

AKSHAYA INNOTECH

Innovating for a better world..



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About Us:

Startup Biotechnology and Eco Solutions Company working on novel, safe and economical solutions for

- a. Drinking Water
- b. Domestic and commercial water treatment
- c. Pollution abatement
- d. Environment
- e. Waste Management
- f. Chemistry
- g. Agriculture



- ❑ Our Aim and vision is to provide clean and safe water to all
- ❑ This will help improve the overall health of the people in the country irrespective of their social and economic status. Water that is clean safe and devoid of pathogens and allergens.

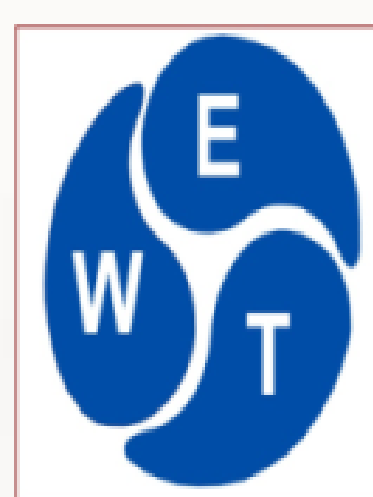
Team Akshaya InnoTech Bio:

Core Team:

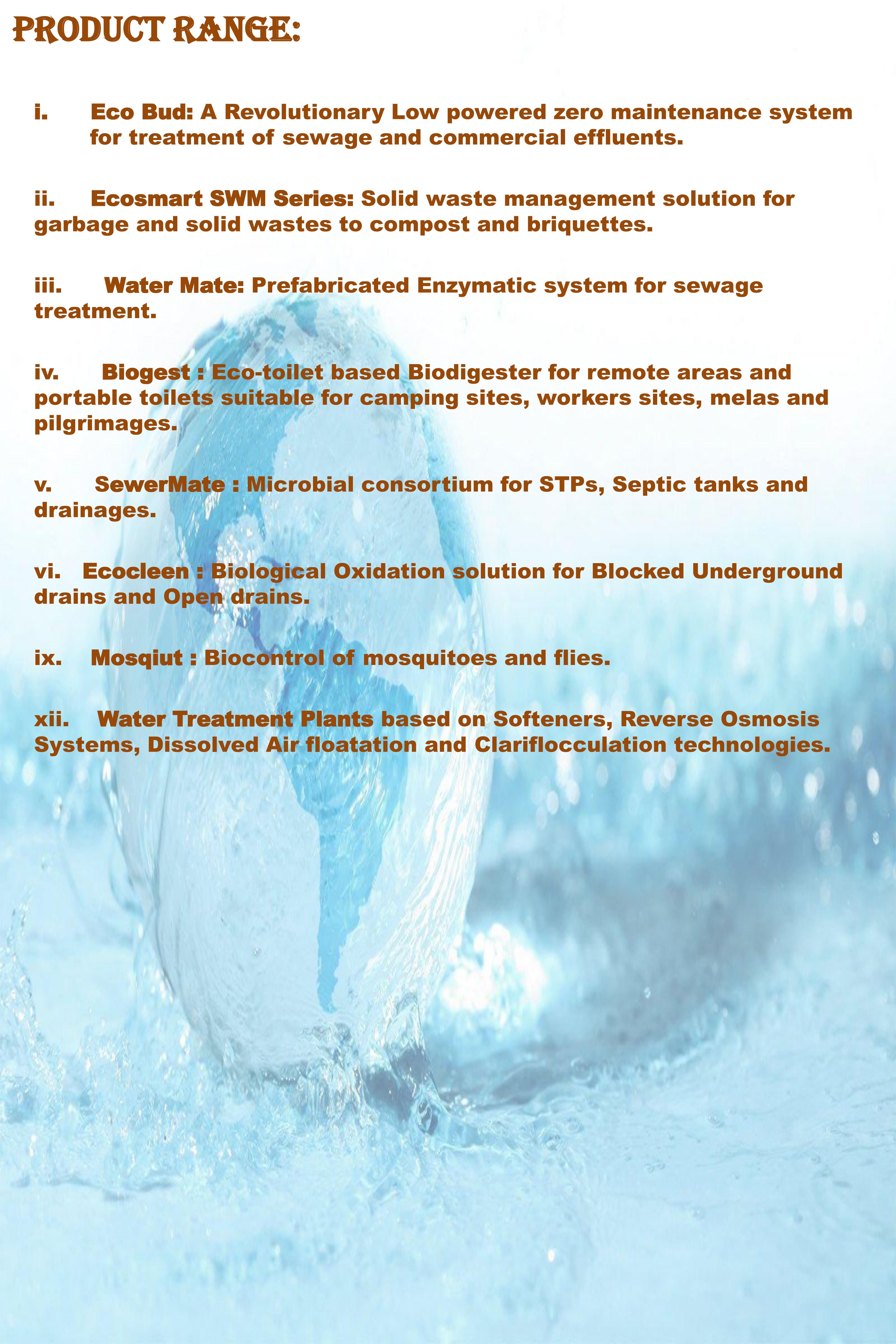
- V R Sarath Babu, Ph.D. (Biotechnology)
- Mr. Satish Kumar, B Tech Chemical Engg, M Tech Nanotechnology.
- Y. Srikanth , B.Tech., Mechanical Engg.
- B. Ravi Teja Baggam, B Tech Mechanical Engg, MBA Project Managament

Technical Advisory Team:

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Prof. Sanjukta Patra, Biotechnology and Bioengineering, IIT, Guwahati
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SRKR ENGINEERING COLLEGE
(Autonomous)
Recognised as Scientific and Industrial Research Organisation



PRODUCT RANGE:

- i. **Eco Bud: A Revolutionary Low powered zero maintenance system for treatment of sewage and commercial effluents.**
- ii. **Ecosmart SWM Series: Solid waste management solution for garbage and solid wastes to compost and briquettes.**
- iii. **Water Mate: Prefabricated Enzymatic system for sewage treatment.**
- iv. **Biogest : Eco-toilet based Biodigester for remote areas and portable toilets suitable for camping sites, workers sites, melas and pilgrimages.**
- v. **SewerMate : Microbial consortium for STPs, Septic tanks and drainages.**
- vi. **Ecocleen : Biological Oxidation solution for Blocked Underground drains and Open drains.**
- ix. **Mosqiut : Biocontrol of mosquitoes and flies.**
- xii. **Water Treatment Plants based on Softeners, Reverse Osmosis Systems, Dissolved Air floatation and Clariflocculation technologies.**

