

# Homemade Solution To Reduce Active Bacteria in School Desks

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The purpose of this research is to create a homemade chemical that decreases bacteria in school desks. This is to decrease the rate of intoxication by cleaning products and decrease the bacteria that can affect our health. To make this project we started by taking 10 mL of lavender, eucalyptus, peppermint, and aloe vera oils. Also, 10 mL of the aloe vera acibar was extracted, this was mixed with the oils and placed in a spray container. Then, two samples were taken, one before applying the homemade chemical and one after applying the homemade chemical on one of the desks in one of the classrooms. The samples were analyzed in the Genesis laboratory in Patillas I, using Petri Blood Agar and MacConkey Agar plates. As part of the procedure: (a) streak seeding was performed; (b) the sample was gently scratched with an inoculation loop. After this process, the plates were placed in an incubator and 6 observations were made for 3 days. In the first observation it was found that in the first sample (Blood Agar), which was taken before applying the homemade chemical, there was a colony of bacteria. While the sample in the Blood Agar plate was taken after applying the homemade chemical, no bacterial colony grew. In the last observation it could be seen how in the Blood Agar sample, which was taken before the homemade chemical, the colony had grown, it was observed growth in size and change in its color. While in the Blood Agar plate taken after the homemade chemical, no colony grew.

**Awards Won:**