

Evaluation Report for Category B, Subcategory 1.1 Application

Application Number: 2021-0454
Application: New TGAI -New Source (site) same registrant
Product: ADAMA Trinexapac Technical
Registration Number: 30635
Active ingredient (a.i.): Trinexapac-ethyl
PMRA Document Number : 3329439

Purpose of Application

The purpose of this application was to register new sources of the technical grade active ingredient (TGAI), ADAMA Trinexapac Technical.

Chemistry Assessment

Common Name: Trinexapac-ethyl
IUPAC* Chemical Name: Ethyl (1*RS*,4*EZ*)-4-[cyclopropyl(hydroxy)methylene]-3,5-dioxocyclohexanecarboxylate
French IUPAC* Chemical Name: 4-[cyclopropyl(hydroxy)méthyl]-3,5-dioxocyclohexanecarboxylate d'éthyle
CAS† Chemical Name: Ethyl 4-(cyclopropylhydroxymethylene)-3,5-dioxocyclohexanecarboxylate

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

ADAMA Trinexapac Technical has the following properties:

Property	Result
Colour and physical state	Yellow solid
Nominal concentration	97.2%
Odour	Odourless
Density	1.1975-1.22 g/mL at 20°C
Vapour pressure	1.89 mPa at 20°C 2.19 mPa at 25°C 2.89 mPa at 30°C
pH	3-4

Property	Result
Solubility in water	pH 3.5 1.1 g/L pH 4.9 2.8 g/L pH 5.5 10.2 g/L pH 8.2 21.1 g/L
n-Octanol/water partition coefficient	log K _{ow} = -2.1 (pH 8.9), -0.29 (pH 6.9), 1.5 (pH 5)

The required chemistry data for ADAMA Trinexapac Technical have been provided, reviewed, and found to be acceptable.

Health, Environmental, and Value Assessments

Health, environmental, and value assessments were not required for this application.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the registration of the new sources of the TGAI, ADAMA Trinexapac Technical.

References

PMRA Document Number	Reference
3196565	2016, Preliminary Analysis and Enforcement Analytical Method for Trinexapac-ethyl TGAI (5-batch analysis of the active and impurities), DACO: 2.13.1, 2.13.2, 2.13.3, 2.13.4 CBI
3196566	2016, Preliminary Analysis and Enforcement Analytical Method for Trinexapac-ethyl TGAI (5-batch analysis of the active and impurities), DACO: 2.13.1, 2.13.2, 2.13.3, 2.13.4 CBI
3196577	2016, Chemical and Physical Characteristics of Trinexapac-ethyl TGAI , DACO: 2.14.1, 2.14.10 ,2.14.11, 2.14.12, 2.14.13, 2.14.15, 2.14.2, 2.14.3, 2.14.4, 2.14.6, 2.14.7, 2.14.8, 2.14.9, 830.7000 CBI
3196578	2018, Characterization of Trinexapac-ethyl (Physical and Chemical Properties), DACO: 2.14.1, 2.14.15, 2.14.2, 2.14.6, 830.7000 CBI
3196579	2018, Determination of Vapour Pressure of Trinexapac-ethyl, DACO: 2.14.9 CBI
3196580	2018, Determination of UV-Visible Spectrum of Trinexapac-ethyl, DACO: 2.14.12 CBI
3196581	2018, Determination of Accelerated Storage Stability of Trinexapac-ethyl at Normal and Elevated Temperatures with Metals and Metal Ions, DACO: 2.14.13 CBI
3196582	2018, Determination of Dissociation Constant of Trinexapac-ethyl, DACO: 2.14.10 CBI
3196583	2020, Trinexapac-ethyl Technical Product Identity and Composition, Description of Materials Used to Produce the Product, Description of the Production Process, Discussion of the Formation of Impurities, Preliminary Analysis, Certified Limits, and Enforcement Analytical Method for Technical Trinexapac-ethyl, DACO: 2.11.1, 2.11.2, 2.11.3, 2.11.4 CBI
3196584	2020, Product Identity and Composition, Description of Materials Used to Produce the Product, Description of the Production Process, Discussion of the Formation of Impurities, Preliminary Analysis, Certified Limits, and Enforcement Analytical Method for Technical Trinexapac-ethyl, DACO: 2.11.1, 2.11.2, 2.11.3, 2.11.4, 2.12.1, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9 CBI
3196585	2018, Validation of Analytical Methodology for the Assay of Active Ingredient and Related Significant Impurities and Subsequent Qualitative and Quantitative Analysis of Trinexapac-ethyl TC, DACO: 2.13.1, 2.13.2, 2.13.3, 2.13.4 CBI
3196587	2017, The Determination of Color, Odor, Physical State, Density, pH Values, Solubility in Organic Solvents, Boiling Point, Partition Coefficient (n-octanol/water) and Water Solubility for Trinexapac-ethyl TC, DACO: 2.14.1, 2.14.11, 2.14.15, 2.14.2, 2.14.3, 2.14.6, 2.14.7, 2.14.8, 830.7000 CBI

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