

[PleaseReview document review. Review title: 2019 First Consultation Draft PT: Cold treatment for
Ceratitis capitata on Vitis vinifera (2017-023A). Document title: 2017-
023A_DraftPT_CT_C_capitata_grape_2019-05-10_en.docx]

**[1]DRAFT ANNEX TO ISPM 28: Cold treatment for *Ceratitits capitata* on *Vitis vinifera*
(2017-023A)**

[2]Status box	
[3] This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption.	
[4]Date of this document	[5] 2019-03-21
[6]Document category	[7] Draft annex to ISPM 28
[8]Current document stage	[9] To first consultation
[10]Major stages	<p>[11]2017-06 Treatment submitted in response to 2017-02 Call for treatments (<i>Cold treatment of Australian Table grapes against Mediterranean fruit fly and Queensland fruit fly</i>).</p> <p>[12]2017-07 Technical Panel on Phytosanitary Treatments (TPPT) reviewed the submission.</p> <p>[13]2018-05 SC added the topic <i>Cold treatment of Ceratitits capitata on table grapes</i> (2017-023A) to the TPPT work programme with priority 1.</p> <p>[14]2018-06 TPPT revised the draft and recommended it to SC for consultation.</p> <p>[15]2018-11 TPPT final review via e-forum (2018_eTPPT_Oct_01)</p> <p>[16]2019-03 SC approved the draft for consultation via e-decision (2019_eSC_May_10)</p>
[17]Treatment Lead	[18] 2017-07 Mr Toshiyuki DOHINO (JP)
[19]Notes	<p>[20]2018-07 Edited</p> <p>[21]2018-12 TPPT discussed whether to add schedule of 1°C for 14 days</p> <p>[22]2019-02 TPPT decided not to add a schedule of 1°C for 14 days that as there is no data available that would sufficiently support it</p>

[23]Scope of the treatment

[24]This treatment describes the cold treatment of fruit of *Vitis vinifera* (table grapes) to result in the mortality of eggs and larvae of *Ceratitits capitata* at the stated efficacy¹.

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[25]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 Commission on Phytosanitary Measures may not provide information on specific effects on human health or food safety, which should be addressed using domestic procedures before contracting parties approve a treatment. In addition,

[26]Treatment description

[27]Name of treatment	Cold treatment for <i>Ceratitis capitata</i> on <i>Vitis vinifera</i>
[28]Active ingredient	n/a
[29]Treatment type	Physical (cold)
[30]Target pest	<i>Ceratitis capitata</i> (Wiedemann, 1824) (Diptera: Tephritidae)
[31]Target regulated articles	Fruit of <i>Vitis vinifera</i>

[32]Treatment schedule

[33]Schedule 1: 1 °C or below for 16 continuous days

[34]There is 95% confidence that the treatment according to this schedule prevents pupariation in not less than 99.9987% of eggs and larvae of *Ceratitis capitata*.

[35]Schedule 2: 2 °C or below for 18 continuous days

[36]There is 95% confidence that the treatment according to this schedule prevents pupariation in not less than 99.9987% of eggs and larvae of *Ceratitis capitata*.

[37]Schedule 3: 3 °C or below for 20 continuous days

[38]There is 95% confidence that the treatment according to this schedule prevents pupariation in not less than 99.9986% of eggs and larvae of *Ceratitis capitata*.

[39]For all three schedules, the fruit must reach the treatment temperature before treatment exposure time commences. The fruit temperature should be monitored and recorded, and the temperature should not exceed the stated level throughout the duration of the treatment.

[40]This treatment should be applied in accordance with the requirements of ISPM 42 (*Requirements for the use of temperature treatments as phytosanitary measures*).

[41]Other relevant information

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

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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.

[43]The efficacy of schedules 1, 2 and 3 was calculated based on an estimated 223 523, 227 190 and 217 881, respectively, larvae treated with no survivors.

[44]Schedules 1, 2 and 3 were based on the work of De Lima (2007) and De Lima *et al.* (2011) and were developed using the cultivars ‘Red Globe’, ‘Crimson Seedless’ and ‘Thompson Seedless’, and using failure to pupariate as the measure of mortality.

[45]References

[46]The present annex may refer to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at <https://www.ippc.int/core-activities/standards-setting/ispms>.

[47]De Lima, C.P.F. 2007. *Cold treatment at 1 °C, 2 ° C and 3 °C of Australian table grapes (Vitis vinifera L.) infested with eggs and larvae of the Mediterranean fruit fly Ceratitis capitata (Wiedemann) Diptera: Tephritidae*. South Perth, Australia, Department of Agriculture and Food Western Australia. 126 pp.

[48]De Lima, C.P.F., Jessup, A.J., Mansfield, E.R. & Daniels, D. 2011. Cold treatment of table grapes infested with Mediterranean fruit fly *Ceratitidis capitata* (Wiedemann) and Queensland fruit fly *Bactrocera tryoni* (Froggatt) Diptera: Tephritidae. *New Zealand Journal of Crop and Horticultural Science*, 39 (2): 95–105.

[49]De Lima C.P.F., Mansfield E.R., Poogoda S.R. 2017. International market access for Australian tablegrapes through cold treatment of fruit flies with a review of methods, models and data for fresh fruit disinfestation. *Australian Journal of Grape and Wine Research* 23: 306-317.

[50]Hallman, G.J. & Mangan, R.L. 1997. Concerns with temperature quarantine treatment research. In: G.L. Obenauf, ed. *Proceedings of the Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reduction*, San Diego, CA, 3–5 November 1997, pp. 79-1–79-4.