

Evaluation Report for Category B, Subcategory 5.0 Application

Application Number: 2007-8270
Application: Application Category B, subcategory 5.0 (import maximum residue limits (MRLs) for registered active ingredients)
Product: Matador 120EC Emulsifiable Concentrate Insecticide
Registration Number: 24984
Active ingredients (a.i.): Lambda-cyhalothrin
PMRA Document Number : 1915109

Background

Lambda-cyhalothrin is the active ingredient in the end-use product Matador 120EC Emulsifiable Concentrate Insecticide, (Registration number 24567). Lambda-cyhalothrin has been registered for use in Canada since 1996.

Purpose of Application

The purpose of this application is to establish maximum residue levels (MRLs) to cover combined residues of lambda-cyhalothrin and its epimer R157836 in/on imported crops belonging Crop Groups 8 and 9, as well as to revise the current MRLs for stone fruit (Crop Group 12) for a different use patterns in the United States. In addition, existing MRLs for wheat, barley, oats, corn, apples, pears, potatoes, sweet potatoes, tomatoes, cauliflower, broccoli, cabbage, and Brussels sprouts are being replaced with appropriate Crop Group/Subgroup MRLs.

Chemistry Assessment

A chemistry assessment was not required for this application as lambda-cyhalothrin is already registered in Canada.

To support the establishment of MRLs in/on a variety of imported crops, residue data for lambda-cyhalothrin were evaluated for avocado, cotton, almonds, pecans, cucumber, summer squash, cantaloupe/honeydew melon, bell peppers, non-bell peppers, peanuts, rice, sorghum, sugarcane, oranges, mandarins, grapes, olives, and tea. Residue data for tomatoes, apples, pears, cherries, plums, and peaches reflecting U.S. Good Agricultural Practice (GAP) were reviewed to support revisions to the currently established MRLs for these commodities.

Maximum Residue Limits

Based on the maximum residues observed in crops treated according to U.S., Mexico, Spain, France, Greece, and Italy label directions, MRLs to cover residues of lambda-cyhalothrin and its epimer R157836 in/on crops will be established as shown in Table 1. Residues of lambda-cyhalothrin in processed commodities not listed in Table 1 are covered under established MRLs for the raw agricultural commodities (RACs).

| Commodity | Total Application Rate (g a.i./ha) | PHI (days) | Total Residues (ppm) | | Experimental Processing Factor | Currently Established MRL (ppm) | Recommended MRL (ppm) |
|---|------------------------------------|------------|----------------------|-------|---|---------------------------------|---|
| | | | Min | Max | | | |
| Olives | 4 g a.i./hL | 7-8 | 0.03 | 0.42 | <u>oil</u> 0.8 | -- | 0.5 |
| | | 14-15 | 0.02 | 0.39 | | | |
| | | 21-22 | 0.01 | 0.41 | | | |
| Grapes, table and wine | 35-43 | 0 | <0.01 | 0.05 | <u>young wine</u> 0.4 <u>grape juice</u> 0.4 <u>raisin</u> 3.5 | -- | 0.2 (to cover RAC and all processed commodities) |
| | | 7 | <0.01 | 0.04 | | | |
| | | 21 | <0.01 | 0.03 | | | |
| Avocadoes | 140 | 7 | 0.03 | 0.11 | -- | -- | 0.2 |
| Oranges, Mandarins | 4 g a.i./hL | 7 | 0.02 | 0.16 | -- | -- | 0.2 |
| Peanuts | 136 | 13-28 | <0.04 | <0.04 | -- | -- | 0.05 |
| Sugarcane | 179 | 21-26 | 0.02 | 0.04 | <u>molasses, refined sugar</u> 0.09 | -- | 0.05 |
| Rice, grain, (extended to wild rice, grain) | 179 | 20-21 | 0.06 | 0.88 | <u>bran</u> 0.2 | -- | 1.0 |

