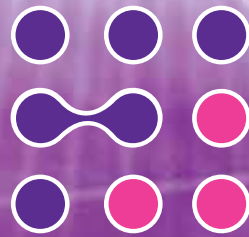


LIPORIENT

Biological Fat/Oil Remover



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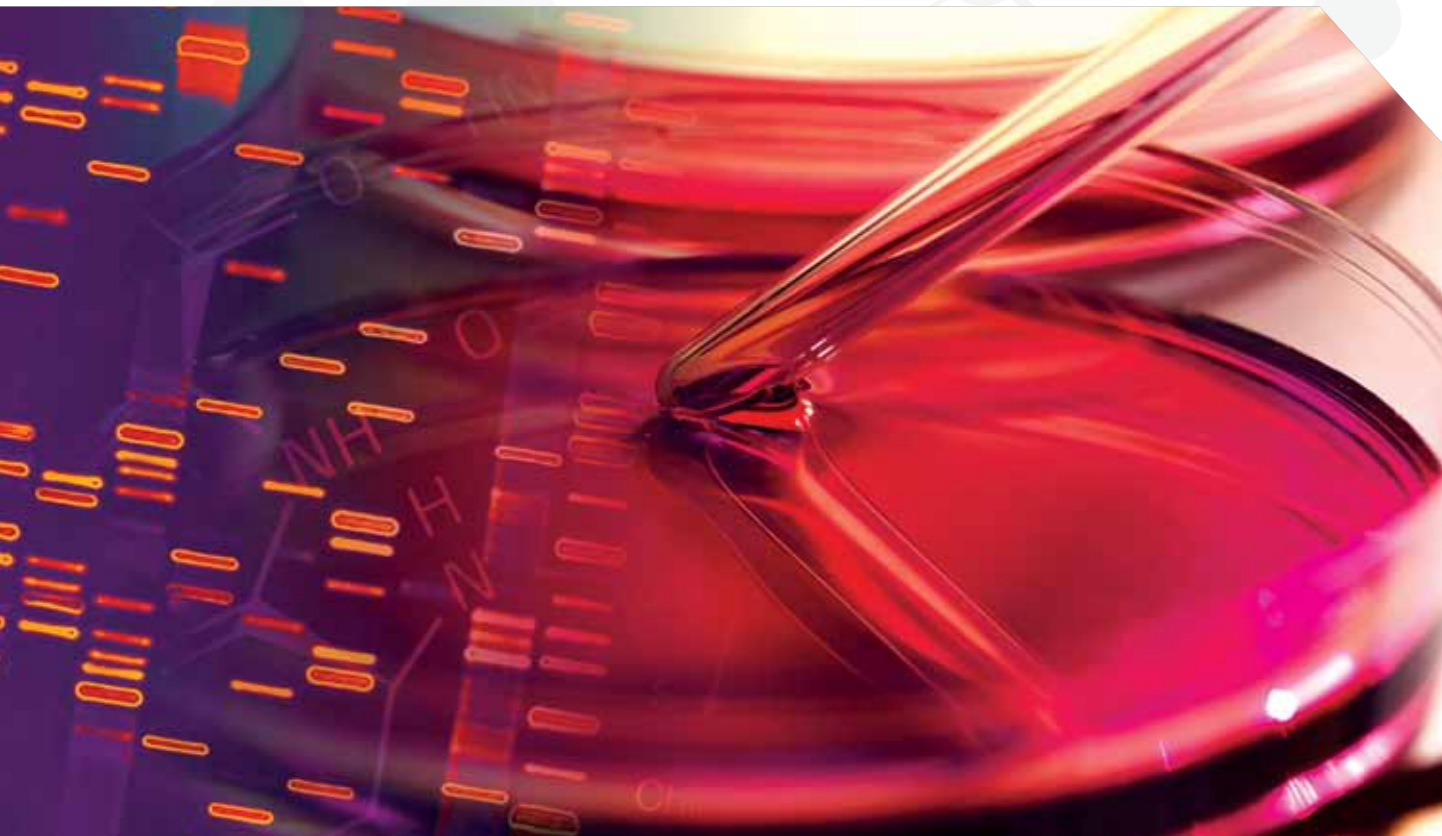
LIPORIENT

LIPORIENT is a special bacteria culture which digests organic fats into smaller constituents in the most efficient way.

