

January 21, 2022

Charlotte Eichenberg
BioMicrobics, Inc.
16002 West 110th Street
Lenexa, KS 66219

RE: Product Registration Renewal #3 – Notice of Conditional Proprietary Treatment Product Listing

Description: Sewage Treatment System, Tertiary Nitrification and Denitrification
Manufacturer: BioMicrobics, Inc.
Product Name: NitriFAST® and ABC®-N
Model Number: NitriFAST 0.5, NitriFAST 0.75, NitriFAST 0.9, NitriFAST 1.5, NitriFAST 3.0,
NitriFAST 4.5, and NitriFAST 9.0
ABC-N 0.5, ABC-N 1.0, ABC-N 2.0, ABC-N 3.0, ABC-N 4.5, and ABC-N 9.0
Product Listing: Category A and B (residential-strength and high-strength sewage)

Dear Ms. Eichenberg:

Thank you for your application for product renewal dated November 30, 2021, for BioMicrobics' NitriFAST and ABC-N tertiary treatment system for nitrogen removal. NitriFAST and ABC-N is a biological wastewater treatment system used specifically to remove nitrogen. These are treatment products used in series as a component of a treatment train, using other registered BioMicrobics treatment products. This renewal is conditional based on the results of a comprehensive review of BioMicrobics' manuals submitted for initial registration of the product. This registration letter may be discontinued at any time between now and the expiration listed below if the MPCA cannot obtain manuals that meet the recommendations from the Technical Advisory Panel to remain in compliance with Minn. R. 7083.4040 Item H.

In accordance with Minnesota Rules Chapter 7080 through 7083, the MPCA has reviewed BioMicrobics's submitted materials requesting registration for Category A (residential) and Category B (high-strength) treatment product listing of the NitriFAST and ABC-N Treatment System in this application. Based on the submitted documentation, the MPCA finds that the BioMicrobics Treatment System is eligible to be registered per Minn. R. Ch. 7083.4030 as meeting the following treatment levels:

- **Total Nitrogen** (TN of less than or equal to 10 mg/L)

The NitriFAST and ABC-N treatment products are registered in Minnesota, when used in series following other registered BioMicrobics treatment products (MicroFAST and HighStrengthFAST) for systems with a design rated capacity of up to 10,000 gallons per day as shown in Table 1.

Subject to this determination, the BioMicrobics NitriFAST followed by the ABC-N, will be placed on the List of Registered Subsurface Sewage Treatment System (SSTS) Products as a component of the treatment train to reduce total nitrogen to less than 10 mg/L. The product information listed in this Notice of Proprietary Product Listing will be maintained on the MPCA website and may not be altered by the manufacturer or any other person without permission by the MPCA.

Table 1. BioMicrobics NitriFAST and ABC-N Treatment* Components

NitriFAST Model	Maximum Treatment Capacity (gal)	ABC-N Model	Minimum Tank Volume (gal)
NitriFAST 0.5	500	ABC-N 0.5	450
NitriFAST 0.75	750	--	--
NitriFAST 0.9	900	ABC-N 1.0	750
NitriFAST 1.5	1,500	ABC-N 2.0	1,125
NitriFAST 3.0	3,000	ABC-N 3.0	2,250
NitriFAST 4.5	4,500	ABC-N 4.5	4,219
NitriFAST 9.0	9,000	ABC-N 9.0	8,438

* NitriFAST models must be used prior to ABC-N models to achieve effluent total nitrogen concentrations of 10 mg/L or less.

