**1. Why did you choose this topic?**

* the researchers choose the topic because of the current situation of the country. the pandemic increases the rate of hospitalization due to covid, and the increase in the demand of disinfecting materials is what we’re trying to fill in.

**2. Briefly, explain what your research project is all about?**

* the researcher’s research project is all about determining the THE EFFECTIVENESS OF UV LIGHTS IN DISINFECTING USING AN AUTOMATIC DISINFECTION BOX IMPLEMENTED WITH ARDUINO

**3. What is the scope of the study.**

* the study’s scope is determining the significant difference of uv lights in disinfecting compared with alcohol based, determining if there’s a significant difference in effectiveness in the amount of ultraviolet to be used, which are the 222nm and 254nm UVC, and determining if there’s a significant difference in effectiveness to the time of exposure. Production cost will also be compared with commercial disinfection products, the target population for the experiment will be limited to salmonella, e. coli and streptococcus but subjected to change prior to the conduct of experiment.

**4. What is the significance of the study?**

* Promotes contactless disinfection
* Reusable compared with disposable disinfecting liquids, reduces plastic waste products from empty plastic bottles.
* Provides great insight into the potential of uv-based automated disinfection.

**5. Did you bridge any gap from your study?**

The study will bridge the

**6. What are your research variables?**

The study’s variables are the UVC lamps, the intensity, the time of exposure and the population target that will be determined prior to the conduct of the study

**Synthesis of rrl**

According to a recent study by Childress J. (2021) and Nozomi et al. (2020), the 254 and 222nm wavelength of ultraviolet inactivates bacteria and viruses, can be utilized for surface sterilization. However, the 254nm wavelength exposure in humans cause harmful effects but on the other hand, the 222nm has similar germicidal capabilities of the more widely used 254-nm UV light to kill or inactivate microbes (bacteria and viruses), but it does not produce the same damaging effects on skin or eyes as 254-nm light.

The researchers will develop and design an automatic disinfecting machine that will utilize the 222nm ultraviolet wavelength as treating agent to disinfect materials or objects.

**Research design**

Quantitative experimental research design will be used for question 1 to 3a, qualitative research design will be used for question number 3b. The method of analysis for question 1 will be t-test, one sample t-test will be used for question 2, anova will be used for question 3a and likert scale will be used for question 3b.

The tools and methods will be determined prior to the conduct of the experiment as stated on the scope and limitations of the study.

**anu ang laman ng likert scale**

the researchers are planning to find related questionnaires and do cross reference. The questionnaires will be adjusted according to the study.

**What are the parameters of the study?**

**Sino mag bebenefit sa study?**

Transport stations such as train stations, airports.

CEA Students

**Pwede ko na ba kunen agad kung lumabas na ang product?**

Yes, kase according to…

**Maapektuhan ba yung mga electronic devices?**

According to chargetech, 2022 “UV light won’t harm touchscreens, cameras or IR sensors, and is optimal for hard, non-porous surfaces. Unlike chemical wipes, UV-C light does not dry out or degrade materials.”

**Baket yan and ang study nyo?**

Dahil sa increase demand ng disinfecting materials ayon kay reports and data 2020

**Sabi mo sa lrt mo yan ilalagay, mawawala po ba yung xray scanner doon?**