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Building A Healthy Nation!

BACTSTER™

ULTRASONIC MICROBE SANITIZER



24/7
GERMS FREE
ENVIRONMENT
Antibacterial & Antifungal

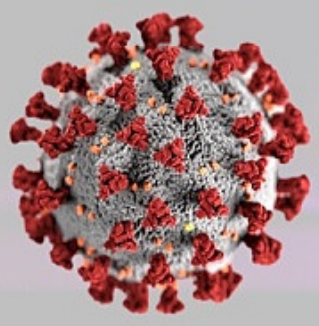
Marketed By:

FROZCULINA
Tech Services
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A-409, Kailas Business Park, CTS No. 1/7 & 1/8A,
Veer Savarkar Road, Park Site,
Vikhroli (W) Mumbai - 400 079 (MS)
India

ECO FRIENDLY 100% NON - TOXIC

CONTROLS MICROBES AIRBORNE & SURFACE



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BACTSTER™

Airborne Low Intensity Multi Frequency Ultrasound (ALIMFUS™) Microbe Sanitizer



How does **BACTSTER** Work?

Bacteria are a group of single-celled microorganisms that reproduce through cell division. Since the main form of reproduction in bacteria is through cell division, any alteration in the structure or segment of the cell can influence the cell division process.

BACTSTER uses patented **ALIMFUS** (Airborne Low Intensity Multiple Frequency Ultrasound) technology which destroys bacteria by engulfing them from all directions, penetrating their cell, and disrupting their DNA. When this happens, the bacteria DNA can't duplicate itself; thereby leaving them unable to perform vital cellular function. Subsequently, since the bacteria can't reproduce, it dies.

BACTSTER is a paradigm shift from the conventional methods and approaches to Microbial sanitation.

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BACTSTER uses specially designed **ALIMFUS** Technology (Airborne low Intensity Multi Frequency Ultrasound) which engulfs bacteria from all directions and destroys them.



BACTSTER has been widely tested for its efficiency at various local, international, government, and non-government laboratories like Haffkine Institute, SGS's labs, APT Testing and Research and Bureau Veritas.

Advantages of **BACTSTER** Ultrasonic Microbe Sanitizer

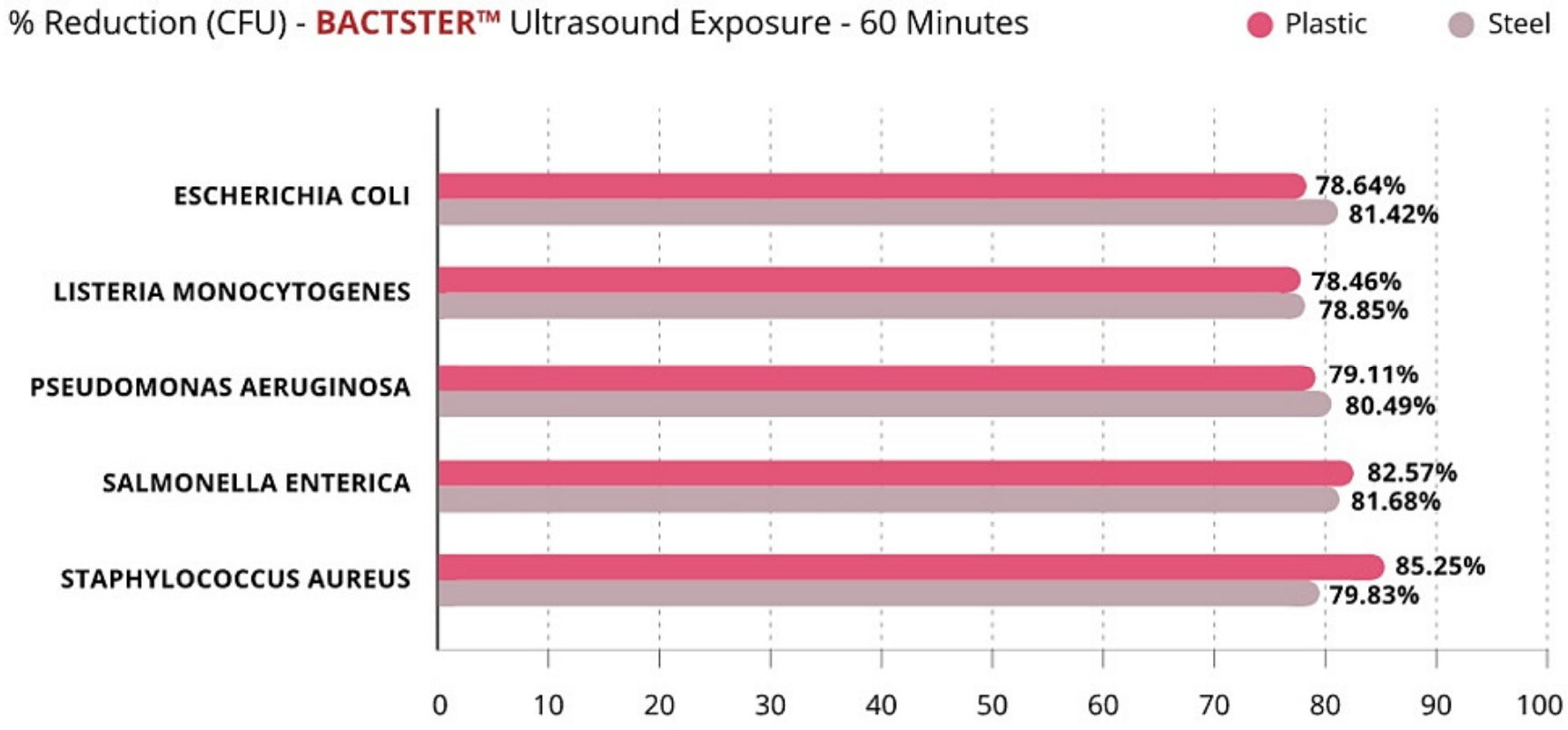
- A novel method for Microbial Sanitation
- Safe to use and environment friendly
- Non-hazardous and chemical free
- 24/7 operation in human presence
- No recurring cost
- Simple to use and install

