

Aiming waste to PHA – escalating production from agro waste stream and Indian Scenario

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Our Vision

- Distillery waste water is potential substrate for PHA production
- Effluent treatment plant in a distillery can be converted into revenue earning facility by PHA production.
- India good source of agro waste

Why PHA?

The mounting crisis in plastic waste calls for polyhydroxy alkanates (PHA), that can be wiped out from the environment as ease.

Problem and solution:

- Large scale production remains a challenge even today, as industrial scale adaptations reduce the yield as compared to lab scale.
- Grain based distillery wastewaters is a major source for organic rich substrate for PHA production which otherwise requires energy intensive evaporation to meet pollution abatement laws.
- Further in this avenue, a techno-commercial feasibility analysis showed that PHA production integrated with ethanol manufacture is viable .



We emphasis on the prospect of India, being a major alcohol producer, can be a hub for PHA based bioplastic production as value added by-product through distillery wastewater valorization.



Our journey commenced with patented process producing PHAs from agro wastewaters in a continuous mode reactor system

Our Solution

- With this technical knowledge we now aim to produce PHA from grain based distillery wastewaters.
- We built foundation on the present outlook that industry solely houses wastewater treatment facility either by social commitment or under compulsion by the law of the land.
- Our cost benefit analysis study shows that the proposed waste valorization process can convert the effluent treatment plant in a distillery into revenue earning facility. The return on investment does not exceed 30 months, even though PHA market price being reduced by 20-25% compared to present.