

EffuTreatTM
Bioculture

MTM
M.B.PL

MOTHEREARTH
BIOTECH PVT. LTD.

DAIRY

DAIRY INDUSTRY - ENVIRONMENTAL ISSUES

The dairy industry is infamous for its excessive water usage, which contributes to its status as one of the most polluting sectors within the food industry. In India, where the demand for milk is steadily increasing, the dairy industry is projected to undergo rapid expansion. However, this growth also entails a rise in waste production and associated environmental concerns. Improperly treated wastewater, resulting from inadequate design, operation, or treatment systems, poses significant environmental challenges when discharged into land or water sources. Given the large quantities of milk handled by the dairy industry, the primary waste material generated during processing is water. This water, extracted from milk, can contain substantial amounts of organic milk products and minerals. Furthermore, the cleaning process of dairy plants generates caustic wastewater. Unlike numerous other industries, the dairy sector produces the highest volume of industrial wastewater or effluent. To provide some perspective, approximately 2 liters of water are needed to produce 1 liter of milk in the dairy industry. This emphasizes the considerable amount of effluents that must be effectively managed in order to enhance operations and adhere to environmental regulations.

EffuTreat - DAIRY

EffuTreat Dairy is a distinctive blend of carefully selected microbial strains that have been specifically chosen and cultivated to effectively break down waste in dairy effluents. These microbial species are adept at handling sudden increases in load caused by the continuous CIP process in the dairy industry, degrading substances such as high BOD, COD, TSS, FATS, Oil, and Grease.

EffuTreat Dairy stands out for its ability to function efficiently under a wide range of pH and temperature conditions, which are common challenges in the dairy sector. By reducing levels of lactose, fat, oil, and grease in wastewater, EffuTreat Dairy helps prevent the accumulation of organic compounds on the inner surfaces of tanks and pipes used in dairy production.



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BENEFITS OF USING EffuTreat DAIRY

- Degrades high C.O.D and B.O.D
- Rapidly increases MLSS and MLVSS count
- Control the high Volatile fatty acids.
- It also helps to degrade the high lactose, which takes part in biodegradation process.
- Helps to control the high Ammonical nitrogen.
- Odour removal from biological systems.
- Helps to increase acetogenesis and methanogenesis process.
- Helps to increase efficiency of Biogas generation.
- Low Production of excess sludge.
- Reduces plant commissioning time
- Multiple strains of bacteria for effective results
- Effective under most environmental conditions

AREAS OF APPLICATION

- Membrane Bio Reactor
- Activated Sludge
- Sequencing Batch Reactor
- Moving Bed Bio Reactor
- Extended Aeration System
- UASB

HOW TO DOSE

- Mix 1Kg EffuTreat Dairy in 100 Liters feed water added with Liquid Jaggery. (2Kg in 200 Litres & so on...)
- Mix it well and leave it for 48 hours, after that dose it as per detailed dosage schedule
- Qty. required per day depends on waste water volume & Organic load

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 DAIRY with 1 kilogram of liquid jaggery, 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.
- The proportion of water required in relation to the EffuTreat DAIRY solution is contingent upon the characteristics of the incoming wastewater.