Chemical Factsheet

Benalaxyl

General Information

- Product Names:
  None
- Chemical Class: Xylylalanine
- Uses: Not U.S. EPA Registered: A systemic fungicide used for the control of Oomycetes, particularly fungi of the family *Peronosporaceae*, *Phythophthora plasmopara*, and *Pythium spp*. Benalaxyl acts by inhibiting RNA polymerization (polymerase complex I).
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects
See citations at end of document.

- Cancer: Insufficiently Studied
- Endocrine Disruption: Suggestive (**1**)
- Reproductive Effects: Possible (**2**, **3**)
- Neurotoxicity: Possible (**4**)
- Kidney/Liver Damage: Possible (**3**)
- Sensitizer/ Irritant: Not Likely
- Birth/Developmental: Insufficiently Studied
- Detected in Groundwater: Yes (**5**)
- Potential Leacher: Low to Moderate (**3**, **5**)
- Toxic to Birds: Low (**3**)
- Toxic to Fish/Aquatic Organisms: Moderate (**3**)
- Toxic to Bees: Moderate (**3**)

Additional Information

- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment](#). Ji, C., Song, Q., Chen, Y., Zhou, Z., Wang, P., Liu, J., Sun, Z., & Zhao, M. (2020). The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment. Environment international, 137, 105490. https://doi.org/10.1016/j.envint.2020.105490

Gateway Health and Environmental Effects Citations

1. Ji, C., Song, Q., Chen, Y., Zhou, Z., Wang, P., Liu, J., Sun, Z. and Zhao, M., 2020. The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment. *Environment international*, *137*, p.105490. https://www.sciencedirect.com/science/article/pii/S0160412019332647?via%3Dihub#s0120

2. Al-Sarar, A.S., Bayoumi, A.E., Abobakr, Y. and Hussein, H.I., 2014. Cytotoxicity of benalaxyl,

metalaxyl, and triadimefon on Chinese hamster ovary cells. *Toxicological & Environmental Chemistry*, *96*(10), pp.1546-1556. https://www.tandfonline.com/doi/abs/10.1080/02772248.2015.1023306

3. The University of Hertfordshire. 2021. Pesticide Properties DataBase (PPDB): Benalaxyl. https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/59.htm

4. European Food Safety Authority (EFSA), Anastassiadou, M., Arena, M., Auteri, D., Brancato, A., Bura, L., Carrasco Cabrera, L., Chaideftou, E., Chiusolo, A., Court Marques, D. and Crivellente, F., 2020. Peer review of the pesticide risk assessment of the active substance benalaxyl. *EFSA Journal*, *18*(1), p.e05985. https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2020.5985

5. Kovacevik, B., Zdravkovski, Z., Mitrev, S. and Markova Ruzdik, N., 2021. Improving Quantitative Analysis of GC-MS for Tracking Potential Contaminants in Groundwater. *Contaminant Levels and Ecological Effects: Understanding and Predicting with Chemometric Methods*, pp.213-237. https://www.google.com/books/edition/Contaminant_Levels_and_Ecological_Effect/IdAiEAAAQBAJ?hl=en&gbpv=1&dq=benalaxyl+groundwater&pg=PA213&printsec=frontcover

Factsheet generated on February 1, 2026