

Letting nature, to clean up man's mess

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A growing no. of industries and business is looking out for microbes and fungi to remove pollutants from the effluents. In countries like Europe and Japan, simple systems have been designed and the technology is already well established. The basic approach involves establishing a colony of microbes and fungi that can absorb and digest water bound and air bound pollutants. Existence of Microbial strains that can survive high pressure and high concentration of heavy metals, that can digest coal are a boon. When blend of enzymes are added to this it works out tremendously in treating the effluent plant especially leather, paper, textile, aqua and food industries. Certainly the above method is advantageous over the oxidation and carbon filtration technologies, which are very expensive at this moment.

Caprienzymes has unique solutions to clean up the effluent systems with a pack of blend enzymes, microbes, filtration, gases produced from it can be used for the generation of biogas. It may be surprise you, if biotech solution can cleanup your effluent system reducing the COD & BOD and TDS. Of course TDS is a biggest factor that pollution authorities always focus on. But if you put biological treatment system in place TDS factor is not far away to reach.

After launching the product of blend of enzymes and microbes during the month of June'15, the firm is involved in constant R & D on the product to present an improvised product to the tanners. More and more research products focusing on maximum TDS reduction should be taken up by the scholars, very sure it will be achieved in a shorter period to have a sigh of relief for the tanners.

Another simple method to decrease the complication in treating tannery effluents is by correcting the basic beam house processes itself where complex chemicals are involved for converting hides to leather. Replacing the chemicals where ever possible with 5 men army enzyme system - enzyme in soaking, enzyme in unhairing, enzyme in bating, enzymes in rebating and enzymes in neutralization is the best safe tanning operation.



Wetblue after rebating with enzymes

The company Caprienzymes provides extensive solution in replacing the chemicals wherever possible with a vision of dream the eco future.

Absolutely we can't say that 100% chemicals can be replaced with enzymes but we can truly say enzymes can minimise the chemicals consumption which are not eco-friendly. When traditional system is replaced by bioprocess the effluents will have the lower impact on the environment. Given that this system is simple and cheap, even individual tanners can afford to have this effluent treatment system in their tanneries thereby complying to the pollution norms with a simple low cost technology.

Caprienzymes proposes a series of measures for recycling and valorization of solid waste produced in tanneries especially sludges in the effluent and considering the possibilities of solid waste being treated at site to facilitate to reuse or dispose as micro nutrients or using for biogas combined with simple solar energy plants thereby providing the electrical energy to the tannery itself. During the optimization, the enzyme type, its concentration and other parameters such as time and system of filtration and aeration are given importance to reduce maximum BOD & COD in a perfect way in finding out the solution for the simpler low cost technology.



Waste water – effluent treatment

Some may feel leather tanned with the vegetable extract will be better. In these areas leather working Group LWG promotes leather naturally and asking to adopt environmental stewardship practices within the leather industry and follow the environmental business practices within the leather industry.

Further to this, efficient in process chemical management systems is the absolute requirement, that's why **we follow and advocate replacing chemical wherever possible through enzymes.**

Ideally, green chemical alternative should also focus implementing, technologies like Nano technology in chrome reductions and other chemical reductions for eg, if you use 12% chrome in tanning , in Nanotechnology it can be reduced to 1 % or 2%, it will be the intelligent innovations which is the need of this hour.

Zero discharge factors is the core area where many of the industries have to focus although it may not be possible right now but if we start implementing the bio process in all the areas, this might be possible in the upcoming years.

For further information on effluent treatment solutions please contact Caprienzymes on 9841023420 or email: caprienzyme@gmail.com. For further reading visit www.caprienzymes.com.