

## Biological solutions for fat in food waste

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### Water Treatment Equipment

**Many companies across Europe are regularly required to treat water even before it enters public sewerage networks. And with environmental standards rising, companies are furiously searching for cost effective solutions that will meet their needs. The IRC Network, with branches all across Europe, proved to be an effective means for a Spanish company to find a solution to their waste treatment challenge in a Dutch technology.**

Reduction of pollution and the minimisation of the environmental impact is one of the foremost concerns of countries across Europe. One important lesson that has been learnt in meeting these requirements is that it need not be a win-lose situation, and that cost effective win-win solutions exists. Yet for many treatment methods, fat remains an issue that seems to choke the works.

Stated very simply, Mr. Enrique Ortiz González, production manager of Helados Alacant-Aiadhessa in Spain says, "many treatments rely on membrane bioreactor technology and fat compounds would clog the membranes."

RCL, a company located in the Netherlands is just one example of a company offering innovative solutions that could be implemented by waste food corporations. Their system offered a number of innovations, aside from being able to remove fatty compounds in wastewaters it also provided a treatment solution for off-gases and odours.

Explaining how it works, Mr. Dennis vd Herberg of RCL says that "the carrier material is designed to create as much surface area in relation to volume as

possible. A reactor filled with this carrier material is extremely porous enabling air and waste water to be easily absorbed by the biomass".



### An IRC catchment area

RCL is just one of many SMEs operating in Europe. Over the years however they have created a niche for themselves in developing novel biological solutions for use by other companies. Being a client of the IRC since 2003, they have both familiarity and a strong rapport with the IRC. Their company profile was on the BBS, receiving regular news updates, and expressions of interest. The IRC even conducted visits to the various locations across Europe to inspect where their technologies have been installed, simply to keep in tune with their developments. So when they were invited to attend a Technology Forum on Wastewater, they did not hesitate to sign up.

Likewise, having a long standing relationship with their client helped the IRC-CENEMES in identifying their specific needs in such a manner that they were immediately able to match RCL's interests to that of Helados. "They are a very innovative and dynamic company," explains Erik Kuipers of IRC NL, "we have cooperated together in the events such as

## Success Story

the Technology Forum on Wastewater that led directly to this technology transfer." Held at the University of Alicante, the forum brought together a number of companies, and it was here that RCL first met with Helados Alacant in person. As a one day event, the Forum consisted of the presentation of Industrial Wastewater treatment technologies to companies from different sectors, such as agro-food, metal-mechanics, tannery, textile and plastics. It was also a day of assessment, as the IRC-CENEMES established an Expert Committee involving Spanish companies, researchers from the University of Alicante and people from Technological Institutes from the region to assist them in selecting the most interesting and formidable technologies on show to their clients.

### A match in the catch

From the outset, Helados Alacant was absorbed in the carrier material technology of RCL. Having met at the Forum, Helados quickly followed them up with a two day trip to the Netherlands "so that they could see for themselves an installation which was up and running with the technology in full working order," explains Mr Iván Rodríguez of IRC CENEMES.

"Our company was under the project of designing and building a new water treatment plant, in cooperation with a water research department of the University of Alicante," explains Mr Enrique Ortiz González, director of production for Helados. "During this time, IRC CENEMES organised an International Technology Forum which focused on industrial wastewater treatment. One of the technologies presented in this forum was from the Dutch company RCL, which was able to remove fats from water before

entering the biological phase of the water treatment."

What really won Helados over was the major benefit the RCL technology provided. "This technology basically gave us two benefits. The first one is to have the guarantee of removing fats before entering the biological phase of the treatment." This ability to remove fats before entering normal sewerage pipes was of the utmost concern for the company. "The second benefit is that the designed system is thought to be duplicated, increasing from 250 m<sup>3</sup> / day to 500 m<sup>3</sup> / day." In addition to this, the water treatment plant design aims at eliminating the environmental impacts of odours or noises, so all plant equipment and devices have been located in a closed and ventilated building with active carbon filters.



### Reeling them in

It is never an easy matter to secure a technology agreement and transfer between two companies. A host of little barriers and hurdles may rise, some are expected, and others are not. Differing business practices, legal requirements and even billing procedures in Europe may provide difficulties. An illustration of this appeared in this one small example, yet elucidates on how thorough the IRC coverage and knowledge is. "We were asked," Mr Kuipers explains, "simply to see if RCL's first invoice to the Spanish company was correct."

"It is not easy to find professionals in the sector of technology transfer," admits Enrique Ortiz González, "and for companies like ours the IRC services are a great help and an excellent way to keep updated of new technologies for our sector. Their services are professional and cordial and we will of course, continue using them."

It is a sentiment echoed by Mr. Dennis vd Herberg as well: "If a situation arose whereby the IRC can assist and or advise our company we would not hesitate to turn to the IRC," he says.

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