

THE EFFECTIVENESS OF MULBERRY LEAVES (*MORUS NIGRA L.*) AS A NATURAL HAND SANITIZER IN DECREASING THE NUMBER OF HAND GERMS

Isnaini Indriawati¹, Rusmiati², Ernita Sari³

The Indonesian Ministry of Health
Health Polytechnic Ministry of Health Surabaya
Environmental Sanitation Study Program Applied Bachelor Program
Email : isnaini28022@gmail.com

ABSTRACT

Covid-19 was a newly discovered infectious disease. Covid-19 infections are fast, so the individual was encouraged to take precautions by keeping the body clean, especially the hands. Hand hygiene can be done with a natural substance hand sanitizer. One of the natural ingredients used for hand sanitizer was the mulberry leaf (*Morus nigra L.*). Flavonoid, saponin, turpentine, and alkaloid an antibacterial. The research aims to see how mulberry leaves affect hand sanitizer as a natural ingredient in hand disinfectant.

Pre-experimentation with the one group pretest-posttest method was used in this study. The study used an object in the form of a palm that was sucked before and after being sprayed with mulberry leaf hand sanitizer. Hand sanitizer concentrations 15%, 25%, and 35 with repetition by 9 times. The total sample was 54 samples. The ALT test of hand germs was carried out to determine the decrease in the number of hand germs before and after being sprayed with hand sanitizer. Paired T test and anova test are used to analyze the data.

The result of the study: hand sanitizer leaves have a spray, clear color, and a distinctive smell of mulberry leaves. pH to hand sanitizer is 6.0. Preliminary tests show a difference between hand sanitizer. ($p < \alpha$) extracts of mulberry leave 15%, 25%, and 35% were effective in reducing hand germs. The results of the ANOVA test ($p < \alpha$) indicate that there was an average diversion after using hand sanitizer with a 15%, 25%, and 35% extract of mulberry leaves.

It was recommended to increase the extract of mulberry leaves, using control. Draw on roots, stems, and fruit in the mulberry tree and combine with other ingredients to add to the hand sanitizer's effectiveness.

Keywords : Mulberry Leaves, ALT, Hand Sanitizer