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Proposed Maximum Residue Limit

PMRL2025-10

Fenazaquin

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Purpose of consultation

Maximum residue limits (MRLs)¹ are being proposed for the pesticide fenazaquin, as part of the following applications, under submission number 2023-1283 for Canadian use and submission number 2023-2068 for imported commodities, as described below.

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 commodities of tree nuts (crop group 14-11), hops and mint as a postemergent foliar use to the product label of Magister SC Miticide containing technical grade fenazaquin, for control of listed mites, insects and fungal diseases. The specific uses approved in Canada are detailed on this product label, *Pest Control Products Act* Registration Number 34544.

In addition, Health Canada is proposing acceptability of the request to specify MRLs for fenazaquin on edible podded bean legume vegetables (crop subgroup 6-21A); edible podded pea legume vegetables (crop subgroup 6-21B); succulent shelled beans (crop subgroup 6-21C); succulent shelled peas (crop subgroup 6-21D); pulses, dried shelled beans, except soybeans (crop subgroup 6-21E); pulses, dried shelled peas (crop subgroup 6-21F); tree nuts (crop group 14-11); avocados, dried peppermint leaves, dried spearmint leaves, fresh peppermint leaves, fresh spearmint leaves, hops (dried cones) and tea (dried leaves) for control of listed mites, insects and fungal diseases, in order to permit the import and sale of food that could contain such residues. Health Canada has determined the quantity of residues that may remain in or on the imported commodities when fenazaquin is used according to the label directions of the exporting country, and that such residues will not be a concern to human health. Except for the proposed domestic uses on tree nuts, mint and hops, these import MRL proposals do not result in a change of the current approved conditions of use in Canada.

The evaluation of these fenazaquin applications 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 fenazaquin is used according to the supported label directions. Therefore, foods containing residues resulting from these uses 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

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.

- 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 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).

Consultation on the proposed MRLs for fenazaquin is being conducted via this document. Health Canada invites the public to submit written comments on the proposed MRLs for fenazaquin 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 fenazaquin, are summarized in [Table 1](#).

Table 1 Proposed maximum residue limits for fenazaquin

Common name	Residue definition	MRL (ppm) ¹	Food commodity
Fenazaquin	4-[2-[4-(1,1-dimethylethyl)phenyl]ethoxy]quinazoline	30	Hops (dried cones)
		10	Dried peppermint leaves, dried spearmint leaves, fresh peppermint leaves, fresh spearmint leaves
		9.0	Tea (dried leaves)
		0.4	Edible podded bean legume vegetables (crop subgroup 6-21A); edible podded pea legume vegetables (crop subgroup 6-21B)
		0.3	Pulses, dried shelled beans, except soybeans (crop

Common name	Residue definition	MRL (ppm) ¹	Food commodity
			subgroup 6-21E); pulses, dried shelled peas (crop subgroup 6-21F)
		0.15	Avocados
		0.03	Succulent shelled beans (crop subgroup 6-21C); succulent shelled peas (crop subgroup 6-21D)
		0.02	Tree nuts (crop group 14-11)

¹ ppm = parts per million

The commodities included in the listed crop groups/subgroups can be found on the Residue Chemistry Crop Groups webpage in the Pesticides section of Canada.ca.

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 geographic locations of the crop field trials used to generate residue chemistry data.

[Table 2](#) compares the MRLs proposed for fenazaquin in Canada with corresponding tolerances in the United States (U.S.) and Codex MRLs.² U.S. 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.

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

Food Commodity	Proposed Canadian MRL (ppm) ¹	Established U.S. tolerance (ppm) ¹	Established Codex MRL (ppm) ¹
Hops (dried cones)	30	30	30 (hops, dry)
Dried peppermint leaves	10	Not established	Not established
Dried spearmint leaves	10	Not established	Not established

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

Food Commodity	Proposed Canadian MRL (ppm)¹	Established U.S. tolerance (ppm)¹	Established Codex MRL (ppm)¹
Fresh peppermint leaves	10	10	Not established
Fresh spearmint leaves	10	10	Not established
Tea (dried leaves)	9.0	9 (tea, dried)	Not established
Edible podded bean legume vegetables (crop subgroup 6-21A); edible podded pea legume vegetables (crop subgroup 6-21B)	0.4	0.4 (Vegetable, legume, edible podded, subgroup 6A)	Not established
Pulses, dried shelled beans, except soybeans (crop subgroup 6-21E); pulses, dried shelled peas (crop subgroup 6-21F)	0.3	0.3 (Pea and bean, dried shelled, except soybean, subgroup 6C)	Not established
Avocados	0.15	0.15	0.15 (avocado)
Succulent shelled beans (crop subgroup 6-21C); succulent shelled peas (crop subgroup 6-21D)	0.03	0.03 (Pea and bean, succulent shelled, subgroup 6B)	Not established
Tree nuts (crop group 14-11)	0.02	0.02	0.02

¹ ppm = parts per million

How to get involved

Health Canada invites the public to submit written comments on the proposed MRLs for fenazaquin up to 75 days from the date of publication of this document (by 5 October 2025). Please forward your comments to Publications. Health Canada will consider all comments received and a science-based approach will be applied in making a final decision on the proposed MRL. 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.