Ingredient bacteria, which have the high fat digestion specifications, have been selected from the nature in the laboratory without any genetic modification.

LIPORIENT bacteria are able to adapt to produce lipase enzyme, which can digest fats, even under the most difficult conditions.

This adaptation skill makes them efficient which none of the chemicals can reach.



WHAT ARE BACTERIA?

Bacteria are single celled life forms which can not be observed with eyes.

Approximately 40 million bacteria cells can be found in one gram soil.

99% of these organisms we live within our environment, in our internal organs, on our skin, every surface that we touch constantly, even in our mouth, are not harmful and live with us in harmony.

Bacteria reproduce quickly.

Therefore, they quickly adapt to the environmental changes. Due to this adaptation skill, bacteria can exist even in the most difficult conditions that mankind can imagine. Bacteria can be often seen in difficult environments such as gastric acid whose pH 1 or 90 °C hot water.

These organisms are the smallest constituents of ecosystem which are the most important part of bioaugmentation process.

WHAT ARE THE BACTERIAL PRODUCTS?

The world started to use new and environment friendly bacteria based systems which are amongst new and ecofriendly biotreatment product range. These bacteria, which work faster and more efficient, are relatives of bacteria that we live within our daily life.

For example; one of the bacteria -*Bacillus meaterium* type- in **LIPORIENT**, has been chosen from 150 different bacteria, because it is the fastest bacteria that produce more enzymes amongst other, which break long fat chains.

Under normal conditions, in a fat trap, it is very unlikely that such bacteria reproduce by itself. Therefore, non genetically modified bacteria which have been chosen regarding its high quality, have been added to the environment to start biotreatment.

Thanks to **LIPORIENT**, the moment millions of bacteria have been applied to fat trap, fat removal will start, residues will vanish and malodor will go away.

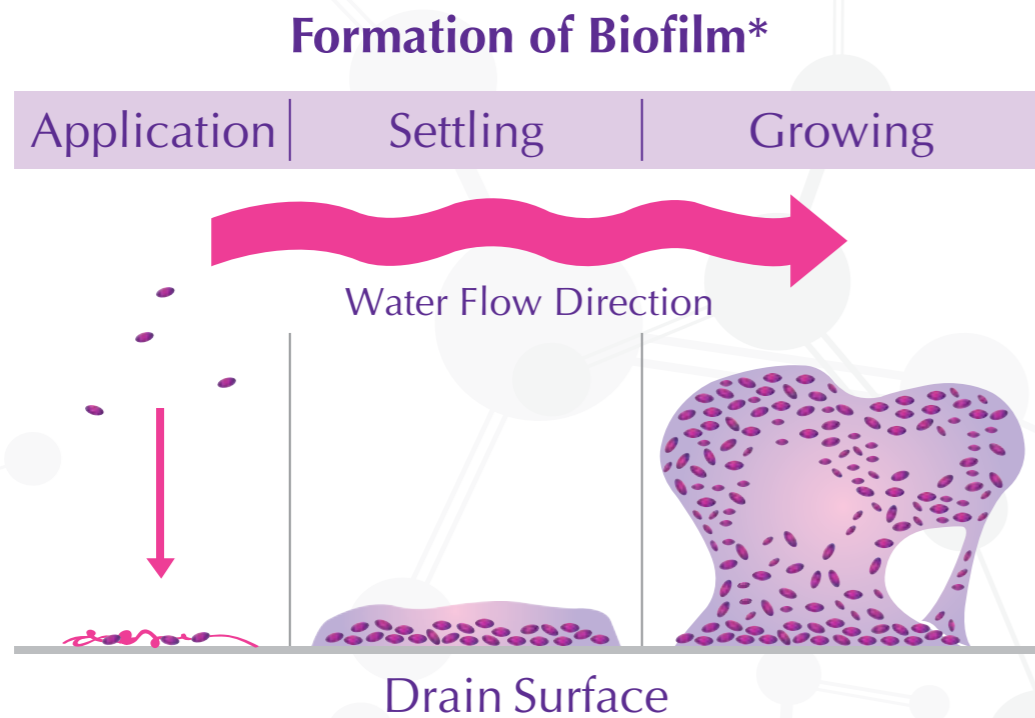
HOW BACTERIAL PRODUCTS WORK?

