(6) Livestock feeding studies are required whenever a pesticide occurs as a residue in a livestock feed. Use involving direct application to livestock, including poultry, will require animal treatment residue studies.

(7) Data on residues in potable water are required whenever a pesticide is to be applied directly to water, unless it can be determined that the treated water would not be used (eventually) for drinking purpose, by man or animals.

(8) Data on residue in fish are required whenever a pesticide is to be applied directly to water inhabited by fish.

(9) Data on residues in irrigated crops are required when a pesticide is to be applied directly to water that could be used for irrigation or to irrigation facilities such as irrigation ditches.

(10) Data on residues in food/feed in food handling establishments are required whenever a pesticide is to be used in food/feed handling establishments. Disinfectants and sanitizers used in food or feed handling establishment are exempt from this requirement if their residues are regulated by the Food and Drug Administration at 21 CFR 178.1010.

(11) Reduction of residue data are required when the assumption of tolerance level residues would result in predicted exposure at an unsafe level. Data on the level of residue in food as consumed will be used to obtain a more precise estimate of potential dietary exposure. The Agency recommends that such data be generated to support all pesticides requiring a tolerance in case new data are revealed which indicates the pesticide is more toxic than initially determined.

(12) The proposed tolerance must reflect the maximum residue likely to occur in crops and meat/milk/poultry eggs.

(13) Residue data for outdoor domestic uses are required if home gardens are to be treated and the home garden use pattern is different from the use pattern on which the tolerance was established.

(14) Required to support registration of an indoor use pesticide if such a use could result in residues in food or feed.

(15) For all food uses, data on whether the FDA/USDA multiresidue methodology would detect and identify the pesticide are required.

[49 FR 42881, Oct. 24, 1984. Redesignated and amended at 53 FR 15993, 15999, May 4, 1988; 58 FR 34203, June 23, 1993]

## § 158.290 Environmental fate data requirements.

(a) *Table.* Sections 158.50 and 158.100 through 158.102 describe how to use this table to determine the environmental fate data requirements and the substance to be tested.

| Kind of data required | (b) Notes | General use patterns | | | | | | | | | Test substance | | Guideline reference No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Terrestrial | | Aquatic | | Greenhouse | | Forestry | Domestic outdoor | Indoor | Data to support MP | Data to support EP | |
| | | Food crop | Nonfood | Food crop | Nonfood | Food crop | Nonfood | | | | | | |
| Degradation studies-lab | | | | | | | | | | | | | |
| Hydrolysis | | [R] | [R] | [R] | [R] | [R] | [R] | [R] | [R] | | TGAI or PAIRA. | TGAI or PAIRA. | 161–1 |
| Photodegradation: | | | | | | | | | | | | | |
| In water | | R | R | R | R | | | R | | | TGAI or PAIRA. | TGAI or PAIRA. | 161–2 |
| On soil | (1) | CR | | | | | | CR | | | TGAI or PAIRA. | TGAI or PAIRA. | 161–3 |
| In air | (2) | CR | | | | | | | | | TGAI or PAIRA. | TGAI or PAIRA. | 161–4 |
| Metabolism studies-lab | | | | | | | | | | | | | |
| Aerobic soil | | [R] | [R] | | | R | R | [R] | R | | TGAI or PAIRA. | TGAI or PAIRA. | 162–1 |
| Anaerobic aquatic | | | | R | R | | | R | | | TGAI or PAIRA. | TGAI or PAIRA. | 162–3 |
| Aerobic aquatic | | | | [R] | [R] | | | | | | TGAI or PAIRA. | TGAI or PAIRA. | 162–4 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobility studies | | | | | | | | | | | | | |
| Leaching and adsorption/ desorption. | ..... | [R] | [R] | R | R | R | R | [R] | R | ..... | TGAI or PAIRA. | TGAI or PAIRA. | 163–1 |
| Volatility: | | | | | | | | | | | | | |
| (Lab) ..... | (2) | CR | ..... | ..... | ..... | CR | CR | ..... | ..... | ..... | TEP ..... | TEP ..... | 163–2 |
| (Field) ..... | (2) | CR | ..... | ..... | ..... | CR | CR | ..... | ..... | ..... | TEP ..... | TEP ..... | 163–3 |
| Dissipation studies-field | | | | | | | | | | | | | |
| Soil ..... | ..... | R | R | ..... | ..... | ..... | ..... | ..... | R | ..... | TEP ..... | TEP ..... | 164–1 |
| Aquatic (sediment) ..... | ..... | ..... | ..... | R | R | ..... | ..... | ..... | ..... | ..... | TEP ..... | TEP ..... | 164–2 |
| Forestry ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | R | ..... | ..... | TEP ..... | TEP ..... | 164–3 |
| Combination and tank mixes. | (2) | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 164–4 |
| Soil, long-term ..... | (4) | CR | ..... | CR | ..... | ..... | ..... | ..... | ..... | ..... | TEP ..... | TEP ..... | 164–5 |
| Accumulation studies | | | | | | | | | | | | | |
| Rotational crops: | | | | | | | | | | | | | |
| (Confined) ..... | (5) | [CR] | ..... | [CR] | ..... | ..... | ..... | ..... | ..... | ..... | PAIRA ..... | PAIRA ..... | 165–1 |
| (Field) ..... | (6) | CR | ..... | CR | ..... | ..... | ..... | ..... | ..... | ..... | TEP ..... | TEP ..... | 165–2 |
| Irrigated crops ..... | (7) | ..... | ..... | [CR] | CR | ..... | ..... | ..... | ..... | ..... | TEP ..... | TEP ..... | 165–3 |
| In fish ..... | (8) | [CR] | [CR] | [CR] | [CR] | ..... | ..... | [CR] | ..... | ..... | TGAI or PAIRA. | TGAI or PAIRA. | 165–4 |
| In aquatic non-target organisms. | (8), (9) | ..... | ..... | ..... | CR | ..... | ..... | CR | ..... | ..... | TEP ..... | TEP ..... | 165–5 |

Key: R=Required: CR=Conditionally required; [ ]=Brackets (ie. [R], [CR], indicate data requirements that apply when an experimental use permit is being sought; TGAI=Technical grade of the active ingredient, PAIRA="Pure" active ingredient-radio labeled; TEP=typical end use product; EP =End use product.

(b) NOTES. The following notes are referenced in column two of the table contained in paragraph (a) of this section.

(1) Not required if use involves application to soils solely by injection of the product into the soil or by incorporation of the product into the soil upon application.

AAA(2) Required on case by case basis depending on product use pattern and other pertinent factors.

AAA(3) Not required if anaerobic aquatic metabolism study has been conducted.

AAA(4) Required if pesticide residues do not readily dissipate in soil.

AAA(5) Confined accumulation study is required when it is reasonably foreseeable that any food or feed crop may be subsequently planted on the site of pesticide application.

AAA(6) Field accumulation study is required if significant pesticide residue is likely to be present in soil at time of plant crop, as evidenced by residue data obtained from confined accumulation study.

AAA(7) Required if it is reasonably foreseeable that water at treated site may be used for irrigation purposes.

AAA(8) Required if significant concentrations of the active ingredient and/or its principal degradation products are likely to occur in aquatic environments and may accumulate in aquatic organisms.

AAA(9) Required unless tolerance or action level for fish has been granted.

[49 FR 42881, Oct. 24, 1984. Redesignated at 53 FR 15993, May 4, 1988]

## § 158.340 Toxicology data requirements.

(a) *Table.* Sections 158.50 and 158.100 through 158.102 describe how to use this table to determine the toxicology data requirements and the substance to be tested.