Appendix I

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

Residue data for fenazaquin in almonds, pecans, hops and mint previously submitted were reviewed to support the use of Magister SC Miticide on tree nuts (crop group 14-11), hops and mint in Canada, and to support maximum residue limits on imported commodities of these same crops. Previously submitted residue data for fenazaquin in avocados, snap beans, snap and snow peas, lima beans, garden peas, dry pinto beans, dry peas and tea were also reviewed to support maximum residue limits on imported commodities of avocados, edible podded bean legume vegetables (crop subgroup 6-21A); edible podded pea legume vegetables (crop subgroup 6-21B); succulent shelled beans (crop subgroup 6-21C); succulent shelled peas (crop subgroup 6-21D); pulses, dried shelled beans, except soybeans (crop subgroup 6-21E); pulses, dried shelled peas (crop subgroup 6-21F); and tea. In addition, a processing study in treated mint previously submitted was reviewed to determine the potential for concentration of residues of fenazaquin in processed commodities.

Dietary risk assessment results

Acute dietary (food plus drinking water) intake estimates indicated that the general population and all population subgroups are exposed to less than 58% of the acute reference dose, and therefore there are no health concerns.

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 10% of the acceptable daily intake, and therefore there are no health concerns.

Maximum residue limits

The recommendation for maximum residue limits (MRLs) for fenazaquin was based upon previously submitted field trial data, and the guidance provided in the OECD MRL Calculator. [Table A1](#) summarizes the residue data for fenazaquin used to calculate the proposed MRLs for edible podded bean legume vegetables (crop subgroup 6-21A); edible podded pea legume vegetables (crop subgroup 6-21B); succulent shelled beans (crop subgroup 6-21C); succulent shelled peas (crop subgroup 6-21D); pulses, dried shelled beans, except soybeans (crop subgroup 6-21E); pulses, dried shelled peas (crop subgroup 6-21F); tree nuts (crop group 14-11); avocados, dried peppermint leaves, dried spearmint leaves, fresh peppermint leaves, fresh spearmint leaves, hops (dried cones), and tea (dried leaves).

Table A1 Summary of field trial and processing 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) ²	Highest average field trial residues (ppm) ²	Experimental processing factor
Snap beans	Foliar/ 501.8–525.3	7	0.091	0.180	Not required
Snow and snap peas	Foliar/ 481.6–529.8	7	0.041	0.134	Not required
Lima beans	Foliar/ 492.8–510.7	7	<0.01	0.017	Not required
Garden peas	Foliar/ 499.5–504.0	7	<0.01	<0.01	Not required
Dry beans (pinto)	Foliar/ 500.6–521.9	7	<0.01	0.168	Not required
Dry peas	Foliar/ 492.8–508.5	7	0.01	0.052	Not required
Almond nutmeat	Foliar/ 498.2–526.4	7	<0.01	0.011	Not required
Pecan nutmeat	Foliar/ 492.8–512.2	6–7	<0.01	0.014	Not required
Avocados (whole)	Foliar/ 469.3–511.8	7	0.028	0.082	Not required
Mint tops	Foliar/ 492.8–515.2	7	0.571	5.34	No concentration in oil
Hops dried cones	Foliar/ 499.5–526.4	7	0.725	11.7	Not required
Green tea	Foliar/100	7	0.804	4.97	Not required

¹ g a.i./ha = grams of active ingredient per hectare

² ppm = parts per million

There are no livestock feed commodities associated with the proposed domestic uses.

Following the review of all available data, the MRLs proposed in [Table 1](#) are recommended, in order to cover residues of fenazaquin. Dietary risks from exposure to residues of fenazaquin 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

PMRA#	Citation
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2962422	2010, Magnitude of the Residue of Fenazaquin and Fenazaquin Dimer on Avocados, DACO: 7.4,7.4.1
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2962780	2010, Magnitude and Decline of the Residue of Fenazaquin and Fenazaquin Dimer in or on Tree Nuts Raw Agricultural Commodities Following One Application of GWN-1708--2008: Final Report., DACO: 7.4,7.4.1
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2962788	2015, Residues of Fenazaquin in or on Hops Following One Application of GWN-1708 (2014): Final Report., DACO: 7.4,7.4.1
2962798	2010, Magnitude and Decline of the Residue of Fenazaquin and Fenazaquin Dimer in or on Mint Raw Agricultural and Processed Commodities Following One Application of GWN-1708--2008: Final Report., DACO: 7.4,7.4.1,7.4.5