ALIMFUSTM is the registered trademark of Maser. Maser has patented this technology under patent application numbers (Patent Ref No. 201821021401/201821021402). It also has design registrations for the product ultrasonic microbe sanitizer under design registration numbers (Design Application Ref. Nos. 306408/306409). Maser Electronics has sole rights to **ALIMFUSTM** technology and its related product designs.

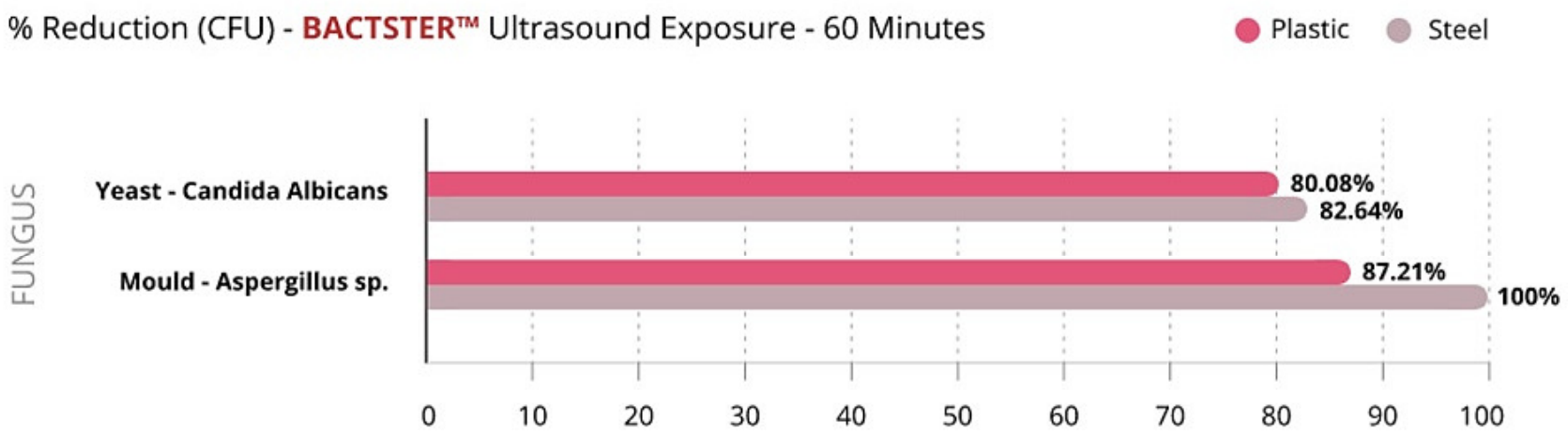
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Surface Test Efficacy – Various bacteria

