

Effect of Ginger on Escherichia coli

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The aim of this scientific project was to determine the effects of ginger on the growth of non-pathogenic Escherichia coli bacteria. First the growth of the bacteria was observed on solid LB agar plate, where a 10% ginger-water solution was added to LB agar medium. The bacteria were diluted on control plates (without ginger) and secondly on the ginger plates. One could observe that ginger slightly influences the growth of the bacterial colonies in a negative way. Noteworthy was also the change of color from the bacterial colonies which grew under influence of ginger: The color of the colonies ranged from dark yellow to brown whereas the control bacteria were brighter. A second research was done in a liquid culture where a high concentrated ginger solution was added. The growth of the bacteria was assessed by measuring the optical density of the LB-medium in presence or absence of the ginger extract. There, the results showed clearly that ginger, especially in high concentrations, inhibits the growth of Escherichia coli. This was primarily proved on the LB-agar plates containing the dilution of the bacteria under influence of ginger where no culture had grown, whereas the control bacteria normally grew. Our hypothesis that has an antibacterial function against Escherichia coli is therefore confirmed.