

TABLE 1.—SUBCHRONIC, CHRONIC, AND OTHER TOXICITY—Continued

Guideline Number	Study Type	Results
870.7485	Metabolism - Rat	<p>Results showed minimal breakage of the ester linkage of the parent compound in the material eliminated via the feces in the period of 0–48 hours after dosage, when most of the administered radioactivity is identifiable as coming from unmodified parent compound. However, the material was subsequently eliminated, although a relatively small proportion of the administered dose appears to have undergone more modification. Since a greater proportion of the radioactivity was eliminated via the feces in the period of 48–168 hours in the form of 2-Methyl-3-phenylbenzyl alcohol and 2-Methyl-3-phenylbenzoic acid than the parent compound, this is evidence that extensive breakage of the ester linkage does occur, either in the material retained in the intestines for more than 46 hours, or in the material absorbed and subsequently eliminated via the feces.</p> <p>Classification: Unacceptable-Guideline. While this study is limited, it does provide some insight into the incomplete absorption of bifenthrin from the intestine, and the lack of modification of most of the unabsorbed material, particularly that eliminated via the feces during the period of 0–48 hours. However, the metabolism of the absorbed compound (radioactivity primarily excreted via the urine, despite differences in labeling) is less clear.</p>
870.7485	Metabolism - Rat	<p>The results of the study demonstrated that the majority of radioactivity excreted in the feces was the parent compound and its intact hydroxylated metabolites. Much of the radioactivity excreted in urine was hydrolytic and hydrolytic/oxidative degradation products of the parent compound.</p> <p>Classification: Unacceptable-Guideline.</p>
870.7600	Dermal Penetration - Rats	<p>For animals in group A, means of 4.6, 14.2, 12.8 and 14.7% total dose were recovered from the skin at 0, 4, 10 and 24 hours post-dose; corresponding percentages in the wash were 94.6, 80.8, 78.6 and 70%. For animals in group B, means of 20.0, 37.9, 42.0 and 41.2% remained (and were recovered from) the skin at 0, 4, 10 and 24 hours post-dose; corresponding percentages in the wash were 73.9, 50.6, 41.3 and 37.7% respectively.</p> <p>This dermal absorption study is classified as acceptable. However, because only one dose was used, this study, by itself, does not satisfy the guideline requirement for a dermal penetration study in the rat for technical bifenthrin (FMC 54800). However, it can be used, in conjunction with other dermal penetration studies, as supporting data for the purposes of registration and/or reregistration of products containing or consisting of bifenthrin.</p>
870.7600	Dermal Penetration - Rats	<p>Means of 96.83, 84.75, 76.86 and 72.88% of the radioactivity were recovered in the skin wash at 0, 4, 10 and 24 hours post dosage, respectively. By the time the 4-hour post-dose and later skin samples were collected the emulsifying solvents had evaporated. Means of 4.04, 12.00, 16.55 and 19.44% total dose were recovered from the washed skin of the application site at 0, 4, 10 and 24 hours respectively; corresponding mean percentages recovered from the carcass were 0.09, 0.87, 0.85 and 1.67%. Mean percentages recovered in urine and feces were 0, 0.14, 0.43 and 3.23%.</p> <p>This dermal absorption study is classified as acceptable. However, because only one dose was used, this study, by itself, does not satisfy the guideline requirement for a dermal penetration study in the rat for technical bifenthrin (FMC 54800). However, it can be used, in conjunction with other dermal penetration studies, as supporting data for the purposes of registration and/or reregistration of products containing or consisting of bifenthrin.</p>
870.7600	Dermal Penetration - Rats	<p>In general, only very small amounts of radioactivity were present in blood, excrement, and carcasses, with almost all (approximately 99%) of the absorbed radioactivity localized in skin at the application site, and in the skin adjacent to the application site. Average percentages of FMC 54800 dosages absorbed at 10 hours were 55.8%, 54.1%, and 37.5% for the 49.2, 514 and 5253 µg/rat groups respectively. Corresponding percentages for the 3 groups at the 0.5 hour sacrifice were 54.6%, 56.4%, and 52.5%, so the percentage absorption of FMC 54800 did not seem to depend on time-to-sacrifice. At 10 hours and the lowest dose level, the percentages present were as follows: excreta: <0.44%; carcass: <1.8%; skin at application site: 50.3%; skin adjacent to application site: 5.5%. At 10 hours and the highest dose level, the percentages of total dose present were as follows: excreta: 0.07%; carcass: 0.5%; skin at application site: 34.6%; skin adjacent to application site: 2.7%.</p> <p>Classification: This dermal absorption study is classified as acceptable. However, by itself, does not satisfy the guideline requirement for a dermal penetration study in the rat for technical bifenthrin (FMC 54800). However, it can be used, in conjunction with other dermal penetration studies, as supporting data for the purposes of registration and/or reregistration of products containing or consisting of bifenthrin.</p>