

# Germicidal

Cordova Heraldez, Vanessa (School: Centro de Bachillerato Tecnológico Industrial y de Servicios No. 132)

Antibacterial disinfectants and cleaners are a growing sector in the cleaning products manufacturing business. This is reflected in the corridors of supermarkets, where a variety of products on the shelves are chemical disinfectants. Many of these products claim to eliminate bacteria, but none mentions that these could also mean risks to the health of our body, our families and the environment. Therefore, the innovation is to develop a natural product based on the mixture of extracts from five different plants with antibacterial activity, which can be used as a cleaner and disinfectant of inanimate surfaces and objects, capable of eliminating the bacteria exposed in the analysis. To demonstrate the efficacy of the mixture hydro-ethanol extracts, microbiological tests were performed at a local university in the microbiology laboratory. A disc diffusion method was performed with different amounts of the solution with each of the bacteria used to observe the inhibition halos. A comparative analysis was also demonstrated by selecting three surfaces within the university, taking samples before and after the application of the product. From this, an analysis with the disc diffusion method was performed again with some bacteria, eleven months after the product was elaborated to verify if it had the same antibacterial properties and effectiveness.