

Electronic Sterilization of Tableware Using Ultraviolet Light Radiation

Sterilisasi Peralatan Makan Secara Elektronik Menggunakan Radiasi Sinar Ultraviolet

*Farros Zuhri Ramdhani
Didik Riyanto Riyanto
Desriyanti Desriyanti*

Muhammadiyah University Ponorogo
Muhammadiyah University of Ponorogo
Muhammadiyah University of Ponorogo

The hospital is one of the health service institutions that conducts complete individual health services that provide inpatient, outpatient and emergency services. Where in the hospital is also a gathering place for many people, namely the patient and also the patient's family. This is also a factor that bacteria and microorganisms can grow rapidly. As found on the patient's tableware. Because the tableware used continuously and alternately will make bacteria grow faster, especially if the process of washing the cutlery is less clean. From this problem emerged the idea to design a tool "Electronic sterilization of tableware using ultraviolet radiation". This tool utilizes ultraviolet radiation that has been studied and has been tested to inhibit bacterial growth. This design is made by finding references originating from journals, books and also articles which are then made a plan or description of the tool that aims to plan what kind of tool will be made, design in the form of hardware in the form of connections between input devices, processes and also outputs , while the software in the form of a program as a system driver. After the design is complete, the tool will be tested and analyzed. Based on the analysis conducted, there are several types of bacteria found in these tableware. After being irradiated with UV light for 15 minutes of exposure, it is found that the bacteria that were originally attached to the cutlery can die completely. This is evidenced by testing conducted in the microbiology laboratory with supervision by experts in their field.

References

1. Andrianto, H. (2013). pemograman Mikrokontroler AVR Atmega16 menggunakan Bahasa C (codevisionAVR). Bandung: Informatika Bandung.
2. Dinas Perdagangan UKM dan Usaha Mikro (2016). Data PKL di Ponorogo tahun 2016
3. Fikri Dika , 2017. Smart card system pengatur dan pengendali penggunaan daya listrik di laboratorium tekni elektro Universitas Muhammadiyah Ponorogo. Ponorogo: Perpustakaan UNMUH ponorogo
4. Hellosehat, (2018). Retrieved 21 12, 2018, from hellosehat: <https://hellosehat.com/penyakit/infeksi-bakteri-e-coli/> Diakses tgl 12 Desember 2018
5. Laboratorium Kesehatan Daerah Ponorogo , Pengujian tanggal 14 januari 2020
6. Sanjaya WS P.hD, M. (2016). Membuat robot arduino bersama professor bolabot menggunakan interface phyton. Yogyakarta: GAVA MEDIA.
7. Syhlan, Vioni L G et al. 2018. "HIGIENE SANITASI PENGELOLAAN MAKANAN DAN ANGKA KUMAN PERALATAN MAKAN (PIRING) DI INSTALASI GIZI RUMAH SAKIT UMUM
8. T.Ariyadi, S. D. (2009). PENGARUH SINAR ULTRA VIOLET TERHADAP PERTUMBUHAN BAKTERI. Jurnal Kesehatan .
9. Umar Zulkham . 2017. Pencanaan Alat Irigasi Sawah menggunakan Short Message Service (SMS) Berbasis Mikrokontroler ATmega16 Ponorogo: Perpustakaan UNMUH Ponorogo