

Kyr D., Tsyretarova A.
USE OF GERMICIDAL LAMPS IN COMMON SPACES
Tutor: senior lecturer Paliashchuk A.U.
Department of General Hygiene
Belarusian State Medical University, Minsk

Disinfection of indoor air is an important aspect of preventive measures aimed at creating safe living conditions for people.

Application of germicidal ultraviolet radiation makes up an irreplaceable part of air disinfection at healthcare, educational, industrial premises and public institutions as well as in other spaces with a high density of people. As a rule, disinfection of air is carried out by germicidal lamps, which emit ultraviolet light.

Based on the way of action germicidal lamps are divided into open and closed (recirculators) types. During the use of germicidal lamps of open type, ultraviolet light radiates through the space destroying pathogens. However, disinfection of air by this type of lamps can be carried out only in the absence of people.

The working principle of recirculators is based upon the passage of air through the housing within which germicidal ozone-free ultraviolet lamps and ventilators are mounted. Under the action of ultraviolet rays emitted by lamps DNA and RNA of viruses, bacteria, spores and fungi is destroyed. Ventilators create airflow forcing the air to pass through the housing.

Advantages of using recirculators include the possibility of their use in the presence of humans and animals, ease of use and high efficiency. Some of the disadvantages are noise created during their work and higher energy consumption in comparison to germicidal lamps of open type. Besides, unlike in the case with open type lamps that disinfect also the surfaces only the air is disinfected with the use of recirculators.

For the evaluation of effectiveness of a certain model for a certain space, volume of air in the room and room's purpose as well as the production capacity with the duration of the lamp are taken into account. In addition, the shape of the space and the placement of the germicidal lamp within it needs to be kept in mind.

To conclude it can be said that the use of germicidal lamps for the purpose of air disinfection is an important part of hygienic adhering to the standards for the degree of microbial contamination of air in spaces for common use. The greatest effect from their use is achieved in case of a correct choice of equipment and its placement keeping in mind the specifics of the space and its purpose.