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# Procedure for moderation of environmental pollution produced by municipal solid waste landfills

Our partner, a Hungarian SME has developed a new procedure for moderation of environmental pollution produced by municipal solid waste landfills. The aim of our partner is to reduce environmental risks of municipal solid waste landfills. The offered technology is based on the partial treatment of municipal solid waste landfills which is independent of the amount of waste mass. The partial treatment can be described as an organic municipal waste aerobic stabilization and composting by use microbial inocula for optimal mineralization without application of inorganic or hazardous additives. The stabilized municipal organic waste layer is functioned as a buffering layer for reduction of environmental risk. The whole composting process is not longer than 70-90 days. The technology is based on the aerobic stabilization of mixed municipal solid waste which consist kitchen waste, green waste and inert waste in smaller amount. The controlled aerobic waste stabilization occurs in open windrow or encapsulated system by utilizing fresh or older municipal solid waste in 5-9 weeks which minimizes the environmental risk. The stabilized municipal organic waste is placed on the untreated waste surface as a soil covering with high buffer capacity. The treated stabilized organic municipal and untreated layers are changed continuously in form of 0,20-0,60 m deep layer. As a result of the 2-year full-scale experiments 30-60 % volume loss was measured by use inoculation. The volume loss depended on the physical-chemical and biological characteristic of the untreated organic waste. With the offered technology the environmental pollution of municipal solid waste landfills and dumps decreases.

# Benefits Summary

Innovative considerations: o decreasing environmental pollution of municipal solid waste landfills and dumps o The stabilized compost layers with high adsorption capacity contribute to the immobilization of organic and inorganic micro-pollutants. o acceleration of mineralization by use microbial inocula (GMO free) o decreasing GHG, harmful gases and odor emission o increasing capacity of municipal waste landfills Main advantages: o increasing capacity in amount of 30-55 v/v % o The technology is flexible which does not depend on the total waste mass. o The compost layers which are produced during the stabilization of organic municipal waste can immobilize the organic and inorganic pollutants in landfills o the number of pathogenic organisms decreases due to the partial treatment more

## Development Summary

This process is field tested and available. more

### IP Summary

Patent information has not been disclosed.

## Discussions (0 items)

No discussions have been created for this TechPak.



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