

# Application of sonic and ultrasonic waves as means of control of underground termites *Reticulitermes flavipes* (Kollar) in radiata pine wood

## Aplicación de ondas sónicas y ultrasónicas como medio de control del ataque de termitas subterráneas *Reticulitermes*

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The behavior of the termites was analyzed when applying sonic and ultrasonic waves with different frequencies, levels of energy, and waveform to establish the conditions to create a physical barrier to the action of the termites in wood specimens of radiata pine. The tests at ultrasonic level were conducted using frequencies of 100, 500 and 1000kHz in specimens of 1×4×10cm by means of an adaptation of European Standard EN118. The application of irradiation at sonic level was made on specimens with different cross section in transverse direction considering different orientation of growth rings (radial, tangential and mixed) and three levels of density (low, medium and high). For this effect was constituted a system of a scale termite nest containing 500 termites with the wood specimen and a feed supply to establish a continuous flow of termites through a practiced central perforation in the specimen. In the ultrasonic rank it was obtained that with a frequency of 500kHz it is possible