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Purification of air from a two-component mixture of volatile organic compounds in a trickle-bed bioreactor

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Abstract: The efficiency of the process of air purification from the mixture of two volatile organic compounds (styrene and p-xylene) was experimentally tested. The experiment was carried out for 248 days in a pilot installation of a trickle-bed bioreactor, operating at co-current gas and liquid flow, changing in a wide range the concentrations of both organic substances in the air supplied to the bioreactor. Satisfactory efficiency of the process was obtained for the tested range of changes of the operational parameters: styrene conversion changed within the range of 80-95%, and the difficult to biodegradation p-xylene in the range of 40-55%.

Attachments:

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