Proposed Maximum Residue Limit PMRL2021-14

# Lambda-Cyhalothrin

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) granted continued registration of products containing lambda-cyhalothrin for sale and use in Canada.

Before registering a pesticide for food use in Canada or allowing continued registration, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally specified as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

The dietary assessment for lambda-cyhalothrin was published in the PRVD2017-03. The PMRA had proposed the cancellation of all food and feed uses and the revocation of all Canadian MRLs due to dietary risks of concern. Based on the comments received through the consultation process, including a prioritized list of food commodities supported by the lambda-cyhalothrin registrants, the dietary risk assessment was revised to include these food commodities and the risks from exposure to lambda-cyhalothrin were shown to be acceptable. The MRLs for the commodities, listed in Table 2, are proposed to be revised to mitigate human health risks.

The final re-evaluation decision for lambda-cyhalothrin (RVD2021-04) indicated that the continued use of this active ingredient on the registered and imported food commodities that were prioritized by the registrants has value and the human health and environmental risks associated with these uses are acceptable. However, as indicated in RVD2021-04, the risks from exposure to lambda-cyhalothrin in/on the commodities listed in Table 2, when considered with the prioritized list of food commodities, were not shown to be acceptable. Therefore, MRLs for the commodities listed in Table 2 are proposed to be revised to the limit of quantification (LOQ) of enforcement, 0.01 ppm via an MRL for "All other food commodities (other than those listed in this item)". This MRL will also be applicable to all food commodities that do not have specific MRLs established in the MRL database. MRLs currently established for commodities that are not listed in Table 2 are not affected by this change.

Consultation on the proposed MRLs for lambda-cyhalothrin is being conducted via this document. This document also serves to inform domestic and international stakeholders of the PMRA's decision to establish MRLs at the LOQ of enforcement, 0.01 ppm, for the food commodities listed in Table 2.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

**Table 1 Proposed maximum residue limit for lambda-cyhalothrin**

| Common name | Residue definition | MRL (ppm)[1] | Food commodity |
|---|---|---|---|
| Lambda-cyhalothrin | 1:1 mixture of (*S*)-α-cyano-3-phenoxybenzyl (*Z*)-(1*R*,3*R*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate and (*R*)-α-cyano-3-phenoxybenzyl (*Z*)-(1*S*,3*S*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate, and its epimer, a 1:1 mixture of (*R*)-α-cyano-3-phenoxybenzyl (*Z*)-(1*R*,3*R*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate and (*S*)-α-cyano-3-phenoxybenzyl (*Z*)-(1*S*,3*S*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate (expressed as parent equivalents)[2] | 0.01 | All food commodities (other than those listed in this item)[3] |

[1] ppm = parts per million

[2] This residue definition is proposed to replace the current residue definition for all food commodities. It represents a change in nomenclature. The compounds included in the residue definition remain the same.

[3] This MRL is proposed to replace the currently established MRL for "All food commodities (other than those already covered by a higher MRL as a result of use on growing crops) in food-handling establishments where food products are held, processed or prepared".

## International situation and trade implications

To mitigate human health risks associated with some food uses, residues in these food commodities are proposed to be regulated under the MRL of 0.01 ppm for "All food commodities (other than those listed in this item)."

Table 2 compares the MRLs proposed to be revised in Canada for lambda-cyhalothrin with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Index webpage, by pesticide or commodity.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

**Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs**

| Food commodity | Canadian MRL (ppm)[1] | American Tolerance (ppm) | Codex MRL (ppm) |
|---|---|---|---|
| Apricots | 0.5 | 0.50 | 0.5 |
| Avocados | 0.2 | 0.20 | Not established |
| Cardoon | 0.3 | Not established | Not established |
| Chinese onions | 0.1 | 0.1 | 0.2 |
| Chokecherries | 0.5 | Not established | Not established |
| Dry bulb onions | 0.1 | 0.1 | 0.2 |
| Eggs | 0.01 | 0.01 | Not established |
| Fat of goats | 5 | 3.0 | 3 (Meat (from mammals other than marine mammals), on a fat basis) |
| Fat of hogs | 0.5 | 0.2 | 3 (Meat (from mammals other than marine mammals), on a fat basis) |
| Fat of horses | 5 | 3.0 | 3 (Meat (from mammals other than marine mammals), on a fat basis) |
| Fat of poultry | 0.01 | 0.03 | Not established |
| Fat of sheep | 5 | 3.0 | 3 (Meat (from mammals other than marine mammals), on a fat basis) |
| Fresh Florence fennel leaves and stalks | 0.3 | Not established | Not established |
| Garlic | 0.1 | 0.1 | 0.2 |
| Grapes | 0.2 | Not established | 0.2 |
| Great headed garlic | 0.1 | 0.1 | 0.2 |

| Food commodity | Canadian MRL (ppm)[1] | American Tolerance (ppm) | Codex MRL (ppm) |
|---|---|---|---|
| Green onions | 0.1 | Not established | 0.2 |
| Head lettuce | 2 | 2.0 | Not established |
| Leaf lettuce | 2 | 2.0 | Not established |
| Leeks | 0.15 | Not established | 0.2 |
| Meat byproducts of goats | 0.2 | 0.2 | 0.2 (kidney)<br>0.05 (liver) |
| Meat byproducts of hogs | 0.01 | 0.02 | 0.2 (kidney)<br>0.05 (liver) |
| Meat byproducts of horses | 0.2 | 0.2 | Not established |
| Meat byproducts of poultry | 0.01 | 0.01 | Not established |
| Meat byproducts of sheep | 0.2 | 0.2 | 0.2 (kidney)<br>0.05 (liver) |
| Meat of goats | 0.2 | 0.2 | 3<br>(Meat (from mammals other than marine mammals), on a fat basis) |
| Meat of hogs | 0.01 | 0.01 | 3<br>(Meat (from mammals other than marine mammals), on a fat basis) |
| Meat of horses | 0.2 | 0.2 | 3<br>(Meat (from mammals other than marine mammals), on a fat basis) |
| Meat of poultry | 0.01 | 0.01 | Not established |
| Meat of sheep | 0.2 | 0.2 | 3<br>(Meat (from mammals other than marine mammals), on a fat basis) |
| Milk | 0.5 | 0.4[2] | 0.2 |
| Milk fat | 12 | 10.0 | Not established |
| Olives | 0.5 | Not established | 1 |

| Food commodity | Canadian MRL (ppm)[1] | American Tolerance (ppm) | Codex MRL (ppm) |
|---|---|---|---|
| Oranges | 0.2 | Not established | 0.2 |
| Peanuts | 0.05 | 0.05 | 0.2 |
| Potato onions | 0.1 [1] | 0.1 | Not established |
| Rhubarb | 0.3 | Not established | Not established |
| Satsuma mandarins | 0.2 | Not established | 0.2 |
| Shallots | 0.1 | 0.1 (bulb only) | 0.2 |
| Sugarcane cane | 0.05 | 0.05 | 0.05 |
| Sunflower oil | 0.3 | 0.30 | Not established |
| Sunflower seeds | 0.2 | 0.2 | 0.2 |
| Swiss chard | 0.3 | Not established | Not established |
| Tea (dried leaves) | 2 | Not established | Not established |
| Tree onion tops | 0.1 | Not established | 0.2 |
| Undelinted cotton seeds | 0.05 | 0.05 | 0.2 |
| Welsh onion tops | 0.1 | Not established | 0.2 |

[1] Following the revision of the MRLs, all food commodities listed in this table will be regulated under the MRL of 0.01 ppm for "All food commodities (other than those listed in this item)."
[2] Based on the American tolerance for "Milk, fat (reflecting 0.4 ppm in whole milk)."

## Next steps

The PMRA invites the public to submit written comments on the proposed MRLs for lambda-cyhalothrin up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document).

The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.