes</td><td>go to Section 3: How do I inspect the container to approve for loading?</td></tr> <tr> <td>no</td><td>go to Section 7: How do I verify a previous sensor calibration?</td></tr> </table>	If...	Then...	yes	go to Section 3: How do I inspect the container to approve for loading?	no	go to Section 7: How do I verify a previous sensor calibration?
If...	Then...						
yes	go to Section 3: How do I inspect the container to approve for loading?						
no	go to Section 7: How do I verify a previous sensor calibration?						

Contact information

- Authorised Officer Program: PlantExportTraining@aff.gov.au
- Horticulture Exports Program: HorticultureExports@aff.gov.au
- Assessment Services - Exports: PlantExportsNDH@aff.gov.au

Related material

The following related material is available on the department's website:

- Manual of Importing Country Requirements ([Micor](#))
- Micor Plants (importing country requirements, [protocols and work plans](#))
- [Plant Exports Management System](#)
- [Plant Export Operations Manual \(PEOM\)](#)
 - Guideline: *Maintenance of phytosanitary security for horticulture exports*
 - Reference: *Work health and safety in the plant export environment*
 - Reference: *Australian phytosanitary treatment application standard for cold disinfestation treatment*
 - Reference: *Certificate of loading and calibration record for an in-transit cold treatment*
 - Reference: *Table of horticulture protocol markets*
 - Reference: *Table of authorised officer job functions*
 - Work Instruction: *Completing plant export inspection and treatment records*
 - Reference: *Plant Export Management System (PEMS) Authorised officer user guide – In-transit Cold Treatment (ITCT) Calibration Records.*

Related material is available on the [Instructional Material Library \(IML\)](#) for departmental AOs.

- Work Instruction: *Invoicing plant exports clients*
- Work health and safety.

Document information

The following table contains administrative metadata.

Instructional Material Library document ID	Instructional material owner
IMLS-9-3491	Director, Horticulture Exports

Version history

The following table details the published date and amendment details for this document.

Version	Date	Amendment details
1.0	5/03/2015	First publication of this work instruction for external AOs working on table grapes to Indonesia.
2.0	8/04/2015	Update of work instruction to cover all countries and commodities for external AOs working on citrus exports.
2.1	22/04/2015	Minor updates following user feedback.
2.2	23/04/2015	Minor updates following user feedback.
3.0	20/05/2015	Changes to reflect revised policy.
4.0	24/02/2016	Aligned to updated calibration record.
5.0	4/12/2017	(Moved to the IML from the Plant Export Operations Manual, which sits on the department's website). Addition of guide on calculating GMT, USDA requirements, policy on treatment restarts, recalibration and container changes and removal of Korea grape requirements.
6.0	09/04/2020	Changes to Job function requirements
7.0	28/03/2021	Updated for the commencement of the Export Control Act 2020 and associated Plant Rules, updated terminology, incorporated PEMS.
8	24/11/2023	Updated department branding, email addresses and the references related to registered establishments to ensure clarity of the content and to prevent mis intended interpretation.

Attachment 1: Calculating local time to Greenwich Mean Time

The following table converts Australian Eastern time to Greenwich Mean Time (GMT) and provides the corresponding date:

AEST (Aust. Eastern Standard Time)	GMT (Greenwich Mean Time) Date: Same date	GMT (Greenwich Mean Time) Date: Day before	ADST (Aust. Daylight Savings Time)
00:00		14:00	01:00
01:00		15:00	02:00
02:00		16:00	03:00
03:00		17:00	04:00
04:00		18:00	05:00
05:00		19:00	06:00
06:00		20:00	07:00
07:00		21:00	08:00
08:00		22:00	09:00
09:00		23:00	10:00
10:00	00:00		11:00
11:00	01:00		12:00
12:00	02:00		13:00
13:00	03:00		14:00
14:00	04:00		15:00
15:00	05:00		16:00
16:00	06:00		17:00
17:00	07:00		18:00
18:00	08:00		19:00
19:00	09:00		20:00
20:00	10:00		21:00
21:00	11:00		22:00
22:00	12:00		23:00
23:00	13:00	–	–
–	–	13:00	00:00