BÖLÜM 2

UVC Light For Sterilization

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INTRODUCTION

Sterilization is a series of processes that destroy or deactivate all pathogens and other biological agents. These biological agents may be present on a solid surface, in air, in a liquid, drug, or living medium. Sterilization used to be done in several ways, such as heat, various chemicals, irradiation, high pressure, and filtration. Sterilization is separate from disinfection, sanitation, pasteurization. Sterilization deactivates or kills all life forms and other biological agents present. Most medical instruments used in hospitals and health centers are resistant to high temperatures. Since the 1950s, devices, and instruments that can be sterilized at low temperatures have been used. In recent years, a wide variety of sterilization techniques have been developed and actively used. One of them is

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and applications. However, UV LEDs have narrow emission spectra. Also, lower wavelength UV LEDs favor has lower output power. These limitations make higher UV LED wavelengths more attractive, but require testing for efficacy per pathogen. Emitting deep ultraviolet light producing a wavelength of about 250-300 nm, LEDs can effectively inactivate microorganisms. [62, 63-65]

CONCLUSION

With the Corona global epidemic, many disinfection products are being made into hot-selling products globally. From the point of view of the main structure of various microorganisms, the simpler the structure, the easier it is to inactivate, while Coronavirus is a virus that does not have a cell structure and has a simple and single-stranded RNA. The use of light against microorganisms dates back to ancient times. Studies have proven that UV is very effective on harmful microorganisms. During the Corona epidemic, many companies improved themselves on UV technology and launched their new products. However, although the use of UV is beneficial, it also brings some risks. Often, with the wrong use of UV, the harmful effects show themselves quickly. Depending on the amount of energy of the lamp and the duration of exposure, it may be possible for people to come with eye damage. The money doesn't stop at short-term eye damage when we talk about people using UV lights. It is necessary to warn people of the other serious and long-term risks of repeatedly exposing your eyes or skin, including skin cancers or long-term eye damage such as cataracts. If you are going to use UV, use it very carefully. But don't think it will replace other protective apps we know work well.

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