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IMPLEMENTATION TO INDUSTRY AND MUNICIPAL SECTOR THE COMPACT TRICKLE BED BIOREACTORS TECHNOLOGY TO ODOR AND VOCS REMOVAL

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Abstract
Biotrickling filters are one of the most effective methods of air bio-purification, this bioremediation process if of high efficiency in pollution reduction. It is an eco-friendly process and economically viable. The technology of biotrickling filters includes Compact Trickle Bed Bioreactors (CTBB), which are currently used in an increasingly wide range. The aim of this work will be an objective assessment of the implementation potential of the CTBB technology to various industries, including the municipal sector. The paper briefly discusses the characteristics and operating parameters of biotrickling filters, a review of their applications as an effective method of VOC and odor removal including sources of their emissions, as well as the characteristics of CTBB and implementation possibilities to various industries. It was concluded that CTBB are promising solution for the future, as it combines the high degradation efficiency of a wide range of pollutants with cost-effectiveness and ecology. According to the analyzed data and results, this technology can be successfully used to remove VOCs and odors from various industries.

Keywords: **Biodegradation; Bioreactor; CTBB; Odor, VOC.**