



ISPM 28
Annex [XX]

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM 28 PHYTOSANITARY TREATMENTS

PT [XX]: Cold treatment for *Bactrocera tryoni* 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 *Bactrocera tryoni* (Queensland fruit fly) at the stated efficacy¹.

Treatment description

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

Treatment schedule

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

The efficacy is effective dose (ED)_{99,99} at the 95% confidence level.

¹ 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 14 continuous days

The efficacy is ED_{99,9872} 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.

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

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

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

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