The registration of the treatment products in Minnesota is contingent upon compliance with the following conditions:

1. Products must be used in compliance with the MPCA rules and the plans and design specifications provided. Any deviation from the plans and specifications shall not be permitted unless authorized by the MPCA for registered use.
2. The manufacturer shall have readily accessible information, specific to a product's registered use in Minnesota, for designers, regulators, installers, system owners, service providers and other interested parties for the following items: a) product manual; b) design instructions; c) installation instructions; d) information regarding operation and maintenance; e) homeowner instructions; and f) list of representatives and manufacturer-certified service providers, if any, as required by Minn. R. Ch. 7083.4040(H).
3. The manufacturer's designated representative(s) is required to review all designs provided by Advance Designers for treatment systems proposed to use the NitriFAST and/or ABC-N Series. Advanced Designers need to work directly with the manufacturer to ensure the wastewater is properly characterized and that the NitriFAST and/or ABC-N products, and other related components used in the treatment train are properly sized and compatible to meet designed performance requirements.
4. All tanks used in the treatment process shall be approved by the manufacturer. Each sewage tank shall be designed to withstand the pressures to which it will be subjected. Tanks and all pipe penetrations, risers, and other connections to tanks shall be watertight.
5. Each system must be delivered with an installation manual and owner's manual. Each component must be installed in accordance with the manufacturer's installation manual.
6. BioMicrobics, along with the Advanced Designer and Installer, are responsible to ensure that proper flow splitting devices are used to split flows when flow splitting is needed. Flow splitting devices must meet the following criteria: a) designed specifically and reliably to split wastewater flows; b) accessible for on-going operation and maintenance; c) monitored to determine flow rates; d) adjustable after construction should settlement occur; and e) have infinite or continuous adjustment features.

7. All systems shall be designed and operated with (a) suitable alarm device(s) that monitors each of the system components should any of the components malfunction.
8. The treatment products contained in this notice of product registration are considered a Minnesota-registered product for Type IV systems. The effluent, following treatment in the wastewater treatment system, is required to be uniformly distributed to the soil for final treatment and dispersal.
9. When BioMicrobics Wastewater Treatment Systems are used, effluent loading rates to the soil, method of distribution, and vertical separation requirements shall meet the minimum requirements contained in Minn. R. Ch. 7080.2350 for flows less than 5,000 GPD. For flows greater than 5,000 GPD, final treatment and dispersal must also meet 7081.0270, which include groundwater mounding.
10. Systems may only be designated as Type IV systems when designed and installed per the drawings submitted as part of the Application for Registration, dated June 18, 2012, and any other subsequent documents submitted prior to this registration.
11. As a Type IV system, the system must be constructed and operated under the required local permits.
12. The level of maintenance required for the BioMicrobics treatment systems shall be as specified in the products Operation and Maintenance Manual and reflected in the local operating permit. At a minimum, weekly visits are needed for system monitoring, inspection and maintenance activities; monthly sampling (one time per month) is needed to document that the required total nitrogen effluent limit is achieved.
13. As specified in the Owner's Manual, limitations of the product are identified. The manufacturer is responsible to provide a listing of other known limitations, made available on the company's website or other means.
14. Training shall be provided to MPCA-licensed Subsurface Sewage Treatment System practitioners before designing, installing, or providing service to BioMicrobic's Wastewater Treatment System registered for use in Minnesota.
15. During the period of product registration and as part of the renewal process, systems using registered treatment products are subject to an audit by the MPCA.

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Please be advised that this registration expires December 31, 2024. Manufacturers desiring to continue product registration beyond this date must obtain MPCA renewal according to the requirements in Minn. R. Ch. 7083.4040 (E). If the product has changed or is retested according to the protocol required for registration, renewal shall be based on the most recent test results. If the MPCA finds the product has changed in any way that may affect performance, it may not be renewed and must meet the requirements for initial registration.

The MPCA is in no way endorsing these products or any advertising and is not responsible for any situation, which may result from its use or misuse. The MPCA is not liable for any product failure and these statements are not intended and cannot be relied upon to establish any substantive or procedural rights with the state of Minnesota or the MPCA, either express or implied, that can be enforced in litigation or any administrative proceeding.

If you have any questions, please contact Katie Dowling at 651-757-2301 or by email at katie.dowling@state.mn.us.

Sincerely,

Katie Dowling

This document has been electronically signed.

Katie Dowling
Environmental Specialist
Municipal Division

KD:lm

cc: File