7 types bacteria in **LIPORIENT**, after produced as pure culture, are kept in spore form under suitable conditions. To activate the bacteria, adding them to a suitable environment (like fat trap) is enough. There is no need for dilution and waiting periods. When **LIPORIENT** unique formula is applied to the suitable environment, bacteria are activated and bioremediation starts on the first day. When **LIPORIENT** is preserved with sealed lid, bacteria stay in "sleep mode" along with its shelf life and they do not lose activity or decay.

When **LIPORIENT** is applied regularly to oil effected drains, formations called biofilm occur around pipeline and they continuously reproduce within the biofilm. These formations cover pipe, drain and oil holding surfaces like a shield and provide a better environment for bacteria.

Regular usage of bacterial products makes these biofilms stronger by reaching to the end points of pipelines and plumbing systems and prevents clogs.

LIPORIENT bacteria living in these biofilms, prevent settling of different type of bacteria which produce malodors, makes fat to drain continuously, prevent clogging and thickening on pipe walls.



* Regular application of bacteria to the drains, settle in most suitable place for themselves, continue to oil removal and get colonised. The biofilm grow towards water flow direction so that they proceed as if a treatment system works in your plumbing system.

DRAINS AND FAT TRAPS

Fat causes serious problems in drain systems.

Drains that connect to dishwashing areas, dishwashers and kitchen sinks become narrower and get clogged in time, as a result of accumulating, thickening fats. This situation is a serious problem.

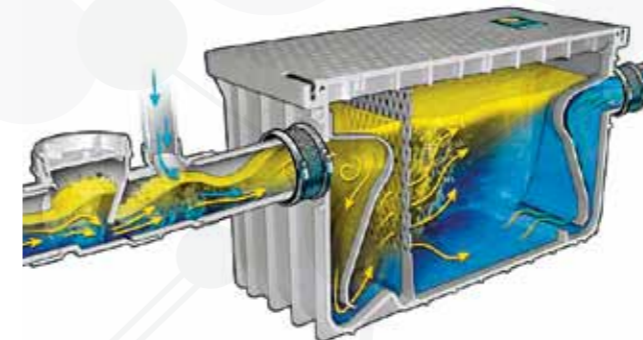
In addition, these residues start to decay and produce malodor.

Fat trap is a storage system which works with floating principle of fat and separates it from water.

To prevent fats to get into sewage systems through restaurant or kitchen drains, it is compulsory to set up a fat trap by Waste Water Discharge regulations.

Unfortunately caustic soda - with pH 11 - is used oftenly to dissolve fats in the system and to unclog pipelines. Such chemicals damage your plumbing because they are corrosive, they also cause saponification with the oil residues inside pipes, lead to more difficult cloggings which are even too difficult to break with tools.

The usage, in a variety of cleaning applications, of chemicals which have pH value is lower than 6 or higher than 10, are forbidden by the waste water regulation.