| TABLE 1. Summary of Field Trial and Processing Data Used to Establish/Revise Maximum Residue Limit(s) (MRLs) | | | | | | | |
|---|--|------------|----------------------|-------|--------------------------------|---|-----------------------|
| Commodity | Total Application Rate (g a.i./ha) | PHI (days) | Total Residues (ppm) | | Experimental Processing Factor | Currently Established MRL (ppm) | Recommended MRL (ppm) |
| | | | Min | Max | | | |
| Cottonseed | 504 | 21-23 | <0.02 | 0.04 | <u>refined oil</u> 0.2 | -- | 0.05 |
| Tea, dried leaves | 5 | 7 | 0.10 | 0.21 | -- | -- | 2.0 |
| | 60 | 7 | 0.57 | 1.6 | | | |
| Sorghum, grain | 89.6 | 28-36 | <0.04 | 0.20 | -- | -- | 0.2 |
| Cucurbit Vegetables (Crop Group 9) | | | | | | | |
| Cucumbers | 200-203 | 1 | <0.02 | 0.03 | -- | -- | 0.05 |
| Summer Squash | 200-206 | 1 | <0.02 | 0.04 | | | |
| Cantaloupe | 197-204 | 1 | <0.02 | 0.03 | | | |
| Stone Fruit (Crop Group 12) | | | | | | | |
| Peaches | 225-280 | 13-14 | 0.02 | 0.36 | -- | 0.2 | 0.5 |
| Plums | 225 | 13-14 | <0.02 | 0.11 | | | |
| Cherries | 225 | 13-14 | 0.05 | 0.20 | | | |
| Fruiting Vegetables, except Cucurbits (Crop Group 8) | | | | | | | |
| Bell Peppers | 403 | 5 | 0.02 | 0.16 | -- | <u>Tomato</u> 0.1 | 0.2 |
| Non-bell Peppers | 403 | 5 | 0.03 | 0.13 | | | |
| Tomatoes | 397-406 | 5 | 0.07 | 0.16 | | | |
| Tree Nuts (Crop Group 14) | | | | | | | |
| Almonds | 180 | 13-14 | <0.02 | <0.02 | -- | -- | 0.05 |
| Pecans | 180 | 13-14 | <0.02 | <0.02 | | | |
| Pome Fruit (Crop group 11) | | | | | | | |
| Apples | 225 | 20-21 | 0.03 | 0.25 | <u>applesauce</u> 0.08 | <u>Apples</u> 0.07 <u>Pears</u> 0.01 | 0.3 |
| Pears | 225 | 20-21 | 0.05 | 0.11 | | | |
| Head and Stem Brassica (Crop Subgroup 5A) | | | | | | | |
| Broccoli | No new data submitted. Extension of representative crop MRL to Crop Subgroup MRL only. | | | | -- | <u>Broccoli,</u> <u>Cabbage</u> 0.4 <u>Cauliflow</u> <u>er, Brussel</u> <u>sprouts</u> 0.01 | 0.4 |
| Cabbage | | | | | | | |
| Cauliflower | | | | | | | |
| Tuberous and Corm Vegetables (Crop Subgroup 1C) | | | | | | | |

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|---|--|------------|----------------------|------|--------------------------------|---|--|
| Commodity | Total Application Rate (g a.i./ha) | PHI (days) | Total Residues (ppm) | | Experimental Processing Factor | Currently Established MRL (ppm) | Recommended MRL (ppm) |
| | | | Min | Max | | | |
| Potatoes | No new data submitted. | | | | -- | <u>Potatoes, Sweet Potatoes</u> 0.01 | 0.02 |
| Sweet potatoes | Based on Canadian residue data and U.S. use pattern indicated for representative crop. | | | | | | |
| Cereal Grains (Crop Group 15), except rice (including wild rice) and sorghum | | | | | | | |
| Barley | No new data submitted. Extension of representative crop MRL to Crop Group MRL only. | | | | <u>wheat bran</u> | <u>Barley</u> | 0.05 <u>wheat bran</u> (extended to barley bran and rye bran) 0.2 |
| Corn | | | | | 3 | 0.01 | |
| Wheat | | | | | <u>wheat flour</u> | <u>Corn</u> | |
| | | | 0.7 | 0.05 | <u>Wheat</u> | 0.03 | |

Environmental and Value Assessments

Environmental and value assessments were not required for this application to establish import MRLs.

Conclusion

Following the review of all available data, the MRLs for the crops noted in Table 1 are recommended to cover residues of lambda-cyhalothrin and its epimer R157836. Residues of lambda-cyhalothrin in these crop commodities at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

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