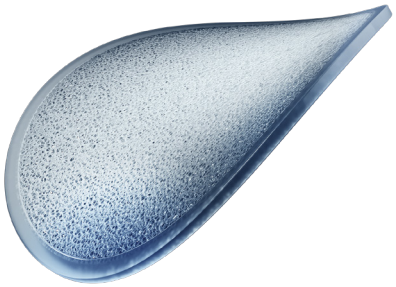
MUTAG
WATER MATTERS

Mutag BioChip™

Smarter water treatment. Proven performance. Clean water.



When you're responsible for delivering clean water, you need solutions that are both intelligent and reliable. The Mutag BioChip™ is designed to make your wastewater treatment smarter - helping you achieve high-level performance with less effort. Discover how this next-generation carrier media can simplify your processes, reduce your costs, and help you secure clean water for the future.

High removal rates and stable operation

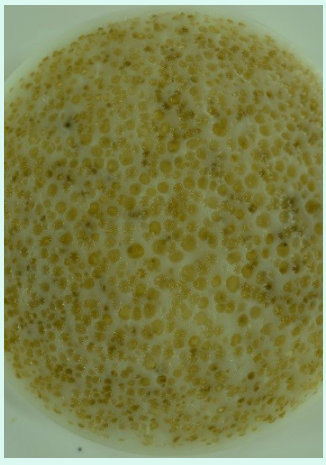
The Mutag BioChip™ provides a protected surface area of up to 5,500 m^2/m^3 - far exceeding conventional carriers, which typically offer 500-800 m^2/m^3. This high surface area enables greater biofilm activity and higher removal rates per unit volume, allowing you to achieve stringent effluent targets with less media and smaller tanks.

Proven clog-free design and operational flexibility

Unlike tube-shaped carriers, which often suffer from clogging and reduced capacity, Mutag BioChip™ is specifically designed to prevent uncontrolled biomass growth. Its shape and motion maintain maximum treatment efficiency and surface area. Since its introduction in 2008, there have been no reported clogging incidents in any installation worldwide.

Pore system of the Mutag BioChip™

Clogged conventional carriers and unclogged Mutag BioChip™.



Unclogged Mutag BioChip™: biofilm is only inside pores.

The unique pore system inside the BioChip™, ensures biofilms remain thin and active. As the carriers move in the reactor, shear forces continuously remove excess biomass from the surface, maintaining optimal diffusion of substrate, nutrients, and oxygen into all biofilm layers. This prevents the formation of thick, inactive biofilms - a common cause of declining performance in tubular carriers. The result is consistently high treatment performance, with biodegradation rates up to 6-10 times higher than conventional media, even with identical media volumes.

The high performance of the Mutag BioChip™ means you can achieve the same treatment results with a smaller carrier volume and reduced tank size, lowering construction costs and making retrofits or expansions

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Mutag BioChip™

easier - even where space is limited. The lower media filling level required by Mutag BioChip™ allows you to maintain reserve capacity in your tanks, which can be activated simply by adding more carriers. This enables straightforward upgrades to handle increased loads or flow rates without new construction.

Energy efficiency and durability

The specific density and shape of Mutag BioChip™ ensure efficient suspension in the reactor with minimal energy input. This reduces the need for aeration or mechanical agitation, lowering your operational expenditure (OPEX) over the system's lifetime. Each BioChip™ is lightweight and engineered by Mutag to minimise abrasion and wear, even after years of operation. The low mass and robust construction reduce the risk of microplastic release and ensure long-term durability, further lowering maintenance and replacement costs.

Technical support and expertise

With over 20 years of experience and a comprehensive database of process data, Mutag supports you with design calculations, equipment selection, technical advice, and after-sales service. Whether you operate MBBR, IFAS, or Anammox processes, you benefit from Mutag's commitment to reliable, high-performance solutions.

Ready to see the difference for yourself?

Contact Mutag to arrange a visit to a reference plant or to discuss how Mutag BioChip™ can help you achieve your treatment goals.

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