

Rage trickling biofilter is proven to be a reliable and cost effective technology for odour abatement. *Hydrogen sulphide* and *other odour emissions* is a major issue for most of the wastewater treatment plant. Although *chemical scrubber* is an effective way in reducing hydrogen sulphide, the huge consumption of chemicals, chemical storage and the maintenance cost of equipment is high. Chemicals could be hazardous and not environmental friendly.



Simple and efficient treatment for biological treatment in the case of *slaughter house*

On the other hand, the utilize of microorganisms to break down hydrogen sulphide or VOC compounds is cost effective and environmental friendly.

The technology combines biodegradation and absorption in one system. A water scrubber is packed with microorganisms that live within a unique biobed media, which is a fixed bed of low volume, high surface area media made of inorganic material into which bacteria are inoculated. When odiferous air is drawn into the system and passed through the biobed. The microorganisms will uptake H_2S or VOC as part of their respective metabolic pathway. Several species of microorganisms can oxidize H_2S to form odourless sulphuric acid. A few species of the genus, for instance, *Thiobacillus* are capable of oxidizing H_2S at low pH

Benefits

- No chemical use
- No nutrient addition for most applications
- Virtually maintenance free
- Compact in size
- Low operating cost
- Low maintenance cost
- Complete breakdown of odour compounds
- No secondary pollution



The application can be also adopted in *textile factories*