



**ISPM 28**  
**Annex [XX]**

## **INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES**

### **ISPM 28 PHYTOSANITARY TREATMENTS**

#### **PT [XX]: Cold treatment for *Ceratitis capitata* on *Citrus limon* (201[X])**

##### **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 *Ceratitis capitata* (Mediterranean fruit fly) at the stated efficacy<sup>1</sup>.

##### **Treatment description**

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

##### **Treatment schedule**

###### **Schedule 1: 2 °C or below for 16 continuous days**

The efficacy is effective dose (ED)<sub>99,9975</sub> at the 95% confidence level.

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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.

**Schedule 2: 3 °C or below for 18 continuous days**

The efficacy is ED<sub>99,9973</sub> at the 95% confidence level.

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**

Pre-cooling of the commodity to treatment temperature may be required.

*Citrus limon* is considered to be a conditional host of *Ceratitis capitata*.

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”.

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 and it will be modified by the IPPC Secretariat after adoption.*

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

2007-12 TPPT meeting split Cold treatment of *Citrus limon* for *Ceratitis capitata* from 2007-TPPT-106 to create 2007-206C

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

2013-06 SC did not reach consensus during the forum discussion and agreed to discuss it in SC November 2013

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

2014-01 Secretariat edited the treatment schedule adding “or below” and “continuous” for consistent wording between treatments, as had been previously been agreed by the TPPT

**ISPM 28.** 2007: Annex [XX] Cold treatment for *Ceratitis capitata* on *Citrus limon* (201[X]), Rome, IPPC, FAO.

Publication history: Last modified 22 January 2014