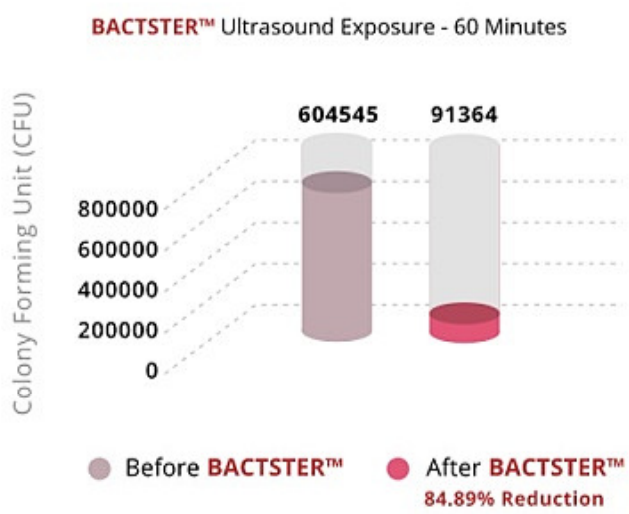


Surface Test Efficacy – Fungus

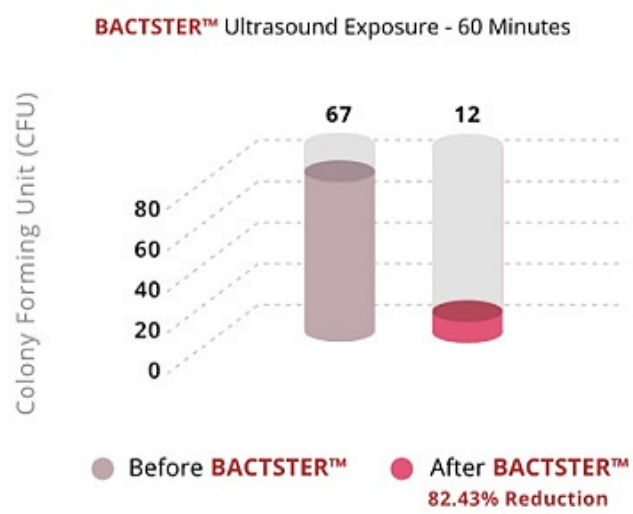


* All tests conducted at Bureau Veritas Labs. The results may vary subject to environmental conditions of your site.

Wooden Surface – Bacteria Test



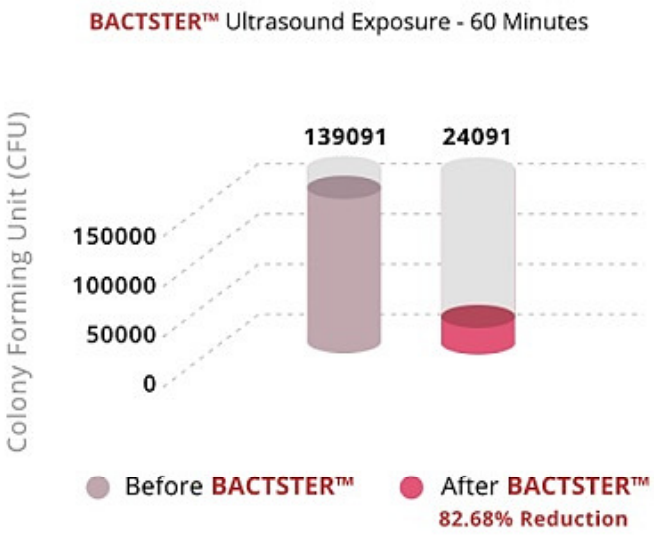
Cloth Surface – Bacteria Test



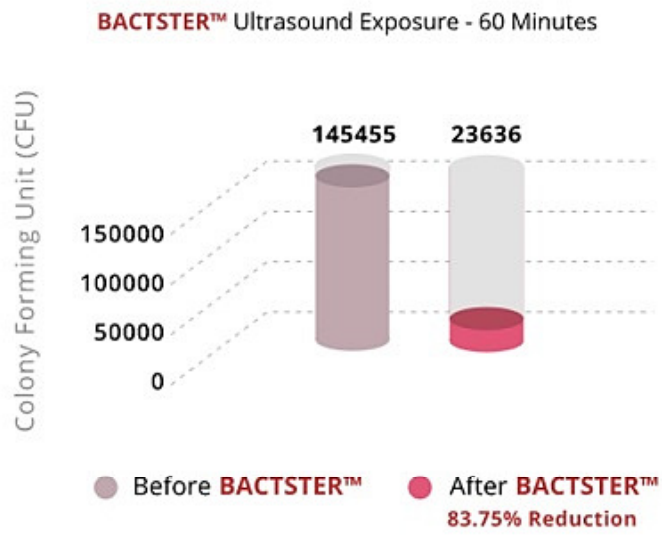
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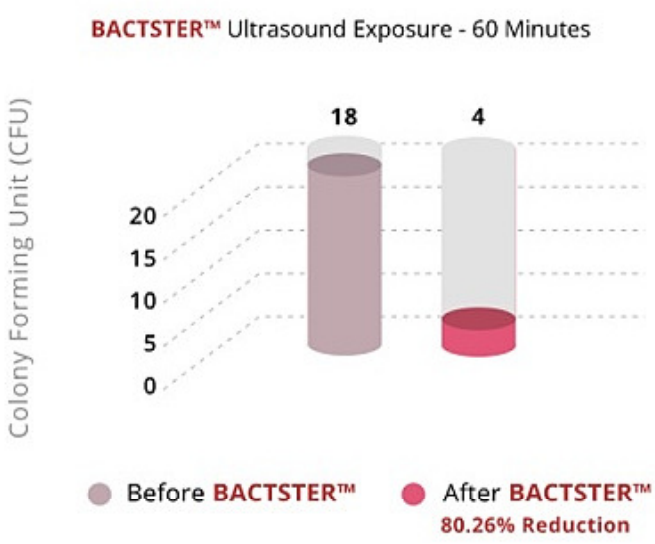
Food (Apple) – Bacteria Test



