Abstract: The authors investigated the pattern formation of drying colloidal droplets containing E. coli bacteria. They observed that the effect of volume on the formation of the patterns is negligible. However, other physical parameters such as concentration, temperature, and surface have a significant role in the pattern formation. For the droplets on microscope slides, they noted that concentric rings formed after drying. The number of these concentric rings was different in all of the samples. However, they could not distinguish between the dead and alive bacteria because the data were so dispersed. In contrast, for the droplets on coverslips, they saw that almost all of the samples had only one outer ring. They calculated the mean density of the bacteria inside the droplets and also the width of the outer ring. The results showed that increasing the concentration changed the pattern formation of the drying, but they could not distinguish the dead and alive bacteria within the error margin. The authors also noted that by increasing the concentration and temperature, the pattern formation of the drying was changed considerably. They concluded that a consummate understanding of the pattern formation of drying colloidal droplets requires a detailed investigation of the effects of these parameters.