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Proposed Maximum Residue Limit

PMRL2022-01

Tiafenacil

(publié aussi en français)

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Publications
Pest Management Regulatory Agency
Health Canada
2720 Riverside Drive
A.L. 6607 D
Ottawa, Ontario K1A 0K9

Internet: canada.ca/pesticides
pmra.publications-arla@hc-sc.gc.ca
Facsimile: 613-736-3758
Information Service:
1-800-267-6315 or 613-736-3799
pmra.info-arla@hc-sc.gc.ca

Canada 

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Purpose of consultation

Maximum Residue Limits (MRLs)¹ are being proposed as part of the following applications submitted under pesticide submission numbers 2018-1276, 2018-1277 and 2018-1301 for Canadian use.

Under the authority of the [Pest Control Products Act](#), Health Canada's Pest Management Regulatory Agency (PMRA) is proposing acceptability of the uses requested under the above-noted applications to register the technical grade tiafenacil and the end-use products Tiafenacil 70WG Herbicide and Tiafenacil 339SC Herbicide for new uses on grapes, field corn, soybeans and spring wheat in Canada, to control or suppress certain annual broadleaf weed species.

The evaluation of these tiafenacil applications indicated that the end-use products have value, and the human health and environmental risks associated with their proposed uses are acceptable. Details regarding these applications can be found in [Proposed Registration Decision PRD2022-01, Tiafenacil, Tiafenacil 70WG Herbicide, Tiafenacil 339SC Herbicide](#), posted to the Health Canada website on 6 January 2022. Dietary risks from the consumption of foods listed in Table 1 were shown to be acceptable when tiafenacil is used according to the supported label directions. Therefore, foods containing residues at these levels are safe to eat, and MRLs are being proposed as a result of this assessment.

In addition, Health Canada is proposing acceptability of the request to specify an MRL for tiafenacil on imported popcorn grain, to control or suppress various weed diseases, in order to permit the import and sale of food containing such residues. Health Canada has determined the quantity of residues that are likely to remain in or on the imported commodities when tiafenacil is used according to label directions in the exporting country, and that such residues will not be a concern to human health. Details regarding the proposed MRL on imported commodities can also be found in PRD2022-01, Section 3.8.

Dietary health assessment

In assessing the risk of a pesticide, Health Canada combines information on pesticide toxicity with information on the degree and duration of dietary exposure to the pesticide residue from food. The risk assessment process involves four distinct steps:

- (1) Identifying the toxicology hazards posed by a pesticide;
- (2) Determining the “acceptable dietary level” for Canadians (including all vulnerable populations), which is protective of adverse health effects;
- (3) Estimating human dietary exposure to the pesticide from all applicable sources (domestic and imported commodities); and

¹ A maximum residue limit (MRL) is the maximum amount of residue that may remain in or on food when a pesticide is used according to label directions.

(4) Characterizing human risk by comparing the estimated human dietary exposure to the acceptable dietary level.

Before registering a pesticide for food use in Canada, Health Canada must determine the quantity of residues that could 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 (Steps 3 and 4 above). If estimated human exposure is less than or equal to the acceptable level (developed in Step 2 above), Health Canada's determination is that the consumption of this amount of residue is safe. This quantity is then subject to consultation to legally specify it as an 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.

Consultation on the proposed MRLs for tiafenacil is being conducted via this document and PRD2022-01. Health Canada invites the public to submit written comments on the proposed MRLs for tiafenacil in accordance with the guidance reported in the Next Steps section of this document, and with the guidance found in PRD2022-01.

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](#).

Proposed MRLs

The proposed MRLs for tiafenacil are summarized in Table 1.

Table 1 **Proposed maximum residue limits for tiafenacil**

Common name	Residue definition	MRL (ppm) ¹	Food commodity
Tiafenacil	methyl <i>N</i> -[2-[[2-chloro-5-[3,6-dihydro-3-methyl-2,6-dioxo-4-(trifluoromethyl)-1(2 <i>H</i>)-pyrimidinyl]-4-fluorophenyl]thio]-1-oxopropyl]-β-alaninate	0.01	Dry soybeans; eggs; fat, meat and meat byproducts of cattle, goats, hogs, horses, poultry and sheep; field corn; grapes; milk; popcorn grain; wheat

¹ ppm = parts per million

MRLs established in Canada may be found using the [Maximum Residue Limit Database](#) on the [Maximum Residue Limits for Pesticides](#) webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International situation and trade implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data. For livestock commodities, differences in MRLs can also be due to different livestock feed items and practices.

Table 2 compares the MRLs proposed for tiafenacil in Canada with corresponding American tolerances. American tolerances are listed in the [Electronic Code of Federal Regulations](#), 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs² listed for tiafenacil in or on any commodity on the Codex Alimentarius [Pesticide Index](#) webpage.

Table 2 Comparison of proposed Canadian MRLs and American Tolerances (where different)

Food commodity	Canadian MRL (ppm)	American tolerance (ppm)
Fat, meat and meat byproducts of cattle, goats, hogs, horses, poultry and sheep	0.01	Not established
Milk	0.01	Not established
Eggs	0.01	Not established

Next steps

Health Canada invites the public to submit written comments on the proposed MRLs for tiafenacil 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). Health Canada will consider all comments received and a science-based approach will be applied in 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](#).

² The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.