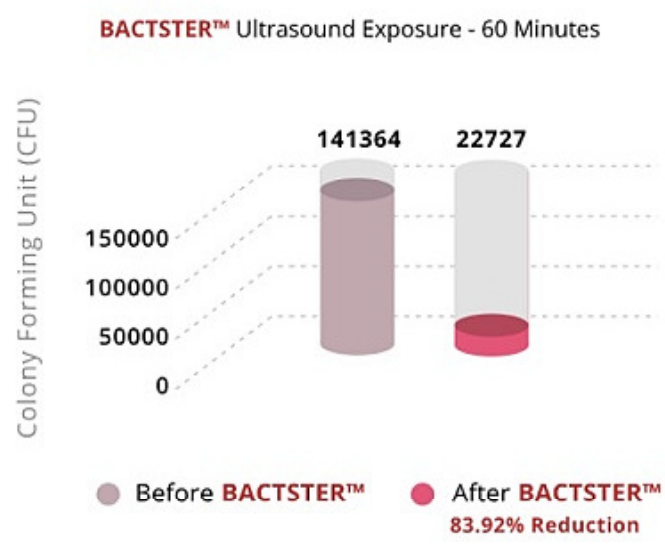
Glass Surface – Bacteria Test



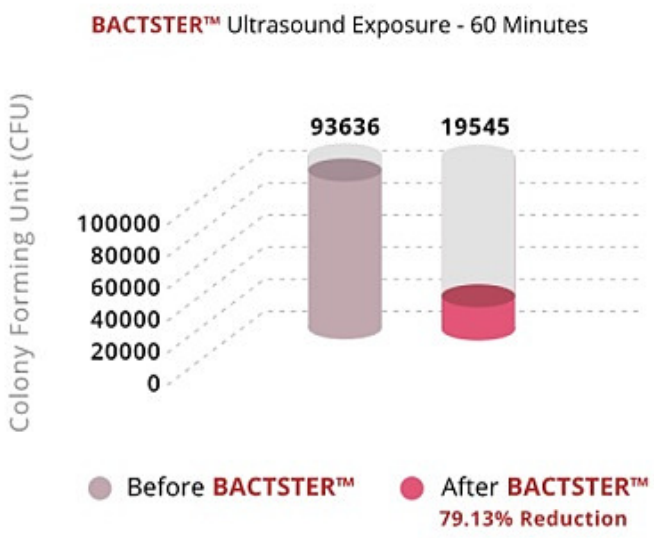
Painted Wall Surface – Bacteria Test



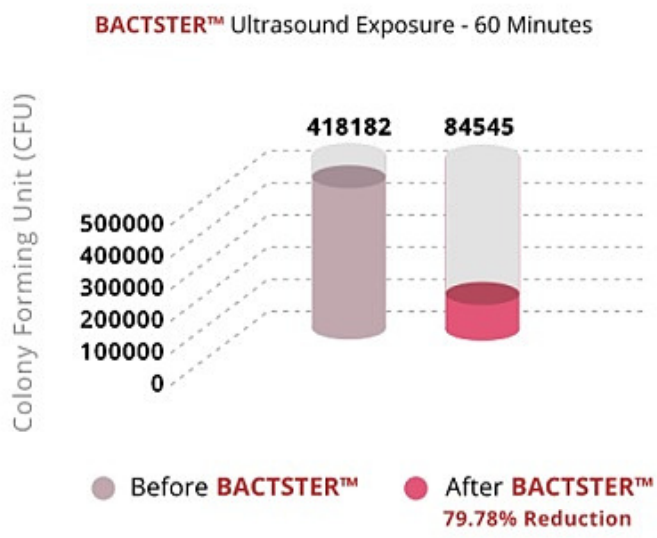
Steel Surface – Bacteria Test



Metal Surface – Bacteria Test



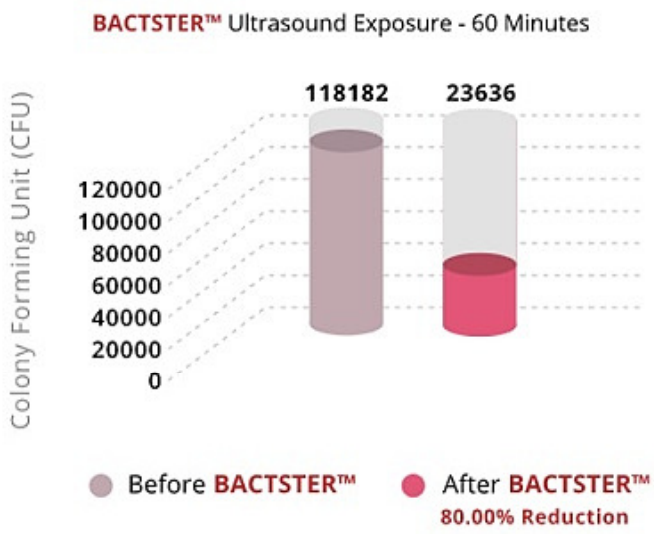
Plastic Surface – Bacteria Test



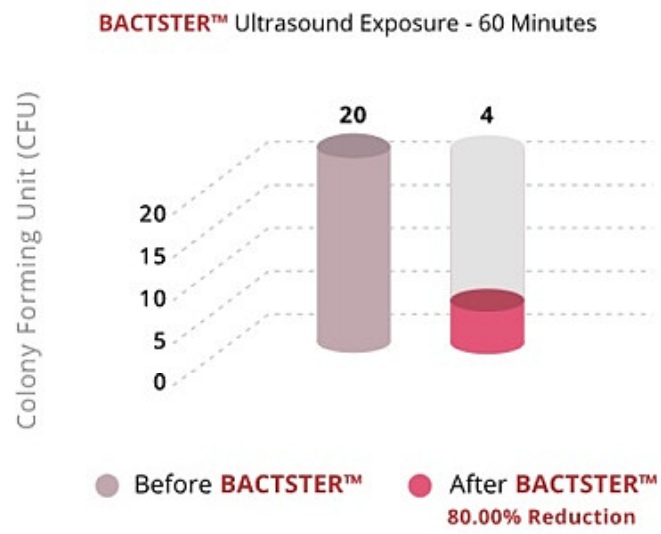
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Granite Surface – Bacteria Test



POP Surface – Bacteria Test



* All tests conducted at Bureau Veritas Labs. The results may vary subject to environmental conditions of your site.

BACTSTER comparison with existing sanitization

Features	UV/ Fumigation	Chemical Treatment	BACTSTER™ Ultrasonic Microbe Sanitizer
Human Presence	✗	✗	✓
Non Hazardous	✗	✗	✓
Non Toxic	✗	✗	✓
24 X 7	✗	✗	✓
One Time Investment	✗	✗	✓
Control Air Bacteria	✓	✓	✓
Control Surface Bacteria	✓	✓	✓
Eco Friendly / Green	✗	✗	✓
Life	UV Lamp dependent / Routine Process for Fumigation	Routine Regular Process & Human Intervention	24 X 7 Active Protection

Please note that BACTSTER™ is a standalone device and can also can be used as an adjunct method along with other modes of treatment available for microbial sanitation.

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TECHNICAL FEATURES

- 2,000 Sq. Feet of Area protection.
- Capable of supporting 20 transducers.
- Each transducer covers an area of 100 Sq. Feet.
- Auto and Manual Modes of Operation.
- Individual Drivers for all transducer.
- 6 Wave speeds, 7 Wave Densities and 3 Frequency Bands of Operation.
- Transducer Sound Output Verification an Analysis

SAFETY AND VERIFICATION

- 100% output Verification with the help of MASER Wave Analyzer Hardware and Software
- Safety Compliance as per IRPA (International Radiation Protection Association) Geneva.
- Record and Report 1/3rd Octave Band Frequiencies thereby ensuring human safety as per IRPA Guidelines.
- Record and Report Individual Frequencies along with corresponding sound pressure levels.

