

NovoMAX AN

Description:

Novomax AN is a blend of micronutrients and biostimulants enriched with Bacillus bacteria. It is used in anaerobic digesters to increase gas production and retention time, while also reducing H₂S levels. Novomax AN helps reduce the bottleneck that occurs during the hydrolysis and acid production stages, which means more time is available for the methanogenesis stage.



	PROBLEMS	SOLUTION
Nutritional Imbalances	Many key micronutrients may be lacking due to inconsistent raw materials in the anaerobic digestion process, which can reduce treatment effectiveness and cause nutrient imbalances.	Novomax AN contains a mix of specifically selected micronutrients to help overcome nutrient imbalances in an anaerobic system.
Low Process Efficiency	When fibrous materials or other difficult-to-degrade raw materials are used, such as raw biomass, hydrolysis can be slowed down, making the process inefficient.	The Bacillus strains in Novomax AN help improve hydrolysis, especially in the breakdown of hard-to-digest material. This increases methane production by providing more substrate for later processes such as acidogenesis, acetogenesis, and methanogenesis.
High Ammonia Content	Ammonia levels above 2000 mg/l inhibit methanogenesis, leading to decreased methane production.	Our Bacillus strains consume Volatile Fatty Acids and similar compounds, helping prevent them from interfering with methanogenesis.
Accumulation of Fatty Acids	Methanogens use acetate produced during acetogenesis to produce methane. However, fatty acids can accumulate and slow down acidogenesis and acetogenesis, making methane production more difficult.	Our Bacillus bacteria help break down long-chain fatty acids, such as oleic acid, and volatile fatty acids, such as valeric acid, into acetate that methanogens can easily digest, thereby improving methanogenesis.

Product Data:

Product Code	Novomax AN
Active Ingredients	Bacillus bacteria, Micronutrients
Concentration	4 billion / gram
Physical Properties	Form: Powder Color: Gray
Presentation	11 kg bucket 450 g water-soluble bags
Storage	Store in a cool, dry place. Keep container tightly closed when not in use.



Properties:

- Contains our highest concentration of micronutrients to enhance biological activity.
- Helps improve digester stability and allows faster recovery.
- Packaged in water-soluble bags, easy to use.



Dosage:

To obtain specific dosage recommendations, consult your service provider or check the system's application sheet. The typical dose is 5 to 20 lbs (2.2 to 9.1 kilos) per 1,000 gallons (3,785.4 L) of daily flow, depending on the load intensity entering the system. Novomax AN is generally added to the system before the digester, in the mixing tank. This will initiate the hydrolysis and acidogenesis phases before the digester, allowing more time for the methanogenesis phase.

Why use Novomax AN?

Novomax AN contains a unique combination of inorganic micronutrients, amino acids, vitamins, and other biostimulants not found in other competing products. The micronutrients in Novomax AN are also more diverse than those in other products. In addition, the personalized combination of Novomax Bacillus bacteria works together with the biostimulants and micronutrients to improve the biological activity of the beneficial bacteria already in the system. By producing more enzymes and releasing more recalcitrant nutrients, the entire system grows more efficiently and produces more beneficial byproducts (methane) while reducing negative byproducts (sludge, H₂S, and odors). Comparatively, a seaweed-based product is mainly organic, with crude fats and carbohydrates making up more than half of its typical composition.

Although such products contain amino acids and vitamins, they only have about one-third of the micronutrients contained in Novomax AN. A combination of inorganic micronutrients generally consists of fewer than five types of micronutrients, with each concentration being much higher than necessary. These products also contain no organic material, meaning that the amino acids, vitamins, and other important biostimulants are absent from their formulas.

Table A: Comparison of the nutrient package composition of Novomax AN with other types of micronutrient products.

	MICRONUTRIENTS	AMINO ACIDS	VITAMINS	VARIOUS BIOSTIMULANTS	BACILLUS
Novomax AN	✓	✓	✓	✓	✓
Competitor Inorganic	✓	✗	✗	✗	✗
Competitor Kelp	✓	✓	✓	✗	✗