About us

We believe that our purpose on the planet is to connect customers with the best solutions. We are constantly focusing on innovation. We believe in the simple not the complicated and participate only in markets where we can make a significant contribution. While protecting the planet, true progress leaves its mark on society instead of the planet.

We believe in saying no to thousands of projects, so that we can really focus on the few that are truly important and meaningful to us. We believe in profound collaboration and sharing ideas which allow us to innovate in a way that others cannot. Foremost we do not settle for anything less than outstanding, and we have the uprightness to admit when we are wrong and the courage to change.

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Magnete
Think more, think future

THE VALUE OF BROWN GREASE FOR SUSTAINABLE ENERGY AUTONOMY

FOG (Fat, Oil and Grease) Reduce, Refine, Reuse

FOG to Biofuel

Brown Grease consisting of FOG (fats, oils & grease), is a byproduct of food preparation, clocking drains, sewer systems and in some cases creating "Monster Fatbergs". Food Serving Establishments (FSEs) are legally required to stop FOG from entering the sewer network and are collecting grease in passive grease traps, Grease Recovery Units (GRUs) or grease interceptors.

Different organisation estimates between 300 and 5000 kg FOG waste is produced per FSE (restaurant), per year.

Recovering FOG as a resource transforms a negative value waste stream into useful energy resources, making it part of the circular economy. The abundant waste product can be used to enhance the production and availability of biodiesel and FAME, ease burden on municipal treatment works, reduce landfilling and contribute to greater sustainability and CO2 reduction.

REDUCE.
REFINE.
REUSE.

WHY BROWN GREASE?

As a resource for the biofuels sector, FOG can support reducing greenhouse gas emissions and mitigate the effects of climate change, as well as offer a cheaper alternative for biofuel and biodiesel creation.

The collected brown grease is usually landfilled, combusted or added to treatment works and may cause environmental pollution. FOG is a good alternative source for biodiesel production, since it has a higher FFA content than yellow grease (used vegetable oil). Yellow grease has a substantial triglyceride content and for this reason, using this source for biodiesel production requires significant energy investment. Brown grease is, therefore, considered as comprising a lower cost feedstock with greater potential for biodiesel production than yellow grease.

Sourcing FOG

There is already an infrastructure in place for the collection of FOG. Grease Contractors empty grease traps regularly while municipal wastewater treatment plants, recycling facilities and other disposal locations accept FOG waste.

Biodiesel Production

It starts with collecting FOG (Fat, Oil & Grease) from restaurant grease traps. The oil is left to settle in large tanks. Lighter particles float to the top, while heavier ones settle at the bottom. The oil is gently heated and turned to remove water and solids. At this point a process called esterification takes place, a chemical reaction that produces biodiesel. Then filtration and distillation finished the process, and the biodiesel is ready for use.

Feedstock Problems

Catalytic transesterification of vegetable oils and animal fats is generally at the core of Biodiesel production. The rising cost of oilseed feedstocks is creating a major challenge for the industry driving up the total cost of production..

The main issues for incorporating FOG feedstock into biodiesel production are additional processing steps to prepare it for biodiesel conversion, as well as logistics to deliver FOG to industrial processing hubs.

Small scale local Production

Creating small scale local Biodiesel production will answer a lot of the short comings of large scale production site. Within our network we currently collect over 50,000 litres of Fat, Oil and Grease a month. The next step of the journey is to create a more compact process for FOG to be repurposed on site. This will reduce:

- wastage in the logistic process
- improve the yield of biodiesel
- create resource where needed
- reduce investment required
- offer scale to the industry

Feedstocks are 60-90% of the cost of biodiesel production