MODBUS OUTPUT ON RS-485

- Networkable on RS-485 with support for Hardwired third party BMS Integration via Modbus & potential free NO-NC Contacts

SOFTWARE INTEGRATION

- Seamless Integration with All new Maser CRMS Software for system health monitoring and reporting in PDF format.

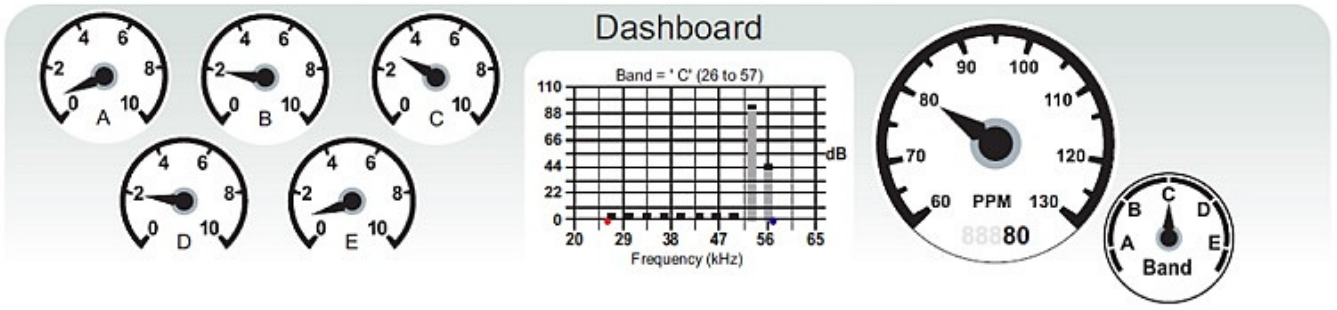
GENERAL FEATURES

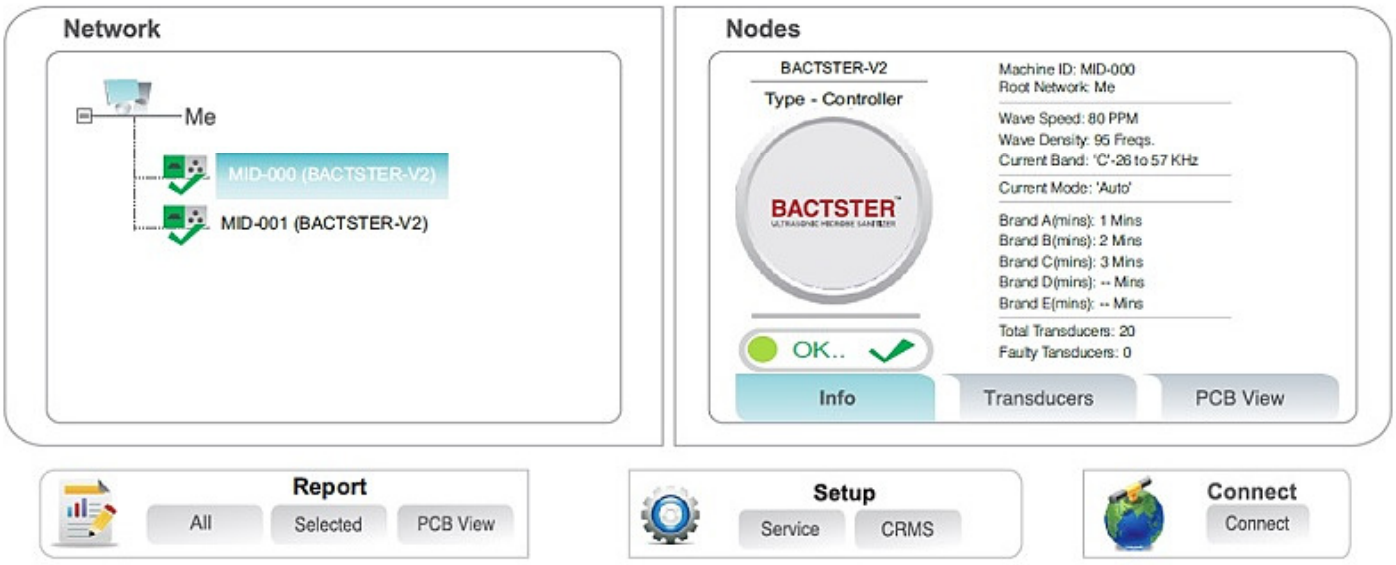
- Transformer Rating: 25 V.A. UL & CE Approved
- Power Supply: 230 V AC, 1 Ph., 50 Hz. **OR** 14 Volt AC
- Operating Frequency: Above 20 KHz and Below 60 KHz
- Dimensions (Width x Depth x Height): 260 mm x 335 mm x 80 mm
- Weight: 4.9 Kg. Approximately
- Mounting: Wall / Table Mounting
- Power Consumption: 15 Watts Approximately

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CRMS Software V2 Dashboard





Seamless integration with All new Maser CRMS V2 proprietary software that enables real time monitoring and reporting of system health.

