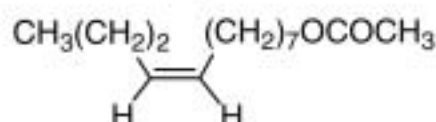


## 4:307 (Z)-dodec-8-enyl acetate

*Plum fruit moth sex pheromone*

*The Pesticide Manual Thirteenth Edition* entry number: 286



**NOMENCLATURE:** **Approved name:** (Z)-dodec-8-enyl acetate.

**Other names:** Z8-12Ac; Z8DDA. **CAS RN:** [28079-04-1].

**SOURCE:** Originally isolated from virgin female plum fruit moth adults (*Cydia funebrana* (Treitschke)).

**PRODUCTION:** Manufactured by SEDQ for use in crop protection.

**TARGET PESTS:** Plum fruit moth (*Cydia funebrana*).

**TARGET CROPS:** Plum, cherry, sour cherry and apricot orchards.

**BIOLOGICAL ACTIVITY:** **Mode of action:** Males locate females by following a plume of air rich in the odour of a complete pheromone blend emitted by virgin females. Evaporation of the pheromone from traps attracts male moths. Permeation of the canopy of an orchard with vapours of the same pheromone is sometimes used to disrupt location of females by males and decrease mating, but (Z)-dodec-8-enyl acetate is often used to attract males to sticky traps.

**COMMERCIALISATION:** **Formulation:** Sold as a slow-release formulation associated with sticky traps. **Tradenames:** 'Fersex CF' ((Z)- isomer) (SEDQ), 'Checkmate OFM' (mixture of (E)- and (Z)- isomers, with (Z)- alcohol) (Suterra), 'Disrupt OFM' (Hercon), 'Ecodian' (disorientation) (Isagro), 'Isomate-M 100' (Shin-Etsu) and (Pacific Biocontrol), 'OPM Disrupt' (ChemTica), 'RAK 5' (BASF), 'Confuser A' (plus tetradec-11-enyl acetate plus (E,Z)-tetradeca-4,10-dienyl acetate plus (Z)-icos-13-en-10-one) (Shin-Etsu), 'Confuser P' (plus tetradec-11-enyl acetate plus 14-methyloctadec-1-ene plus (Z)-icos-13-en-10-one) (Shin-Etsu), 'Confuser Z' (plus dodec-9-enyl acetate plus tetradec-11-enyl acetate plus (Z)-icos-13-en-10-one plus (Z)-tetradec-9-enyl acetate) (Shin-Etsu), 'Isomate C/OFM' (plus codlemone) (Shin-Etsu).

**APPLICATION:** Traps are placed within the canopy of individual trees in an orchard, at a height of about 3 metres and at a rate of about one trap per 5 trees (more if insect pressure is significant).

**PRODUCT SPECIFICATIONS:** The active ingredient is  $\geq 97\%$  (w/w) (Z)-dodec-8-enyl acetate.

**COMPATIBILITY:** It is unusual to apply (Z)-dodec-8-enyl acetate with any other crop protection chemicals.

**MAMMALIAN TOXICITY:** There are no reports of allergic or other adverse toxicological effects from researchers, manufacturers, formulators or field workers. It is considered to be non-toxic. **Acute oral LD<sub>50</sub>:** rats >5 000 mg/kg. **Inhalation:** No toxicity seen on rats at the highest test level. **Skin and eye:** There were no signs of toxicity at the highest test levels.

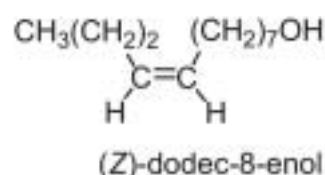
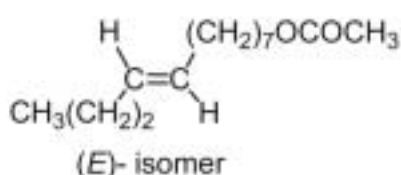
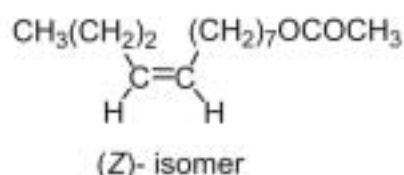
**ENVIRONMENTAL IMPACT AND NON-TARGET TOXICITY:** (*Z*)-dodec-8-enyl acetate is the sex pheromone of the plum fruit moth. It is not expected that it will have any adverse effects on non-target organisms or on the environment. **Behaviour in soil:** It is broken down to carbon dioxide and water very rapidly in soil.

**Accepted for use in organic farming:** Yes.

## 4:308 (*Z*)-dodec-8-enyl acetate plus (*E*)-dodec-8-enyl acetate plus (*Z*)-dodec-8-enol

*Oriental fruit moth sex pheromone*

*The Pesticide Manual* Thirteenth Edition entry number: 286



**NOMENCLATURE:** **Approved name:** (*Z*)-dodec-8-enyl acetate plus (*E*)-dodec-8-enyl acetate plus (*Z*)-dodec-8-enol. **Other names:** *Grapholitha molesta* sex pheromone; oriental fruit moth sex pheromone; Z8-12Ac; E8-12Ac; Z8DDA. **Development code:** BAS 284 I. **CAS RN:** [28079-04-1] (*Z*)-dodec-8-enyl acetate; [38363-29-0] (*E*)-dodec-8-enyl acetate; [40642-40-8] (*Z*)-dodec-8-enol.

**SOURCE:** Female *Grapholitha molesta* (Busck) emit several volatile components shown to be attractive to males. Originally extracted from the terminal segments of virgin females.

**PRODUCTION:** Manufactured for use in crop protection.

**TARGET PESTS:** Oriental fruit moth (*Grapholitha* [*Cydia*] *molesta*). Also effective against the macadamia nut borer (*Cryptophlebia ombrodelta* (Lower)) and the koa seedworm (*C. illepidia*).