

Removing odor from wastewater using bacteria

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EcoVerde removes odor and other contaminants through a biological process based on bacteria that feed on hydrogen sulfide

The company EcoVerde, by Mexican Humberto Uribe Luis Lobo, designed a new filtration system that removes odor and other pollutants

from wastewater through a [biological process](#) based on bacteria that feed on [hydrogen sulfide](#), a substance characterized for a rotten egg-like stench. This technology is more environmentally friendly than the ones already on the market, because it uses no chemicals or consumables such as activated carbon.

Uribe Lobo created the company EcoVerde in the USA, which has become one of the expert companies in odor removal. The entrepreneur also chairs the Network of Mexican Talents Abroad, Chapter Arizona.

Air is extracted from sewage or industrial wastewater and sent to system called bioscrubber EG, there a mechanism evaporates it and directs contaminants (ammonia, mercaptan and hydrogen sulfide) that cause odor to the filter were bacteria eliminates them.

"The bioscrubber EG is based on a non-degradable filter (patent pending) where we place and adhere various types of bacteria which are selected depending on the application and contaminants. The removal of pollutants occurs through a natural process of oxidation. Odors are consumed by microorganisms, so that the more polluted the air, there will be more food for the bacteria without incurring any cost," said Uribe Lobo.

Some autotrophic bacteria are used by EcoVerde (including Theobacilus) to remove hydrogen sulfide and methane; heterotrophic bacteria remove VOCs ([volatile organic compounds](#)).



As a part of the bioscrubber installation, the filter is inoculated with a mixture of bacteria during the first three days. When contaminated air passes through the extractor, it reaches the filter where the odor removing [bacteria](#) are, said the president of the Network of Mexican Talents Abroad, Chapter Arizona.

EcoVerde originally started in the USA, where it managed to position itself as a provider of [odor](#) removal services in sewage according to the regulations of that country.



Luis Uribe said that the purpose of taking this technology to Mexico was to benefit the communities surrounding sewage plants and meet the "Official Mexican Standard NOM-010-STPS-1999" which states that health and safety conditions in workplaces where chemical pollutants are processed.

Provided by Investigación y Desarrollo

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