

TABLE 1.—SUMMARY OF MAMMALIAN TOXICITY/PATHOGENICITY STUDIES<sup>1</sup>

Study	Animal	Dose (mg)	Dose (cfu)	Result
Acute oral, LD <sub>50</sub>	Rat	> 2,000 milligrams/kilogram body weight (mg/kg bwt)	> 4 x 10 <sup>9</sup> colony forming units/kilogram body weight (cfu/kg bwt)	LD <sub>50</sub> > 2,000 mg/kg
Acute dermal, LD <sub>50</sub>	Rat	> 2,000 mg/kg body.wt	> 4 x 10 <sup>9</sup> cfu/kg body wt	LD <sub>50</sub> > 2,000 mg/kg
Acute IP injection	Rat	> 2,000 mg/kg body.wt	> 4 x 10 <sup>9</sup> cfu/kg body wt	LD <sub>50</sub> > 2,000 mg/kg Non-infectious; 100% clearance
Acute pulmonary (intratracheal)	Rat	> 125 mg/kg body.wt	> 2.5 x 10 <sup>8</sup> cfu/kg body wt	LD <sub>50</sub> > 125 mg/kg Non-infectious; 100% clearance
Acute skin irritation	Rabbit			Non-irritant
Acute eye irritation	Rabbit			Non-irritant
Skin sensitization (Buehler test)	Guinea pig			Not sensitizing

<sup>1</sup>The end product was test substance.

In addition, the temperature profile for this strain of *P. lilacinus* strain 251 indicates that it does not grow at 36°C or higher, and therefore, will not be pathogenic to humans. The strain does not produce paecilotoxins or other toxins. The acute toxicity/pathogenicity studies have determined that the end use product containing the organism is not toxic, irritating or sensitizing to the test animals. Strain 251 of *P. lilacinus* has not been reported as a pathogen to humans or as causing any type of adverse effects to humans in the published literature or through commercial manufacture or use.

In conclusion, all submitted toxicological studies and supplemental information on *P. lilacinus* strain 251, prove that this fungus is non-pathogenic and non-infectious to mammals and imposes no health risk for operators, workers, or consumers.

#### D. Aggregate Exposure

1. *Dietary exposure*—i. *food*. Dietary exposure from use of MeloCon™ WG and its active ingredient is minimal to non-existent. MeloCon™ WG is applied to the soil before planting and very early in the plant-growing season. After harvest any remaining fungal spores on potato, celery and carrots will be exposed to unfavorable conditions (e.g. dryness), and are not likely to germinate and grow on the harvested crop.

Any potentially occurring residual deposits on these crops are not relevant as a human health concern in view of the toxicological profile of this strain. The amount of residue, if any, is likely to be very low.

*P. lilacinus* is not able to enter plants and infest them. As a saprophytic

fungus it would use the resources of the plant host in case access was possible.

Residues of the active ingredient are not expected on agricultural commodities.

ii. *Drinking water*. Exposure to humans from residues of *P. lilacinus* strain 251 in drinking water is unlikely. The active ingredient of MeloCon™ WG is not very soil mobile and will not leach to the water table. Following application of the active ingredient to the soil, spores of *P. lilacinus* strain 251 are likely to establish a population based on the prevailing environmental conditions of the relevant soil ecosystem. Unlimited growth is not expected, given that this species is not a “foreigner” to the naturally occurring soil micro-flora. The active ingredient is a spore and not soluble and therefore non-leaching. In addition, when the product is used as directed, the presence of spores in natural surface waters is not expected.

2. *Non-dietary exposure*. The potential for non dietary exposure to the general population, including infants and children, is minimal to non-existent. No approval for consumer uses is expected. The proposed uses are limited to commercial agricultural and horticultural applications. No exposure is expected to the general public during either manufacture or application of the product. If non-dietary exposures were to occur, they would not be expected to pose a risk due to a lack of pathogenicity and toxicity, as demonstrated for this strain in the studies conducted on MeloCon™ WG. The recommendations for use of personal protective equipment (PPE)

will mitigate the potential exposure of workers.

#### E. Cumulative Exposure

No residues are expected to remain in human food and no cumulative effects of this microbial nematicide are expected.

#### F. Safety Determination

1. *U. S. population*. There have been no reports of *P. lilacinus* strain 251 infecting humans, and no reports that the microbe makes toxins or secondary metabolites that might be harmful to humans.

In most of the crops envisaged for use of the active ingredient no residue is expected on the food, since soil drench applications rule out a direct contact between the applied product and the fruit. This applies to all crops with above ground harvest, such as grapes, tomato, and tobacco. After harvest, any remaining fungal spores on potato, celery and carrots will be exposed to unfavorable conditions (e.g. dryness), and are not likely to germinate and grow on the harvested crop.

*P. lilacinus* strain 251 does not grow at 36°C or greater, and therefore, cannot grow in humans. It has been shown to be non-toxic/pathogenic to mammals in acute studies.

2. *Infants and children*. Residues of *P. lilacinus* strain 251 are not expected to occur on agricultural commodities. There is no reason to expect harm to infants and children from exposure to the active ingredient from the proposed uses on the proposed product label.