

## Evaluation Report for Category B, Subcategory 3.12 Application

**Application Number:** 2019-6357  
**Application:** Changes to Product Labels-New Site or Host  
**Product:** Zidua SC  
**Registration Number:** 32542  
**Active ingredient (a.i.):** Pyroxasulfone  
**PMRA Document Number :** 3177293

### Purpose of Application

The purpose of this application was to amend the label of Zidua SC to add use on mint to control annual grasses and broadleaf weeds in the Prairie Provinces.

### Chemistry Assessment

A chemistry assessment was not required for this application.

### Health Assessments

A toxicological assessment was not required for this application.

The use of Zidua SC on mint to control annual grasses and annual broadleaf weeds is not expected to result in potential occupational or bystander exposure over the registered use of pyroxasulfone. No risks of concern are expected when workers follow label directions and wear personal protective equipment as stated on the label.

Residue data from field trials conducted in the United States were submitted to support the use of Zidua SC on mint (spearmint and peppermint). Pyroxasulfone was applied to mint at 1.9-2.1-fold GAP. Mint was harvested according to label directions. In addition, a processing study in treated mint was reviewed to determine the potential for concentration of residues of pyroxasulfone into processed commodities.

### Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for pyroxasulfone was based upon the submitted field trial data, and the guidance provided in the [OECD MRL Calculator](#). MRLs to cover residues of pyroxasulfone and metabolites M-1, M-3, M-25 and M-28 in/on mint and mint oil are proposed as shown in Table 1. Residues in processed commodities not listed in Table 1 are covered under the proposed MRL for the raw agricultural commodity (RAC).

<b>TABLE 1. Summary of Field Trial and Processing Data Used to Support Maximum Residue Limits (MRLs)</b>
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Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues <sup>1</sup> (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Recommended MRL (ppm)
			LAF T	HAF T			
Mint	broadcast application / 289-315	84-147	<0.05	0.076	Mint oil: <0.53x-18x <sup>2</sup>	None	Mint (Spearmint and Peppermint): 0.2  Mint oil: 0.7

LAFT = Lowest Average Field Trial; HAFT = Highest Average Field Trial

<sup>1</sup> The residues include pyroxasulfone and metabolites M-1, M-3, M-25 and M-28 expressed as parent equivalent.

<sup>2</sup> Reflects the different processing factors for all analytes; 12x for pyroxasulfone, <0.53x for metabolite M-1 and 18x for metabolite M-28. Metabolites M-3 and M-25 were assigned processing factors of 1x since residues were <LOQ and a processing factor could not be calculated.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of pyroxasulfone. Residues in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

### Environmental Assessment

The environmental risks associated with the use amendments for Zidua SC are acceptable when the product is used according to the label directions.

### Value Assessment

There are few herbicides registered for use on mint. Inclusion of mint as a host crop on the Zidua SC label will provide growers with an additional option for early season weed management.

Value information submitted for review consisted of scientific rationales, a scientific publication, and data from field trials. This information demonstrated that mint as a host crop exhibited an adequate margin of tolerance to Zidua SC applied in accordance with the label instructions.

Based on the weight of evidence, the registration of mint as a host crop for early season weed suppression on the Zidua SC label is considered to have acceptable value.

### Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to amend the label of Zidua SC to include use on mint.

### References

**PMRA****Document**

<b>Number</b>	<b>Reference</b>
3051216	2019, Value summary for Pyroxasulfone 85 WG Herbicide, containing pyroxasulfone, for control of various weeds in mint, DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.1, 10.2.3.3, 10.3.1, 10.4, and 10.5.
3051217	2009, Mint weed research report, DACO: 10.2.3.4 and 10.2.3.4(B).
3051218	2010, Report - weed research in mint, DACO: 10.2.3.4 and 10.2.3.4(B).
3051219	2011, Weed control in peppermint (#10792 Pyroxasulfone), DACO: 10.2.3.4 and 10.2.3.4(B).
3051220	2011, Report - weed research in mint, DACO: 10.2.3.4 and 10.2.3.4(B).
3051221	2016, 14-20 Fierce in dormant peppermint, DACO: 10.2.3.4 and 10.2.3.4(B).
3051222	2016, Oregon Mint Commission, DACO: 10.2.3.4 and 10.2.3.4(B).
3051223	2018, PMUC Zidua on spearmint in Canada, DACO: 10.2.3.4 and 10.2.3.4(B).
3051224	2019, PMUC Zidua on mint in Canada, DACO: 10.2.3.4 and 10.2.3.4(B).
3051215	2017, Pyroxasulfone: Magnitude of the Residue on Mint, DACO: 7.4.1,7.4.2,7.4.5

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