

## Evaluation Report for Category L, Subcategory 1.1 Application

**Application Number:** 2022-5201  
**Application:** Application Subject to Protection of Proprietary Interests in Pesticide Data (PIIP) Policy – Equivalency/Data Compensation Assessment  
**Product:** Albaugh Mesotrione Technical  
**Registration Number:** 35233  
**Active ingredient (a.i.):** Mesotrione  
**PMRA Document Number:** 3516590

### Purpose of Application

The purpose of this application was to register Albaugh Mesotrione Technical, a new mesotrione technical grade active ingredient, based on a registered precedent product.

### Chemistry Assessment

Common Name: mesotrione  
 IUPAC\* Chemical Name: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]cyclohexane-1,3-dione  
 CAS† Chemical Name: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione

\* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Albaugh Mesotrione Technical has the following properties:

Property	Result								
Colour and physical state	Pale yellow solid								
Nominal concentration	99.2 %								
Odour	Odourless								
Density	Pour density: 0.83 g/mL Tap density: 0.92 g/mL								
Vapour pressure	0.121 mPa at 25 °C								
pH	3.78								
Solubility in water	<table border="0"> <tr> <td><u>pH</u></td> <td><u>Solubility (g/L)</u></td> </tr> <tr> <td>3.78</td> <td>0.4</td> </tr> <tr> <td>5.5</td> <td>20.521</td> </tr> <tr> <td>7.04</td> <td>39.231</td> </tr> </table>	<u>pH</u>	<u>Solubility (g/L)</u>	3.78	0.4	5.5	20.521	7.04	39.231
	<u>pH</u>	<u>Solubility (g/L)</u>							
	3.78	0.4							
	5.5	20.521							
7.04	39.231								

Property	Result
n-Octanol/water partition coefficient	log K <sub>ow</sub> = 0.23 at pH = 3.61 log K <sub>ow</sub> = -2.41 at pH = 7.06

The required chemistry data for Albaugh Mesotrione 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 acceptable to support the registration of Albaugh Mesotrione Technical.

## References

### PMRA

#### Document

Number	Reference
3394277	2022, Additional Chemistry Information for Albaugh Mesotrione Technical, DACO: 2.1,2.13.3,2.2,2.3,2.3.1
3394281	2015, Validations of Analytical Methodologies for the Assay of Active Ingredient and relevant impurity in Mesotrione TGAI, DACO: 2.13.1,2.13.2,2.13.4 CBI
3394871	2019, Five Batch Analysis of Mesotrione Technical, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3394872	2019, Five Batch Analysis of Mesotrione Technical, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3394949	2019, Five Batch Analysis of Mesotrione Technical, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3394950	2019, Five Batch Analysis of Mesotrione Technical, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3394990	2014, Determination of Active Content and Impurity Profile of Mesotrione, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3394991	2014, Determination of Physical-chemical properties of Mesotrione, DACO: 2.14.1,2.14.11,2.14.12,2.14.13,2.14.14,2.14.15,2.14.2,2.14.3,2.14.4,2.14.6,2.14.7, 2.14.8,2.14.9,2.2,2.4,2.5,2.6,2.7,2.8,2.9,830.7000
3394992	2015, Physical Chemical Properties Test of Mesotrione TC: Dissociation constant, DACO: 2.14.10
3395004	2021, Determination of Impurities in Test Item of Mesotrione Technical in Organic Solvents, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3395005	2019, Determination of Partition Coefficient (n-Octanol/Water) of Mesotrione Technical, DACO: 2.14.11
3395006	2021, Determination of Melting Point of Mesotrione Technical, DACO: 2.14.4
3395007	2021, Determination of Water Solubility of Mesotrione Technical, DACO: 2.14.7
3395008	2021, Determination of Solubility of Mesotrione Technical in Organic Solvents, DACO: 2.14.8
3395009	2019, Estimation of Vapour Pressure of Mesotrione Technical, DACO: 2.14.9
3395011	2018, Mesotrione Technical Product Identity and Composition, DACO: 2.11.1,2.11.2,2.11.3,2.11.4,2.12.1 CBI
3454757	2016, Determination of [CBI Removed] in Mesotrione, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3454758	2015, Preliminary Analysis of Active Ingredient and Three Impurities in Mesotrione TGAI, DACO: 2.13.1,2.13.2,2.13.3,2.13.4 CBI
3454759	2015, Validation of Analytical Methodology for the Assay of Three Impurities in Mesotrione TGAI, DACO: 2.13.1 CBI
3503501	2023, 2022-5201, Albaugh Mesotrione Technical - Chemistry Clarification Responses, DACO: 2.11.3,2.11.4,2.13.1 CBI
3503503	2023, Discussion of the presence of impurities of Mesotrione Technical, DACO: 2.11.4 CBI
3503505	2023, Revised Manufacturing Process for Mesotrione Technical - [CBI Removed], DACO: 2.11.3 CBI

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