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PRESS RELEASE

Tackling Biological Treatment of Chemical Wastewater with BCP11™

Factories that make chemicals or use chemicals in their manufacturing processes face special wastewater treatment challenges. In a high chemical environment, it is difficult for biological wastewater treatment microorganisms to flourish and survive. A low level of dissolved oxygen makes biological treatment even more difficult and leads to less efficient treatment and increased bad odors. The overall impact is reflected in high levels of BOD/COD that are not compliant with wastewater discharge requirements and may result in additional fees or surcharges. Bionetix® International is here to help chemical plants overcome these challenges with biological treatment solutions such as BCP11™.

Reducing BOD in Wastewater

BCP11™ is specifically targeted for treating chemical industry wastewater streams. The main goal of BCP11™ and any biological wastewater treatment is to reduce BOD/COD levels and bring them into compliance with local regulations. BCP11™ does so by removing chemicals from the wastewater. Beneficial bacteria in the biological treatment digest all kinds of organic chemicals, including solvents, surfactants, antifreeze, pharmaceutical byproducts, petrochemicals, and much more. The microorganisms use elements found in these compounds as a food source, thus digesting the chemicals in order to support their own growth and reproduction into a larger colony that can digest even more contaminants. BCP11™ also reduces ammonia, an inorganic chemical often found at high levels in many different sources of wastewater.

Tackling High Chemical Wastewater Challenges

Biologicals typically do not flourish in high chemical wastewaters due to a lack of nutrients and the presence of some chemicals that may be toxic to microorganisms. When microorganisms do not have the nourishment needed, they are unable to grow, reproduce, and digest chemicals on a large scale. This can lead to problems with filaments and foam control. Another challenge is the absence of oxygen, which forces bacteria to switch over to anaerobic digestion and its associated bad odors and lower efficiency. In contrast, BCP11™ has built-in mechanisms to survive and flourish in low-nutrient environments and help with low dissolved oxygen levels. With these advantages, BCP11™ can perform its intended purpose of improving effluent quality and increasing wastewater treatment efficiency. Because of these built-in defenses against low nutrient environments, BCP11™ is also good for reducing plant upsets from shocks, helping new plant startups, controlling filaments, and lowering odor and foam.

BCP11™ Success Stories

How, then, has BCP11™ been used in the field? In one instance, a solvent recovery plant added BCP11™ and BCP35™ to a container of wastewater collected from rainwater, equipment wash water, and process water. The pH was adjusted and the tank aerated. Starting with a COD of about 15,000, the tank was observed for seven days. The final COD was <700 ppm—an approximately 96% reduction in COD that would help the plant meet municipal discharge limits.

In a more recent case, a glove manufacturer desired a biological treatment that would help bring high levels of BOD and COD closer into compliance with standards. They began treating the effluent with BCP11™ in February 2021 and saw a tremendous improvement after just the first two weeks. More than a year later, the customer continues to use BCP11™ and is satisfied with the results.

Making Biological Treatment of Chemical Wastewaters Possible

In the face of so many challenges, some may think that biological treatment is not viable in a chemical wastewater environment. However, BCP11™ shows otherwise as a biological treatment equipped to tolerate a nutrient- and oxygen-deficient environment. With BCP11™, plant owners can successfully treat their chemical wastewaters to lower BOD/COD, can stabilize plant upsets, and can help new chemical plants launch their wastewater treatment programs. Contact Bionetix® to learn more about BCP11™ and other biological treatments tailored to specific wastewater environments:

https://www.bionetix-international.com/contact-us/

Keywords: reducing BOD, biological treatment of chemical wastewaters, biological wastewater treatment, chemical plant wastewater treatment, wastewater treatment refinery, petrochemical wastewater treatment, remove chemicals from wastewater, control filaments, lower foam, low dissolved oxygen levels, Bionetix

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