

Wes Seger  
*Cleaning Lights*

The goal of my experiment is to test whether or not light on the visible spectrum can kill bacteria. If I find one, it will be possible to sterilize objects without damaging human cells. My hypothesis is that the blue light will damage the cells enough to kill them. My materials were: red, blue, green, white, orange, ultra-violet bulbs, seven light bulb sockets, a seven celled opaque box, 16 agar plates, an incubator, a sterile saline solution, silicone sealant and a dry pellet of *Staphylococcus epidermidis*. My procedures were: to assemble a box to test the plates in, wire the box in a parallel circuit, swab each agar plate in rehydrated bacteria, label the plates with necessary information, place two plates under each light, leave two plates out for control, close the lid to the box, leave the plates undisturbed for 24 hours, take the plates out and record data on the amount of effect from the lights. I found that only the ultra-violet light killed bacteria, the control had a large amount of bacteria on it and all other plates directly resembled it. My hypothesis was incorrect because the blue light had no affect on the growth of the bacteria. The information that was found in this project could help hospitals because now they know any wavelength of light on the visible spectrum does not affect bacteria growth and they will have to continue to use UV bulbs which are made for this purpose.