



# MILORGANITE SAFETY

## Trusted for over 95 years

Milorganite is produced with your safety in mind every single day. It complies with all applicable federal and state requirements and can be used with confidence for all of your fertilizing needs, including lawns, trees, shrubs, flowers, and vegetables.

Milorganite meets stringent criteria imposed on any fertilizer product for health, safety and the environment and is more heavily regulated by the United States Environmental Protection Agency (EPA) than synthetic fertilizers.

### Daily Testing for EPA and State Standards

Milorganite is intensively analyzed to ensure compliance with all applicable standards established by the U.S. Environmental Protection Agency (EPA) and every state in which Milorganite is sold. Metals and other pollutants and pathogens are analyzed daily. As shown by the table, metals concentrations in Milorganite are much less than allowed for an Exceptional Quality product.

### The Truth About Metals

Metals are not all bad. Some metals are micronutrients and are necessary in small amounts for plants to grow and reproduce, including copper and zinc, which naturally occur in the environment. For a product like Milorganite, federal and state regulations have established limits for metals to protect public health and the environment. Milorganite contains metals at levels found safe by the EPA when Milorganite is used as directed. Milorganite has over 95 years of experience producing a product that is both safe and effective.

### Heat Drying Kills Pathogens

Milorganite is heat-dried in large-scale, bus-sized rotary dryers that operate at 900–1200°F. The extreme heat and dryness kills pathogens.

Metals and Fertilizer Micronutrients  
Milorganite vs. U.S. EPA Limits

Metals and Micronutrients	EPA Exceptional Quality Limit	2022 Milorganite Average
Arsenic	41 mg/kg	3.6 mg/kg
Cadmium	39 mg/kg	0.48 mg/kg
Copper*	1,500 mg/kg	230 mg/kg
Lead	300 mg/kg	27 mg/kg
Mercury	17 mg/kg	0.23 mg/kg
Molybdenum*	75 mg/kg	11 mg/kg
Nickel	420 mg/kg	26 mg/kg
Selenium	100 mg/kg	3.5 mg/kg
Zinc*	2,800 mg/kg	450 mg/kg

\* Essential micronutrients

## No Salts or Added Pesticides or Herbicides

Milorganite is composed of organic matter and nutrients and contains no added pesticides or herbicides. It will not burn. It will not hurt your family or the environment.

## Children and Pets

Milorganite is safe for your children and pets when used as directed and stored out of their reach. Milorganite is composed of organic matter and nutrients and contains no added pesticides or herbicides.

Some dogs are attracted to the odor of Milorganite, which may lead to them rolling on freshly fertilized areas or eating it off the lawn or garden. After spreading Milorganite, monitor your dog to determine their interest in Milorganite. If they show interest, keep them off your lawn for about 24 hours. You can reduce attraction by watering your lawn after application.

## Non-Leaching Phosphorus

Phosphorus in runoff is a significant pollution problem. Excess phosphorus causes algae blooms, fish kills, and odors. Plants, including grass, need phosphorus. It contributes to important functions such as root development and growth. The phosphorus in Milorganite is slow-release, reducing the risk that phosphorus will leach from soils into surface or groundwater. In contrast, other fertilizers often contain quick-release phosphorus that is more likely to leach.

## Micro-impurities: Pharmaceuticals and Personal Care Products

In modern society, it's inevitable that trace amounts of pharmaceuticals and personal care products will be present in wastewater. Although detectable, concentrations of these compounds are extremely low in Milorganite.

From water reclamation and Milorganite production, to harvest and consumption; it's a long pathway for these micro-impurities to reach humans. The risk they pose to people and the environment is extremely low and is reduced at every step along the way. Milorganite is a leader in investigating the risk caused by these compounds.

One study found that Triclosan—a commonly used antibacterial, antifungal agent used in a range of products from soap to toothpaste— was detected at very low levels in vegetables fertilized with Milorganite, with corn having the highest concentration. A 154 lb person could eat up to 1,249 lbs of this corn daily without any adverse effect, indicating that the risk of Triclosan exposure from Milorganite is extremely low.

Item Tested	% Triclosan
Toothpaste (Colgate®)	0.30%
Milorganite®	0.0002%
Sweet Corn Fertilized with Milorganite®	0.000003%

Source: Dr. George Snyder. "Uptake of the Pharmaceutical Triclosan in Vegetables Fertilized with a Triclosan-containing Biosolids." University of Florida, 2013.

## Per- and polyfluoroalkyl substances (PFAS) Chemicals

The PFAS issue in biosolids fertilizer is a relatively new issue, and there is no clear indication that Milorganite fertilizer has a PFAS build-up that need's remediation. Experience has shown PFAS concentrations in biosolids vary significantly depending upon local conditions, such as the type of water supply, the presence of fire suppression training sites, and industries that manufacture or use PFAS.

For Milorganite fertilizer, local conditions that contribute to the production of our product favor low concentrations. In fact, PFAS sampling for Maine, concentrations for two of the three analyzed compounds were below the level of detection and the third was slightly above the level of detection, confirming minimal PFAS risk.

To understand and find solutions to the PFAS problem, Milorganite fertilizer supports (1) research into the fate of and risk from the PFAS that already exist in commerce and the environment and (2) restrictions on the continuing production and use of these chemicals. The entire water reclamation community is engaged with these issues. No individual producer of biosolids can address these issues alone. Please consider contacting your legislators to support action on these issues.

