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| Table of  Contents  [Introduction](http://docs.google.com/title.html)  [Prediction/](http://docs.google.com/pred-hypo.html)  [Hypothesis](http://docs.google.com/pred-hypo.html)  [Procedure](http://docs.google.com/procedure.html)  [Data](http://docs.google.com/data.html)  [Daily Log](http://docs.google.com/dailylog.html)  [Bibliography](http://docs.google.com/biblio.html) | Conclusions  **Analysis of Results**  We took two sets of data.  The first set is of the voltage of the light given off by the bacteria immediately upon adding the variable media.  The second set is two hours later.  The first set of data demonstrated that all of the subjects were emitting about the same amount of light, which was what we anticipated.  Since these measurements were taken immediately upon adding the media, no change was expected as the bacteria had not yet been given time to react.  One exception, of course, was the bleach media, which killed the bacteria instantly, which is why the readings for it are notably lower (it did not register as true darkness with the light sensor because of ambient light).  The other exception was our Control Standard, which registered higher with the light sensor because its light was not diffused by any sort of liquid.  The second set of data is nonsensical, and no conclusions can be drawn from it.  There are several reasons we believe are responsible for this.  The main one is the physical changes our subjects went through during the two hours they were soaking in media.  For one thing, several of the agar slants became dislodged, blocking the hole through which the light sensor was supposed to make its readings.  Another problem was that the bacteria, which began the experiment concentrated on an agar slant, became diffused throughout the media we added, spreading out the luminescence and greatly reducing the intensity of the light shining through the hole through which the light sensor made its readings.  We had believed this would happen before we started and had not thought it would be a problem, since we knew it would happen to every sample.  However, the light emitted was reduced to the point where the light sensor could not distinguish between the glow of the bacteria and ambient light.  Another major reason for the meaninglessness of the second set of data lies with the electrical equipment itself.  The light sensor is vulnerable to changes such as temperature and humidity.  This only becomes a problem when the experiment is lengthy, as ours was, with over two hours elapsing between the first and second data sets.  For this reason, it was necessary to recalibrate the light sensor before collecting the second data set.  In doing so, we may have made it unstable.  Any of these problems by themselves may have been manageable, but in the end we simply had to many variables creeping into our experiment.  We did not have the time and resources necessary to properly control the experiment and obtain reliable results.  Our research is therefore inconclusive.    **Afterword**  Though it now seems that our project was overly ambitious, we do not regret its undertaking.  We believe we have taken valuable steps in developing a useful experimental protocol and laid a solid foundation for the continuation of our research, some of which, in fact, we plan to carry out in the next few weeks.  We will attempt the experiment one more time, as we believe we have a way to better control ambient light and improve the experiment to where it might produce meaningful results.  Until then, we can only hope.  [[Top]](#gjdgxs) |