

Ammonia Guarde

The ultimate nitrification booster



MalaTECH
water

PRODUCT DESCRIPTION:

BioGuarde product line development - The new wave of bioaugmentation

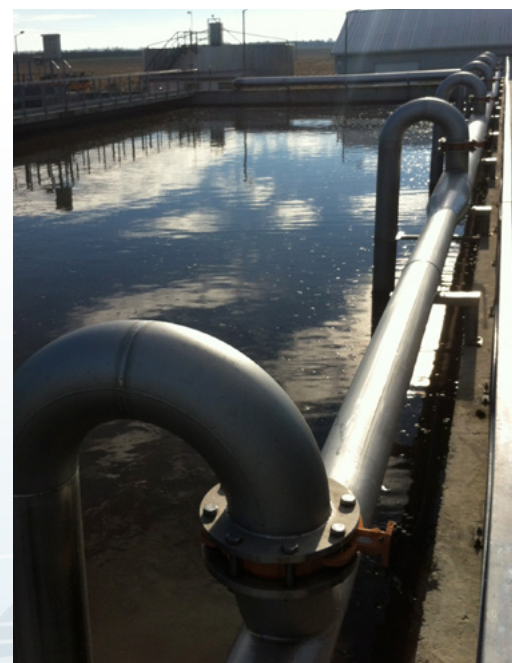
BioGuarde product line has been developed to improve biological and physical processes in wastewater systems. It was formulated as an all-natural organic botanical compound with high concentration nutrients and, is very fast acting on existing bacteria. This synergistic effect stimulates the bacteria and it consequently becomes very effective in decomposing and converting organic matter. Additionally, these wastewater microorganisms will produce highly concentrated hydrolytic enzymes. The microbial action developed with BioGuarde accelerates enzyme activity. Additionally, dramatic changes in ratio of food to microorganisms (F/M) takes place as well. This basically helps to predict improved process efficiency.

BioGuarde is based on the Cozymase Technology. Cozymase is based on the principle of using all-natural vitamin and energy suppliers, as well as, minerals and essential salts to existing microbes and enzymes in septic, grease or wastewater systems. Cozymase Technology reactivates dead or sluggish bacterial systems by adding very specific vitamins to it. Our R&D department has proven that using the Cozymase technology is more effective than traditional methods by eliminating the risk of malnutrition to the existing enzymes and microbes. by adding vitamins, and minerals to the system. Vitamins and minerals are essential because once the enzymes or microbes become sluggish or stop working altogether, it re-stimulates and enhances the whole system so digestion and efficiency is increased and maximized. By using our BioGuarde product line, any system can operate at its maximum efficiency without costly side effects to the system or the environment.

The pH of a solution is a key factor in the growth of organisms. Optimum pH growth is 6.5 to 7.5. We improved on that, BioGuarde bioaugmented systems operate between pH 4 and 11. The metabolic activities of microbiological populations are also temperature dependent and, processes are affected by those biological reaction rate changes. Variances in wastewater temperatures and pH have a wider operating range with BioGuarde products than with conventional microbiology of the system. This capability allows for more consistent activity with uniform feed rates.

BioGuarde applications:

1. Heterotrophic facultative microbiological processes (BioGuarde I)
2. Floc structure optimization (BioGuarde I)
3. Nitrification/Denitrification processes (Ammonia Guarde, BioGuarde I)
4. Bio-P processes (Ammonia Guarde, BioGuarde I)
5. FOG removal (BioGuarde II)
6. Filamentous blooming control (BioGuarde II)



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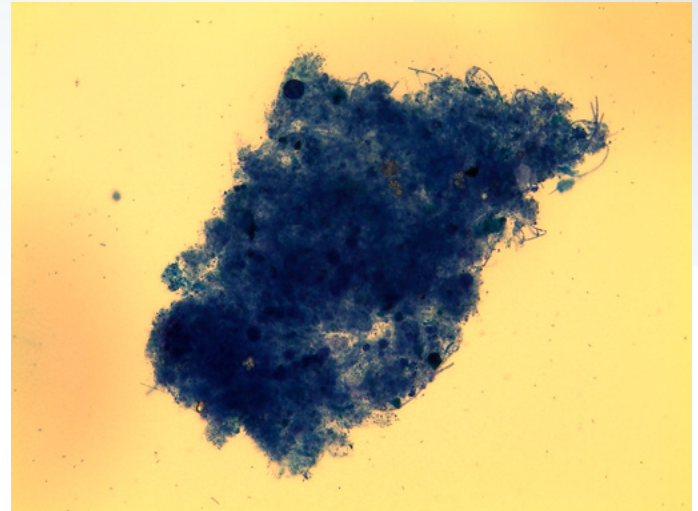
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Ammonia Guard - Improving nitrification in wastewater treatment

Ammonia Guard's special blend of microbes and nutrients intensifies the conversion of Ammonium to Nitrate, which is known as nitrification. Ammonia Guard is a microbial digestion system designed to reduce or remove ammonia in wastewater systems. The product contains specially selected facultative anaerobic *Bacillus* species combined with our Cozymase technology which significantly accelerates nitrification processes in your activated sludge or pond biology.

