**Waste management, Borås**
A Mellifiq reference project

# Treating Polluted Washwater to Keep Garbage Trucks Clean

## From polluted washwater to crystal-clear purity with AxoPur®

MELLIFIQ

# Waste management, Borås Sweden

*This project takes us to western Sweden, where we are partnering with a municipally owned company specializing in infrastructure and technology. This company manages essential infrastructure across the municipality of Borås, including the central city and surrounding areas. Its core responsibilities include district heating, waste management, and water and sewage services.*

## Facts

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|---|---|
| Location : | Borås, Sweden |
| Application | Removal of emulsified oil and transition metal ions |
| Industry: | Waste management |

### Solution:

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|---|---|
| Mellifiq delivery: | Containerized AxoPur system with a capacity of 2 m³/h, featuring AxoPur reactors (2 m³/h each) for redundancy and a flotation unit. |
| Capacity: | 2 m³/h |
| Energy consumption: | 1.5 kWh/m³ |
| Performance: | Cadmium <100%, Lead <100%, Zinc 99%, Copper 99%, Chromium 95%, Oil index 75% |

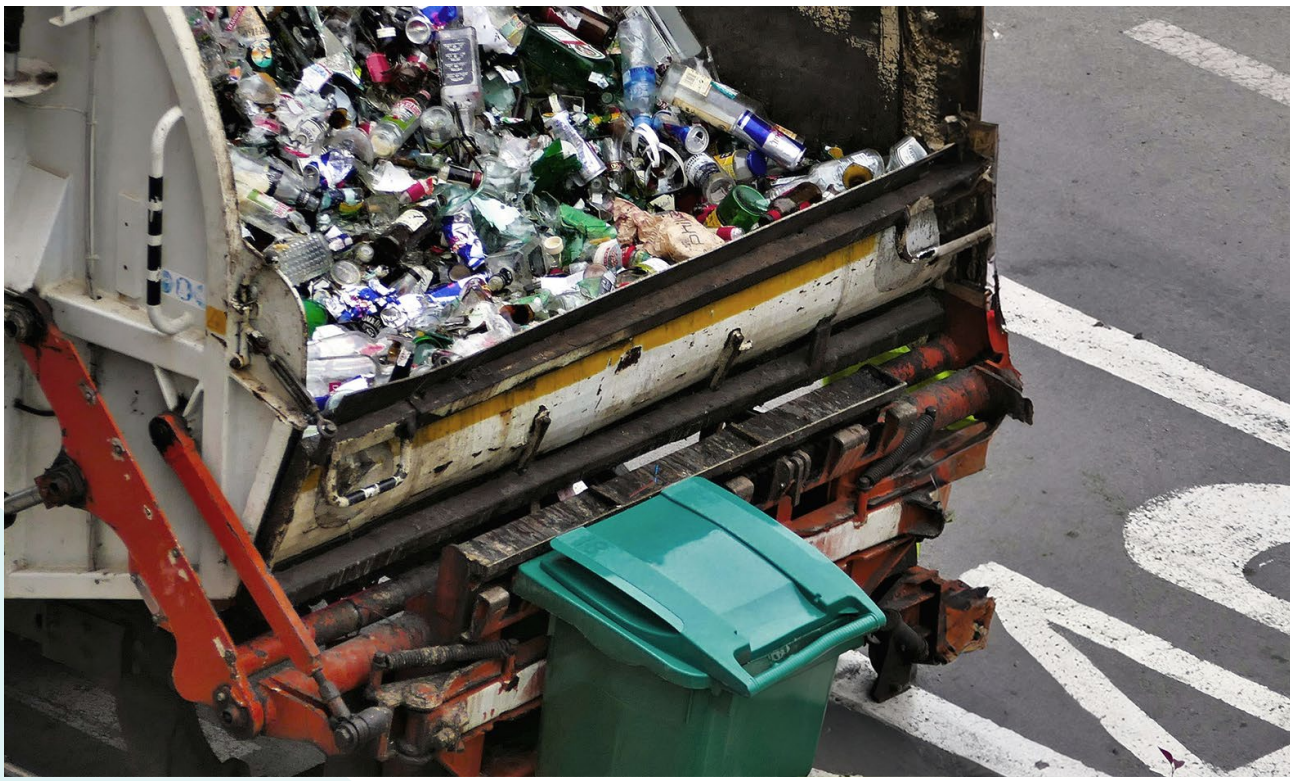
## The problem

Garbage collection is carried out using garbage trucks, which inevitably get dirty inside due to the nature of the business. As a result, regular interior washing is necessary—not only to maintain a clean operation but also to reduce odors, bacterial contamination and promote a healthy work environment.