End to End Water Treatment Solutions



Alkaline Water System



Domestic Reverse Osmosis System



Commercial RO Plants: 1 to 1000 KLH



Water Softening Systems



Dissolved Air Floatation



Ultra-filtration System



Raw Water Treatment and clarification Systems

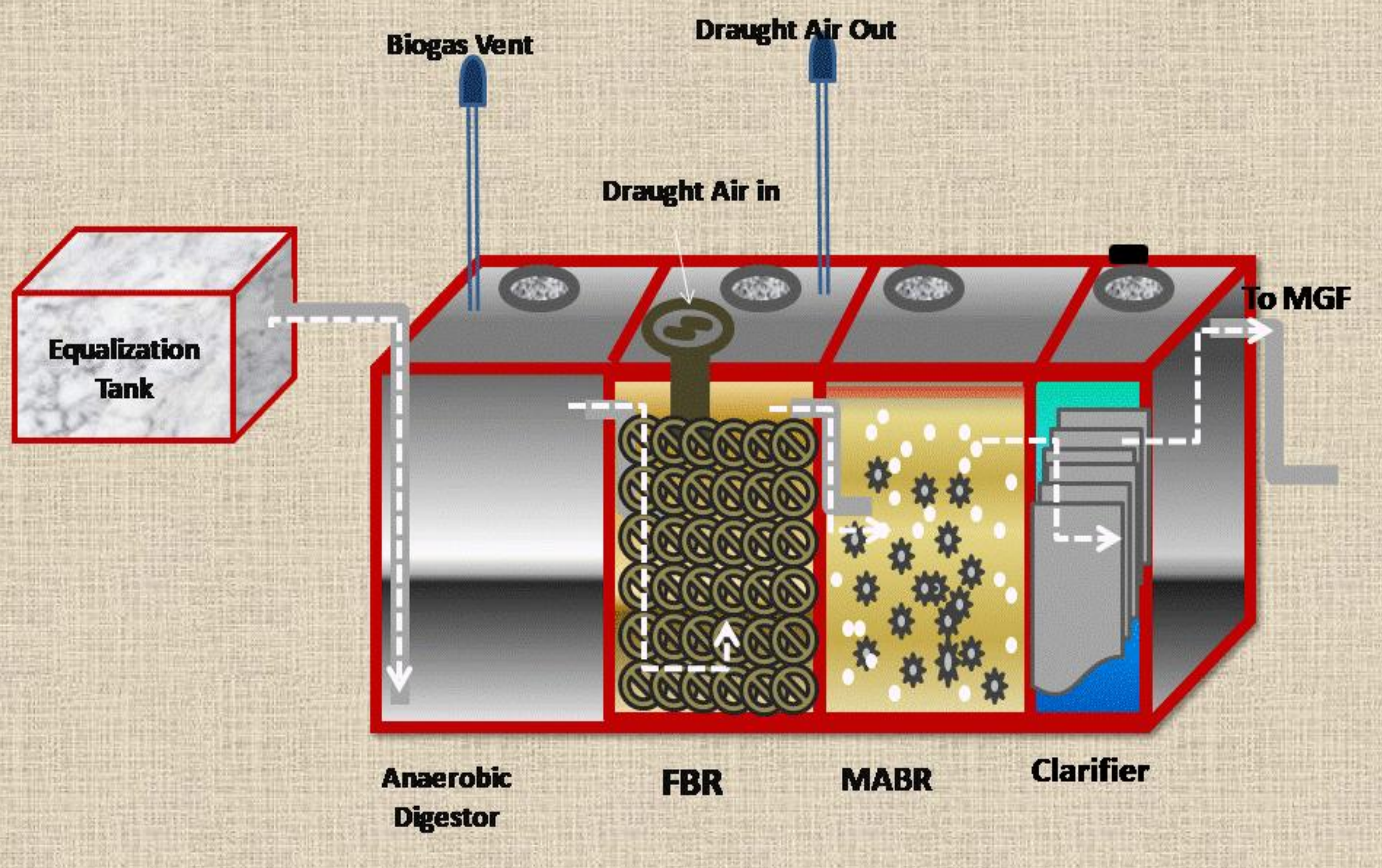


WFI System

Domestic and Commercial Solutions

A Disruptive Model in Treating the Sewage –

WaterMate



Advantages:

- No moving parts.
- No Motors and pumps.
- Zero electricity
- Shut off and shut on possible
- Ready to install and use
- Removes BOD, COD, TSS, Pathogens and generates clean water.
- Zero maintenance.

Urinex

- Saves water
- Save time, and money.
- No maintenance required.
- No doors and pathogens.
- Can be retrofitted into any existing or new urinals.
- Frees blocks and films on toilet seats.
- All natural ingredients convert uric acid directly to Nitrogen.
- Biofilm formation is completely eradicated.
- Eco-friendly and completely Biodegradable.
- Simple to install.

