Chemical Factsheet

Fenpropathrin

General Information

- Product Names:
  Danitol (Valent)
  Tame 2.4 (Valent)
  V-10141 2.8 (Valent) forumulated with Etoxazole
- Chemical Class: Pyrethroid insecticide (miticide)
- Uses: Agriculture, ornamentals
- Alternatives: Organic agriculture
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

- Cancer: Not documented
- Endocrine Disruption: Not documented
- Reproductive Effects: Not documented
- Neurotoxicity: Yes (**1**)
- Kidney/Liver Damage: Not documented
- Sensitizer/ Irritant: Yes (**1**)
- Birth/Developmental: Not documented
- Detected in Groundwater: Not documented
- Potential Leacher: Not documented
- Toxic to Birds: Not documented
- Toxic to Fish/Aquatic Organisms: Yes (**2**)
- Toxic to Bees: Yes (**3**)

Additional Information

- Regulatory Status:
  - EPA Fenpropathrin Interim Registration Review Decision (2020)
- Supporting information:
  - PAN Pesticides Database: Fenpropathrin (Pesticide Action Network)
  - CA Dept. of Pesticide Regulation
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Pre-Conception And First Trimester Exposure To Pesticides And Associations With Stillbirth. Furlong, M. et al. (2024) Pre-conception and first trimester exposure to pesticides and associations with stillbirth, American Journal of Epidemiology. Available at: https://academic.oup.com/aje/advance-article-abstract/doi/10.1093/aje/kwae198/7714541 .
  - Occurrence of Current-Use Pesticides in Paired Indoor Dust, Drinking Water, and Urine Samples from the United States: Risk Prioritization and Health Implications. Xie, Y., Li, J., Salamova, A., & Zheng, G. (2025). Occurrence of Current-Use Pesticides in Paired Indoor Dust, Drinking Water, and Urine Samples from the United States: Risk Prioritization and

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- Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults (ESPINA) 2016 and 2022 examination data. Parajuli, R. et al. (2025) Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults (ESPINA) 2016 and 2022 examination data, Data in Brief. Available at: https://www.sciencedirect.com/science/article/pii/S2352340925006067.
- The Effect of the Pyrethroid Pesticide Fenpropathrin on the Cardiac Performance of Zebrafish and the Potential Mechanism of Toxicity. Saputra, F., Lai, Y. H., Roldan, M. J. M., Alos, H. C., Aventurado, C. A., Vasquez, R. D., & Hsiao, C. D. (2023). The Effect of the Pyrethroid Pesticide Fenpropathrin on the Cardiac Performance of Zebrafish and the Potential Mechanism of Toxicity. Biology, 12(9), 1214. https://doi.org/10.3390/biology12091214
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- Enantiomer-Specific Study of Fenpropathrin in Soil-Earthworm Microcosms: Enantioselective Bioactivity, Bioaccumulation, and Toxicity. Zhang, Ping et al. “Enantiomer-Specific Study of Fenpropathrin in Soil-Earthworm Microcosms: Enantioselective Bioactivity, Bioaccumulation, and Toxicity.” Journal of agricultural and food chemistry vol. 70,41 (2022): 13152-13164. doi:10.1021/acs.jafc.2c04624
- Developmental effects of fenpropathrin on zebrafish (Danio rerio) embryo-larvae: Toxic endpoints and potential mechanism. Ma, Junguo et al. “Developmental effects of fenpropathrin on zebrafish (Danio rerio) embryo-larvae: Toxic endpoints and potential mechanism.” Pesticide biochemistry and physiology vol. 208 (2025): 106262. doi:10.1016/j.pestbp.2024.106262
- Fenpropathrin exposure induces neurotoxicity in zebrafish embryos. Yu, T., Xu, X., Mao, H. et al. Fenpropathrin exposure induces neurotoxicity in zebrafish embryos. Fish Physiol Biochem 48, 1539–1554 (2022). https://doi.org/10.1007/s10695-022-01134-9
- Fenpropathrin causes alterations in locomotion and social behaviors in zebrafish (Danio rerio). Liu, Sian-Tai et al. “Fenpropathrin causes alterations in locomotion and social behaviors in zebrafish (Danio rerio).” Aquatic toxicology (Amsterdam, Netherlands) vol. 265 (2023): 106756. doi:10.1016/j.aquatox.2023.106756
- Adverse effects of fenpropathrin on the intestine of common carp (Cyprinus carpio L.) and the mechanism involved. Xiu, Wenyao et al. “Adverse effects of fenpropathrin on the intestine of common carp (Cyprinus carpio L.) and the mechanism involved.” Pesticide biochemistry and physiology vol. 199 (2024): 105799. doi:10.1016/j.pestbp.2024.105799
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Gateway Health and Environmental Effects Citations

1. Pesticide Action Network Pesticide Database. http://www.pesticideinfo.org/Search_Chemicals.jsp.

2. National Library of Medicine. PubChem Hazardous Substances Database. PubChem (nih.gov)

3. Tew, J.E. 1996. Protecting Honeybees from Pesticides. Ohio State University Cooperative Extension. http://web.archive.org/web/20031123075324/http://beelab.osu.edu/factsheets/sheets/2161.html

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