Proposed Maximum Residue Limit PMRL2024-16

Rimsulfuron

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Purpose of consultation

A maximum residue limit (MRL)[1] is being proposed for the pesticide rimsulfuron, as part of the following application for Canadian use, under submission number 2023-0430.

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 pome fruits (crop group 11-09) to the product label of Prism SG Herbicide containing technical grade rimsulfuron, to control certain weeds. The specific uses approved in Canada are detailed on this product label, *Pest Control Products Act* Registration Number 30057.

The evaluation of this rimsulfuron application indicated that the end-use product has value, and the human health and environmental risks associated with the new use are acceptable. Dietary risks from the consumption of foods listed in Table 1 were shown to be acceptable when rimsulfuron is used according to the supported label directions. Therefore, foods containing residues resulting from this use are safe to eat, and an MRL is being proposed as a result of this assessment. A summary of the field trial data used to support the proposed MRL 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 above). If estimated human exposure is less than or equal to the acceptable level (developed in Step 2 above), 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).

[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.

Consultation on the proposed MRL for rimsulfuron is being conducted via this document. Health Canada invites the public to submit written comments on the proposed MRL for rimsulfuron 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 MRL is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Canada's Notification Authority and Enquiry Point.

Proposed MRL

The proposed MRL, to be added to the MRLs already established for rimsulfuron, is summarized in Table 1.

Table 1 Proposed maximum residue limit for rimsulfuron

Common name	Residue definition	MRL (ppm)[1]	Food commodity
Rimsulfuron	*N*-[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]-3-(ethylsulfonyl)-2-pyridinesulfonamide	0.01	Pome fruits (crop group 11-09)

[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 and pest management 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

As per Table 2, The MRL proposed for rimsulfuron in Canada is the same as the corresponding tolerance in the United States (U.S.) as listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs[2] listed for rimsulfuron in or on any commodity on the Codex Alimentarius Pesticide Index webpage.

[2] 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 proposed Canadian MRLs, U.S. tolerances and Codex MRLs

Food commodity	Proposed Canadian MRL (ppm)	Established U.S. tolerance (ppm)	Established Codex MRL (ppm)
Pome fruits (crop group 11-09)	0.01	0.01	Not established

How to get involved

Health Canada invites the public to submit written comments on the proposed MRL for rimsulfuron up to 75 days from the date of publication of this document (by 19 November 2024). 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 MRL will be legally in effect as of the date that it is entered into the Maximum Residue Limit Database.

Appendix I

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

Residue data for rimsulfuron were submitted to support the use of Prism SG Herbicide on pome fruits (crop group 11-09).

Dietary risk assessment results

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

Chronic dietary (food plus drinking water) intake estimates indicated that the general population and all population subgroups are exposed to less than 6% of the acceptable daily intake, and therefore there are no health concerns.

Maximum residue limit

The recommendation for the maximum residue limit (MRL) for rimsulfuron was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data for rimsulfuron used to calculate the proposed MRL for pome fruits (crop group 11-09). Residues in processed commodities not listed in Table 1 are covered under the proposed MRL for the raw agricultural commodities (RACs).

Table A1 Summary of field trial and processing data used to support the MRL

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)	Experimental processing factor
Apples	Foliar /69.8–73.5	7	<0.01	<0.01	No quantifiable residues observed at exaggerated rates
Pears	Foliar /68.3–71.3		<0.01	<0.01	

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

Following the review of all available data, the MRL proposed in Table 1 is recommended, in order to cover residues of rimsulfuron. Dietary risks from exposure to residues of rimsulfuron in pome fruits at the proposed MRL 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 No.	Citation
3432388	2005, Magnitude and Decline of Rimsulfuron Residues in Pome Fruit (Apple and Pear) Combined with Magnitude of Rimsulfuron Residues in Processed Fractions of Apple (Pome Fruit) Following Ground-Directed Applications of Rimsulfuron 25 WG, DACO 7.2.1, 7.2.2, 7.3, 7.4.1, 7.4.2, 7.4.5