

Mykrobak Anaerobic

What is Mykrobak Anaerobic?

Mykrobak Anaerobic is a mixture of naturally safe dry formulation of eco-friendly microbial strains that consist of wide variety isolated species of anaerobic bacteria. These anaerobes cannot grow in the presence of oxygen. They depend on fermentation and anaerobic respiration using a final electron acceptor other than oxygen.

Organic matter (CHN) + Microorganism $\text{CH}_4 + \text{H}_2\text{S}$ + Sludge

Anaerobic digestion occurs naturally in the sediment in streams and lagoons that are not adequately aerated, converting carbon compounds to methane, nitrogen and hydrogen sulfide gases (the components of marsh and sewer gases) instead of the carbon dioxide and water produced by aerobic digestion.

Mykrobak (Anaerobic) is micro-encapsulated and packaged in a dormant state in the powder form and have a 98% to 99% reactivation rate within their shelf life, that is two years. Mykrobak Anaerobic is single-celled microorganisms, these bacteria work in absence of oxygen breakdown waste water contaminants into energy and secret different enzymes that digest macromolecules into smaller molecules that can be used as nutrients for growth. Secreted enzymes have potential benefits but also entail costs in the form of biomass and energy, Microbes' combination in Mykrobak (Anaerobic) is specialized strains non-genetically engineered species that are very essential in treatment process in a very unique way to ensure there is no impact on the surrounding environment.

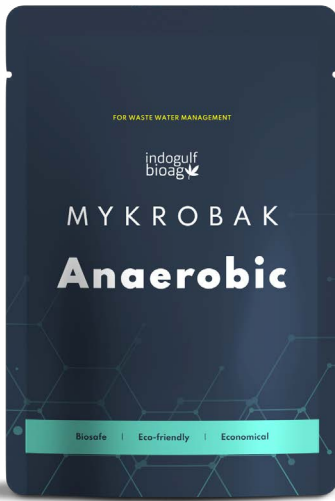




A three-step treatment process converts organic waste to methane gas, water, and new bacterial cell mass.

1. Simplify carbohydrates and starch into soluble organics in the process called hydrolysis. Facultative anaerobes are the most successful for this process.
2. Changes simple starch and carbohydrates into formic and acetic acid. Facultative anaerobes that can use electron acceptors from sulfates and nitrates work best in this step.
3. Convert volatile fatty acids (organic acids from step 2) into methane gas. Strict anaerobes work best in this application.

By introducing relatively small amount of Mykrobak Anaerobic to augment the natural population of bacteria in the digester, increases rate of waste degradation with lower temperatures, and more efficient production of methane is possible. The specialized bacterial strains in Mykrobak Anaerobic is selected for their improved ability to use complex organic substrates for faster growth and reproduction rates. With the application of Mykrobak an anaerobic system, can be started up in 90 days or less.



Benefits of Mykrobak Anaerobic

- Degrades high COD & BOD
- Acclimatized anaerobes for fast stabilization
- Increases Methanogenesis and Bio-gas generation
- Suppresses harmful bacterial growth
- Reduces plant commissioning time & increases digester or UASB efficiency. Bacteria effectively degrade oil & grease and other complex compounds
- Multiple bacterial strains Stabilize shock load
- Reduces odour from plant
- Reduces excess sludge generation
- Improves overall efficiency of the plant
- Effective under most environment condition
- Easy to store, handle and transport

Performance properties	
PH	6.5 - 7.5
Temperature	5 to 55°C
Reactivation Rate	99% After addition to water
Concentration	Highly Concentrated
Shelf Life	2 years

Physical properties	
Appearance	Off White Colour
Physical State	Powdered Form
Odour	Odourless
Moisture Content	6-7%
Mesh Size	0.6 mm
Packaging	1 kg Aluminum zip lock

Dosage Schedule

Depend upon the organic load, contaminants and volume of waste water.

Area of Application

- Up flow anaerobic sludge blanket (UASB)
- Bio-gas digester
- Anaerobic lagoon
- Anaerobic filter (Stone & PVC media)
- Expanded granular sludge blanket

Application Matrix

Mix Mykrobak 1 kg powder in 20 Liter water (Prefer normal temperature). Stir well and remain in bucket for 30 minutes (for bacteria activation) Directly Dose at inlet of Anaerobic tank.

