

EffuTreatTM
Bioculture

MTM
M.B.PL

MOTHEREARTH
BIOTECH PVT. LTD.

The background of the entire page is a vibrant green gradient. In the lower half, there is a dynamic splash of water with numerous bubbles and droplets. A small, realistic globe of the Earth is positioned in the upper right quadrant of this splash area. The word "SUGAR" is prominently displayed at the bottom center in a large, bold, white font with a thick green outline. The letters of "SUGAR" are filled with a green, grass-like texture.

SUGAR

SOURCE & PROBLEMS OF WASTEWATER IN SUGAR INDUSTRY

The primary source of sugar industry waste water is the result of cleaning activities. These include the washing of the milling house floor, as well as the various divisions of the boiling house such as evaporators, clarifiers, vacuum pans, and centrifugation processes. These operations generate a significant volume of wastewater. Additionally, the periodic cleaning of heat exchangers and evaporators using NaOH and HCl to remove scales on the tube surface contributes to the presence of both organic and inorganic pollutants in the wastewater. Furthermore, wastewater is also generated from boiler breakdowns, spray pond overflow, and the contamination of condenser cooling water with cane juice, which is then discharged as wastewater. The wastewater originating from the sugar industry typically comprises carbohydrates, nutrients, oil and grease, chlorides, sulphates, and heavy metals. It is distinguished by its brown hue, acidic nature, elevated temperature, substantial biochemical oxygen demand (BOD), considerable chemical oxygen demand (COD), olfactory concerns, total solids content, and a significant proportion of dissolved organic and inorganic substances.

There are two distinct biological processes employed in the treatment of wastewater within the sugar industry. Both the biological anaerobic and aerobic treatment processes are suitable for reducing soluble organic matter in sugar industry wastewater due to its high content of sugars and volatile fatty acids, which are easily biodegradable.

EffuTreat SUGAR

EffuTreat Sugar is a customized remedy designed to address the distinct obstacles faced by sugar industries. The microbial species have been adapted to accommodate the primary chemicals utilized in the sugar industry. Additionally, the bacteria have been acclimated to align with the key processes involved in sugar production, including washing, juice extraction, juice purification and concentration, syrup processing, and crystallization. This solution consists of a unique combination of specialized bacteria strains that have been carefully selected for their efficacy in breaking down organic compounds and converting glucose, sucrose, cellulose, and starch into simpler substances. Furthermore, it effectively degrades sugars and other contaminants commonly present in sugar wastewater.



BENEFITS OF USING EffuTreat AEROBIC

- The ETP commissioning time is reduced.
- The MLSS experiences a rapid expansion accompanied by a significant concentration of MLVSS.
- It effectively decreases BOD and COD levels while mitigating the unpleasant odor emitted by the ETP.
- To achieve swift stabilization, expedite the growth of highly concentrated acclimatized anaerobes.
- The augmentation of methanogenesis and the subsequent generation of biogas are enhanced.
- Oil and grease, along with other complex compounds, can be efficiently degraded by bacteria.
- Multiple strains of bacteria stabilize shock loads and decrease the production of excessive sludge.
- This solution is efficient in various environmental conditions, posing no harm to living organisms, non-damaging to surfaces, and can be safely handled and stored without causing any harm to the environment.

AREAS OF APPLICATION

- ASP- activated sludge process
- E-ASP: Extended aeration process
- SBR: Sequencing batch reactor
- MBBR: Moving Bed Bio Reactor
- MBR: Membrane Bio Reactor
- RBC: Rotating Biological Contactor

PERFORMANCE PARAMETERS

- pH 6.5-7.5
- Temperature 5°C - 55°C
- Reactivation Rate 99% after addition to water
- Concentration Highly Concentrated
- Shelf Life 1 Years



PHYSICAL STATES AND THEIR FEATURES

- | | | |
|--------------------|---|------------------------------|
| • Physical States | LIQUID | POWDER |
| • Appearance | Tortilla brown | Swiss coffe brown |
| • Odor | Smell of media & micro organisms is present | Odorless |
| • Moisture Content | 100% | 15% - 17% |
| • Mesh Size | N/A | 0.4 mm – 0.8 mm |
| • Packaging | 50 ltr drum, 1 ltr bottle | 1 kg Aluminum Standing Pouch |

APPLICATION MATRIX

- Merge 1 kilogram of EffuTreat SUGAR with 1 kilo gram of liquidjaggery, and subsequently add this combination to 100 liters of feed water. (2Kg in 200 Litres & so on...)

DOSAGE SCHEDULE

- The quantity needed daily is determined by the volume of wastewater and the organic load.
- However, the ratio between the amount of water to be used and the odor control solution also depends on the intensity of the odor at different places