

SCIENCO/FAST[®] a subsidiary of BioMicrobics, Inc.

BioBarrier[®] MarineMBR[®] Press Release
FOR IMMEDIATE RELEASE

For media Contact:

Jennifer Cisneros
VP, Marketing
BioMicrobics, Inc.
jcisneros@biomicrobics.com
913-422-0707

Bob Millerbaugh
VP, Marine Sales & Marketing
Scienco/FAST, a subsidiary of BioMicrobics, Inc.
bmillerbaugh@sciencofast.com
314-756-9300

Received USCG Certificate Approval for BioBarrier MarineMBR Series

The BioBarrier[®] MarineMBR[™] joins the MarineFAST[®] product line of Scienco/FAST to provide effective systems for the Naval architects & Engineers, maritime owners & operators, chief engineers, and shipyard operation and maintenance crews.

USCG 33CFR159 Certification: BioBarrier[®] MarineMBR[™] Type II Marine Sanitation Device (SEWAGE POLLUTION PREVENTION EQUIPMENT) - certified for the next 5 years and with IMO resolution MEPC.227(64) to meet the operational requirements referred to in regulation 9 of Annex IV of the International Convention for the Prevention of Pollution from Ships (MARPOL).

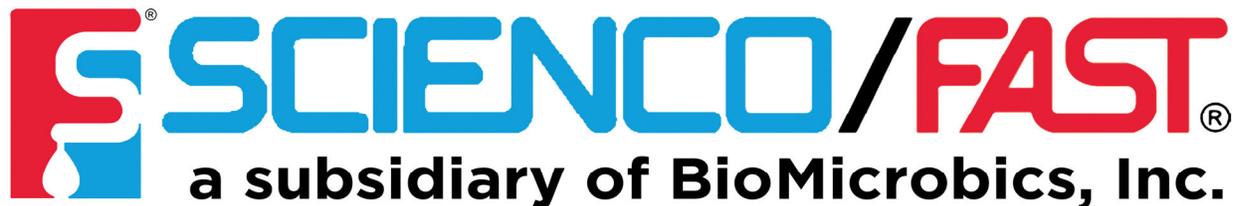


SUNSET HILLS, MO – July 2020 – Scienco/FAST is proud to offer the newly certified BioBarrier[®] MarineMBR[™] series of Type II Sewage Treatment Plant (STP) to the marine marketplace. With its long performance history of providing the affordable, adaptable, and proven FAST[®] Systems, Scienco/FAST offers a higher treatment option with membrane technology to remove 99.9% of the pollutants and contaminants found in sewage sources on the vessel.

There are three different types of MSDs that can be certified by the U.S. Coast Guard to meet the requirements in 33 CFR Part 159, each having its own design, certification, and discharge criteria. Based on the testing and recommendations provided by U. S. Coast Guard, this shipbuilding certification supports the effective operation and consideration for approval of Type II Marine Sanitation Systems. The Type II Marine Sanitation Device (MSD) is a flow through discharge device that produces effluent having a fecal coliform bacteria count not greater than 200 per 100 milliliters and suspended solids not greater than 150 milligrams per liter. This type of device is typically a biological or aerobic digestion based system. These standards support the effective operation, maintenance, and health of shipboard marine sanitation devices (MSDs).

Certified by the USCG Acceptance to 33CFR159 Standards and to International Maritime Organization (IMO) resolution MEPC.227(64), the BioBarrier[®] MarineMBR[™] HSMBR[®], HS-STP[®] & HS-MSD[®] is capable of treating with freshwater or saltwater (input <6.5% salinity) flushing or combination of the two. The BioBarrier MarineMBR uses an advanced process that acts as an impenetrable physical barrier for nearly every common pollutant found in wastewater. Scienco/FAST and BioMicrobics team of water/wastewater process and design engineers along with a control panel expert (to centralize all the controls on a single touch screen) worked together to provide the most innovative and efficient sewage treatment solution.

The approval of the BioBarrier MarineMBR Systems 1.0 through 7.0 is based upon the submittal of satisfactory evidence that the item complies with the applicable provisions of the navigation and shipping



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laws and the applicable regulations in Title 33 and/or Title 46 of the Code of Federal Regulations. BioBarrier® membrane bioreactor technology are engineered to treat all sources of blackwater and greywater in varying strengths and dependent on daily wastewater flow. The Scienco/FAST custom MarineMBR™ steel tank provides access for maintenance and removal of the membranes for deep cleaning or replacement. As well as the maintenance on the filtrate pumps and easy to access blower(s), while keeping as much of the equipment below deck and out of sight. All penetrations for air lines, filtrate outflow and electric cables are installed below the main deck. A submersible pump is mounted on the membrane module housing and used as the filtrate pump. On marine applications, the BioBarrier® MarineMBR™ helps to meet the increasingly stringent needs of water quality standards, Coast Guard and IMO, and ideal for water reuse applications.

The approval is subject to any conditions noted and in the applicable laws and regulations governing the use on vessels subject to Coast Guard inspection or on other vessels and boats.

- **Inspected Vessels:** In addition to the MSD requirements in 33 CFR Part 159, inspected vessels must also comply with the marine engineering regulations in 46 CFR Subchapter F and the marine electrical regulations in 46 CFR Subchapter J. The U.S. Coast Guard Certificate of Approval and device label will both indicate *inspected vessel* for those devices that meet these additional requirements and therefore are suitable for installation onboard inspected vessels. For more information see 33 CFR 159.97.
- **International Voyages:** U.S. vessels on international voyages may obtain a U.S. Coast Guard Statement of Voluntary Compliance to demonstrate compliance with international sewage regulations contained in Annex IV to MARPOL 73/78.

Other certifications received for the BioBarrier MBR technology is the NSF/ANSI (National Sanitation Foundation International) Standards 40, class 1; 245 for Nitrogen Reduction; 350 for Water Reuse, and EN12566-3 (European standard for onsite sewage Treatment plants for up to 50 people) and with future approvals, such as with ASTM's ships and marine technology committee (F25), is developing another proposed standard (WK73063).

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About Scienco/FAST, a subsidiary of BioMicrobics, Inc.: Internationally recognized for quality products and top-notch field services, Scienco/FAST is an original equipment manufacturer specializing in sewage and water treatment equipment for the marine industry, these marine sewage systems, and other industrial water management technologies help keep your vessel in compliance. Since the first installation in 1969 on board the Towboat, M/V Missouri, these MarineFAST® Sewage Treatment Systems are installed on some of the 'greenest' boats in the world to provide total sewage treatment, pretreatment, and (in some cases) water reuse opportunities. The MarineFAST units provide outstanding effluent quality and starts up much faster than conventional suspended growth processes – usually in half the time!

What makes Scienco/FAST so great? Our Products, Policies, and People! With decades of experience in our respective fields, the Scienco/FAST team of marine engineers, drafters, technical engineers for sizing and regulations, manufacturing, and field experts brings creative and diverse perspectives for marine sanitation solutions.