Alpha Cleantec AG

Newsletter May 2023

Dear Madam or Sir,

We hope this email finds you well. In May, we enjoyed presenting Alpha Cleantec´s innovative technology in the field of wastewater and sludge treatment to a large array of companies, public authorities, and experts at the Expo Biomasa Exhibition in Valladolid-Spain. In a context marked by a growing focus on circular economy and energy savings, Alpha Cleantec´s capacity to condition wastewater sludge in a way allowing for an up to 50% increase in biogas production and to reduce sludge volumes by 20% drew the specific interest of wastewater utility operators as well as the farming sector. Furthermore, our performance in soil and water decontamination led to numerous - further ongoing - discussions with several engineering and service-providing companies with regard to concrete cooperation projects in those fields.

From our R&D department, we are happy to provide you with a new update regarding customer projects.

A Successful pilot test with one of the EU manufacturers of perfumes and toiletries.

The Problem: We successfully accomplished a pilot test with one of the EU manufacturers of perfumes and toiletries. One of the challenges of this manufacture was the generation of **industrial wastewater** with a high concentration of solids and organic leftovers as a process byproduct. The target of the pilot was wastewater decontamination to the level required by the government and discharge of the wastewater to the sewage system.

The Objective: Therefore, the customer intends to decontaminate the industrial wastewater rapidly and cost-effectively from organic materials and solids to meet the EU threshold value regulation for organic contaminants.

The Solution: We have implemented our SOA-AFA solution as a treatment agent based on a batch treatment approach. As shown below, our reagent is an efficient reagent for this type of wastewater, with a conversion of 99+% after second treatment.

Results:

Sample	Contamination	Before treatment) (ppm | mg/L)	After treatment (ppm | mg/kg)	Conversion (%)	Test Target
After -1h	COD	752,100	462,300	39	X
	TSS	8,580	47	99.5	**V**
After second treatment	COD	462,300	**4,981**	99	**V**
	TSS	47	**<10**	99.9	**V**

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Maybe you face similar challenges in your business. Then please feel free to contact us.

https://www.linkedin.com/company/alpha-cleantec-ag/

About Alpha Cleantec AG

We believe that our eco-system requires looking after so we have a world worth living in to pass to our next generations. Decontamination of soil and water from hazardous contaminants plays a major role in this regard, in our view. This is why we established Alpha Cleantec AG as an environmental technology company in 2016 with a vision to provide safe, green, rapid, efficient and cost effective technologies to resolve environmental harms and hazards caused by inadequate human and industrial activities.

For Decontamination for a wide range of contaminants, see table of contaminants below, we provide two technologies, AFA and SOA, achieving decontamination ratios of up to 97% in just hours (such as Hydrocarbons, BTEX, Petroleum leftovers, Aromatics, PAHS, Chlorinated Solvents, PCBs, Dioxins as well as Pesticides and Herbicides) to be applied for soil, groundwater, wastewater and railway ballast treatment.

For wastewater facilities we have developed based on our proprietary technology a process allowing to pretreat sludge before the digester, thereby significantly increasing biogas generation (up to 50%) and decreasing dry sludge disposal at the end of the process (up to 20%).

For Vegetation control we have developed a process based on an environmentally friendly mixture of inorganic salts that generates concentrated (non-Glyphosate) herbicide absorbing water from the plants and drying the plant including the roots (without changing the salinity of the soil).

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Table of contaminants treatable by our technologies

	IN-SITU		ON SITE	
CONTAMINANTS	**SOA**	**AFA**	**SOA**	**AFA**
BTEX				
Benzene	◆	◆	◆	◆
Toluene	◆	◆	◆	◆
Ethylbenzene	◆	◆	◆	◆
Xylene	◆	◆	◆	◆
PETROLEUM HYDROCARBONS				
Gasoline Range Organics (GRO)	◆	◆	◆	◆
Diesel Range Organics (DRO)	◆	◆	◆	◆
Oil Range Organics (ORO)	◆	◆	◆	◆
AROMATICS				
Chlorobenzene	◆	◆	◆	◆
Bromobenzene	◆	◆	◆	◆
Dichlorobenzene	◆	◆	◆	◆
Nitrobenzene	◆		◆	
Phenol	◆		◆	
Styrene	◆	◆	◆	◆
Naphthalene	◆	◆	◆	◆
Trichlorobenzene	◆		◆	
Trimethylbenzene	◆	◆	◆	◆
PAHS				
Phenathrene	◆	◆	◆	◆
Naphthalene	◆		◆	
Acenaphthylene	◆		◆	
CHLORINATED SOLVENTS				
Tetrachloroethylene	◆		◆	
Trichloroethene	◆	◆	◆	◆
Dichloroethene	◆	◆	◆	◆
Vinyl chloride	◆		◆	
Tetrachloroethane	◆	◆	◆	◆
Trichloroethane	◆		◆	
Dichloroethane	◆	◆	◆	◆
Dibromochloroethane	◆	◆	◆	◆
Bromodichloromethane	◆		◆	
Carbon tetrachloride	◆	◆	◆	◆
Chloroethane	◆	◆	◆	◆
Chloroform	◆	◆	◆	◆
Chloromethane	◆	◆	◆	◆
Chlorotoluene	◆	◆	◆	◆
Methylene chloride	◆		◆	
PCBS	◆	◆	◆	◆
DIOXINS	◆	◆	◆	◆
PESTICIDES AND HERBICIDES				
Glyphosate	◆		◆	
Goal	◆		◆	

We plan to inform you in future whenever we accomplished projects, pilots or case studies. Please let us know if you do not wish to get our company news.

Kind regards/ Mit freundlichem Gruß

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