



Food and Agriculture  
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United Nations



**International Plant Protection Convention**  
Protecting the world's plant resources from pests

INTERNATIONAL STANDARD FOR PHYTOSANITARY MEASURES 28

PHYTOSANITARY TREATMENT

ISPM 28  
ANNEX 18

ENG

# PT 18: Cold treatment for *Bactrocera tryoni* on *Citrus limon*

Produced by the Secretariat of the  
International Plant Protection Convention (IPPC)

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## ISPM 28

### Phytosanitary treatments for regulated pests

#### PT 18: Cold treatment for *Bactrocera tryoni* on *Citrus limon*

Adopted 2015; published 2016

##### Scope of the treatment

This treatment applies to the cold treatment of fruit of *Citrus limon* (lemon) to result in the mortality of eggs and larvae of *Bactrocera tryoni* (Queensland fruit fly) at the stated efficacy<sup>1</sup>.

##### Treatment description

<b>Name of treatment</b>	Cold treatment for <i>Bactrocera tryoni</i> on <i>Citrus limon</i>
<b>Active ingredient</b>	N/A
<b>Treatment type</b>	Physical (cold)
<b>Target pest</b>	<i>Bactrocera tryoni</i> (Diptera: Tephritidae) (Queensland fruit fly)
<b>Target regulated articles</b>	Fruit of <i>Citrus limon</i> (lemon).

##### Treatment schedule

###### Schedule 1: 2 °C or below for 14 continuous days

There is 95% confidence that the treatment according to this schedule kills not less than 99.99% of eggs and larvae of *Bactrocera tryoni*.

###### Schedule 2: 3 °C or below for 14 continuous days

There is 95% confidence that the treatment according to this schedule kills not less than 99.9872% of eggs and larvae of *Bactrocera tryoni*.

The fruit must reach the treatment temperature before treatment commences. The fruit temperature should be monitored and recorded, and temperatures should not exceed the stated level throughout the duration of the treatment.

##### Other relevant information

In evaluating this treatment the Technical Panel on Phytosanitary Treatments (TPPT) considered issues associated with temperature regimes and thermal conditioning, taking into account the work of Hallman and Mangan (1997).

Schedules 1 and 2 were based on the work of De Lima *et al.* (2007) and developed using cultivar “Lisbon”.

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<sup>1</sup> The scope of phytosanitary treatments does not include issues related to pesticide registration or other domestic requirements for contracting parties' approval of treatments. Treatments adopted by the CPM may not provide information on specific effects on human health or food safety, which should be addressed using domestic procedures prior to contracting parties approving a treatment. In addition, potential effects of treatments on product quality are considered for some host commodities before their international adoption. However, evaluation of any effects of a treatment on the quality of commodities may require additional consideration. There is no obligation for a contracting party to approve, register or adopt the treatments for use in its territory.

The TPPT also considered issues associated with chilling injury in lemons (TPPT, 2012).

## References

- De Lima, C.P.F., Jessup, A.J., Cruickshank, L., Walsh, C.J. & Mansfield, E.R.** 2007. Cold disinfestation of citrus (*Citrus* spp.) for Mediterranean fruit fly (*Ceratitis capitata*) and Queensland fruit fly (*Bactrocera tryoni*) (Diptera: Tephritidae). *New Zealand Journal of Crop and Horticultural Science*, 35: 39–50.
- Hallman, G.J. & Mangan, R.L.** 1997. Concerns with temperature quarantine treatment research. In G.L. Obenauf, ed. *1997 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reduction*, San Diego, CA, USA, Nov. 3–5. pp. 79-1–79-4.
- TPPT.** 2012. TPPT response to SC's concerns about chilling injury in lemons during in-transit cold disinfestation. Appendix 9, TPPT meeting report, Dec. 2012, pp. 55–57.

### Publication history

*This is not an official part of the standard.*

2007-09 Treatment submitted in response to the Call for treatments.

2007-12 TPPT meeting split *Cold treatment of Citrus limon for Bactrocera tryoni* from 2007-106 to create 2007-206G.

2008-04 CPM-3 added subject under the topic Fruit fly treatments.

2008-09 SC approved for member consultation via e-decision.

2009-06 Sent for member consultation.

2010-07 TPPT meeting revised the text and recommended to SC for CPM-7 (2012) adoption.

2011-11 SC commented by e-decision.

2012-12 TPPT meeting finalized response to concern about chilling injury revised the text and recommended to SC for CPM adoption.

2013-11 SC agreed to recommend the treatment for CPM for adoption.

2014-03 Treatment received formal objection.

2014-06 TPPT meeting drafted response to formal objection and revised text.

2014-11 SC reviewed TPPT response and approved draft for CPM adoption.

2015-03 CPM-10 adopted the treatment.

**ISPM 28. Annex 18** *Cold treatment for Bactrocera tryoni on Citrus limon* (2015). Rome, IPPC, FAO.

2015-07 IPPC Secretariat incorporated minor formatting changes.

2016-04 CPM-11 noted ink amendments in relation to "effective dose".

2016-04 IPPC Secretariat incorporated ink amendments from CPM-11 (2016).

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## IPPC

The International Plant Protection Convention (IPPC) is an international plant health agreement that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. International travel and trade are greater than ever before. As people and commodities move around the world, organisms that present risks to plants travel with them.

### Organization

- ◆ There are over 180 contracting parties to the IPPC.
- ◆ Each contracting party has a national plant protection organization (NPPO) and an Official IPPC contact point.
- ◆ Nine regional plant protection organizations (RPPOs) work to facilitate the implementation of the IPPC in countries.
- ◆ IPPC liaises with relevant international organizations to help build regional and national capacities.
- ◆ The Secretariat is provided by the Food and Agriculture Organization of the United Nations (FAO).



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