

§ 301.93-10 **Treatments.**

Treatment schedules listed in the Plant Protection and Quarantine Treatment manual to destroy the Oriental fruit fly are approved for use on regulated articles. The Plant Protection and Quarantine Treatment Manual is incorporated by reference. For the full identification of this standard, see §300.1 of this chapter, "Materials incorporated by reference". The following treatments can be used for bell pepper, citrus and grape, tomato, premises, and soil:

(a) *Fruits and vegetables*⁷—(1) *Bell Pepper*—(i) *Vapor Heat*. Heat by saturated water vapor at 44.4 °C. (112 °F.) until approximate center of bell pepper reaches 44.4 °C (112 °F.). Maintain at 44.4 °C. (112 °F.) for 8¾ hours, then immediately cool.

(2) *Citrus and grapes*—(i) *Fumigation plus refrigeration*. Fumigate at normal atmospheric pressure (chamber or tarpaulin, load not to exceed 80%) with 32 g/m³ methyl bromide at 21 °C. (70 °F.) or above, minimum gas concentrations 25 g/m³ at ½ hour, 18 g/m³ at 2 or 2½ hours, 17 g/m³ at 3 hours. Fumigate for a minimum of 2 hours. Then, aerate fruit at least 2 hours before refrigeration (but begin refrigeration no more than 24 hours after fumigation is completed). Refrigerate based upon fumigation exposure time listed in the table below:

Fumigation exposure time	Refrigeration	
	Days	Temperature
2 hours	4	0.55–2.7 °C. (33–37 °F.)
	11	3.33–8.3 °C. (38–47 °F.)
2½ hours	4	1.11–4.44 °C. (34–40 °F.)
	6	5.0–8.33 °C. (41–47 °F.)
	10	8.88–13.33 °C. (48–56 °F.)
3 hours	3	6.11–8.33 °C. (43–47 °F.)
	6	9.88–13.33 °C. (48–56 °F.)

(ii) *Refrigeration plus fumigation*. Refrigerate for 21 days at 0.55 °C. (33 °F.) or below, then fumigate at normal atmospheric pressure (chamber or tarpaulin, load not to exceed 80%) with—

⁷Some varieties of fruit may be injured by approved treatments. The USDA is not liable for damages caused by this quarantine. Commodities should be tested by the shipper to determine each commodity's tolerance before commercial shipments are attempted.

(A) 48 g/m³ (3 lb/1000 ft³) methyl bromide for 2 hours at 4.5 °C. (40–59 °F.), minimum gas concentration 44 g/m³ at ½ hour, 36 g/m³ at 2 hours; or

(B) 40 g/m³ (2½ lb/1000 ft³) methyl bromide for 2 hours at 15.5–20.5 °C. (60–69 °F.), minimum gas concentration 36 g/m³ at ½ hour, 28 g/m³ at 2 hours; or

(C) 32 g/m³ (2 lb/1000 ft³) methyl bromide for 2 hours at 21–26 °C. (70–79 °F.), minimum gas concentration 30 g/m³ at ½ hour, 25 g/m³ at 2 hours.

(3) *Tomato*—(i) *Fumigation*. Fumigate with methyl bromide at normal atmospheric pressure (chamber or tarpaulin, load not to exceed 80%) with 32g/m³ (2 lb/1000 ft³) for 3½ hours at 21 °C. (70 °F.) or above, minimum gas concentration 26 g/m³ at ½ hour, 14 g/m³ at 4 hours.

(ii) *Vapor heat*. Heat by saturated water vapor at 44.4 °C. (112 °F.) until approximate center of tomato reaches 44.4 °C. (112 °F.). Maintain at 44.4 °C. (112 °F.) for 8¾ hours, then immediately cool.

(b) *Premises*. A field, grove, or area that is located within the quarantined area but outside the infested core area, and that produces regulated articles, must receive regular treatments with malathion bait spray. These treatments must take place at 6- to 10-day intervals, starting a sufficient time before harvest (but not less than 30 days before harvest) to allow for completion of egg and larvae development of the Oriental Fruit Fly. Determination of the time period must be based on the day degrees model for Oriental fruit fly. Once treatment has begun, it must continue through the harvest period. The malathion bait spray treatment must be applied by aircraft or ground equipment at a rate of 2.4 ounces of technical grade malathion and 9.6 ounces of protein hydrolysate per acre.

(c) *Soil*. Soil within the drip area of plants which are producing or have produced the fruits, nuts, vegetables, and berries listed in §301.93-2(a) of this subpart: Apply diazinon at the rate of 5 pounds active ingredient per acre to the soil within the drip area with sufficient water to wet the soil to at least a depth of ½ inch. Both immersion and pour-on treatment procedures are also acceptable.

[58 FR 8521, Feb. 16, 1993; 58 FR 29028, May 18, 1993]