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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 2, 2025

Mr. Daniel Westrich, Manager of Regulatory Affairs
BioMicrobics, Inc.
16002 W. 110th Street
Lenexa, Kansas, 66219

Re: Approval of proprietary OSSF treatment product for:
BioMicrobics, Inc.
MicroFAST Flex 0.5 Model

Dear Mr. Westrich:

We have received your request for a Texas Commission on Environmental Quality (TCEQ) review of the above-referenced proprietary system, with supporting documentation, on September 2, 17-18, 23, and 30, 2025. Cindy Rojas Annicchiarico of the TCEQ Technical Programs Team conducted the review, as required by 30 Texas Administrative Code (TAC) §285.5(b)(3). After reviewing your request and supporting documentation, TCEQ has determined that the treatment product meets the applicable technical requirements. **This letter serves as notification of approval for use in the State of Texas as an approved proprietary system.** Please be advised, the review of individual OSSF applications is a separate action and this letter is not an authorization to install an individual OSSF.

This approval notes that the MicroFAST Flex 0.5 model is approved for use in Texas as a Class I treatment system under NSF Standard 40. The bracketing review of MicroFAST Flex 0.5 to the testing of MicroFAST 0.5 has been completed by NSF, and it has been determined that the requested model meets the requirements of NSF/ANSI 40-2023 and NSF/ANSI 245 for Residential Wastewater Treatment Systems - Nitrogen Reduction. Table 3-5 provides the technical information and dimensions for the MicroFAST Flex 0.5 and MicroFAST 0.5, which have been found acceptable according to NSF Standard 40. The approved aerators for MicroFAST Flex 0.5 are cited as Fuji Electric VFC200 or Mapro CL20HS.

As required by Title 30 TAC 285.32(c)(5)(A), proprietary units are approved to treat flows equal to or less than their rated capacity with an influent wastewater strength ranging from a 30-day average CBOD concentration between 100-300 mg/L. Proprietary units may be used as components in an overall treatment system treating influent stronger than 300 mg/L CBOD as shown in table 1. However, the overall treatment system shall meet the requirements set forth in 30 TAC 285.32(d). This approval also notes that the subject unit does not include pump chambers. All pump tanks are subject to the requirements specified in 30 TAC §285.34(b).

Influent Characteristic	NSF 40 Standard Required	Actual Average
BOD5, mg/L	100 to 300	250
Total Suspended Solids (TSS), mg/L	100 to 350	310

Table 1: Influent Wastewater Characteristics Required Vs. Tested Results as Cited on the provided Standard 40 Certification Report for the tested unit MicroFAST 0.5- Under the provisions of NSF/ANSI Standard 40 - 2022 for Residential Wastewater Treatment Systems

Effluent Characteristic	Concentration Range (During testing)	Average Concentration	Median
CBOD5	2 to 8 mg/L	3 mg/L	2 mg/L
TSS	2 to 29 mg/L	5 mg/L	2 mg/L
pH	6.1 to 7.90 Standard Units (SU)	6.8 – 6.9 SU	6.8 SU

Table 2: Effluent Wastewater Characteristics as Cited on the provided Standard 40 Certification Report for the tested unit MicroFAST 0.5- Under the provisions of NSF/ANSI Standard 40 - 2022 for Residential Wastewater Treatment Systems

The MicroFAST 0.5 wastewater treatment bioreactor utilizes a proprietary attached and suspended growth process to achieve treatment. Since the media used in the plant is submerged, both attached and suspended biological growth occur simultaneously. In both attached and suspended growth systems, microorganisms remove soluble contaminants from wastewater, utilizing them as a source of energy for growth and production of new microorganisms (as cited in the NSF/ANSI Standard 40 MicroFAST® 0.5 Wastewater Treatment System Report, page 9).

The MicroFAST Model 0.5 tested in the NSF report has a rated capacity of 500 gallons per day (gpd). The tank was constructed of concrete. The plant utilizes part of the tank for primary treatment, with the secondary treatment achieved in an aerobic zone inside an insert in the tank (as cited in the NSF/ANSI Standard 40 MicroFAST® 0.5 Wastewater Treatment System Report, page 9).

MicroFAST® Model	Volume of FAST® Media	Media Dimensions	Design Flow Rate (gallons per day)
MicroFAST Flex™ 0.5	16 cu. ft.	32"x36"x24"	500
MicroFAST 0.5	16 cu. ft.	24"x48"x24"	500

Table 3. Technical Specifications for MicroFAST 0.5 and MicroFAST Flex 0.5, as cited on the NSF Bracketing review (July 29, 2025)

Model Number	Standard	Minimum Settling Zone		Minimum Treatment Zone		Minimum Total Tank	
		Volume (gal)	Hydraulic Retention Time (hrs)	Volume (gal)	Hydraulic Retention Time (hrs)	Volume (gal)	Hydraulic Retention Time (hrs)
MicroFAST® Flex™ 0.5	40 & 245	500	24	750	36	1,250	60
MicroFAST® 0.5	40 & 245	500	24	750	36	1,250	60

Table 4: Tanks Dimensions for MicroFAST 0.5 and MicroFAST Flex 0.5 as cited on the NSF Bracketing review (July 29, 2025)

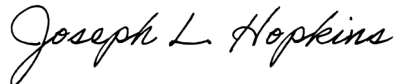
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Model Number	Standard	Minimum Settling Zone		Minimum Treatment Zone		Minimum Total Tank	
		Volume (gal)	Hydraulic Retention Time (hrs)	Volume (gal)	Hydraulic Retention Time (hrs)	Volume (gal)	Hydraulic Retention Time (hrs)
MicroFAST® Flex™ 0.5	40	350	16.8	450	21.6	800	38.4
MicroFAST® 0.5	40	350	16.8	450	21.6	800	38.4

Table 5: Tanks Dimensions for MicroFAST 0.5 and MicroFAST Flex 0.5 as cited on the NSF Bracketing review (July 29, 2025)

If you have any questions, or if we may be of assistance to you, please contact Cindy Rojas Annicchiarico in the TCEQ Technical Programs Team at (512) 239-5146 or via e-mail at Cindy.Annicchiarico@tceq.texas.gov.

Sincerely,



Joseph L. Hopkins, P.G.
Technical Programs Team Leader
Texas Commission on Environmental Quality

JLH/CRA