



DRAFT ANNEX TO ISPM 28: Irradiation treatment for *Sternochetus frigidus* (2017-036)

Status box

This is not an official part of the annex to the standard and it will be modified by the IPPC Secretariat after adoption.	
Date of this document	2021-11-01
Document category	Draft annex to ISPM 28
Current document stage	To CPM for adoption
Major stages	<p>2017-10 Treatment submitted during 2017-02 call for treatments.</p> <p>2018-03 Technical Panel on Phytosanitary Treatments (TPPT) reviewed and requested further information from submitter.</p> <p>2018-05 SC added the topic <i>Irradiation treatment for Sternochetus frigidus</i> (2017-036) to the TPPT work programme with priority 2.</p> <p>2018-09 Submitter provided the requested information.</p> <p>2019-07 TPPT reviewed and requested further information from submitter.</p> <p>2020-02 Submitter provided the requested information.</p> <p>2020-03 TPPT reviewed the additional information and recommended the draft for consultation.</p> <p>2020-06 SC approved the draft for consultation via e-decision (2020_eSC_May_21).</p> <p>2020-07 First consultation.</p> <p>2021-03 TPPT meeting responded to consultation comments, revised the draft and recommended it for second consultation.</p> <p>2021-05 SC approved for second consultation via e-decision (2021_eSC_May_16).</p> <p>2021-07 Second consultation.</p> <p>2021-10 TPPT revised and recommended to the SC for approval for adoption by the CPM</p> <p>2021-12 SC approved for adoption by the CPM via e-decision (2022_eSC_May_04).</p>
Steward history	<p>2019-07 Walther ENKERLIN (IAEA)</p> <p>2008-03 Andrew PARKER (IAEA)</p>
Notes	<p>2020-02 Edited</p> <p>2020-05 Edited</p> <p>2021-04 Edited</p> <p>2021-11 Edited</p>

Scope of the treatment

This treatment describes the irradiation of fruits and vegetables at 165 Gy minimum absorbed dose to prevent oviposition of any female *Sternochetus frigidus* that may emerge from fruit irradiated at the stated efficacy.¹

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, 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.

Treatment description

Name of treatment	Irradiation treatment for <i>Sternochetus frigidus</i>
Active ingredient	n/a
Treatment type	Irradiation
Target pest	<i>Sternochetus frigidus</i> (Fabricius) (Coleoptera: Curculionidae)
Target regulated articles	All fruits and vegetables that are hosts of <i>Sternochetus frigidus</i>

Treatment schedule

Minimum absorbed dose of 165 Gy to prevent oviposition in *Sternochetus frigidus*.

There is 95% confidence that the treatment according to this schedule prevents oviposition in not less than 99.88684% of adult females of *S. frigidus*.

This treatment should be applied in accordance with the requirements of ISPM 18 (*Guidelines for the use of irradiation as a phytosanitary measure*).

This treatment should not be applied to fruit or vegetables stored in a modified atmosphere because the modified atmosphere may affect the treatment efficacy.

Other relevant information

Because irradiation may not result in outright mortality, inspectors may encounter live but non-viable *Sternochetus frigidus* (eggs, larvae, pupae or adults) during the inspection process. This does not imply a failure of the treatment.

The Technical Panel on Phytosanitary Treatments based its evaluation of this treatment on the research reported by Obra *et al.* (2014), which determined the efficacy of irradiation of *S. frigidus* on mangoes.

The efficacy of this schedule was calculated based on a total of 2 274 adult females treated with no egg production; the control egg production was 397 eggs per female.

References

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>.

Obra, G.B., Resilva, S.S., Follett, P.A. & Lorenzana, L.R.J. 2014. Large-scale confirmatory tests of a phytosanitary irradiation treatment against *Sternochetus frigidus* (Coleoptera: Curculionidae) in Philippine mango. *Journal of Economic Entomology*, 107 (1): 161–165.