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## REMOVAL OF BIS (1-CHLORO-2-PROPYL) ETHER FROM WASTEWATER USING SONODEGRADATION AND BIODEGRADATION

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### Abstract

The potential of using ultrasonic irradiation and microbiological treatment for the removal bis(1-chloro-2-propyl) ether from aqueous solutions has been investigated. Experiments were performed in a continuous bioreactor, 3500 mL volume, and in an ultrasonic bath respectively, using frequencies of  $38 \pm 1$  kHz and applying a power of 30 W. Under these conditions, the sonochemical conversion of ether was found to be superior to the biological one. The ultrasound method was improved by air bubbled into liquid bulk solution and it was found that the main part of bis(1-chloro-2-propyl) ether destruction takes place in the close vicinity of the ultrasound source. These experiments showed the usefulness of the applications of ultrasound to the wastewater treatment processes.

*Key words:* biodegradation, bis(1-chloro-2-propyl) ether, wastewater, ultrasound

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