USB Reporting



PDF Reports showing Safety Compliance, Transducer Sound Output Verification and Controller Health Status for System Commissioning and Audit Purposes.

Modbus Integration (Hardwired)

Modbus®

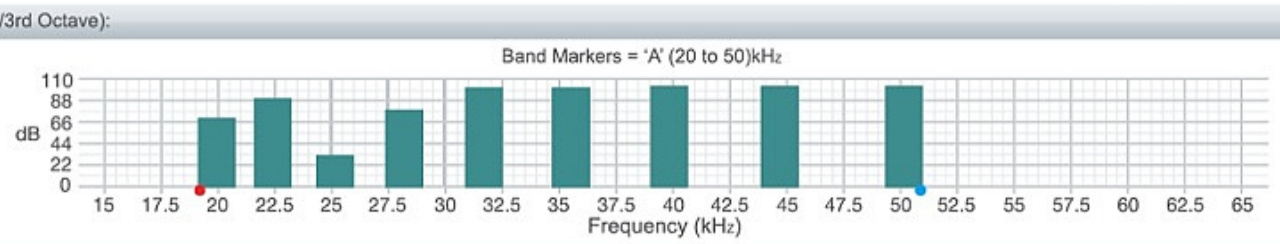
Support for Third Party BMS Integration via Modbus.

Safety First

Visual Representation of Adherence to Safety Standards for continuous exposure to one third octave band airborne ultrasound frequencies as per IRPA Guidelines (International Radiation Protection Association) Geneva

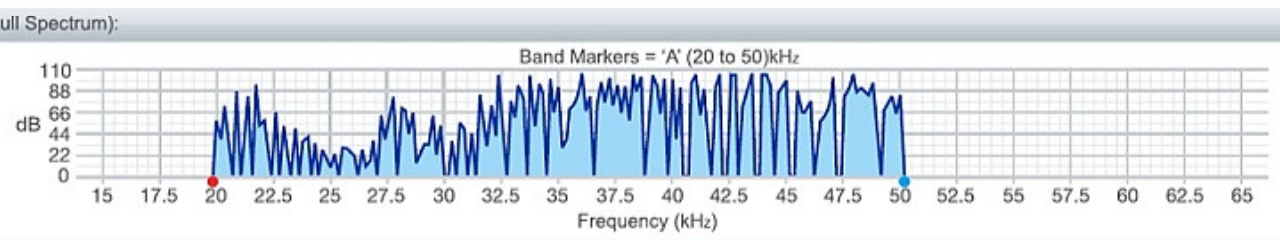
USFR-V2





Verifiable

Document and Verify ultrasound output from the transducer whereby you can record individual frequency peaks along with corresponding sound pressure levels.



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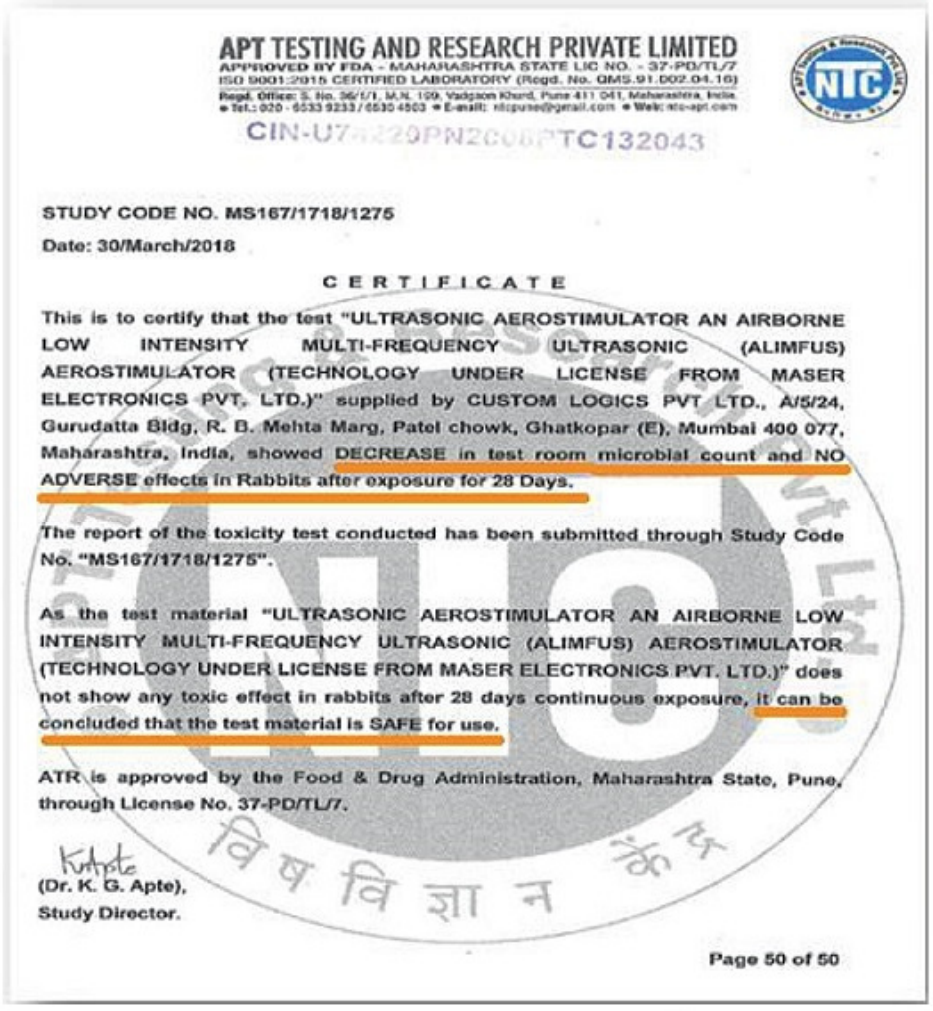
BACTSTER™ – Safe To Use