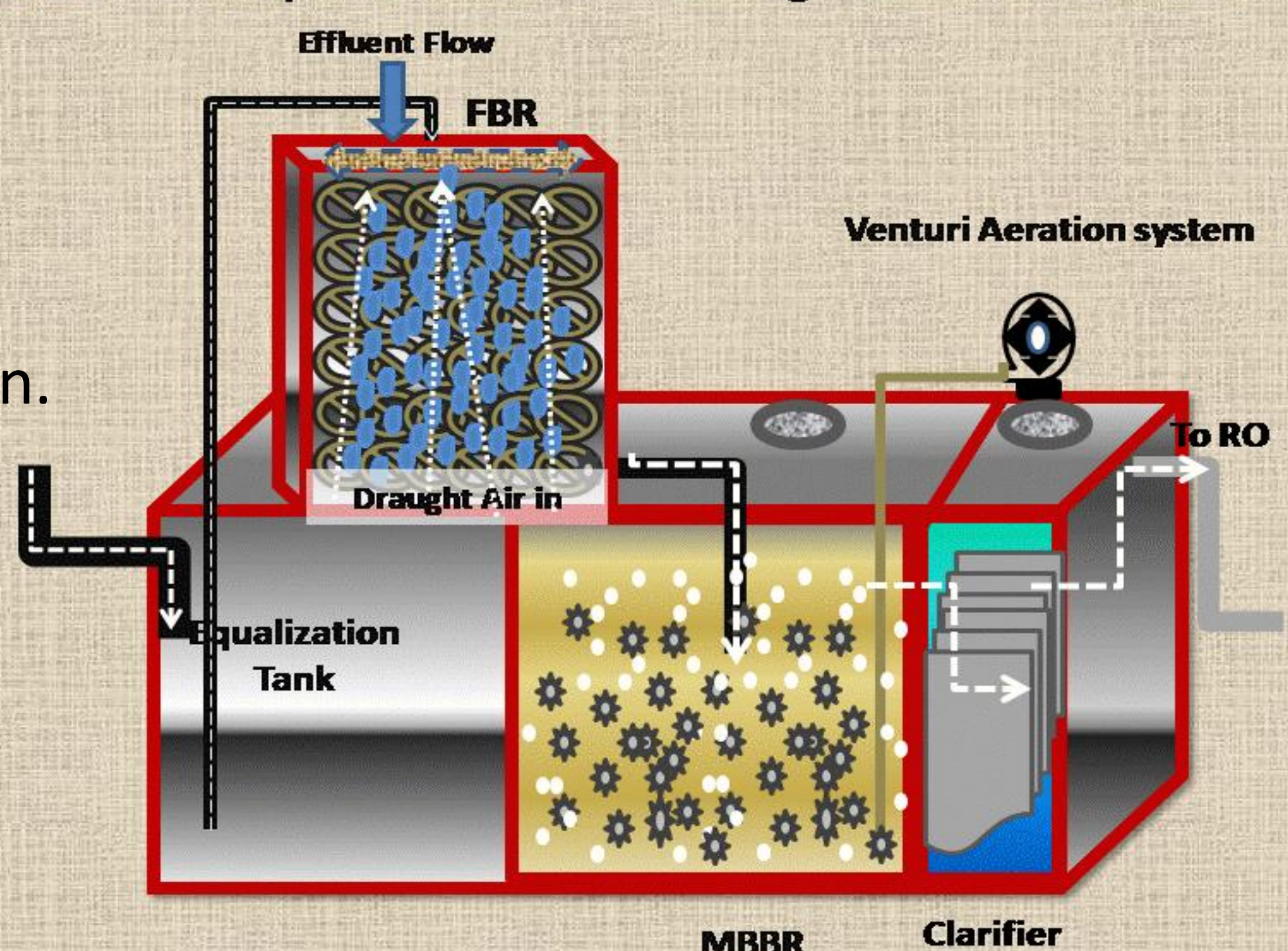


Urinex Blocks placed in traditional urinals.

Advantages:

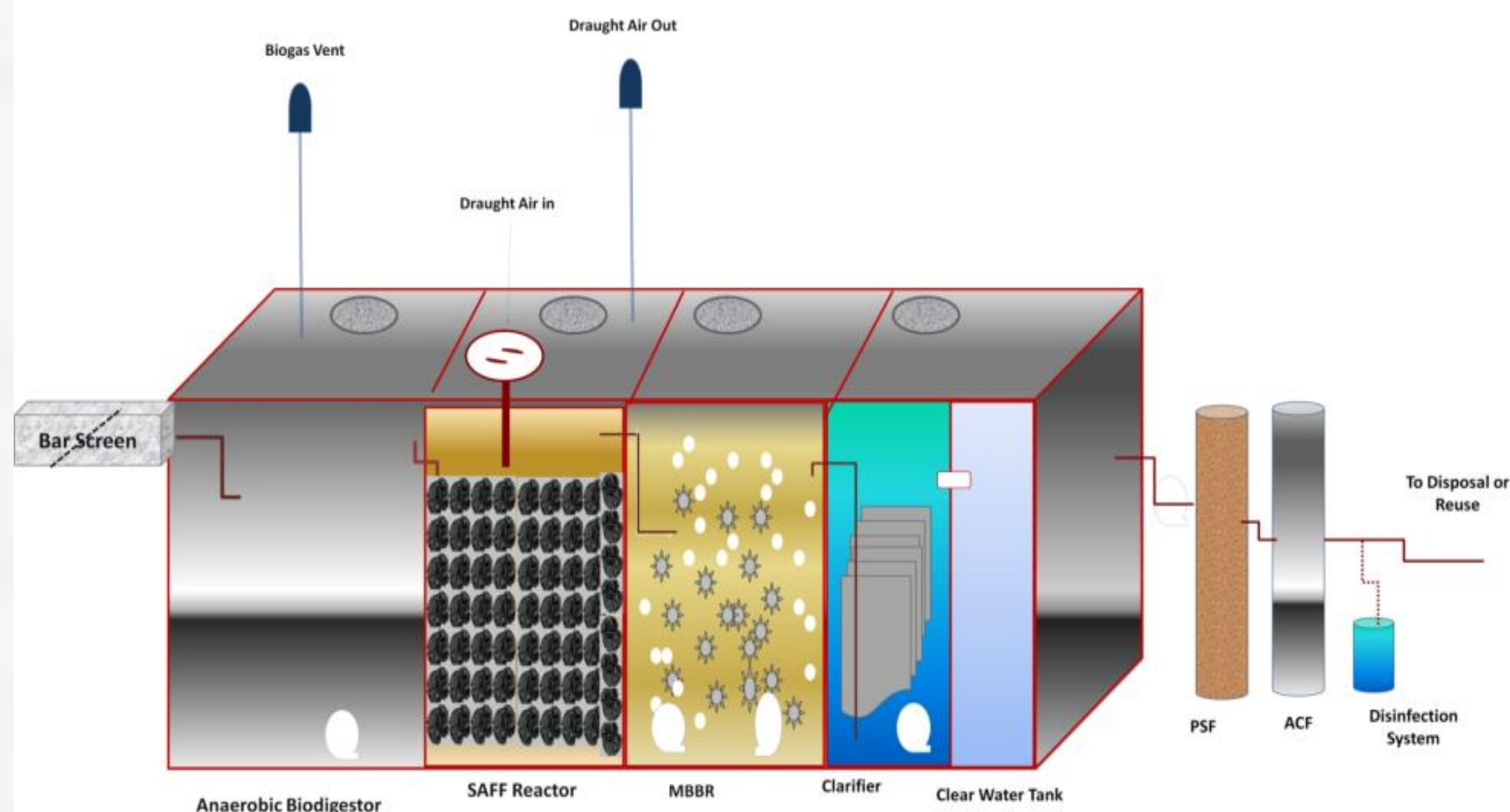
- Saves more than 50% electricity on aeration.
- Shut off and shut on possible
- Ready to install and use
- Removes BOD, COD, TSS, Pathogens and generates clean water suitable for gardening and washing.
- Minimum maintenance.
- No chemicals required.

