

## ABSTRACT

Ministry of Health Indonesian Republic  
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FendickaErliani

### **EFFECT OF THE LONG TIME OF IRROWING USING ULTRAVIOLET (UV) RAYS WITH BACTERIOLOGICAL QUALITY (MPN *Coliform*) ON DEPOT DRINKING WATER CONTINUED (DAMIU) WHICH IS LIGHTED WITH LIVING WATER MOUNTAINSIN THE WORK AREA OF PATIHAN PUBLIC HEALTH CENTER MADIUN CITY**

xiii + 60 Page + 14 Table + 11 Appendix

The bacteriological quality of refill drinking water depots Fajar Tirta sourced from the mountains of Lawu mountain water in the work area of Patihan Health Center, Madiun City exceeds 240 colonies/100ml from 0 colonies/100ml standards according to the Minister of Health Regulation No.492/MENKES/PER/IV/2010. If you consume too much water it can cause illness and other losses. One way to get quality drinking water for drinking water can be treated with a disinfection process that uses ultraviolet light.

The purpose of this study was to determine the effect of exposure time using ultraviolet light with bacteriological quality (MPN *Coliform*) in refill drinking water depots originating from Lawu mountain water in the work area of Patihan Health Center, Madiun City. This type of research is a non-experimental analytic method which means *ex post facto*. The level of treatment for the duration of the ultraviolet light irradiation used 1 minute, 2 minutes, 3 minutes, 4 minutes and 5 minutes. The sampling technique was by using purposive sampling method.

Long irradiation time using ultraviolet light 1 minute, 2 minutes, 3 minutes, 4 minutes and 5 minutes produces an average value of 240 colonies/100ml, 240 colonies/100ml, 0.84 colonies/100ml, 0.88 colonies/100ml and 0.40 colonies/100ml so that the long exposure time using ultraviolet light is most effective in reducing *Coliform* bacteria that is 5 minutes. The duration of exposure or contact of ultraviolet light is an important factor in disinfection of drinking water. The researchers suggest then analyze the hygiene depot refill drinking water sanitation.

Katakunci : Raw water, Ultraviolet, Disinfection, Time of Disinfection, Number of Germs

Readinglist : 20 books (2009-2019)

Classification : -