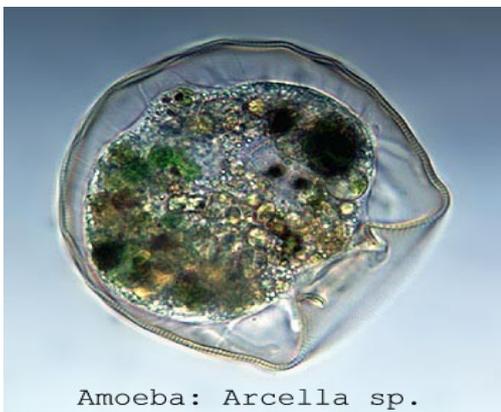


BFL 5050VF

The main problem with the effluent from the processing of vegetable oils such as palm oil, olive oil, rapeseed oil, etc. is the large amounts of oils present. These create major problems by coating drains, pumps, pumping stations, inlet screens and primary clarifiers. In many activated sludge plants excessive quantities of oils can give rise to *Nocardia* foaming which causes major operational problems. While the bulk of the oils are removed in Dissolved Air Flotation (DAF) units or grease

interceptors the remainder must be treated in the wastewater treatment system.



Amoeba: Arcella sp.

Other components of the effluent such as plant organic material contribute to an effluent with a high BOD.

Situations in which the use of BFL 5050VF are beneficial include:-

- | | |
|--------------------------------|------------------------------------|
| Plant start up | Poor final effluent quality |
| Poor settlement | Shock recovery |
| Overloaded plants | Bulking sludge |
| <i>Nocardia</i> foaming | Poor oxygen transfer |
| Sludge reduction | |

BioFuture harnesses the power of environmental biotechnology to solve the problems by degrading the vegetable oils and other organic materials in an exceptionally efficient manner. BFL 5050VF uses only harmless, natural micro-organisms that deal with the

problem by degrading the organic matter to CO₂ and H₂O in a highly effective and environmentally acceptable way.

What is BFL 5050VF?

BFL 5050VF consists of a carefully selected blend of natural micro-organisms that have the ability to efficiently degrade vegetable oils and other organic materials in the effluents arising from the vegetable oil extraction industry. The wide range of strains have been specially chosen for their ability to produce the broad range of enzymes required to completely degrade the organic matter. These strains grow at a fast rate so that they can quickly establish dominance in the biological population. The product contains strains that have the ability to produce good floc structure which



Rotifer attached to a floc

will settle well and produce a clear final effluent. The strains in the product work in harmony

with the existing biomass and increase its overall efficiency so that plant performance is restored as quickly as possible.

The type of systems in which BFL 5050VF can be used include:-

- | | |
|----------------------------------|------------------------|
| Activated sludge | Aerated lagoons |
| Oxidation ditches | Biotowers |
| Membrane BioReactors | MBBR/IFAS |
| Sequencing batch reactors | |

The microbial strains are produced as single pure cultures, harvested, stabilised on a cereal base and blended together to produce the final product.

Extensive checks are conducted throughout the process to ensure purity and quality of the product.

Directions for use

The product as supplied is on a cereal base so it is important that the bacteria are rehydrated before use. This is achieved by adding the required quantity of product to lukewarm (~30°C) water in a suitable container. Apply 1 part product to 10 parts water, stir well and allow to stand for 1 hour before application. Apply the rehydrated product immediately prior to the aerated section of the treatment plant e.g. into a drain, pump sump or return sludge line.

Since each application is different and has different characteristics it is important to assess the site before deciding on a dosing programme. The Technical Department provides assistance in assessing the site and devising a treatment programme.

Product safety

The micro-organisms in BFL 5050VF have all been isolated from natural environments. They have not been genetically modified in any way. These microbial strains have been classified as being harmless to humans, animals and plants in accordance with EU and WHO guidelines. The product is subjected to independent testing to ensure that it is free of *Salmonella* and other contaminants.

For further information on dosing programmes and product application please

contact :-

**Technical Department,
BioFuture Ltd.,
62C Heather Road,
Sandyford Business Estate,
Foxrock,
Dublin 18,
Ireland.**

Phone: +353-1-2149749

Fax: +353-1-2149767

E-mail: info@biofuture.ie

Web: www.biofuture.ie

The information presented above is believed to be reliable. It is presented in good faith as being representative of the formulation and knowledge at time of publication. The right to change this document and product formulation is reserved. No warranties or liabilities can be expressed, implied or accepted regarding the use of this information.