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Proposed Maximum Residue Limit

PMRL2014-43

Pyroxasulfone

(publié aussi en français)

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has granted conditional registration to a new end-use product, containing technical grade pyroxasulfone and flumioxazin for use on soybeans, and has also concluded that the addition of new uses on soybeans to the product label of Pyroxasulfone 85 WG Herbicide, containing technical grade pyroxasulfone, is acceptable. The specific uses approved in Canada are detailed on the labels of Pyroxasulfone 85 WG Herbicide, *Pest Control Products Act* Registration Number 30572, and Fierce Herbicide, *Pest Control Products Act* Registration Number 31117.

The evaluation of this flumioxazin and pyroxasulfone application indicated that the end-use product has merit and value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to 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. This quantity is then legally established as a maximum residue limit (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 MRL for pyroxasulfone is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRL can be found in Appendix I. Existing MRLs for flumioxazin are adequate to cover the use of Fierce Herbicide.

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 Standards Council of Canada.

The proposed MRL, to be added to the MRLs already established for pyroxasulfone, is as follows.

Table 1 Proposed Maximum Residue Limit for Pyroxasulfone.

Common Name	Residue Definition	MRL (ppm) ¹	Food Commodity
Pyroxasulfone	3-[[[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1 <i>H</i> -pyrazol-4-yl]methyl]sulfonyl]-4,5-dihydro-5,5-dimethylisoxazole, including the metabolite <i>N</i> -(2-carboxyacetyl)- <i>S</i> -(4,5-dihydro-5,5-dimethyl-3-isoxazolyl)-cysteine	0.06	Dry soybeans

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

The MRL proposed for pyrozasulfone in Canada is the same as the corresponding American tolerance as listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs¹ listed for pyrozasulfone in or on any commodity on the Codex Alimentarius Pesticide Residues in Food webpage.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRL for pyrozasulfone 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). The PMRA will consider all comments received before making a final decision on the proposed MRL. Comments received will be addressed in a separate document linked to this PMRL. The established MRL will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

¹ 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 MRL

Residue data for pyroxasulfone in soybeans conducted in the US were submitted to support the use of this active on the labels of Pyroxasulfone 85 WG Herbicide and Fierce Herbicide. In addition, a processing study in treated soybeans was included in the field trial studies to determine the potential for concentration of residues of pyroxasulfone into soybean processed commodities.

Maximum Residue Limit

The recommendation for maximum residue limit (MRL) for pyroxasulfone and the metabolite M-28 was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRL for dry soybeans.

Table A1 Summary of Field Trial and Processing Data Used to Support Maximum Residue Limit(s) (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	Preharvest Interval (days)	Residues ¹ (ppm)		Experimental Processing Factor
			Min	Max	
Dry soybeans	Postemergence spray/ 124-211	85-137	<0.018	0.037	Meal: 1.4x Hulls: 0.7x Refined oil: 0.7x

¹ Combined residues of pyroxasulfone and the metabolite M-28.

Following the review of all available data, an MRL as proposed in Table 1 is recommended to cover residues of pyroxasulfone and the metabolite M-28. Residues of pyroxasulfone in dry soybeans at the proposed MRL will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.