EuTreat-A Disruptive Model in Treating Industrial Effluents



Waste water Treatment Systems

A Disruptive Model in Treating the Sewage – EcoBud Works on Natural Draft Aeration with Low electricity.



Salient Features of EcoBud STP:

- Compact, has minimum Moving Parts,
- Energy Recovery in first stage of treatment while removing over 30-40% of the BOD/COD.
- Tanks in Civil in RCC is placed below the ground level.
- The system can be run on an ON-OFF Mode.
- Automatic Operation through Control Panel.
- Minimum Manpower requirement..

Working of EcoBud STP:

- The first stage of treatment provides for recovery of biogas while removing over 30-40% of the BOD/COD. Equalization tank utilized for the same.
- Second Stage consists of a Submerged Aerobic Fixed Film (SAFF) Bioreactor, which allows for a very high MLSS (High Microbial loading rate in a compact space). A natural draft aeration system (Ventury aeration) provides the necessary aeration for the microbial consortia in the fixed film bioreactor. The honeycomb structure of the SAFF Bioreactor provides longer paths for the air bubbles to travel allowing for a very high oxygen transfer between the sewage and the microbial biofilm.
- This is the unique feature of the **Eco-Bud system** which enables a very high rate of biodegradation of organic pollutants in the sewage. Another 45-50% of the organic loads are removed in this stage reducing the power requirement by 30-40%.
- A turbine blower based aeration system is provided in the next MBBR stage to remove the remaining organic loads. The blower is a low power consuming, high efficiency equipment, and the aeration grid is a non-clog type system.
- All other tanks of STP in RCC can be built below the ground as required.
- A metered dosing system is provided to have better control on dosing rate and to avoid the wastage of chemical.
- All electro-mechanical equipments are proposed with standby units. Pumps, blowers shall be operational in auto mode through level controllers, timers etc. for easier operation.
- The system can be run on an ON-OFF Mode.

Advantages of EcoBud STP:

- **Works on very low power (40-50% less electricity used)**
- **Zero maintenance**
- **Minimum chemical intervention**
- **Zero sludge generation and Zero odors**
- **100% water recovery and reuse.**
- **Capable of handling shock loads.**
- **Customized Microbes with high Enzymatic activity.**
- **Scope for energy recovery through Biogas.**
- **Faster Return on Investment.**

S.No.	Feature	Eco-Bud	Conventional Systems
1	Space Requirements	20-30% Less than Existing systems	Large
2	Resource Recovery (Biogas)	High	Nil
3	Energy Requirements	Very Low	High
4	Carbon Footprint	Very Low	High
5	Obnoxious Odors	Nil	High risk if not run continuously.
6	Maintenance	Ultra Low	High
7	Chemicals Requirement	Low	High
8	Moving Parts	Minimum	All moving parts
9	Water Reuse and Recovery	100%	Only for gardening
10	Sludge Generation	Less than 2%	Very high
11	Noise Pollution	Zero	High
12	Operator/Surveillance requirement	Minimum	High
13	Sustainability	100%	--
14	Pathogens Reduction	>98%	50-60%
15	ON-OFF Mode of operation	Yes	No
16	Return on Investment	Fast	No
17	Energy Requirement	70% lower than exiting systems like MBBR , MBR and SBR System	Very High

