

Title: RESEARCH RESISTANT BACTERIA IN ARTESIAN WELLS IN LOCATIONS SANTA TERESA AND SANTA MARIA JETIBÁ, ES

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Abstract:

Water is an essential fluid for living beings and its scarcity has led the search for different alternatives for obtaining the same, as the use of artesian wells. It is common to think that the removal of these water wells is clean and is fit for human consumption, but they may be contaminated with micro-organisms that may be pathogenic, causing disease for whom consume. Furthermore, bacterial contaminants may carry resistance genes, currently considered a health problem worldwide. This study aimed to investigate the presence of enterobacteria resistant to different antimicrobials in water wells constructed in the region of Santa Teresa and Santa Maria de Jetibá - ES. For this we were collected samples from 10 wells and 5 wells of each city. These samples were subjected to laboratory tests for isolation and identification of bacteria and then the antibiogram. In Santa Teresa 60% of collection points showed microbial contamination, where two wells grew by 2 different microorganisms. In Santa Maria, 80% of wells were contaminated, where in one of the points grew by 3 different bacteria. In the contaminated wells there was a prevalence of total coliforms, such as *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Enterobacter gergoviae* and *Serratia rubideae*. Some resistance presented draws attention, such as *Klebsiella pneumoniae* resistant to cephalothin and *Enterobacter cloacae* resistant to gentamicin, cephalothin, tetracycline and ampicillin. Microbial contamination in wells, and even the presence of contaminants that is resistant to antimicrobials, shows the level of human interference in these ecosystems. Highlighting the need of care with how to use these waters, especially if it is being used by hospitals or other places that deal with human health.

Key words: artesian wells, enterobacteria, bacterial resistance

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