

exception of body and subcutaneous fat, DIPN was not detected 48 hours after the single (100 mg/kg) dose. Peak levels in body and subcutaneous fat were found 24 hours after dosing at 75 and 85 µg/g of tissue, respectively; these levels declined to approximately 60 µg/g by 48 hours following the single dose. Results were similar in rats given the repeated doses with the peak levels in body and subcutaneous fat reported to be 150 and 90 µg/g, respectively, at 2 hours following administration of the last dose. By 30 days after this last dose was given, the 2,6-DIPN levels in fat had declined to 5 µg/g. The estimated half-life for 2,6-DIPN in fat was approximately 7 days, and the investigators noted that DIPNs had a small potential for accumulation in fat (levels increased from 2 to 7% over those found after a single dose in subcutaneous and body fat, respectively). Worst-case estimates of secondary residues were calculated for meat (1.35 ppm) and milk (0.7 ppm) of beef/dairy cattle fed waste from 2,6-DIPN-treated processed potatoes. These tolerance provide a reasonable certainty of no harm and livestock feeding studies will allow further refinement of these estimates.

In the second article, it was noted that 2,6-DIPN was metabolized in rats primarily by way of an oxidative pathway involving the isopropyl groups. Five metabolites were identified in urine from rats given an oral dose of 240 mg 2,6-DIPN per kg body weight, and the majority of the DIPN residues recovered in the urine (23% of the dose at 24 hours) was represented by 2-[6(1-hydroxy-1-methyl)ethylnaphthalen-2-yl]-2-hydroxypropionic acid (17.5% of the dose). This study did not explain the fate of the remaining 77% of the administered dose. The livestock feeding study should determine the fate of the administered dose, but because worst-case estimates were used to establish the tolerances, there is a reasonable certainty of no harm.

Acute and chronic dietary exposure assessments were conducted using the Dietary Exposure Evaluation Model software (DEEM™ version 1.30) which incorporates consumption data from USDA's Continuing Surveys of Food Intakes by Individuals (CSFII, 1994–1996/1998).

For acute exposure assessments, individual 1-day food consumption data define an exposure distribution which is expressed as a percentage of the aPAD (aPAD is 0.1 mg/kg). For chronic exposure and risk assessment, an estimate of the residue level in each food or food-form on the commodity residue list is multiplied by the average

daily consumption estimate for the food/food-form. The resulting residue consumption estimate for each food/food-form is summed with the residue consumption estimate for all other food/food-forms on the commodity residue list to arrive at the total estimated exposure. Exposure estimates are expressed as mg/kg body weight/day and as a percent of the cPAD (0.1 mg/kg/day). It is just as likely that the exposure estimates are appropriate, given that it is not uncommon for the peels to be eaten. These procedures were performed for each population subgroup.

As a condition of registration, the registrant will be required to submit livestock feeding studies and enforcement analytical methods for livestock and potatoes; however, EPA believes that its analyses, which rely on the available data, supplemented with conservative assumptions, are sufficient to support a tolerance for the short period during which these studies are conducted.

2. *Dietary exposure from drinking water.* Pesticide residues in drinking water are not expected to result from this use. The use is restricted to application in a commercial warehouse to stored potatoes. In addition, the label will restrict users from contaminating water supplies when cleaning equipment or disposing of equipment wash waters.

3. *From non-dietary exposure.* The term "residential exposure" is used in this document to refer to non-occupational, non-dietary exposure (e.g., for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets).

2,6-DIPN is not registered for use on any sites that would result in residential exposure, but is restricted to use in commercial warehouses.

4. *Cumulative exposure to substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of the FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider "available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity."

EPA does not have, at this time, available data to determine whether 2,6-DIPN has a common mechanism of toxicity with other substances or how to include this pesticide in a cumulative risk assessment. Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, 2,6-DIPN does not appear to produce a toxic

metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has not assumed that 2,6-DIPN has a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see the final rule for Bifenthrin Pesticide Tolerances (62 FR 62961, November 26, 1997).

D. Safety Factor for Infants and Children

1. *In general.* Section 408 of the FFDCA provides that EPA shall apply an additional ten-fold margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the data base on toxicity and exposure unless EPA determines that a different margin of safety will be safe for infants and children. Margins of safety are incorporated into EPA risk assessments either directly through use of a MOE analysis or through using uncertainty (safety) factors in calculating a dose level that poses no appreciable risk to humans.

2. *Prenatal and postnatal sensitivity.* The toxicity data on 2,6-DIPN does not indicate extra sensitivity of offspring when compared with that of adult animals, but the data base does not represent a complete assessment of potential age-related sensitivity or acute effects other than lethality. The following data would be necessary to allow for a complete assessment: A developmental toxicity study in a second species, a multigeneration reproduction toxicity study, or a range of doses adequate to induce a full range of toxic responses, especially potential acute effects in any of the available studies.

3. *Conclusion.* In light of the absence of a developmental toxicity study in a second species, a multigeneration reproduction toxicity study, or a range of doses adequate to induce a full range of toxic responses, especially potential acute effects in any of the available studies, EPA has retained the default 10-fold safety factor.

IV. Aggregate Risks and Determination of Safety for U.S. Population, Infants and Children

1. *Acute risk.* Acute dietary exposure estimates were based on the available residue data and worst-case assumptions (Refs. 1 and 2). For the U.S. population, acute dietary exposure was estimated to be 0.023113 mg/kg. These