

Project Title: Fabrication of UV disinfection chambers for office files

Objectives: The central objective of this project is to disinfect files, papers, envelopes etc. which will be circulated in the campus. For a fruitful disinfection, box type disinfection chambers will be fabricated by incorporating a tube light emitting wavelength in UV-C range. Exposure time will be optimized based on the lamp energy and material specifications.

Expected Outcome: By employing UV disinfection chambers, spreading of microorganisms through surfaces could be prevented effectively as a non-contact mode. We anticipate that a whole file can be disinfected in short time without dismantling the contents. Moreover, the chamber could be provided to local administration offices through our social responsibility services such as UBA, NSS etc.

Expected Timeline: 1-2 Weeks

Brief Description: It is known that light at UV-C wavelengths (200-280 nm) could effectively kill microorganisms by disrupting their nucleic acid, proteins and membranes. By employing this technique, the spreading microorganisms such as viruses, bacteria etc is greatly reduced. We are planning to construct a box equipped with two UV tubelights (254 nm). There will be provisions to safely insert files/ papers into the chamber. The lamp energy, exposure time, and lamp-file distance could be controlled remotely. The whole setup will be designed in such a way that harmful UVC radiation won't escape out of the box. The expected cost for box is about Rs. 20,000.

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