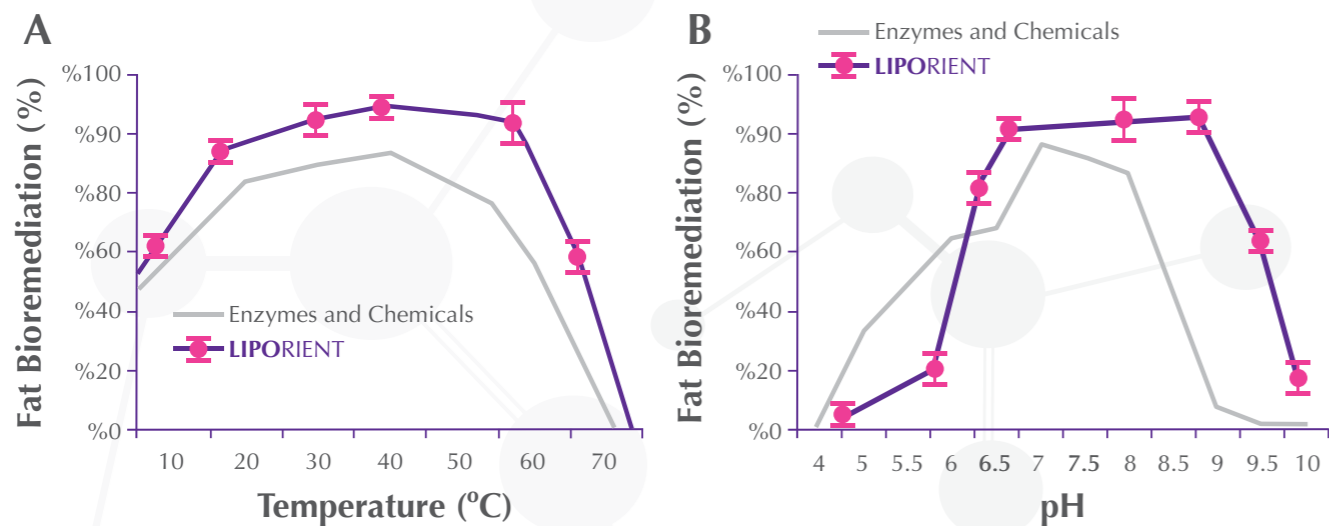


LIPORIENT AND OIL DRAINING

Enzymes and chemicals, that are used for odor removal or as a clog oppener, can only work under certain types of physical conditions. So they can not have the same efficiency under every condition.

On the contrary, Bacterial products can adapt to every environment and produce the necessary enzymes and chemicals by themselves.

So they have a higher adaptibility and efficiency and remove fats for you.



LIPORIENT includes oil degrading bacteria and special enzymes which produced by the origin bacteria in the product.

When this product is applied to fat trap, first enzymes provide some oil to mix with water, so that bacteria reach deeper and work in every layer.

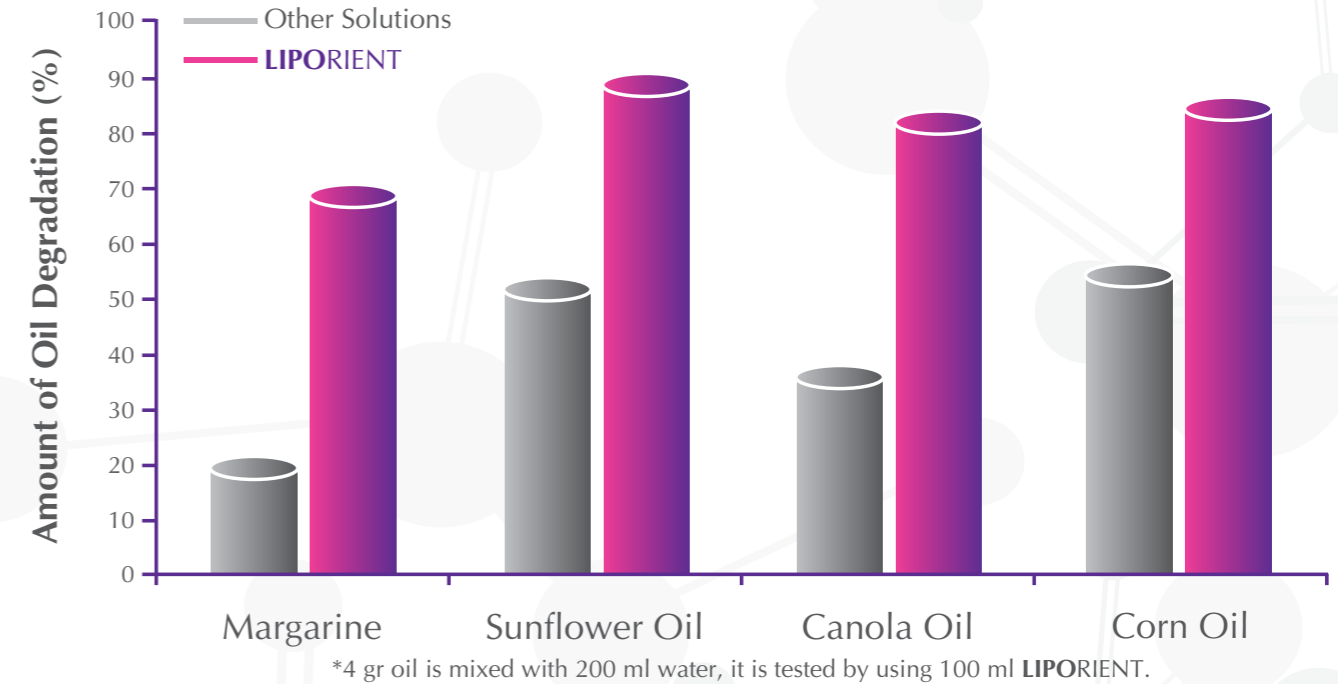
Bacteria start to form biofilm in fat trap and drain system, and digest the oil by bioremediation.

