Proposed Maximum Residue Limit PMRL2025-24

Quizalofop-ethyl

(publié aussi en français)

7 November 2025

This document is published by the Health Canada Pest Management Regulatory Agency.
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ISSN: 1925-0835 (print)
1925-0843 (online)

Catalogue number: H113-24/2025-24E (print version)
H113-24/2025-24E-PDF (PDF version)

Purpose of consultation

Maximum residue limits (MRLs)[1] are being proposed for the pesticide quizalofop-ethyl,[2] as part of the following application for Canadian use, under submission number 2021-2969.

Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) is proposing acceptability of the requested application to add the new commodity of king's crown (*Rhodiola rosea* L.) to the product label of Assure II Herbicide containing technical grade quizalofop-p-ethyl, as a postemergent foliar application to control certain weeds. The specific uses approved in Canada are detailed on this product label, *Pest Control Products Act* Registration Number 25462.

The evaluation of this quizalofop-p-ethyl application indicated that the end-use product has value, and the human health and environmental risks associated with the new uses are acceptable. Dietary risks from the consumption of foods listed in Table 1 were shown to be acceptable when quizalofop-p-ethyl is used according to the supported label directions. Therefore, foods containing residues resulting from this use are safe to eat, and MRLs are being proposed as a result of this assessment. A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

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 the 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

4) Characterizing health 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). If

[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.

[2] Quizalofop-ethyl is the unresolved isomeric mixture (containing *R* and *S*-enantiomers) of the technical grade active quizalofop-p-ethyl (which contains the *R*-enantiomer only). As both quizalofop-ethyl and quizalofop-p-ethyl contain the pesticidally-active *R*-enantiomer, residues of quizalofop-p-ethyl will be covered by MRLs established for quizalofop-ethyl

estimated human exposure is less than or equal to the acceptable level (developed in Step 2), Health Canada concludes that consuming residues resulting from use according to approved label directions is not a health concern. The proposed MRL 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 for certain instances where different MRLs are specified for the raw agricultural commodity and its processed product(s).

Residues of the resolved isomer quizalofop-p-ethyl are covered by MRLs established for quizalofop-ethyl, the unresolved isomeric mixture. Consultation on the proposed MRLs for quizalofop-ethyl is being conducted via this document. Health Canada invites the public to submit written comments on the proposed MRLs for quizalofop-ethyl in accordance with the process outlined in the How to get involved section of this document.

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 the Canada's Notification Authority and Enquiry Point.

Proposed MRLs

The proposed MRLs, to be added to the MRLs already established for quizalofop-ethyl, are summarized in Table 1.

Table 1 Proposed maximum residue limits for quizalofop-ethyl

Common name	Residue definition	MRL (ppm)[1]	Food commodity
Quizalofop-ethyl	ethyl 2-[4-[(6-chloro-2-quinoxalinyl)oxy]phenoxy]propanoate, including the acid metabolites of (*RS*) 2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propanoic acid (expressed as parent equivalents)	0.05	King's crown roots, king's crown leaves

[1] ppm = parts per million

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum residue limits, human health, and food safety 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

As reported in Table 2, there are currently no tolerances in the United States (U.S.) for quizalofop-ethyl in or on the petitioned commodities listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide, nor are there Codex MRLs[3] listed for quizalofop-ethyl in or on any commodity on the Codex Alimentarius Pesticide Index webpage.

Table 2 Comparison of proposed Canadian MRLs, U.S. tolerances and Codex MRLs

Food commodity	Proposed Canadian MRL (ppm)	Established U.S. tolerance (ppm)	Established Codex MRL (ppm)
King's crown roots, king's crown leaves	0.05	Not Established	Not Established

ppm = parts per million

How to get involved

Health Canada invites the public to submit written comments on the proposed MRLs for quizalofop-ethyl up to 75 days from the date of publication of this document (by 21 January 2026). Please forward your comments to the Pest Management Regulatory Agency Publications Section. 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 response to comments document found in Pesticides and pest management consultations. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

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

Appendix I

Summary of field trial data used to support the proposed maximum residue limits

No residue data were submitted to support the use expansion of quizalofop-p-ethyl on *Rhodiola rosea* (king's crown). Previously reviewed residue data from field trials conducted in/on sugar beet (roots and leaves) and rutabaga (roots) were reassessed in the framework of this petition. In addition, plant metabolism data on sugar beets, confined crop rotational data, and environmental fate data were also reassessed in support of this petition.

Dietary risk assessment results

Studies in laboratory animals showed no acute health effects relative to dietary exposure. Consequently, a single dose of quizalofop-p-ethyl is not likely to cause acute health effects in the general population (including infants and children).

Chronic (non-cancer and cancer) dietary (food plus drinking water) intake estimates indicated that the general population and all population subgroups are exposed to less than 53% of the acceptable daily intake, and therefore there are no health concerns.

Maximum residue limits

The recommendation for maximum residue limits (MRLs) for quizalofop-ethyl was based upon the previously reviewed field trial data on file, and the principles of the Organisation for Economic Co-Operation and Development (OECD). Table A1 summarizes the residue data used to calculate the proposed MRLs for king's crown roots and king's crown's leaves.

Table A1 Summary of field trial data used to support the MRLs

Commodity	Application method/ Total application rate (g a.i./ha)[1]	Preharvest interval (days)	Lowest average field trial residues (ppm)	Highest average field trial residues (ppm)
Sugar beet, roots	Foliar/252	45–60	<0.05	<0.05
Sugar beet, leaves	Foliar/252	45–60	<0.05	0.52
Rutabaga, roots	Foliar/72	29–37	<0.05	<0.07

[1] g a.i./ha = grams of active ingredient per hectare
ppm = parts per million

It is noted that the residue data used to support the maximum residue limits were conducted at exaggerated rates and harvested at significantly shorter preharvest intervals (PHIs) than the proposed use pattern (maximum seasonal rate of 72 g a.i./ha, 365 day PHI). Based on all available information (including plant metabolism, confined crop rotational, and environmental fate data), there is no expectation of quantifiable residues of quizalofop-p-ethyl in *Rhodiola rosea* (king's crown) roots and leaves treated according to the proposed use pattern and PHI. Therefore MRLs of 0.05 ppm will be established to cover residues of quizalofop-ethyl in/on king's crown roots and king's crown leaves.

Following the review of all available data, the MRLs proposed in Table 1 are recommended, in order to cover residues of quizalofop-ethyl. Dietary risks from exposure to residues of quizalofop-ethyl in these crop commodities at the proposed MRLs were shown to be acceptable for the general population and all subpopulations, including infants, children, adults and seniors. Thus, the foods that contain residues as listed in Table 1 are considered safe to eat.

References

None.