Other Solutions



Effluent Treatment Plants



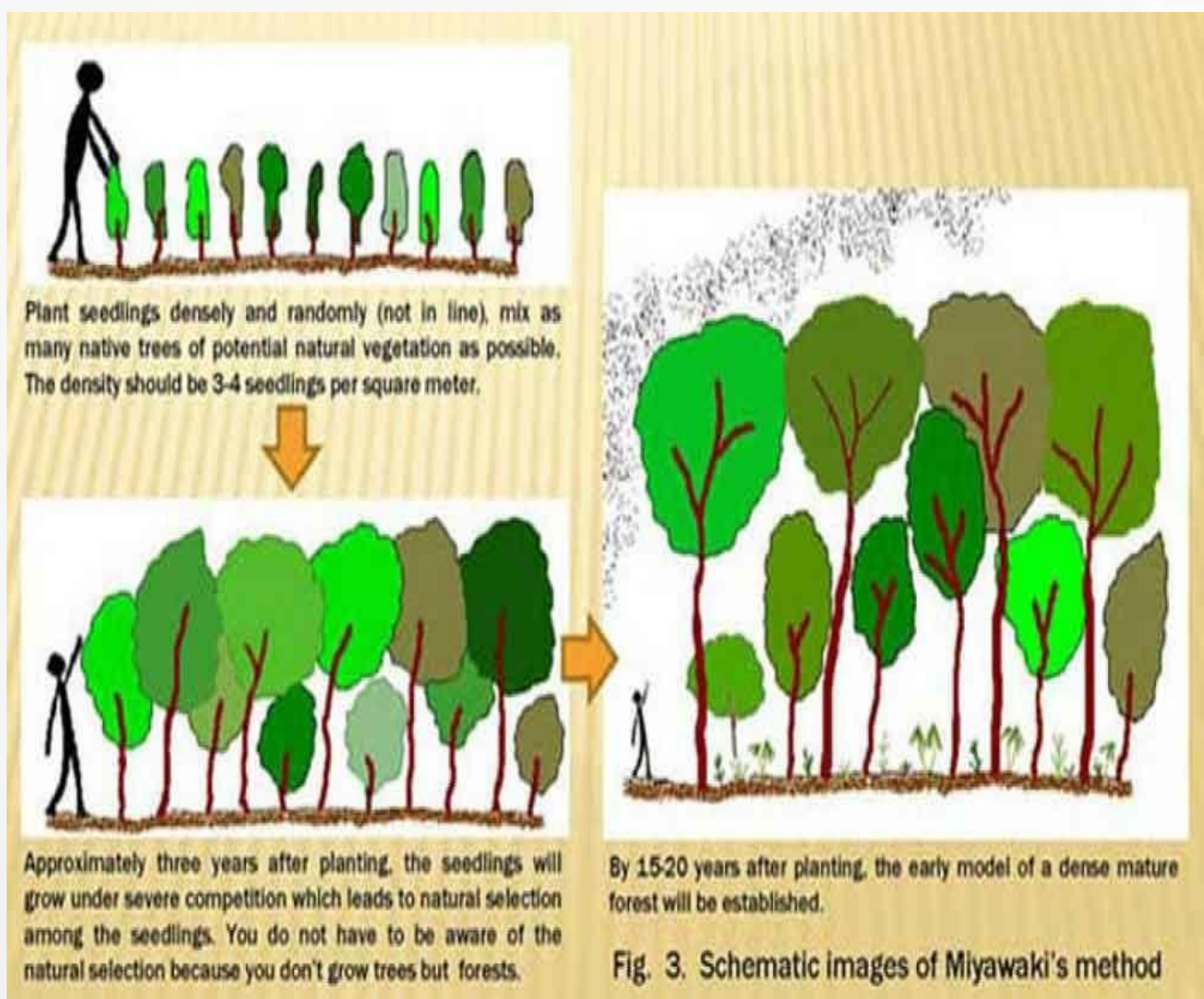
Pre fabricated STP



STP Based on REED Bed Technology



Zero Liquid Discharge Systems



Miyawaki Forests Projects



Solid Waste Management



Ecosmart SWM Series:

A hassle free solution for domestic Solid wastes management.

Salient Features :

- No pre-segregation is required.
- Inbuilt shredding system opens up the polythene and boxes.
- In-built enzyme dosing system doses microbial inoculums and enzymes to hasten the process of composting.
- Organic part of the solid waste converted to high quality compost within 24 hours.
- Compost Segregation done to separate non biodegradable matter.
- Composted material stored for maturation.
- Undegraded solids sent to a compactor machine to prepare Blocks.



Working of Ecosmart SWM Series:

- A. Feeding of un-segregated organic waste into composting machine.
- B. Shredding of waste and adding Bio-culture as suggested.
- C. Processing of waste into compost machine.
- D. Segregation of compost and undegraded wastes.
- E. Ready compost for use.
- F. Non-biodegradable wastes compacted into blocks.



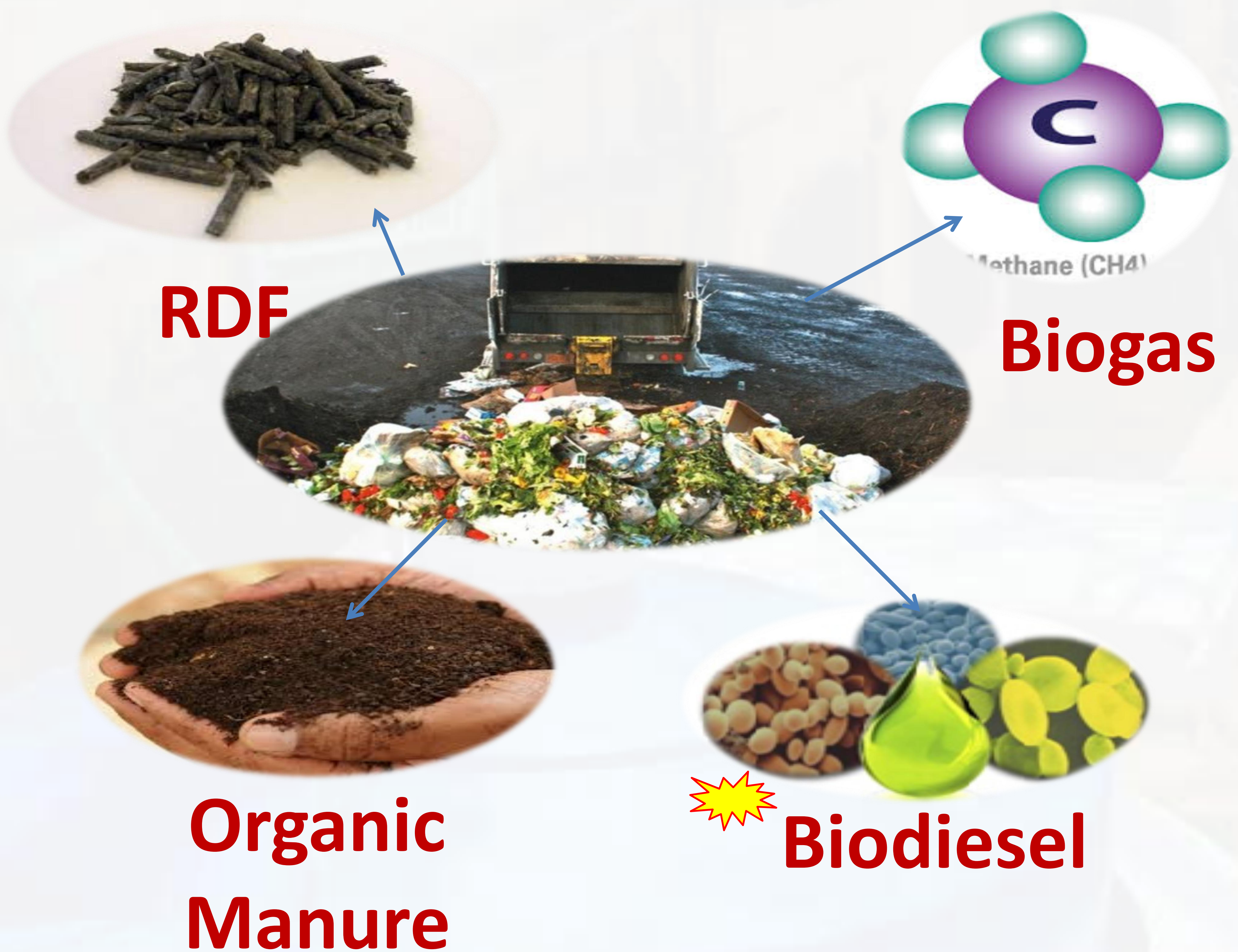
Advantages:

- a. Low power Requirement
- b. Minimal Manpower requirement
- c. Single structure, completely enclosed modular system with Complete automation.
- d. No Physical Handling of equipment.
- e. Valuable Compost Recovered.
- f. Low Investment and Requires Low space.
- g. No risk of pests, flies and rodents.
- h. No risk of disease contamination and spread.
- i. Zero Odor and zero nuisance.
- j. Aesthetically designed.
- k. All parts made of high quality Mild steel, and contact parts of SS-304.
- l. Meets ASTM quality norms and IE-54 Safety norms.