So fat accumulated on the surface is digested, and residues in the bottom of fat trap are removed.

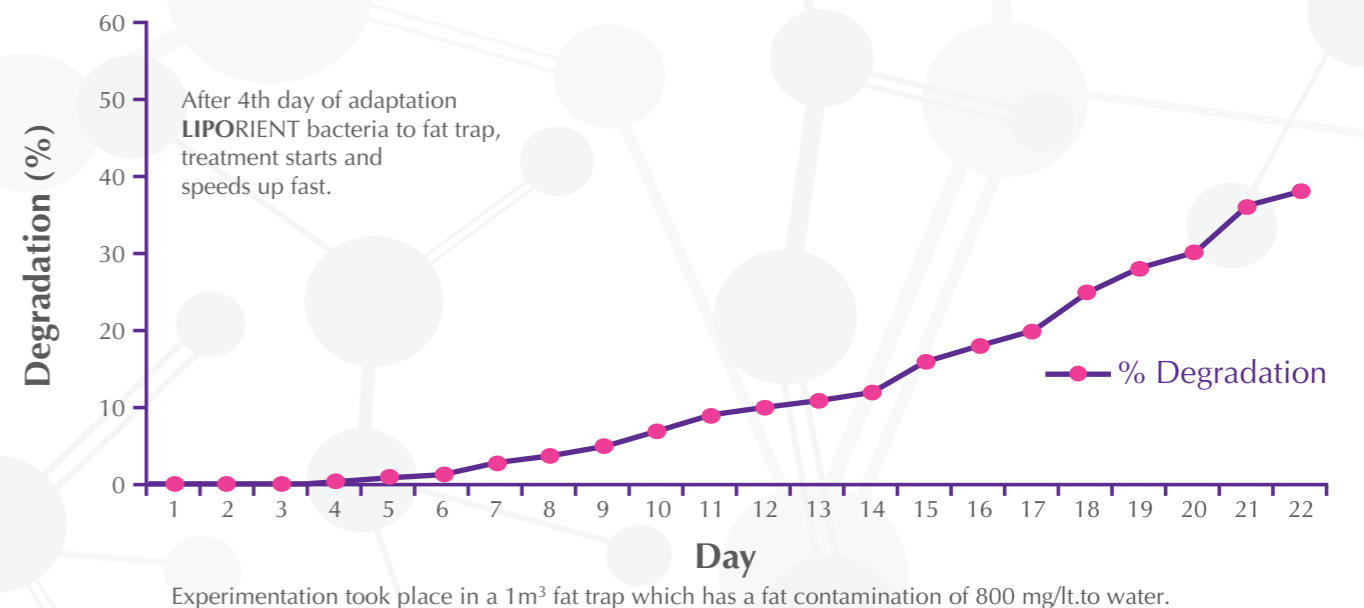
As a result, fat trap is not blocked, does not produce malodor and since fat is not clogged, your fat trap works perfectly.

LIPORIENT increases the efficiency of oil degradation in waste water by 40%-50%, simplifies you to follow oil/fat discharge regulations. LIPORIENT also prevents malodor formation and provides you to reach a healthy working environment.

THE EFFECTS OF LIPORIENT UPON A VARIETY OF FATS



LIPORIENT OIL DEGRADATION

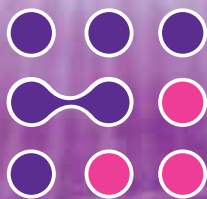


LIPORIENT

- It stops cloggings in plumbing system.
- It prevents formation of malodor.
- It guaranties the flow of pumps and pipelines.
- It prevents overflow.
- It decreases the need for mechanical cleaning.
- By digesting the fat, it prevents the problem before occuring.
- It increases the efficiency of treatment systems connected to oil drains.
- It is friendly to environment and people.

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