The wastewater generated during the cleaning of garbage trucks contains a mixture of pollutants, including organic materials, oils and grease, suspended solids, and chemical contaminants.

From the outset, it was clear that treating the resulting washwater was essential for an environmental company, while cost efficiency remained a priority.

To achieve this, the company opted for a cost-effective biofilter solution. However, the filter failed to effectively clean the water, leading to ongoing maintenance issues and prompting repeated yet unsuccessful attempts to improve the performance of the inadequate equipment.



*Frequent cleaning of the truck's interior helps prevent the buildup of waste residue, reducing odors and bacterial contamination.*

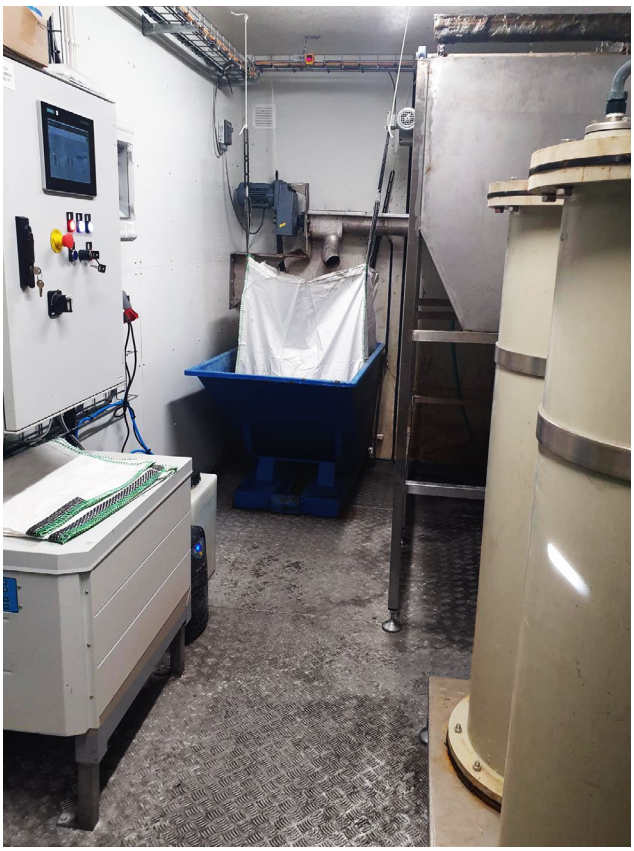
## The solution

The company reached out to explore wastewater treatment solutions, and it turned out to be a profitable decision.It quickly became clear that the filter was outdated, especially given the challenging nature of the wastewater that required treatment. As a publicly owned company in the environmental sector, it is not only the company's goal but also its obligation to set a benchmark in managing environmental responsibilities.

Garbage, by nature, has an unpredictable composition, underscoring the need for a truly  broad-spectrum cleaning technology.

The AxoPur system appeared to offer exactly the features the company was looking for. Through electrocoagulation, AxoPur effectively removes transition metal ions and oil contaminants simultaneously, transforming black, polluted washwater into crystal-clear, purified water in a single step. Green electricity powers the process.

*The AxoPur rectifier features a polarity switch that enables regular polarity shifts, ensuring optimal electrode performance and sustained energy efficiency.*



*The process equipment is conveniently fitted into one container, which in this case includes AxoPur reactors, flotation unit, rectifier, and a control system.*

## Evaluation

By upgrading to the AxoPur containerized system, our client successfully resolved the challenge of cleaning polluted washwater from garbage trucks.

The AxoPur system met the company's needs by efficiently removing transition metal ions, emulsified oils, and other contaminants from the washwater in a single step, with a flow rate of 2 m³/h. The system delivered impressive results, including near-total removal of cadmium and lead, along with significant reductions in zinc, copper, chromium, and oil.

This successful implementation not only enhanced regulatory compliance but also set a new benchmark in the waste management industry, providing a long-term solution that improves operational efficiency while reinforcing the company's commitment to environmental responsibility.


*The AxoPur containerized system provides high-performance wastewater treatment, making it ideal for mobile and temporary applications.*

# About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonetech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

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