DRAFT ANNEX TO ISPM 28:: Irradiation treatment for *Epiphyas postvittana*
(2017-018)

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| **Status box** |
| This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption. |
| **Date of this document** | 2024-06-24 |
| **Document category** | Draft Annex o ISPM 28 |
| **Current document stage** | To 2024-06 TPPT meeting |
| **Major stages** | 2017-06 submitted during the 2017 Call for treatments 2017-10 TPPT reviewed submission and requested additional information from the submitter2018-04 Submitter responded 2018-05 SC added the topicto the TPPT work program2018-06 TPPT revised the draft PT and requested additional information from the submitter (*1. methods of inserting larvae from diet in fruits for confirmatory trials; 2. 5th instar the MTLS – it could be a 6th instar under certain conditions – was it tested?; 3. How the number of treated insects calculated*) 2021-07 TPPT noted the IPPC Secretariat will send a reminder to request info from submitter2024-05 Additional information received from submitter 2024-06 TPPT reviewed treatment  |
| **Treatment lead** | 2017-10 Mr Daojian YU (CN) |
| **Secretariat notes** |  |

Scope of the treatment

This treatment comprises the irradiation of all fresh commodities at a minimum absorbed dose of 154 Gy to prevent oviposition of *Epiphyas postvittana* (Light brown apple moth)[[1]](#footnote-1).

Treatment description

**Name of treatment** Irradiation treatment for *Epiphyas postvittana* (Lepidoptera: Tortricidae)

**Active ingredient** N/A

**Treatment type** Irradiation

**Target pest** *Epiphyas postvittana* (Lepidoptera: Tortricidae)

**Target regulated articles** all fresh commodities

Treatment schedule

Minimum absorbed dose of 154 Gy to prevent oviposition of the adults developing from eggs and larvae of *Epiphyas postvittana*.

There is 95% confidence that the treatment according to this schedule prevents adult emergenceof not less than 99.99% of *Epiphyas postvittana*.

This treatment should be applied in accordance with the requirements of ISPM 18.

This treatment should not be applied to fruits and vegetables stored in modified atmospheres because they may affect the treatment efficacy.

Other relevant information

Because irradiation may not result in outright mortality, inspectors may encounter live but non-viable *Epiphyas postvittana* during the inspection process. This does not imply a failure of the treatment.

[new parag.] This treatment is not effective against pupae of *E. postvittana*, which may be found associated with some commodities at the time of the treatment, for example *Vitis* spp. (table grapes) (Follett & Snook 2012).

 , . The Technical Panel on Phytosanitary Treatments (TPPT) based its evaluation of this treatment on the research reported by Follett & Snook 2012, Batchelor et al. 1985 and Dentener et al. 1990, which determined the efficacy of irradiation as a treatment for this pest in fresh commodities.

In evaluating this treatment the Technical Panel on Phytosanitary Treatments (TPPT) considered issues associated with the possibility of the survival of sufficient numbers of sterile adults that would escape from irradiated infested produce and fly into exotic pest traps, thereby causing financial loss and trade restrictions. The TPPT considered that, based on the work described in Hallman and Hellmich (2009) and Hallman *et al.* (2010), numbers of fit survivors would be negligible and would not pose quarantine concerns.

**References**

The present annex to the standard may refer to international standards for phytosanitary measures (ISPMs). ISPMs are available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/core-activities/standards-setting/ispms.

**Follett, P. A., and K. Snook.** 2012. Irradiation for quarantine control of the invasive light brown apple moth (Lepidoptera: Tortricidae) and a generic dose for tortricid eggs and larvae. Journal Econmic of Entomology, 105 (6): 1971-1978.

**Batchelor, T. A., R. L. O’Donnell, and J. J. Roby.** 1985.  Irradiation as a quarantine treatment for ‘Granny Smith’ apples infested with *Epiphyas postvittana* (Walk.) (light brown apple moth) stages.  New Zealand Department of Scientific and Industrial Research.  Report submitted to the Food and Agricultural Organization (FAO) of the United Nations and the International Atomic Energy Agency (IAEA) through their joint FAO/IAEA Division of Isotope and Radiation Applications of Atomic Energy for Food and Agricultural Development.

**Dentener, P. R., B. C. Waddell, and T. A. Batchelor.** 1990. Disinfestation of lightbrown apple moth: a discussion of three disinfestation methods.Occasional Publication No. 46. Australian Institute of Agricultural Science. pp. 166-177.

**ISPM 18.** 2003. Guidelines for the use of irradiation as a phytosanitary measure. Rome, IPPC, FAO.

Hallman and Hellmich (2009) [to be completed]

Hallman *et al.* (2010) [to be completed]

1. The scope of phytosanitary treatments does not include issues related to pesticide registration or other domestic requirements for contracting parties’approval of treatments. IPPC adopted treatments 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. [↑](#footnote-ref-1)