

Evaluation Report for Category B, Subcategory 2.3, 2.4 Application

Application Number: 2021-2205
Application: Changes to End-use Product (Product Chemistry) – Identity of Formulants, Proportion of Formulants and Name Change
Product: HopGuard 3
Registration Number: 33571
Active ingredients (a.i.): Hop Beta Acids (Present as Potassium Salts)
PMRA Document Number: 3395143

Purpose of Application

The purpose of this application was to change the identification and proportion of formulants, as well as change the end-use product name to HopGuard 3.

Chemistry Assessment

HopGuard 3 is formulated as an impregnated fabric containing hop beta acids, present as potassium salts at a concentration of 4 g per strip. This end-use product has a density of 1.080 g/mL and pH of 8.8. The required chemistry data for HopGuard 3 have been provided, reviewed and found to be acceptable.

Health Assessments

HopGuard 3 is slightly acutely toxic via the oral route and extremely irritating to the eyes. Based on a long history of safe use, waivers were requested and granted for acute dermal and inhalation toxicity, primary skin irritation, and dermal sensitization.

Potential exposure to HopGuard 3 may occur when handling or applying the end-use product or performing post-application activities. Risk from occupational exposure is expected to be acceptable when the product is used according to label directions. Precautionary and personal protective equipment statements on the product label aimed at mitigating worker exposure are considered adequate to protect individuals from any potential risk due to occupational exposure.

Health risks to bystanders and individuals in residential areas are considered acceptable when the product is used according to label directions.

Maximum Residue Limit (MRL)

As part of the assessment process prior to the registration of a pesticide, Health Canada must determine that the consumption of the maximum amount of residues that are expected to remain on food products when a pesticide is used according to label directions will

not be a concern to human health. This maximum amount of residues expected is then legally specified as an MRL under the *Pest Control Products Act* for the purposes of adulteration provision of the *Food and Drugs Act*. Health Canada specifies science-based MRLs to ensure the food Canadians eat is safe.

The dietary risks from food and drinking water are considered to be negligible given that HopGuard 3 is used in the brood chambers and not the honey supers, that honey or wax are not to be harvested from the brood chambers, that hop beta acids have a low degree of volatility, and a long history of use in foods without reports of adverse effects. Consequently, the specification of an MRL under the *Pest Control Products Act* is not required.

Environmental Assessment

The changes to the product formulation are not expected to lead to any additional risks to the environment.

Value Assessment

Value information submitted in support of HopGuard 3 consisted of four field trials. The trials included one side-by-side bridging trial of HopGuard II, with HopGuard 3, while the other three trials tested HopGuard 3 alone. The submitted value information is sufficient to extrapolate control of varroa mite from HopGuard II, to HopGuard 3. The value information supports a claim that up to 2 applications of HopGuard 3, at a rate of 1 strip per 5 frames of bees and a re-application interval of 10 to 15 days, to honey bee hives with little to no brood, will provide control of varroa mite. The application rate is rounded up to the nearest multiple of 5 (i.e., 1 strip for ≤ 5 frames, 2 strips for 6-10 frames of bees) to ensure all bees are exposed to the product.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the changes to HopGuard 3.

References

PMRA Document Number	Reference
2783884	2017, Use Description and Exposure Scenarios (Handler and Post-Application) for HopGuard® II Acaricide on Honey Bee Hives, DACO: 5.2
2783878	2017, Summary DACO data requirements and data for HopGuard II TGAI-MA-EP, DACO: 10.1, 3.0, 3.1, 4.1, 5.2, 6.1, 7.1, 8.1, 9.1 CBI
3233995	2021, HGII-HG 3 March 2018 AZ Field Test Report 5-21-21, DACO: 10.2.3.3
3233996	2019, HG 3 Report Queen Operation 3-27-19, DACO: 10.2.3.3
3233997	2019, HopGuard III Field Study Summer 2019, DACO: 10.2.3.3
3233998	2020, plots of HG vs Apiguard trial, DACO: 10.2.3.3
3233999	2021, HopGuard II vs HopGuard 3 FA 5-21-21, DACO: 10.2.3.4

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