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Proposed Maximum Residue Limit

PMRL2025-18

# Triallate

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## Purpose of consultation

Maximum residue limits (MRLs)<sup>1</sup> are being proposed for the pesticide triallate, as part of the following application for Canadian use, under submission number 2022-1104.

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 dry chickpeas, dry lentils and dry peas to the product label of Avadex MicroActiv Herbicide containing technical grade triallate (to control or suppress certain weeds) as a preplant soil incorporation. The specific uses approved in Canada are detailed on this product label, *Pest Control Products Act* Registration Number 25112.

The evaluation of this triallate 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 triallate 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 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).

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<sup>1</sup> 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 MRLs for triallate is being conducted via this document. Health Canada invites the public to submit written comments on the proposed MRLs for triallate 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 triallate, are summarized in Table 1.

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

Common name	Residue definition	MRL (ppm) <sup>1</sup>	Food commodity
Triallate	<i>S</i> -(2,3,3-trichloro-2-propen-1-yl) <i>N,N</i> -bis(1-methylethyl)carbamothioate, including the metabolite 2-propene-1-sulfonic acid, 2,3,3-trichloro-	0.2	Dry chickpeas, dry lentils, dry peas

<sup>1</sup> 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 geographic locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for triallate in Canada with corresponding tolerances in the United States (U.S.). U.S. tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs<sup>2</sup> listed for triallate in or on any commodity on the Codex Alimentarius Pesticide Index webpage.

<sup>2</sup> 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**

<b>Food commodity</b>	<b>Proposed Canadian MRL (ppm)</b>	<b>Established U.S. tolerance (ppm)</b>	<b>Established Codex MRL (ppm)</b>
Dry chickpeas	0.2	Not established	Not established
Dry lentils	0.2	Not established	Not established
Dry peas	0.2	0.2	Not established

ppm = parts per million

### **How to get involved**

Health Canada invites the public to submit written comments on the proposed MRL for triallate up to 75 days from the date of publication of this document (by 2 November 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 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.

## Appendix I

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

Residue data for triallate were submitted to support the use of Avadex MicroActiv Herbicide on dry chickpeas, dry lentils and dry peas.

#### Dietary risk assessment results

Acute dietary (food only) intake estimates indicated that the general population and all population subgroups are exposed to less than 2% of the acute reference dose, and, therefore, there are no health concerns.

Chronic non-cancer (food only) dietary intake estimates indicated that the general population and all population subgroups are exposed to less than 1% of the acceptable daily intake, with a cancer risk for the general population of  $2 \times 10^{-7}$ , (less than 1 in a million), and, therefore, there are no health concerns.

When considering food and drinking water (aggregate) exposure, acute, chronic and cancer risks were addressed by calculating drinking water levels of comparison (DWLOCs). A DWLOC is the maximum concentration in drinking water which, when considered together with dietary (food) exposure, does not exceed the level of concern. Based on the available water monitoring data (surface water) for both triallate and the metabolite TCPSA (2-propene-1-sulfonic acid, 2,3,3-trichloro-), estimated residues of triallate in drinking water were below the calculated acute, chronic and cancer DWLOCs. As the residues in the water monitoring data were less than the DWLOCs, there are no health risks of concern.

#### Maximum residue limits

The recommendation for maximum residue limits (MRLs) for triallate was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data for triallate and its metabolite TCPSA used to calculate the proposed MRLs for dry chickpeas, dry lentils and dry peas.

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

Commodity	Application method/Total application rate (kg a.i./ha) <sup>1</sup>	Preharvest interval (days)	Lowest average field trial residues (ppm) <sup>2</sup>	Highest average field trial residues (ppm) <sup>2</sup>
Dry peas	Preplant soil incorporation/2.14–2.31	100–118	<0.070	<0.070

ppm = parts per million

<sup>1</sup> kg a.i./ha = kilograms of active ingredient per hectare

<sup>2</sup> Combined residues of triallate and its metabolite TCPSA (2-propene-1-sulfonic acid, 2,3,3-trichloro-) in parent equivalents.

Following the review of all available data, the MRLs proposed in Table 1 are recommended, in order to cover total residues of triallate and its metabolite TCPSA. Dietary risks from exposure to residues of triallate 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.

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**References**

<b>PMRA number</b>	<b>Citation</b>
3330419	2022, Triallate: Magnitude of the Residue on Dry Bean, DACO: 7.4.1
3330420	2020, Magnitude of the Residue of Triallate and its Metabolite, TCPSA, in or on Dry Peas Raw Agricultural Commodities as a Representative Crop of Legume Vegetables Subgroup 6C (CSG6C) Following One Pre-plant Incorporated Application of Avadex MicroActiv Herbicide and Avadex Liquid EC Herbicide (Canada, 2019), DACO: 7.4.1