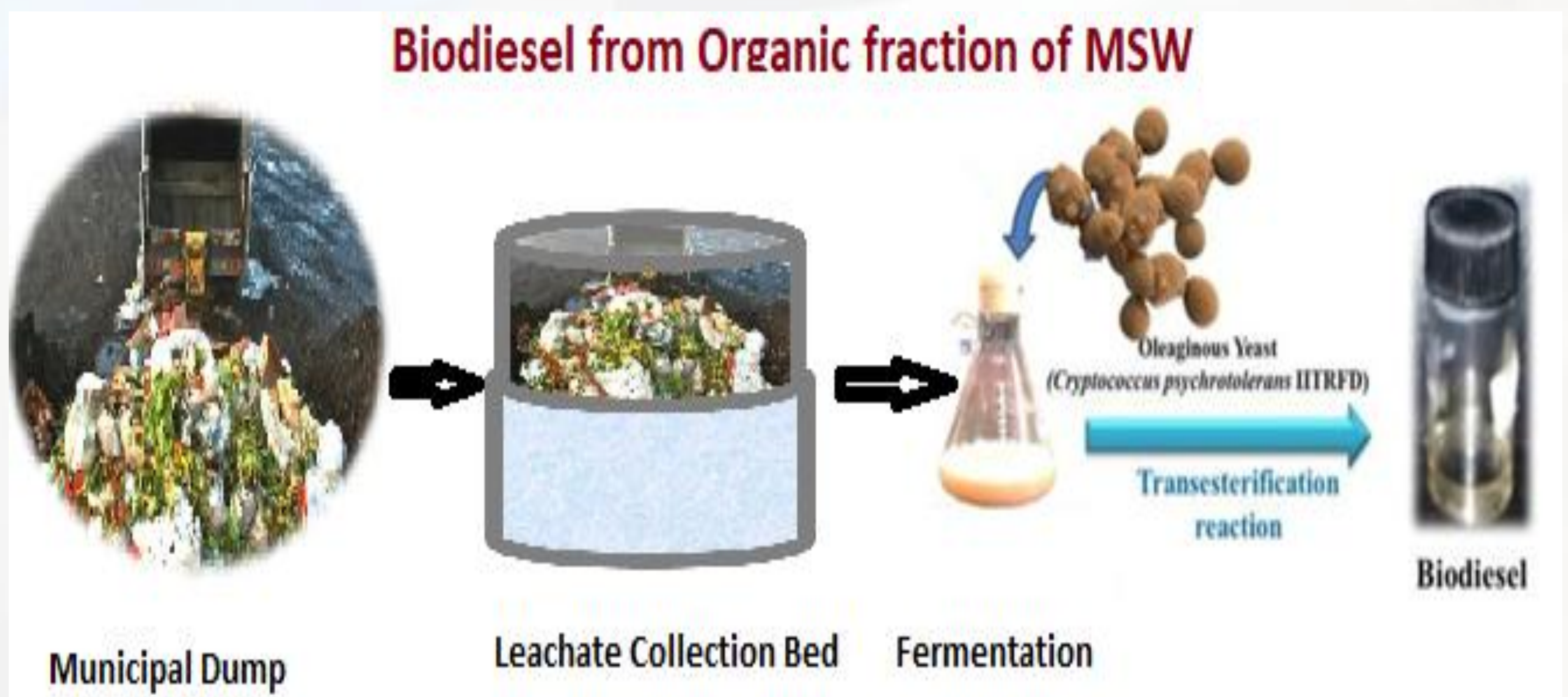
APPLICATION OF Ecosmartn SWM Series Equipment:

- a) Vegetable and Fruit markets.
- b) Corporate canteens.
- c) Hotels and resorts, Restaurants,
- d) Parks and stadiums.
- e) Hospital, school, Colleges and
- f) Military canteens, Mess.
- g) Railway stations.
- h) Highway service centers.
- i) Temples and other religious institutions.
- j) Airports, Manufacturing facilities for foods.
- k) Supermarkets and food distribution centers.
- l) Municipal Councils and corporations.
- m) Group Housing societies etc.

Municipal Solid Waste Management



MSW Based Biorefinery

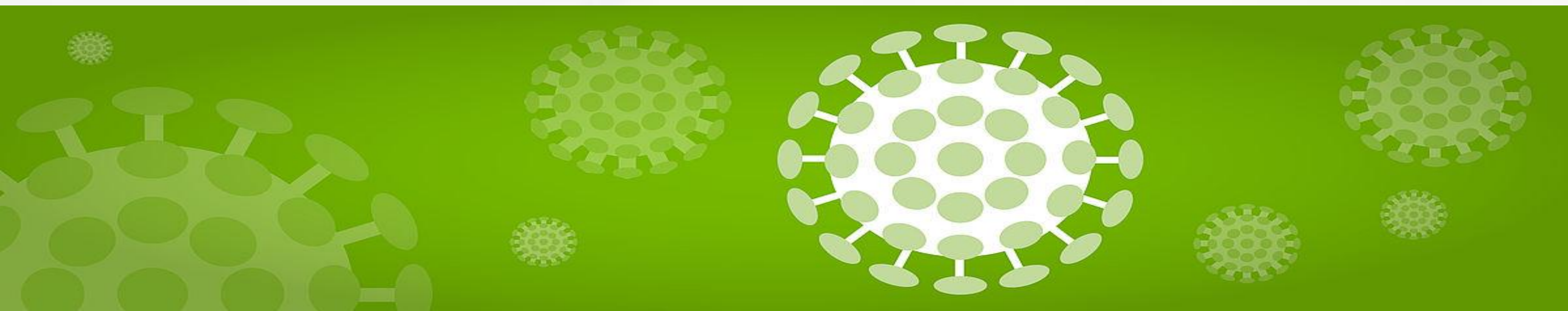


Covid Solutions

About Us:

In the wake of the current crisis of Covid-19, We have developed a system for providing One stop solution for procurement of Covid essentials for the smooth reopening and operations of

- a. Government Bodies
- b. Industries
- c. Private Organizations
- d. Commercial Establishments
- e. Domestic Household sector.



Effective against
Bacteria, Antibiotic
Resistant bacteria,
Tubercle Bacillus,
Fungi, Viruses,
incl HCV



Enriched with the power of Organic Lemon Grass Oil with
Antiviral CITRAL.

The all natural phytoextract based sanitizer not only kills viruses, but also softens skin, provides a long lasting effect, pacifies moods, and gives a long lasting protection from viruses.

Antiviral molecules such as citral, linalool, triterpenoids and anti oxidants kill all viruses and bacteria.