BACTSTER™ is produced strictly keeping in mind all safety aspects.

BACTSTER™ is made as per the guidelines / safety standards laid down by:

- American Conference of Governmental and Industrial Hygienists (ACGIH)
- International Commission on Non Ionizing Radiation Protection (ICNIRP)
- World Health Organization.
- Bureau of Radiation and Medical Devices, Canada and many others.
- International Radiation Protection Agency IRPA (Geneva)

These guidelines are published by INIRC on their website www.icnirp.de/ documents/ ultrasound. pdf detailing the exposure limits, frequencies, etc.



APT TESTING AND RESEARCH PRIVATE LIMITED
APPROVED BY FDA - MAHARASHTRA STATE LIC NO. - 37-PD/TL/7
ISO 9001:2015 CERTIFIED LABORATORY (Regd. No. QMS.91.002.04.16)
Regd. Office: S. No. 36/1/1, M.N. 109, Vadgaon Khurd, Pune 411 041, Maharashtra, India.
● Tel.: 020 - 6533 9233 / 6530 4503 ● E-mail: ntcpune@gmail.com ● Web: ntc-apt.com
CIN-U74220PN2008PTC132043

STUDY CODE NO. MS167/1718/1275

Date: 30/March/2018

CERTIFICATE

This is to certify that the test "ULTRASONIC AEROSTIMULATOR AN AIRBORNE LOW INTENSITY MULTI-FREQUENCY ULTRASONIC (ALIMFUS) AEROSTIMULATOR (TECHNOLOGY UNDER LICENSE FROM MASER ELECTRONICS PVT. LTD.)" supplied by CUSTOM LOGICS PVT LTD., A/5/24, Gurudatta Bldg, R. B. Mehta Marg, Patel chowk, Ghatkopar (E), Mumbai 400 077, Maharashtra, India, showed DECREASE in test room microbial count and NO ADVERSE effects in Rabbits after exposure for 28 Days.

The report of the toxicity test conducted has been submitted through Study Code No. "MS167/1718/1275".

As the test material "ULTRASONIC AEROSTIMULATOR AN AIRBORNE LOW INTENSITY MULTI-FREQUENCY ULTRASONIC (ALIMFUS) AEROSTIMULATOR (TECHNOLOGY UNDER LICENSE FROM MASER ELECTRONICS PVT. LTD.)" does not show any toxic effect in rabbits after 28 days continuous exposure, it can be concluded that the test material is SAFE for use.

ATR is approved by the Food & Drug Administration, Maharashtra State, Pune, through License No. 37-PD/TL/7.

(Dr. K. G. Apte),
Study Director.

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Clinical toxicity test report for **BACTSTER™** performed at "FDA APPROVED LAB" APT Testing and Research formerly known as National toxicology center, PUNE.

AN UL REGISTERED ISO 9001:2015 FIRM | ICMED 13485 | ICMED 9000 | QM - 033

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A-409, Kailas Business Park, CTS No. - 1/7&1/8 A, Veer Savarkar Road, Park Site,
Vikhroli (W), Mumbai - 400 079 (India).

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