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Abstract

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DIFFERENCES OF TIME OF UV-C RAY CONTACT TIME TO THE DECREASE OF THE TOTAL NUMBER OF GERMS ON CUTLERY AT THE CATERING VENDOR PT. ADIENT AUTOMOTIVE INDONESIA

x + 82 Pages + 16 Tables + 10 Images + 5 Attachments

Bacterial contamination of food can cause health problems. One of the contaminations in food can be caused by cutlery. PT. Adient Automotive Indonesia is a car sheet production industry. The results of the initial laboratory examination of the number of germs on cutlery at PT. Adient Automotive Indonesia does not meet the requirements according to the Regulation of the Minister of Health of the Republic of Indonesia No. 1096/MENKES/PER/VI/2011, which is 0 colonies/cm2 while the results of the inspection are 63 CFU/cm2. The bacteriological quality of cutlery is influenced by washing, drying and storage techniques. Cutlery that has been washed is immediately stacked and stored in an open basket. The quality of cutlery can be controlled by making engineering tools for sterilization cabinets, one of which is by using UV-C radiation. UV-C lamps have the ability to mutagen and can kill cells. This study aims to determine the difference in contact time (9 minutes, 12 minutes and 15 minutes) of UV-C light to decrease the total number of germs on cutlery. The type of research used is experimental, with a post-test with control research design. The population in this study were 116 cutlery in the canteen. The samples taken were 24 samples with random sampling technique. Data analysis was carried out using the One Way Anova test. Based on the results of the study, it was known that there was a decrease in the total number of germs in the control and after UV-C ray treatment. Exposure contact time of 9 minutes decreased 86.67%, 12 minutes decreased 90.32%, and 15 minutes decreased 97.22%. The reduction in the total number in this study has not been effective. It is recommended for further research with a longer contact time using the UV-C ray method.

REFERENCES : 27 (2003 – 2019)

KEYWORDS : Contact time, total number of germs, cutlery (plates), sterilization, UV-C rays.