

## MicroCat® SBP Technology

### SBP Capsules

The SBP capsules form a small bioreactor (Small Bioreactor Platform). The SBP capsules can alternatively be used in biological wastewater treatment plants where bioaugmentation doses are performed daily.



The **SBP** capsules are equipped with micro-membranes that work like an MBR (Membrane Bioreactor). The membranes keep the **MicroCat®** bacteria in the capsule, separated from the waste water.

Waste water and contaminants pass through the membranes so that the bacteria in the capsule are fed and can break down the contaminants.

### How are SBP capsules applied?

Based on your waste water analyzes and flow rate, **QM** experts will determine which **MicroCat®** will go into the **SBP** capsules and how many capsules are needed.

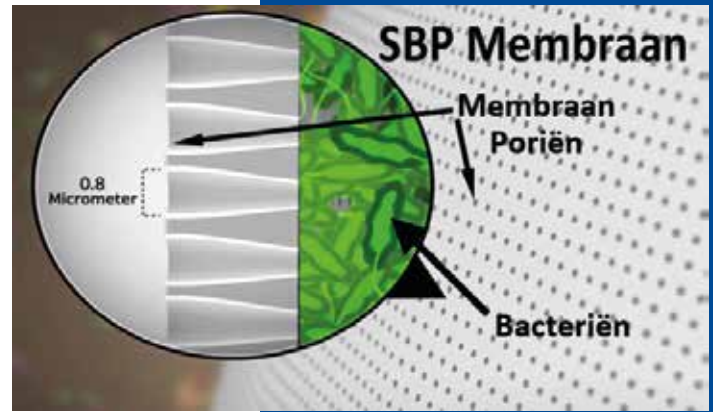
The **SBP** capsules are suspended in a perforated container in the waste water in the aeration tank. We supply a hoisting mechanism for this.

The **SBP** capsules have a lifespan of 1 to 2 months. The **SBP** capsules are made of biodegradable organic material that breaks down into sugars. **SBP** capsules do not harm the environment.



# How do SBP capsules work?

- ★ The **MicroCat**® bacteria used are safe for Protozoa (bacteria eating higher life forms in an a.w.i.), dilution and leaching.
- ★ Contaminants always flow into the **SBP** capsule as long as the bacterial population in the capsule breaks down these contaminants (diffusion).
- ★ A biofilm will not clog the membrane because it is equipped with a strong negative charge that repels the biofilm.



## Product specification (per capsule)

|         |                   |
|---------|-------------------|
| Length  | 2,5 cm            |
| Volume  | 1,5 - 2 ml        |
| Polymer | Cellulose Acetate |

|                   |  |
|-------------------|--|
| Shelf Life        | 3 years at room temperature                          |
| Sludge Age (MCRT) | up to 60 days  |
| Pore size         | Nanometric mesh (30-50nm) with a pore size of 0.2 µm |

## Advantages

### Biological treatment in a container:

- ★ It is not necessary to grow, separate and recycle biomass.
- ★ CAPEX reduction up to 70% and OPEX up to 50% (reduces costs for daily bioaugmentation maintenance dosing).
- ★ Starts working immediately. No need for inoculum and or a long run-in period.
- ★ Rapid recovery after toxic shock event.
- ★ Easy to use, no need for professional outside manpower to operate it.
- ★ Can be used with all **MicroCat**® products for all types of waste water.
- ★ The most environmentally and economically viable approach to improved pollutant degradation.

## Applications

- Heavy duty industrial waste water
- Food industry
- Retrofitting of existing WWTP's with limited room for expansion
- To replace daily bacteria doses
- Small and medium AWP's in remote areas

## Best Use

- For nitrate removal regardless of sludge age
- For treatment of additional organic and hydraulic load
- As additional biomass in existing wwtp's
  - Increasing the yield of a.w.i.s by 20%
  - Increasing a.i.a. efficiency
  - As a backup in case of stressful moments
  - Help stabilize the treatment process

QM Environmental International offers a green and sustainable alternative for solving environmental problems in the field of water, soil and air. We work closely with our clients to achieve the maximum result for them.

*Products you can Trust, Experience you can Rely on!*