Each 100 ml contains:

Ethyl Alcohol (96%)	:75 % v/v
Glycerine (99%)	: 1.45% v/v
Hydrogen Peroxide (3%)	: 0.125 % v/v
Moisturizer	: 1.5% v/v
Fragrance	: 1% v/v
Distilled Water	: Q.S.

Features:

- Enriched with the power of Organic ally Grown Lemon Grass, Tulsi and Calendula essential oils with Antiviral CITRAL. , Triterpenoids, Polyphenols , Vitamin-E and Anti oxidants.
- Organic Lemon grass containing Citral content of >76%, kills bacteria, fungi, Viruses including Covid and Respiratory pathogens.
- Calendula and Lauric acids, Triterpenoids, urizer provide additional protection from viruses.
- Leaves subtle fragrance on skin for longer time.
- All natural substances used.
- No chances of allergic reactions.
- Soft on skin and soothe mind.



Bulk Packs and Custom Labelling Available on Request.

Automated Disinfection Dispension Systems

Automatic Hand Sanitizer Spray Dispenser.

Features.

- Automatically Senses the Hand.
- Dispenses around 0.8 – 1.5 ml per person.
- Completely spreads the sanitizer.
- Reduces sanitizer wastage.
- Quick response time.
- Cost effective.



Vehicle Sanitizing System:

Features.

- Automatically Senses the Vehicle
- Completely spreads the sanitizer in all directions.
- Full vehicle surface is sanitized within 2 minutes.
- Reduces long Queues and Sanitizer wastage.
- Quick response time.
- Cost effective.



Whole Room Sanitizing System:

Features.

- Complete Room Sanitized using Advanced Disinfectants.
- Requires less manpower.
- Completely spreads the sanitizer in all corners and walls
- Complete Room is sanitized within 30-40 minutes.
- Can be automated to schedule the disinfection daily.
- Minimum Human Intervention needed.
- Can be operated and monitored remotely.



PhytoSan:

A Multi Purpose PolyHerbal Disinfectant Wash Concentrate.

Advantages :

- a. 100% Natural phytoextract based sanitizer kills viruses, bacteria, but also softens skin, provides a long lasting effect, pacifies moods, and gives a long lasting protection from viruses.
- b. Antiviral molecules such as citral, linalool, triterpenoids and anti oxidants kill all viruses and bacteria.
- c. Can be used as a multi purpose disinfectant for Fruits and Vegetables, Floor, Door Handles, Furniture, as an additive for washing machine detergent.
- d. Best to disinfect and deodorize face masks and Aprons.
- e. 100 % Biodegradable, Safe to Children, Pets and Animals.
- f. Non Allergic, Safe and sublte.

Each 100 ml contains Ethanolic Extracts of:

Calendula Extract	: 1.5 % w/v
Lemon Grass Oil	: 1.5 % w/v
Tulsi Extract	: 1.5% w/v
Turmeric Essential Oil	: 1.5% w/v
Camphora	: 1% w/v
Durva Extract	: 12% w/v
Emollients	: Q.S.
Surfactants	: Q.S
Distilled Water	: Q.S.



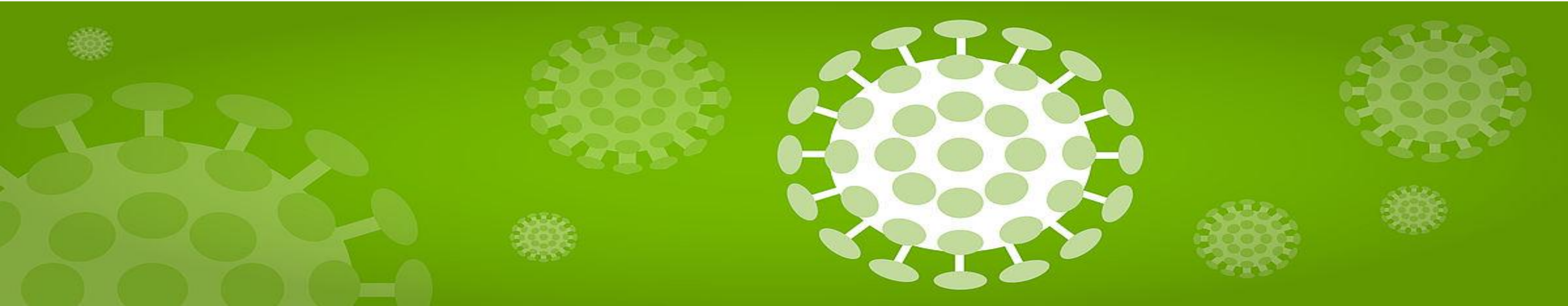
Features:

- a. Enriched with the power of Organic ally Grown Lemon Grass, Tulsi and Calendula essential oils with Antiviral CITRAL. , Triterpenoids, Polyphenols , Vitamin-E and Anti oxidants.
- b. Organic Lemon grass containing Citral content of >76%, kills bacteria, fungi, Viruses including Covid and Respiratory pathogens.
- c. Calendula and Lauric acids, Triterpenoids, urizer provide additional protection from viruses.
- d. Leaves subtle fragrance on skin for longer time.
- e. All natural substances used.
- f. No chances of allergic reactions.
- g. Soft on skin and soothens mind.

Usage Instructions:

For washing aprons and masks	: 10 ml per Bucket of water.
For washing machine	: 20 ml per basket of 7-9 Kgs.
For Cleaning floors	: 10 ml per bucket of water
For Cleaning surfaces	: Dilute 1 part in 2 parts water and spray on surfaces
For Disinfection Tunnels	: 1 liter in 50 liters of water.

Available Pack Sizes: 1 Liter, 5 Liters, 10 Liters, 20 Liters, 50 Liters.



Cleaning Chemicals and Supplies

Naphthalene Balls

Composition:

Naphthalene or Dichloro Benzene : 99.5% W/w
Color : Q.s

Available in white balls or colored balls in 20-25 mm sizes.