Decline of nitrification is a common problem amongst wastewater treatment plants in winter, due to water temperature decrease. Ammonia Guard is a biotechnological product that helps intensifying the nitrification processes, and moderating the decline of nitrification in winter. The active agents of the product are highly effective heterotrophic nitrifier bacterial strains, present in high CFU count, botanical extracts and vitamins supporting them. Dosing of Ammonia Guard provides effective nitrification at wastewater treatment plants, even when water temperature is low (around 8 °C). The product also reduces the negative impacts of shock loads, inhibitors, or Oxygen deficiency on nitrification.



The product is supplied as a concentrated liquid with dark brown color where the bacteria are inactivated. The product does not require pre-activation, dilution with water activates the bacteria which means that dosing is recommended by our [Malatech-C Dosing Unit](#), or by a simple metering pump from any container, if the application is indoor, or does not require temperature control.

FIELDS OF APPLICATION:

- Industrial, and municipal activated sludge wastewater treatment plants
- Industrial, and municipal fixed film wastewater treatment plants
- Wastewater lagoons, effluent holding tanks, tertiary treatment ponds
- Livestock waste streams (lagoons, pre-treatment plants, etc.)



BENEFITS OF AMMONIA GUARDE BIOAUGMENTATION:

- Significantly reduces Ammonium concentration in your effluent in a minimal amount of time
- Reduces TSS (total suspended solids)
- Boosts Bio-P removal in WWTP's where Bio-P step is established
- Applicable in cold climate for boosting nitrification due to its temperature resistant heterotrophic nitrifiers
- Reduces odors caused by excess Ammonia
- Works effectively without introducing environmentally hazardous chemicals
- Safe, and easy to incorporate into your normal treatment routine
- 100% biodegradable, non-toxic, non-hazardous



APPLICATION OF AMMONIA GUARDE – DOSING, PLANT SETUP, TECHNICAL INFORMATION

IMPORTANT INFORMATION:

Recommended daily dosages are given in ppm based on m³/d average hydraulic raw wastewater load!

For determining exact dosages for your WWTP, please provide us information by sending us our questionnaire filled with information as much as possible: [Click here for questionnaires!](#)

Dosage of Ammonia Guarde is preferably continuous by mixing the product with pure water, and pour the content into our Malatech-C Dosing Unit. Our dosing units are easy to install, and use, consume low amount of space, isolated, and have a heating function for outdoor operations at winter. [Click here](#) for more information on the Malatech-C Dosing Unit!

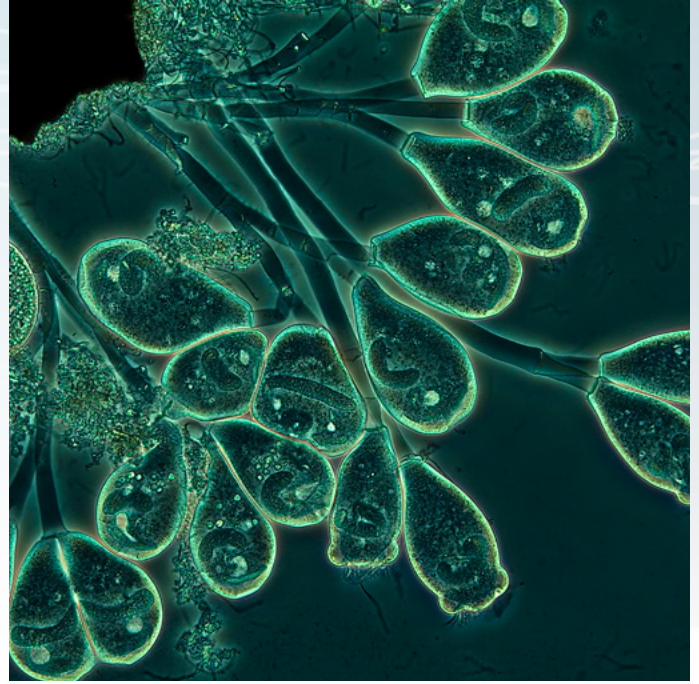
Whenever you have any questions, do not hesitate to [contact us!](#)

DOSAGE INFORMATION:

- Week 1: 0.7-4 ppm per day
- Week 2: 0.4-2.5 ppm per day
- Onwards: 0.1-1.5 ppm per day as daily maintenance dosage

Dosing location: First biological reactor of the system is recommended, or the product can be dosed directly into the primary treated wastewater entering the first bioreactor of the system.

In case of plants running with generally high MLSS, and sludge age, or extremely high MLSS, and sludge age (UF membrane systems), please [contact us](#) for further assistance, also please contact us for Complete Process Engineering Assistance service to extract the most of your WWTP with Ammonia Guardel!



PACKAGING INFORMATION:

The product is available in 19 litre safety pails which is the lowest unit for ordering.

STORAGE INFORMATION:

Keep the product in a cool and dry place below 28 Celsius. Avoid exposure to direct sunlight.