White Naphthalene Balls

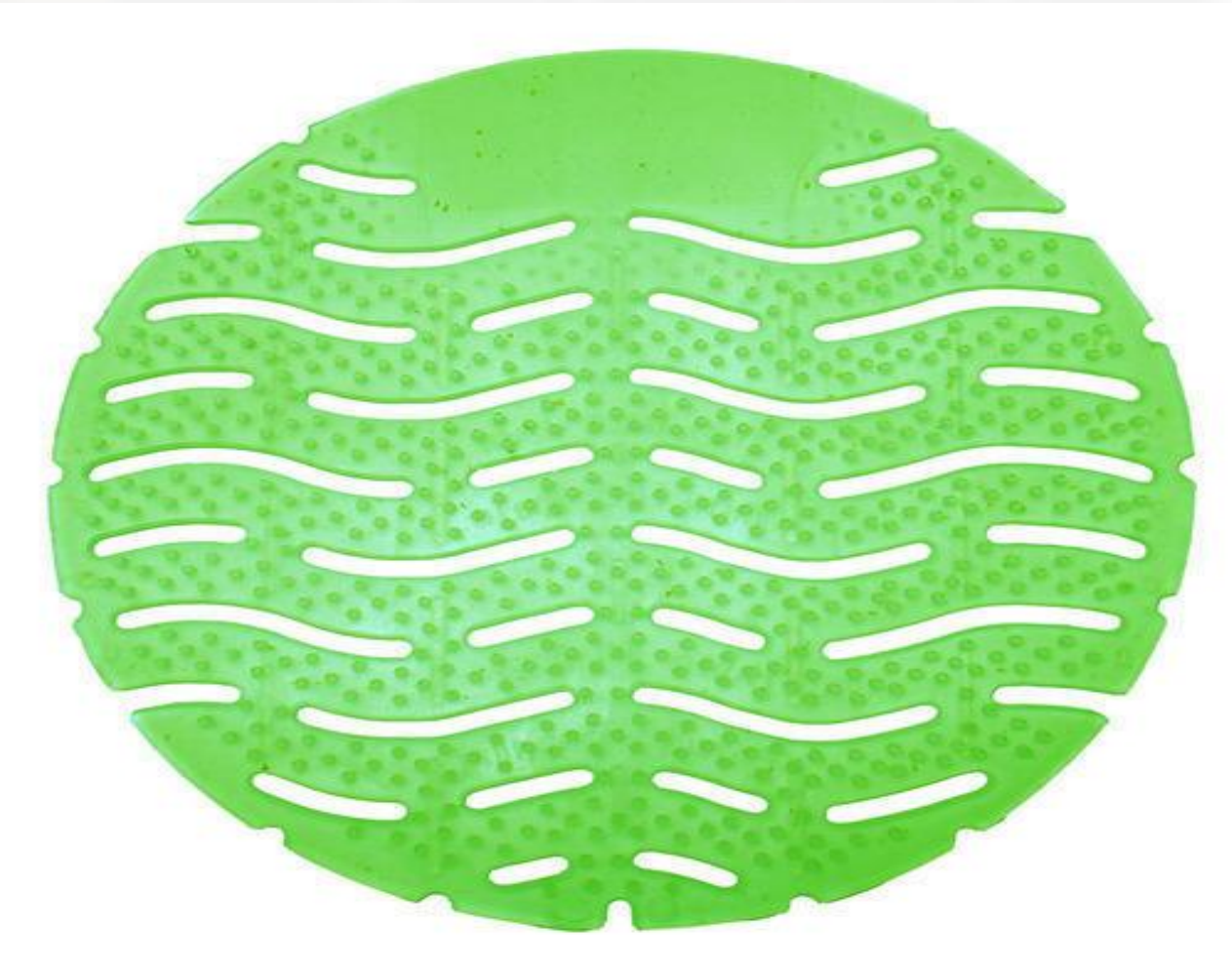


Colored Naphthalene Balls

Urinal Splash pads:

Specification:

Active Ingredients: Enzymes, Flavor, Urease inhibitors, Nano Particles
Polyvinyl Material : Biodegradable Polyvnyl Polymer.
Color: Green, Pink, Indigo, Yellow.
Deodorizer : Lemon, Mint, Lavender .
Stability : Fragrance lasts till one month.



Anti Splash pad for Urinal with deodorizer

Available in different shapes and colors as per customer specifications.

Surface Cleaners (Disinfectant) :

Features:

- Complete Germ Killing Effect
- Safe to Humans and Pets
- Safe to Environment
- Completely Biodegradable
- No Environmental Toxicity.

Composition:

Quaternary Ammonium Compounds : 40% w/v
Isopropyl Alcohol : 5%
Ethyl Alcohol : 10 %
Water : Q.s.
Color : Q.S
Specific Gravity : 1.15 g/ml
Fragrance : Lemon, Lavender, Jasmine, Mint
Pack Size : 1 Lit, 5 lits, 10 Lits & bulk packs



GeoMate Sanitizing Floor Cleaner 1 liter pack

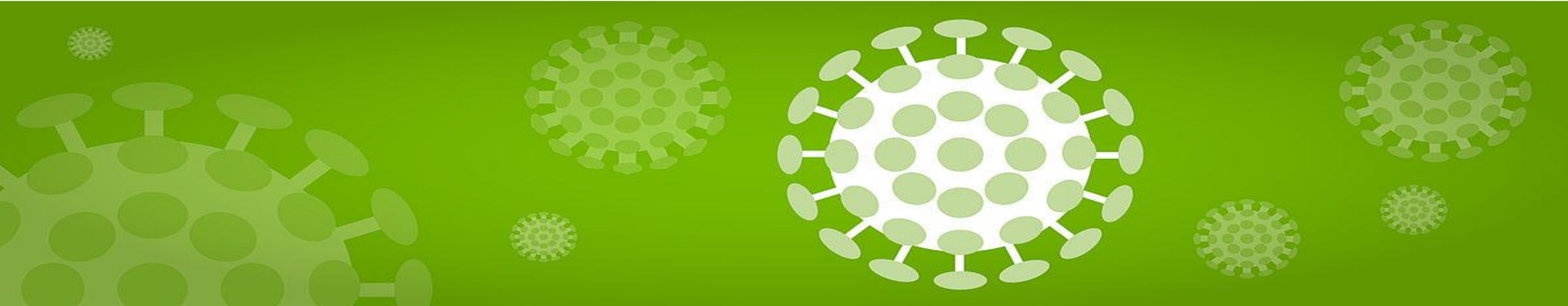
Sodium Hypochlorite (Disinfectant) :

Features:

- Powerful Chlorine with Germ Killing Effect

Composition:

Sodium Hypochlorite : 13-14% w/v
Water : Q.s.
Color : Pale Yellow
Specific Gravity : 1.15 g/ml
Pack Size : 5 lits, 30 Lits, 50 Lits and Tankers





Come.. Let us Build a sustainable tomorrow



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